Mary Economic Region:
Agribusiness Resource Guide




Queensland Government

Mary Economic Region:
Agribusiness Resource Guide

Primary Industries and Fisheries

**Department of Employment,
Economic Development and Innovation**

PR09–4060

On 26 March 2009, Queensland's Department of Primary Industries and Fisheries (DPI&F) was integrated into the new Department of Employment, Economic Development and Innovation (DEEDI). This publication retains references to DPI&F as the department functioned under that title at the time of writing.This publication is a key outcome of the Food and Fibre Futures Project.

Copies of this publication, along with other related reports, are available from www.dpi.qld.gov.au

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Images courtesy of: John Switala (DPI&F), Mark Dawson (DPI&F), Ian Layden (DPI&F), Mathew Johnson (DPI&F), Port Authority of Brisbane, Department of Infrastructure and Planning.

The Department of Primary Industries and Fisheries (DPI&F) seeks to maximise the economic potential of Queensland's primary industries on a sustainable basis.

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ACKNOWLEDGMENTS

The Mary Economic Region: Agribusiness Resource Guide could not have been written without the generous help and advice provided by many people. The author acknowledges the valuable contribution of the following individuals and agribusinesses that are highlighted as case studies in this publication:

Jane Parker and Nicholas White—Botanical Food Company

David Haviland and Martha Shepherd—Galeru

Andrew Burnside—Cedar Hill Corporate Group

Heinz and Angela Gugger—Mary Valley Orchards

Evan Stacey—Buderim Ginger

Markus Bucher—Maleny Cheese

Jim Twentyman—Suncoast Gold Macadamia.

Within the Department of Primary Industries and Fisheries, several colleagues offered valuable insights, time and resources, including:

Jason Keating (Brisbane), Graeme Whittaker (Gympie), Liz Dalley (Brisbane), John Daniels (Brisbane), Alan Stephens (Nambour), Peter Rigden (Maroochy Research Station), Bob Nissen (Maroochy Research Station), Sue Carstens (Nambour), Sacha Kitson (Brisbane), Samantha Denley (Brisbane), Matt Curr (Brisbane), Steven Smith (Gympie), Graeme Elphinstone (Gympie) and Ross Warren (Gympie).

An outstanding feature of this publication is the detailed technical information regarding the region, including its soils, water and townships. The author wishes to acknowledge the input of Department of Natural Resources and Water staff.

Many other individuals, agencies and stakeholders provided input and feedback for this publication, including:

Community Futures Taskforce and the Department of Employment and Industrial Relations.

FOREWORD

This DPI&F publication is designed to give both investors and newcomers to agribusiness in the Mary Economic Region an overview of:

- the region
- agribusinesses
- natural resources, particularly land and water
- supporting infrastructure
- basic business support services available in the area.

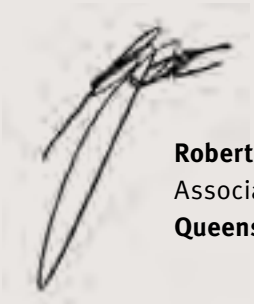
The Mary Economic Region, as defined in this publication, consists of the combined land area represented by the Sunshine Coast Regional Council, Gympie Regional Council, and the Fraser Coast Regional Council. Agribusiness within these regional councils is highly interconnected and valued at more than $400 million per annum at the farm gate. The key natural resource feature across all three of these regional councils is the Mary River Catchment, which this publication also examines, particularly its rich soils and rural water.

Establishing, or diversifying, any rural enterprise involves a level of risk, particularly for new entrants reviewing the region. A broad knowledge of the region, resources, infrastructure, industries and communities can help potential investors to identify the opportunities that the region offers.

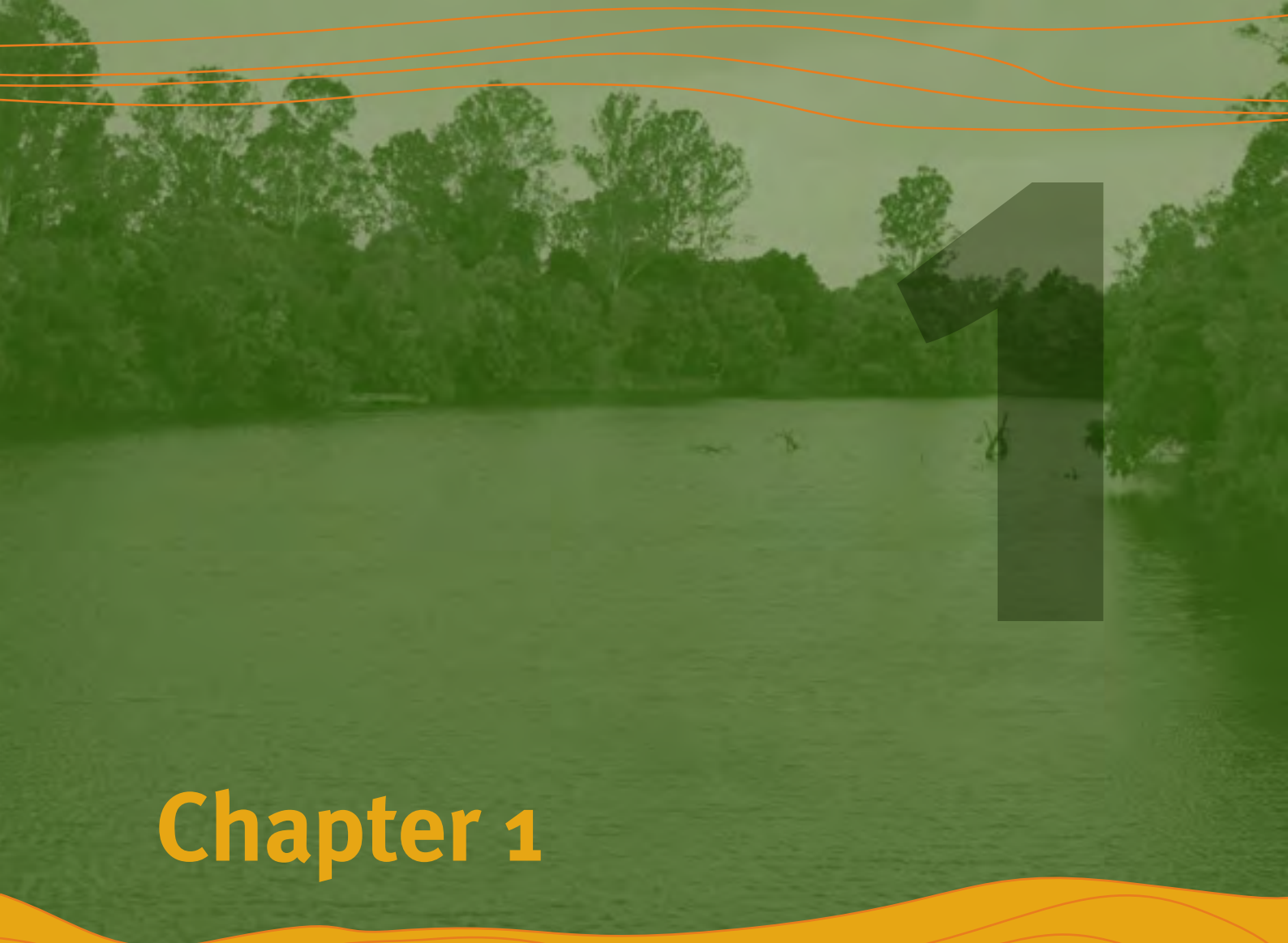
That is where this publication comes in. It aims to introduce rural business investors to the local area and, in so doing, lead to new investments, new activities and new complementary businesses that add value to the community and region in terms of jobs and income.

The information presented in this publication has been collected from many sources, and has been referenced accordingly to allow further, more detailed, investigation if required.

Our aim is to provide a meaningful, accurate and up-to-date publication to assist our readers make informed investment decisions about developing a profitable agribusiness enterprise within the Mary Economic Region.



Robert Setter
Associate Director-General
Queensland Primary Industries and Fisheries



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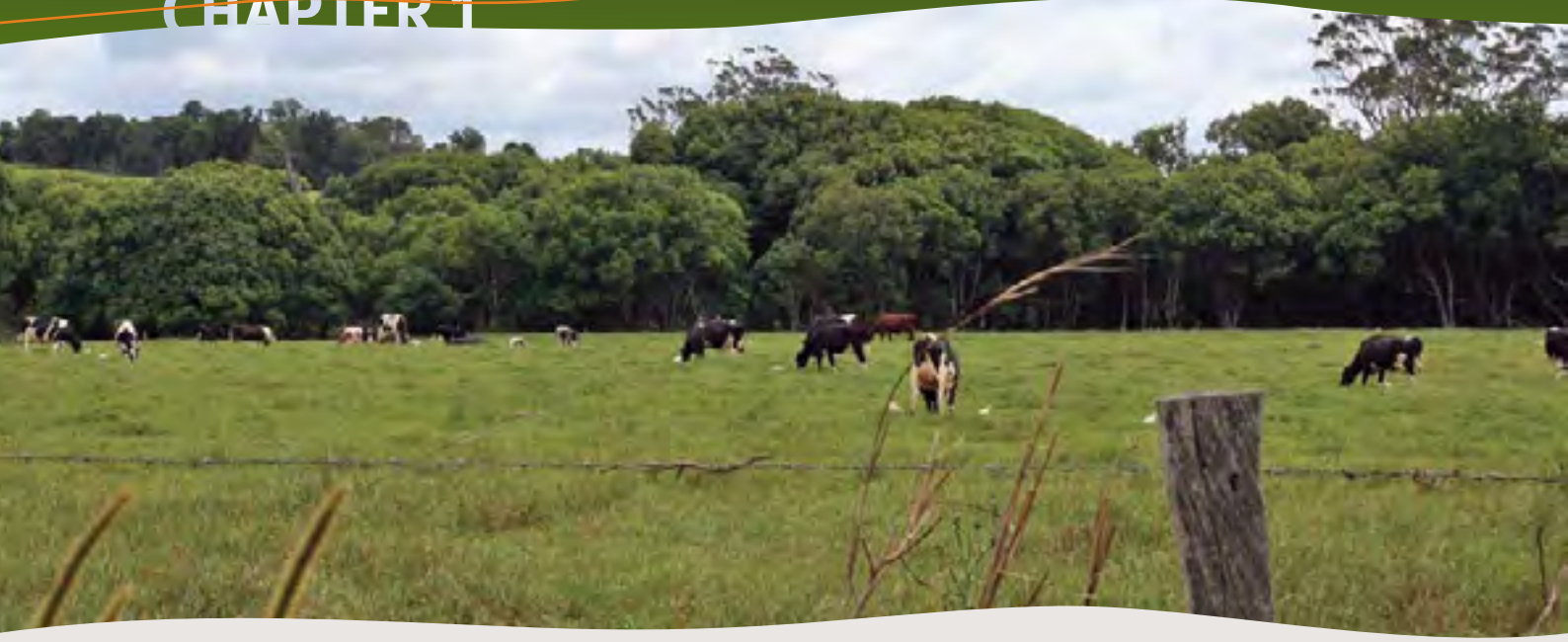
Chapter 1

Mary Economic Region

CHAPTER 1

Mary Economic Region



The Mary Economic Region, as defined in this DPI&F publication, consists of the total land area as represented by the three regional councils of Sunshine Coast, Gympie and Fraser Coast, as indicated in Map 1. This economic region sits in the south east of Queensland, with the main business centres being Nambour (100 kilometres north of Brisbane), Gympie (165 kilometres north of Brisbane) and Maryborough (255 kilometres north of Brisbane).

A key feature of this region is the coastline (as indicated in Map 1), which stretches from the beautiful beaches of the Sunshine Coast to the World Heritage listed Fraser Island.

The population for the region is approximately 430 000, of which the Sunshine Coast accounts for approximately two-thirds. Projections by the Department of Infrastructure and Planning forecast continuing rapid population growth rates well above state and national averages.

The rapid population growth across the region has been supported by strong economic growth. The region has a number of significant business districts, supporting a wide selection of industries and sectors, that has ensured continued job growth and wealth creation opportunities. For example, between 2001 and 2006, the Fraser Coast's labour force increased by 4.1% per annum (AEC 2008).

Agribusiness (incorporating the entire value chain from farm gate production, processing and packaging, and distribution and marketing) within the Mary Economic Region is highly interconnected, typically with individual support businesses and infrastructure servicing the entire region.

The region enjoys a sub-tropical climate, with warm summers and mild winters. Vast areas are frost free, which has led to the development of a wide range of plant-related industries. Because it is a coastal region, there is generally reliable and plentiful rainfall, with coastal plains and hinterlands receiving up to 2000 mm per annum.

Because of the area's fertile soils, agricultural activities incorporating both plant and animal related activities are significant across the region. Approximately 800 000 ha is farmed, producing more than $400 million in farm gate value alone. The region also supports leading national agribusinesses involved in the value adding and distribution of food and fibre crops to domestic and overseas markets.

The dominant natural resource feature supporting agriculture across all three of these regional councils is the Mary River Catchment. Rich soils, favourable sub-tropical climatic conditions, along with plentiful supplies of rural water, makes this region highly suitable for additional agribusiness investment.

Chapter 2

Overview of agriculture

CHAPTER 2 Overview of agriculture

There is an assortment of agricultural activities throughout the region, ranging from sugarcane production, to sub-tropical fruit, vegetable, nursery, turf, flower, beef, dairy, poultry, pork businesses on surrounding hinterlands and valleys.

This section highlights the diversity and significance of land-based food and fibre activities, valued at the farm gate. The geographic scope of analysis for this study has been defined by the availability of reliable statistics for food and fibre industries. The smallest geographical context for reliable food and fibre statistics are the former (prior to March 2008) Local Government Area (Shire) boundaries. For the purposes of this study, information regarding agriculture is provided as follows:

- Upper Mary Economic Region incorporates the former shires of Noosa, Caloundra and Maroochy. The boundaries of the Upper Mary Economic Region as defined in this publication reflect the boundaries of the new Sunshine Coast Regional Council.
- Middle Mary Economic Region incorporates the former shires of Cooloola and Kilkivan, and part shire of Tiaro. The boundaries of the Middle Mary Economic Region as defined in this publication reflect the boundaries of the new Gympie Regional Council.
- Lower Mary Economic Region incorporates the former shires of Tiaro, Woocoo, Maryborough City and Hervey Bay. The boundaries of the Lower Mary Economic Region as defined in this publication reflect the boundaries of the new Fraser Coast Regional Council.

2.1 Upper Mary Economic Region

The Upper Mary Economic Region occupies a significant part of the upper reaches of the Mary River Catchment (see Map 2). The main geographic features supporting agriculture are the coastal flats, and the neighbouring hinterland which supports a wide array of horticultural and animal related activities.

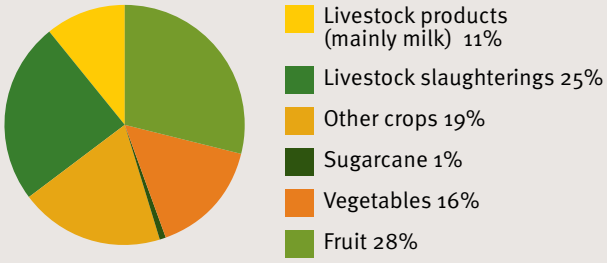
The area's high rainfall, generally fertile soils, high land real estate values, sub-tropical environment, and its close proximity to Brisbane, have generally favoured the development of high-valued/intensive cropping and livestock activities within the Upper Mary Economic Region.

As indicated in Table 1, agricultural production in 2005–2006 was valued at more than $200m (latest reliable statistics available relating to agriculture), involving approximately 85 000 hectares of farmland. Cropping activities are valued at approximately $130m, while livestock is valued at approximately $70m.

Figure 1 illustrates the breakdown in value of food and fibre industries within the Upper Mary Economic Region in 2005–06.

Horticulture and cropping are significant within the region, with fruit (28%), other cropping (20%), vegetables (16%) contributing 64% of total agricultural farm gate value. Livestock processing (poultry and beef) make up 25%, while livestock products (mainly milk) contribute another 11%.

Figure 1. Proportion of food and fibre industries within the Upper Mary Economic Region in 2005–06 based on value of production



Source: DPI&F calculations utilising ABS Statistics (7215.0 Agricultural Commodities: Small Area Data Australia, 2005–06).

Key specific industries identified in 2005–06 include poultry meat $33m, strawberries $24m, nurseries $21m, milk $18m, beef $14m, pineapples $14m, macadamia nuts $7m and mushrooms $5m. Although statistics are not readily reported by ABS for ginger, DPI&F (2009) estimates that approximately $11m of ginger is produced per annum.

Of the 1116 recorded farm gate agribusinesses, 349 are involved in fruit production. Other key farming activities included beef (266), plant nurseries (116), dairy (111) and sugarcane (109).

For a more comprehensive breakdown of production statistics for the Upper Mary Economic Region, see Appendix A.

Table 1. Summary of the value of agricultural production within the Upper Mary Economic Region

	1996–97	2000–01	2005–06
Total value of fruit	$43 420 000	$41 814 000	$58 336 000
Total value of vegetables	$5 014 000	$12 627 000	$31 734 000
Total value of sugarcane	$17 061 000	$7 909 000	$1 565 000
Total value of nurseries, cut flowers, turf	$23 089 000	$21 375 000	NA
Total value other crops	$6 139 000	$1 739 000	$39 095 000
Total value of livestock slaughterings	$44 121 000	$48 064 000	$49 769 000
Total value of livestock products (mainly milk)	$27 081 000	$22 483 000	$21 309 000
Total value of agriculture	**$165 925 000**	**$156 011 000**	**$201 808 000**

Source: DPI&F calculations utilising ABS Agstats and 7125.0 Agricultural Commodities: Small Area Data Australia, 2005–06.

NA. Not available. Values for the nursery sector, cut flower and turf in 2005–06 census were not published by ABS, but recorded under the heading of Other Crops.

2.2 Middle Mary Economic Region

The Middle Mary Economic Region occupies a significant part of the Mary River Catchment (see Map 3). The main geographic feature supporting agriculture is the Mary River and its associated tributaries.

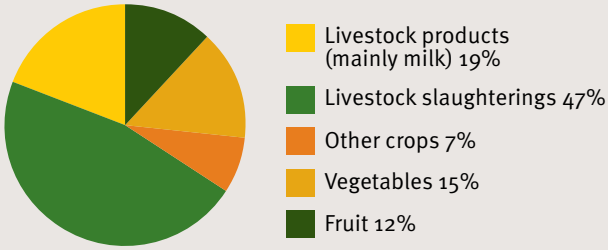
Rich, alluvial flat soils along the major streams support irrigated pastures, fodder and field crops, while adjoining ridges and slopes (many frost free) support a wide array of plant related crops (sugar, vegetable, fruit and forestry) and extensive animal grazing activities.

The Middle Mary Economic Region is a significant agricultural area. As indicated in Table 2, agricultural production in 2005–2006 was valued at approximately $150m per annum (latest reliable statistics available relating to agriculture), involving approximately 430 000 hectares of farmland. Livestock activities are valued at approximately $100m, while cropping is valued at $50m.

Figure 2 illustrates the breakdown in value of food and fibre industries in the Middle Mary Economic Region in 2005–06. Livestock slaughtering (mainly beef) accounted for 47% of total farm gate production. Livestock products (mainly milk) also featured heavily, accounting for a further 19% of total farm gate value. Note that dairy farms also produce cattle offspring that are sold to the beef trade, and therefore a significant value of the cattle and calves slaughtered value (47% in Figure 2) can also be attributed to dairy activities (thereby increasing the significance of dairying within the region).

Fruit, vegetables and other cropping (field crops including grains, pastures, etc) also feature within the

Figure 2. Proportion of food and fibre industries in the Middle Mary Economic Region in 2005–06 based on value of production



Source: DPI&F calculations utilising ABS Statistics (7215.0 Agricultural Commodities: Small Area Data Australia, 2005–06).

Middle Mary Economic Region, representing more than 30% of all food and fibre production within the region.

The value of farm gate production for specific farming activities in 2005–06 include beef cattle $66m, milk $25m, French and runner beans $7m, macadamia nuts $8m, zucchini and squash $4.5m, pineapples $3m, and hay production at $3.5m. DPI&F (2009) estimates approximately $4m of ginger is also produced each year within the Wide Bay-Burnett region.

Of the 965 farmers recorded in 2000–01, approximately 500 are involved in beef production. Other key farming activities included dairy (151), fruit growing (146), and vegetable growing (80).

For a more comprehensive breakdown of production statistics for the Middle Mary Economic Region, see Appendix B.

Table 2. Summary of the value of agricultural production within the Middle Mary Economic Region

	1996–97	2000–01	2005–06
Total value of fruit	$13 470 000	$15 746 000	$18 084 000
Total value of vegetables	$9 116 000	$11 596 000	$22 598 000
Total value of other crops	$10 624 000	$9 527 000	$11 354 000
Total value of livestock slaughtering	$42 450 000	$97 970 000	$70 725 000
Total value of livestock products (mainly milk)	$32 375 000	$28 260 000	$28 626 000
Total value of agriculture	**$108 035 000**	**$163 099 000**	**$151 387 000**

Source: DPI&F calculations utilising ABS Agstats and 7125.0 Agricultural Commodities: Small Area Data Australia, 2005–06.

2.3 Lower Mary Economic Region

The Lower Mary Economic Region occupies a significant part of the Mary River Catchment (see Map 4).

The main geographic feature supporting agriculture is the Mary River flood plains, its associated tributaries, and neighbouring inland mountain ranges.

The alluvial soil flats predominantly support sugarcane, while pockets of horticulture (tree and vegetable crops) appear throughout the region on the richer soils.

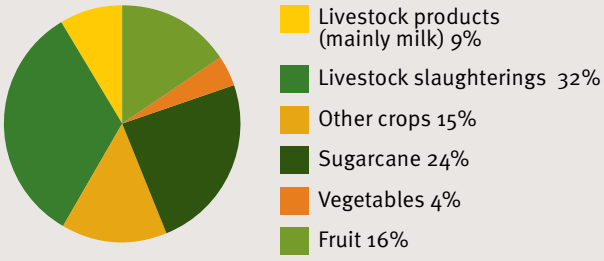
A large proportion of the sugarcane production relies on irrigation supplies from either the Mary River or Tinana Creek water supply system.

The predominant land use activity within the neighbouring ranges is extensive grazing on native pastures (mainly beef).

As indicated in Table 3, a range of livestock and cropping activities are undertaken within the Lower Mary Economic Region. Food and fibre production in 2005–2006 was valued at approximately $63 million per annum, involving approximately 295 000 hectares of farmland. Cropping activities were valued at approximately $37 million, while livestock activities were valued at approximately $26 million.

As indicated in Figure 3, livestock meat industries (beef and pork) dominate farm gate production within the Lower Mary Economic Region, accounting for 32% of total production. Sugarcane, which accounts for 24% of total farm gate production within the region, is the second most significant food and fibre industry.

Figure 3. Proportion of food and fibre industries in Lower Mary Economic Region in 2005–06 based on value of production



Source: DPI&F calculations utilising ABS Statistics (7215.0 Agricultural Commodities: Small Area Data Australia, 2005–06).

The value of farm gate production in 2005–06 included beef $17m, sugarcane $15m, pork $3.5m, pineapples $5m, and milk $2m, involving a total of 547 farmers. Approximately 286 were involved in beef production, 114 in sugarcane farming, and 64 in fruit growing.

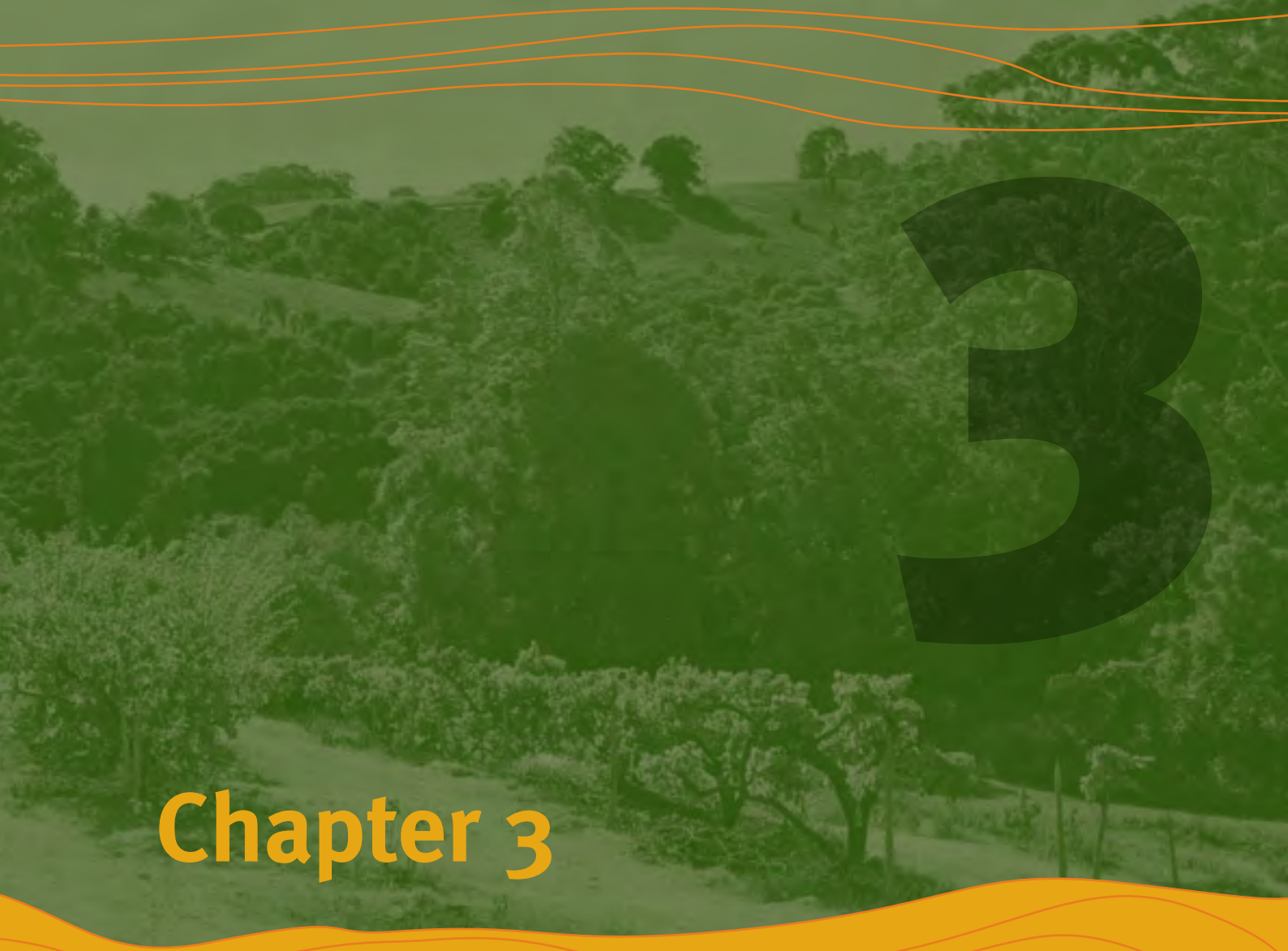
For a more comprehensive breakdown of production statistics for the Lower Mary Economic Region, see Appendix Region, see Appendix B.

Table 3. Summary of the value of agricultural production within the Lower Mary Economic Region

	1996–97	2000–01	2005–06
Total value of fruit	$6 542 000	$6 651 000	$10 006 000
Total value of vegetables	$1 035 000	$1 571 000	$2 573 000
Total value of sugarcane	$18 744 000	$12 911 000	$15 263 000
Total value of nurseries, cut flowers, turf	$3 364 000	$3 596 000	NA
Total value of other crops	$335 000	$850 000	$9 326 000
Total value of livestock slaughtering	$10 368 000	$19 431 000	$20 841 000
Total value of livestock products (mainly milk)	$5 375 000	$3 205 000	$5 424 000
Total value of agriculture	**$45 763 000**	**$48 215 000**	**$63 433 000**

Source: DPI&F calculations utilising ABS Agstats and 7125.0 Agricultural Commodities: Small Area Data Australia, 2005–06.

NA. Not available. Values for the nursery sector, cut flower and turf in 2005–06 census were not published by ABS, but recorded under the heading of Other Crops.



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Chapter 3

Emerging rural opportunities

CHAPTER 3

The Mary Economic Region is an existing agribusiness zone with a diverse range of land-based primary production activities, and extensive business and infrastructure support networks, including a number of leading national and international agribusinesses. The area is close to markets in Brisbane, and key air and sea export port facilities. It has substantial areas of good quality agricultural land that can support a range of agriculture as demonstrated by the diversity of production, and substantial additional supplies of irrigation water.

The Mary Economic Region also offers a climatic advantage—its sub-tropical climate. This allows agribusinesses (particularly those that produce seasonal crops including fruit and vegetables) to generate their product at times when producers in other climatic regions are unable to do so, thus presenting a window of opportunity to supply the market at optimal price.

As indicated in the previous section, the main agricultural activities within the region are dairy, beef, horticulture and sugarcane production. A number of these and other rural activities are experiencing growth either at the farm gate level, or further down the value chain (e.g. export market growth, expansion value adding/processing). Key rural activities experiencing some form of growth include (not in any particular order of merit):

- fruit crops
- major vegetable crops
- amenity horticulture (nurseries, cut flowers, turf, etc)
- dairy
- high-valued/value adding
- sugarcane
- beef cattle
- value-chain agribusinesses.

3.1 Fruit crops

A number of tree crops are grown, including low chill stone fruit, avocado, macadamia nuts, custard apples, persimmons, strawberries, passionfruit, lychees and citrus.

Although growth has been reported for all of these tree crops on some farms, low chill stone fruit have been identified as having significant growth opportunities within the Mary Economic Region. Low chill stone fruit, produced 'out of season' to other growing districts (September to October), provides the opportunity to sole supply the marketplace at this time (thereby achieving high prices). Year-round intensive and skilled management of the orchard is required to produce good quality early fruit.

Mary Valley Orchards is Australia's leading biodynamic grower and exporter of persimmons.

'Our Mary Valley location not only allows us to produce high quality persimmons during a unique market window, but also enables us to pick, pack, and airfreight our fruit to customers in Singaporean supermarkets within 24 hours. This ensures the freshest and highest quality persimmons for sale to end consumers.'

Heinz and Angela Gugger, owners of Mary Valley Orchards.

3.2 Major vegetable crops

As indicated earlier in the report, a range of seasonal vegetables is grown within the Mary Economic Region, for example:

- crops grown only in response to short-term favourable market prices (e.g. cucumbers, potatoes, broccoli, melons)—this is known as opportunistic production
- other vegetables including French and runner beans, snow peas and ginger—these are typically grown every year.

The key drivers of vegetable growth within the region are seasonal conditions (windows of opportunity to supply to markets outside of the normal season) and secure irrigation water supplies. The Mary Economic Region's sub-tropical climate allows vegetable producers to harvest during periods of the year when harvesting is not possible in many other regions, which presents a window of opportunity to supply the market place.

3.3 Amenity horticulture

Amenity horticulture—including nurseries, turf, and flowers—is a significant industry (one which utilises a small area of land and water, and produces high end-valued products) within the Mary Economic Region.

The projected doubling of South East Queensland's population over the next decade will have two major ramifications for the amenity horticulture industry. First, it will greatly expand the market place and demand for products including turf, plants, flowers, etc. Second, it will severely reduce the availability of rural land and water within existing amenity horticulture locations in the Brisbane region (e.g. Redland Bay).

As a consequence, a number of amenity horticulture businesses are relocating from the Brisbane area, many favouring the Mary Economic Region for its close proximity to South East Queensland marketplaces, its ideal sub-tropical climate (frost-free in many areas), and ample rural water reserves.

The Cedar Hill Group, on the Sunshine Coast Hinterland, is Australia's leading exporter of native foliage.

'Our Sunshine Coast-based processing facilities allow us to process, pack and load our foliage products onto airfreight at Brisbane International Airport in a matter of hours. Short access times to international marketplaces are critical for our business.'

Andrew Burnside, CEO Cedar Hill Group.

Staff member from Cedar Hill Group, packing foliage for export.

3.4 Dairy

The Queensland Dairy Organisation has projected that demand for milk and dairy products will increase in excess of 200 million litres of milk (QDO 2007) due to predictions that the population in South East Queensland is likely to grow to 3.6 million people by 2026. The dairy industry has identified the Mary Economic Region as one of the most significant dairying areas within Queensland. Endowed with ideal production seasons, good quality soils, high rainfall and secure water supplies, the Mary Economic Region has been identified as an area for strategic dairy expansion.

In addition to the general trend in production increases, the Mary Economic Region is also supporting farms with herd sizes close to 700 cows. There is a trend in the region for the larger herds to be more intensively fed, and there are examples of cows managed this way, producing 6500–7000 L per cow per lactation.

In addition to substantial farm gate production of milk, the Mary Economic Region supports a number of value-adding businesses producing a wide range of milk related products under local brands.

Maleny Cheese is a leading producer of boutique cheeses and yoghurts.

'One of the key features of our business is that we use only the highest quality of local milk. We are based in beautiful Maleny, which is 400 metres above sea level and has an annual rainfall of about 2000 mm. The temperate climate ensures green pastures all year round and allows us to produce a unique cheese of superb quality. Most other dairy areas do not have the conditions to achieve this, which gives us a distinct product and marketing edge.'

Markus Bucher, Managing Director.

3.5 High-value food and fibre sector

The high-value food and fibre sector incorporates a range of activities. The businesses are typically niche-marketed, value-added and are often incorporated within the value chain for tourism and/or the food service sector.

Generally, each gourmet business markets a premium-made product or service. In some instances, producers of gourmet food and fibres have collaborated, utilising local support services (e.g. commercial kitchens), and collectively branding and marketing their product. These economies of scale not only reduce processing/marketing unit costs, but also provide vendors continuity of supply (thereby increasing product appeal).

Regional high-value agri-businesses are appearing more regularly in various marketplaces and in the media as consumers become more accustomed to supporting local produce/businesses, and new value-added products and services.

In many cases, emerging high-value producers first target local market places, trialling products and developing brands and market knowledge. Over time, many expand production to meet larger markets, such as the food service sector in Brisbane. An emerging number of these businesses are also distributing to national and export markets.

For many of these agribusinesses the tourism value chain is a component of their overall business, either through farm gate sales, participation in local farmers' markets, direct sales to the food service sector (including restaurants), and on-farm accommodation.

Galeru Pty Ltd is a leading grower, processor and distributor of processed Australian rainforest fruits located on the Sunshine Coast Hinterland.

'The key for our business is the supporting infrastructure, particularly the availability of local commercial kitchen and processing facilities that has allowed us to undertake batch processing. In addition, we are centrally located to other food value-adding businesses such as boutique dairy processors and bakeries. This has enabled us to expand the market scope for our business.'

David Haviland and Martha Shepherd, directors of Galeru.

DPI&F's Gourmet food project

The project aims to build relationships between producers, the food service sector and niche retailers in Queensland and interstate.

It targets Queensland primary producers (small to medium sized enterprises) who are developing high-value products including organics, aquaculture seafood, specialty Australian products and game meats for niche markets. The project provides professional development activities in partnership with local government and other state government departments.

Key activities include showcasing Queensland fine food to chefs, restaurateurs, distributors, niche retailers and food media via publications, roundtables and trade events such as Restaurant 08.

For more information contact DPI&F on 13 25 23.

3.6 Sugarcane

Within the Mary Economic Region there are emerging investment opportunities for traditional broadacre rural activities, including sugarcane production.

Sugarcane, which is the dominant cropping activity within the Mary Economic region both in terms of land use (intensive) and irrigation water use, is gaining renewed interest via the local mill operator at Maryborough. The Maryborough Sugar Mill has been actively seeking additional rural water supplies as well as green field development opportunities for new cane throughout the region. This will increase overall local cane production and help ensure the long-term sustainability of the mill.

3.7 Beef cattle

In terms of beef cattle, the Mary Economic Region is highly regarded as a proven provider of high-valued breeding stock. The rich soils and high rainfall combine to deliver some of Queensland's most fertile grazing pastures, which attract several beef stud agribusinesses. Many of these businesses have gained state and national recognition for the provision of high-valued breeding stock across a number of temperate/sub-tropical/tropical breeds.

3.8 Value-chain agribusinesses

The Mary Economic Region is supporting a number of leading national and international agribusinesses involved in the harvesting, processing, value-adding, distribution and marketing of several food and fibre products.

The following examples showcase the diversity of agribusinesses within the region.

Buderim Ginger is the world's largest manufacturer of sweet ginger products and processes more than 5000 tonnes of raw ginger each year.

'We are centrally located to our Sunshine Coast grower base, which produces the best quality raw ginger in the world. By tapping into the region's tourist trade and becoming a tourist icon in our own right we have been able to successfully expand our business.'

Evan Stacey, Group Technical Manager, Buderim Ginger.

The Botanical Food Company Pty Ltd, trading as Gourmet Garden, is a leading exporter of processed herbs.

'The Sunshine Coast's lifestyle and environment has enabled us to recruit—and more importantly retain—valued staff, as we have grown exponentially in recent years.

Our Palmwoods processing and distribution centre allows us convenient access to suitable irrigated, low rainfall production areas essential for the quality of our herb products, and to excellent transport infrastructure for our finished product for domestic and international markets.'

CEO, Nicholas White.

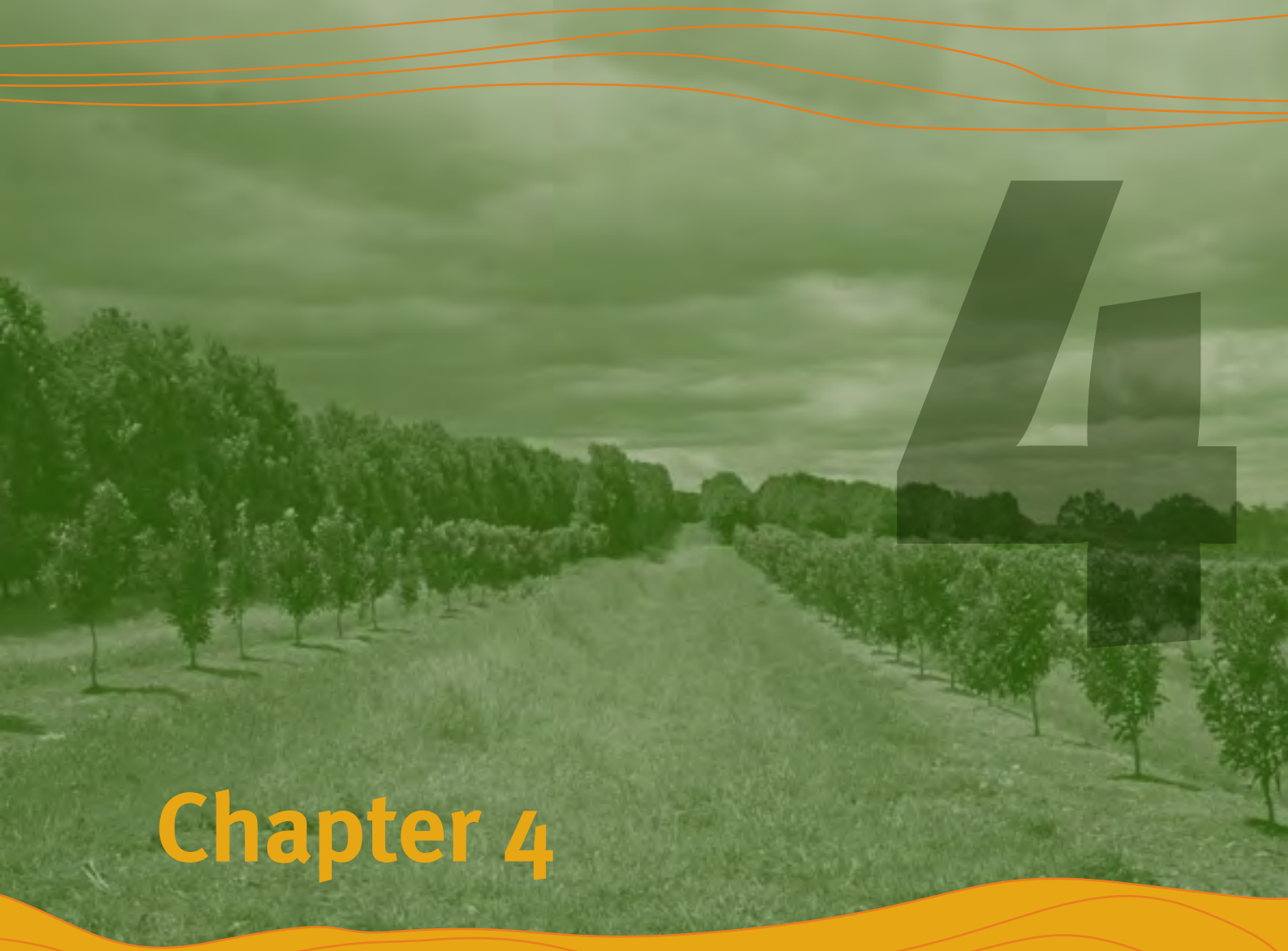
Suncoast Gold Macadamias is Queensland's largest processor and marketer of Macadamia nuts.

'Our Gympie location is close to most of our producers and to Brisbane export port facilities, where we send most of our production. Gympie is an affordable and increasingly popular place to live and consequently we have good access to quality staff for our processing operations. As we have expanded our business we have found local and state governments very supportive of our Gympie operations'

Jim Twentyman, CEO.

DPI&F Maroochy Research Station

In the next few years, DPI&F expects to release new varieties of low chill stone fruit with a much higher sugar and 'sweetness' content. These varieties will be highly suited to the Mary Economic Region and will substantially increase consumer demand.



Chapter 4

Why the Mary Economic Region?

CHAPTER 4

The previous chapters highlighted the diversity and significance of agriculture within the Mary Economic Region. The region supported more than $400 million (farm gate value) of primary production in 2005–06, up substantially from approximately $350 million in 2000–01. Based on renewed interest by a number of agricultural sectors, growth in the regional value of agricultural production is projected.

There are a number of factors favouring continued agricultural growth within the Mary Economic Region, including the available natural resources, particularly good quality agricultural soils, and, more importantly, rural water supplies. There are few agricultural areas left in Australia close to capital markets and export infrastructure that have sub-tropical climatic conditions with high reliable rainfall, and that have unallocated rural water available at comparatively low values. Within the Mary Economic Region, the Mary River Catchment presents all the ingredients that can sustain future agricultural growth. This chapter seeks to highlight the specific natural assets of the Mary River Catchment that make it so attractive for agricultural production.

As indicated in Map 5, the Mary River Catchment overlaps a significant proportion of the Mary Economic Region. The Mary River flows practically through the middle of the catchment from south to north, and is the lifeline for many rural irrigators in the region.

The Mary River Catchment covers an area of approximately 9400 square kilometres (940 164 ha), and is located in the south-eastern corner of Queensland. The catchment stretches 173 kilometres from north to south and 102 kilometres from east to west (overall extent).

The largest towns in the catchment are Maryborough and Gympie, with many smaller towns and rural residential communities scattered throughout the catchment (see Appendix D). The majority of townships and the largest population base are in the eastern and southern areas of the catchment, areas that are close to the coastline.

4.1 Land use

The major agricultural land uses within the Mary River Catchments are beef grazing, sugarcane, forestry, dairying and horticulture. Agricultural land use within the catchment is determined largely by the climate. Extensive grazing industries and native forestry dominate in the drier western parts of the catchment, while plantation forestry, residential developments, horticultural and intensive livestock pursuits are undertaken in higher rainfall areas in the south and east.

Map 6 provides an indication of land use for the Mary River Catchment. Note that the Department of Natural Resource and Water completed this dataset in 1997–98, and will revise this information in 2009 (as part of an overview of land use activities throughout the entire south-east of Queensland).

Although the land use dataset is dated (1997–98), it is useful in providing generalised assessments of potential and current land use practices. Key land use activities for the catchment in 1997–98 include:

- 48% catchment utilised for beef grazing, predominantly native pastures and forested native pastures
- 3% catchment utilised for dairying production. The majority of these farms are located along the major tributaries, utilising irrigation schemes on fertile alluvial flats
- 30% to forestry
- 2% to sugarcane, grown downstream at Tiaro, Woocoo, Maryborough and Hervey Bay regions. An estimated 180 cane farmers, with an average farm size of 77 hectares, supply the Maryborough Sugar Mill
- 1% horticulture. Key crops include pineapples, macadamias, mangoes, papaws, citrus, vegetables, maize and sorghum.

There are numerous sub-regions within the catchment that contain fertile soils and high moisture levels (with a combination of either high rainfall, or access to irrigation water from on-farm facilities or supplemented irrigation), that result in landscapes of intensive agriculture.

4.2 Climate

The Mary River catchment is classed as sub-tropical, with long summers and mild winters. Rainfall is summer dominant, with about 70% falling between October and March.

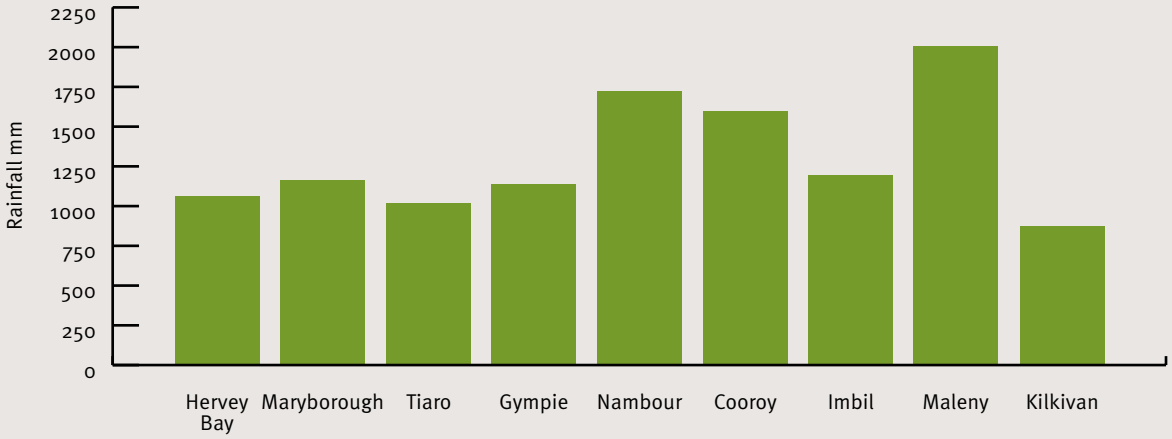
The western parts of the catchment are much drier and experience greater temperature extremes than those in the southern and eastern parts (see Map 7). The most striking difference is the amount of rainfall received: Kilkivan receives less than half that of Maleny's rainfall (see Figure 4).

Frost may also impact upon cropping activities in this region. Frosts can occur across parts of the catchment; however, low-lying areas have the highest number of frosts and the most severe. The coldest months in the region are June, July and August, but occasional frosts occur in May and September. Gympie averages eleven light frosts a year (i.e. days in which the air temperature is below 2 °C), while Maryborough averages three light frosts a year. Higher areas away from the valley floor, where cool air drains away on cold nights, have few frosts. These areas are capable of growing many frost-sensitive sub-tropical plants such as avocados and macadamia nuts.

The Mary River Catchment does not have the high temperatures of other regions. On average, Gympie records approximately 12 days per annum where the temperature is higher than 35 °C, while Imbil records approximately 8 days and Maryborough 3 days where the temperature exceeds this figure.

Additional climatic information for the townships of Imbil, Gympie and Maryborough are presented in Appendix E.

Figure 4. Mean annual rainfall for locations within and around the Mary River Catchment



Source: Pointon and Collins, 2000.

4.3 Water

Water is a critical element for agricultural land-based activities. As indicated in the previous section, rainfall in many parts of the catchment is relatively high and reliable. Additional water resources for irrigation practices are a key asset for this catchment. Landowners have access to a number of options, including: on-farm storages, both above-ground (dams/tanks) and underground (bores); and supplemented water from rivers, creeks, weirs, channels (irrigation schemes).

The supplemented water network

The Mary River is the main watercourse throughout the entire catchment, as indicated in Map 8. Map 8 also highlights the mean annual discharge flows for the Mary River, and key tributaries that feed into it. Note that these flow volumes for the catchment streams are highly variable from year to year, and historically peak between the months of November to April.

The Mary River starts from the extreme south of the catchment in the Conondale Ranges (at 500 metres above sea level) and flows to Maryborough in the north (flowing out into the Great Sandy Strait region between Fraser Island and the mainland). Note that there is a tidal barrage downstream of Tiaro.

There are a number of major tributaries entering the Mary River from the west, including Munna Creek, Wide Bay Creek, Widgee Creek, Amamoor Creek, Kandanga Creek and Yabba Creek. Major tributaries entering from the east include Tinana Creek, Six Mile Creek and Obi Obi Creek.

Significant rural irrigation activities are found along many of the tributaries mentioned above, in conjunction with irrigation water being sourced directly from the Mary River. A network of man-made channels also distribute irrigation water below the tidal barrage, supplying a wide area of sugarcane production.

Key irrigation schemes

The management of supplemented water within the catchment is divided into two separate schemes as follows:

- Upper Mary River Water Supply Scheme (UMRWSS) (includes Pie Creek diversion and Deep Creek scheme)
- Lower Mary River Water Supply Scheme (LMRWSS).

The UMRWSS supplies irrigation, industrial, stock and domestic water from Borumba Dam, located 10 kilometres south-west of Imbil. Borumba Dam supplies users along the Mary River for a total distance of 179 kilometres. The Cedar Pocket Dam releases water for downstream irrigation of dairy pastures and horticultural activities such as fruit trees and vegetable production. The managing authority for this scheme is SEQWater.

The LMRWSS is located between Maryborough and Tiaro, and is supplied irrigation water by pipelines and open channels from the Mary River and Tinana Creek Barrages. Sugarcane is the principal crop grown within this area. The managing authority for this scheme is Sunwater.

For an overview of the irrigation schemes, see Map 8.

Currently there are 11 impoundments within the catchment, supplying both rural water and urban water needs (Table 4).

Table 4. Key existing impoundments within the Mary River Catchment

Storage name	Capacity (ML)	Stream
Tinana Barrage	4770	Tinana Creek
Mary River Barrage	11 700	Mary River
Teddington Weir	3590	Tinana Creek
Tallegalla Weir	385	Tinana Creek
Goomeri Weir	22	Kinbombi Creek
Cedar Pocket Dam	725	Deep Creek East
Imbil Weir	46	Yabba Creek
Borumba Dam	46 000	Yabba Creek
Lake McDonald	8000	Six Mile Creek
Baroon Pocket Dam	61 000	Obi Obi Creek
Maleny Weir	57	Obi Obi Creek
Total storage	**136 295**	

Source: Pointon and Collins, 2000.

4.3.1 Water supply schemes

Customers in the two water supply schemes hold Interim Water Allocations (IWA), which entitles them to take water from the regulated reaches of streams supplemented by releases from infrastructure within the schemes.

The Interim Resource Operation Licence (IROL) holder for each scheme is responsible for the operation and management of all infrastructure and water entitlements within the scheme.

The Water Resource (Mary Basin) Plan 2006 is current for the area. A Resource Operations Plan (ROP) is currently being developed to define operation and monitoring rules for the Basin.

For more information regarding the water resource planning process, see the website: www.nrw.qld.gov.au/wrp

The current IROLs for the Mary Basin are as follows:

- *Interim Resource Operations Licence for the Upper Mary River Water Supply Scheme: Issued to Queensland Bulk Water Supply Authority, July 2008*. This covers the upper Mary Valley from Borumba Dam on Yabba Creek downstream to near Tiaro at the backup of the Mary River Barrage, including the Pie Creek diversion. It also includes Cedar Pocket Dam and the supplemented reach of Deep Creek.
- *Interim Resource Operations Licence for the Lower Mary River Water Supply Scheme: Issued to Sunwater, July 2008*. This covers the area of the storages of the Mary River Barrage and the Tinana Creek Barrage and may be supplemented from Borumba Dam.

A ROP for the Mary Catchment is proposed for release in early 2009, detailing substantial changes including a new trading mechanism, which will allow landowners to separate their water entitlements from their land titles, and effectively trade in water entitlements to better suit their land production intentions. It is expected that water entitlements (particularly medium priority) will be offered and sold when the trading scheme commences, which offers irrigators an alternative market place to source water (in addition to 9000 ML unallocated water highlighted in tables 5 and 6).

Note that the data in Table 5 provides information regarding the Mary Valley Irrigation Project (MVIP), with the exception of the areas shaded blue within the table which relate to the Deep Creek Project Area (DCPA). The section highlighted in yellow in Table 5 shows a total of 3000 ML of medium priority water that is presently unallocated (and available for purchase).

Table 5. Interim water allocation in the Upper Mary River Supply Scheme

User—Use—Customer	ML	Purpose	Priority
Amenities—Borumba Dam and Imbil town water supply	120	Urban	High
Gympie Regional Council—Imbil town water supply	60	Urban	High
Initial loss—Pie Creek Scheme	60	Losses	High (loss)
Continuing loss—Pie Creek Scheme	426	Losses	Medium (loss)
Industrial user	60	Industrial	High
Upper Mary irrigators and other users	17 249	Agriculture	Medium
Unallocated water	3000		Medium
Sunshine Coast Regional Council	6500	Urban	High
Pie Creek Scheme irrigators	864	Agriculture	Medium
Deep Creek Scheme irrigators	512	Agriculture	Medium
Gympie Regional Council—Gympie town water supply	3454	Urban	High
Gympie Regional Council	10	Urban	High
Industrial customer	400	Industrial	Medium
Total	**32 715**		

Source: Interim Resource Operations Licence for the Upper Mary River Water Supply Scheme July 2008.

The data in Table 6 provides information regarding the Lower Mary Irrigation Area (LMIA). The section highlighted in yellow in Table 6 shows a total of 6000 ML of medium priority water that is presently unallocated (and available for purchase).

Table 6. Interim water allocation in the Lower Mary River Supply Scheme

Section	Customer	ML	Purpose	Priority
Mary River—Mary Barrage storage	Tiaro Shire Council	45	Urban	High
	Canter Wood	5	Industrial	High
	Unallocated	75		High
	Irrigators and other water users—river	4528	Agriculture	Medium
	Irrigators and other water users—Copenhagen Bend/Main Road	6266	Agriculture	Medium
	Initial losses	174	Losses	High (loss)
	Continuing loss	4273	Losses	Medium (loss)
	Unallocated water	3000		Medium
Tinana Creek—Teddington Weir storage	Unallocated water	1360		High
	Irrigators and other water users—river	2426	Agriculture	Medium
Tinana Creek—Tinana Barrage storage	Irrigators and other water users—river	5205	Agriculture	Medium
	Irrigators and other water users—Walker's point system	3675	Agriculture	Medium
	Unallocated water	3000		Medium
	Point loss	150	Losses	High (loss)
	Continuing loss	315	Losses	Medium (loss)
Total		**34 497**		

Source: Interim Resource Operations Licence for the Lower Mary River Water Supply Scheme July 2008.

4.3.2 Availability of irrigation water

As indicated in tables 5 and 6, approximately 40 000 ML of medium priority water is allocated for agricultural irrigation purposes. However, due to a decline in areas irrigated throughout the catchment, actual rural water use (that is, the proportion of supplementary water entitlements fully utilised) is estimated to range between approximately 40% and 60%, dependent upon location within the catchment. These unused water entitlements are commonly referred to as latent, sleepers, or dozers, and with the proposed introduction of a water entitlement trading scheme (with the release of a ROP due in early 2009), a number of them are likely to become available for purchase.

In addition, tables 5 and 6 also show that another 9000 ML of unallocated medium priority water is currently available at various locations throughout the Mary River Catchment.

The actual day-to-day management of the two water supply schemes is carried out by the IROL holder for each scheme: Sunwater and SEQ Water. SEQ Water owns Borumba Dam (from which much of the supplemented water for the Mary is derived), and will also manage the distribution of bulk water to all end users from Yabba Creek/ Borumba Dam and above the Upper Storage limit of the Mary River Barrage.

Consequently, of the 9000 ML of unallocated medium priority water currently available, SEQ Water will manage the sale/distribution of 3000 ML, while Sunwater will manage the remaining 6000 ML.

For more information regarding these unallocated entitlements, view the following websites: www.seqwater.com.au and www.sunwater.com.au

4.3.3 Pricing for irrigation water

The bulk water supply entities (SEQ Water and Sunwater) are responsible for the setting and collection of water charges. These charges are to offset the costs incurred to research, operate, maintain and refurbish the infrastructure required to store the water and deliver it so that it can be used for irrigation, and to ensure that the water is available for future generations of irrigators.

Water charges are based on a two-tariff system: Part A, which covers the fixed costs of maintaining water supply; and Part B, which covers the costs associated with water delivery. Hence, Part A tariffs are charged regardless of whether or not there is water usage, while Part B is proportionate to the quantity of water utilised.

Sunwater manages 27 water supply schemes across Queensland. To provide transparency and security to its water clientele, it provides long-term pricing structures for all of its schemes. Table 7 provides an example of water charges for some of the rural water users within the Lower Mary River Irrigation Area (LMIA) as managed by Sunwater.

For more water pricing information see the following website: www.sunwater.com.au/ irrigationpricing_final_report.htm

Table 7. Example of water pricing by Sunwater for Lower Mary River (Mary Barrage) (per ML basis)

	2005–06 (last year)	2006–07 (Year 1)	2007–08) (Year 2)	2008–09 (Year 3)	2009–10 (Year 4)	2010–11 (Year 5)
Part A	$8.60	$8.04	$8.04	$8.04	$8.04	$8.04
Part B	$8.02	$8.58	$8.58	$8.58	$8.58	$8.58
Total	**$16.62**	**$16.62**	**$16.62**	**$16.62**	**$16.62**	**$16.62**

Source: Sunwater Irrigation Price Paths 2006–07/2010–11, Final Report, September 2006. Based in 2005–06 dollars and subject to cumulative annual indexation on 1 July each year.

4.4 Soil Resources

This section seeks to provide a preliminary overview of the soil resources supporting agriculture within the Mary River Catchment. Topography (as highlighted in Map 9) varies substantially across the catchment, and greatly influences the distribution of soil types.

Key topographical features are the steep mountain ranges across the southern and western sections of the catchment (peaks rising to more than 800 meters above sea level in the Conondale National Park, located in the south-west of the catchment). The other key topographical features are the alluvial and coastal plains, particularly in the north-east of the catchment (which supports numerous cropping activities, including sugarcane).

For more information regarding the catchment's topography, see the Pointon and Collins, 2000.

In the past, CSIRO, Department of Natural Resources and Water, Department of Primary Industries and Fisheries, and private consultants have conducted a number of studies to describe and classify soils across the Mary River Catchment. The most comprehensive analysis of soils across the entire catchment is that shown by CSIRO Atlas of Australian Soils in 1968. The CSIRO mapping exercise was conducted at a very broad scale of 1:2 000 000, which restricts its use to overview purposes. Map 10 shows the catchment's soil as described by the CSIRO study.

The Department of Natural Resources and Water began mapping the soils of the Mary River Catchment in 1986. These are outlined in Map 11 and Table 8.

The type of survey undertaken affects the use of information obtained. For example:

- The 1:50 000 land resource assessment surveys aim to map soil types and their associated attributes and limitations. This soil information is used to evaluate mapped areas for their capability to sustain a crop or pasture that is economically viable as well as environmentally sustainable. Users of the information can then determine the most suitable land use for any given area that is mapped. The surveys also record landform, vegetation, and land surface information, which is used to gain a more detailed understanding of the soils within the mapped areas. Soil surveys at a scale of 1:50 000 are entered into digital format on geographic information systems (GIS) and are able to be used for catchment management, large property management, etc.
- 1:100 000 surveys are limited in detail and are used for regional assessment. They give a broad assessment of the land resources present. These surveys are also entered into GIS, but their use is restricted by the scale of mapping.

Table 8. Land and soil survey project details within the Mary River Catchment

Project/report	Mapping scale	Project progress
Horticultural land suitability study—Sunshine Coast South East Queensland	1:100 000	Completed
Developing sustainable natural resource management systems for Maryborough	1:50 000	Completed
Mary River Catchment land resource assessment project	1:50 000	Completed
Gundiah—Curra land resource assessment	1:50 000	Completed
Maryborough Tiaro land resource assessment	1:50 000	Completed
Soil and landscape modelling in Cooloola Shire (COOL)	1:100 000	Completed
Soil and landscape assessment of the Maroochy River Catchment (SCSLA)	1:100 000	In progress. However, mapping data available
Soils and Land Suitability—The Kenilworth—Conondale Area	1:50 000	Completed

Note that all these reports are available for purchase from NRW service centres, or from the website on www.nrw.qld.gov.au

More detailed information for key soil groups of the region is provided in Appendix F.

4.5 Agricultural land classes of the Mary Economic Region

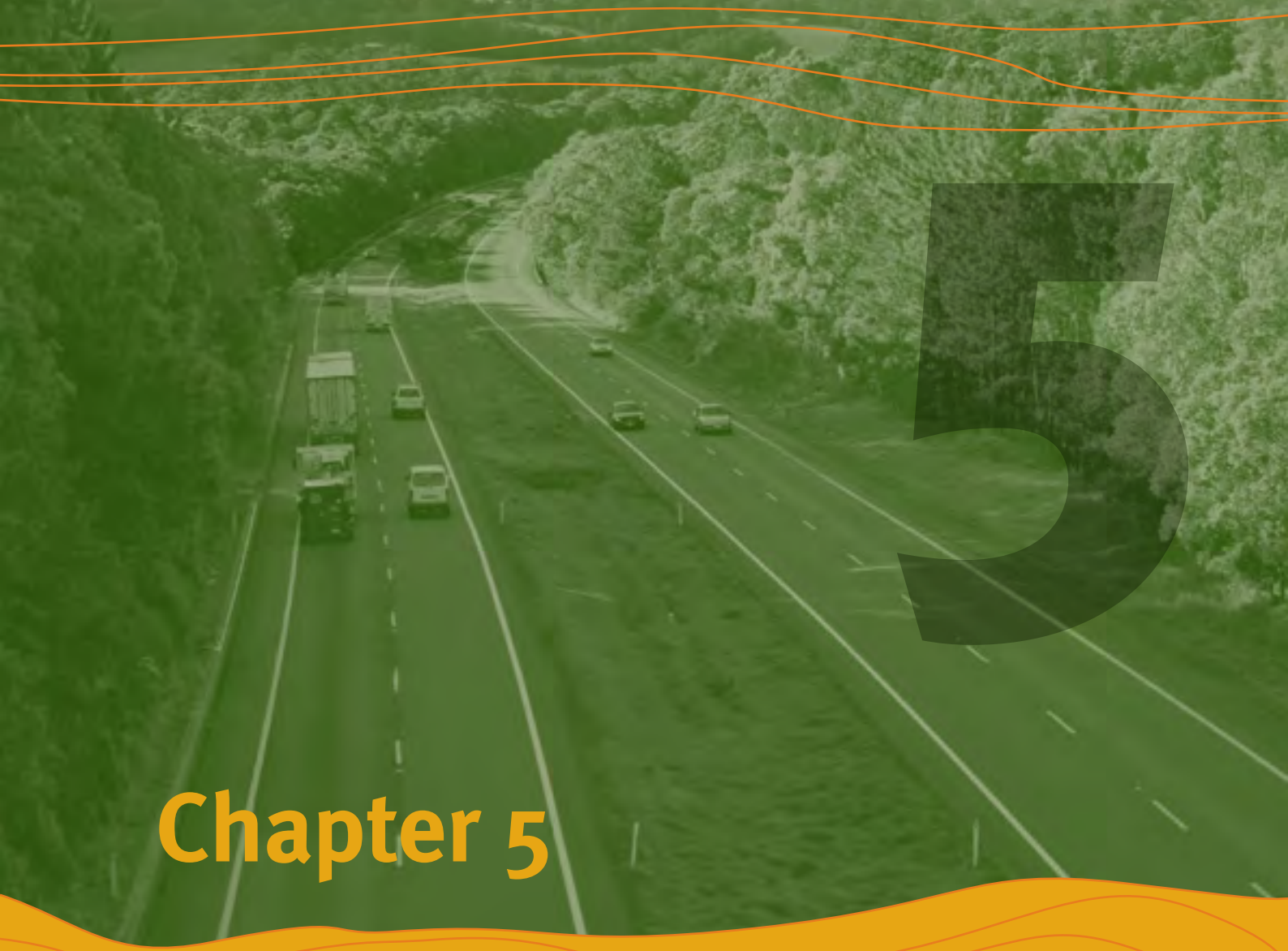
The Queensland Government, through various departments and agencies, has undertaken various land resource surveys to measure soil and land attributes. This work is then used to assess land suitability for a range of agricultural land uses. Agricultural land classes are based on an assessment of the suitability of land for a specified agricultural use. Four classes of agricultural land use are used in Queensland (refer to Table 10).

Map 12 highlights the assessed agricultural capacity for the Mary River Catchment. Note that the information provided in this map is to be viewed in a generalised manner.

Table 9. Agricultural land classes

Class	Description
Class A Crop land	Land that is suitable for current and potential crops with limitations to production ranging from none to moderate levels.
Class B Limited crop land	Land that is marginal for current and potential crops due to severe limitations and is suitable for pastures. Engineering and/or agronomic improvements may be required before the land is considered suitable for cropping.
Class C Pasture land	Land that is suitable only for improved or native pastures due to limitations which preclude continuous cultivation for crop production; some areas may tolerate a short period of ground disturbance for pasture establishment.
Class D Non-agricultural land	Land not suitable for agricultural uses due to extreme limitations. This may be undisturbed land with significant habitat, conservation and/or catchment values or land that may be unsuitable because of very steep slopes, shallow soils, rock outcrop or poor drainage.

Source: Department of Primary Industries and Department of Housing, Local Government and Planning. (1993). Planning Guidelines: The Identification of Good Quality Agricultural Land.



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Chapter 5

Infrastructure supporting economic development

CHAPTER 5

Infrastructure supporting ag

Advanced networks of infrastructure products and services support farm based and off-farm based agribusinesses throughout the Mary Economic Region. This chapter seeks to highlight a number of these infrastructure networks, and also highlights the considerable future investments being undertaken by the Queensland Government within this area to drive future economic growth.

5.1 Transport

Road

As indicated in Map 13 (and in Map 14 in Chapter 5.6), the region is well supported by transport infrastructure, with direct access by sea and air to major centres both domestically and throughout South East Asia.

The Bruce Highway (National Highway One) runs through the region, linking the key business districts of Nambour, Gympie and Maryborough with Brisbane to the south, and Bundaberg region to the north. Travelling from Nambour to Brisbane on the Bruce Highway takes approximately 1 hour and 15 minutes; Gympie to Brisbane approximately 2 hours; and Maryborough to Brisbane approximately 2 hours 45 minutes.

In addition, the Wide Bay Highway, just north of Gympie township, provides access to the South Burnett, Toowoomba and inland New South Wales.

Rail

The region is also well serviced by the State Government's Q-Link rail line, which includes major freight stations at Gympie and Maryborough, and numerous commuter stops in between. The Queensland Rail Citytrain operates a daily commuter service from Gympie to Brisbane. Details regarding rail services are available at: www.qr.com.au and www.citytain.com.au

Air

The region is also serviced by several airports. There is an airport 15 kilometres south of Gympie off the Bruce Highway, and an airport (predominantly light passenger) on the outskirts of Hervey Bay. To the north, Bundaberg has a larger passenger airport.

Maroochy Airport, on the Sunshine Coast, is a major domestic and commercial airport used by most domestic airline operators (with direct flights to many capital cities in Australia).

Brisbane Airport, some 100 kilometres south of Nambour, has domestic, international and airfreight terminals and provides regular passenger and freight services. Details of Brisbane Airport's facilities and services are available at: www.brisbaneairpot.com.au

Port

The region also has access to sea ports. Ports located at Hervey Bay, Maryborough, and Mooloolaba have extensive facilities supporting a vibrant recreational sector, as well as commercial users. The commercial users include major tourism operators and commercial fishing.

The commercial Port of Brisbane is located alongside Brisbane Airport. The Port of Brisbane is Queensland's largest general cargo port and Australia's fastest-growing container port, handling more than 2600 ships each year and exchanging more than 28 million tonnes of cargo. Details regarding Brisbane's port facilities and services are available at: www.portbris.com.au

Bundaberg, to the north, also has commercial port facilities to cater for specialised bulk and general cargoes.

5.2 Energy

Electricity is provided throughout the region, and businesses in Queensland can now negotiate with a number of licensed electricity retailers to suit their particular requirements. Some innovative companies have invested, or are considering the potential for co-generation, which can feed excess power back to the grid.

Most properties within the region are serviced via overhead transmission, although some newer estates and local estates in coastal areas have underground power. For a listing of licensed electricity retailers, see the following website: www.thepowertochoose.qld.gov.au

Gas is presently available in the region through bottles and tanker refilling, or by exchange gas bottles. Gas supply is available from major suppliers such as Origin Gas, Elgas, Allgas and Kleenheat.

Plans are presently underway to supply reticulated gas to large gas users in the near future. Allgas/ Energex is presently negotiating pipeline routes with traditional and current landowners. This will enable reticulated gas to be supplied to the region via a Gatton to Gympie gas pipeline.

5.3 Commercial/industrial land precincts

Gympie region

There are seven designated industrial estates for business and light industry in the Gympie region, six of which are located in the City of Gympie. The zonings and site areas are mainly for light industry except for the Brisbane Road Industrial Estate, which is for high-tech industries.

Industrial land is also available at Rainbow Beach and Imbil.

A project through the Gympie Regional Council is presently investigating further industrial land precinct options.

Fraser Coast region

The Fraser Coast region sits within the Fraser Coast Enterprise Zone (incorporating Maryborough and Hervey Bay), a newly established industrial region incorporating:

- Moonaboola Industrial Estate
- Airport Industrial Estate
- Wide Bay Business Park
- Dundowran Industrial Estate
- Fraser Coast Marine Industrial Park
- Tourism Food Precinct.

For more information see: www.fcez.com.au

Sunshine Coast region

The Sunshine Coast region has a number of commercial land precincts, including:

- Central Park, Coolum
- Sunshine Industrial Park, Caloundra
- Yandina Industrial Estate
- Carpenters Lane, Cooroy
- Cooroy Lower Mill site
- Kunda Park
- Nandroya Industrial, Cooroy.

For more information see: www.business.sunshinecoast.qld.gov.au

5.4 Labour resources

The region also has significant labour resources.

Table 10 provides an overview of key statistical information for the regional centres of Gympie, Maryborough, Cooroy and Maleny (as defined by their postcodes). Of particular interest is the recorded unemployment rate at the time of Census 2006. Maryborough had an unemployment rate of 8.0%, Gympie 7.8%, Cooroy 6.4% and Maleny 5.1%. In comparison, at that time the Australian unemployment rate was 5.2%, while the Queensland unemployment rate was 4.7%.

Table 10 also highlights the diversity for these regional centres, in terms of employment by industry. Agriculture (as defined by sheep, beef cattle and grain farming) is a top-five industry employer for residents at Gympie and Maleny. Note that this classification system disaggregates agriculture into subgroups (such as horticulture, sugarcane production), and therefore the significance of agriculture is much higher than reported above. In addition, there are significant numbers employed post-farm gate within the region, e.g. at Maryborough Sugar Mill.

Note that the horticultural industry also utilises transient labour, particularly backpackers, for seasonal work. However, competition for transient labour is very strong from Childers and Bundaberg to the north, with a number of backpacker hostels targeted to supply casual labour to farmers within the Childers/Bundaberg region.

Regional information, at the level of either Local Government Boundary or Postcode regarding labour force, occupation and industry of employment are readily available from the ABS website: www.censusdata.abs.gov.au

5.5 Labour training resources

The region is well supported with vocational training resources. The Wide Bay Institute of TAFE has a number of campuses within the region, including:

- Gympie
- Maryborough
- Hervey Bay
- Bundaberg (Marina).

Through these campuses, approximately 12 000 students each calendar year undertake a range of courses and qualifications from more than 200 programs. A number of programs are also offered through other means, including:

- online
- external
- workshop
- workplace
- blended.

For more information regarding Wide Bay Institute of TAFE and its programs, see the following website: www.widebay.tafe.qld.gov.au

The Sunshine Coast Institute of TAFE provides quality vocational education and training to support the dynamic Sunshine Coast region. The campus has a number of programs centered on building and construction, manufacturing, agricultural production, hospitality, tourism and retail, which all are key economic drivers for the area.

For more information, see the following website: www.sunshinecoast.tafe.qld.gov.au

The region also has a university campus. The University of the Sunshine Coast is located at Buderim. The University has approximately 5800 students enrolled in 384 courses, including 67 undergraduate degree programs and 50 postgraduate degree programs. For more information, see the following website: www.usc.edu.au

A number of other vocational, higher education and academic facilities are located in and around Brisbane.

Table 10. An overview of labour resources and employment (Census year 2006)

	Gympie[2]	Mary-borough[1]	Cooroy[3]	Maleny[4]
Population (resident)	36 164	31 330	7587	7279
Labour engagement				
Employed full-time	8693	7112	1696	1471
Employed part-time	4702	3661	1163	1244
Unemployed	1203 (7.8%)	1012 (8.0%)	210 (6.4%)	158 (5.1%)
Industry of employment[5]				
School education	867 (6.1%)	674 (5.8%)	161 (5.3%)	185 (6.3%)
Hospitals	–	466 (4.0%)	81 (2.6%)	–
Log sawmilling and timber dressing	–	441 (3.8%)	–	–
Cafes, restaurants and takeaway food	410 (2.9%)	383 (3.3%)	80 (2.6%)	126 (4.3%)
Supermarkets and grocery stores	417 (2.9%)	329 (2.8%)	122 (4.0%)	107 (3.6%)
Road freight transport	401 (2.8%)	–	–	–
Sheep, beef cattle and grain farming	447 (3.1%)	–	–	80 (2.7%)
Residential building construction	–	–	111 (3.6%)	–
Accommodation	–	–	–	91 (3.1%)
Occupation	–	–	–	–
Technicians and trade workers	2200 (15.4%)	1853 (16.0%)	542 (17.7%)	422 (14.4%)
Clerical and administation workers	1620 (11.3%)	1768 (15.3%)	392 (12.8%)	326 (11.1%)
Labourers	2482 (17.4%)	1633 (14.1%)	396 (12.9%)	363 (12.4%)
Professionals	1640 (11.5%)	1399 (12.1%)	471 (15.4%)	616 (21.0%)
Community and personal service	1235 (8.6%)	1316 (11.4%)	276 (9.0%)	295 (10.1%)
Managers	2077 (14.5%)	1236 (10.7%)	396 (12.9%)	481 (16.4%)
Sales workers	1383 (9.7%)	1142 (9.9%)	322 (10.5%)	251 (8.6%)
Machinery operators and drivers	1365 (9.6%)	1043 (9.0%)	212 (6.9%)	118 (4.0%)

[1]Area of Maryborough and districts represented by the postcode of 4650.

[2]Area of Gympie and districts represented by the postcode of 4570.

[3]Area of Cooroy and districts represented by the postcode of 4563.

[4]Area of Maleny and districts represented by the postcode of 4552.

[5]Only the top five industries reported.

Source: ABS 2006 Census, Quick Stats.

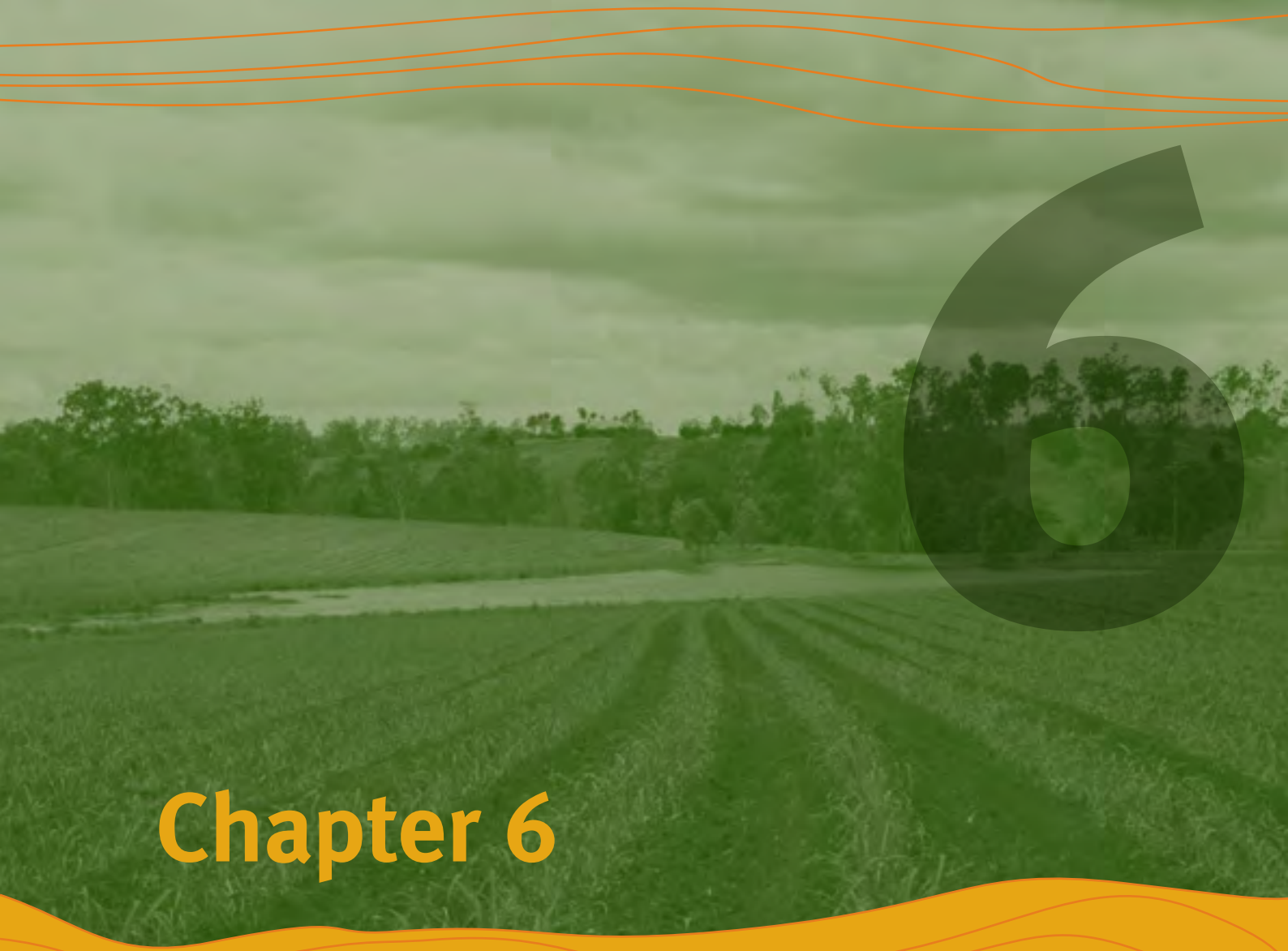
5.6 Future government commitments to infrastructure

Over the next 18 years, the Queensland Government is proposing to invest more than $107 billion in infrastructure within South East Queensland. Key investment areas are:

- transport and freight
- water
- energy
- information and communication technology
- industry development
- social and other community infrastructure.

For a detailed overview of these proposed projects, see the South East Queensland Infrastructure Plan and Program 2008–2026: www.dip.qld.gov.au/regional-planning/south-east-queensland.html

Map 14 provides an overview of the proposed new investments in transport and freight infrastructures across the south-east region, with major upgrades to roads and rail, in particular in the Sunshine Coast region.



6

Chapter 6

Overview of economic development support structures within the region

CHAPTER 6

There are a number of economic development support agencies across the region, as listed below.

Department of Primary Industries and Fisheries

DPI&F is an economic development agency, with offices at Nambour, Gympie and Maryborough, and a sub-tropical horticultural research station at Nambour. A DPI&F research station at Bundaberg also supports the Mary Economic Region.

Business Information Centre

The DPI&F Business Information Centre answer questions related specifically to DPI&F services. Business Information Centre staff may also refer callers to other government departments for further assistance. The Business Information Centre is open from 8 am to 6 pm Monday to Friday, and 9 am to 6 pm on Wednesdays. It is closed on public holidays.

Contact: DPI&F Business Information Centre on 13 25 23 (for the cost of a local call).

Horticulture opportunities in the Mary Valley area

At the DPI&F Maroochy Research Station, information is available on establishing and managing fruit and vegetable crops grown in the Mary Valley area, and on climate, soil and irrigation issues.

The on-site Farmers Information Centre is open from 9 am to 5 pm. An extension officer is also available from 9 am to 12:30 pm on Mondays, Wednesdays and Fridays.

Contact: DPI&F Maroochy Research Station on 5441 2211 or the DPI&F Business Information Centre on 13 25 23.

Building rural leaders

This program builds the confidence and capacity of individuals to work together to improve leadership in communities, organisations and businesses. The service is available to primary producers.

Contact: Building Rural Leaders Program on Freecall 1800 356 621 or the DPI&F Business Information Centre on 13 25 23.

Continuous improvement and innovation team

The continuous improvement and innovation team design tools to help farm managers and others design and improve systems, processes and practices. The service is available to primary producers.

Contact: Janice Timms on (07) 3239 6541 or the DPI&F Business Information Centre on 13 25 23.

Farm financial counselling service

The farm financial counselling service works with primary producers to help them address financial problems and facilitate structural adjustment. Financial counsellors can help farmers understand their financial position, identify and assess the financial impacts of options for resolving problems and develop strategies and plans for improvement. Financial counsellors also assist in negotiations with financial and other institutions. The service is available to primary producers.

Contact: Farm financial counsellor, Steven Smith on 5480 4431, or the DPI&F Business Information Centre on 13 25 23.

Rural partnerships

Rural partnerships works with industry and community groups to help them manage change and access a range of government services to promote rural development. The service is available to primary producers in association with community groups and members.

Contact: Bruce McGrath on 3404 3354 or the DPI&F Business Information Centre on 13 25 23.

Plantation forestry

Forest Plantations Queensland (FPQ) is a commercial unit responsible for managing the state-owned forest estate. FPQ is also seeking to expand the exotic and hardwood plantations resource through land rental arrangements with farmers. Suitable land parcels of 30 ha and above will be considered.

Contact: The Plantation Development Officer at Beerburrum on 5438 6654.

QRAA

Primary Industry Productivity Enhancement Scheme

Primary Industry Productivity Enhancement Scheme provides low-interest loans, with no fees and charges, to assist growers increase the productivity and long-term viability of their enterprise. The service is available to primary producers.

Resource management loans

Resource management loans assist growers to achieve sustainable development by improving the management of their natural resources, including improving existing irrigation systems and water-use efficiency.

Maximum loan amount: $300 000 pa.

Repayment terms: 20 years.

First Start farm loans

First Start farm loans provide growers with access to financial assistance in the first years of establishing their farming business, including purchasing property on a staged basis or entering into leasing or share farming arrangements.

Maximum loan amount: $500 000.

Repayment terms: 20 years.

Development loans

Development loans allow growers to implement on- and off-farm projects to improve their production efficiencies and capabilities through activities such as diversifying, value adding or rationalising partnerships.

Maximum loan amount: $500 000.

Repayment terms: 20 years.

Contact: QRAA on Freecall 1800 623 946 or www.qraa.qld.gov.au

Department of Education, Training and the Arts

Training Queensland

Training Queensland provides information on vocational education and training, funding and incentives, wages and conditions, and labour market research.

Contact: Training Queensland on 1300 369 935.

Department of Employment and Industrial Relations

Skilling Queenslanders for Work initiative has provided resources to up-skill existing seasonal workers in the agricultural industry.

Contact your local DEIR office on 1300 369 925.

Department of Tourism, Regional Development and Industry

The Department of Tourism, Regional Development and Industry regional centres work with local business and industry by providing support for regional, industry and business development to diversify the economic base of the region and grow a sustainable regional economy.

The department supports business development through a wide range of products and services (many of which are on line at www.business.qld.gov.au). Access to the department's full range of high quality services is made easy through the regional centres by calling 1300 363 711. Expert assistance is provided through Trade Queensland's Advisor Unit, email: tradeinfo@qld.gov.au

Cooloola Regional Development Bureau

Cooloola Regional Development Bureau is a not-for-profit autonomous organisation responsible for promoting tourism and economic development within the Cooloola (Gympie) region.

www.cooloola.org.au

Economic Development Unit, with the Fraser Coast Regional Council

This unit provides advice and ideas to assist investors, developers and enterprises seeking to locate or expand within the Fraser Coast region.

www.frasercoast.qld.gov.au/business/edu

Sunshine Coast Regional Council Economic Development

The Economic Development Branch aims to assist new and existing businesses expand, generate wealth and create jobs.

Contact 07 5475 8501.

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APPENDIX A

A. Detailed overview of agriculture within the Upper Mary Economic Region

This section provides detailed statistics on food and fibre production within the Upper Mary Economic Region.

A key feature of the Upper Mary Economic Region, is the diversity of cropping activities undertaken, which includes an array of field cropping, vegetable and sub-tropical fruit tree crops, and livestock activities reflecting the suitability of the region to a wide range of food and fibre production activities.

For many activities, there are a number of noticeable trends in terms of value of production. For some, it may be more of a reflection in changes in farm gate prices, rather than a change in production levels. For instance, the farm gate prices for beef practically doubled between 1996–97 and 2000–01.

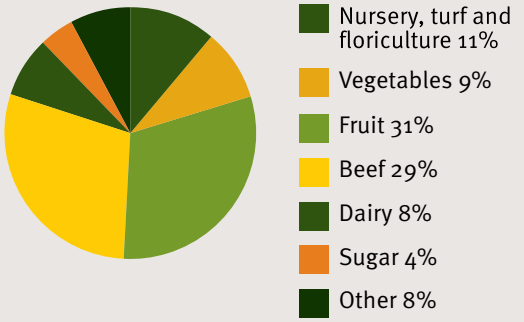
However, for other primary sectors, there are noticeable changes in production levels. The closure of the Moreton Mill (Nambour) in 2003 impacted substantially on the farm gate value of sugarcane, as cane farmers became reliant on either transporting cane to Maryborough Mill, or reliant on alternative markets (e.g. mulch, stock feed).

As indicated in Table A1, the milk industry within the Upper Mary Economic Region has also declined dramatically. Dairy industry restructuring in the early 2000s, and high land values, have resulted in a number of dairy farms closing.

Note that Table A1 does not report statistics by ABS for ginger. DPI&F (2009) estimates that approximately $11m of ginger is produced per annum.

Table A2 provides an overview of the number of food and fibre businesses within the Upper Mary Economic Region in 2005–06. Of the 880 recorded agribusinesses (down from 1116 in 2000–01), there are 267 involved in fruit production. Other key food and fibre industries in terms of agribusinesses were beef (257), nurseries, turf and floriculture (100), vegetable (76), dairy (68), and sugarcane (39).

Figure A1. Breakdown on the number of food and fibre businesses by industry within the Upper Mary Economic Region as at 2005–06



Source: DPI&F calculations utilising ABS unpublished statistics.

About 30% of all food and fibre businesses (Figure A1) were involved in fruit growing. A further 10% of all agribusinesses were involved in nursery and related high-value production. The high rainfall, generally fertile soils, and high land real estate values, along with the sub-tropical environment and the region's close proximity to Brisbane, has favoured the development of high-valued/ intensive cropping activities within the Upper Mary Economic Region.

Table A1. Value of agricultural production within the Upper Mary Economic Region

	1996–97	2000–01	2005–06
Hay production	$15 000	$65 000	$550 000
Maize for grain	$33 000	$46 000	$167 000
Tobacco	$681 000	$673 000	$175 000
Sugarcane	$17 061 000	$7 909 000	$1 565 000
Cultivated turf	$2 019 000	$3 732 000	$NA
Nurseries	$20 153 000	$16 053 000	$21 462 000
Cut flowers	$917 000	$1 950 000	$NA
Potatoes	$187 000	$121 000	$NA
French and runner beans	$94 000	$293 000	$204 000
Cabbage	$92 000	$48 000	$7000
Capsicum, chillies and peppers	$27 000	$115 000	$7000
Cucumbers	$45 000	$286 000	$535 000
Zucchini and squashes	$626 000	$1 126 000	$1 634 000
Lettuce	$598 000	$161 000	$566 000
Melons—watermelons	$118 000	$72 000	$178 000
Mushrooms	$1 228 000	$2 091 000	$5 165 000
Onions—spring (including shallots)	$0	$486 000	$20 000
Pumpkins, triambles and trombones	$318 000	$413 000	$769 000
Parsley	$0	$36 000	$43 000
Peas—snow	$18 000	$66 000	$64 000
Sweet corn	$2000	$60 000	$42 000
Tomatoes	$552 000	$287 000	$436 000
Oranges	$3 315 000	$2 190 000	$1 417 000
Lemons and limes	$2 775 000	$1 236 000	$691 000
Mandarins	$910 000	$211 000	$534 000
Avocados	$4 243 000	$4 620 000	$3 695 000
Mangoes	$513 000	$871 000	$57 000
Nectarines	$314 000	$161 000	$356 000
Peaches	$271 000	$217 000	$284 000
Plums	$20 000	$30 000	$9000
Macadamia nuts	$7 199 000	$3 085 000	$7 235 000
Pecans	$14 000	$87 300	$1000
Strawberries	$9 243 000	$16 765 000	$24 093 000
Bananas	$1 395 000	$1 034 000	$805 000
Papaws/papaya	$552 000	$34 000	$28 000
Pineapples	$10 325 000	$8 939 000	$14 782 000
Milk	$22 846 000	$18 760 000	$17 755 000
Cattle and calves slaughtered	$7 599 000	$13 806 000	$14 459 000
Pigs slaughtered	$40 000	$389 000	$2 842 000
Poultry slaughtered	$36 476 000	$33 864 000	$32 460 000
Eggs produced for human consumption	$3 789 000	$3 467 000	$24 000
Honey and beeswax	$430 000	$255 000	$NA

Source: DPI&F calculations utilising ABS Agstats and 7125.0 Agricultural Commodities: Small Area Data Australia, 2005–06.

Note that valuesare rounded to nearest $1000.

Activities grossing less than $20 000 in 2000–01 have been omitted from this table.

Table A2. Number and distribution of food and fibre businesses operating within the Upper Mary Economic Region in 2005–06*

	Less than $22 500 pa	22 500 to less than 50 000	50 000 to less than 100 000	100 000 to less than 150 000	150 000 to less than 200 000	200 000 to less than 350 000	350 000 to less than 500 000	500 000 to less than 1 000 000	1 000 000 to less than 2 000 000	2 000 000 or more	Total
Nurseries	14	8	9	9	0	13	1	1	2	0	**57**
Turf	–	–	–	3	3	3	4	–	–	–	**13**
Floriculture	7	8	6	2	4	2	–	1	–	–	**30**
Mushrooms	–	–	–	–	–	1	–	1	2	–	**4**
Vegetable growing	17	16	9	4	2	14	7	4	1	2	**76**
Stone fruit growing	1	2	–	1	1	–	–	1	–	–	**6**
Berry fruit growing	1	2	5	8	3	5	1	6	4	2	**37**
Citrus fruit growing	9	1	4	2	2	–	1	–	–	1	**20**
Other fruit and nuts	56	48	48	11	8	20	5	6	–	2	**204**
Grain/sheep and grain/beef cattle	–	1	1	–	1	–	–	–	–	–	**3**
Beef cattle farming	138	70	34	9	3	2	1	–	–	–	**257**
Dairy cattle farming	3	5	5	6	13	21	7	8	–	–	**68**
Poultry farming	1	–	–	–	–	–	–	3	6	2	**12**
Pig farming	–	–	–	–	–	–	–	–	1	–	**1**
Horse farming	14	4	3	3	1	1	–	–	–	–	**26**
Livestock farming n.e.c.	5	–	–	1	–	–	–	–	–	–	**6**
Aquaculture	1	1	–	–	–	–	–	–	–	–	**2**
Sugarcane growing	11	12	3	8	2	3	–	–	–	–	**39**
Other crop growing n.e.c.	2	–	4	2	–	1	–	–	–	–	**9**
Beekeeping	5	1	3	–	–	–	–	–	–	–	**9**
Total agriculture	**285**	**179**	**134**	**69**	**43**	**86**	**27**	**31**	**16**	**9**	**879**

Source: unpublished statistics from ABS (AgStats database).

**Estimated Value of Agricultural Operations (EVAO) for the financial year ending 30 June 2006.*

n.e.c. not elsewhere counted.

APPENDIX B

B. Detailed overview of agriculture within the Middle Mary Economic Region

This section provides detailed statistics on food and fibre production within the Middle Mary Economic Region.

As indicated in Table A3, the Middle Mary Economic Region is home to a wide range of cropping and livestock activities reflecting the suitability of the region to food and fibre production.

Note that values are rounded to nearest $1000.

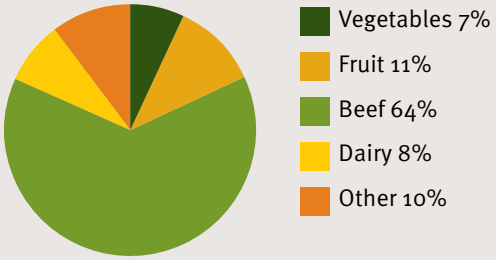
Activities grossing less than $20 000 in 2000–01 have been omitted from this table.

Table A3 highlights a number of changes that occurred between 1996–97 and 2005–06. French runner beans and zucchini expanded substantially, and were valued recently at $7m and $4.5m respectively, while both milk and pineapples contracted.

Note that Table A3 does not report statistics by ABS for ginger. DPI&F (2009) estimates that approximately $4m of ginger is grown per annum within the Wide Bay-Burnett region (which includes the Middle Mary Economic Region, the Lower Mary Economic Region, along with Childers and Bundaberg).

Table A4 provides an overview of the number of food and fibre businesses within the Middle Mary Economic Region in 2005–06. Of the 996 recorded agribusinesses, there are approximately 630 involved in beef production. Other key industries are dairy (80), fruit growing (112), and vegetable growing (70).

Figure A2. Breakdown on the number of food and fibre businesses by industry within the Middle Mary Economic Region as at 2005–06



Source: DPI&F calculations utilising ABS unpublished statistics.

About 64% of all food and fibre businesses (Figure A2) are involved in beef production. The next most common agribusiness within the Middle Mary Economic Region is fruit (11%), followed by dairy (8%) and vegetables (7%).

Table A3. Value of agricultural production within the Middle Mary Economic Region

	1996–97	2000–01	2005–06
Hay production	$2 064 000	$3 017 000	$3 530 000
Wheat for grain	$232 000	$136 000	$38 000
Barley for grain	$329 000	$61 000	$76 000
Sorghum for grain	$410 000	$284 000	$120 000
Mung beans	$0	$180 000	$44 000
Soybeans	$282 000	$108 000	$33 000
Sugarcane	$1 748 000	$1 889 000	$1 975 000
Nurseries	$2 138 000	$1 529 000	$1 267 000
Cut flowers	$709 000	$1 496 000	NA
Asparagus	$1000	$24 000	$10 000
French and runner beans	$4 904 000	$5 326 000	$7 026 000
Capsicum and chillies and peppers	$111 000	$64 000	$150 000
Cucumbers	$274 000	$296 000	$301 000
Zucchini and squashes	$1 484 000	$1 081 000	$4 580 000
Peas—green	$342 000	$228 000	$84 000
Peas—snow	$663 000	$2 304 000	$1 997 000
Pumpkins and triambles, etc	$44 000	$64 000	$196 000
Tomatoes	$116 000	$268 000	$162 000
Oranges	$93 000	$325 000	$435 000
Lemons and limes	$248 000	$42 000	$465 000
Avocados	$1 097 000	$1 295 000	$1 128 000
Mangoes	$589 000	$1 008 000	$386 000
Nectarines	$92 000	$89 000	$159 000
Peaches	$156 000	$83 000	$73 000
Macadamia nuts	$3 040 000	$5 465 000	$7 776 000
Strawberries	$558 000	$213 000	$325 000
Bananas	$543 000	$417 000	$81 000
Papaws/papaya	$679 000	$1 770 000	$66 000
Pineapples	$5 612 000	$3 748 000	$3 214 000
Wool	$12 000	$21 000	NA
Milk	$31 895 000	$27 983 000	$24 828 000
Cattle and calves slaughtered	$37 555 000	$95 184 000	$65 991 000
Pigs slaughtered	$4 878 000	$2 740 000	$4 325 000
Honey and beeswax	$242 000	$76 000	NA

Source: DPI&F calculations utilising ABS Agstats and 7125.0 Agricultural Commodities: Small Area Data Australia, 2005–06.

Table A4. Number and distribution of food and fibre businesses operating within the Middle Mary Economic Region in 2005–06*

	Less than $22 500 pa	22 500 to less than 50 000	50 000 to less than 100 000	100 000 to less than 150 000	150 000 to less than 200 000	200 000 to less than 350 000	350 000 to less than 500 000	500 000 to less than 1 000 000	1 000 000 to less than 2 000 000	2 000 000 or more	Total
Nurseries	–	1	2	–	–	–	–	–	–	–	**3**
Turf	–	–	–	–	–	–	–	–	–	–	**–**
Floriculture	2	4	1	–	–	–	–	–	–	–	**7**
Mushrooms	–	–	–	–	–	–	–	1	–	–	**1**
Vegetable growing	18	9	14	4	4	11	3	5	–	1	**69**
Stone fruit growing	1	–	1	–	–	–	–	–	–	–	**2**
Berry fruit growing	–	1	1	2	–	–	–	–	–	–	**4**
Citrus fruit growing	3	7	–	1	–	1	–	–	–	–	**12**
Other fruit and nuts	17	29	15	12	5	8	4	2	1	1	**94**
Grain/sheep and grain/beef cattle	4	3	2	1	–	–	–	–	–	–	**10**
Beef cattle farming	239	196	99	44	16	23	9	6	1	1	**634**
Dairy cattle farming	2	2	13	6	15	22	13	7	–	–	**80**
Poultry farming	1	2	1	1	–	–	–	–	–	–	**5**
Pig farming	1	–	1	1	2	3	–	–	1	–	**9**
Horse farming	7	8	4	3	1	1	–	–	–	–	**24**
Livestock farming n.e.c.	3	2	–	–	–	–	–	–	–	–	**5**
Aquaculture	1	1	1	–	–	–	–	–	–	–	**3**
Sugarcane growing	–	2	3	1	2	3	–	–	–	–	**11**
Other crop growing n.e.c.	7	1	2	2	1	4	1	1	–	–	**19**
Beekeeping	2	–	2	–	–	–	–	–	–	–	**4**
Total agriculture	**308**	**268**	**162**	**78**	**46**	**76**	**30**	**22**	**3**	**3**	**996**

Source: unpublished statistics from ABS (AgStats database).

**Estimated Value of Agricultural Operations (EVAO) for the financial year ending 30 June 2006.*

n.e.c. not elsewhere counted.

C. Detailed overview of Agriculture within the Lower Mary Economic Region

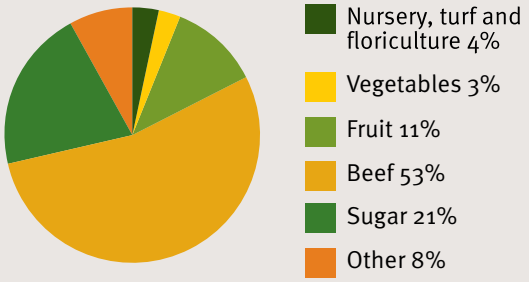
This section provides detailed statistics on food and fibre production within the Lower Mary Economic Region.

Table A5 provides greater insight into food and fibre industries within the Lower Mary Economic Region. The Lower Mary Economic Region is home to a wide range of cropping and livestock activities reflecting the suitability of the region to food and fibre production.

Table A5 highlights a number of changes that occurred between 1996–97 and 2005–06. Although beef production is the most noticeable change, expanding from $7.7m to $17m over the period, other major rural industries experiencing strong growth include nurseries ($2.7m to $4.8m), macadamia nuts ($0.8m to $2.3m), poultry eggs ($0 to $1.7m), and pineapples ($3.4m to $5.2m).

Table A6 provides an overview of the number of food and fibre businesses within the Lower Mary Economic Region in 2000–01. Of the 445 recorded agribusinesses (547 in 2000–01), there are approximately 240 involved in beef production. Other key food and fibre industries are sugarcane farming (92) and fruit growing (50).

Figure A3. Breakdown on the number of food and fibre businesses by industry within the Lower Mary Economic Region as at 2005–06



Source: DPI&F calculations utilising ABS unpublished statistics.

More than half of all food and fibre businesses (Figure A3) are involved in beef production. The next most common agribusiness within the Lower Mary Economic Region is sugarcane growing at 21%.

Table A5. Value of agricultural production within the Lower Mary Economic Region

	1996–97	2000–01	2005–06
Hay production	$229 000	$90 000	$206 000
Cereals for grain	$47 000	$30 000	$18 000
Soybeans	$6000	$65 000	$82 000
Sugarcane	$18 744 000	$12 911 000	$15 263 000
Cultivated turf	$506 000	$1 295 000	NA
Nurseries	$2 713 000	$1 584 000	$4 759 000
Cut flowers	$145 000	$260 000	NA
Potatoes	$114 000	$21 000	$91 000
French and runner beans	$232 000	$315 000	$626 000
Zucchini and squashes	$168 000	$89 000	$934 000
Melons—watermelons	$101 000	$58 000	$56 000
Mushrooms	$0	$134 000	$332 000
Peas—snow	$46 000	$91 000	$61 000
Pumpkins and triambles, etc	$64 000	$64 000	$310 000
Tomatoes	$138 000	$80 000	$20 000
Oranges	$90 000	$49 000	NA
Lemons and limes	$567 000	$93 000	$150 000
Mandarins	$745 000	$31 000	NA
Avocados	$240 000	$530 000	$668 000
Mangoes	$204 000	$217 000	$259 000
Macadamia nuts	$772 000	$1 336 000	$2 276 000
Papaws/papaya	$238 000	$764 000	$21 000
Bananas	$168 000	$114 000	$12 000
Pineapples	$3 373 000	$3 170 000	$5 235 000
Milk	$4 841 000	$2 298 000	$2 065 000
Cattle and calves slaughtered	$7 737 000	$16 272 000	$17 135 000
Pigs slaughtered	$2 624 000	$3 118 000	$3 532 000
Poultry slaughtered	$5000	$29 000	$126 000
Eggs for human consumption	$0	$532 000	$1 660 000
Honey and beeswax	$526 000	$372 000	NA
Milk	$31 895 000	$27 983 000	$24 828 000
Cattle and calves slaughtered	$37 555 000	$95 184 000	$65 991 000
Pigs slaughtered	$4 878 000	$2 740 000	$4 325 000
Honey and beeswax	$242 000	$76 000	NA

Source: DPI&F calculations utilising ABS Agstats and 7125.0 Agricultural Commodities: Small Area Data Australia, 2005–06.

Note that values rounded to nearest $1000.

Only food and fibre industries with a value over $20 000 in 2000–01 have been included in the table above.

Table A6. Number and distribution of Food & Fibre businesses operating within the Lower Mary Economic Region in 2005-06*

	Less than $22 500 pa	22 500 to less than 50 000	50 000 to less than 100 000	100 000 to less than 150 000	150 000 to less than 200 000	200 000 to less than 350 000	350 000 to less than 500 000	500 000 to less than 1 000 000	1 000 000 to less than 2 000 000	2 000 000 or more	Total
Nurseries	–	1	2	–	–	2	1	1	–	–	7
Turf	–	–	–	–	1	2	1	1	–	–	5
Floriculture	–	–	1	–	1	2	–	–	–	–	4
Mushrooms	–	–	–	–	–	1	–	–	–	–	1
Vegetable growing	5	1	1	1	1	2	–	–	–	–	11
Stone fruit growing	–	–	–	–	1	–	–	–	–	–	1
Berry fruit growing	–	1	1	–	–	–	–	–	–	–	2
Citrus fruit growing	1	2	–	–	–	–	–	–	–	–	3
Other fruit and nuts	6	7	12	4	2	6	3	3	1	–	44
Grain/sheep and grain/beef cattle	2	–	1	–	–	–	–	–	–	–	3
Beef cattle farming	87	57	57	17	7	9	2	4	–	–	240
Dairy cattle farming	–	–	–	1	2	2	1	1	–	–	7
Poultry farming	–	–	–	–	–	–	–	–	–	–	–
Pig farming	–	–	–	1	1	–	–	–	–	1	3
Horse farming	2	2	2	–	–	–	–	–	–	–	6
Livestock farming n.e.c.	3	–	1	–	–	–	–	–	–	–	4
Aquaculture	1	–	–	–	–	–	–	–	–	–	1
Sugarcane growing	4	16	24	13	11	10	9	3	2	–	92
Other crop growing n.e.c.	–	2	2	1	1	–	–	–	–	–	6
Beekeeping	2	1	1	1	–	–	–	–	–	–	5
Total agriculture	**113**	**90**	**105**	**39**	**28**	**36**	**17**	**13**	**3**	**1**	**445**

Source: unpublished statistics from ABS (AgStats database).

**Estimated Value of Agricultural Operations (EVAO) for the financial year ending 30 June 2006.*

n.e.c. not elsewhere counted.

APPENDIX D

D. Population information

The largest towns in the region are Hervey Bay, Maryborough, Gympie and Nambour with many smaller towns and rural residential communities scattered throughout the catchment. The highest density of towns is in the eastern and southern regions of the catchment.

ABS Census 2006 showed Hervey Bay and district's (postcode 4655) population at 46 930, Maryborough and district's (postcode 4650) population at 31 330, while Gympie and district's (postcode 4570) population was 36 164. Population centres are constantly expanding throughout the catchment as the public are discovering the favourable climate and living conditions that prevail in the region. Map A1 highlights the population of the larger townships within the region.

More information for key regional areas—including demographics, labour force, occupations, incomes, industry of employment, dwelling characteristic, etc—are available from ABS on the website: www.censusdata.abs.gov.au

An overview of the regional population is also available based on Local Government Authority (LGA) boundaries. Map A1 highlights the old LGA boundaries (LGA boundaries prior to amalgamation in March 2008) and the estimated resident population (as of 2006 Census collection). Average annual growth rates for each LGA since 2001 are also presented.

Of interest in Map A1, is the diversity in population growth rates for the region. The old LGA of Hervey Bay was recognised as one of the fastest growing regions in the country, posting annual growth of 4.9% pa between 2001 and 2006. Although Woocoo and Tiaro shires also posted high growth rates of 3.6% pa, they both have a very small population base, whereas Maroochy, Caloundra and Caboolture have significantly larger population bases.

Table A7 below highlights the current population for the former local government authorises within the Mary Economic Region, and also provides forecasts for future population numbers for these areas. Of interest are the projected growth rates for the former local government boundaries of Maroochy (2.6% average pa), Hervey Bay (2.4%) and Tiaro (2.2%), which are well above the projected average annual growth rate for Queensland of 2.0%, and that for Australia of 1.2% per annum.

Table A7: Current and projected population numbers for selected local Government authorities within the Mary Economic Region

	Population 2006	Projected population 2016	Projected population 2026	Average annual growth 2006–2026
Maroochy (S)	149 051	197 851	249 412	2.6%
Hervey Bay (C)	54 310	68 692	86 875	2.4%
Noosa (S)	48 556	54 793	58 432	0.9%
Cooloola (S)	37 480	43 571	49 635	1.4%
Maryborough (C)	25 804	26 763	27 499	0.3%
Kilkivan (S)	3386	3588	3781	0.6%
Tiaro	5238	6592	8025	2.2%
Woocoo (S)	3349	3931	4561	1.6%

Source: Department of Local Government, Planning, Sport and Recreation.

E. Climatic data for Imbil, Gympie and Maryborough

Climatic averages for Imbil, Gympie and Maryborough are shown in the following graphs.

For more detailed climatic information, see the Bureau of Meteorology website at www.bom.gov.au

Figure A4: Gympie monthly climate statistics

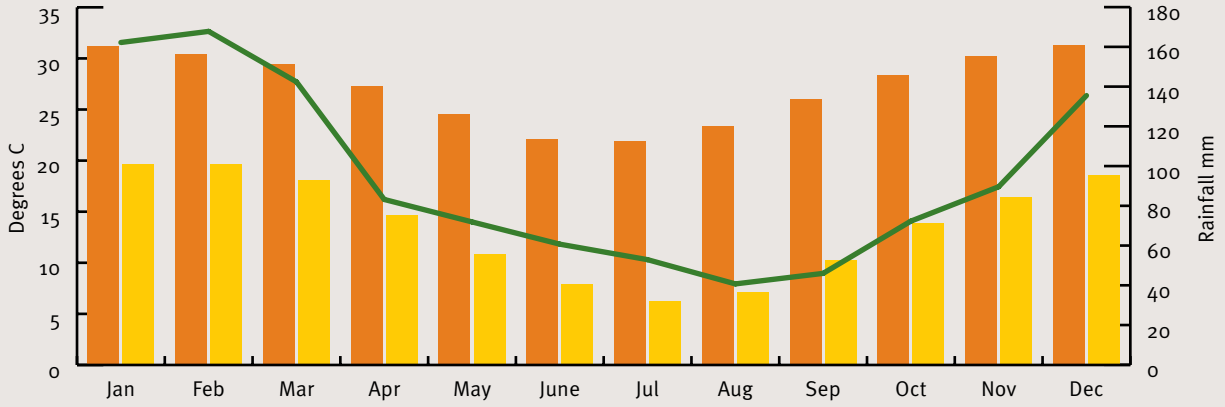


Figure A5: Maryborough monthly climate statistics

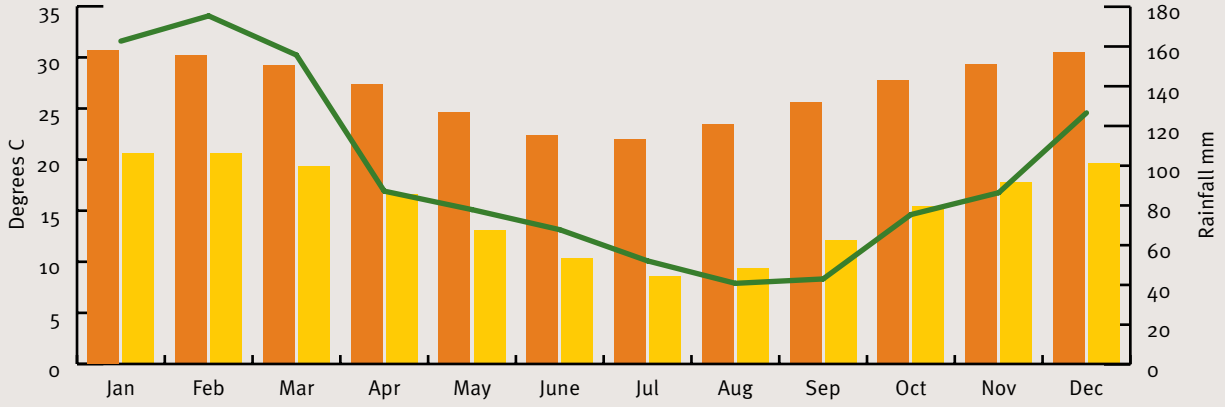
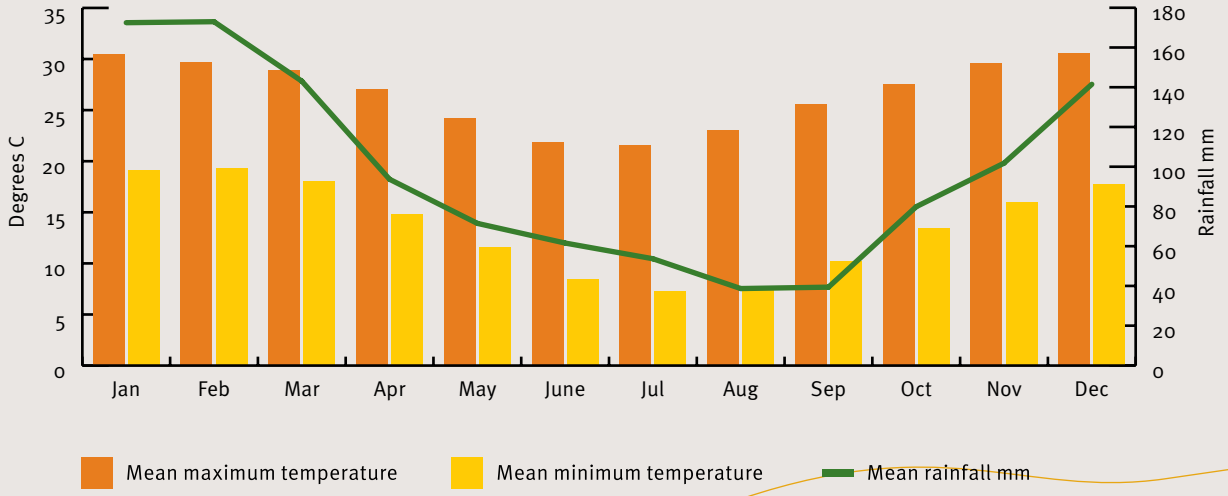


Figure A6: Imbil monthly climate statistics



APPENDIX F

F. Land resource areas in the Mary Economic Region

Two Land Resource Area (LRA) studies have been completed for the Mary catchment, focusing on the Maryborough and Gympie/Nambour areas. LRAs are broad landscape units made up of groups of different soils developed from related geological units with recurring patterns of topography and vegetation. The LRAs outlined in Table A8 (Maryborough region) and Table A9 (Gympie/Nambour region) give a broad overview of the landscapes encountered across the region.

Table A8. Land resource areas of the Maryborough district

Land Resource Area (LRA)	Description	Agricultural activity
Alluvium	*Alluvial plains* Generally level, sandy and clayey alluvial plains with some steep overfalls into creeks and rivers: open *Eucalyptus* forest.	Sugarcane production
Basalt	*Basalt hills* Undulating plains, low hills and plateau remnants of lateritised basalt and olivine basalt: largely cleared for agriculture—formerly vine forest and grassy forest.	Sugarcane production
Sandplain	*Coastal lowlands* Coastal and estuarine fine sands and muds subject to tidal influences, coastal sand dunes; banksia, tea-tree, heath, and *Casuarina* vegetation.	Sugarcane production, fruit tree cropping (particularly avocadoes and macadamia nuts)
Coastal plains	Level to gently undulating plains and low hills on consolidated sediments; layered and grassy forest with small areas of sclerophyll forest.	Sugarcane production
Uplifted coastal plains	Undulating plains, low hills and ridges on consolidated sediments; grassy open forest with sliver leaved iron bark and pink bloodwood, spotted gum, ironbarks and *Acacia* Spp.	Grazing and sugarcane
Granite	Mountains and undulating to rolling plains and rises on granite, granodiorite and quartz diorite: low, open *Eucalyptus* and *Acacia* forest.	Grazing
Metamorphic	Mountains and undulating to rolling rises and plains on slate, chert, schist, phyllites, gneiss, greywacke and other metamorphic rock; open, *Eucalyptus* and *Acacia* forest.	Grazing

Source: Pointon, S.M. and Collins, A.W. (2000). Mary River Catchment Resource Atlas. Department of Natural Resources, Queensland. DNRQ00114. Column 1 and 2.

Source: DPI&F Staff 2008. Column 3.

Table A9. Land resource areas of the Gympie/Nambour region

Land Resource Area (LRA)/Geology	Great soil group	Agricultural activity
Landsborough sandstone	Red earths, yellow podzolic soils. Lithosols formed principally on sandstones.	Fruit tree cropping
Coastal sand plains	Yellow earths, yellow and red podzolics on sandstones. Humic gleys and humus podzols in drainage depressions.	Sugarcane production
North arm volcanics	Krasnozems, xanthosems red and yellow podzolics, lithosols formed on rhyolite.	Fruit tree cropping and sugarcane
Maleny/Buderim plateau	Krasnozems on basalt. Red podzolic soils with small areas of prairie and non-calcic brown soils on rhyolite.	Fruit tree cropping
Amamoor beds	Red and yellow podzolic soils. Gradational yellow podzolic soils. Lithosols developed on shale, mottled red soils.	Fruit tree cropping
Woondum granite	Lithosols and red podzolics. Shallow to gritty sands developed on granite.	Grazing
Kin Kin beds	Red podzolics and gradational yellow podzolic soils, lithosols, yellow-red latosols developed principally on phyllite shales and shales.	Fruit tree cropping
Gympie group	Lithosols, podzolics, solodics developed on shales and siltstones. Prairies soils, krasnozems and xanthozems developed on andesites and rhyolites.	Field and fodder cropping
Alluviums	Medium and coarse textured alluvium soils. Lateritic podzolic soils, yellow podzolic and prairie soils.	Field and fodder cropping
Coastal sand dunes	Podzols, humic gleys and gleyed podzolic soils. Deep siliceous sands.	Sugarcane
Kilkivan adamelite	Yellow brown solodic and reddish prairie soils.	Grazing
Kurwongbar block	Shallow yellow podzolic soils and lithosols developed on chert.	Grazing

Source: Pointon, S.M. and Collins, A.W. (2000). Mary River Catchment Resource Atlas. Department of Natural Resources, Queensland. DNRQ00114. Column 1 and 2.

Source: DPI&F Staff 2008. Column 3.

APPENDIX G

G. Maps

List of maps

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