

Prospects

for Queensland's primary industries
2009–10

Forecasting, analysis & trends

September 2009



Acknowledgements

This report was researched and compiled by Queensland Primary Industries and Fisheries (QPIF) staff: George Antony, Liz Cox, Stephanie Denman, Alex Francis, Mary-Ann Franco-Dixon, Sarah Goswami, David Holdom, Karl Kloessing, Ross Lobegeiger, Josh Maroske, Dave Mc Rae, Yen Nguyen, Adrian Peake, Kimberly Percival, Arlind Shini, Ken Smith, Nicholas Swadling, John Switala, Cameron Thomas, Barry Underhill and Lew Williams.

The Department acknowledges the contributions of industry representatives, QPIF researchers and industry experts, market commentators, Herron Todd White (HTW), the Office of Economic and Statistical Research (OESR), the Australian Bureau of Agricultural and Resource Economics (ABARE), the Australian Bureau of Statistics (ABS), Meat and Livestock Australia (MLA) and various industry news media.

On 26 March 2009, the Department of Primary Industries and Fisheries was amalgamated with other government departments to form the Department of Employment, Economic Development and Innovation.

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This edition of *Prospects*

Prospects for Queensland's primary industries (Prospects) is now in its ninth year, after its official launch in June 2001. In the September 2007 edition of *Prospects* some changes were introduced (detailed below), which have been continued in this edition.

Total value of Queensland's primary industries

The most significant change in the September 2007 edition of *Prospects* was the way the value of Queensland's primary industries was reported. Prior to September 2007, the measure used to value Queensland's primary industry commodities in *Prospects* was gross value of production (GVP).

From September 2007 onwards, the total value of Queensland's primary industry commodities reported in *Prospects* and *Prospects update* comprises two components, which are reported separately. These are:

- a GVP figure
- a value of first-stage processing for the commodities listed below.

Value of first-stage processing

First-stage processing forecasts and estimates for previous years are provided for:

- meat processing
- sugar processing
- milk and cream processing
- fruit and vegetable processing
- flour mill product and feed processing
- seafood processing
- log sawmilling, timber dressing and plywood and veneer manufacturing
- lifestyle horticulture services
- cotton ginning
- kangaroo processing.

In this edition of *Prospects*, estimates of major primary industry processing activity are based on a methodology derived from the 2006–07 Australian Bureau of Statistics (ABS) Manufacturing Survey/Census statistics released in April 2009.

The methodology assumes a constant ratio of farm output to processing output and a constant ratio of processing output to processing industry value-added. Previous editions used the same methodology derived from the Queensland 2000–01 Manufacturing Survey. As such, the first-stage processing forecasts for 2009–10 should not be compared with the estimates for previous years.

Lifestyle horticulture

In September 2008, Queensland Primary Industries and Fisheries (QPIF), part of the Department of Employment, Economic Development and Innovation (DEEDI), commissioned Queensland Treasury's Office of Economic and Social Research to undertake a comprehensive, statewide telephone survey to determine the economic value of the lifestyle horticulture industry.

The industry has changed significantly since QPIF last conducted a comprehensive survey in 2001, and a new benchmark was needed to gain an accurate understanding of the scope and economic contribution of this important Queensland primary production industry.



In Table 2, page 17, the value of the lifestyle horticulture industry includes the production sectors of the industry. These are captured under ‘lifestyle horticulture production’ and include the GVP of nurseries, cut flowers and turf.

The value of the service segment of the industry is included in the special feature ‘Setting a new benchmark for lifestyle horticulture’ (page 72) and includes:

- retail plant nursery
- florists or retail flower sales
- landscape design and architecture
- landscape construction (greenscape and irrigation excluding hardscape)
- garden and lawn maintenance
- horticulture consultant
- arboriculture and tree maintenance
- indoor plant hire.

Forestry

Also in Table 2, page 17–18, the value of Queensland’s forest industry has two components:

- the gross value of the log timber produced from Queensland’s plantations and native forests **before** it reaches a sawmill or primary timber processing plant
- the value-added component that includes log sawmilling and timber dressing, and plywood and veneer manufacturing.

Maps showing main production regions

For livestock, horticulture and crops, maps are included that show the main production areas for individual commodities. The maps are based on ABS 2005–06 agricultural census data, which are the most up-to-date data available. The maps show where the top 80% of production occurs for each commodity by statistical local area.

Comparisons with previous years

From 2005–06, the ABS used a new methodology for gathering agricultural data. ABS’s final GVP estimates for 2007–08, released in July 2009, are included in Table 2 (page 16). Due to this break in the series, ABS advises that figures from 2005–06 onwards should not be compared to previous years.

Special feature articles

This edition of *Prospects* includes three special feature articles:

- ‘Queensland agriculture and agri-food system’ (page 67),
- ‘Queensland beef value chain’ (page 69)
- ‘Setting a new benchmark for lifestyle horticulture’ (page 72).

Kangaroo industry, as a special feature in *Prospects* September 2008, is included as an industry within livestock disposals.



Summary of key findings

Total value of Queensland's primary industries

In 2009–10, the total value of Queensland's primary industry commodities (including GVP and first-stage processing) is forecast at \$13.82 billion, 9% higher than 2008–09 and 10% higher than 2007–08.

GVP ('farm gate')

In 2009–10, the GVP of Queensland's primary industry commodities at the 'farm gate' is forecast at more than \$11 billion, 5% higher than 2008–09 and 6% higher than 2007–08.

Livestock industries

Livestock disposals

- The GVP of Queensland's **cattle and calf** industry in 2009–10 is forecast at \$3.44 billion, 1% lower than 2008–09. Cattle and calf slaughterings in 2009–10 are expected to be slightly lower than 2008–09, with a forecast GVP of \$3.31 billion. The GVP of Queensland's live cattle exports is forecast at \$125 million, about 14% higher than 2008–09.
- The GVP of Queensland's **sheep and lamb** industry in 2009–10 is forecast at \$60 million, the same as 2008–09.
- The GVP of Queensland's **pig** industry in 2009–10 is forecast at \$245 million, 4% higher than 2008–09.
- The GVP of Queensland's **poultry** industry in 2009–10 is forecast at \$360 million, 3% higher than 2008–09.
- The GVP of Queensland's **kangaroo** industry in 2009–10 is forecast at \$15 million, 55% lower than 2008–09.

Livestock products

- The GVP of Queensland's **wool** industry in 2009–10 is forecast at \$100 million, 5% lower than 2008–09.
- The GVP of Queensland's **milk** industry in 2009–10 is forecast at \$295 million, 5% higher than 2008–09.
- The GVP of Queensland's **egg** industry in 2009–10 is forecast at \$120 million, the same as 2008–09.

Crops

Fruit and nuts and vegetables

- The GVP of Queensland's **fruit and nut** industry in 2009–10 is forecast at \$1.09 billion, 4% higher than 2008–09.
- The GVP of Queensland's **vegetable** industry in 2009–10 is forecast at \$1.05 billion, 7% higher than 2008–09.

Lifestyle horticulture

- The GVP of Queensland's **lifestyle horticulture** industry (production sectors)¹ in 2009–10 is forecast at \$974 million, 1% lower than QPIF's revised estimate of \$979 million for 2008–09.

¹ Information about lifestyle horticulture services is included in the special feature 'Setting a new benchmark for lifestyle horticulture'.



- The GVP of Queensland's **nursery** industry in 2009–10 is forecast at \$788 million, the same as 2008–09.
- The GVP of Queensland's **turf** industry in 2009–10 is forecast \$105 million, 5% lower than 2008–09.
- The GVP of Queensland's **cut flower and foliage** industry in 2009–10 is forecast at \$81 million, the same as 2008–09.

Other crops

- The GVP of Queensland's **sugarcane** industry in 2009–10 is forecast at \$1.34 billion, 46% higher than 2008–09.
- The GVP of Queensland's **cotton** industry in 2009–10 is forecast at \$420 million, 24% higher than 2008–09.

Cereal grains

- The GVP of Queensland's **wheat** industry in 2009–10 is forecast at \$320 million, 34% lower than 2008–09.
- The GVP of Queensland's **barley** industry in 2009–10 is forecast at \$33 million, 6% lower than 2008–09.
- The GVP of Queensland's **grain sorghum** industry in 2009–10 is forecast at \$245 million, 6% lower than 2008–09.
- The GVP of Queensland's **maize** industry in 2009–10 is forecast at \$45 million, 14% lower than 2008–09.

Fisheries

The GVP of Queensland's **fisheries** in 2009–10 is forecast at \$437 million.

In this edition, recreational fishing, which is an important part of Queensland fisheries, is included in the forecast for 2009–10 with an estimated value of \$73 million. The values of commercial fishing and aquaculture are forecast at \$275 million (1% increase from 2008–09) and \$89 million (5% increase from 2008–09), respectively.

Forestry

The GVP of the forest growing sector of Queensland's forest industry in 2009–10 is forecast at \$170 million, a 5% increase from QPIF's final estimate of \$162 million for 2008–09. This translates into a GVP of \$351 million for the first-stage processing sector.

The total GVP of Queensland's forest industry (including forest growing and first-stage processing sectors) is therefore forecast to contribute \$521 million to the Queensland economy in 2009–10.

First-stage processing

In 2009–10, the value of first-stage processing (or value-added production) is forecast at \$2.76 billion. This should not be compared with the previous years as new ratios for value-added are applied for 2009–10 forecast (See page 1 'Value of first stage processing' for details).

- The value of meat processing in 2009–10 is forecast at \$1.18 billion.
- The value of sugar processing in 2009–10 is forecast at \$720 million.
- The value of milk and cream processing in 2009–10 is forecast at \$251 million.
- The value of fruit and vegetable processing in 2009–10 is forecast at \$128 million.
- The value of flour mill and feed processing in 2009–10 is forecast at \$62 million.
- The value of seafood processing in 2009–10 is forecast at \$24 million.
- The value of log sawmilling, timber dressing and plywood and veneer manufacturing in 2009–10 is forecast at \$ 351 million.
- The value of cotton ginning in 2009–10 is forecast at \$48 million.



Introduction

QPIF's vision will provide quality services that are relevant and accessible to its broad range of clients. Future service delivery will place an emphasis on food and agriculture enterprises contributing to economic growth targets, while ensuring the community has access to a full range of information services.

QPIF delivers outcomes that maximise the economic potential of Queensland's primary industries on a sustainable basis. There is a focus on improving industry competitiveness, productivity, innovation and export earnings. Such outcomes drive growth and improve profitability.

A new framework for service delivery has been developed that sets out QPIF's vision to grow the future of Queensland's primary industries. The plan is a fresh approach to build a skilled workforce, to network and modernise services, and to capitalise on research and development potential to foster world-class innovation.

A fresh approach for Queensland's primary industries

QPIF is delivering an innovative plan to revitalise Queensland's food and agriculture sector and enhance its economic and employment contribution to the state. The 'Fresh Approach' initiative was launched in June 2008 to accelerate growth in Queensland's primary industries and achieve the vision of a \$34 billion industry by 2020—almost three times today's value.

This initiative determines an important focus for QPIF and provides a framework to ensure the delivery of integrated, innovative and relevant services that meet our clients' needs.

This whole-of-agency approach will set the standard for service delivery to be met by each of the business groups and units within QPIF. It also describes how QPIF services will be delivered as part of DEEDI's commitment to Queensland Government priorities. Achieving a Fresh Approach will address the targets set out in the Queensland Government's 'Toward Q2: Tomorrow's Queensland' vision. In particular, QPIF's service delivery framework will support a diverse Queensland economy powered by bright ideas.

Our clients are far more than the traditional family farmer. In fact, they range from individuals in suburbia to large agribusinesses. Therefore, delivering services in the traditional way is becoming increasingly impractical and inefficient. QPIF must continue to develop innovative and sustainable ways of delivering equitable services.

QPIF will build closer and stronger strategic relationships and partnerships with clients and other service providers particularly other parts of DEEDI and the Queensland Government that may have services relevant to QPIF clients.

QPIF will recognise the important role that each staff member plays in delivering innovative services and will develop strategies to train, reward and retain staff.

Moving forward

The challenge is to take this framework from a vision to a reality and, as a result, deliver improved services to our clients. To ensure QPIF is equipped to deliver the five service priorities of Toward Q2, major improvements to existing systems and practices have been identified.

Four major projects have been identified to achieve these improvements.

Project 1: Service Innovation Centre

To ensure that innovation becomes a culture within QPIF, a Service Innovation Centre will be established. The centre will comprise a team of innovative and passionate individuals, providing leadership in innovation and its application to service delivery.



The centre will ensure that the priorities outlined in this framework are guiding QPIF service delivery across all channels.

The centre will explore new technologies that make access to services and information easier, and will consider ideas and suggestions for service improvement at a whole-of-agency level (in line with the Queensland Public Service Charter).

Project 2: Agribusiness service centres

Centres will be located strategically throughout regional Queensland and will have the technological capabilities to provide access to QPIF's full suite of services.

Each agribusiness service centre, in conjunction with the Service Innovation Centre, will consult and collaborate with local and regional clients to establish a service delivery plan. This plan will be based on:

- major production systems in the area
- opportunities for accelerated growth
- particular threats and risks
- service delivery needs and preferences of clients, including the incorporation of modern information technology
- partnership with other service providers.

One concept that is currently being piloted and evaluated is the use of mobile offices. Apart from the benefits of increased coverage of QPIF services, we anticipate that mobile offices will ensure the agency has an expanded capacity to respond to emergency situations (such as pest and disease incursions).

These mobile and emergency response services are linked to QPIF's computer network, which means instant and easy access to critical information or vital services. The aim of the mobile offices is to provide access to QPIF's full range of products and services in areas and situations where they were not previously available.

Project 3: Statewide industry-focused networks

As well as delivering services locally and regionally through the agribusiness service centres, we will establish statewide networks of industry-focused staff.

These networks will facilitate greater levels of cooperation among stakeholders and improve access to specialist expertise that may not be locally available. These networks will also work together to develop statewide projects that promote industry growth.

These industry-focused networks will include QPIF scientists, extension and biosecurity officers, trade and business development officers, communication officers and economists. They will be responsible for the development of statewide, industry-focused service delivery plans, and will be supported by the Service Innovation Centre to ensure clients receive the full benefits of QPIF's resources. These networks will consult locally with clients, industry and peak agricultural bodies representing industry.

FutureBeef is an initiative to invigorate QPIF extension services and accelerate the growth of the state's \$3.4 billion beef industry.

The Queensland beef industry already provides more than a third of the state's GVP and directly employs 23 000 people. It supports a strong meat processing sector, employing a further 10 000 workers, and is Australia's largest meat exporter.

FutureBeef provides a statewide framework for the transfer and adoption of information, practices and technologies aimed at maximising the profitability and sustainability of the beef industry.



It will achieve this by focusing on three key areas:

1. Improve whole-of-business management and productivity with a focus on integration of new and existing technologies.
2. Support beef supply chains with a focus on market-orientated extension services.
3. Maintain industry adaptability and risk management with a focus on climate change and drought preparedness, animal welfare, biosecurity and environmental risk management.

FutureBeef will develop extension activities that target client groups where the greatest impact will be achieved.

Project 4: Redesign information technology systems

Redesigning the information technology systems will ensure that service delivery channels are fully integrated, modern and user-friendly. This will allow clients to access the full suite of services through the QPIF website, the Business Information Centre, mobile offices and agribusiness service centres.

To achieve QPIF's service delivery priorities, there is a need to map out how the systems will support these priorities. This map will ensure the agency has the correct information, applications and technology to deliver a service that is user-friendly, relevant, reliable, trusted and consistent.

To ensure service standards are met and clients find it easy to do business with our agency, QPIF will:

- define the information and technology framework to deliver our services through multiple channels
- align the service delivery strategy to the current information and technology platforms, and identify systems that need to be redesigned
- identify how we will use information and communication technology developments to provide improved efficiency and access for our clients.

Jan Taylor and Associates was commissioned to conduct an independent review of QPIF's service delivery. Their review highlighted the need to redesign the information technology systems.



About Queensland's primary industries

In 2007–08, Queensland's primary industries exports were valued at \$6.1 billion, accounting for almost 17% of Queensland's exports. The state's primary industries sector was the second largest exporter behind mining. Half of the value of Queensland's exports came from the state's livestock industries.

Queensland is Australia's second largest state, covering more than 173 million ha. Of this, almost 144 million ha (or 83%) of the land area is used for agriculture. Queensland has the largest area of agricultural land of any Australian state and the highest proportion of land area in Australia dedicated to agriculture.

There are approximately 30 551 businesses in Queensland that carry out agricultural activity. Queensland's beef industry is the state's largest primary industry and almost half (14 274) of all Queensland's agricultural businesses are specialist beef cattle enterprises. A further 1487 businesses have some beef cattle, either in feedlots, as beef cattle–sheep farming and grain–beef or grain–sheep farming. The next largest industry in terms of number of businesses is sugarcane farming with 3516 businesses.²

In May 2009, there were 81 700 people employed in agriculture, forestry and fishing in Queensland, accounting for 4.6% of the total number of people employed in the state.³

In 2007–08, Queensland's gross state product was estimated at almost \$209 billion. Queensland's primary industries and first-stage processing sectors accounted for 6% of this.⁴

² Source: ABS Agricultural Commodities, Australia, 2006–07

³ Source: ABS Labour Force, Australia, May 2008

⁴ Source: Department of Foreign Affairs and Trade



About *Prospects*

Prospects has a circulation of approximately 2500, with copies distributed to members of parliament, industry associations, agribusinesses, banks, law firms, local councils, government departments, educational institutions, primary producers and other businesses along the value chain.

The annual September edition of *Prospects* contains QPIF's:

- initial GVP forecasts for 2009–10
- initial forecasts for 2009–10 for first-stage processing
- GVP estimates for 2008–09 and 2007–08.

Prospects is available on the QPIF website at www.dpi.qld.gov.au (click on 'Business & trade' > 'Industry trends' > '*Prospects*').

About *Prospects update*

Initial GVP forecasts and first-stage processing forecasts for the financial year are published in the September edition of *Prospects*. These forecasts are then updated as the year unfolds. Updated forecasts will not be published in the December, March and June editions of *Prospects update* but instead will be made available electronically and can be downloaded from the QPIF website, www.dpi.qld.gov.au. This is in line with the recent election commitment to upgrade the QPIF information technology platform to make services integrated, modern and user-friendly.

We welcome your feedback. Please send your comments and suggestions to us at:

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Contact the QPIF Business Information Centre on 13 25 23.

Visit www.dpi.qld.gov.au for current and previous editions of *Prospects* and *Prospects update*.



Content and procedure

In this publication, GVP refers to the output of primary industry operations. Most non-commercial activities, such as home vegetable and flower gardening and hobbyist beekeeping, are not included due to a lack of data. This in no way diminishes the importance of these activities to the economy and society.

Gross values of commodities produced are calculated by multiplying the output from each primary industry activity by the average wholesale market price paid to producers. Production output resulting from primary industry activity is largely determined by the availability of resources (e.g. irrigation water), market factors, incidences of pests and diseases, and weather conditions.

In this edition, estimates of major primary industry processing activity are based on a methodology derived from the 2006–07 ABS Manufacturing Survey/Census statistics released in April 2009. The methodology assumes a constant ratio of farm output to processing output and a constant ratio of processing output to processing industry value-added. Previous editions used the same methodology derived from the Queensland 2000–01 Manufacturing Survey. As such, the first-stage processing forecasts for 2009–10 should not be compared with the estimates for previous years.

Value-added refers to the additional value created at a particular stage of production. Value-adding that occurs beyond the first round is not included in this analysis. It should be noted that for some industries, there is a significant number of rounds of processing and value-adding beyond the first round. For instance, timber is processed in numerous downstream industries, including wooden structural component, pulp, paper and paperboard, and paper product processing.

Economists use the value-added method as a way to avoid double-counting (i.e. counting the same input twice). The sum of the value-added in each of the different stages of production equals the value of the final product. Final products include consumer goods and fixed capital equipment. In a microeconomic context, value-added is simply measured as the value of the output produced minus the costs of the intermediate goods.

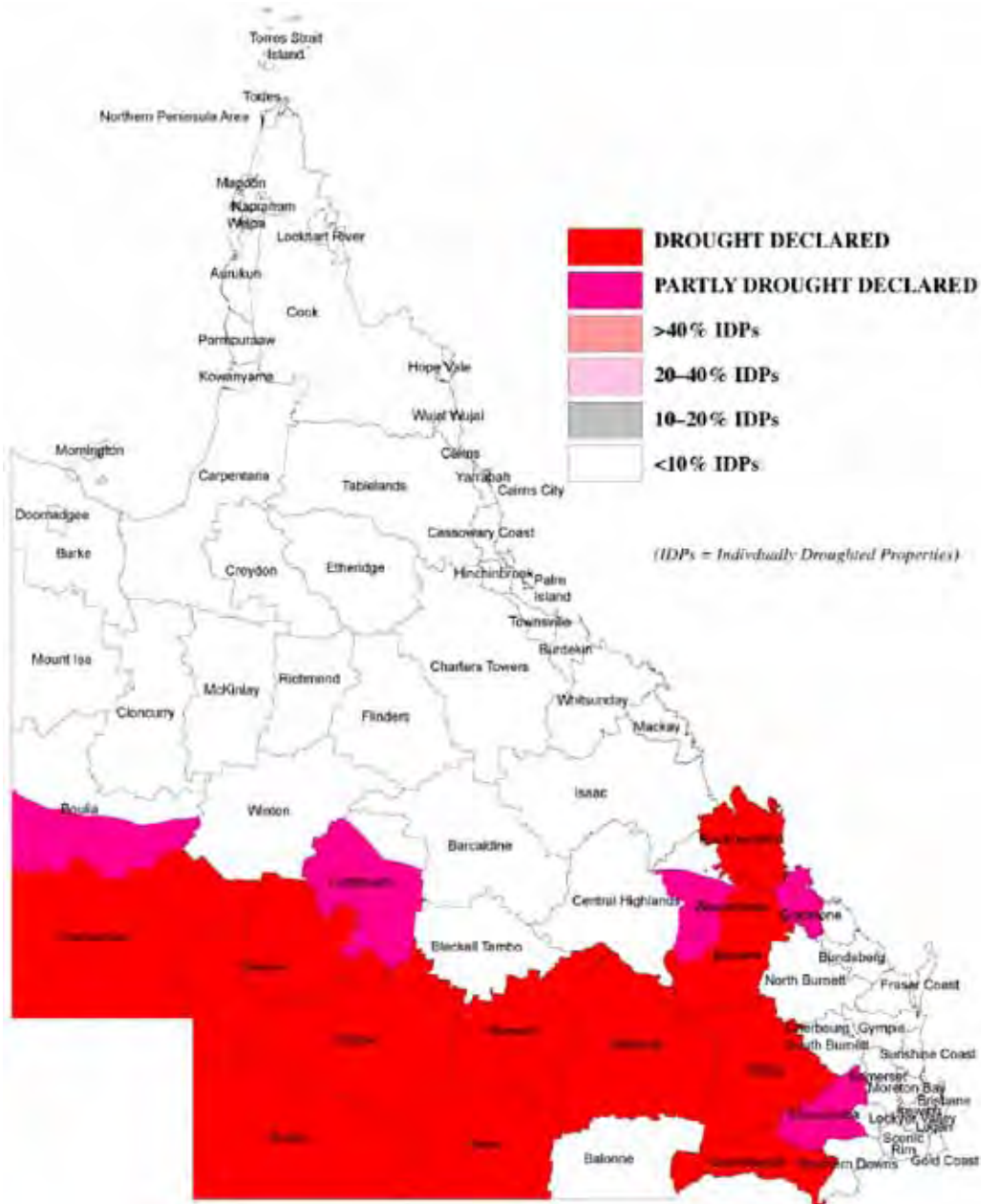
The estimates and forecasts contained in this edition of *Prospects* were based on information available in August and September 2009, and follow consultation with industry experts and QPIF staff.

The prices of all overseas-traded commodities are responsive to changes in the exchange rate of the Australian dollar relative to the currencies of our trading partners. Prices paid to primary producers, and therefore gross unit values, could change depending on whether exchange rates increase or decrease.

Drought situation

As at 31 July 2009, 35% of the land area of Queensland is drought declared under state processes. There are a total of eight individually droughted properties (IDPs) in four local government areas.

Figure 1. Drought situation in Queensland as at 31 July 2009



(Source: www.longpaddock.qld.gov.au)

Climate outlook for September–November 2009⁵

According to the Bureau of Meteorology's (www.bom.gov.au) seasonal climate summary for Queensland, below-average rainfall was recorded throughout most of the state during winter. While low rainfall is normal between July and September throughout Queensland, July and August this year was particularly dry with a statewide averaged rainfall of 2 mm for those two months. This breaks the previous record of 2.8 mm set in 1946.

As well as being drier than normal, temperatures experienced throughout winter across Queensland were also generally warmer than normal. For example, the average daily temperature experienced during winter was the second highest on record. These warmer-than-average conditions were also reflected by the state-averaged winter maximum temperature being the warmest on record. August 2009 was also Australia's warmest on record.

This trend is likely to continue as there is a 70–85% chance of getting above-median maximum temperatures throughout Queensland during spring (September to November).

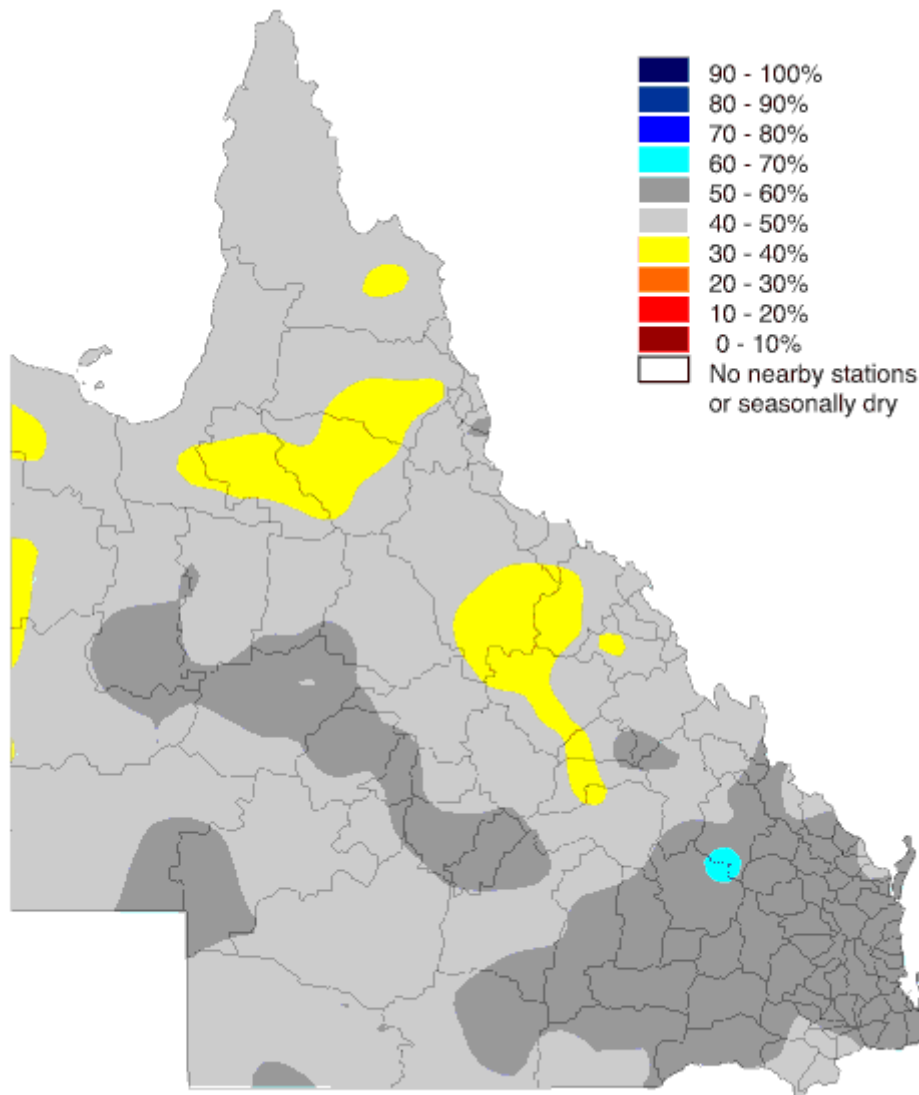
An analysis of a 'consistently near zero' Southern Oscillation Index (SOI) phase at the end of August and rainfall records for September to November indicate a 30–50% chance of getting above the long-term median rainfall across northern, central and western Queensland. Throughout the south-east quarter of the state, the chance of getting above the long-term median rainfall for the same period is marginally higher at 50–60%.

Based on these probabilities, this forecast does not indicate a high chance of getting well above-average rain during September to November. The latest rainfall probability maps are available at www.longpaddock.qld.gov.au

In the mean time, the 30-day average of the SOI as of 7 September is minus 0.6. It will be interesting to see what the SOI does over the next few weeks. If it remains in a 'near zero' phase through to the end of the September, there is an increase in the likelihood or chance of severe storm activity across the southern half of Queensland and northern New South Wales.



Figure 2. Probability of exceeding median rainfall for September–November 2009 based on consistently near zero phase during July–August 2009



(Source: www.longpaddock.qld.gov.au)

Global demand for Australian commodities

According to the International Monetary Fund's (IMF) latest forecast, the global economy is starting to emerge from the recession but stabilisation is uneven and recovery is expected to be slow. Economic growth is now projected to contract by 1.4%, 0.5 percentage points higher than the April forecast, and reach 2.5% in 2010.

Table 1. IMF forecast (year over year percent change)

| | 2007 | 2008 | Projections | | Difference from April 2009 WEO projections | |
|---|------------|------------|-------------|------------|--|------------|
| | | | 2009 | 2010 | 2009 | 2010 |
| World output¹ | 5.1 | 3.1 | -1.4 | 2.5 | -0.1 | 0.6 |
| Advanced economies | 2.7 | 0.8 | -3.8 | 0.6 | 0.0 | 0.6 |
| United States | 2.0 | 1.1 | -2.6 | 0.8 | 0.2 | 0.8 |
| Euro area | 2.7 | 0.8 | -4.8 | -0.3 | -0.6 | 0.1 |
| Germany | 2.5 | 1.3 | -6.2 | -0.6 | -0.6 | 0.4 |
| France | 2.3 | 0.3 | -3.0 | 0.4 | 0.0 | 0.0 |
| Italy | 1.6 | -1.0 | -5.1 | -0.1 | -0.7 | 0.3 |
| Spain | 3.7 | 1.2 | -4.0 | -0.8 | -1.0 | -0.1 |
| Japan | 2.3 | -0.7 | -6.0 | 1.7 | 0.2 | 1.2 |
| United Kingdom | 2.6 | 0.7 | -4.2 | 0.2 | -0.1 | 0.6 |
| Canada | 2.5 | 0.4 | -2.3 | 1.6 | 0.2 | 0.4 |
| Other advanced economies | 4.7 | 1.6 | -3.9 | 1.0 | 0.2 | 0.4 |
| Newly industrialised Asian economies | 5.7 | 1.5 | -5.2 | 1.4 | 0.4 | 0.6 |
| Emerging market and developing economies ² | 8.3 | 6.0 | 1.5 | 4.7 | -0.1 | 0.7 |
| Africa | 6.2 | 5.2 | 1.8 | 4.1 | -0.2 | 0.2 |
| Sub-Saharan Africa | 6.9 | 5.5 | 1.5 | 4.1 | -0.2 | 0.3 |
| Central and eastern Europe | 5.4 | 3.0 | -5.0 | 1.0 | -1.3 | 0.2 |
| Commonwealth of Independent States | 8.6 | 5.5 | -5.8 | 2.0 | -0.7 | 0.8 |
| Russia | 8.1 | 5.6 | -6.5 | 1.5 | -0.5 | 1.0 |
| Excluding Russia | 9.8 | 5.4 | -3.9 | 3.2 | -1.0 | 0.1 |
| Developing Asia | 10.6 | 7.6 | 5.5 | 7.0 | 0.7 | 0.9 |
| China | 13.0 | 9.0 | 7.5 | 8.5 | 1.0 | 1.0 |
| India | 9.4 | 7.3 | 5.4 | 6.5 | 0.9 | 0.9 |
| ASEAN-5 ³ | 6.3 | 4.8 | -0.3 | 3.7 | -0.3 | 1.4 |
| Middle East | 6.3 | 5.2 | 2.0 | 3.7 | -0.5 | 0.2 |
| Western Hemisphere | 5.7 | 4.2 | -2.6 | 2.3 | -1.1 | 0.7 |
| Brazil | 5.7 | 5.1 | -1.3 | 2.5 | 0.0 | 0.3 |
| Mexico | 3.3 | 1.3 | -7.3 | 3.0 | -3.6 | 2.0 |

(Source: IMF, World Economic Outlook Update, July 2009)

1 The quarterly estimates and projections account for 90% of the world's purchasing-power-parity weights.

2 The quarterly estimates and projections account for approximately 76% of the emerging and developing economies.

3 Indonesia, Malaysia, the Philippines, Thailand and Vietnam.



IMF Chief Economist Olivier Blanchard said, 'The good news is that the forces pulling the economy down are decreasing in intensity. The bad news is that the forces pulling the economy up are still weak. The recovery is coming, but, it is likely to be a weak recovery.'

As the figures in Table 1 above suggest, forecasts for the United States (US) economy suggest a diminishing rate of deterioration during the second half of 2009 ending in a contraction of 2.6% in growth, before commencing a gradual recovery in 2010. Economic growth in Europe and Japan is also expected to contract by 4.8% and 6.0%, respectively, in 2009 but there is expected to be an improvement in growth into 2010. In China, however, growth is forecast to increase slightly from 7.5% in 2009 to around 8.5% in 2010.

These are encouraging developments according to the Reserve Bank; however, they caution, 'Despite this improvement, significant headwinds remain.' The Reserve Bank believes that, 'Credit conditions are still difficult in many countries and the effect of the global slowdown has yet to show up fully on many banks' balance sheets. Therefore, more unexpected bad news in the financial sector could again have an unsettling effect on confidence'. In addition, they believe that 'many countries face balance sheet issues not only in the financial sector, but also in the public sector, with the ratio of public debt to [gross domestic product] GDP forecast to rise rapidly over the next few years and reach historically high levels. Reducing public sector debt to more sustainable levels is likely to weigh on growth in many of the advanced economies for some time. In contrast, prospects for growth in the Asian region, which is becoming increasingly important to Australia, look more positive.'

Domestically, the Reserve Bank believes:

The economy continues to exhibit considerable resilience in the face of what has been a very difficult international environment. The December and March quarter GDP data, in conjunction with other information on the economy, suggest that output contracted only modestly around the turn of the year, compared with the very sharp contractions experienced in most other countries. More recently, the information that has become available suggests that demand and output have strengthened a little, with household consumption continuing to grow in the June quarter while investment has been weak.

The Reserve Bank contends:

The outlook for the Australian economy continues to be subject to considerable uncertainty, although the risks are more balanced than they have been for some time. With confidence globally still fragile, it remains possible that the outlook could again weaken. On the other hand, with the cash rate at an unusually low level and the global economy stabilising, movement towards a more normal setting of monetary policy could be expected at some point if further signs of a durable recovery emerge.

WTO says global crisis will boost Doha round

The Doha round of global trade negotiations was launched in 2001 by members of the World Trade Organisation (WTO), with the aim of cutting tariffs and farm subsidies as well as liberalising trade in services. The WTO claims there is renewed political commitment from states to conclude the Doha Round. The WTO believes that a free trade agreement is possible by the end of 2009. WTO economists predict world trade will shrink by 10% in 2009, something that has not happened since World War II. WTO Spokesman Keith Rockwell said it was increasingly recognised that trade has been a victim of the economic crisis. At the same time, he noted trade would be an important tool for lifting the world out of this crisis.

**Table 2. GVP, first-stage processing and total primary industries estimates and forecasts
2007–08 to 2009–10**

| | 2007–08 (b) | 2008–09 (c) | 2009–10 (d) | Change 2008–09 to 2009–10 |
|-------------------------------------|----------------|----------------|----------------|---------------------------------|
| Commodity GVP (a) | \$m | \$m | \$m | % |
| Livestock disposals | | | | |
| Cattle and calves | 3315 | 3460 | 3435 | -1 |
| Sheep and lambs | 57 | 60 | 60 | 0 |
| Pigs | 234 | 235 | 245 | 4 |
| Kangaroos | 41 | 33 | 15 | -55 |
| Poultry | 315 | 350 | 360 | 3 |
| Other livestock | 15 | 15 | 15 | -1 |
| Total livestock disposals | 3976 | 4153 | 4130 | -1 |
| Livestock products | | | | |
| Wool | 103 | 105 | 100 | -5 |
| Milk (all purpose) | 252 | 280 | 295 | 5 |
| Eggs | 105 | 120 | 120 | 0 |
| Total livestock products (e) | 460 | 505 | 515 | 2 |
| Total livestock | 4436 | 4658 | 4645 | 0 |
| Horticulture | | | | |
| Fruit and nuts | | | | |
| Bananas | 354 | 410 | 400 | -2 |
| Pineapples | 55 | 50 | 55 | 10 |
| Mangoes | 79 | 65 | 70 | 8 |
| Mandarins | 90 | 60 | 70 | 17 |
| Strawberries | 83 | 130 | 145 | 12 |
| Avocados | 70 | 65 | 80 | 23 |
| Macadamias | 20 | 30 | 35 | 17 |
| Apples | 50 | 50 | 45 | -10 |
| Table grapes | 33 | 50 | 50 | 0 |
| Other fruit and nuts | 259 | 130 | 135 | 4 |
| Total fruit | 1093 | 1040 | 1085 | 4 |
| Vegetables | | | | |
| Potatoes | 58 | 50 | 45 | -10 |
| Beans | 51 | 50 | 50 | 0 |
| Carrots | 21 | 20 | 25 | 25 |
| Lettuce | 66 | 60 | 65 | 8 |
| Melons (rockmelon and cantaloupe) | 20 | 30 | 30 | 0 |
| Melons (watermelon) | 38 | 40 | 40 | 0 |
| Mushrooms | 34 | 50 | 60 | 20 |
| Pumpkin | 31 | 30 | 30 | 0 |
| Onions | 25 | 28 | 30 | 7 |
| Sweet corn | 27 | 30 | 30 | 0 |
| Tomatoes | 210 | 200 | 240 | 20 |
| Capsicums and chillies (f) | 98 | 100 | 105 | 5 |

Table 2 (cont.)

| | 2007–08 (b) | 2008–09 (c) | 2009–10 (d) | Change 2008–09 to 2009–10 |
|--|----------------|----------------|----------------|---------------------------------|
| Commodity GVP (a) | \$m | \$m | \$m | % |
| Zucchini and button squash | 39 | 40 | 45 | 13 |
| Sweetpotatoes | 55 | 45 | 55 | 22 |
| Other vegetables | 222 | 205 | 200 | -2 |
| Total vegetables | 995 | 978 | 1050 | 7 |
| Total fruit and vegetables | 2088 | 2018 | 2135 | 6 |
| Lifestyle horticulture—production | | | | |
| Nurseries (c) | 723 | 788 | 788 | 0 |
| Turf (c) | 101 | 110 | 105 | -5 |
| Cut flowers (c) | 74 | 81 | 81 | 0 |
| Total lifestyle horticulture production | 898 | 979 | 974 | -1 |
| Total horticulture | 2986 | 2997 | 3109 | 4 |
| Other field crops | | | | |
| Sugarcane (g) | 799 | 920 | 1340 | 46 |
| Cotton (raw) (h) | 79 | 340 | 420 | 24 |
| Other crops (c) | 392 | 210 | 285 | 36 |
| Total other crops | 1270 | 1470 | 2045 | 39 |
| Cereal grains | | | | |
| Wheat | 353 | 485 | 320 | -34 |
| Barley | 44 | 35 | 33 | -6 |
| Grain sorghum | 637 | 260 | 245 | -6 |
| Maize | 60 | 53 | 45 | -14 |
| Other cereal grains | 5 | 20 | 15 | -25 |
| Total cereal grains | 1100 | 853 | 658 | -23 |
| Total crops | 5356 | 5320 | 5812 | 9 |
| Total agriculture | 9792 | 9978 | 10 457 | 5 |
| Fisheries (c) (i) | | | | |
| Commercial fishing | | | | |
| Crustaceans | 161 | 161 | 161 | 0 |
| Molluscs | 10 | 9 | 10 | 11 |
| Finfish | 109 | 103 | 104 | 1 |
| Total commercial fishing | 280 | 273 | 275 | 1 |
| Recreational fishing | | | | |
| Aquaculture | 80 | 85 | 89 | 5 |
| Total fisheries | 360 | 358 | 437 | 22 |
| Forestry and logging (c) (j) | | | | |
| Total forestry and logging | 185 | 162 | 170 | 5 |
| Total primary industries (farm gate) | 10 337 | 10 498 | 11 064 | 5 |
| First-stage processing value-added (k) | | | | |
| Meat processing (c) (m) | 936 | 977 | 1176 | |
| Sugar processing (c) | 336 | 386 | 720 | |

Table 2 (cont.)

| Commodity GVP (a) | 2007–08 | 2008–09 | 2009–10 | Change |
|--|---------------|---------------|---------------|-----------------------|
| | (b) | (c) | (d) | 2008–09 to 2009–10 |
| | \$m | \$m | \$m | % |
| Milk and cream processing (c) | 138 | 153 | 251 | |
| Fruit and vegetables processing (c) | 205 | 198 | 128 | |
| Flour mill and feed processing (c) | 205 | 159 | 62 | |
| Seafood processing (c) | 26 | 26 | 24 | |
| Log sawmilling and timber dressing and plywood and veneer manufacturing (c) | 321 | 281 | 351 | |
| Cotton ginning (c) | 9 | 39 | 48 | |
| Total primary industries (first-stage processing) | 2176 | 2221 | 2760 | |
| Total primary industries | 12 513 | 12 718 | 13 824 | 9 |

- (a) GVP is defined as the gross value of commodities produced. It is a measure of economic output. In this publication, GVP relates to the output of primary industry commercial operations only. The GVP is the value of recorded production at wholesale prices realised in the market place (e.g. cattle sold at saleyards, sugarcane at the mill door, fruit and vegetables at the wholesale market). It is derived by multiplying the output from each primary industry by the average wholesale price paid to producers.
- (b) ABS final estimates for 2007–08 unless otherwise indicated.
- (c) QPIF estimates.
- (d) QPIF forecasts.
- (e) Excludes minor commodities such as honey, beeswax, mohair.
- (f) QPIF estimate does not include chillies.
- (g) Gross value of sugarcane at mill door.
- (h) Includes value of cotton seed and lint.
- (i) Includes catches from both Commonwealth-managed (including Torres Strait, Gulf of Carpentaria and east coast tuna fisheries) and state-managed fisheries.
- (j) Australian Bureau of Agricultural and Resource Economics (ABARE) estimates.
- (k) See 'Notes' section for definition of value-added. The forecasts for the value of first-stage processing in 2009–10 should not be compared with the previous years due to the change in value-added ratios.
- (m) Includes value of kangaroo meat processed.

Volume of production index

The volume of production index for Queensland's major agricultural commodities from 1996–97 to 2009–10 is detailed in Table 3 below. A volume of production index describes the movement in production over a period of time relative to a base period.

In 2009–10, the production index for agriculture is forecast to be 108. This indicates that Queensland's agricultural production in 2009–10 is forecast to be 8% higher (on average) than in the base year of 1996–97.

On average, the volume of agricultural production in 2009–10 is forecast to be 1% higher than in 2008–09.

Table 3. Volume of production index for Queensland's major agricultural commodities from 1996–97 to 2009–10

| Volume index (a) | 1996 -97 | 1997 -98 | 1998 -99 | 1999 -00 | 2000 -01 | 2001 -02 | 2002 -03 | 2003 -04 | 2004 -05 | 2005 -06 | 2006 -07 | 2007 -08 | 2008 -09 (e) | 2009 -10 (f) |
|----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------|--------------------|
| Wheat | 100 | 70 | 98 | 96 | 58 | 46 | 30 | 56 | 59 | 62 | 39 | 48 | 89 | 64 |
| Grain sorghum | 100 | 69 | 106 | 130 | 115 | 124 | 93 | 129 | 116 | 103 | 89 | 251 | 128 | 123 |
| Barley | 100 | 48 | 75 | 59 | 27 | 40 | 35 | 61 | 42 | 39 | 18 | 33 | 40 | 36 |
| Major cereal grains | 100 | 67 | 98 | 103 | 72 | 69 | 50 | 80 | 74 | 77 | 51 | 102 | 96 | 79 |
| Sugarcane | 100 | 102 | 98 | 97 | 71 | 78 | 94 | 93 | 97 | 95 | 91 | 86 | 83 | 83 |
| Cotton lint | 100 | 116 | 146 | 173 | 129 | 120 | 50 | 88 | 151 | 130 | 42 | 26 | 88 | 110 |
| Major other field crops | 100 | 104 | 110 | 116 | 86 | 88 | 83 | 92 | 110 | 103 | 78 | 71 | 84 | 89 |
| Major fruit | 100 | 112 | 108 | 128 | 159 | 151 | 139 | 137 | 149 | 131 | 167 | 148 | 183 | 203 |
| Major vegetables | 100 | 96 | 96 | 100 | 104 | 108 | 98 | 122 | 104 | 112 | 122 | 110 | 116 | 118 |
| Major fruit and vegetables | 100 | 105 | 102 | 114 | 132 | 130 | 119 | 130 | 134 | 127 | 145 | 129 | 150 | 162 |
| Crops | 100 | 95 | 105 | 114 | 92 | 92 | 82 | 97 | 105 | 99 | 85 | 90 | 100 | 101 |
| Cattle and calves + live exports | 100 | 115 | 125 | 130 | 140 | 133 | 136 | 131 | 135 | 132 | 140 | 131 | 131 | 129 |
| Pigs | 100 | 108 | 113 | 111 | 108 | 113 | 123 | 132 | 128 | 135 | 127 | 128 | 114 | 120 |
| Poultry | 100 | 110 | 108 | 113 | 111 | 116 | 123 | 127 | 138 | 143 | 147 | 156 | 160 | 169 |
| Sheep and lambs | 100 | 116 | 119 | 133 | 143 | 111 | 84 | 66 | 68 | 64 | 75 | 69 | 62 | 60 |
| Major livestock disposals | 100 | 114 | 122 | 126 | 134 | 129 | 132 | 129 | 132 | 131 | 137 | 131 | 130 | 130 |
| Milk (all purposes) | 100 | 103 | 104 | 106 | 95 | 93 | 90 | 85 | 78 | 73 | 67 | 61 | 64 | 68 |
| Wool | 100 | 103 | 109 | 95 | 95 | 67 | 55 | 50 | 60 | 54 | 54 | 46 | 43 | 41 |
| Eggs | 100 | 138 | 133 | 162 | 173 | 151 | 135 | 187 | 191 | 260 | 260 | 445 | 450 | 450 |
| Major livestock products | 100 | 105 | 107 | 106 | 100 | 87 | 80 | 78 | 78 | 77 | 77 | 78 | 79 | 81 |
| Livestock | 100 | 111 | 118 | 121 | 125 | 118 | 119 | 116 | 120 | 116 | 119 | 116 | 115 | 116 |
| Total agriculture (b) | 100 | 102 | 111 | 116 | 107 | 111 | 98 | 105 | 109 | 86 | 100 | 102 | 107 | 108 |

(a) Base of each index is 1996–97 = 100

(e) Estimate

(b) Excludes lifestyle horticulture due to insufficient data

(f) Forecast

(Source: Compiled by QPIF from ABS and QPIF data)

The indices of different commodities and groups of commodities were calculated using a simple Laspeyres index with 1996–97 as the base year. The year 1996–97 was chosen as the base year because it is considered to be a year when average production levels were recorded for most of Queensland's major agricultural commodities.

Livestock disposals

Cattle and calves

Forecast

In 2009–10, the GVP of Queensland’s cattle and calf industry (including cattle and calves sold for slaughter plus live exports) is forecast at \$3.44 billion. This is nearly 1% lower than QPIF’s final estimate for 2008–09 and almost 4% greater than 2007–08.

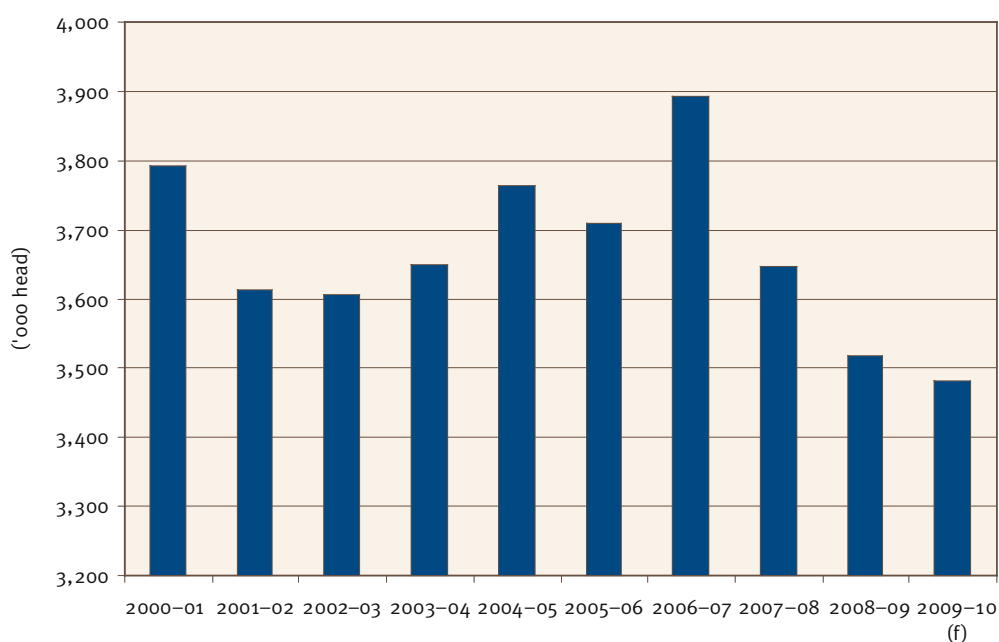
Analysis

Cattle and calves sold for slaughter

In 2009–10, the gross value of cattle and calves sold for slaughter is forecast at \$3.31 billion, the same as the ABS estimated value of cattle and calf slaughterings in 2008–09. This is a result of a forecast decrease in slaughterings being offset by a rise in price.

In 2008–09, around 3.52 million head of cattle and calves were slaughtered in Queensland, 3.5% less than 2007–08.

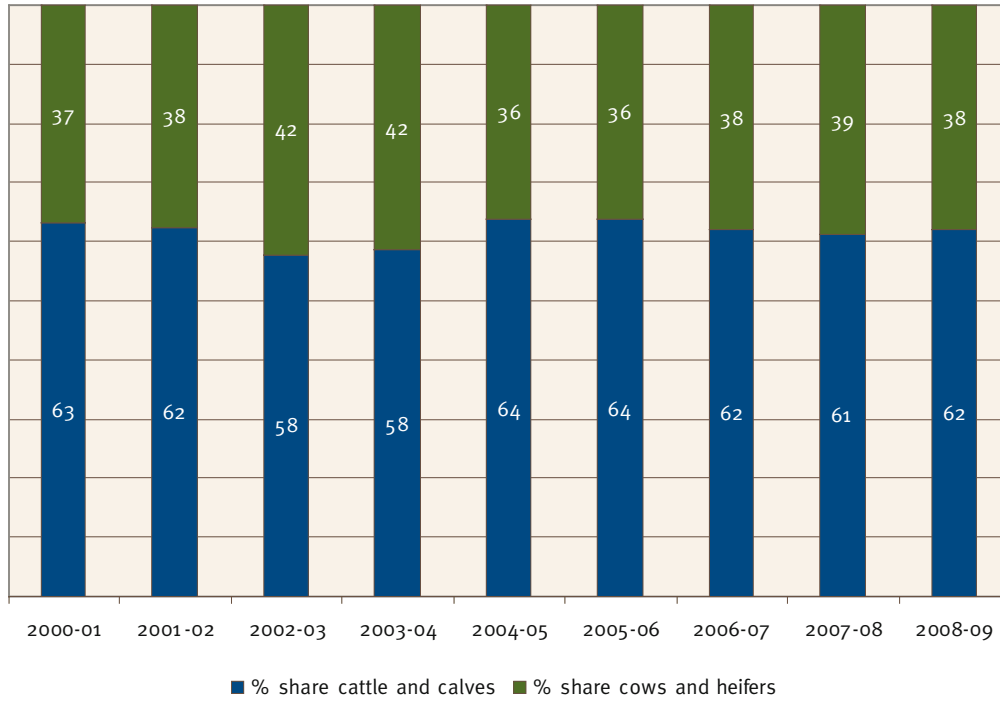
Figure 3. Queensland cattle and calf slaughterings, 2000–01 to 2009–10



Slaughter numbers in Queensland in 2009–10 are expected to be down on 2008–09 at approximately 3.48 million head. The anticipated decrease in slaughter numbers in Queensland is partly attributable to producers retaining cattle for herd rebuilding due to the floods in the north in the early months of 2009 and also to producers capitalising on the improved seasonal conditions and ample supply of feed in other parts of the state. The full extent of the impact of flooding rains on slaughter numbers is still not known; the impact may not be seen until the second and possibly third quarters of 2009–10.

The percentage of cows and heifers slaughtered as a share of total cattle and calves decreased in 2008–09 from the previous year, returning to 2006–07 levels (as shown in Figure 4 below). The reduced cow and heifer slaughter in 2008–09 from the previous year suggests some producers have begun herd rebuilding in response to improved seasonal conditions.

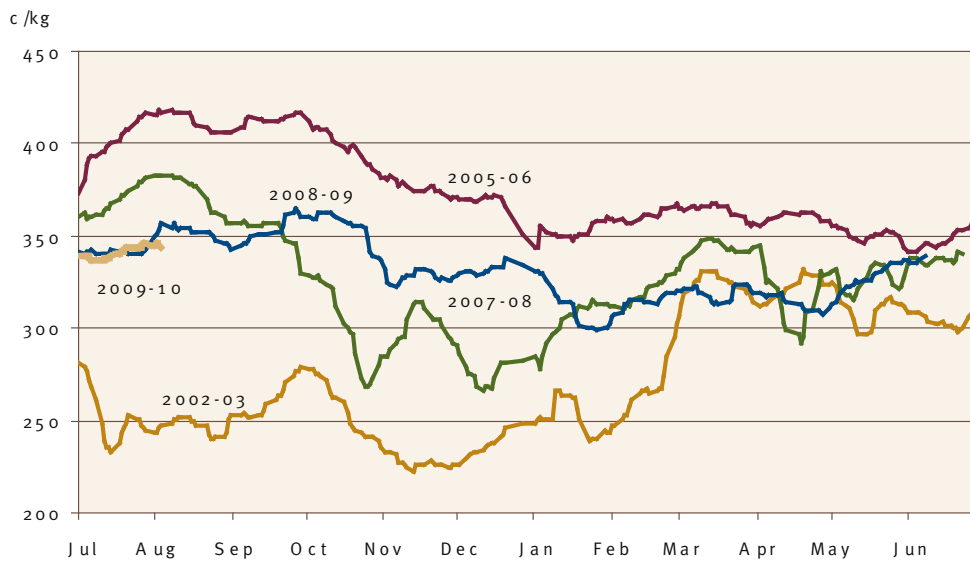
Figure 4. Percentage share of total slaughter for cattle and calves and cows and heifers, Queensland, 2000–01 to 2008–09



(Source: ABS)

As shown in Figure 5 below, prices were high in 2005–06 and these levels have not been achieved since, even in nominal terms. Beef prices at the beginning of 2009–10 are similar to that of 2008–09.

Figure 5. Eastern Young Cattle Indicator (EYCI)



(Source: MLA)

Australia

The total number of cattle and calves slaughtered in Australia in 2008–09 was estimated at 8.7 million head, 1% lower than 2007–08.

According to MLA total cattle turn-off is forecast to decline over the next year. This is due to the significant improvement in seasonal conditions across key beef producing regions, with producers responding by withholding cattle.

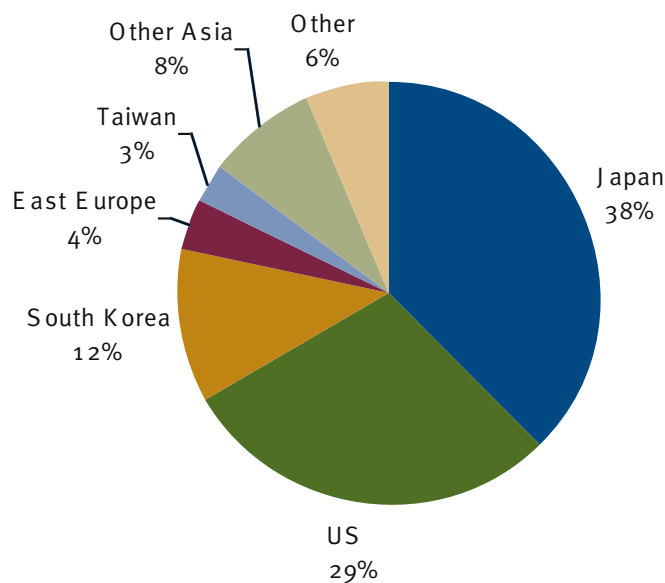
The feedlot sector, as discussed below, has experienced a slight increase in the number of cattle on feed over the last financial year. The Australian feedlot sector has been hit hard by financial and economic conditions. Demand for grain-fed beef in Australia and overseas has suffered from the impact of the recession, as consumers turned towards cheaper beef items.

Exports

Exports of Australian beef and veal decreased slightly from 2007–08. In 2008–09, 922 703 t were exported, compared to 930 319 t in 2007–08.

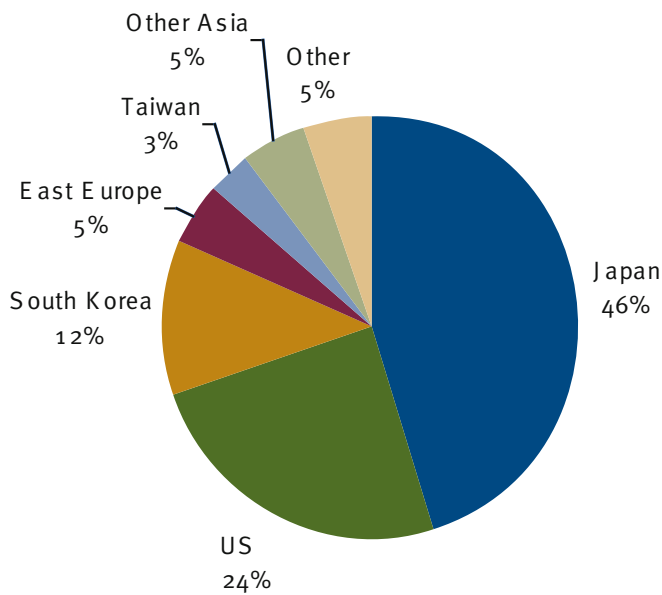
Japan was Australia's largest export market with shipments of 362 629 t in 2008–09, approximately 3000 t less than 2007–08. Japan accounted for 39% of Australia's beef and veal exports. This was followed by the US (29% of Australia's exports) and South Korea (12% of Australia's exports). Together, these three countries accounted for 79% of Australia's beef and veal exports.

Figure 6. Australian exports of beef and veal, 2008–09



(Source: DAFF)

Figure 7. Queensland exports of beef and veal, 2008–09



(Source: DAFF)

In 2008–09, Queensland exported 545 162 t of beef and veal, accounting for 59% of Australia’s beef and veal exports. This was an increase of 14,848 t from 2007–08.

Japan

Japan was Queensland’s largest export market, accounting for 46% of Queensland’s beef and veal exports in 2008–09. This was followed by the US (24%) and South Korea (17%).

Australia’s beef trade with Japan has been adversely affected due to the economic downturn. However, with the expected return to positive economic growth into 2010, there is a chance demand for Australian beef will recover. According to MLA (under the assumption of normal seasonal conditions into 2010), an increased supply of heavy grass-fed cattle, primarily out of Queensland, will underpin the higher beef production.

Demand from Japan, however, is also dependent on the progress in Japan–US beef access negotiations.

South Korea

Increased seasonal demand is expected to lift exports in the first half of 2009–10. However, into 2010 US beef imports are expected to increase—this in turn decreasing Australia’s share in the Korean imported beef market.

US

The value of the Australian dollar is the major determinant for Australian beef and veal exports to the US. According to MLA, Australian beef and veal exports to the US are expected to increase in the second half of 2009–10 as an improving economy, better credit and trading conditions and falling US beef supplies sees US beef import demands grow.

Feedlots

The number of cattle on feed in Queensland fell consistently between June 2006 and March 2008. However, since June 2008, numbers have gradually increased to reach 415 099 head in the June 2009 quarter. This was an improvement from the previous quarter and also from the same time last year.

In the June 2009 quarter, Queensland’s feedlots were operating at 66% capacity—an improvement on the March 2009 quarter but slightly lower than June 2008 where feedlots were operating at 68% capacity.

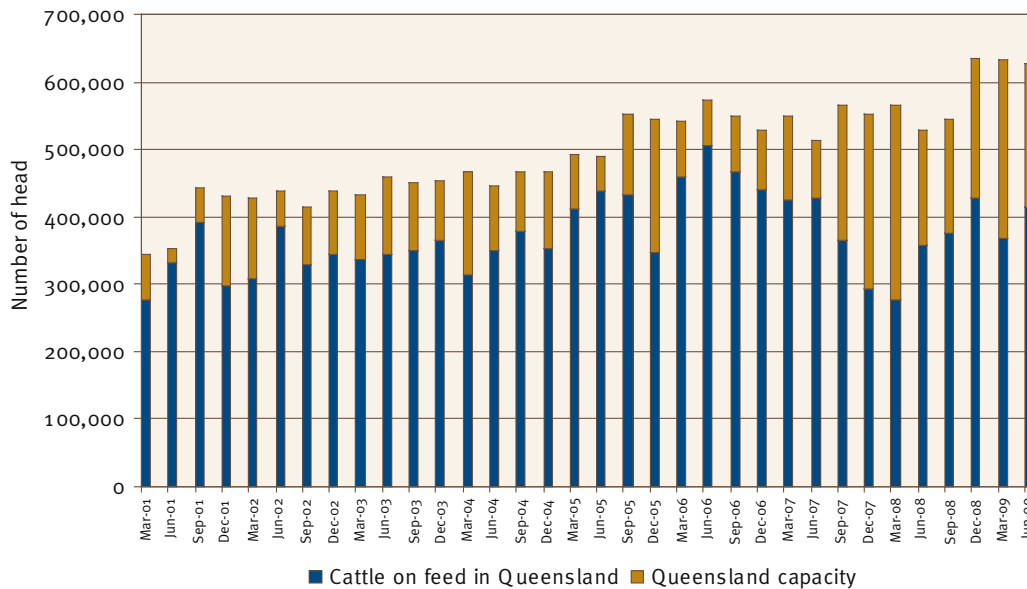
According to MLA, the number of cattle on feed for March 2009 better reflected the position of the feedlot industry. Results for June 2009 showed that conditions for the feedlot sector have improved slightly.

Queensland grain-fed cattle turn-off in the June quarter of 2009 was 15% greater than at the same time last year. However, turn-off for the June 2009 quarter was 15% lower than the March quarter of 2009.

Turn-off from feedlots generally accounts for approximately 40% of Queensland's total slaughter. Changes in the number of cattle on feed therefore have a significant impact on total slaughter numbers and beef production in Queensland.

Trading conditions are still difficult, with the global financial crisis continuing to dampen beef demand in export markets.

Figure 8. Queensland cattle on feed and feedlot capacity, March 2001 to June 2008



(Source: Australian Lot Feeders' Association (ALFA)/MLA, June 2009 national accredited feedlot survey)

Live cattle exports

In 2009–10, the gross value of live cattle exports is forecast at \$125 million.

Live cattle export data from the ABS valued Queensland's live cattle exports at \$125 million in 2008–09.

In 2002–03, live cattle exports from Queensland accounted for almost 25% of Australia's live cattle exports, reaching a peak of 253 835 head. Since then, the number of live cattle exported has decreased dramatically due to the appreciation of the Australian dollar, competition from South America and increasing freight costs. However, live cattle exports rebounded in 2008–09, reaching 178 307 head, which accounted for approximately 20% of Australia's live cattle exports.

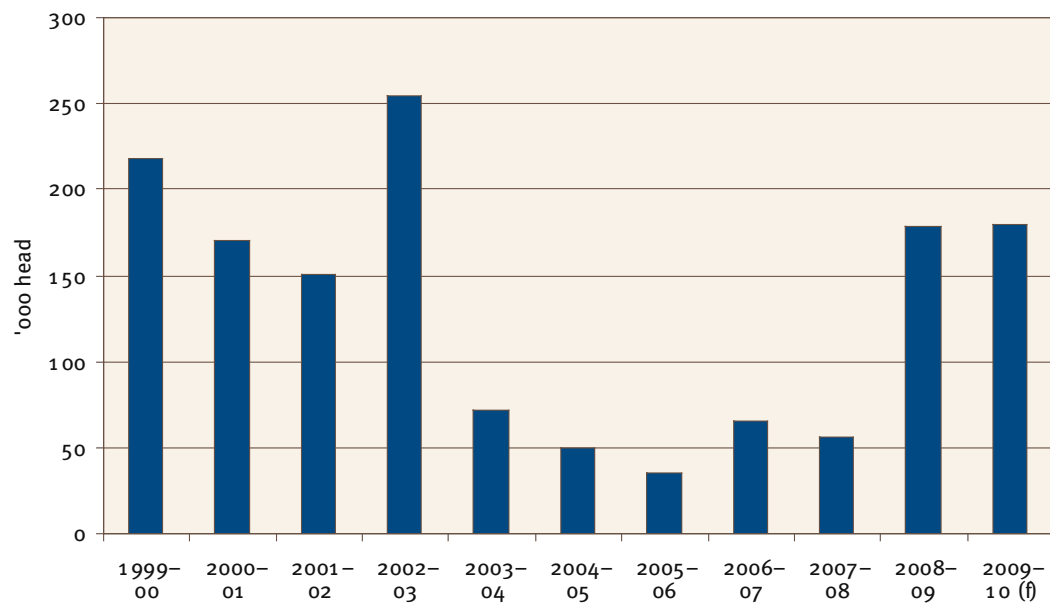
The large increase in live cattle exports is thought to be due to the falling Australian dollar and a continued increase in demand from Indonesia. According to MLA, steady expansion in the Indonesian feedlot capacity will help to facilitate the steady increase in exports.

In 2009–10, it is expected approximately 2000 more head will be exported from Queensland. However, appreciation of Australian dollar is likely to increase pressure on exports. If the price becomes less attractive for sellers, then southern buyers (restockers/finishers) will be able to offer a more competitive price. Live cattle prices are still reasonable compared to other options, with a boat leaving Townsville on average every 4–6 weeks.

Also, Queensland cattle are not the first choice for live exporters as the state is furthest from Asian destinations. The preferred options are the Northern Territory and Western Australia.

Prospects for live cattle trade in 2009–10 are expected to be similar to the previous year.

Figure 9. Queensland live cattle exports, 1999–2000 to 2009–10



CQ BEEF expansion: a FutureBeef project triumph

Ten Middlemount district grazing businesses have founded another CQ BEEF (Better Economic and Environmental Futures) Group, a regional producer-driven project under the FutureBeef initiative.

QPIF principal industry development officer Mick Sullivan said FutureBeef 2020 was firmly focused on partnering with Queensland beef producers to deliver technology and best management practices to the state's progressive cattle industry.

Mr Sullivan said the CQ BEEF project was flourishing with eight groups now established since its mid-2007 launch based on a partnership between Fitzroy Basin Association Inc (FBA), Cooperative Research Centre for Beef Genetic Technologies and QPIF.

The Australian Government's Caring for Our Country program has provided the funding support through FBA to help these families assess the financial implications of changes in business strategies relating to turn-off, marketing, property development and supplementary feeding.

'Our objective is to assist the group members to review their family operated grazing businesses using in-depth economic analysis to identify opportunities to improve profitability and environmental management,' Mr Sullivan said.

The newly formed Middlemount group held their initial meeting in late June and members are working closely with Emerald-based facilitators Byrony Daniels (a QPIF development officer) and Gina Mace (an FBA grazing land management officer).

Working through the Profit Probe economic analysis of each individual business can be a challenge but all participants have access to the project support team, which includes QPIF agricultural economist Rebecca Gowen at Rockhampton.

With the addition of Middlemount, the Central Highlands now has functioning groups established at Mackenzie River, Rolleston and the Billaboo catchment in the Gemfields–Bogantungan area west of Emerald.

Mr Sullivan said that FutureBeef groups like this are providing meaningful direction to achieve long-term management and productivity outcomes for Queensland's cattle industry.

'We have successfully brought group members together to openly share and entrust their business objectives and financial records to help identify and address the strengths and weaknesses of individual family operations,' Mr Sullivan said.

'By identifying ways to improve business profitability, producers can then focus on the most effective ways to implement change to lift on-farm efficiency.

'There are groups utilising remote sensing technology to benchmark land cover changes to help monitor land condition and maintain sustainable stocking rates.

'Others are adopting rotational grazing with strategic water placement coupled with water medication for better pasture utilisation; investigating the economics of planting leucaena; and honing live cattle assessment skills to target high-value markets.'

Mr Sullivan said the scope for improved business profitability was unlimited and the ground-breaking leadership of FutureBeef's CQ BEEF pilot project was also delivering natural resource management benefits welcomed by an increasingly environmentally aware broader community.

Queensland's grazing property values

Southern Queensland

According to Doug Knight, Senior Property Valuer at Herron Todd White, the growth in land values from 2000–07 could not be sustained, particularly since the advent of the global financial crisis. He said the majority of the growth had been driven by the buoyant cattle market, and that at present it was a buyers' market with falls of 5–15% in grazing land values since the peak of 2007. Doug said these falls were very much dependent on where the property was located, the type of industry involved, and the quality of the property itself. Doug also believed that the market bottomed out around March to May this year and that better quality properties were not as affected by the downturn.

Central Queensland

According to Will McLay, Property Valuer at Herron Todd White, the Central Queensland rural property market has slowed in terms of the volume of properties selling and the rate of sales since the market peak late in 2007. However, good quality scrub grazing properties—improved to permanent pastures and capable of finishing cattle at premium weight-for-age prices—have still remained in demand and held their values accordingly.

The slow down in sales is largely attributed to the fallout from the global financial crisis affecting Australian agribusiness financiers, which tightened credit policies and restricted competition on the rural property market. Meanwhile, vendors largely remain unmotivated, enjoying good seasonal conditions and cheap finance supported by a reasonably consistent cattle market.

Further analysis by Will McLay has shown there has been a renewed interest in the Emerald Irrigation Area, particularly from corporate investors, exemplified by Primag's purchase of 'Parker' for \$7.5 million with 2000 ML of water plus harvest entitlement. This sale marks the first substantial irrigation sale since 'Lochiel' also by Primag in early 2008.

No irrigation blocks have sold on the Channel Irrigation Scheme since 2006; however, the 100% announced allocation and Fairbairn Dam's level at 86% may inspire some confidence back to this market. The aggregated grazing blocks 'Hillview' and 'Manalee', located west of Springsure, sold at auction in May this year and were resold to a local grazier at values slightly below the auction-realised sale in May, which reflected a rate of \$1062/ha across the 5836 ha aggregation.

Will McLay also said that although the mining sector had a scare at the start of the global financial crisis, things are looking fairly positive. Solid demand from China has inspired the proposal of the Galilee Basis coal projects in the Alpha/Aramac districts. The mining companies, although not as aggressive with acquisitions as they have been in the past, have still been active and purchased 'Tremaine' (\$3.95 million) and 'Tantallon' (\$3.3 million), both located in the Blackwater district.

Northern Queensland

So far in 2009 there has been reduced sales activity compared with recent years. Analysis by rural property valuers Herron Todd White indicates that business trading conditions appear to be remaining at a level that should maintain status quo or slightly less than the 2007–08 peak years. Reasons for this general optimism are:

- Interest rates are still relatively low.
- The Queensland Cattle Market Index (QCMI) is at similar levels to 2007–08 for this time of the year.
- The wet season of 2009 has maintained a good feed supply.

However, possible dampeners to the ensuing year could include:

- the potential arrival of El Niño (drier seasonal conditions)
- an ongoing increase in the costs of fuel arising from the imposition of the state fuel tax
- international market increases.

Economic and risk factors that influence property buyers

Changes in input prices can also cause buyers to choose different properties, in terms of enterprise type (breeding or fattening), land type (topography, soil type and balance of pasture/forested areas) and the layout/infrastructure of the property (locations of watering points and the development of laneways, mustering yards, loading ramps and fencing). Some properties are not as susceptible to changing input costs as others.

In terms of enterprise type, a fattening enterprise has lower input costs (a breeding enterprise has higher labour needs for branding, pregnancy testing, artificial insemination and disease control) and less weaners and bulls. In times of drought, a breeding operation requires more feed than a fattening operation, because weaners need to be maintained.

Assuming that the land type and infrastructure (watering points, holding yards, mustering lanes and fencing) of a breeding-only enterprise is the same as for a fattening-only enterprise, then the costs of a breeding enterprise will likely be higher. However, when the price risk associated with purchasing replacement stock for the fattening enterprise is considered, an enterprise that consists of both breeding and fattening stock would have more appeal to risk-averse cattle producers than a fattening enterprise alone.

Aside from the type of cattle enterprise determining input costs, the land type and farm infrastructure layout (as described) will also influence input costs. For example, buyers may elect to save labour by selecting a property that has fewer natural watering points surrounded by trap yards, as compared to a property with more watering points but with no way of controlling access by cattle. A property with the former characteristics will require much fewer staff and therefore have lower labour costs. Similarly, given the rising costs of steel and fuel (and hence fencing materials and transport), it may be cheaper for a cattle producer to purchase a property with already well-established cattle yards and fencing, rather than developing a new and undercapitalised property.

Top and bottom line property improvements

The economic top line and bottom line improvements (as well as personal preferences and family decisions) can motivate new property purchases.

Bottom line improvements can be made by lowering operating cost profiles, since the purchase of a particular property may lower operating costs through, for example, improvements in cattle yard development and self-containing cattle muster lanes (which reduce labour costs). Some property purchasers may also be motivated by opportunities to produce a quality meat grade for target markets.

Top line improvements refer to buying different purpose properties (e.g. breeding versus fattening) to complement each other. Also, the degree of a producer's risk aversion will not only influence the type of enterprise bought, but also the land type and infrastructure set-up chosen. Such factors relate to personal decisions by producers, with external economic factors (such as the strength of the Australian dollar, interest rates, input prices, the domestic prices of competitive meats, domestic beef demand, and supplies of export competitor countries to export markets) also influencing the outlook for grazing property values.

In conclusion, the 2009 growth rate in Queensland's grazing property values is less than it was in 2008 and the 2007 peak year. Buyers are rationalising existing assets and are not purchasing property unless they can benefit from supply chain development and/or reduce input costs.

Pigs

Forecast

The gross value of pigs sold to slaughter in 2009–10 is forecast at \$245 million, 4% higher than QPIF's estimate for 2008–09 and 5% higher than the 2007–08 estimate.

Analysis and discussion

Slaughter data from ABS indicate a steady downward trend in slaughter numbers for 2008–09; however, slaughterings have begun to increase for the first five months of 2009.

Pig prices have risen dramatically from October 2008. In saying that, they remained high for the first two quarters in 2009 and have declined since then—a pattern that is common during mid-year.

The increase in prices can be attributed to the reduction in sow numbers, which affect the number of pigs available in the market. Also, an improvement in the supply of feed grain caused feed prices to drop at the start of 2009 and remain constant since. Pig-to-feed price ratios, which are good indicators of return from pig production, have increased from the start of 2008 up until March 2009 and have begun to slightly fall. However, they still remain high compared to previous years.

The Queensland pig industry exported about 779 t of pig meat for the year to June 2008. For the last financial year it has increased by 4% to 813 t, making up 26.5% of Australian pig exports.



Poultry

Forecast

The gross value of Queensland's poultry production in 2009–10 is forecast at \$360 million, 3% higher than 2008–09.

Analysis

An estimated 99 million chickens were slaughtered in Queensland in 2008–09 (based on initial ABS livestock slaughter data). This number is expected to increase in 2009–10. The average gross unit value per chicken is expected to remain stable in 2009–10 as feed grain prices ease from their peak in 2007–08.

The average gross value of poultry production is forecast to increase as a result of an increase in production and the relatively stable prices expected in 2009–10. Poultry production is expected to increase by 2–4% in 2009–10.

Discussion

The current structure of the poultry industry enables it to manage any fluctuations in input prices and pass these changes on to consumers. Chicken meat is produced via contract growing, whereby processors own the chickens and meet the costs of inputs, with growers providing labour and shelter only. The price used in the calculation of the poultry GVP is price per whole chicken ready for the market.

Demand for poultry meat is expected to steadily rise as the effects of the global financial crisis induce consumers to substitute poultry meat for more expensive sources of protein. In 2009–10, poultry consumption is forecast to reach 38 kg per person, unchanged from 2008–09 but 1% higher than 2007–08. Poultry consumption is forecast by ABARE to reach 40 kg per person by 2013–14. Poultry is expected to maintain its position as consumers' most preferred meat.

Across the industry there has been an increasing trend in research and awareness of biosecurity threats as cases of avian influenza continue to be reported outside Australia. The World Health Organisation (WHO) has reported 45 cases so far this year. Queensland poultry growers have



implemented and continue to improve plans to protect the industry from pests and diseases.

For a discussion of egg production, see page 33.

Sheep and lambs

Forecast

Queensland's gross value of sheep and lamb production in 2009–10 is forecast at \$60 million, the same as QPIF's 2008–09 estimate and 5% higher than the 2007–08 estimate.



Analysis

Strong demand and tight supply are expected to lift sheep prices in 2009–10 by 2.6% from 2008–09.

These higher prices are positive for producers in the short to medium term, but one of the biggest challenges to the sustainability of the sheep and lamb industry in the longer term is to arrest the sell-off of the flock.

MLA estimates that to stabilise the national flock at around 68 million head over the next three to four years, sheep turn-off (slaughter and live exports) will have to decline by at least 30% on rates recorded in 2008. MLA is trying to address this problem by continuing to fund research and extension that will increase reproduction rates and reduce lamb mortality using improved genetic tools, nutrition and grazing management.

Smaller sheep flocks and the retention of breeding animals are constraining supply, and sheep slaughterings are expected to fall by approximately 5% from 2008–09. Relatively favourable lamb prices have also contributed to the tight sheep supply, as producers seek to take advantage of them.

Lamb prices almost reached historical highs in 2008–09 due to tight supply and strong demand. These high prices have led to a slight increase in lamb slaughterings in 2009–10. In response, lamb prices are forecast to decrease by 1.7% in 2009–10 from 2008–09.

Seasonal conditions are expected to improve throughout the year. This will provide an incentive for producers to restock. In doing so, this will help maintain high saleyard prices as turn-off is constrained.

For a discussion on wool, see page 32.

Kangaroos

Forecast

Queensland's gross value of kangaroos in 2009–10 is forecast at \$15 million, 55% lower than QPIF's 2008–09 estimate of \$33 million.

Analysis

The reduction in value is mainly a reflection of Russia's current ban of kangaroo imports from Australia. The ban was put in place in August, cutting off the kangaroo meat industry from an export customer that takes 60% of its product. This in turn has reduced the incentive for cull targets to be met, and has seen the average price per kilogram fall to \$0.65.

Livestock products

Although *Prospects* generally discusses only the larger primary industry sectors, special mention should be made of the beekeeping industry.

While the direct commodity production of the industry is relatively small (the GVP in 2001–02 was \$5.1 million, representing less than 1% of Queensland's gross value of primary industry production), it has particular importance to cropping industries. In particular, bees provide significant pollination services, either paid or as a by-product of the honey/pollen collection process. The value of pollination is reflected in the gross values of the cropping industries that bees service, but these services are difficult to value, primarily because of a lack of data about the extent of reliance on feral honeybees.

Australia is the last country that is free of the bee parasite varroa mite. If this mite were introduced, the importance of pollination by managed hives would increase significantly as feral bee numbers drop.

Milk

Forecast

Queensland's GVP of milk in 2009–10 is forecast to increase to around \$295 million, 5% higher than 2008–09 and 17% higher than the revised estimate for 2007–08.

Analysis

With the impact of the global financial crisis on international dairy trade and subsequent decline in dairy product prices globally, there has been a downward price pressure on farm gate milk prices for milk supplied to the domestic market between March and September 2009.

Prices paid to dairy farmers in southern Australia have already been impacted significantly over the last six months. Some dairy farmers in the northern dairying regions who entered into short-term contracts with processors have also been impacted.

This domestic farm gate price pressure has largely occurred due to:

- Some dairy product stocks that could not be sold into the international market have been sold domestically, reducing margins on some dairy product categories. This has placed pressure on the margins of processors operating in these markets, which in turn puts downward pressure on farm gate prices.
- The impact of the global financial crisis on consumption has seen consumers move to cheaper options within dairy product ranges. This scenario has seen the major retailers increase their market share of milk sales through their own brands, which translates to lower margins for processors and downward pressure on farm gate prices.
- the margin a processor can derive from milk that is surplus to the daily market needs.

The majority of dairy enterprises in Queensland have forward supply contracts with fixed base prices. This will limit the impact of the global financial crisis on domestic farm gate prices in Queensland. We expect the most dramatic impacts of the global financial crisis to have passed prior to farm gate contracts being up for renewal.

We expect international demand for dairy products to recover in the year ahead as trade starts to move more freely following the global financial crisis. However, a high Australian dollar will slow the recovery for the Australian dairy industry overall.

It is forecast that production will continue to grow in the first quarter of 2009–10 but then



stabilise with the influence of forecast drier seasons and the impact of lower farm gate prices. Other potential impacts on milk production that were not taken into account in this analysis include heat waves and other climate and market risks.

Improved seasonal conditions across a number of Queensland dairy areas, especially in the southern regions, have helped to boost production over the last year. These conditions have also allowed many producers to restore their feed reserves and improve their herds' on-farm feed ration regime. However, parts of the Northern Darling Downs and the wider Burnett region are still suffering from drought conditions. In addition, higher inputs prices continue to push up farm costs and constrain dairy operations. Security and access to water will also play a critical role in the sustainable future of Queensland's dairy industry.

Supplier numbers appear to be stabilising. Small numbers of new producers started up during the last year; however, processors are not currently taking on any new suppliers.

Fortunately, the market in southern Queensland is the strongest growth market on the eastern seaboard—in terms of growth in population and per capita consumption. During the 2008–09 year milk consumption grew at an average rate of 2.2%, compared to less than 2% on the whole of the eastern seaboard.

The continuing milk sales growth and forecast population growth provides the Queensland dairy industry with the opportunity for future growth.

Table 4. Queensland milk production estimates and forecasts by region 2006–07 to 2009–10

| | 2006–07 million litres (e) | 2007–08 million litres (e) | 2008–09 million litres (e) | 2009–10 million litres (e) | Change from 2008–09 to 2009–10 (%) |
|-------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|--|
| South East Queensland | 419 | 377 | 406 | 438 | 8% |
| Far North Queensland | 82 | 77 | 76 | 76 | 0% |
| Central Queensland | 33 | 31 | 30 | 30 | 0% |
| Total Queensland | 534 | 485 | 512 | 544 | 6% |

(e) Estimate

(f) Forecast

(Source: Dairy Australia)

Wool

Forecast

Wool GVP (including the value of skins) is forecast to be \$100 million in 2009–10, which is 5% lower than 2008–09.

Analysis

The gross value of Queensland's wool production is forecast to decline as a result of:

- weak demand for wool products on the back of the global financial crisis (as wool products are discretionary items)
- depressed prices (from 2007–08) in response to weak demand
- relative attractiveness of sheep meat (as sheep and lamb prices hold high)
- reduced sheep flock limiting supply.

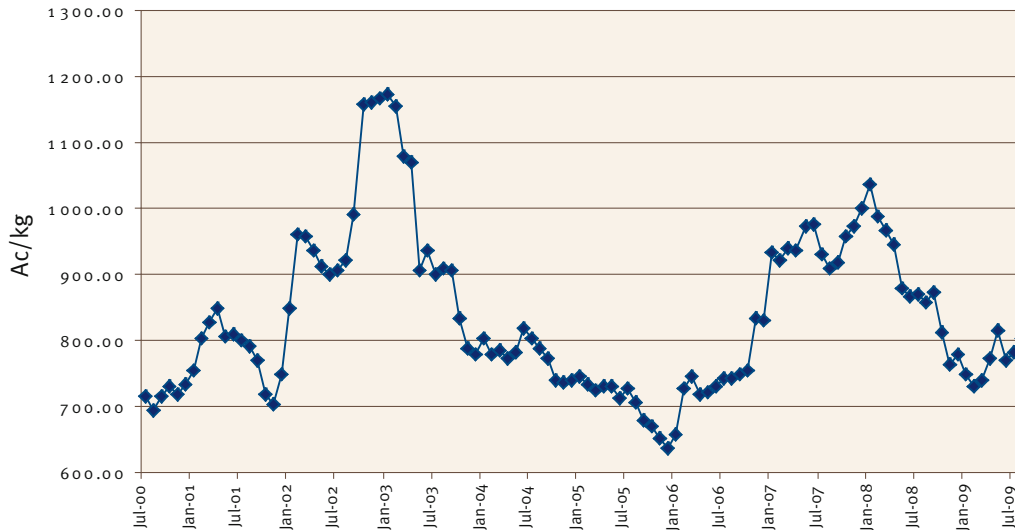
The Australian Wool Innovation Production Forecasting Committee's July 2009 report estimates the Queensland sheep flock to open at 3.7 million head in 2009–10. This is a 7% decline from 2008–09. The July report also forecasted a 2% rise in per head wool production on the back of better seasonal conditions. Consequently, Queensland shorn wool production is predicted to fall by only 5% to 17 million kg in 2009–10 from the 2008–09 season estimate of 18 million kg.



ABARE is forecasting a 3% increase in the Eastern Market Indicator (EMI) in 2009–10 from 2008–09. However, wool prices will still remain much lower than the highs experienced in 2007–08.

Wool is forecast to become increasingly competitive in 2009–10. Wool-to-cotton and wool-to-polyester ratios are both expected to decrease in 2009–10. That is, the prices of alternative fibres are forecast to increase substantially relative to the increase in the price of wool.

Figure 10. Monthly EMI from July 2000 to August 2009



(Source: ABARE June 2009, Australian commodities)

Eggs

Forecast

In 2009–10, the gross value of Queensland’s egg production is forecast at \$120 million, the same as QPIF’s 2008–09 estimate but 14% higher than the 2007–08 estimate.

Analysis

The volume of egg production has increased steadily over the past few years and is expected to continue the trend.



Discussion

Unlike the chicken meat industry, Queensland egg farms are independently owned and operated.

The majority of egg producers are located in the Darling Downs. Those producers vary in size in order to cater for a broad range and scale of existing markets (from farmers’ markets to supermarket chains).

Prices for eggs vary across these markets, but have generally been quite stable. Australian egg producers face no international competition as quarantine protocols prohibit imports of unprocessed egg products.

Caged egg production represents approximately 80% of commercial egg production in Queensland. Although supermarket retailer Woolworths has recently announced that they were removing some of the caged egg lines, the overall volume of caged eggs produced and the composition of the egg industry is unlikely to drastically change in 2009–10.

Crops

HORTICULTURE CROPS

Fruit and nuts

Forecast

The total gross value of Queensland's fruit and nut production in 2009–10 is forecast at \$1.09 billion, 4% higher than 2008–09 and 1% lower than 2007–08.

Analysis

The gross value of **banana** production is forecast at \$400 million in 2009–10, 2% lower than QPIF's 2008–09 estimate and 13% lower than the revised estimate for 2007–08.

Most of the state's banana production occurs in the Cardwell and Johnstone shires in northern Queensland.



The gross value of **strawberry** production is forecast at \$145 million in 2009–10, 12% higher than 2008–09 and 74% higher than the revised estimate for 2007–08. The increase is mainly due to slightly higher production and prices.

Most strawberry production occurs in the Caboolture shire, just north of Brisbane, and along the Caloundra rail corridor.



The gross value of **mandarin** production in 2009–10 is forecast at \$70 million, 17% higher than QPIF's estimate for 2008–09 and 22% less than the revised estimate for 2007–08.

Half of Queensland's mandarin production occurs in the Gayndah shire. A further third of production occurs in Mundubbera (not shown on map).

The forecast is up on last year's estimate, mainly due to the increase in the volumes of production—in particular, the imperial mandarin crop. However, prices are expected to remain lower in the near future.



The gross value of **mango** production is forecast at \$70 million in 2009–10, 8% higher than 2008–09 estimate and 11% less than 2007–08 revised estimate.

The season is expected to be ‘average’ with greater volumes than 2008–09 offset by lower prices. Flowering is reportedly scattered but good in places. However, until flowering is complete and fruit-set determined, a better estimate will not be available.

More than 40% of Queensland’s mango production is in the Mareeba shire in Far North Queensland. A further 39% of production occurs in the neighbouring Burdekin, Bowen and Townsville shires.



The gross value of **avocado** production is forecast at \$80 million in 2009–10, an increase of 23% on QPIF’s estimate for 2008–09 and 14% higher than the 2007–08 revised estimate.

The forecast is based on expected higher production for the coming year. We acknowledge the assistance of Avocados Australia who provided data for this year’s forecast.

Thirty-seven percent of Queensland’s avocados are produced in the neighbouring shires of Isis and Burnett, with 29% of production occurring in the Atherton and Mareeba shires in Far North Queensland. Just over 10% is grown in Crows Nest shire on the Darling Downs.



The gross value of **pineapple** production is forecast at \$55 million in 2009–10, 10% higher than QPIF’s estimate for 2008–09 and the same as the 2007–08 estimate.

Lower volumes of smooth cayennes for both processing and fresh markets are expected to be offset by higher prices, especially for fresh fruit.

More than a third of pineapple production occurs in the Caboolture shire, just north of Brisbane, with a further 20% of production in the Caloundra shire and 10% north of Yeppoon in the Livingstone shire on the Central Queensland coast.



The gross value of **apple** production is forecast at \$45 million in 2009–10, 10% lower than the 2008–09 and 2007–08 estimates.

Lower-than-expected prices have contributed to the lower forecast.

More than 95% of Queensland’s apples are grown in Stanthorpe.



The gross value of **macadamia nut** production is forecast at \$35 million in 2009–10, 17% higher than QPIF’s 2008–09 estimate and 78% higher than the 2007–08 revised estimate.

The forecast for 2009–10 is higher than last year because of modest increases in prices and similar volumes.

Forty percent of macadamia production occurs in the Burnett shire north of Bundaberg. A significant amount is grown around Gympie and just north of Gympie in the Tiaro shire.



The gross value of **table grape** production is forecast at \$50 million in 2009–10, the same as QPIF’s 2008–09 estimate and 52% higher than the 2007–08 revised estimate.

Table grapes were added to *Prospects* last September, the industry having grown rapidly in recent years. The main varieties are Menindee seedless, flame seedless and red globe. Queensland table grapes are early season, with 90% harvested between October and December.

The major production areas are in the Balonne shire where more than 40% of Queensland’s table grapes are grown, and the Emerald shire, where a third (33%) of production occurs.



Quest to find the perfect avocado tree

QPIF researchers are on a quest to create the perfect avocado tree for Queensland growers and consumers.

Queensland produces approximately 80% of Australia's avocados, which equates to about 40 000 tonnes each year.

QPIF researchers are working on a five-year project with a commercial orchard in Childers, Central Queensland, to assess 33 different avocado rootstocks.

QPIF senior horticulturist Dr Danielle Le Lagadec said the rootstock known as 'Ashdot' had been the standout performer for both Hass and Shepard avocado varieties under the trial conditions.

'There are also quite a few other promising rootstocks emerging from the trial and we will be sharing these results with delegates and industry at the Australian and New Zealand Avocado Conference in Cairns,' Dr Le Lagadec said.

'As growers know, the rootstock of an avocado tree determines such things as the volume and quality of fruit, health, productive life of a tree, and even the height and shape of a tree.

'Identifying superior rootstock gives growers critical, scientifically backed advice on the varieties to use to give them better fruit quality, larger volumes and more disease-resistant trees.

'They can even use the data to select varieties based on their ideal height and canopy shape.

'Dwarf varieties are favoured because they reduce pruning and harvesting costs - so this is another area we are exploring.

'Another important aspect of the project is selection of rootstock that has resistance to root rot, which is a significant avocado disease that causes tree decline.

'Root rot almost wiped out the world's avocado industry in the early 1970s so resistant varieties are extremely important for Queensland growers.'

The project results were presented in Cairns at the Australian and New Zealand Avocado Conference, 21-24 July 2009. The QPIF trial will continue for another year.

Vegetables

Forecast

In 2009–10, Queensland’s gross value of vegetable production is forecast at \$1.05 billion, 7% higher than 2008–09 and 6% higher than 2007–08.

Analysis

Queensland’s gross value of **potato** production is forecast at \$45 million, 10% lower than 2008–09 and 23% lower than 2007–08 revised estimates.

Market prices for the start of 2009–10 are already lower than the corresponding period last year. In response to these lower prices, which have prevailed from the second half of last season, some growers are planning to reduce the amount of plantings.

The main potato growing areas are the Atherton and Herberton shires in Far North Queensland, the Burnett shire, north of Bundaberg and Gatton, west of Brisbane.



Tomato GVP for 2009–10 is forecast at \$240 million, 20% higher than the 2008–09 estimate and 15% higher than the 2007–08 revised estimate.

Production is expected to increase through the first half of the season as existing growers increased the area sown in response to favourable market and growing conditions.

The significance of hydroponic and glass-house production has also grown substantially in recent years, contributing to the rise in production value for the industry.

Half of Queensland’s tomato production occurs in the Bowen shire, with some production in the Isis shire around Childers.



The gross value of **capsicum** production in Queensland is forecast at \$105 million, 5% more than the 2008–09 estimate and 7% more than the 2007–08 revised estimate.

Reasonable water availability is likely to result in an increased volume of production, particularly around Isis shire.

In recent years, evidence has emerged that the growth in chilli production has outpaced that of capsicums.

As with tomatoes, the main areas for capsicum production are the Bowen and Isis shires. The main chilli production region is Bowen, with some also grown in Stanthorpe.



The gross value of **sweetpotatoes** is forecast at \$55 million, which is 22% higher than 2008–09 and the same as 2007–08.

Queensland produces 85% of Australia's sweetpotatoes, with Bundaberg being the main growing area. Some sweetpotatoes are also grown in Cudgen in northern New South Wales. All production is sold domestically.

The growth of the sweetpotato industry has been rapid over the past five years. Although overproduction resulted in low prices last year, and a dramatic drop in total gross value, prices are expected to firm in 2009–10 as production aligns more closely with domestic demand.

Other vegetables

The gross value of **lettuce** production in Queensland in 2009–10 is forecast at \$65 million, 8% higher than the 2008–09 estimate but similar to the 2007–08 estimate.

Overproduction and depressed prices resulted in a substantial reduction in the gross value of lettuce in 2007–08 and 2008–09, seeing the industry go from \$98 million in 2006–07 to an estimated \$60 million in 2008–09. Indications are that the industry in Queensland has bottomed out, with a rebounding industry resulting in slight growth for the coming year.

The Gatton, Esk and Cambooya shires are Queensland's main areas of lettuce production.

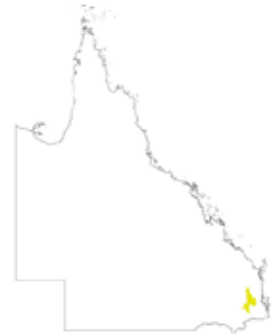
Queensland's gross value of **mushroom** production is forecast at \$60 million, 20% higher than the 2008–09 estimate and 76% higher than the 2007–08 revised estimate.

The mushroom industry has experienced rapid growth over the past four years, driven by steady growth in market demand.

The main two production areas for mushrooms are the Beaudesert and Stanthorpe shires, south-west of Brisbane, where almost 60% of production occurs. Neighbouring shires, Isis (around Childers) and Burnett (north of Bundaberg), account for 12% of production, while 9% of production occurs in the Maroochy shire (around Nambour).

Watermelon production in Queensland in 2009–10 is forecast at \$40 million, which is the same as the 2008–09 estimate and 5% higher than the 2007–08 revised estimate.

A third of Queensland's watermelon production occurs in the adjoining shires of Bowen and Burdekin in Central Queensland. Smaller pockets of production are in the Chinchilla and Rosalie shires on the Darling Downs, as well as the Banana shire and Gatton shire.



Lifestyle horticulture

Forecast

The GVP of Queensland's lifestyle horticulture industry production sectors including nursery, turf and cut flowers) in 2009–10 is forecast at \$974 million, 1% lower than 2008–09. The forecast for 2009–10 and the revised estimates for 2007–08 and 2008–09 are based on the survey conducted by Queensland Treasury's Office of Economic and Social Research on behalf of QPIF in 2008 based on.

- The gross value of nursery production is forecast at \$788 million, the same as 2008–09.
- The gross value of turf production is forecast at \$105 million, 5% lower than 2008–09.
- The gross value of cut flower production is forecast at \$81 million, the same as 2008–09.

Analysis

The gross value of **nursery** production is forecast at \$788 million in 2009–10, the same as for 2008–09.

2009 was a highly variable year for the production nursery sector; businesses have reported both strongest and poorest performance months.

Industry outlook for the later half of 2009 and early 2010 is positive and both domestic and interstate trade are buoyant due to generally good rainfall in the capital cities and despite impacts from the economic downturn and ongoing restrictions to urban water use.

The anticipated upcoming easing of water restrictions to 'permanent water conservation' across south-eastern Queensland in December is expected to further bolster the production nursery market.

Production nurseries are reporting strong growth in the edible seedling market segment and the growth of 'grow your own' type home food gardens. Potted colour, indoor plants and other ornamental ranges remain relatively steady.

Widespread rainfall across the state in early 2009 promoted steady demand for vegetable seedling, fruit tree and plantation forestry planting stock through to the end of 2009.

A number of nurseries are reporting strong indications that the spring 2009 season is going to be strong, with demand and orders already exceeding anticipated supply in a number of plant types.

Production nurseries supplying the landscape sector are reporting an ongoing downturn due to reduced demand in this market segment. Landscape activity has stalled as result of general building development easing across the nation, although infrastructure investment by government is likely to partially offset negative impacts and encourage positive growth across the sector.

Overall, the nursery production sector continues to re-build after the previous two years of water restrictions in south-eastern Queensland.

The gross value of **turf** production is forecast at \$105 million in 2009–10, 5% lower than 2008–09.

The turf sector is currently seeing a slight downturn. The residential and renovation market segments have maintained a moderate level of demand; however, the commercial, subdivision and development market segments have dropped off noticeably. The infrastructure-related market segment has maintained growth throughout the first half of 2009.

The relaxation of permanent water restrictions provides expansion to irrigation and watering allowances and will help improve consumer confidence to maintain and renovate lawns.



The outlook for the coming year is optimistic. A strong spring 2009 season is anticipated as a result of the high dam levels.

The GVP of **cut flowers** is forecast at \$81 million in 2009–10, the same as 2008–09.

A good 2009 winter has resulted in strong product quality and quantity. Wholesale prices have maintained and the outlook is encouraging with a steady increase in demand for product.

The highly labour-intensive nature of cut flower production and associated costs continue to place strong pressure on profit margins in the sector.

Flower purchasing continues to remain strong for the traditional holidays and events such as Mother's Day. Encouragingly, florists and retailers report that overall sales remain steady.

The native flower sector will be participating in trade missions to China and Japan in late 2009. This will further develop export markets and create additional demand for Queensland cut flower and foliage products.

More information about the results of the new lifestyle horticulture industry survey, and the lifestyle horticulture services segment, is included in the special feature 'Setting a new benchmark for lifestyle horticulture' (page 72).



OTHER CROPS

Sugarcane

Forecast

The gross value of Queensland's sugarcane production in 2009–10 (i.e. from the 2009 harvest) is forecast at \$1.34 billion. This value exceeds QPIF estimates for 2008–09 and 2007–08 by 46% and 79%, respectively.

Total sales of the Queensland sugar industry, in raw sugar equivalent, are forecast at \$2.06 billion in 2009.

Although there has been an increase in the use of different pricing options for sugarcane, it is assumed that QSL's Seasonal Pool price and the grower share in the old uniform cane-payment formula are still the best indicators for industry valuation along the supply chain.



Analysis

Queensland's 2009 crop has been set back by floods in northern regions in January and February, and by the ongoing dry conditions further south. However, the crop has recovered well and dry weather up to the end of August has helped harvesting schedules and sugar content. The likely continuation of dry conditions influenced current expectations of a 2009 cane crop of 30 million tonnes and a CCS⁶ of 14.

In August 2009, world sugar prices have reached a 28-year high in nominal terms. The expected Seasonal Pool price is \$480–500/t for the 2009 crop, against pool returns of \$335/t in 2008 and \$275/t in 2007. Thus, despite the renewed strength of the Australian dollar, Queensland cane farmers can expect a good season.

6 CCS or Commercial Cane Sugar is a measure of sugar content.

Industry situation

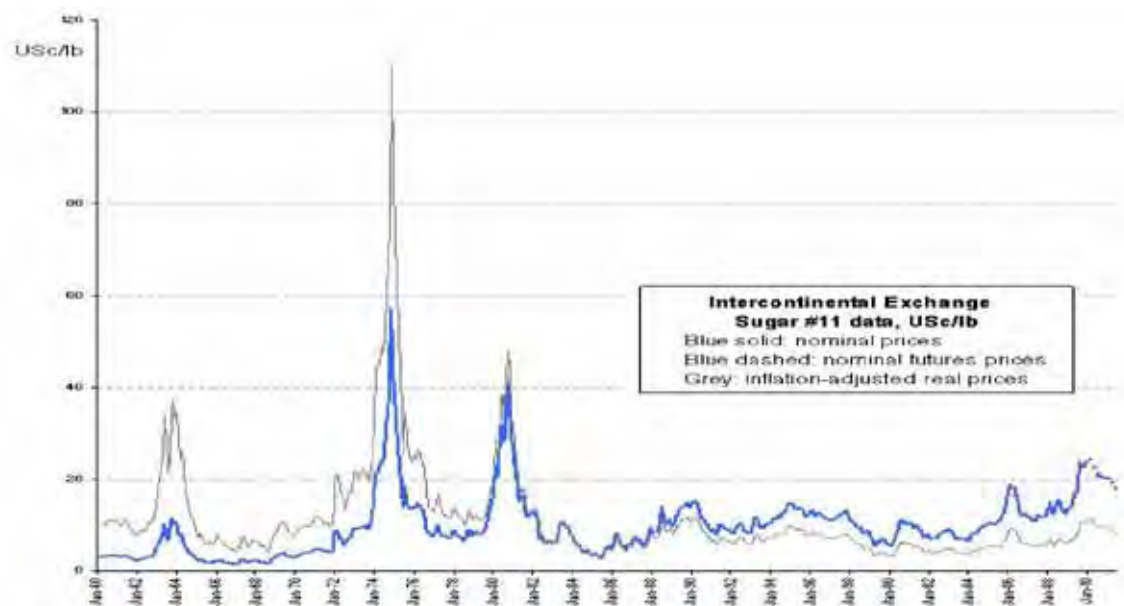
Sugar has become a staple food, rather than a luxury, for hundreds of millions in the developing world who have reached a level of relative affluence. Short of a major recession hitting developing countries, international demand for sugar will increase steadily as a function of growth in population and incomes.

However, world sugar prices have recently been increasing steeply due to sugar still being one of the international commodities most affected by domestic policies. A positive development is that the European Union's sugar reform is removing a major factor of market distortion by reducing subsidised re-export of sugar from developing countries.

Over recent years India has become a major source of market instability through the stop-go effect of its domestic agricultural policies. After producing surpluses that required subsidised exports, India is now experiencing a domestic sugar shortfall caused by significantly reduced plantings and missing monsoon rains. Given the size of the Indian sugar market, these oscillations between exporting and importing have a large impact on international prices. Meanwhile, excessive rainfall in Brazil is reducing production estimates and makes it less likely that the world's largest sugar exporter can fill the supply void.

The sugar market is notoriously difficult to predict, but as high prices tend to trigger a supply response they may not last beyond 2011. At a 28-year record, current nominal prices are higher than most historical figures, although in inflation-adjusted real terms they look less remarkable (see Figure 11).

Figure 11. International real and nominal raw sugar prices, 1960–2009⁷



Industry restructuring is continuing. Maryborough Sugar Factory acquired Mulgrave Central Mill in March 2009 and is bidding for Tully Sugar to create the fourth largest sugar producer in Australia.

Current favourable conditions of the sugar industry, despite the worldwide after-effects of the global financial crisis, have added impetus to CSR's renewed attempt to spin-off its Australian sugar business. These developments create the potential for change in the Queensland sugar industry.

⁷ <http://capital-chronicle.com/2009/08/sugar-sweetness-and-blight.html>

Cotton

Forecast

In 2009–10, the gross value of cotton production (including cotton seed) in Queensland is forecast at \$420 million, a 24% increase on the 2008–09 estimate.

Analysis

World demand for cotton in 2009–10 is expected to revive after the weak recovery of the world economy.

Due to the relatively tight supply, the indicator price for cotton (Cotlook 'A' index) is forecast to increase to US\$0.725 a pound in 2009–10, compared with US\$0.625 cents in the previous year.

The outlook for Queensland cotton remains favourable in 2009–10, with recent significant rainfall across growing areas. Area sown to irrigated cotton is expected to increase by over 10 000 ha in the Darling Downs, Border Rivers and Central Queensland. However, the St George and Irranbandi regions have experienced low irrigation water supplies with an expectation of reduced plantings next season.

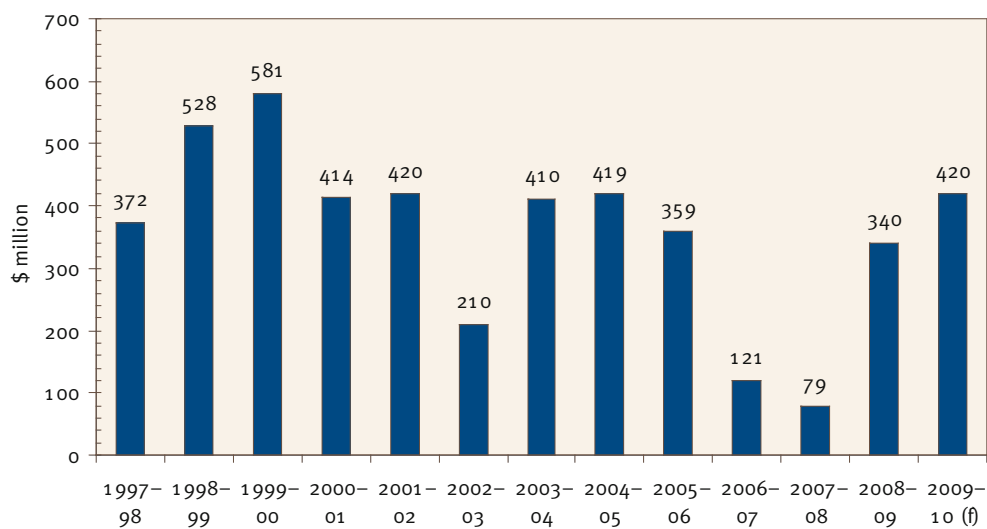
Cotton remains a lucrative alternative crop since world prices for grain, especially summer crops like sorghum, have fallen significantly over the last couple of years. The area sown to dryland cotton is expected to increase substantially in the Dawson area as some grain growers are likely to switch to cotton given the low prices for grain.

Cotton production is also making its way to the north. About 700 ha of cotton have been harvested in the Burdekin in 2008–09. Cotton growers, mostly moving from the Darling Downs, are said to be attempting to build up the 3000–5000 ha needed to establish a commercially viable gin in northern Queensland.

The GVP is forecast to increase by 24% in 2009–10. This estimate is almost the same as value of cotton production before the drought in 2006 (Figure 12), yet still lower than the historically high in 1999–00 (\$581 million).



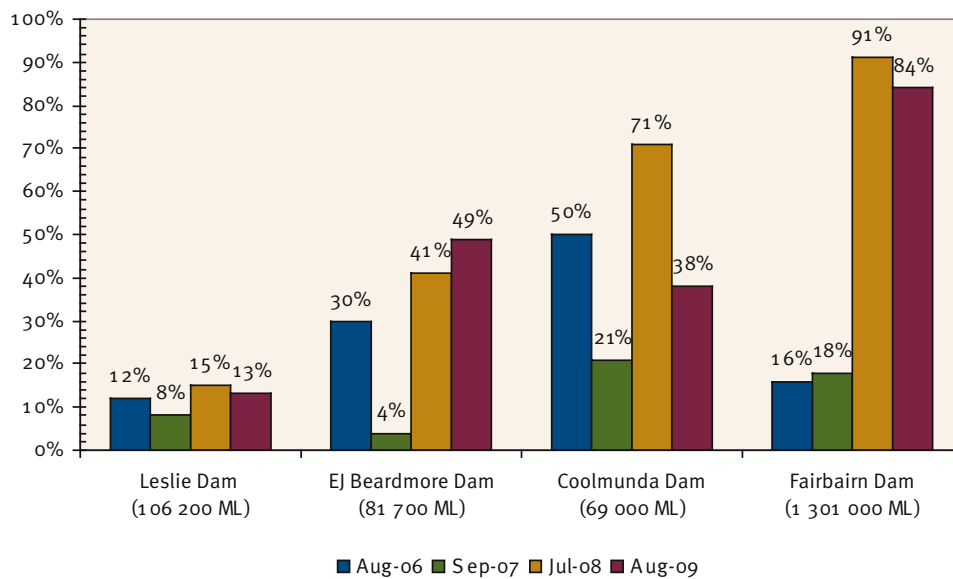
Figure 12. Gross value of cotton production in Queensland, 1997–98 to 2009–10



(e) Estimate (f) Forecast

(Source: ABS and QPIF)

Figure 13. Status of major water storages in Queensland's cotton growing regions



(Source: Queensland Sunwater)

Figure 13 shows the current status of major water storages in Queensland's cotton growing regions. The availability of irrigation water remains stable relative to last year in all cotton growing regions except Coolmunda Dam (near Goondiwindi), which does not affect cotton production as much as the other dams.

OTHER MAJOR FIELD CROPS

Chickpeas

Forecast

The GVP of chickpeas in 2009–10 is forecast at \$60 million, which is 8% lower than QPIF's estimate for 2008–09, but 20% higher than the 2007–08 estimate.

Analysis

The lower GVP is due to an expected significant reduction in yields, despite an increase in area sown, thereby reducing production. This, coupled with a small fall in prices, is expected to reduce GVP.



Prices and area sown

Area sown to chickpeas in 2009–10 is expected to increase by 40% to 100 750 ha, from 72 000 ha in 2008–09. High chickpea prices, good subsoil moisture profiles at planting time, and chickpeas being a beneficial rotational crop have all contributed to the increase in area sown.

Chickpea prices for the September 2009–10 quarter are estimated to be \$469/t; this represents a fall of 2% from \$478/t in 2008–09, and a 19% fall from \$578/t in 2007–08. Nevertheless, chickpea prices remain high in absolute terms and also in relation to winter competitor crops such as wheat (\$252/t) and barley (\$216/t).

Areas of desi chickpeas planted in Central Queensland in 2009 are estimated at 55 000 ha, which is slightly higher than in 2008, with increased plantings in the north of Emerald. However, areas are slightly reduced in more southern parts of Central Queensland. The area planted to desi chickpeas in southern Queensland was 67 000 ha, which is a significant increase on the 2008 level, with many growers receiving suitable planting rains for the first time in several years.

The chickpea triangle extends from Dalby/Miles, to the Condamine (west) and St George, and

then to the border at Goondiwindi. In 2009 the planting period has extended from late April to the end of June with 30–40% of the crop in some districts being planted in June due to continued overcast and wet weather in May delaying growers from getting onto their paddocks.

The benefit for crops planted later was that as at July 2009 they were sitting on full moisture profiles. Western Downs and Childers to Goondiwindi all had good soil moisture during May–June 2009. Weather conditions until July remained mild, resulting in rapid vegetative growth of the earlier planted crops with some of these crops looking to be at risk of lodging at harvest. However, in much of July and August conditions have been unseasonably hot and dry; an early and short spring will limit the chickpea podding window and thus yield potential.

Yields

Yield expectations for 2009 are of 1.3 t/ha; however, lack of rain in August and September could reduce yield to 1 t/ha. Early high temperatures and a lack of rain is expected to have significant impact on the yield of June planted crops, especially in southern Queensland. Last year exceptional yields were experienced; however yield forecasts for 2009 are closer to the long-term average. In 2008, much of the Central Queensland crop was planted south of Emerald, which is higher-yielding country. However, in 2009 more of the crop is north of Emerald, which is currently very dry and lower-yielding country.

Lower temperature last year allowed good podding and higher yields also. Mid-October to Christmas is harvest time. More rain and lower temperatures than are currently being experienced will be required to stimulate good podding and decent yields. Given that yields are estimated to fall by around one-third in 2009–10 compared to 2008–09, chickpea production is expected to fall slightly, by 5%, from 134 100 t in 2008–09 to 127 250 t in 2009–10.

Price outlook

Prices are likely to stay robust, at \$450–500/t. Prices are quite variable. At harvest time last year prices were \$380/t because there was abundant supply and growers were trying to dispose of their product immediately after harvest. Unlike wheat, there is no futures market for chickpeas, so growers cannot sell their crop at a good future price. Area contracts are declining. Most growers engage in one-on-one deals with grains traders.

Despite prices having fallen over 2008–09, chickpeas still offer a gross margin comparable to that of cotton, but with less outlay costs. Chickpeas also compete favourably with irrigated wheat and sorghum, as well as their dryland counterparts. An advantage of chickpeas over other cereal crops is that it is a crown rot disease breaker, which is a soil-borne root disease of wheat. Also nitrogen is supplied by chickpeas. These are added benefits of chickpeas even though they are profitable to grow in their own right.

Since 2006–07, world pulse demand has increased, while supply has fallen. The US and Canada are large producers of maize and soybeans. However, large areas of soybeans have been displaced by corn in the US for ethanol production, creating a global shortage of pulses. Ninety-eight per cent of Australian chickpeas are exported to India and Pakistan. India has gone from being a net exporter to a net importer of pulses. Demand for Australian and Queensland chickpeas is expected to continue to increase, providing some support for prices.

Summary

The area sown to chickpeas is estimated to increase significantly in 2009–10, by 40% compared to 2008–09 due to buoyant chickpea prices, good 2009 autumn soil moisture storage levels. However, due to unseasonably hot and dry conditions in July and August, the advent of an early and short spring will likely limit the podding window and grain fill, reducing yields by 32% and causing an estimated net fall in production of 5%. This, coupled with a slight price decline of 2%, is estimated to reduce GVP by 8% in 2009–10 on the 2008–09 level.

International gene pool of plant breeders to expand

Plant breeders want to do more than breed new plants—they want to breed more plant breeders.

The Society for the Advancement of Breeding Research in Asia and Oceania (SABRAO) is gravely concerned that not enough plant breeders are being trained to face the enormous challenges in developing countries.

‘We are a dying breed,’ said QPIF principal plant breeder Phillip Banks.

‘It’s a problem right across agriculture—there are fewer students in the areas of plant breeding and genetics.

‘Plant breeders need more education and training to help strengthen international plant-breeding research both in developed and developing countries.

‘If we improve education and training in Australia there will be less need to employ plant breeders from other countries.’

To address the issue, an education, training and breeding forum was held as part of this week’s 14th Australasian Plant Breeding Conference (APBC) and 11th Congress of SABRAO in Cairns.

Representatives from the Food and Agriculture Organisation of the United Nations (FAO), Grain Research and Development Corporation (GRDC), Australian universities and international crop improvement centres took part on a panel to discuss present and future initiatives.

They discussed with breeders the need to attract more young people into plant-breeding courses and ways of emphasising their vital humanitarian role in providing food security in developing countries.

‘Global food production needs to double by 2030 just to keep pace with spiralling population growth,’ Dr Banks said.

‘Climate change, diminishing water resources, higher temperatures and more frequent extreme weather events all impact on production.

‘The increased production needs to be principally from genetic improvement because additional land area, water and fertilisers will be scarce or too expensive.

‘Biofuel crops will need to be taken into account as well as food and fibre crops.’

Peanuts

Forecast

The GVP of peanuts in 2009–10 is forecast to be \$30 million, 8% below the value for 2008–09, but 20% above the drought-affected crop of 2007–08.

Analysis

The decrease in GVP is due to an 11% fall in price, despite a 6% increase in expected yields.

History and area sown

Reflecting on the 2008–09 crop, there was a lack of rain in March 2009, which prevented chances of bumper yield. The area sown in 2009–10 is expected to remain unchanged from 2008–09 (11 000 ha), despite a fall in price.

Prices

The world supply of peanuts is expected to be higher in 2009–10 compared to the previous year, hence softening prices. Prices, although having fallen by 11% to \$780 (from \$875 in the 2008–09 June quarter), are now closer to the long-term average. This fall will not deter plantings given the absolute high level of price.

The main peanut exporters are the US, China and Argentina. The US crop has increased by 30% over the past year, hence dampening world prices. Currently, Australian production is sufficient to meet domestic demand. The current premium for Australian peanuts is expected to be short-term only because processors will switch to imported peanuts if the domestic price is significantly higher than import prices.

Yields

Yields will be variable statewide, depending on rainfall and the availability of irrigation water entitlements. These are forecast to increase slightly, by 6% in 2009–10 compared to 2008–09. Despite the area sown expected to remain unchanged in 2009–10, peanut production is expected to increase by 6% to 38 000 t. Given the forecast of El Niño, irrigators will need to use more stored water, instead of relying on rains, during the growing phase.

Peanut markets

Peanut production over the past 11 years has been relatively low in Queensland due to drier-than-average summer conditions.

Peanut production is only limited by supply factors such as rainfall levels and changes in area sown due to the relative prices of other cereal crops. This is because domestic demand for peanuts remains strong, with peanuts being used in the manufacture of snack food, confectionery and peanut oil. Often peanuts are imported (e.g., from Argentina) to counter the annual shortfall in supply.

Most peanuts in the Queensland and Australian field are used as edible nuts. Only lower quality kernels in the Australian crop are used for peanut oil. Currently 6–8% of the Australian crop is used for crushing.

Summary

An increase in peanut yields of 6% in 2009–10 is expected to increase production to 38 000 t, with the area sown unchanged at 11 000 ha. However, price has fallen by 11% to \$780/t, outweighing the production increase, causing GVP to fall by 8% to \$30 million.



Soybeans

Forecast

The GVP of soybeans in 2009–10 is forecast to be \$30 million, 14% lower than QPIF estimate for 2008–09, but double the 2007–08 estimate.

Analysis

The forecast lower GVP is due to a marginal 1% fall in production, and a significant fall (16%) in estimated price.

Area sown and prices

The area sown to soybeans in 2009–10 is estimated to be 21 810 ha, a 10% decrease on the 24 310 ha in 2008–09, and nearly triple the area sown in 2007–08 with very dry conditions at sowing time.

Even though approximately two-thirds of the Queensland crop is irrigated in the growing phase of the crop, good rainfall is required in spring to boost subsoil moisture levels for planting. The area sown in 2009–10 is expected to decrease primarily due to a fall in price (16%) to \$480/t in the 2009–10 September quarter.

As for sunflowers, the domestic price of soybeans is falling in line with a forecast reduction in the world indicator oilseed price (soybeans, cost insurance and freight (CIF) Rotterdam) from US\$417/t in 2008–09 to US\$396/t for 2009–10.

Water availability in November and December will determine the amount of soybeans that are planted. Areas being planted in Bundaberg and Childers are expected to increase. Soybean continues to be an attractive rotational crop for cane in the Bundaberg and Burgen areas because it is a quick rotation leguminous crop, making a good contribution to farm cash flow. There were approximately 3000 ha of soybeans sown on cane farms over 2007–08, which represented 40% of the Queensland crop. The area of soybeans rotated with cane is expected to increase.

About one-third of soybeans are exported. There will be a premium paid for edible soybeans, averaging over \$550/t farm gate for 2009–10. Crushing grade soybeans will be sold for less at \$500/t.

Yields

In southern Queensland the area sown is expected to decrease due to lower prices. However, as most of the state's soybean crop is expected to be grown in southern Queensland, consisting mostly of irrigated and higher-yielding varieties, average yields are expected to increase by 10% on 2008–09 levels. Approximately two-thirds of the Queensland soybean crop is expected to be planted in southern Queensland in 2009–10, with the remaining third to be planted in Central Queensland.

On balance, the expected decrease in area sown will just outweigh the increase in yields, causing a marginal 1% fall in production.

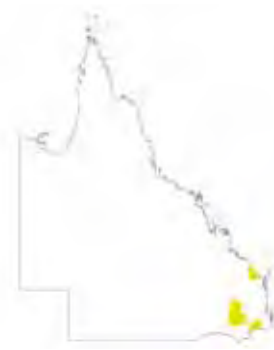
Competitor crops

Sorghum, sunflowers and peanuts are summer competitor crops with soybeans. Price is more of a determinant of the area sown for sunflowers than for soybeans, since soybeans offer legume rotation benefits for other crops such as cane.

The 2009–10 estimated price for sorghum is around \$200/t, under half the price for soybeans. As such, soybeans are expected to stay competitive with sorghum in 2009–10. Sunflowers, (returning \$600/t) and peanuts (returning \$780/t) will be more price-competitive, but peanuts require more specialist equipment and outlay than soybeans.

Soybean markets

In Australia, 80% of soybeans are used for the edible market (for soy flour, soy milk and tofu), and 20% for crushing to make oil. Significant market opportunities exist for the Japanese export



market to make tofu. Opportunities also exist for Taiwan, Korea and South-East Asia.

When soybean oil is in short supply it can be substituted, to a degree, by canola and sunflower oil. Currently, the domestic crushing market annually uses the equivalent of 30–40 000 t of seed. However, there has been a shift from demand for soybeans for crushing purposes to soybeans for edible purposes. The soybean market is still very much developing, with new opportunities currently being identified, so it is premature to estimate the size of the edible and crushing oil markets.

Like sunflowers, significant market opportunities exist for expansion of soybean production. In 2008, several private grain trading companies jointly set up soybean drying and storage facilities on the sugarcane coast around Mackay to cater for increased demand.

Summary

Area sown for soybeans is expected to decrease by 10% in 2009–10 to 21 810 ha; this is primarily due to a fall in price. The smaller area sown is estimated to just outweigh an anticipated increase in yields, causing a 1% fall in production to about 61 840 t. This, coupled with an estimated 16% fall in price to \$480/t, is expected to reduce GVP by 14% to \$30 million.

Sunflowers

Forecast

In 2009–10, Queensland's GVP of sunflower seed is forecast at \$20 million, 20% lower than 2007–08 and 2008–09 values.

Analysis

The lower GVP forecast is due to a 4% decrease in area sown, and an 18% decline in yields, reducing production by an estimated 21%. This, coupled with a marginal 3% fall in price, is estimated to reduce GVP by 20%.



Area sown

The area sown to sunflowers in 2009–10 is expected to fall by 4% to around 25 460 ha (from 26 490 ha in 2008–09).

Early planting takes place in August and September. This slight fall in area sown is due to an expected lower sunflower seed price and competition from cotton, with higher levels of irrigation water supply expected for the 2009–10 summer and relatively strong cotton prices (\$420/bale). However, with a forecast of El Niño in 2009–10, irrigation water storage levels may be lower-than-expected. Less water-demanding crops, such as sunflowers and sorghum, could therefore become more attractive.

International oilseed prices

The world indicator oilseed price (soybeans, CIF Rotterdam) is forecast to decline from US\$417/t in 2008–09 to US\$396/t in 2009–10, with a significant increase in supply expected to outweigh any increase in demand.

Soybean planting area in the US is expected to increase by 31 million ha in 2009–10 due to high prices. Production of soybeans in Brazil and Argentina is also expected to increase. Canola/rapeseed production in the EU is expected to increase to a record 19.1 million tonnes in 2009–10.

On the consumption side, continued support for mandated biodiesel use in South America, North America, and the EU is keeping biodiesel production growth strong. EU is the largest biodiesel producer and uses canola/rapeseed oil. Industrial vegetable oil consumption is estimated to increase in 2009–10 by 6% to 10 million tonnes. Human consumption vegetable oil is set to increase steadily by 3% in 2009–10 to 108 million tonnes. China is the largest consumer of edible vegetable oil (23 million tonnes in 2009–10).

Demand for oilseed meal is expected to grow, but at a slower pace in 2009–10 due to weakened

demand for livestock products. Despite relatively strong world demand for oilseeds, the higher seed supplies are expected to weigh international prices downwards, reducing Australian domestic sunflower seed prices slightly.

Domestic prices

Prices for Queensland sunflower seed are expected to fall by 3% in 2009–10 to \$600/t, from \$622/t in 2008–09, and by 25% from a high \$805/t in 2007–08. Despite expected falling world oilseed prices over 2009–10, a relatively low international stocks-to-use ratio (15% = 63 million tonnes) is expected to provide some support for international and domestic prices in the short term.

Competitor crops

Sunflowers compete directly with sorghum as a crop to grow. However, at current price levels, sunflowers will return approximately three times more per tonne than sorghum, which makes sunflowers a relatively attractive alternative crop.

The estimated sorghum price in the September 2009–10 quarter is around \$200/t. Soybeans will also be a competitive summer crop, with an estimated September 2009–10 quarter price of \$480/t.

Production

Assuming an El Niño summer for 2009–10, the extra hot and dry conditions are expected to reduce average sunflower yield by around 18%. Combining this with a small reduction in area sown, production is estimated to fall by 21% to 33 221 t from 41 998 t in 2008–09.

Sunflower seed markets

Since the early 1990s, Queensland has produced progressively less sunflower seed amid drier-than-average summers. The demand for sunflower seed is approximately 120 000 t for Australia. Companies such as Goodman Fielders are importing seed to meet the demand. Usually domestic demand outstrips supply.

Currently, Australia consumes 150 000 t of palm oil and about 100 000 t of tallow. Hence, there is a big opportunity for sunflower growers to meet the increasing demand for healthier unsaturated fat oils. Over half the oils consumed in Australia are saturated.

Currently approximately 60 000 t of sunflower seed are imported by Australia to make 25 000 t of oil annually. There has been a trend towards switching demand from polyunsaturated oils to monounsaturated sunflower oil, which requires sowing a different variety of sunflower. The poly variety is used for margarine and cooking oil, whereas the mono variety is used by the commercial sector for producing crisps, confectionaries, and other saleable food items. This represents a significant marketing opportunity for growers.

Summary

The area of sunflowers sown is expected to fall slightly, by 4% to 25 458 ha, due to a slightly lower price and more average irrigation water supplies. Also, buoyant cotton prices make sunflowers less attractive to grow in 2009–10 than in 2008–09.

Lower-than-average rainfall, due to expected El Niño conditions in 2009–10, is expected to reduce yields by 18%. Hence, production is estimated to fall by 21% to 33 221 t. This, coupled with a marginally (3%) lower price of \$600/t, is estimated to reduce GVP by 20%. Despite the relative drought tolerance of sorghum, the 200% price premium of sunflowers over sorghum, along with strong domestic demand for sunflower oil, will likely maintain sunflowers as a competitive crop in 2009–10.

WINTER CEREAL GRAINS

Wheat

Forecast

The GVP of wheat in 2009–10 is forecast at \$320 million, which is 34% lower than the bumper harvest of 2008–09 and 9% lower than the revised estimate for 2007–08.

Analysis

The lower expected GVP is due to a 6% fall in production and a 9% decline in prices, despite a 3% increase in area sown.

Competing crop prices

Average prices for Australian premium white (APW) wheat are estimated to have fallen by 9% (to \$252/t) in 2009–10 following a softening in international grains prices since the record highs experienced in 2007–08 (\$383/t). Despite this decline, wheat prices are still relatively high by historical standards.

The price of barley per tonne has fallen almost as much as wheat, by 34% (to \$216/t) in 2009–10. The price of sorghum, which competes with wheat as a crop to plant has fallen by less—25% (to \$199/t) in 2009–10.

Cotton also competes with wheat as a crop to grow. With cotton prices per bale increasing from \$390/bale in June 2008 quarter to \$420/bale in June 2009 quarter, there may have been some wheat areas on cotton farms set aside for fallow over the 2009 winter in preparation for the 2009–10 cotton crop.

Area sown

Despite this price competition from other crops, the wheat area sown in Queensland is expected to increase by 3% to 938 860 ha. This may be attributed to the high yields experienced in 2008–09, and the current sound price of wheat.

The price of sorghum, although having fallen less than wheat since 2007–08, is still low. Increased areas of wheat may have been planted in 2009 in preference to fallowing land for sorghum in 2009–10. However, wheat, which demands less water and has lower farm overheads than cotton, has continued to be attractive crop given its quick turnover.

Wheat yields

Current soil water conditions and the seasonal rainfall outlook indicate a reduced chance of an above-median wheat yield during the 2009 season for most of Queensland.

Winter grain planting in Central Queensland (about 15% of Queensland wheat) was patchy due to poor rainfall earlier in 2009. The unseasonably hot and dry weather in July and August is causing Central Queensland crops to fail.

In southern Queensland, especially in the Darling Downs, the start of the growing season was promising with good rainfall in May, and sound growing conditions prevailed until around mid-August. The Darling Downs, as at the end of August, is still maintaining its crop yields; however, much of the southern Queensland grain belt will likely suffer if there is no follow-up rain in spring.

Subsoil moisture levels have been depleted in Central Queensland and southern Queensland, with a reduced chance (30–40%) of exceeding the long-term median yield. In Central Queensland, yields are expected to fall by over 50% from 2 t/ha to 0.8 t/ha. Closer to average yields are expected in southern Queensland because of the better start to the wheat cropping season, with an average to slightly above-average chance (40–70%) of exceeding the long-term median wheat yield.

There has been stripe rust in some areas (e.g. St George), which has arrived 2–3 weeks earlier



than usual this year. This could reduce grain yields and quality by reducing grain size. Smaller wheat grain returns a lower price because it is not as effectively crushed by milling machines as larger grain.

The Roma area has produced quite a good crop in 2009, but still has lower yields than other areas (such as the Northern Downs). More of the Queensland crop has been planted in Roma this year than other areas. This has the potential to shift the average state crop yield downwards.

Transporting grain to port on time could jeopardise export contracts this year after the grain transport crisis in 2008 (when the shortage of grain trains put increased demand on road transport).

Price outlook

In 2009–10 world wheat production is forecast to fall by 40 million tonnes. This is due to a fall in area sown in response to lower world prices and high farm input costs.

World wheat consumption is expected to stay constant in 2009–10 at 641 million tonnes. Wheat for human consumption is expected to rise, but is likely to be offset by lower animal feed demand as world recession reduces demand for meat. Overall consumption will be stable, maintaining some support for prices.⁸

The average world indicator price (US hard red winter) is forecast to decline by 4%, mainly because of increased stocks. High-quality milling wheat stocks by five major exporters are estimated to increase by 3 million tonnes to 49 million tonnes in 2009–10. Also pressure on international wheat prices is also the prospect of larger US output and good US weather.

Because domestic milling-grade wheat price generally follows export prices, this may have a dampening effect on domestic milling prices as well as domestic feed grain prices. For the beginning of the 2008–09 season the world indicator price was US\$300/t, which then fell to US\$250/t in early 2009 because global production increased to a record 687 million tonnes for 2008–09.

Due to higher Australian production, an appreciation of the Australian dollar, and lower world prices, Queensland APW prices are expected to decrease to \$252/t in the 2009–10 September quarter, 9% lower than in the June 2009–10 quarter and 34% lower than in the June 2007–08 quarter.

Despite the falling price, continued increasing demand for US corn-based ethanol will likely help maintain relatively buoyant prices of wheat and other cereal grains on the global market.

Summary

Despite an estimated 3% increase in the area sown to wheat in Queensland (to 938 860 ha), wheat yields are expected to fall by 31% due to very dry and hot conditions in July and August, thus reducing grain-fill.

Production is therefore expected to fall by 29% in 2009–10 to 1.26 million tonnes, from the record 1.76 million tonnes in 2008–09. This, combined with an estimated price fall of 9% in 2009–10 from the 2008–09 level, is expected to reduce Queensland wheat GVP by 34% in 2009–10 to \$320 million. If average rainfall is not received over the spring months in 2009, average yields, and hence GVP, could fall further.

Wheat shows promise in northern and coastal Queensland

Wheat and barley trials are producing some remarkable results in northern and coastal Queensland, proving that production is feasible for producers in those areas looking at profitable alternatives.

While the trials are showing early success, more studies are needed to identify varieties that resist a range of diseases and how they are best managed in northern and coastal soils and according to climate conditions.

QPIF principal plant breeder Dr Phillip Banks said crop cycle and yield trials were well underway.

‘A few farmers with the Aussie pioneering spirit are giving wheat and barley a serious try,’ Dr Banks said. ‘They already have quite remarkable crops.’

‘Climate-change models forecast adverse impacts on traditional wheat production areas such as southern Australia and there is a growing scarcity of global wheat stocks.

‘In fact, global food production needs to be double current production by 2030 just to keep pace with spiralling population growth.’

Dr Banks discussed the latest findings from the trials at the 14th Australasian Plant Breeding Conference (APBC) and 11th Congress of the Society for the Advancement of Breeding Research in Asia and Oceania (SABRAO) in Cairns, August 10–14.

‘Plant breeding experts from 30 countries attending the APBC/SABRAO conference will discuss how to facilitate this massive increase in food production,’ Dr Banks said.

‘One thing we can do in Australia is accelerate growth in wheat and barley production in non-traditional areas.’

Yield trials are taking place on the Atherton Tableland, Pentland (100 km west of Charters Towers), near Richmond, Longreach, Home Hill, Mackay and Bundaberg.

The yield trial at Atherton, with 675 varieties of wheat and barley, will feature at one of the conference field tours on Friday.

‘It makes sense to explore the possibilities of expansion of production into the northern tropics,’ Dr Banks said.

‘In the past, leaf diseases largely thwarted the development of wheat and barley industries on coastal Queensland.’

‘Production was limited in the northern inland because of unsuitable varieties and cultivation systems incompatible with the soil structure, as well as lack of transport and marketing infrastructure.’

Dr Banks said advances in plant-breeding research internationally had delivered new wheat varieties that resisted leaf diseases (such as stem rust, leaf rust, yellow spot and spot blotch). New barley varieties were showing greater resistance to spot blotch.

‘Transport infrastructure has since improved thanks to mining activities in north Queensland,’ Dr Banks said.

‘Increasing the feasibility of northern production has been the development of cultivation systems such as controlled traffic tillage, which allows winter crops to take advantage of stored soil moisture from summer rainfall.

‘The requirement for cold weather had been bred out of many wheat and barley varieties, so they can be grown in areas that don’t have a cold climate.

‘Significantly increased production can add to profitability of the state’s wheat industry, which is already worth \$600 million at farm gate values and about \$3 billion further down the value chain.’

Barley

Forecast

The GVP for barley in 2009–10 is forecast at \$33 million, 6% less than the estimate for 2008–09 and 25% less than the revised estimate for 2007–08.

Analysis

The lower GVP is due to a forecast 10% decline in production—a result of an expected fall in yields by 14%. This is despite an estimated 5% increase in area sown and a 7% increase in price.



Area sown and price

In 2009–10, the area sown to barley in Queensland is expected to be around 80 920 ha, only 5% higher compared to the 2008–09 estimate. This is primarily due to favourable subsoil moisture storage levels in autumn 2009—a result of good 2008–09 summer rainfall. In April 2009, average to above-average rainfall was recorded for almost the entire Queensland cropping area.

Price signals for barley have been flatter than for wheat. In some areas in 2009 there was a swing away from barley to wheat, which may have been price-driven. There has also been an increase in fallowed areas in preparation for summer crops and some of these have been at the expense of barley.

World coarse grain indicator price (US corn, free on board Gulf) is set to increase in 2009–10, largely due to strong demand for corn used to produce ethanol, from US\$177 to US\$182/t in 2009–10. Despite this, Australian feed barley prices are expected to fall slightly due to an increase in barley supply from other states. Barley bids have been capped by an increase in feed wheat availability (old season wheat) in northern regions.

Beef feedlot demand has been quite low due to good pasture growth conditions in Queensland over 2009, except for very dry and hot conditions over July and August 2009. Together with high sorghum supplies from the 2007–08 and 2008–09 seasons, this has dampened feed grain prices. As at August 2009, the price is \$202/t for F1 (Feed 1 quality standard). Malting barley commands a premium price of \$240/t.

In the first week of August 2009, the price of barley increased by \$10/t, in line with sorghum prices, underpinned by increased demand for ethanol. Current dry conditions in July and August 2009 are increasing demand for feed grains domestically; as sorghum prices increase, so too will barley prices.

Competition from wheat

All Queensland barley is sold domestically, and around 90% of barley is for feed grain. Feedlot producers currently prefer wheat to barley because of its availability and high energy content.

Growers on average still continue to favour wheat as a crop to grow over barley because of comparatively higher price and better agronomic performance. However, it must be noted that barley as a winter crop will likely remain competitive with higher valued chickpeas on an agronomic basis. Barley is a far denser crop than chickpeas, requiring less chemical treatment, which significantly reduces weed control costs.

New demand for malting barley

The Barrett Burston Malting Company (BBMC) is building an \$80 million malting plant at Pinkenba in Brisbane's north-east. It is Queensland's first malting plant in over 40 years and will be the only one exporting malt into South-East Asian markets. The new Pinkenba plant will produce 86 000 t of malt a year from 100 000 t of barley, and will give barley farmers an opportunity to sell increased volumes of malting barley, which commands a \$40/tonne premium above feed barley. This will also encourage the sowing of new malting varieties. However, this is a specifically accredited process, and it may take several years for the malting industry to approve a farmer.

Yields

Barley has been planted this year on the Southern and Eastern Downs, rather than on the Western Downs/Maranoa area, which is higher-yielding than the Goondiwindi area.

There has not been much leaf rust this year; cool temperatures in June have kept the rust at bay. Despite these positive yield influences, barley yields are forecast to fall by up to 14% in 2009–10 compared to 2008–09, due to the end hot and dry conditions in winter.

Summary

As a result of lower-than-expected yields, barley production is expected to fall by 10% to 155 360 t in 2009–10 (from 171 670 t in 2008–09), despite a small increase in area sown to 80 920 ha. The fall in production is estimated to outweigh a 7% increase in price to \$216/t, causing GVP to fall by 6% to around \$33 million.

SUMMER CEREAL GRAINS

Grain sorghum

Forecast

GVP of grain sorghum is forecast to be \$245 million in 2009–10, which is 6% lower than the value for 2008–09 and 62% lower than the revised estimate for 2007–08.

Analysis

The slight decrease in GVP for 2009–10 is due to an expected 0.5% smaller area sown, a 4% decline in yield per hectare, causing a decrease in production, along with an estimated 2% fall in price.



Prices, water availability and area sown

Two of the major determinants of area sown are expected price in relation to other competing summer crops and rainfall. Sunflowers will remain a competitive summer crop, as will cotton. The rainfall in spring will also determine what gets planted, not just expected price.

Winter crops are not very profitable on the Darling Downs, which means that some areas may have been left for fallow over the 2009 winter in preparation for the 2009–10 summer sorghum crop. Dry and hot conditions in July and August 2009 are impacting on potential sorghum planting. Most sorghum sown in 2009–10 will be on land that has been fallowed over winter.

However, the soil moisture profiles maybe inadequate, for sorghum planting if the dry spell continues. The first early planting of sorghum happens in late September to early December. The second planting happens in January/February. On the Darling Downs an early crop is preferred to avoid high summer temperatures and severe summer storms, and to encourage flowering with the cooler temperatures.

The price of sorghum is estimated to fall by 2% in 2009–10 to \$199/t (from \$203/t in 2008–09). There are still significant quantities of old season sorghum in storage, which will add to downward price pressure. Sorghum prices have been falling partly in response to other feed grains (such as wheat and barley) remaining competitive because of their relatively high protein and energy contents, and digestibility. Sorghum usually needs to be steam-flaked before being sold as feed, adding more costs to growers. Despite the higher price of wheat and other summer crops, sorghum is still likely to be a popular crop to grow, since it is a relatively drought-resistant, low-outlay and high-turnover crop.

Water availability will also determine the degree of switching from sorghum to cotton. If rainfall levels are average and above then cotton will be competitive with sorghum as a crop to plant. In Central Queensland there is likely to be a switch away from sorghum to cotton due to expected full water allocations.

The sorghum crop in 2009–10 is likely to be planted more on the traditional inner Darling Downs country, which is drier than the cotton country. This will reduce the average state yield of sorghum, since some of the higher-yielding country will be planted to cotton.

Internationally, corn area planted in the US is expected to fall by 1% in 2009–10 due to an increase in soybeans planted. World coarse grain consumption is set to increase by 14 million tonnes to 1.1 billion tonnes in 2009–10, driven by strong demand for corn in ethanol production. This is expected to help maintain prices for other grains (such as wheat and barley) as well as sorghum, since little extra land is likely to be freed up to increase production of these grains.

Summary

In summary, in 2009–10 some switching is expected from sowing sorghum to other summer crops. Combining this with lower-than-expected yields is likely to reduce production by 4.4% to 1.23 million tonnes. Together with an expected price decline of 2% to \$199/t, this is estimated to reduce GVP by around 6%.

Wild crop relatives unlock potential for commercial crops

Everyone has a story about ‘wild relatives’ and the problems they cause, but in the plant world these wild plants may hold the key to boosting the nutritional content of common commercial crops in Australia.

Plant breeders from around the world gathered in Cairns for the 14th Australasian Plant Breeding Conference (APBC) and 11th Congress of the Society for the Advancement of Breeding Research in Asia and Oceania (SABRAO).

They’re learning about a range of scientific breakthroughs, including a QPIF project aimed at crossing wild native-sorghum grasses with similar commercial crops.

QPIF research scientist Dr Sally Dillon, who is spearheading the project, said the aim was to produce sorghum with higher protein and great resistance to climate conditions as well as pests and diseases.

‘Australia has 17 native sorghums that don’t look anything like commercial sorghum,’ Dr Dillon said.

‘They are weedy-looking and their seeds shatter easily making them unsuitable for commercial production.

‘But on the plus side, these lines grow in poor soil across northern Australia, require little nutrition, tolerate salinity and are extremely drought-resistant.

‘They contain more readily available starch, which can improve both livestock and human nutrition.

‘We are looking at the plant’s DNA to single out the genes that provide the traits we want in commercial crops, such as higher yield, higher protein, drought-resistance and resistance to pests and diseases.

‘By identifying these genes in these resilient native plants and crossing them with commercial cultivars we hope to produce the desirable traits.

‘These improved traits will improve the productivity, and hence profitability of sorghum growers around the world.

‘Sorghum is a staple food in some African countries, so there is potential for this genetic work to benefit millions of people.’

Dr Dillon was previously involved in crossing wild native-pigeon pea species with commercial cultivars as part of a project aimed at improving staple foods in India, Africa, the Caribbean and South-East Asia.

Maize

Forecast

The GVP of maize for 2009–10 is forecast at \$45 million, 14% lower than 2008–09 and 25% lower than 2007–08.

Analysis

The lower GVP of maize in 2009–10 is expected due to a 4% decline in area sown and production, coupled with a 7% fall in estimated price.



Area sown and prices

Average irrigation water entitlements are likely to be available due to high summer rainfall in 2008–09, which will have a positive effect on area sown.

Maize prices, on the other hand, have been steadily falling. Currently, the price of maize is estimated at \$234/t, 7% lower than the price for the June 2008–09 quarter. Low price of maize will be likely to reduce plantings. However, the price of sorghum, a major summer competitor crop, will also determine maize area sown. The price premium of maize over sorghum has fallen from 27% in the June 2007–08 quarter to 18%.

Despite the current higher price of maize, growers will be considering the greater water demands (and cost) of maize compared to sorghum, the relative drought-resistance of sorghum and the reduced price premium of maize over sorghum when deciding maize plantings over 2009–10. A decline of 4% in maize area (to 35 550 ha) is forecast for 2009–10, from 36 880 ha in 2008–09.

Yields

Due to irrigation water availability in 2009–10 expected to be closer to average, yields are expected to remain unchanged from 2008–09 levels. This combined with a 4% decline in area sown in 2009–10 is estimated to reduce production by a corresponding 4% to 197 120 t from the 2008–09 level.

Maize market and price outlook

The world coarse grains indicator price has increased by 3% to US\$182/t, from the 2008–09 level, as driven by ethanol demand. Of the 197 120 t of Queensland maize expected for 2009–10, around 40% will be sold as waxy corn and grit for human consumption. However, this is a limited market and is currently filled by domestically produced maize. The remainder will be sold domestically as feed grain.

There is a lack of available markets for maize, as a domestic feed grain and for export. However, the presence of a domestic grit maize market, continued steady demand for all feed grains by end-users in eastern Australia, and continuing strong demand for ethanol internationally are expected to support maize price. Counter to this, increased large supplies of old season sorghum and feed wheat, and increased barley supplies available in other states, will be likely to exert some pressure on domestic maize prices in 2009–10.

The price of maize will be likely to fall in line with domestic feed grain prices. The estimated price of feed maize (\$220/t) will be likely to fall by more than higher valued grit maize (\$280/t).

Summary

An expected decline in area sown and production by 4% in 2009–10, to 35 550 ha and 197 120 t, respectively, coupled with a forecast price fall of 7% to \$234/t, is estimated to reduce Queensland maize GVP by 14% to \$45 million.

Fisheries

In 2009–10, the total GVP of Queensland's fisheries is forecast at \$437 million. This includes a forecast of \$275 million for commercial fishing (1% increase on 2008–09) and \$89 million for aquaculture (5% increase from 2008–09). Recreational fishing is also included in this year's forecast with an estimated commercial value equivalent of \$73 million.

Australian seafood imports and exports

In 2007–08, Australia exported 45 500 t of seafood with a total value of \$1.07 billion. Fish contributed 23 500 t and \$325 million of exports, while crustaceans and molluscs provided 22 000 t and \$741 million of the total exported product.

Queensland accounted for 4700 t (or 16%) of the total fish exports and \$75.5 million (or 23%) of the total fish value. For crustaceans and molluscs, Queensland provided 4700 t (or 21%) of the total quantity and \$85.3 million (or 12%) of the total value.

Compared to 2006–07 export figures, there was a decrease of about 8% in quantity and value in 2007–08.

In 2007–08, Australia imported about 198 500 t of seafood product, at a total cost of \$1132 million. Fish imports were responsible for 137 000 t and \$715 million of the total cost, while 61 400 t and \$417 million of the overall cost were for crustacean and mollusc product.

In 2007–08, Australia was a net importer of seafood. It imported 154 500 t of seafood more than it exported, at an overall net cost of \$66.8 million. In comparison with 2006–07, imports decreased by 0.07% while total imported value decreased by 4.4% and the overall net cost increased by \$40.3 million from \$26.5 million.

Total net apparent consumption of seafood products is about 390 000 t, with Australian-produced seafood providing about half this consumption.

Given that apparent seafood consumption continues at about 17 kg/head, Australia will continue to be a net importer of seafood in the foreseeable future.

Likely impacts (overall)

A higher Australian dollar will mitigate against price increases for product exported and at the same time reduce the price for imported product, resulting in the potential to hold down or reduce the price being offered for Queensland harvested product. It also forces the processors (and fishers) to present Australian finfish in a convenient fillet form in order to compete with overseas product. The effects of overseas products in the different harvest sectors vary, depending on the volume of imports for competing species.

Fuel prices are likely to reduce in relative terms as the Australian dollar moves towards parity with the US dollar, which may allow a small reduction in the price of fuel to the industry.

Aquaculture production worldwide continues to increase, with the potential for product to be imported into Australia.

As part of the process of implementing the Moreton Bay Marine Park, 118 licences used to harvest product from this area were purchased in February 2009. The effects on production from this area are yet to be determined as the operators remaining adjust to the changes implemented as part of this marine park.

An extensive program of removing fishing symbols from commercial fishing operations (which provide the right to use commercial fishing gear to harvest fish for sale), based on their limited or nil use, has been undertaken recently by QPIF. This has caused some angst within parts of the commercial industry. Some fishers see symbol removal as reducing their chances to diversify when necessary. Consequently, confidence in the commercial sector continues to wane.

The wild-caught sector of Queensland fisheries includes:

- commercial (Queensland-managed and managed by other agencies but in Queensland waters)
- recreational fishing and its subset of charter fishing.

Commercial sector

In 2009–10 the forecast GVP of the commercial sector and the harvest level is at \$275 million, about the same as the 2008–09 year, and 2% lower than the estimated GVP for 2007–08. This is in spite of the declining terms of trade for fishing businesses, difficult access arrangements in a range of fisheries and a strong Australian dollar, which reduces both import prices of seafood and fuel prices.

Queensland-managed fisheries are forecast to have a GVP of about \$196 million in 2009–10, slightly higher than the 2008–09 estimate but 3% lower than the 2007–08 (see Table 5). The GVP of Commonwealth-managed fisheries in Queensland waters is forecast at \$79 million.

The total value of the commercial fishing value chain (including input suppliers, processors, wholesale and retail marketing) is estimated to be around \$460 million. The strong Australian dollar creates opportunities for competitors to develop niche live fish markets overseas and import finfish into Australia. This competition reduces prices offered to domestic fishers and forces processors to present the Australian product in a convenient fillet form in order to compete with overseas product.

Change in method of reporting

Reporting GVP and harvest has been changed to align with the categories used in the Australian fisheries statistics published by ABARE, which includes crustaceans, molluscs and finfish. The method reports by major species groups. Underlying this analysis, however, are other factors such as fishing method and the number of boats undertaking fishing activity.

Table 5. GVP of commercial fisheries by categories, 2007–08 to 2009–10

| GVP (\$m) | 2007–08 | | | 2008–09 | | | 2009–10 | | |
|--------------------------|--------------|---------------|-------------------|--------------|---------------|-------------------|--------------|---------------|-------------------|
| | Cwlth in Qld | State managed | Total wild-caught | Cwlth in Qld | State-managed | Total wild-caught | Cwlth in Qld | State-managed | Total wild-caught |
| Tuna | 15 | | 15 | 15 | | 15 | 14 | | 14 |
| Salmonids | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Other | 11 | 83 | 94 | 10 | 78 | 88 | 10 | 80 | 90 |
| Total finfish | 26 | 83 | 109 | 25 | 78 | 103 | 24 | 80 | 104 |
| Prawns | 44 | 58 | 102 | 45 | 66 | 111 | 45 | 66 | 111 |
| Rock lobster | 9 | 11 | 20 | 10 | 6 | 16 | 10 | 6 | 16 |
| Crab | 0 | 29 | 29 | 0 | 25 | 25 | 0 | 25 | 25 |
| Other | 0 | 10 | 10 | 0 | 9 | 9 | 0 | 9 | 9 |
| Total crustaceans | 53 | 108 | 161 | 55 | 106 | 161 | 55 | 106 | 161 |
| Abalone | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Scallops | 0 | 10 | 10 | 0 | 8 | 8 | 0 | 9 | 9 |
| Oysters | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Squid | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| Other | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Total molluscs | 0 | 10 | 10 | 0 | 9 | 9 | 0 | 10 | 10 |
| Total value | 79 | 201 | 280 | 80 | 193 | 273 | 79 | 196 | 275 |

Table 6. Volume of production of commercial fisheries by categories, 2007–08 to 2009–10

| Quantity (t) | 2007–08 | | | 2008–09 | | | 2009–10 | | |
|--------------------------|---------------|---------------|-------------------|---------------|---------------|-------------------|---------------|---------------|-------------------|
| | Cwlth in Qld | State managed | Total wild-caught | Cwlth in Qld | State-managed | Total wild-caught | Cwlth in Qld | State-managed | Total wild-caught |
| Tuna | 2900 | | 2900 | 3500 | | 3500 | 3500 | | 3500 |
| Salmonids | 0 | | 0 | | | 0 | | | 0 |
| Other | 2500 | 11 000 | 13 500 | 2000 | 9700 | 11 700 | 2000 | 11 100 | 13 100 |
| Total fish | 5400 | 11 000 | 16 400 | 5500 | 9700 | 15 200 | 5500 | 11 100 | 16 600 |
| Prawns | 4700 | 5000 | 9700 | 4500 | 5600 | 10 100 | 4500 | 5500 | 10 000 |
| Rock lobster | 400 | 300 | 700 | 400 | 200 | 600 | 400 | 250 | 650 |
| Crab | 0 | 3300 | 3300 | 0 | 2900 | 2900 | 0 | 3000 | 3000 |
| Other | 0 | 500 | 500 | 0 | 450 | 450 | 0 | 450 | 450 |
| Total crustaceans | 5100 | 9100 | 14 200 | 4900 | 9150 | 14 050 | 4900 | 9200 | 14 100 |
| Abalone | 0 | | 0 | | | 0 | | | 0 |
| Scallops | 0 | 700 | 700 | | 600 | 600 | | 700 | 700 |
| Oysters | 0 | | 0 | | | 0 | | | 0 |
| Squid | 0 | 100 | 100 | | 150 | 150 | | 150 | 150 |
| Other | 0 | | 0 | | | 0 | | | 0 |
| Total molluscs | 0 | 800 | 800 | 0 | 750 | 750 | 0 | 850 | 850 |
| Total quantity | 10 500 | 20 900 | 31 400 | 10 400 | 19 600 | 30 000 | 10 400 | 21 150 | 31 550 |

The following GVP forecasts are for Queensland-managed fisheries (see Table 5 for details).

Crustaceans

Prawn and bugs

GVP of prawn and bugs in 2009–10 is forecast to be about \$66 million, assuming that prices being offered to fishers remain about the same. Prices being offered for the various prawn species have not changed in the last few years, and for some species prices have declined slightly. A good prawn harvest in the Gulf of Carpentaria, as well as the base price provided by prawn imports into Australia, and lower returns for exports due to higher Australian dollar has limited the potential for an increase in prawn prices being offered to fishers.

Prawns and bugs are harvested by the Queensland-managed trawl fishery, which stretches from Cape York to the New South Wales border. Prawns make up about 80% of the trawl harvest by weight and GVP. The prawn harvest is estimated at 5000 t in 2007–08 with a GVP of about \$58 million. The otter trawl sector harvests about 5100 t and the beam trawlers harvest about 400 t. Bug harvest, as incidental catch to both the prawn and the scallop targeted catch, is expected to be about 450 t with a GVP of about \$9 million.

It is estimated that prawn harvest will stabilise at around 5500 t over the next few years. This is because boat numbers appear to have stabilised at about 300 active otter trawlers and 80 beam trawlers. Mean days fished per boat appear to have stabilised at about 100 days, while the mean daily prawn catch rate appears to be increasing. King prawn currently provides about 55% of the otter trawl prawn harvest; tiger prawn harvest provides about 25% of the total prawn harvest.

Crabs

The GVP for the crab fisheries is expected to be about \$25 million in 2009–10 as crab prices appear unlikely to increase and levels of harvest are expected to be maintained at the 2008–09 level.

The GVP of the commercial harvest of mud crab and blue swimmer crab harvest in 2008–09 is expected to decline by about 12% compared to 2007–08. This is mainly due to an expected

reduction in harvest due to a decline in the number of days fishing for these crabs (the price from the previous year is expected to be maintained). Mean daily catch per boat is expected remained about the same.

The spanner crab fishery is a quota-managed fishery. It is expected to fill about 1400 t of the quota in 2008–09, slightly less than the previous year. Most of Queensland’s spanner crabs are exported. This fishery produces within the available quota, driven by export prices. The appreciation of the Australian dollar is expected to only have a marginal impact on the price being offered to fishers.

Tropical rock lobster (TRL)

This dive fishery operates mainly on the eastern side of Cape York and does not include the Torres Strait. It typically produces between 200 t and 250 t of TRL with a GVP of about \$6 million. Export prices drive the harvest, especially the price offered for live TRL.

The appreciation of the Australian dollar will have a small effect on this type of fishery and its GVP in 2009–10 is expected to remain at about the same level.

Molluscs

Even with some changes in the management of the scallop fishery it is anticipated that the GVP will be about \$9 million in 2009–10, about \$1 million higher than 2008–09. Harvest is expected to be about 700 t of scallop meat.

Scallop harvest in 2008–09 is forecast to be about 600 t with a GVP of about \$8 million. As with the other sectors, scallop imports into Australia are holding down the price being offered to fishers. The high Australian dollar has also affected scallop export prices.

Finfish

Line-caught

There are three parts to the line fishery managed by Queensland:

- the Gulf
- Great Barrier Reef Marine Park area (reef line fishery)
- southern area (rocky reef fishery).

The line fisheries of Queensland have an estimated GVP for 2008–09 of about \$47 million with a harvest of about 3200 t. The reef line fishery provided about 90% of the GVP and 75% of the harvest weight. Compared to the other sectors, the reef line harvest is expected to increase from its present level to about 3300 t harvest, with an estimated GVP of about \$48 million.

The coral trout quota is expected to be filled in 2008–09 and in 2009–10. Most of Queensland’s coral trout harvest is exported, with live fish trade the main focus. Compared with other reef species, coral trout are a very high value fish (especially live fish), with fishers being paid 7–9 times the price of other species harvested. The current level of the Australian dollar compared to other currencies is likely to decrease the price offered to fishers.

Catches of other reef species, such as Spanish mackerel, red-throat emperor and fish grouped in the ‘other reef species’ category, are more seriously affected by economic and other factors currently operating in the reef line sector. These species are almost completely targeted for the domestic market.

Given the prices currently being offered, the likelihood of filling these quotas in 2008–09 and 2009–10 is low. Typically, the level of harvest is about one-third of the available quota. Fishers report that fish are available for harvest whenever prices improve.

Net-caught species

In 2008–09, production from the Queensland net fishery is expected to be about 5800 t with a forecast GVP of \$27 million—a decrease from the 2007–08 estimated GVP of \$33 million.

It is anticipated that the harvest and GVP from the net fishery, especially from the east coast, will decline further in 2009–10 with the introduction of a competitive shark quota of 600 t. The follow-on effects into netting operations are difficult to define at this stage. The main reason for the decline in harvest from this sector is a 17% reduction in the number of days fished compared to the previous year. The number of boats remained about the same and mean daily harvest rate appeared relatively stable.

As most of Queensland's net-caught product is destined for the local and wider Australian market, imports of finfish limit the price offered to fishers for locally caught fish.

Mullet harvest has declined by about one-third. The primary cause is that the price being offered for the winter fish with their roe has collapsed—other countries now supply the markets at a lower price.

As stated previously, the reduction in harvest of net-caught species cannot be interpreted as a decline in fish stocks. Recent studies indicate that, from a biological perspective, most of the species harvested by net fishers are in robust health and are being harvested at a sustainable level.

Recreational fishing

Using 2005 RFISH survey database it is estimated that the recreational finfish harvest is between 10 500 t and 13 000 t each year. The recreational crab harvest ranges between 700 t and 900 t each year—most of the harvest is mud crab.

During this year, commercial harvest of finfish (net and line) was typically about 10 000 t and about 1200 t of blue swimmer and mud crab.

Placing a value on the recreational fishery presents interesting dilemmas. Using the approach that the recreational fish harvest has a commercial value equivalent; finfish has a notional GVP of between \$57 million and \$71 million. The commercial value equivalent for crabs is about \$9 million. The estimated GVP (commercial equivalent) of recreational fishing therefore is expected to be about \$73 million in 2009–10.

The GVP of the commercial finfish is about \$74 million and the crab (not spanner) of about \$22 million.

However, the total value of recreational fishing is larger than the commercial equivalent value of fish caught. This is because recreational fishing comprises, in simple terms, a harvest component, a recreational component and a wilderness component. Expenditure figures are often taken as an indicator of this total value. Such expenditure data from the recreational fishing sector are difficult to obtain and it is difficult to attribute them to individual components.

The national fisheries survey estimated that the recreational expenditure attributable to the fishing experience and harvest for Queensland residents was about \$320 million in 2000. In 2009 dollars, and assuming the same economic conditions apply (which is unlikely), the recreational expenditure is anticipated to be within the range of \$350 million to \$420 million.

Constituting a segment within recreational fishing, there are about 250 boats reporting charter boat activity in Queensland waters, undertaking between 13 500 and 14 000 days fishing each year. Total harvest is estimated to be 580 t from this sector. Expenditure on recreational fishing activity from these charter boats is estimated to be about \$16 million.

Aquaculture

Forecast

The GVP of aquaculture is forecast at \$89 million in 2009–10, 5% higher than 2008–09 and 11% higher than 2007–08.

Discussion

Aquaculture figures for 2008–09 have not been collected at this stage but estimates at 30 June for 2008–09 were \$87 million, which is 9% higher than the 2007–08 production. This large increase was due to increasing marine prawn production by 30% from 2900 t to 3900 t.

Researchers claw award for longer-lasting mud crabs

A team of Queensland seafood researchers has won a major industry award for increasing the survival rate of mud crabs through the supply chain.

QPIF seafood team and project partner, the Northern Territory Crab Fishermen's Association, won the Seafood Research and Development Award at the recent Northern Territory Seafood Industry Awards.

QPIF principal technician John Mayze said the project sought to understand which handling steps along the supply chain imposed the greatest stress to mud crabs.

'With this information, alternative handling practices were developed to minimise stresses experienced and improve survival rates,' Mr Mayze said.

'With a 10% loss to the Northern Territory mud-crab fishery representing 60–100 t, or \$2 million per year, it's evident how important this project is in maximising revenue to the industry.'

Mr Mayze said the findings were equally applicable to the Queensland mud crab industry, with a commercial harvest in 2008 of 906 t and a GVP of \$14.5 million.

'Feedback from harvesters, wholesalers and the retail sector has indicated increased survival and improved vigour of mud crabs when the alternative handling methods had been employed,' Mr Mayze said.

'These improved methods are about lowering the stress level of the crabs, including re-immersing them for a period, then holding them in a quiet, undisturbed and moist environment.'

Mr Mayze said industry trials had demonstrated a 10% reduction in crab mortalities in the processing sector and a further 50% reduction at retail level.

'This also means mud crabs reach the consumers in premium quality, raising public confidence and perception of the commercial operators and resource sustainability,' Mr Mayze said.

'The wheels are in motion to provide all industry sectors, from harvest to plate, with the best practice protocols and assist with uptake to ensure the Q150 iconic mud crab is always at its premium.'

Sponsored by the Fisheries Research and Development Corporation, the award was given to the project due to its clear outcomes that would have significant impacts on profitability for the Northern Territory industry.

Mr Mayze said the Northern Territory Crab Fishermen's Association and QPIF worked closely over the last five years to obtain these desired outcomes as well as a major recommendation.

'The major recommendation from this research was the inclusion of a recovery step within the distribution chain for live mud crab,' Mr Mayze said.

'It is important to include a purge step of two to three hours where the crabs are returned to aerated water to allow excretion of accumulated ammonia caused by stress.'

'Of major importance for industry-wide uptake was the newly discovered information that if sea water was not available, town water could be used in this step. Importantly, no discernable difference in flavour was detected in town-water-revived crabs.'

The QPIF Innovative Food Technology Seafood Team provides new and enhanced value-adding opportunities, as well as post-harvest technical support, to Australian aquaculture and seafood industries.

It has specific experience in stress factors and mortalities of crabs and lobsters, and has conducted research for projects on extending the survival of spanner crabs, lobsters and prawns.

For more information about Queensland seafood research, call QPIF on 13 25 23 or visit www.dpi.qld.gov.au



Forestry

Forecast

The forest-growing sector of the Queensland forest industry in 2009–10 is forecast at \$170 million, a 5% increase on QPIF's final estimate of \$162 million for 2008–09. This translates into a GVP of \$351 million for the first-stage processing sector. The total GVP of the Queensland forest industry (including forest growing and first-stage processing sectors) is therefore forecast to contribute \$521 million to the Queensland economy in 2009–10.

The moderate forecast growth for the Queensland forest industry in 2009–10 follows the very poor market conditions experienced in 2008–09 as a result of the global financial crisis, and the downturn in dwelling construction activity in particular. The Housing Industry Association (HIA) reported that new housing construction commencements fell by 35% in Queensland in 2008–09. This translated to decreased activity in the forest industry with Queensland's principal forest grower, Forestry Plantations Queensland (FPQ), reporting that log harvest volumes fell by 20% in 2008–09 compared to the previous year.

The latest leading dwelling finance approval data provide evidence that the dwelling construction sector is recovering and that this improvement will translate into growth in forest industry activity over the medium term. The total number of owner–occupier home loans in Queensland increased by almost 1% in July 2009 (trend data)—the 11th consecutive monthly increase and the highest number of loans since January 2008. Loan approvals for the construction of new dwellings also show signs of improvement with the total number of loan approvals in July 2009 recovering to late-2007 levels.

Building approvals data for Queensland also provide some basis for optimism. Total building approvals in Queensland troughed in February 2009 (trend data), and they have now risen for five consecutive months to July 2009. Nevertheless, the numbers of building approvals still remain at about half the levels recorded at the peak in late 2007.

The first home owner segment of the housing market also continues to provide positive signals with first home owners accounting for almost 30% of all dwelling finance approvals in Queensland in May 2009. The historically low interest rates, together with Australian and Queensland government policy initiatives, such as the extension in the First Home Owners Boost Grant (FHOBG) and the lifting in the stamp duty exemption to \$500 000, have underpinned the strong participation of first home owners in the housing market. Although first home owners typically purchase established dwellings, the Reserve Bank of Australia reports that there has been an increase over recent months in FHOBG grant applications for new dwellings.

Over the medium term, demand for new dwellings in Queensland will be stimulated by solid population growth, historically low interest rates, pent-up demand arising from the recent downturn, and also stimulus from new public housing construction arising from the Australian Government's Social Housing Initiative to build 20 000 new dwellings across Australia by the end of 2010.

After taking account of the considerable 'lag effect' between loan approvals and the actual commencement of construction, HIA are forecasting a slow recovery in dwelling commencements in Queensland in 2009–10 (a forecast increase of 1%). FPQ also report that they expect a slow recovery in the market for timber products in 2009–10, with a stronger pick-up in the second half of the year.

HIA forecast 16% growth in new housing starts in 2010–11; this indicates that they expect the recovery in dwelling construction in Queensland to gather momentum over the medium term. Queensland Treasury also expects relatively strong growth in new dwelling investment (20.75%) in 2010–11.

The Department of Environment and Resource Management's (DERM) Forest Products Group has the responsibility for the commercial management of state-owned commercial native forest resources and therefore is a significant supplier of native hardwood and cypress log timber to the

Queensland forest industry. DERM report that they expect moderate growth in their native log timber sales from state-owned lands in 2009–10.

Reports from the hardwood processing sector confirm that there was a downturn in production in 2008–09, with a number of companies forced to reduce labour. Processors report that the market is currently flat and they expect that these conditions will continue for the remainder of 2009. However, a number of businesses are optimistic that the market will recover in 2010. Supply constraints will be a major influence on the native hardwood (and cypress) log timber segment of the market over the longer term.

Managed Investment Scheme (MIS) or ‘pooled investment’ projects have been very successful in attracting large-scale investment into the agribusiness sector, particularly the forestry plantation segment, over the last decade. For example, they have been responsible for over 80% of the estimated 300 000 ha of new forestry plantations established in Australia over the last five years. In Queensland they have underpinned the development of the emerging private plantation forestry sector with an estimated 50 000 ha of new forestry plantations being financed over the last decade through MIS projects.

Although the economic impacts generated from new plantation expansion are not currently included in the forest growing GVP data compiled by QPIF, information produced by the Agribusiness Australia Group (AAG) provides an overview of current activity in this sector.

According to AAG, the Australian agribusiness MIS sector raised \$250 million in 2008–09—a sharp 77% decrease on the previous year. Timber projects attracted \$227 million in MIS investment funds in 2008–09—a 68% decrease on the previous year. Factors such as the global financial crisis, uncertainty about the future of taxation arrangements for agribusiness MIS projects, and the high profile collapse of Australia’s two largest MIS-based companies (Great Southern Limited and Timbercorp Limited) all clearly had a significant negative impact on the ability of the agribusiness MIS sector to attract investment funds in 2008–09.

AAG further estimates that only \$12 million (or 5%) of the total Australian agribusiness MIS funds raised in 2008–09 will be invested in projects in Queensland. If the national trend holds for Queensland, most of these funds will be invested in timber/forestry projects. Nevertheless, the latest year’s result is a significant reduction in the \$150 million (on average) that has been invested in MIS agribusiness projects in Queensland over the previous four years. Clearly the agribusiness MIS sector experienced very difficult market conditions in 2008–09, and it must now develop strategies to restore market confidence.

The Queensland Government has announced that it will sell its forestry plantation agency (FPQ) as part of its Renewing Queensland Plan. Although the details of the FPQ sale arrangement are currently being determined, it arguably represents the most significant change to the structure of the Queensland forest industry since plantation-sourced log timber became the dominant input used by the timber processing sector in Queensland in the mid 1990s. In particular, privatising FPQ should attract new investment into the timber plantation sector and enable the industry to grow.

A note about forest industry data sources

Prior to September 2007 *Prospects* used the reported turnover of Australian and New Zealand Standard Industrial Classification (ANZSIC) Group 231 (Log sawmilling and timber dressing), as defined and measured by ABS in their survey of manufacturing, as an indicator of the gross value of forest industry activity in Queensland. However, while these data do separately report the forest growing sector, they exclude some elements of the first-stage processing sector and they also contain some elements of double-counting.

Prospects now uses data produced by ABARE in its biannual Australian wood and forest products statistics publication about the value of log production (gross value of logs delivered to the sawmill door or wharf gate) as an estimate of the gross value of the forest growing sector in Queensland. This, together with estimates of the ‘value-added’ to intermediate inputs) of ANZSIC Group 231 and ANZSIC Code 2321 (Plywood and veneer manufacturing), provide an overall estimate of Queensland forest industry activity.

Special feature 1: Queensland agriculture and agri-food system

The agriculture and agri-food system continues to be a complex and highly integrated group of industries that significantly contributes to Queensland's economy, particularly when the whole supply chain is considered. In 2006–07, agriculture and agri-food system contributed \$22.7 billion to the state's gross state product (GSP), or around 12% of the Queensland economy, and employed 272 471 Queenslanders.

The agriculture and agri-food system encompasses several industries including farm input and service suppliers; primary agriculture; food, beverage and tobacco (FBT) processing; retail and wholesale food industries and food service.

This paper provides a review of each segment of the system in Queensland, moving along the supply chain from consumers to food distribution, food, beverage and tobacco (FBT) processing, primary agriculture and input suppliers for 2006–07. The contributions of agriculture and agri-food system to the economy are shown in Table 7 below.

- The Food service industry was worth \$1 billion and accounts for 0.5% of Queensland's GSP.
- Food retail and wholesale industries were worth \$3.6 billion and account for 1.8% of Queensland's GSP.
- The FBT processing industry encompasses industries that transform primary production and account for 1.7% of GSP. It represents one of the largest manufacturing sectors in Queensland and contributes \$3.5 billion to the economy.
- Primary agriculture, including agriculture, fisheries and forestry, accounts for 5% Queensland economy and is at the heart of the agriculture and agri-food system. It is worth \$9.5 billion in 2006–07.
- Input suppliers and service providers also perform important functions in the agriculture and agri-food system. In 2006–07, this industry was estimated to be worth \$5.1 billion.

Table 7. Agriculture and agri-food system's contribution to Queensland's GSP and employment (2006–07)

| | Industry value-added (IVA) | IVA as % GSP | Employment | |
|------------------------------|----------------------------|--------------|------------------|------|
| | \$million | % | Number | % |
| Food service | 1021 | 0.5 | 39 903 | 1.9 |
| Food retail/wholesale | 3591 | 1.8 | 90 467 | 4.5 |
| Food and beverage processing | 3586 | 1.7 | 46 769 | 2.2 |
| Primary agriculture | 9532 | 4.8 | 78 000 | 3.7 |
| Input and service suppliers* | 5128 | 2.6 | 17 332 | 0.8 |
| Sub-total | 22 858 | 11.5 | 272 471 | 13.0 |
| Total GSP | 198 514 | | 2 091 700 | |

(Source: Australian Bureau of Statistics (ABS), various years and various publications)

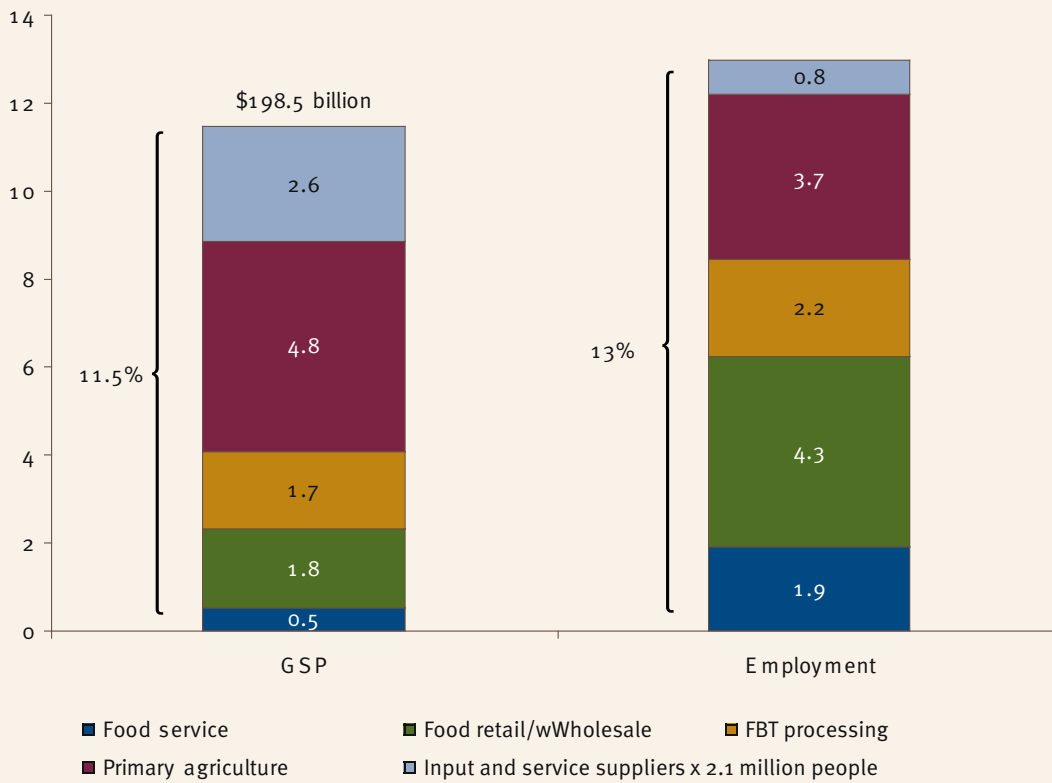
* Based on an estimate

Food and agriculture is also one of Queensland's key employers. In 2006–07, there were 272 471 jobs supported by food and agriculture or 13% of total Queensland jobs of 2 091 700. Therefore, one in eight Queensland jobs are either partially or fully supported by food and agriculture.

Applying the same supply analysis and using 2006–07 statistical data, Table 7 shows the number of jobs in the different food and agriculture-related industries. There were 39 903 jobs (2%) for food services, 90 467 jobs (4%) from the food retail and wholesale industries and 46 769 jobs (2%) from food and beverage manufacturing. There were 78 000 Queenslanders or 4% directly employed in primary agriculture and 17 332 jobs (0.8%) in input and service suppliers industry.

Figure 14 below shows the summary of food and agriculture’s contribution to GSP and employment in Queensland for 2006–07.

Figure 14. The agriculture and agri-food system’s contribution to GSP and employment, 2007



(Source: Australian Bureau of Statistics (ABS), various years and various publications)

Special feature 2: Queensland beef value chain

A value chain is a model used to illustrate the product and financial flows that occur throughout a specific industry. Value chains can be used to discern the implications that changes in inputs will have for the pricing of end retail products.

Queensland beef value chain

The Queensland beef value chain describes the Queensland beef industry by quantifying the costs associated with each sequence or link from the farm gate to the consumer. The Queensland beef value chain models the beef product flow from farmers to consumers and financial flows from consumers back to farmers. Within the value chain, value is added to the product as it passes through activities in the chain. Beef cattle move from farms to feedlots to processors and then to retailers who transform them into saleable retail beef products and co-ordinate their sale to retail customers.

The value chain consists of three stages—primary production, processing and retail. Within these stages, costs are incurred as cattle are converted from live animals into a variety of retail products. Throughout this process, costs are incurred and value is added to the product.

Any analysis of the value chain of the Queensland beef industry is inherently complex and must be simplified by making a large number of assumptions regarding meat quality, market prices and cost structures. Yet, as an approach, it can be used to make valuable comparisons between the returns at each stage in the value chain. The value chain model allows for all assumptions to be adjusted and for these changes to trickle down the value chain and ultimately impact the end retail prices of retail products.

Transport costs are incurred within each stage of the value chain for Queensland beef when live animals are transported from farm to feedlot, when live animals are transported to the abattoir and processing plants, when meat is transported to retailer warehouses and when retailers transport meat to individual stores.

Livestock costs and co-product costs are calculated based on annual averages to provide a general reflection of the relative value chain returns over time. The decision to adopt average annual costs was made due to the high sensitivity of the value chain model to changes in costs and other variables.

Saleyard and feed grain costs were derived from ABARE's *Australian Commodities*, Vol. 16, No. 1, March quarter publication. All other primary production and processing assumptions were derived from the Macarthur Agribusiness's *Economic and social/community impacts of the live cattle and processed beef export supply chains in Queensland* report. The value chain is a variant of the value chain outlined in the Macarthur Agribusiness's *Economic and social/community impacts of the live cattle and processed beef export supply chains in Queensland* report (prepared for QPIF in 2001). Although there are minor differences in the structures of both value chains, the Macarthur Agribusiness value chain provided the basic structure for the Queensland beef value chain.

The primary production stage (including saleyard, backgrounding and feedlot costs) accounts for roughly 55% of the end retail price. The processing stage accounts for roughly 10% of the end retail price. Retail costs account for roughly 26% of the end retail price. Transport costs (from farm to feedlot, from feedlot to works, from works to warehouses and then to individual stores) account for 3% of the retail price.

Information provided by Coles to the Australian Competition and Consumer Commission (ACCC) and the findings reported by Whitehall Associates' analysis of the determinants of prices and costs in product value chains yields a very similar breakdown of value-added in the beef sector. In the ACCC report, Coles revealed that the price it pays for a whole cow (inclusive of producer and feedlot costs) typically accounts for 53% of the end retail price. Processing activities and

costs (kill fee, boning, packaging and chilling) account for 14% of the end retail price while retail activities and costs (slicing and trimming, packaging, labour, shrinkage, promotion and advertising, store costs and retail margin) account for 30% of the end retail price.

Applications

The value chain model allows for parameters to be adjusted to assess the impact of changes. For example, the value chain model can be used to discern the effect changes in input costs can have on end retail prices of beef products, assuming all other input prices are unchanged and that price differences do not lead to a market realignment. Examples include saleyard prices, feed grain prices and fuel prices.

Example: Approximate value chain for grain-fed cattle (100 days)

Primary production parameters

- Beef animal is a trade steer with a live weight of 360 kg at 18–20 months.
- Farm gate price of trade steer is 300c/kg.
- Average road transport distance from farm to feedlot is 1072 km.
- Cost per deck per kilometre is \$1.50.
- Number of cattle head per deck is 37.
- Animal lose 5% live weight in transit from farm to backgrounding destination.
- Cattle are backgrounded for seven weeks.
- The weekly cost of agistment is \$2.00.
- On average, weekly gain is 4.90 kg/week.
- Cattle are lofted for 100 days.
- Ration cost is \$260/t.
- Margin on feed is 30%.
- On average, feed intake is 15.76 kg per head per day.
- Average daily gain of individual steer is 1.5 kg.

Processing parameters

- Average road transport distance from feedlot to works is 940 km.
- Cost per deck per kilometre is \$1.00.
- Number of cattle per deck is 22 head.
- Cattle lose 5% live weight in transit from feedlot to works in Brisbane.
- Feedlot steer is assumed to achieve a dressing percentage of 55%.
- Cold shrink causes a further 3 % loss of carcass weight.
- Total processing costs (inclusive of kill levy) is \$250.

Retail parameters

- Aging, storage and pre-preparation of carcass comprise 2.5 % of total retail costs.
- Transportation to stores comprises 2.5 % of total retail costs.
- In store preparation and packaging of cuts comprise 35 % of total retail costs.
- Refrigeration and display comprise 17.5 % of total retail costs.
- Gross margin to supermarket comprises 42.5 % of total retail costs.
- Total retail costs are \$700.

Impact assessment: an increase in fuel costs

The value chain can be applied to predict the effect fuel cost increases will have on beef retail prices. Within the value chain, transportation costs comprise only a small proportion of the end retail price of beef products (3%). An increase in fuel costs, which will increase transportation costs, is thus deemed to have a minimal affect on end retail prices. For example, if transportation costs (\$ per deck per kilometre) were to double as a result of a sizeable increase in fuel costs (greater than a 100% increase as fuel costs are only one component of transport costs), the model predicts retail costs will increase by only 3%.

Special feature 3: Setting a new benchmark for lifestyle horticulture

In September 2008, QPIF commissioned Queensland Treasury's Office of Economic and Social Research to undertake a comprehensive statewide telephone survey to determine the economic value of the lifestyle horticulture industry. The industry has changed significantly since QPIF last conducted a comprehensive survey in 2001, and a new benchmark was needed to gain an accurate understanding of the scope and economic contribution of this important Queensland primary production industry.

While lifestyle horticulture is commonly viewed as the initial stage of the ornamental-focused landscaping, gardening and florist supply chains, it also plays an integral role in the supply of seedlings, tubestock and trees to the forestry, production fruit, nut and vegetable industries.

In 2007–08 the estimated gross value or turnover for the production segment of the lifestyle horticulture industry was \$899 million. The survey has also revealed a much larger contribution to the Queensland economy from the service sector of the industry supply chain relative to previous surveys.

The services segment is now estimated to contribute \$2496 million of gross value to the Queensland economy in 2007–08. Collectively, the whole of industry value chain is up to \$3.4 billion, exceeding all previous industry estimates. Readers should note that as the services value is a gross figure (not value-added), the whole-of-industry figure includes significant levels of 'double-counting'. However, detailed data are unavailable about the extent of the double-counting.

Survey background

The sample population for the 2007–08 survey was 1398 businesses operating in all sectors of the lifestyle horticulture industry. The survey responses were extrapolated to provide a whole-of-sector and industry estimates. Readers should note that the definition or scope of the lifestyle horticulture industry has changed from the previous survey. Therefore, care should be taken in comparing the results from the 2007–08 survey with the 2000–01 survey.

The increased estimate of the GVP segment reflects an expansion in the larger-end enterprises when compared to previous industry and government estimates. Production nursery respondents, representing 71% of the total gross turnover of the production segment, reported that 4% had a gross annual turnover in excess of \$5 million.

The total survey frame (identified lifestyle horticulture 'population') of 5748 businesses for the new survey was significantly larger compared to earlier surveys. This delivered a more thorough and reliable estimate of industry activity.

In particular, the service segment population was significantly larger than the previous survey. The 2000–01 survey identified 1717 businesses in the landscape design, softscape installation and maintenance sectors. The 2007–08 survey identified over 2200 businesses in the same sectors.

In addition, the significant size of a number of the industry sectors necessitated that they be identified as stand-alone sectors in the new survey. For example, arboriculture businesses were included in the 'other' category in the 2000–01 survey. The new survey identified 474 arboriculture businesses in the population, justifying its categorisation as a stand-alone sector. Similarly, 318 landscape architecture businesses were identified in the 2007–08 survey.

Gross turnover

The lifestyle horticulture production segment is estimated to have generated \$899 million of gross value/turnover in 2007–08, and the lifestyle horticulture services segment is estimated to have generated \$2496 million of turnover/gross value in the same year.

The definition of the lifestyle horticulture industry for the purpose of this survey was broken into the following industry sectors:



Table 8. Lifestyle horticulture industry sectors

| Production segment | \$m |
|---|------------|
| Nursery-plant production | 723 |
| Turf-grass production | 101 |
| Cut flower and foliage production | 74 |
| Services segment | \$m |
| Retail plant nursery | 412 |
| Florists or retail flower sales | 34 |
| Landscape design and architecture | 263 |
| Landscape construction (greenscape and irrigation, excluding hardscape) | 1132 |
| Garden and lawn maintenance | 343 |
| Horticulture consultant | 10 |
| Arboriculture and tree maintenance | 223 |
| Indoor plant hire | 78 |

The industry—both service and production segments—is comprised of a large number of small to medium enterprises. Of total survey respondents, 18% reported that their annual turnover is under \$50 000 per year and 32% of the respondents reported that their annual turnover was between \$50 000 and \$200 000 per year.

The value of the industry was boosted by the 2% of survey respondents reporting over \$10 million in gross turnover in the 2007–08 year.

Businesses and organisations providing a range of training and education, research and development, management and maintenance of golf courses, parks and sporting grounds, specialised transport services, as well as manufacturers and suppliers of allied products were not included in the scope of the new survey.

Exports

The survey results confirmed that the lifestyle horticulture industry is focused on domestic markets and is not as trade-oriented as production horticulture or the livestock industries. Only 4% of survey respondents reported that they export internationally, with production segment respondents (9%) more likely to have exported than service segment (3%) respondents.

Production sector respondents reported a focus on markets in Japan and Asia (other than China and Japan). There also appears to be growing interest in exporting with 63% of survey respondents currently exporting reporting that they intended to increase exports in the next 12 months.

The cut flower sector had the highest export propensity with 15% of respondents from this sector reporting that they currently export—mostly to markets in Japan and the greater Asia region. Respondents also indicated that exports to China accounted for 11% of the total exports from the production sector. Production nursery respondents were the only respondents to indicate that they currently exported to China.

While overall service segment exports are relatively low, respondents from the services segment reported that Europe and Oceania are their largest export markets. Exporters from the service segment were more pessimistic than their production segment counterparts, with 53% of respondents indicating that exports would be static or decline over the next 12 months.

The survey results also indicated that service segment businesses are less likely to export interstate than businesses in the production segment. New South Wales and the Australian Capital Territory are the largest interstate export markets for both the production and service segments of the lifestyle horticulture industry.

Labour

Lifestyle horticulture is a relatively labour-intensive industry. The survey results indicate that the nursery and cut flower and foliage production, particularly landscaping and maintenance sectors, require relatively high labour inputs.

The production segment is estimated to employ a total of 6260 full-time equivalents (FTEs)—based on 38-hour week—in full-time, part-time and casual capacities. Production nurseries accounted for the highest labour usage, accounting for 73% of the total estimated FTEs in the production segment.

The garden maintenance (27%) and landscape construction—greenscape—(23%) sectors account for half of the estimated service segment labour requirement of 14 060 FTEs. The landscape sectors also accounted for the highest numbers of part-time and casual staff in the lifestyle horticulture industry.

The survey also revealed that 31% of total respondents (27% production segment and 32% service segment) reported operating as a sole proprietor with no staff. Furthermore, one-third of the FTEs in the service segment did not draw a regular wage from the business. Production segment respondents reported that 30% of FTEs did not receive a regular wage from the business.

Based on the total reported salary expenditure per business and the number of reported FTEs, the average salary for FTEs in the lifestyle horticulture industry was around \$25 000.

Medium-term outlook

The lifestyle horticulture industry outlook was generally favourable when the survey was conducted, with only 16% of respondents reporting a 'poor' or 'very poor' view of business conditions for the next five years. By contrast, 66% of survey nominated 'even' or 'good' business prospects for the medium-term future. Respondents in the production and services segments reported very similar future business outlooks.

All survey respondents were requested to provide possible explanations for their responses about future business conditions. The most common justification provided by the production segment for the positive growth was 'positive market trends' and 'optimistic rainfall projection'. The service segment respondents indicated that 'positive market trends' was the key reason for their projection; however, 'good reputation and customer service' were also reported as key factors underpinning their responses. Pessimistic respondents reported 'higher production costs' and 'poor economic conditions' as the main reasons for their response.

Notes

- Gross value of commodities produced is a measure of economic output.
- Estimates of the gross values of Queensland agricultural production are calculated and published at the state level by the Australian Bureau of Statistics (ABS). Presently, ABS publishes estimates for most agricultural commodities twice a year.
- A preliminary estimate for a particular financial year is published approximately four months after the end of that year. The second (final estimate) is published approximately 12 months after the preliminary estimate.
- Estimates of the gross value of Queensland's fishery production are available from QPIF.
- Estimates of the gross value of Queensland's forestry production are available from Forest Products Queensland.
- All estimates provided in this publication are in nominal dollar values unless otherwise stated.

Definitions

Crops

Field and horticulture crops.

Fisheries

Trawl- and non-trawl fishing, and aquaculture.

Forestry

Log sawmilling and timber dressing.

Gross value of commodities produced

Value of recorded production at wholesale prices realised in the market place (for example, cattle sold for slaughter and sugarcane at the mill).

Value-added production

'Value-added' is simply measured as the value of the output produced minus the costs of the intermediate goods.

Livestock disposals

Cattle, sheep, pigs, poultry, kangaroos and other live animals sold for slaughter, plus live exports minus live imports.

Livestock products

Eggs, milk, wool and honey.

Market place

Generally, the metropolitan market in each state and territory. Where commodities are consumed locally, or where they become raw material for a secondary industry, these points are presumed to be the market places. Commodities exported overseas are generally valued at free-on-board prices.