

# Markets

Increasing demand in current markets and securing access to additional markets forms the third pathway to growth outlined in *Queensland's agriculture strategy*. Securing and increasing market access will underpin the long-term competitiveness of the sector.

Queensland's agricultural producers currently service domestic markets and a number of international markets. Exports are worth approximately \$8.9 billion, which represents 60 per cent of the sector's output. Interstate markets are worth approximately \$3.6 billion or 25 per cent of the sector's output, with the remaining output sold in Queensland.

While many of the current domestic markets are mature, there is still some potential to expand these markets for some commodities. However, it is international markets, particularly in Asia, that offer the greatest opportunities for increased output.

## International markets

### National and international policy environment

Queensland's agricultural producers have access to overseas markets through negotiations involving multilateral, regional and bilateral approaches by the Australian Government. These include:

- Australia as signatory to successive multi-lateral trade negotiations and its membership of the World Trade Organisation (WTO)
- free trade agreements (FTAs)—Australia currently has seven FTAs in force, covering 28 per cent of Australia's total trade, with a further eight under negotiation, covering a further 45 per cent of trade (see Table 4.1)<sup>1</sup>
- a wide range of other more specific trade arrangements—see <http://www.daff.gov.au/market-access-trade/market-access-news/achievements>
- agreements which confer both rights and obligations in relation to decision-making processes related to the assessment and application of sanitary and phytosanitary measures. These processes are set out in:
  - the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement)
  - the International Plant Protection Convention (IPPC)
  - the associated International Standards for Phytosanitary Measures (ISPM).

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<sup>1</sup> <http://www.dfat.gov.au/fta/>

**Table 4.1** Established FTAs and FTAs under negotiation as at April 2014

Australia's established FTAs	FTAs under negotiation
Closer Economic Relations (CER) Agreement between Australia and New Zealand (1983)	Australia–China (ACFTA) Negotiations commenced in April 2005
Singapore–Australia FTA (2003)	Australia–Japan (AJFTA) Negotiations concluded in April 2014 FTA still to be signed
Thailand–Australia FTA (2005)	Australia – Gulf Cooperation Council (GCCFTA) involving Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the UAE Negotiations commenced in July 2007
Australia–United States FTA (2005)	Trans – Pacific Partnership Agreement (TPP) involves 11 members: Australia, Brunei, Canada, Chile, Malaysia, Mexico, New Zealand, Singapore, United States, Peru and Vietnam Negotiations commenced in 2008
Australia–Chile FTA (2009)	Pacific Agreement on Closer Economic Relations (PACER Plus) involves Australia and the Cook Islands, Micronesia, French Polynesia, Fiji, Kiribati, New Caledonia, Nauru, Niue, Palau, Papua New Guinea, Marshall Islands, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu Negotiations commenced in August 2009
ASEAN – Australia – New Zealand FTA (2010) The ASEAN (Association of South East Asian Nations) comprises Burma, Brunei, Cambodia, Indonesia, Laos, Malaysia, Philippines, Singapore, Thailand and Vietnam	Australia–India Comprehensive Economic Cooperation Agreement (AI-CECA) Negotiations commenced in May 2011
Malaysia–Australia FTA (2013)	Indonesia–Australia Comprehensive Economic Partnership Agreement (IA-CEPA) Negotiations commenced in Jakarta in September 2012
Australia–Korea FTA (2013) (Note: concluded and signed but not yet in force.)	Regional Comprehensive Economic Partnership (RCEP) initially includes the 10 ASEAN member states and those countries which have existing FTAs with ASEAN: Australia, China, India, Japan, Republic of Korea and New Zealand Negotiations were launched in November 2012

Source: <http://www.dfat.gov.au/fta/>

## The SPS Agreement

WTO member countries are expected to use any existing international standards, guidelines and recommendations to promote the harmonisation of sanitary and phytosanitary measures in international trade. The standards are developed by leading scientists and government officers with relevant expertise, and are subject to international scrutiny and review. The standards are adopted and managed by the Commission on Phytosanitary Measures (CPM), who is also responsible for the international implementation of the IPPC.

The SPS Agreement is applied at a national level and is defined by a number of principles that support the application of phytosanitary measures. These principles include sovereignty, necessity, minimal impact, modification, transparency, harmonisation, equivalence, risk analysis and regionalisation.

The SPS Agreement recognises that there may be a number of different mitigation measures that can be applied to achieve an equivalent and acceptable level of risk. In practice, this means that where a country can show that the measures it applies provide the same level of risk mitigation as other measures already agreed to by the receiving country, then these measures should be accepted as equivalent. Alternatives must be technically and economically feasible and provide the same level of protection. The measures selected should be the least trade restrictive to achieve the appropriate level of protection (ALOP) for that country.

International standards are agreed by three organisations known as the ‘Three Sisters’—who develop international standards, recommendations and guidelines for plant and animal health, as well as food safety. The Three Sisters are the:

- International Plant Protection Convention (IPPC)
- World Organisation for Animal Health (Office International des Epizooties, OIE)
- Codex Alimentarius Commission (Codex).

Precise details of export conditions negotiated for Australian agricultural produce are managed by the Department of Agriculture who oversee compliance with programs established to meet the quarantine requirements of destination countries. Quarantine requirements are based on the presence or absence of pests and diseases of concern in both the growing region and also the destination country. In order to provide evidence of absence or otherwise on which to base the negotiation of market access protocols, surveillance programs are undertaken by DAFF (Biosecurity Queensland) to support the pest status claimed. Tables in the appendix show the current status of agricultural pests of concern in Queensland.

To help exporters understand the quarantine requirements of destination countries, the Department of Agriculture manages a number of databases including MiCor, Phyto and Exdoc. The Department of Agriculture also manage the auditable certification processes that vary according to the commodities and the destination country. DAFF provides supporting services under agreement with the Department of Agriculture, as required.

The Codex Alimentarius Commission was established by the Food and Agricultural Organisation (FAO) and the World Health Organisation (WHO) in 1963. Its purpose is to guide the development of harmonised international food standards, guidelines and codes of practice to protect the health of consumers and ensure fair practices in the food trade.

In Australia, guided by Codex, the requirements for food standards for Australia and New Zealand are managed by Food Standards Australia and New Zealand (FSANZ). Safe Food Production Queensland (SFPQ) provides operational support for FSANZ in Queensland, in collaboration with DAFF and Queensland Health (QH). In Queensland there are two major pieces of legislation regulating food safety:

- *Food Production (Safety) Act 2000*, administered by SFPQ
- *Food Act 2006*, administered by QH

Businesses producing or processing meat, dairy, eggs or seafood may be required to have an accreditation with SFPQ under the appropriate scheme:

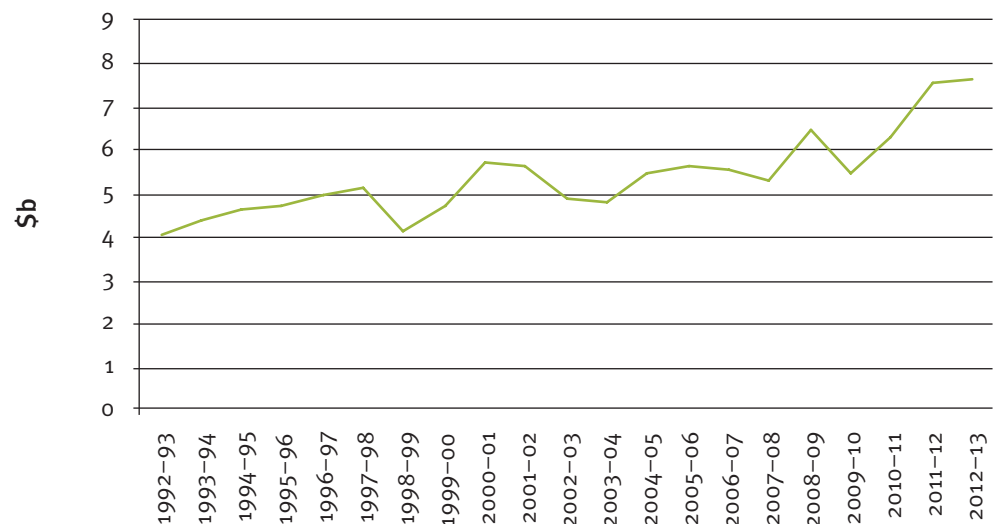
- Meat and Meat Products Scheme (the Meat Scheme)
- Dairy Food Safety Scheme (the Dairy Scheme)
- Egg and Egg Products Scheme (the Egg Scheme)
- Seafood Scheme

To comply with Queensland law, businesses that are registered through the Department of Agriculture (Biosecurity) to export meat, dairy or seafood, must also be accredited with SFPQ. These businesses may also be required to submit a food safety program or management statement. The Department of Agriculture oversees compliance with programs established to meet the quarantine requirements of destination countries.

## Market trends

The Queensland Government Statistician’s Office (QGSO), within Queensland Treasury and Trade, provides information about the state’s main agricultural commodity exports—including beef, horticulture, cotton, sugar and wheat—over the last 10 years. (See the information tables at the end of this chapter and in Section 7: Appendix.)

**Figure 4.1** Value of Queensland agriculture exports



Source: DAFF

## Beef

Queensland's beef is exported in a number of different forms: live cattle exports (feeder and slaughter), live exports (breeding cattle), chilled or frozen meat (bone in) and chilled or frozen meat (boneless). Each of these products are suitable for very different markets and this is generally reflected by the level of development in the destination country.

Indonesia has been the primary market for live cattle exports (feeder and slaughter) for the past 10 years. This market is mainly made up of developing countries with religious slaughtering rituals and a culture of purchasing from markets due to the absence of refrigerators in many homes. Live exports (breeding cattle) are mainly destined for countries endeavouring to build up their own herds.

The data in the tables in the appendix show the impacts on the live trade market when the Federal Government suspended trade to Indonesia in 2010 following reports of animal welfare incidents. Live trade was re-established in 2011.

Cattle tick is a barrier to market access for live cattle intrastate, interstate and internationally. Cattle tick is managed by regulating cattle movement across a designated tick line separating free and endemic areas of Queensland.

The National Livestock Identification System (NLIS) supports market access and traceability requirements, and is held in high regard by destination countries. Queensland's strong regulatory system helps prevent the entry of Bovine spongiform encephalitis, making our product highly-desirable in markets such as Korea, Japan and the USA.

The following table shows the meat safety and traceability programs that are supporting the industry in Australia. These systems provide customers with reassurance regarding the quality and safety of Queensland meat products.

**Table 4.2** Meat safety and traceability programs currently operating in Australia

Supply chain position	Safety program or initiative
On-farm	<ul style="list-style-type: none"> <li>• Livestock Production Assurance</li> <li>• LPA Quality Assurance</li> </ul>
Feedlot	<ul style="list-style-type: none"> <li>• National Feedlot Accreditation Scheme</li> </ul>
Transport	<ul style="list-style-type: none"> <li>• TruckCare</li> </ul>
Saleyards	<ul style="list-style-type: none"> <li>• National Saleyards Quality Assurance Program</li> </ul>
Processing	<ul style="list-style-type: none"> <li>• Australian Government legislation and standards</li> <li>• AQIS health certificate</li> <li>• Australian Government Halal Slaughter Program</li> <li>• Micro-organism monitoring</li> <li>• MLA food safety program</li> <li>• National Residue Survey</li> </ul>
Export	<ul style="list-style-type: none"> <li>• Department of Agriculture Biosecurity</li> </ul>
Overall supply chain	<ul style="list-style-type: none"> <li>• National Livestock Identification System</li> <li>• AUS-MEAT</li> </ul>

Source: MLA, <http://www.mla.com.au/Meat-safety-and-traceability>

## Horticulture

Over the last 10 years, most of Queensland's fruit, vegetable and nut markets have been consolidated into the Asia-Pacific region, with the exception of United Arab Emirates. The largest markets over this period have consistently been Hong Kong and New Zealand. Other important markets include Singapore, Indonesia, Thailand and Japan.

The Queensland fruit fly (*Bacterocera tryoni*) is one of the most significant pests of concern for many destination markets and requires produce to be treated to reduce the risk of this pest being introduced in consignments. This is particularly limiting for tropical fruits. Cold storage treatment, which is used to treat fruit fly, is the main market access measure used for citrus—one of our largest commodity exports. However, this treatment isn't ideal for tropical fruit as it damages the fruit quality.

Changes to the permitted usage of two of the main post harvest chemical treatments used to treat produce for fruit fly—dimethoate and fenthion—have resulted in loss of market access into New Zealand since 2012 for tomatoes and capsicums.

Although *B. tryoni* is an endemic pest, Queensland remains free of other exotic fruit flies through continued participation in the national Ports Trapping Program. This program is supported by the Long-term Containment Strategy for Exotic Fruit Flies in Torres Strait which combines surveillance for exotic fruit flies with containment activities that ensure mainland Australia remains free from these pests.

Queensland's main export markets tend to be:

- in the northern hemisphere where seasonality gaps are filled
- in countries where there is limited ability for local produce to meet the market's needs
- in temperate regions that are unable to produce tropical and sub-tropical fruits and vegetables.

These countries also tend to have a large middle class with an ability to purchase higher-priced, quality products—for example, Hong Kong (SAR of China), Korea, New Zealand, Indonesia, Singapore and the United Arab Emirates. China has only recently emerged as a large market fitting the same profile. (See Section 7: Appendix for more details.)



## Case study

# Torres Strait fruit fly eradication

The papaya fruit fly is endemic to Thailand, Malaysia, Borneo, Indonesia and Singapore. It is considered a significant agricultural pest, lowering production yields in countries where it has established.

It infests twice the number of fruit varieties as the Queensland fruit fly (209 compared with 116) and often infests at a greener stage of fruit development. In order to control the pest, spray regimes need to begin earlier and become more frequent. In countries where the pest is established, growers can encounter significant market access barriers when exporting their produce.

The papaya fruit fly has been found in Papua New Guinea since 1992 and was detected for the first time in the Torres Strait (part of Australia) in March 1993.

In October 1995 an incursion of the species was found near Cairns. The incursion into mainland production areas sparked a four-year eradication campaign costing \$34 million in direct costs. Another \$100 million was incurred in additional control regimes, quarantine and disinfestation activities, crop damage and lost trade.

Following its eradication from mainland Australia, the Queensland Government and Federal Government began a cooperative arrangement to monitor and eradicate annual incursions of exotic fruit flies in the Torres Strait under the Long Term Containment Strategy for Exotic Fruit Flies in Torres Strait.

A number of exotic fruit fly species, including the papaya fruit fly, spread to the Torres Strait from nearby Papua New Guinea each year. If they are allowed to establish on the islands they will eventually spread to the Australian mainland, where they have the potential to cause severe disruption to market access.

Since the program's inception, the average annual cost of surveillance and proactive eradication of all six fruit fly species of concern has averaged \$200 000 per year. Subsequent to the 1995 mainland incursion, the dynamics of Australian horticulture has changed with increasing production value and diversity of crops, and larger growing regions.

In 2013, the ABARES estimated the potential cost of an incursion of exotic fruit flies from the Torres Strait at between \$442.9 million to \$3.3 billion with a benefit:cost ratio ranging from 63:1 to 339:1. Producers' losses are estimated to range from \$269 million to \$2.1 billion.

In addition to the Torres Strait fruit fly program, Queensland also manages a trapping grid to monitor for a range of exotic fruit fly species (species not present within the state or the country) in high-risk areas of Queensland, including Brisbane and Cairns. This network of traps provide early warning of new incursions of exotic fruit fly species and contribute to Australia's national country freedom from species of quarantine concern. This trapping will continue to support market access to fruit fly sensitive countries.

Industry consultation will soon begin for the program to be delivered under the Emergency Plant Pest Response Deed. This will give the industry more opportunity to provide input into the delivery strategies that form an eradication response plan. Implementation of the response plan is scheduled to occur in July 2015.



## Dairy

Dairy exports have significantly declined over the past 10 years (see the tables in the appendix), mirroring the general decline of the industry in Queensland since deregulation occurred in 2001. In 2000, there were 1545 dairy farms in Queensland but by 2010 this number had fallen to 610.

As the demand for fresh milk and dairy products in developing Asian countries increases, particularly in China, exports provide an opportunity to reverse past declines.

## Cotton

Almost all of Queensland's cotton is exported. Growth of the textiles industry and associated manufacturing industries in the East Asia region have been the main source of growth in Queensland cotton exports.

This is reflected in increased exports to China, Indonesia, Thailand and other East Asian countries. At the same time European markets have reduced, particularly after the GFC in 2009.

## Sugar

The data for sugar exports is limited in availability due to it being commercial-in-confidence and therefore the data provided in the appendix should be used with caution. Also, values for sugar are difficult to report due to the sugar pricing methodology adopted by the market. Sugar is priced over a period of time with different prices prevailing over that period. Sugar is also sold on the forward market adding to the complexity.

Data provided in the tables in the appendix has been taken from OESR data. Queensland Sugar Limited, the main sugar marketer in Queensland, has also provided sales by volume and destination for the past five years.

The available data shows that sugar markets are global, with Asia, Europe and the USA being key markets for Queensland. The increasing proportion of the Asian market has provided the main source of growth in sugar exports.

While Korea has consistently been Queensland's largest buyer, latest figures show the extremely rapid emergence of the Chinese market over the last four years.

## Wheat

Wheat export data is also limited in availability due to it being commercial-in-confidence and therefore the data provided in the tables in the appendix should also be used with caution. Until 2006, export sales were via a single desk model, but there are now a number of companies filling this role. Like sugar, marketing and sales of wheat are complex.

Queensland's wheat exports are distributed to various destinations according to the different qualities and protein content of the wheat. Asia has been the main driver of increased exports in wheat over the last 10 years.



The Korean market drives demand for Australian Prime Hard quality wheat as it is highly suited to noodle-making; and Queensland is one of the two main growing regions in Australia. Queensland's wheat industry has also benefited from the rapidly emerging Chinese market.

The traditional markets of the USA and Italy remain important markets for Queensland. Despite the US market contracting after the GFC it appears to have regained prominence. The Italian market has also been contracting over recent years and has yet to show signs of recovery.

## Domestic markets

Queensland's interstate primary production exports were estimated to be valued at approximately \$3.6 billion in 2013<sup>2</sup>, representing approximately 25 per cent of production, while interstate imports exceeded this figure at approximately \$5.8 billion.

More detailed data on interstate trade by commodity and industry is not available, partly due to the absence of central collection points for the data. This absence reflects the number of different pathways through which products can flow, including the traditional central market system which previously dominated.

However, supermarkets now have direct purchasing arrangements with producers throughout Australia. This means that product can be purchased in Queensland, shipped in bulk to another state for packaging and then shipped for sale—either to another state or back to Queensland.

For some commodities such as beef, data from the National Livestock Identification Database potentially provides a better understanding of the domestic markets for Queensland's products. The Animal Health Committee also commissioned some older analyses of livestock data, showing Australia's domestic markets for livestock.<sup>3</sup>

Biosecurity Queensland negotiates domestic quarantine market access measures on behalf of the Queensland horticulture industry. The following tables list Interstate Certification Assurance (ICA) scheme accreditations to certify their products for interstate markets.

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<sup>2</sup> Interstate trade, Queensland, December 2013, Australian Bureau of Statistics 8502.

<sup>3</sup> [http://www.daff.gov.au/animal-plant-health/animal/livestock\\_movement\\_in\\_australia\\_and\\_emergency\\_disease\\_preparedness](http://www.daff.gov.au/animal-plant-health/animal/livestock_movement_in_australia_and_emergency_disease_preparedness)



## Case study

# Citrus canker

In June 2004 the highly destructive disease known as citrus canker was detected on a farm at Emerald in Central Queensland. The disease is caused by extremely contagious bacteria that cause a significant decline in tree health to the point where no fruit is produced.

The disease can be spread through infected plant material and also by rain, equipment, animals, birds, humans and clothing. It infects all types of citrus crops including oranges, grapefruit, tangerines, lemons and limes.

Citrus canker is common in many citrus-growing areas of the world including Japan, Central Africa, the Middle East, the Pacific Islands and parts of South America, and it is responsible for devastating Florida's citrus industry in the USA.

Outbreaks in Australia's Northern Territory were eradicated in 1912, 1991 and 1993 by removing and destroying all host plants in the vicinity.

In 2004 the disease was detected in Queensland, and the then Department of Primary Industries and Fisheries immediately quarantined the infected property to help control and eradicate the disease. Funding for the eradication program was provided by Australian states and territories producing citrus, along with the Federal Government and the citrus industry.

The program had an initial budget of \$18.8 million over more than four years and employed up to 95 officers. Queensland coordinated containment and eradication activities through removing infected plant material, conducting extensive surveillance around the initial detection area, and establishing market access arrangements to help recommence interstate trade in Queensland citrus produce.

By January 2006, all high-risk host plants had been destroyed, including around 490 000 commercial citrus trees, 4000 residential trees and 150 000 native citrus plants. The area was kept clear of all citrus plants for 18 months and commercial growers were then given a further 18 months to replant. The new plantings were inspected by Biosecurity Queensland officers at three-monthly intervals to ensure the new plants remained disease-free.

In January 2009, the Emerald area, Queensland and Australia were once again declared free of citrus canker. The biosecurity effort delivered a clean, marketable and positive future for Queensland's citrus industry, estimated to be worth more than \$133 million in 2010–11.

**Table 4.3** ICA accreditations as at March 2014

Procedure code	Procedure	Number of accreditations
ICA01	Dipping with Dimethoate or Fenthion	10
ICA02	Flood Spraying with Dimethoate or Fenthion	50
ICA03	Low Volume Non-recirculated Spraying	28
ICA04	Fumigation with Methyl Bromide	8
ICA06	Hard Green Condition of Bananas	118
ICA08	Mature/Immature Green Condition of Papaw & Babaco	4
ICA10	Hot Water Treatment of Mangoes	1
ICA13	Unbroken Skin Condition of Approved Fruits	17
ICA15	Mature Green Condition-Passionfruit/TLime/BSapote	22
ICA16	Mature Green Condition of Bananas	30
ICA17	Splitting & Reconsigning Certified Produce	36
ICA18	Treatment & Inspection of Custard Apple	2
ICA19	Treatment & Inspection of Mangoes	21
ICA20	Pre-Harvest Treatment & Inspection of Grapes	25
ICA21	Pre-Harvest Treatment & Inspection Approved Fruits	3
ICA26	Pre-Harvest Treatment Tomato, Capsicum, Chilli, Eggplant	38
ICA28	Pre-Harvest Bait Spraying & Inspection of Citrus	8
ICA29	Treatment of Nursery Stock and Soil-less Media	16
ICA30	Hard Green Condition of Avocados	3
ICA34	Pre-Harvest Control & Inspection of Strawberries	20
ICA35	Inspection & Treatment for Spiraling Whitefly	5
ICA36	Property Freedom for Spiraling Whitefly	4
ICA38	Inspection for Melon Thrips	29
ICA39	Inspection and Treatment of Plants for Red Imported Fire Ant	1
ICA42	Nursery Freedom, Treat & Inspect For Myrtle Rust	2
ICA47	Inspection for Freedom from Fruit Fly	11
ICA48	Pre-Harvest Treatment Tomato, Capsicum-Bowen Gumlu	1
ICA55	Irradiation Treatment	1
ICA42	Nursery freedom, treat and inspect for myrtle rust	2
ICA47	Inspection for freedom from fruit fly	11
ICA48	Pre-harvest treatment tomato, capsicum-bowen gumlu	1
ICA55	Irradiation treatment	1

**Note:** A business may have more than one accreditation. Just because a business maintains an accreditation it does not necessarily mean it is sending product interstate.

**Table 4.4** Active non-ICA accreditations as at March 2014

Procedure Code	Procedure	Number of accreditations
BHA01	BioSecure HACCP Arrangement	2
CLS01	Cercospora Leaf Spot Area Freedom	89
EEA01	Electric ant – Certification Services	43
GRFo1	Garlic Rust Property Freedom Cured	33
GRFo3	Garlic Rust Freedom – Repacking Alliums	2
ISCO1	Inspection of seed crops intended for export	3
ISCO2	Inspection of grass and legume pasture seed crops	1
MLHo1	Treating mango plants for mango leafhopper	1
MTFo1	Melon Thrips Area Freedom – 100 km	11
MTFo3	Melon Thrips Nursery Inspection	13
MTFo4	Melon Thrips – Treatment of Tomato Fruit	9
NPMo1	Nursery Potting Mix – soil free media	20
PAFo1	Phylloxera Area Freedom	1
PHYo2	Phylloxera Area Freedom, Phylloxera Exclusion Zone	29
PHYo3	Phylloxera Area Freedom 40 km	15
PHYo4	Phylloxera not in area and >50 m from grapevine	7
PHYo5	Grown more than 50 m from a grapevine	28
PHYo6	Phylloxera Property Freedom Survey	1
PSTo1	Phylloxera Sulphur Treatment	9
RAFo1	RIFA Area Freedom – 5 km	326
RLRo2	RIFA Low Risk Enterprise – NSW Approval	2
RPFo1	RIFA Property Freedom	46
SPWo3	Spiraling Whitefly Area Freedom – 10 km	8
<b>Total number</b>		<b>697</b>

**Note:** GRFo1 and GRFo2 are property freedom accreditations that have recently been discontinued following the detection of garlic rust in South Australia. ISCo1 and ISCo2 are accreditations provided for international exports. MLHo1 is an accreditation for movement within Queensland. Businesses may have more than one accreditation.

While the Australian Food and Grocery Council (AFGC) provides data on the volume of domestic sales in the retail food sector, the origin of food sold in each state is unclear. However, figures do suggest the domestic market is mature with a slight contraction nationally of 0.7 per cent in 2011–12. During the same period, Queensland’s share of turnover in the fresh produce sector increased from 29.1 per cent to 32.5 per cent.<sup>4</sup>

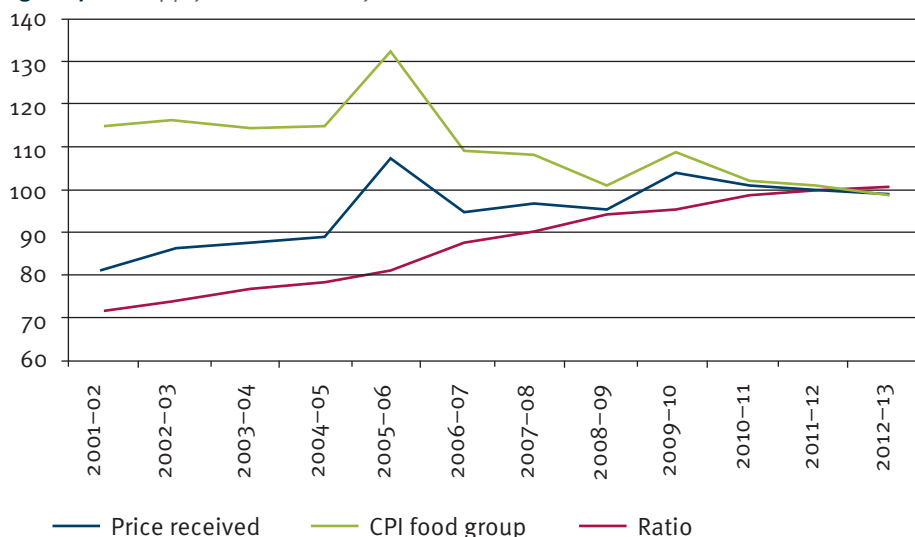
<sup>4</sup> <http://www.afgc.org.au/state-of-the-industry-2013.html>

## Supply chain efficiency

Figure 4.2 shows an index of supply chain efficiency, calculated by comparing movements in the Brisbane food groups consumer price index (CPI) with an estimate of average prices received by Queensland farmers.

Collectively, since 2001–02, the Brisbane food groups CPI has generally increased (3.4 per cent per annum) more rapidly than prices received by Queensland farmers (1.7 per cent per annum). Therefore, the ratio of the two has fallen.

**Figure 4.2** Supply chain efficiency



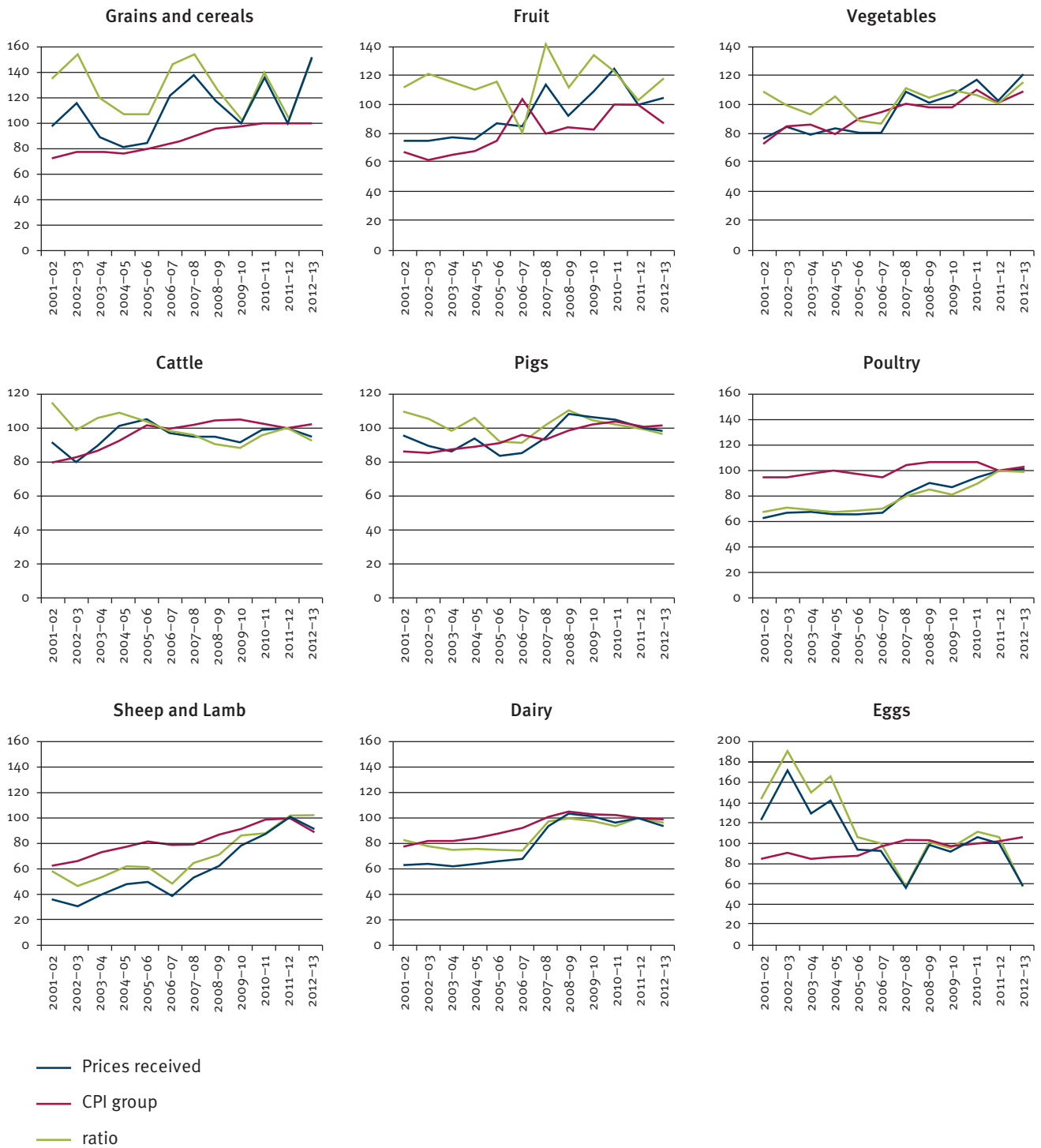
Source: Value of agricultural commodities produced, Queensland, ABS, cat. no. 7503.0 (series); Agriculture, Queensland, ABS, cat. no. 7113.3; and unpublished ABS data.

On the surface this might suggest a decline in supply chain efficiency. However, there are substantial compositional differences between the pattern of domestic food consumption and the pattern of Queensland agricultural production. Figure 4.3 shows the ratio of prices received by Queensland farmers to the relevant Brisbane food groups CPI at a more detailed level.

This does not represent the entire picture of the declining ratio of farm gate prices to consumer prices. For some commodities (cattle and eggs) there appears to be a declining trend; for most other commodities such as cereals, fruit, vegetables and pork, little trend is apparent. The commodities of sheep and poultry show a rising trend.

Consumer prices for dairy products have fallen slightly since 2008–09, reflecting a 15 per cent fall in fresh milk prices, which is likely to be related to supermarket pricing practices. Prices received by farmers have fallen in line with overall dairy product prices but by much less than retail milk prices. This may suggest that some, but not all, of the retail price reduction is being passed back onto farmers.

**Figure 4.3** Ratio of Brisbane CPI group to price received by Queensland farmers, 2011–12 = 100



Source: Value of agricultural commodities produced, Queensland, ABS, cat. no. 7503.0 (Series); Agriculture, Queensland, Australian Bureau of Statistics, cat. no. 7113.3; and unpublished ABS data.

To DAFF’s knowledge, this is the first time such an index has been calculated and published for Queensland. DAFF welcomes comments about the validity and value of the index.



## Transport pathways

This section provides some information about physical flows for produce. Information on transport costs is presented in Section 5: Production costs.

Livestock flows toward sales points located along the transport routes listed in Table 4.5, then on to regional processing centres.

**Table 4.5** Queensland cattle saleyards

Location	Saleyard name
Beaudesert	Beaudesert Saleyards
Belyando	Clermont Saleyards
Biggenden	Biggenden Saleyards
Blackall	Blackall Municipal Saleyards
Cloncurry	Cloncurry Saleyard
Cooloola	Gympie Saleyard
Dalby	Dalby Saleyards
Dalrymple	Dalrymple Saleyard
Emerald	Emerald Saleyard
Goondiwindi	MacIntyre Saleyards
Kingaroy	Coolabunia Saleyards
Longreach	Longreach Saleyard
Mareeba	North Queensland Saleyards
Moreton	Moreton Saleyards
Murgon	Murgon Municipal Saleyards
Nebo	Nebo Saleyard
Rockhampton	Central Queensland Livestock Exchange CQLX
Roma	Roma Saleyards
Silverdale	Silverdale Saleyards
Wandoan	Dalby Regional Council Saleyards
Warwick	Warwick Saleyards

The following tables show primary product exports from Queensland ports.<sup>5</sup> In tonnage terms the most significant ports are Brisbane, especially for meat products and cereals; Townsville, especially for sugar; and Mackay, especially for sugar and cereals.

<sup>5</sup> *Trade statistics for Queensland ports*, DTMR, <http://www.tmr.qld.gov.au/business-industry/Transport-sectors/Ports/Trade-statistics-for-Queensland-ports.aspx>

**Table 4.6** Meat and livestock products: Trade statistics

Financial year	2007-08	2008-09	2009-10	2010-11	2011-12	Variance	
						Amount	%
Export tonnes							
Brisbane							
Meat products	746 691	754 356	740 155	777 274	786 832	9 558	1.2%
Tallow	201 742	184 874	186 071	193 977	190 358	- 3 619	-1.9%
Karumba							
Livestock	4 431	5 018	6 842	7 036	5 261	- 1 775	-25.2%
Mackay							
Cattle	0	1 085	0	0	0	0	0.0%
Tallow	4 844	3 813	2 803	5 677	5 724	47	0.8%
Mourilyan							
Livestock	1 864	3 938	3 289	1 197	0	- 1 197	-100.0%
Rockhampton							
Tallow	29 822	33 498	25 834	26 678	28 092	1 414	5.3%
Townsville							
Cattle	13 580	76 204	45 031	23 888	10 863	- 13 025	-54.5%
Meat and meat by products	7 728	6 832	15 129	27 188	21 288	- 5 900	-21.7%
Weipa							
Livestock	0	0	595	0	0	0	0.0%
<b>Total exports</b>	<b>1 010 702</b>	<b>1 069 618</b>	<b>1 025 750</b>	<b>1 062 914</b>	<b>1 048 418</b>	<b>- 14 496</b>	<b>-1.4%</b>
<b>Total throughput</b>	<b>1 010 702</b>	<b>1 069 618</b>	<b>1 025 750</b>	<b>1 062 914</b>	<b>1 048 418</b>	<b>- 14 496</b>	<b>-1.4%</b>

Trade statistics for Queensland ports, DTMR, <http://www.tmr.qld.gov.au/business-industry/Transport-sectors/Ports/Trade-statistics-for-Queensland-ports.aspx>

**Table 4.7** Livestock: Export statistics

Financial year	2007-08	2008-09	2009-10	2010-11	2011-12	Variance	
						Amount	%
Exported livestock per head							
Brisbane	22 009	16 498	14 938	12 389	15 776	3 387	27.3%
Karumba	12 659	14 337	13 684	14 072	10 522	- 3 550	- 25.2%
Mackay	0	0	3 099	0	0	0	0
Mourilyan	5 326	11 252	6 578	2 393	0	- 2 393	-100.0%
Townsville	27 159	131 887	90 062	47 776	21 725	- 26 051	-54.5%
Weipa	0	0	1 701	0	0	0	0.0%
<b>Total livestock</b>	<b>67 153</b>	<b>173 974</b>	<b>130 062</b>	<b>76 630</b>	<b>48 023</b>	<b>- 28 607</b>	<b>-37.3%</b>

Trade statistics for Queensland ports, DTMR, <http://www.tmr.qld.gov.au/business-industry/Transport-sectors/Ports/Trade-statistics-for-Queensland-ports.aspx>

**Table 4.8** Sugar: Trade statistics

Financial year	2007-08	2008-09	2009-10	2010-11	2011-12	Variance	
						Amount	%
Export tonnes							
Brisbane							
Sugar	75 249	65 048	40 008	64 986	42 589	- 22 397	-34.5%
Bundaberg							
Sugar	223 654	248 938	282 324	280 071	252 858	- 27 213	-9.7%
Cairns							
Sugar	289 123	221 546	297 115	197 024	157 239	- 39 785	-20.2%
Lucinda							
Sugar	570 684	591 500	583 351	404 694	0	- 404 694	-100.0%
Mackay							
Refined sugar	329 105	314 843	337 107	312 271	298 941	- 13 330	-4.3%
Sugar	883 203	698 735	765 215	575 522	382 966	- 192 556	-33.5%
Mourilyan							
Sugar	470 224	564 239	465 500	435 868	322 425	- 113 443	-26.0%
Townsville							
Sugar	1 184 190	1 078 520	1 190 898	958 720	1 490 541	531 821	55.5%
<b>Total exports</b>	<b>4 025 432</b>	<b>3 783 369</b>	<b>3 961 518</b>	<b>3 229 156</b>	<b>2 947 559</b>	<b>- 281 597</b>	<b>-8.7%</b>
<b>Total throughput</b>	<b>4 025 432</b>	<b>3 783 369</b>	<b>3 961 518</b>	<b>3 229 156</b>	<b>2 947 559</b>	<b>- 281 597</b>	<b>-8.7%</b>

Trade statistics for Queensland ports, DTMR, <http://www.tmr.qld.gov.au/business-industry/Transport-sectors/Ports/Trade-statistics-for-Queensland-ports.asp>

**Table 4.9** Timber and woodchip: Trade statistics

Financial year	2007-08	2008-09	2009-10	2010-11	2011-12	Variance	
						Amount	%
Export tonnes							
Brisbane							
Timber	263 640	205 056	204 363	191 268	155 024	- 36 244	-18.9%
Woodchip	280 264	145 537	219 191	134 733	72 174	- 62 559	-46.4%
Mackay							
Logs	0	0	0	40 114	46 803	6 689	16.7%
Mourilyan							
Timber	0	0	0	0	51 133	51 133	100.00%
Townsville							
Timber	114 641	0	0	0	318 696	318 696	100.0%
<b>Total exports</b>	<b>658 545</b>	<b>350 593</b>	<b>423 554</b>	<b>366 115</b>	<b>643 830</b>	<b>277 715</b>	<b>75.9%</b>
Import tonnes							
Brisbane							
Timber	375 048	264 127	272 640	323 475	287 177	- 36 298	-11.2%
<b>Total imports</b>	<b>375 048</b>	<b>264 127</b>	<b>272 640</b>	<b>323 475</b>	<b>287 177</b>	<b>- 36 298</b>	<b>-11.2%</b>
<b>Total throughput</b>	<b>1 033 593</b>	<b>614 720</b>	<b>696 194</b>	<b>689 590</b>	<b>931 007</b>	<b>241 417</b>	<b>35.0%</b>

Trade statistics for Queensland ports, DTMR, <http://www.tmr.qld.gov.au/business-industry/Transport-sectors/Ports/Trade-statistics-for-Queensland-ports.aspx>

**Table 4.10** Grains and cereals: Trade statistics

Financial year	2007-08	2008-09	2009-10	2010-11	2011-12	Variance	
						Amount	%
Export tonnes							
Brisbane							
Cereals	505 047	1 881 841	1 207 311	1 272 938	2 031 197	758 259	59.6%
Gladstone							
Grain	18 345	446 449	240 762	260 218	338 245	78 027	30.0%
Mackay							
Grain	194 002	310 909	278 406	350 056	386 324	36 268	10.4%
<b>Total exports</b>	<b>717 394</b>	<b>2 639 199</b>	<b>1 726 479</b>	<b>1 883 212</b>	<b>2 755 766</b>	<b>872 554</b>	<b>46.3%</b>
Import tonnes							
Brisbane							
Cereals	98 669	74 487	100 695	66 941	62 744	- 4 197	-6.3%
<b>Total imports</b>	<b>98 669</b>	<b>74 487</b>	<b>100 695</b>	<b>66 941</b>	<b>62 744</b>	<b>- 4 197</b>	<b>-6.3%</b>
<b>Total throughput</b>	<b>816 063</b>	<b>2 713 686</b>	<b>1 827 174</b>	<b>1 950 153</b>	<b>2 818 510</b>	<b>868 357</b>	<b>44.5%</b>

Trade statistics for Queensland ports, DTMR, <http://www.tmr.qld.gov.au/business-industry/Transport-sectors/Ports/Trade-statistics-for-Queensland-ports.aspx>