



AgTrends update

April 2016

At a glance

Total value of Queensland's primary industries

In April 2016, the total value of Queensland's primary industry commodities for 2015–16, comprising gross value of production (GVP) at the farm gate and first-round processing, was forecast to be \$17.32 billion. This is 3% greater than the October 2015 estimate of the Department of Agriculture and Fisheries (DAF)¹ and 16% greater than the average for the past 5 years.

GVP at the farm gate

In April 2016, the 2015–16 GVP of Queensland's primary industry commodities at the farm gate was forecast to be nearly \$13.74 billion. This is 3% greater than DAF's initial estimate for 2015–16 and 16% greater than the average for the past 5 years.

This edition of *AgTrends* only reports the significant revisions to the October 2015 forecasts.

Forecasts that have been revised **up** from previous forecasts for 2015–16 are those for:

- mung beans (209%)
- barley (70%)
- wheat (33%)
- pumpkin (27%)
- apples (17%)
- macadamias (15%)
- rockmelons (15%)
- sugar cane (15%)
- cotton (11%)
- soybeans (8%)
- aquaculture (7%)
- chickpeas (7%)

¹ In February 2015, the Queensland Department of Agriculture, Fisheries and Forestry (DAFF) was renamed the Department of Agriculture and Fisheries (DAF). Therefore, forecasts and estimates made before February 2015 were made by DAFF, but later ones were made by DAF.

- pigs (6%)
- sweet corn (5%)
- wool (4%).

Forecasts that have been revised **down** from previous forecasts for 2015–16 are those for:

- sorghum (19%)
- capsicums and chillies (8%)
- sheep and lambs (4%).

First-round processing

The value of first-round processing (or value-added production) for 2015–16 is forecast to be \$3.58 billion.

Autumn 2016 climate forecast

According to the National Climate Centre, the Queensland outlook for the March to May period is for drier than average weather (see Figure 1). The climate centre states that the El Niño is steadily declining, with models forecasting a return to a neutral pattern in late autumn to early winter. During the latter breakdown part of the El Niño cycle, warmer days tend to persist over northern and eastern Australia, with warmer nights across much of Australia.

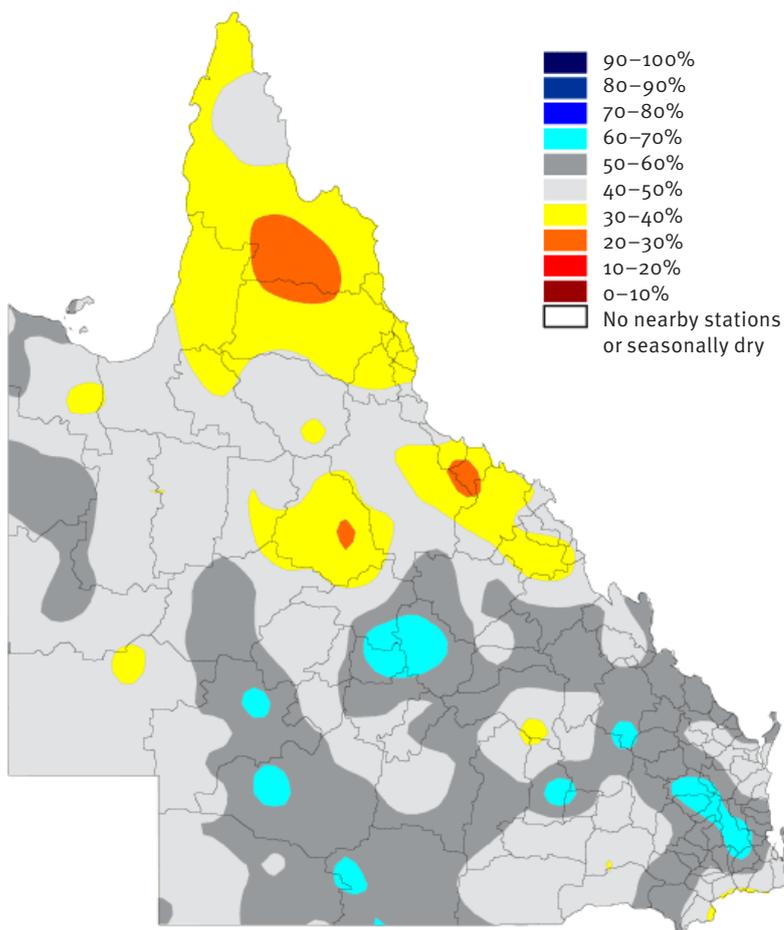


Figure 1 The chance of exceeding the median rainfall, March to May 2016

Source: National Climate Centre, <<http://www.longpaddock.qld.gov.au>>.

Primary industries estimates and forecasts

The GVP, first-round processing and total primary industries estimates and forecasts are provided in Table 1.

Table 1 GVP, first-stage processing and total primary industries estimates and forecasts, 2013–14 to 2015–16, and difference between 2015–16 forecast and average for the past 5 years

	2013–14 ^b (\$m)	2014–15 ^d (\$m)	2015–16 forecast, October 2015 (\$m)	2015–16 forecast, April 2016 (\$m)	Change from October 2015 to April 2016 forecast (%)	Average of past 5 years (\$m)	Difference between 2015–16 forecast and average of past 5 years (%)
Commodity GVP^a							
Livestock							
Livestock disposals^m							
Cattle and calves	3 890	3 282	4 312	4 312	0	3 457	25
Poultry	494	587	610	610	0	469	30
Pigs	262	273	297	315	6	234	34
Sheep and lambs	61	72	72	69	-4	59	17
Other livestock	31	30	31	31	0	20	57
Kangaroos	12	12	12	12	0	19	-37
Total livestock disposals	4 750	4 256	5 334	5 349	0	4 258	26
Livestock products							
Milk (all purpose)	231	220	222	222	0	239	-7
Eggs	188	144	193	193	0	163	18
Wool	80	61	53	55	4	96	-43
Total livestock products^e	451	425	468	470	0	480	-2
Total livestock	5 201	4 681	5 802	5 819	0	4 738	23
Horticulture							
Fruit and nuts							
Bananas	570	538	584	580	-1	461	26
Other fruit and nuts	232	238	244	248	2	178	39
Strawberries	170	203	180	180	0	144	25
Avocados	167	148	151	151	0	154	-2
Macadamias	54	106	104	120	15	60	100
Mandarins	77	78	94	94	0	76	24
Apples	77	72	70	82	17	75	10
Mangoes	77	83	75	75	0	67	12
Pineapples	73	72	71	71	0	69	3
Table grapes	50	50	53	53	0	40	33
Total fruit and nuts	1 547	1 588	1 626	1 654	2	1 326	25

continued

Table 1 continued

	2013–14 ^b (\$m)	2014–15 ^d (\$m)	2015–16 forecast, October 2015 (\$m)	2015–16 forecast, April 2016 (\$m)	Change from October 2015 to April 2016 forecast (%)	Average of past 5 years (\$m)	Difference between 2015–16 forecast and average of past 5 years (%)
Commodity GVP^a							
Vegetables							
Tomatoes	291	273	293	294	0	261	13
Other vegetables	236	201	214	217	1	236	-8
Capsicums and chillies ^f	155	153	154	142	-8	134	6
Beans	79	79	79	79	0	89	-12
Mushrooms	64	70	70	70	0	55	27
Sweet potatoes	52	52	62	62	0	53	17
Melons (rockmelon and cantaloupe)	36	42	48	55	15	34	64
Lettuce	54	54	54	54	0	59	-9
Potatoes	54	53	53	53	0	55	-3
Sweet corn	38	39	43	45	5	37	22
Zucchinis and button squash	47	46	40	41	3	42	-3
Melons (watermelon)	33	33	34	33	-3	34	-2
Pumpkin	22	26	26	33	27	23	42
Carrots	25	25	25	25	0	22	12
Onions	25	25	25	25	0	27	-6
Total vegetables	1 211	1 171	1 220	1 228	1	1 160	6
Total fruit and vegetables	2 758	2 759	2 846	2 882	1	2 466	17
Lifestyle horticulture production							
Nurseries ^l	867	880	898	898	0	879	2
Turf ^l	140	160	175	175	0	146	20
Cut flowers ^l	151	151	151	151	0	153	-1
Total lifestyle horticulture production	1 158	1 191	1 224	1 224	0	1 178	4
Total horticulture	3 916	3 950	4 070	4 106	1	3 643	13
Other field crops							
Sugar cane ^g	1 165	1 152	988	1 141	15	1 082	5
Cotton (raw) ^h	698	369	483	535	11	677	-21
Other crops ^c	155	182	499	530	6	142	272
Total other crops	2 018	1 703	1 970	2 206	12	1 901	16
Cereal grains							
Wheat	339	323	308	410	33	378	9
Grain sorghum	261	432	384	312	-19	330	-6
Other cereal grains	84	110	97	145	50	93	56
Barley	50	45	54	92	70	43	114
Maize	44	118	60	60	0	80	-25
Total cereal grains	778	1 028	903	1 019	13	924	10
Total crops	6 711	6 682	6 943	7 331	6	6 468	13
Total agriculture	11 912	11 363	12 745	13 150	3	11 265	17

continued

Table 1 continued

	2013–14 ^b (\$m)	2014–15 ^d (\$m)	2015–16 forecast, October 2015 (\$m)	2015–16 forecast, April 2016 (\$m)	Change from October 2015 to April 2016 forecast (%)	Average of past 5 years (\$m)	Difference between 2015–16 forecast and average of past 5 years (%)
Commodity GVP^a							
Fisheries^{c, i, n}							
Commercial fishing							
Crustaceans	121	110	110	110	0	113	-3
Finfish	65	59	56	56	0	68	-19
Molluscs	6	5	5	5	0	7	-29
Total commercial fishing	192	173	170	170	0	189	-10
Recreational fishing	73	94	94	94	0	77	22
Aquaculture	101	103	104	111	7	98	13
Total fisheries	366	370	368	375	2	364	3
Forestry and logging^{c, j}	175	187	211	211	0	178	19
Total primary industries (farm gate)	12 453	11 920	13 324	13 737	3	11 806	16
First-round processing value added^k							
Meat processing ^c	1 822	1 632	2 046	2 052	0	1 651	24
Sugar processing ^c	634	609	532	533	0	614	-13
Log sawmilling, timber dressing and plywood and veneer manufacturing ^c	361	386	435	435	0	366	19
Fruit and vegetables processing ^c	232	232	239	242	1	207	17
Milk and cream processing ^c	122	116	117	117	0	128	-8
Flour mill and feed processing ^c	63	83	73	83	13	75	10
Cotton ginning ^c	80	42	55	61	11	77	-21
Seafood processing ^c	55	56	55	57	2	55	3
Total primary industries (first-round processing)	3 369	3 156	3 553	3 580	1	3 174	13
Total primary industries	15 822	15 076	16 878	17 316	3	14 981	16

a GVP (gross value of production) 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 marketplace (e.g. cattle sold at saleyards, sugar cane 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 Australian Bureau of Statistics (ABS) final estimates unless otherwise indicated.

c DAFF or DAF estimates.

d DAF estimates.

e Excludes minor commodities such as honey, beeswax and mohair.

f DAFF or DAF estimate or forecast does not include chillies.

g Gross value of sugar cane at mill door.

h Includes value of cottonseed and lint.

i Includes catches from both Commonwealth-managed fisheries (including Torres Strait, Gulf of Carpentaria and East Coast Tuna fisheries) and state-managed fisheries.

j Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) estimates.

k Value added is the value of the output produced minus the costs of the intermediate inputs.

l The value of the lifestyle horticulture sector has been calculated on a gross-turnover basis rather than a value-added basis and therefore will contain some double counting.

m No ABS price data was available to update the April 2016 cattle and calves and poultry forecasts at the time of publication.

n Revised GVP data from DAF's Fisheries group required amendment of previous estimates.

Primary industry forecasts revised since October 2015

Livestock

Livestock disposals

Sheep and lambs

Forecast

The GVP of **sheep and lambs** for 2015–16 is forecast to be \$69 million, which is 4% lower than DAF's initial forecast for 2015–16 but 17% higher than the average for the past 5 years.

Discussion

The forecast for sheep and lambs has been revised downward in line with lower forecast slaughtering and more marginal forecast price increases. Australian sheep and lamb saleyard prices have risen throughout 2015–16, although not as much as originally forecast, in response to lower sheep and lamb slaughter rates and strong export demand. ABARES estimates that sheep prices will increase by 5.4% in 2015–16 (following a 26% rise the previous year) and lamb prices will increase by approximately 6% (following an 8% rise the previous year).² Queensland saleyard prices are forecast to follow this national trend.

Pigs

Forecast

The GVP of **pigs** for 2015–16 is forecast to be \$315 million, 6% higher than DAF's initial forecast for 2015–16 and 34% higher than the average for the past 5 years.

Discussion

DAF's forecast for pigs has been revised upwards in response to higher than previously forecast prices. Over-the-hooks pig prices have continued to rise throughout 2015–16. These high prices are being supported by strong domestic demand for fresh pork, underpinned by higher retail prices for substitute meats.

Livestock products

Wool

Forecast

The GVP of **wool** (including the value of skins) for 2015–16 is forecast to be \$55 million, 4% higher than DAF's initial forecast for 2015–16 and 43% lower than the average for the past 5 years.

Discussion

The wool forecast has been revised marginally upward, reflecting higher forecast wool prices as sheep numbers and consequently wool production decline due to ongoing adverse seasonal conditions across Queensland's main sheep-growing regions. The forecast price increase is expected to offset the decline in production. ABARES forecasts an average Eastern Market Indicator (EMI) price for 2015–16 of 1240 cents per kilogram. This is an increase of 1% on the previous estimate for 2015–16 and a 12.5% increase on the 2014–15 price.

² ABARES 2016, *Agricultural commodities: March quarter*, Commonwealth of Australia, Canberra.

Horticulture

Fruit and nuts

Apples

Forecast

The GVP of **apples** for 2015–16 is forecast to be \$82 million, 17% greater than the October 2015 forecast and 10% greater than the average for the past 5 years.

Discussion

Warm climate and good flowering in October resulted in plenty of fruit harvested. Farm-gate prices are also higher due to the good quality of fruit harvested and stronger consumer demand.

Macadamias

Forecast

The GVP of **macadamias** for 2015–16 is forecast to be \$120 million, 15% greater than the October 2015 forecast and 100% higher than the average for the past 5 years.

Discussion

Both production and prices have been higher across the national industry due to the strong consumer demand from China. Also, a greater proportion of production has come from Queensland, and this contributed to the forecast increase.

Vegetables

Capsicums and chillies

Forecast

The GVP of **capsicums and chillies** for 2015–16 is forecast to be \$142 million, 8% less than the initial forecast for 2015–16 but 6% greater than the average for the past 5 years.

Discussion

A reduction in the expected area planted has led to a revised volume of production across the Bowen region. Expected prices have remained about the same.

Rockmelons

Forecast

The GVP of **rockmelons** for 2015–16 is forecast to be \$55 million, 15% greater than the initial forecast for 2015–16 and 64% above the average for the past 5 years.

Discussion

The volume of rockmelons is expected to be up on the previous year in the Bowen region due to a larger area planted. One-third of Queensland's rockmelon production occurs in the Bowen and Burdekin areas of Central Queensland.

Pumpkin

Forecast

The GVP of **pumpkin** for 2015–16 is forecast to be \$33 million, 27% greater than the October 2015 forecast and 42% greater than the average for the past 5 years.

Discussion

The increase in production is expected to occur in the Bowen region and is due to a larger area planted.

Sweet corn

Forecast

The GVP of **sweet corn** for 2015–16 is forecast to be \$45 million, 5% greater than the October 2015 forecast and 22% greater than the average for the past 5 years.

Discussion

The increase in production is expected to occur in the Bowen region and is due to a larger area planted.

Other field crops

Sugar cane

Forecast

The GVP of **sugar cane** for 2015–16 is forecast to be \$1.141 billion, a 15% increase on the October 2015 forecast and 5% greater than the average for the past 5 years.

Discussion

Queensland's crop of sugar cane reached 32.7 million tonnes for the 2015–16 season. This exceeded the 31.5 million tonnes predicted in October 2015. The final average CCS (commercial cane sugar) of 13.97 exceeded the 13.75 units predicted in October, but was slightly down on the 14.1 units achieved for the 2014–15 season.

As at 26 February 2016, Queensland Sugar Limited estimated its harvest pool return to be \$383 per tonne IPS (international polarity scale). This was \$32 per tonne (9.1%) higher than the October forecast.

This trend of rising sugar prices was anticipated by ABARES, based on the expectation that global consumption will exceed production. The upward trend in sugar prices is expected to continue into the 2016–17 harvest season as demand begins to deplete world carryover stocks.

Cotton

Forecast

The GVP of **cotton** for 2015–16 is forecast to be \$535 million, an 11% increase on the October 2015 forecast but 21% lower than the average for the past 5 years.

Discussion

Since the October forecasts, there has been a significant increase in dryland plantings for the Darling Downs (from 15 000 to 25 000 hectares) due to improved growing conditions. There has also been a slight increase in irrigated cotton area on the Darling Downs (up 2000 hectares to 32 000 hectares).

Sorghum

Forecast

The GVP of **sorghum** is forecast to be \$312 million, 19% lower than the \$384 million forecast in October 2015 and 6% below the average for the past 5 years. This is due to the smaller area sown and a lower price per tonne.

Discussion

The area sown to sorghum is estimated to be 476 000 hectares, 4% smaller than the 494 000 hectares forecast in October 2015. Yields are forecast to be marginally (1%) higher. Overall, production is forecast to fall slightly to 1 371 000 tonnes, down 3% from the 1 409 000 tonnes previously forecast.

The average price has fallen to \$242 per tonne, down 11% from \$272 per tonne at the end of 2015. Strongly influencing this fall is a reported lack of buyer interest this season from China, due to its large internal stocks of sorghum. In the previous 3 years, China progressively dominated buying of Queensland exports.

However, Queensland growers need not be unduly alarmed by this change in demand, since it is likely to be an annual fluctuation. Locally, feedlots are showing some preference for white grains instead of sorghum, but this may be reflecting dampened wheat prices making wheat a cheaper source of energy than usual. Again, feedlot demand for coarse grains fluctuates annually in response to both livestock dietary preferences and prices of competing white grains.

Mung beans

Forecast

The **mung bean** GVP is forecast to be around \$145 million, more than triple that estimated in October 2015 (\$47 million).

Discussion

The increase in GVP is due to a sharp increase in plantings, which are above average. The area sown is estimated to be 100 000 hectares, an increase of 150% on the October 2015 forecast of 40 000 hectares. This sharp jump has reportedly been at the expense of mainly sorghum (but also some other crops), due to a significantly increased mung bean price coupled with a fall in sorghum price. The mung bean price has increased due to lower than average production in India and Myanmar (the world's largest mung bean producer), caused by a poor Indo-Asia monsoon season. It has increased by 25% to average \$1250 per tonne.

Yields are estimated to be 13% below those previously expected, but the large increase in area sown will take production up 143%, from around 47 000 tonnes to 115 000 tonnes. This, coupled with the increased price, has significantly increased the GVP outlook for mung beans.

Winter cereal grains

Wheat

Forecast

The GVP of **wheat** is estimated to be around \$410 million, 33% above the October 2015 forecast of \$308 million and 9% higher than the average for the past 5 years.

Discussion

The increase in GVP is due to higher than expected yields, which are more than offsetting a lower price per tonne.

The area sown is estimated to be approximately the same as originally forecast, at around 630 000 hectares. In many parts of south-eastern and south-western Queensland, yields in the maturing phase of the wheat crop were boosted by good rainfall received over spring and into the beginning of summer. However, rainfall and yields were lower than average in Central Queensland. As a result, the overall Queensland yield increased 42% from that forecast in October 2015, lifting the total production estimate by the same proportion to nearly 1.5 million tonnes.

The estimated price has fallen 7% from \$294 to \$275 per tonne Australian Premium White (used as an average for wheat price) because of two factors. Firstly, higher than expected wheat production in northern New South Wales has been satisfying domestic demand for wheat, and this has dampened the initial buyer interest for Queensland wheat. Secondly, larger northern hemisphere supplies of wheat have placed downward pressure on global prices, causing a similar impact on domestic prices. Global wheat production has been at record levels for the past three consecutive seasons, expanding stocks and causing an oversupply effect. Despite the lower domestic wheat price, the \$275 per tonne is marginally higher than the average price per tonne since June 2008 (\$272 per tonne).

Barley

Forecast

The GVP of **barley** for winter 2015 (2015–16 crop) is forecast to be \$92 million, 70% higher than the October 2015 forecast of \$54 million and 114% higher than the average over the past 5 years.

Discussion

The increase in GVP is due to a larger than expected area sown and higher than average yields.

The area sown to barley is estimated to be 115 000 hectares, nearly 30% above the October forecast of 90 000 hectares. Yields are estimated at 40% above the October 2015 estimate. Good rainfall over spring and early summer boosted barley yields in south-eastern and south-western Queensland. Rainfall and yields were lower than average in Central Queensland, but overall the larger area sown coupled with above-average yields has taken the state's barley production up nearly 80% to 357 000 tonnes. This is about double the average annual production level (since June 2008) of 174 000 tonnes.

The price is 5% lower than at October 2015, at \$258 per tonne (down from \$270 per tonne). The estimated large increase in barley production has far outweighed the slight fall in price. The current GVP estimate is the highest since June 2008, with the annual average since then being \$43 million.

Chickpeas

Forecast

The GVP of **chickpeas** for 2015–16 is forecast to be \$471 million, 7% higher than the October 2015 estimate of \$441 million.

Discussion

The increase in GVP is due to yields being slightly better than expected.

The estimated area sown to chickpeas is unchanged, at a record 338 000 hectares. However, yields were higher than expected on the Darling Downs and Western Downs, due to cooler weather over the end of September and the beginning of October, which prompted more productive podding prior to harvest. Yields were 7% higher than forecast in October 2015, taking production higher to 554 000 tonnes. The price has remained the same, at around \$850 per tonne.

All chickpeas grown in Queensland are the Desi variety. The Kabuli variety are grown in Western Australia, South Australia, Victoria and southern New South Wales in much smaller quantities than the Desi chickpeas in Queensland. However, northern New South Wales produced 365 000 tonnes of Desi chickpeas in 2015, not too far behind Queensland's production of 554 000 tonnes.

Approximately 99% of Queensland's chickpeas are bulk exported as whole grains in 25-foot containers to the main export markets of Bangladesh, India, the United Arab Emirates and Pakistan. Upon arrival, the chickpeas are processed—either split or ground for flour. The proportions of these end uses are currently unknown, as are the end-market points from the export destination ports.

About 1% of Queensland's chickpeas are not bulk exported. Some of these are split and exported to high-value export markets such as the United States, while the rest are sold domestically. Domestic chickpeas are consumed by mostly Indian and Pakistani expats, and in the restaurant trade in South Asian cuisine. They are both split and ground for flour.



Figure 2 Kabuli chickpeas

Source: Bing images 2016



Figure 3 Desi chickpeas

Source: Bing images 2016

Chickpea exports

In 2014–15, Queensland exported 383 000 tonnes of dried and shelled chickpeas. India has traditionally been our largest chickpea export market. However, in 2014–15 the biggest single buyer of Queensland's chickpeas was Bangladesh, importing 160 600 tonnes (worth \$93.2 million, 41% of the total export value). Next was India, importing 136 500 tonnes (worth \$80.0 million, 35% of the total export value). Following were the United Arab Emirates (26 000 tonnes) and Pakistan (23 000 tonnes), each accounting for around 6% of total export value.

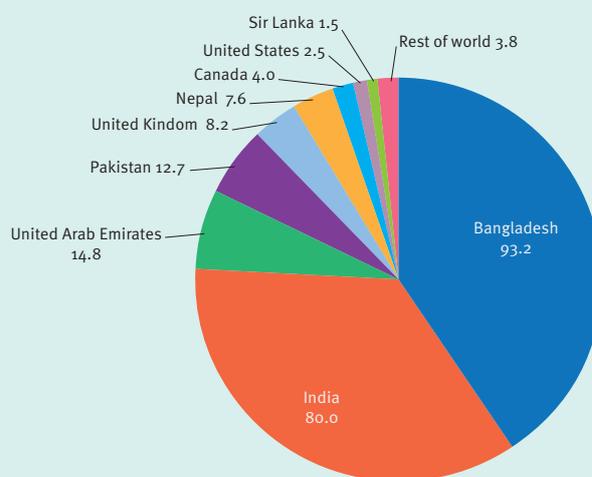


Figure 4 Queensland chickpea exports 2014–15 (dried and shelled) by order value (\$m); total value \$228 million

Source: Queensland Government Statistician's Office 2016, *Trade data—commodity*, viewed 15 March 2016, <<http://www.qgso.qld.gov.au/subjects/economy/trade/tables/trade-data-commodity-industry/index.php>>.

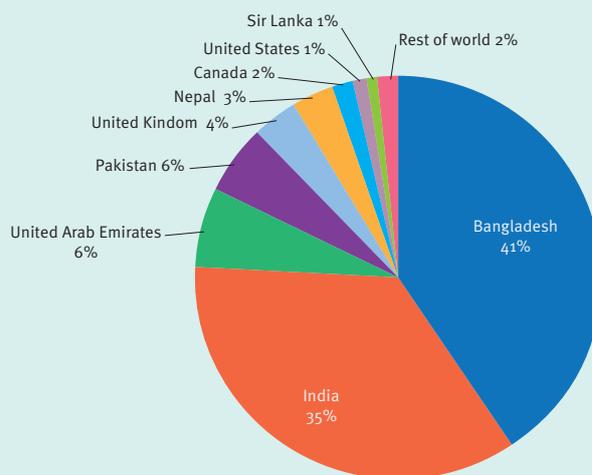


Figure 5 Queensland chickpea exports 2014–15 (dried and shelled) by order percentage value

Source: Queensland Government Statistician's Office 2016, *Trade data—commodity*, viewed 15 March 2016, <<http://www.qgso.qld.gov.au/subjects/economy/trade/tables/trade-data-commodity-industry/index.php>>.

Soybeans

Forecast

The GVP of **soybeans** is forecast to be \$11.2 million, 8% above the October 2015 forecast.

Discussion

The increase in forecast GVP is due to a higher price relative to last October.

The area sown is expected to remain unchanged at around 11 700 hectares. In Central Queensland, Wide Bay Burnett, Darling Downs, Goondiwindi and the Lockyer Valley, areas sown to soybeans have come under increasing competition from mung beans, which are currently selling for record prices. Yields are also expected to remain unchanged to average around 1.7 tonnes per hectare, keeping the production forecast constant at around 20 000 tonnes. The price has increased 8% to \$564 per tonne (up from \$521 per tonne in the September quarter), taking the expected GVP 8% higher.

Fisheries

Aquaculture

Forecast

The GVP of the Queensland **aquaculture** industry for 2015–16 is forecast to be \$111 million. This is an increase of about 7% from the October 2015 forecast and 13% greater than the average for the past 5 years.

Discussion

Prawn farming remains the largest sector of the Queensland aquaculture industry. This sector is expecting an increase in production from the previous season, with the farm-gate value of prawns predicted to reach \$81 million, a 12.5% increase on the estimated 2014–15 value of \$72 million.

Barramundi, the second largest sector, is expected to increase production from the previous season. It is expected to achieve a value of about \$28 million in 2015–16, a 22% increase on the estimated 2014–15 value of \$23 million.

The freshwater fish sector (primarily silver perch, Murray cod and jade perch) has been affected by the drought. Its forecast value for 2015–16 is \$1.7 million, a 37% decrease on the estimated 2014–15 value of \$2.7 million.

The red claw, oyster and hatchery sectors are expected to increase slightly from the production levels achieved in 2014–15.

Appendix: The economic contribution of agriculture and the food supply chain, Queensland, 2013–14

Queensland’s primary industries play a vital role in the state’s economy. However, the role of this sector extends beyond primary production of agricultural commodities.

Primary industry commodities are used in a range of manufacturing, retail and service industries. By investigating the value of agriculture and the food supply chain, we can better understand the role of primary industries in the state’s economy. Queensland’s food supply chain extends from primary production of agricultural products to food services and a range of manufactured goods that are delivered to consumers.

In this analysis, we estimate the economic contribution (gross value added) and the number of employees in agriculture and the food supply chain. To do this, we define three stages in agriculture and the food supply chain:

- primary production
- manufacturing of food and beverages
- food-related retail and services.

The industry subdivisions are detailed in Table 2.

Table 2 Industry subdivisions in agriculture and the food supply chain

Stage	Industry subdivision (ANZSIC code)
Primary production	Agriculture (A01)
	Aquaculture (A02)
	Forestry and logging (A03)
	Fishing, hunting and trapping (A04)
	Agriculture, forestry and fishing support services (A05)
Manufacturing of food and beverages	Food product manufacturing (C11)
	Beverage and tobacco product manufacturing (C12)
Food-related retail and services	Grocery, liquor and tobacco product wholesaling (C36)
	Food retailing (C41)
	Cafes, restaurants and takeaway food services (C451)

Source: ABS, *Australian and New Zealand Standard Industrial Classifications (ANZSIC) 2006*, cat. no. 1292.0.

Agriculture product wholesaling (ANZSIC331) has been excluded from estimates of the food supply chain because we have assumed that the majority of value for this group comes from wool wholesaling (ANZSIC3311).

Gross value added

To calculate the economic contribution of agriculture and the food supply chain, national income accounting uses ‘value added’. This avoids double counting, as intermediate products are excluded. The sum of the value of production inputs and the gross value added in each stage of production and distribution equals the total value of agriculture and the food supply chain:

$$\text{Value of production inputs} + \text{gross value added} = \text{total value of output}$$

That is:

$$\text{Gross value added} = \text{value of output} - \text{value of production inputs}$$

So gross value added is the value of output at basic prices (i.e. without commodity taxes or subsidies) minus the value of production inputs. The concept of value added is used to describe the economic contribution by an industry or sector.

Estimate of the economic contribution of agriculture and the food supply chain, Queensland

The estimates are determined by the availability of data; therefore, the estimates in Table 3, Figure 6 and Figure 7 are for the year 2013–14.

Table 3 Value added and employment in agriculture and the food supply chain

	Primary production	Manufacturing	Retail and services	Total
2013–14 estimates				
Value added (\$b)	6.9	4.4	8.8	20.2
Employment ('000s)	55.6	43.7	182.7	282.0
2012–13 estimates				
Value added (\$b)	7.9	3.8	8.4	20
Employment ('000s)	66.0	37.6	184.7	288.3
Percentage change 2012–13 to 2013–14				
Value added	-13	17	5	1
Employment	-16	16	-1	-2

Gross value added for agriculture and the food supply chain in Queensland for 2013–14 is estimated to be \$20.2 billion. This makes up about 7% of the state’s economic output. Just over 282 000 people were employed in agriculture and the food supply chain in 2013–14, accounting for 12% of all working Queenslanders.

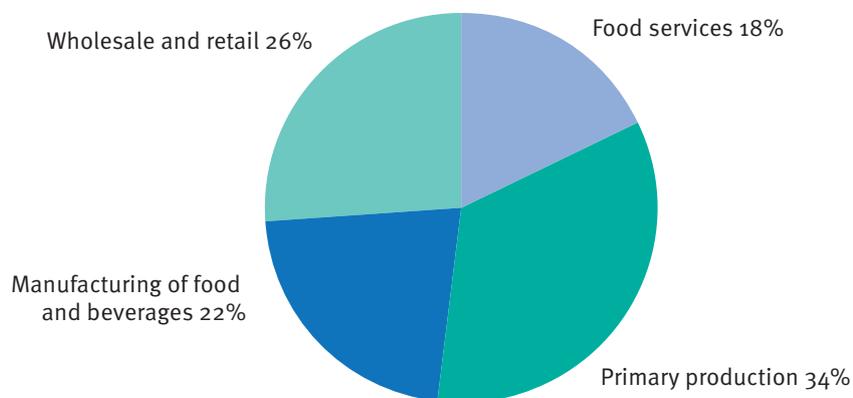


Figure 6 Value added in agriculture and the food supply chain, 2013–14

Source: DAFF estimates based on ABS data from *Australian industry, 2013–14* (cat. no. 8155.0) and *Australian national accounts: state accounts, 2013–14* (cat. no. 5220.0).

The value of food processing and distribution in Queensland (incorporating manufacturing and retail and services) is estimated to be almost \$13.3 billion for 2013–14. This sector employs around 226 400 people.

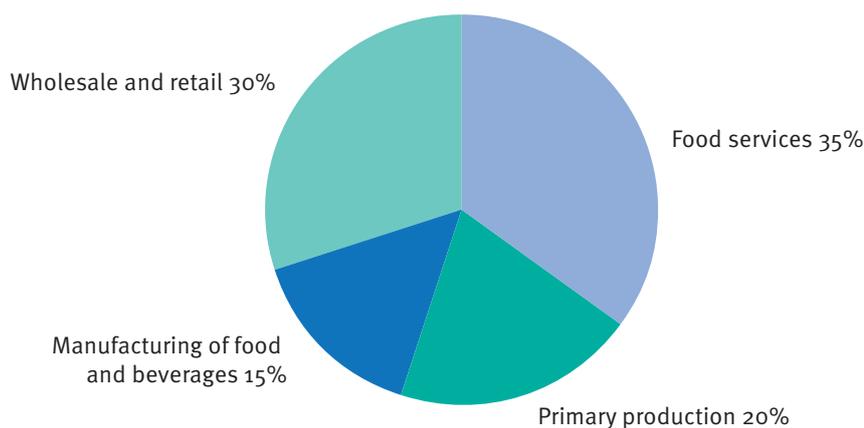


Figure 7 Employment in agriculture and the food supply chain, 2013–14

Source: DAFF estimates based on ABS data from *Labour force, Australia, detailed, quarterly, November 2015* (cat. no. 6291.0.55.003).

Estimate of the GVP of Queensland’s primary industries and the food supply chain

Gross value of production (GVP) is used in *AgTrends* to measure the output for each primary industry commodity. GVP of agricultural commodities is calculated by multiplying the output for each primary industry activity by the average wholesale market price paid to producers:

$$\text{GVP} = \text{output} \times \text{price}$$

This measure describes the production output of a farm, industry or sector.

The estimate for the 2013–14 GVP at the farm gate is \$12.5 billion.

GVP as a percentage contribution to the state’s economic output is not reported because measures of economic output such as gross state product (GSP) are based on value added. Gross value added is preferred when presenting the contribution of an industry or sector to economic output.

Estimates derived with the new method **should not** be directly compared with the estimates derived from the old method (used in *Prospects for Queensland’s primary industries* before 2011). The new method has several advantages:

- Publications recently released by the ABS allow data to be updated annually. Previously data was sourced from numerous publications, four of which have not been updated since 2006–07 and are now discontinued.
- The new method does not require the use of price deflators.
- Updating the data is simple and transparent.
- The presentation of results has been simplified with continued emphasis on the difference between industry value added and GVP.

Table 3 shows industry value added and employee estimates for 2013–14 and 2012–13 based on the new method.

Key assumptions

When calculating these forecasts, DAF follows the convention used by all government forecasting agencies that 'normal' seasonal conditions will occur across Queensland throughout the forecast year (2015–16) or that part of the forecast year yet to be completed. It also takes into account the seasonal conditions that have occurred to date. This sets a benchmark for measuring variations from 'normal' as the season unfolds.

The prices of all internationally traded commodities are responsive to changes in the exchange rate of the Australian dollar, relative to the currencies of our trading partners. Prices to primary producers (and therefore gross unit values) decline when the Australian dollar exchange rate increases and vice versa.

Notes

Gross value of commodities produced (gross value of production or GVP) 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 marketplace (e.g. cattle sold at saleyards, sugar cane 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. Note that gross values of production are not the measures used to represent sectoral contributions to the gross domestic (or state) product.

Value added is the value of the output produced minus the costs of the intermediate inputs.

Acknowledgements

We acknowledge the contributions to this report from DAF officers, industry experts, the Office of Economic and Statistical Research (OESR), the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES), the Australian Bureau of Statistics (ABS), Meat and Livestock Australia (MLA), the National Climate Centre, various industry representatives, and various market commentators and industry media.

Disclaimer

This publication should not be relied upon as financial advice; readers should seek their own independent financial advice. DAF disclaims all liability for all claims, loss, damages, cost or expense of whatever nature, howsoever occurring as a result of reliance upon the information contained in this report.

While every care has been taken in preparing this publication, the State of Queensland accepts no responsibility for decisions or actions taken as a result of any data, information, statement or advice, expressed or implied, contained in this report.

Contacts

Call us on **13 25 23**.

Visit www.daf.qld.gov.au to view this update, *Queensland AgTrends 2015–16* and earlier editions and updates of *AgTrends* and *Prospects for Queensland's primary industries*.

© State of Queensland, 2016.

The Queensland Government supports and encourages the dissemination and exchange of its information. The copyright in this publication is licensed under a Creative Commons Attribution 3.0 Australia (CC BY) licence.



Under this licence you are free, without having to seek our permission, to use this publication in accordance with the licence terms.

You must keep intact the copyright notice and attribute the State of Queensland as the source of the publication.

Note: Some content in this publication may have different licence terms as indicated.

For more information on this licence, visit <http://creativecommons.org/licenses/by/3.0/au/deed.en>.

CS5290 04/2016