

AgTrends update

April 2018

At a glance

Total value of Queensland's primary industries

In April 2018, the total value of Queensland's primary industry commodities for 2017–18, comprising gross value of production (GVP) at the farm gate and first-stage processing, was forecast to be $19.45 billion. This forecast is 2% less than the October 2017 estimate of the Department of Agriculture and Fisheries (DAF)[1], but 9% greater than the average for the past 5 years.

GVP at the farm gate

In April 2018, the 2017–18 GVP of Queensland's primary industry commodities at the farm gate was forecast to be nearly $15.33 billion. This forecast is 2% less than DAF's initial estimate for 2017–18 but 9% greater than the average for the past 5 years.

Forecasts that have been revised **up** from previous forecasts for 2017–18 are those for:

- turf (82%)
- peanuts (47%)
- table grapes (23%)
- mangoes (18%)
- poultry (14%)
- soybeans (3%).

[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.

Forecasts that have been revised **down** from previous forecasts for 2017–18 are those for:

- barley (54%)
- sunflowers (46%)
- mung beans (37%)
- chickpeas (36%)
- grain sorghum (23%)
- wheat (18%)
- aquaculture (16%)
- maize (10%)
- avocados (6%)
- sugarcane (5%)
- milk (4%)
- pigs (3%)
- eggs (3%).

First-stage processing

The value of first-stage processing (or value-added production) for 2017–18 is forecast to be $4.12 billion.

Climate outlook for November 2018 to March 2019

The Science Delivery division of the Department of Environment and Science considers that the probability of exceeding median summer (November to March) rainfall is currently slightly higher than normal for much of Queensland (see Figure 1).

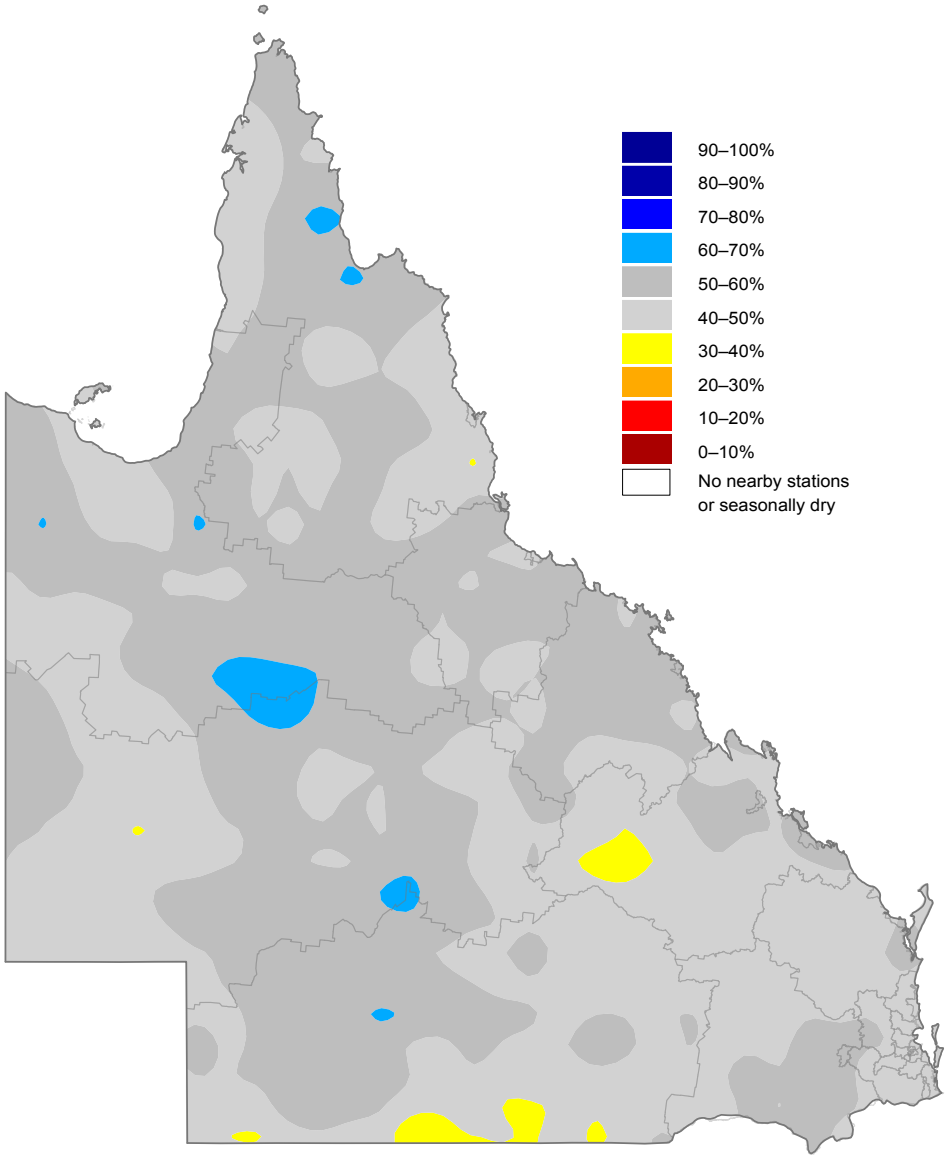

Figure 1 The chance of exceeding the median rainfall, November 2018 to March 2019
Source: National Climate Centre, ‹http://www.longpaddock.qld.gov.au›.

Primary industries estimates and forecasts

The GVP, first-stage 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 2015–16 to 2017–18 and difference between 2017–18 forecast and average for the past 5 years

	2015–16 estimate, April ($m)	2016–17 estimate, April ($m)	2017–18 forecast, October 2017 ($m)	2017–18 forecast, April 2018 ($m)	Change in forecast October 2017 to April 2018 (%)	Average of past 5 years ($m)	Change over 5 years to 2017–18 (%)
Commodity GVP[a]							
Livestock							
Livestock disposals							
Cattle and calves	5 861	5 744	5 379	5 379	0	4 764	13
Poultry	590	650	560	640	14	552	16
Pigs	320	294	239	232	–3	270	–14
Other livestock	43	40	41	41	0	42	–3
Sheep and lambs	58	10	11	11	0	48	–77
Total livestock disposals	**6 872**	**6 738**	**6 230**	**6 303**	**1**	**5 676**	**11**
Livestock products							
Eggs	210	212	244	237	–3	198	19
Milk (all purpose)	237	233	235	225	–4	232	–3
Wool	62	66	75	75	0	75	0
Total livestock products	**509**	**511**	**554**	**537**	–3	**498**	**8**
Total livestock	**7 381**	**7 249**	**6 784**	**6 840**	**1**	**6 174**	**11**
Horticulture							
Fruit and nuts							
Bananas	580	572	580	580	0	552	5
Other fruit and nuts	248	264	269	272	1	234	16
Avocados	151	225	240	226	–6	166	36
Strawberries	180	144	160	160	0	164	–3
Macadamias	120	140	126	126	0	88	43
Mangoes	75	96	96	113	18	75	50
Mandarins	94	107	107	107	0	86	25
Apples	82	90	93	93	0	70	32
Pineapples	71	70	70	70	0	70	0
Table grapes	53	53	53	61	23	52	26
Total fruit and nuts	**1 654**	**1 761**	**1 794**	**1 812**	**1**	**1 558**	**16**
Vegetables							
Tomatoes	294	250	298	298	0	270	10
Other vegetables	217	220	231	231	0	219	5
Capsicums and chillies[f]	142	132	128	128	0	144	–11
Beans	79	72	77	77	0	87	–11

continued

Table 1 continued

Commodity GVP[a]	2015–16 estimate, April ($m)	2016–17 estimate, April ($m)	2017–18 forecast, October 2017 ($m)	2017–18 forecast, April 2018 ($m)	Change in forecast October 2017 to April 2018 (%)	Average of past 5 years ($m)	Change over 5 years to 2017–18 (%)
Vegetables continued							
Mushrooms	70	70	70	70	0	68	4
Sweet potatoes	62	64	64	64	0	56	13
Melons (rockmelon and cantaloupe)	55	50	59	59	0	43	37
Lettuce	54	56	56	56	0	58	–3
Potatoes	53	52	52	52	0	59	–11
Sweet corn	45	41	44	44	0	40	11
Zucchinis and button squash	41	39	41	41	0	43	–5
Melons (watermelon)	33	31	37	37	0	34	9
Pumpkins	36	30	32	32	0	27	19
Carrots	31	27	27	27	0	24	13
Onions	27	26	26	26	0	25	2
Total vegetables	**1 239**	**1 160**	**1 242**	**1 242**	**0**	**1 197**	**4**
Total fruit and nuts and vegetables	**2 893**	**2 921**	**3 036**	**3 054**	**1**	**2 735**	**1 259**
Lifestyle horticulture production							
Nurseries[n]	898	902	907	907	0	883	3
Turf[n]	175	180	180	327	82	156	110
Cut flowers[n]	151	161	161	161	0	153	5
Total lifestyle horticulture production	**1 224**	**1 243**	**1 248**	**1 395**	**12**	**1 192**	**17**
Total horticulture	**4 117**	**4 164**	**4 284**	**4 449**	**4**	**3 927**	**13**
Other field crops							
Sugarcane[g]	1 209	1 460	1 180	1 125	–5	1 229	–8
Cotton (raw)[h]	466	985	884	884	0	642	38
Other crops[c]	59	81	177	134	–24	69	95
Total other crops	**1 734**	**2 526**	**2 241**	**2 143**	**4**	**1 940**	**10**
Cereal grains							
Chickpeas	471	767	633	406	–36	330	23
Wheat	384	504	346	282	–18	414	–32
Grain sorghum	312	164	359	276	–23	317	–13
Other cereal grains	202	284	263	188	–28	190	–1
Barley	52	92	71	64	–10	60	6
Maize	102	75	74	34	–54	71	–52
Total cereal grains	**1 343**	**1 886**	**1 746**	**1 250**	**–28**	**1 338**	**–7**
Total crops	**7 195**	**8 576**	**8 271**	**7 842**	**–5**	**7 204**	**9**
Total agriculture	**14 576**	**15 825**	**15 055**	**14 682**	**–2**	**13 437**	**9**

continued

Table 1 continued

	2015–16 estimate, April ($m)	2016–17 estimate, April ($m)	2017–18 forecast, October 2017 ($m)	2017–18 forecast, April 2018 ($m)	Change in forecast October 2017 to April 2018 (%)	Average of past 5 years ($m)	Change over 5 years to 2017–18 (%)
Commodity GVP[a]							
Fisheries[c,i]							
Commercial fishing							
Crustaceans	104	80	107	107	0	107	0
Finfish	65	64	67	67	0	65	3
Molluscs	4	3.6	4	4	0	6	–38
Total commercial fishing	**173**	**148**	**178**	**178**	**0**	**178**	**0**
Recreational fishing	94	94	94	94	0	86	10
Aquaculture	111	92	125	105	–16	102	3
Total fisheries	**378**	**334**	**397**	**377**	**–5**	**366**	**3**
Forestry and logging[c,j]	**243**	**260**	**270**	**270**	**0**	**203**	**33**
Total primary industries (farm gate)	**15 197**	**16 419**	**15 722**	**15 329**	**–2**	**14 005**	**9**
First-stage processing value added[k]							
Meat processing[c]	2 636	2 584	2 390	2 418	1	2 195	10
Sugar processing[c]	533	860	650	635	–2	658	–3
Log sawmilling, timber dressing and plywood and veneer manufacturing[c]	413	423	435	435	0	378	15
Fruit and vegetables processing[c]	243	246	255	257	1	230	12
Milk and cream processing[c]	125	123	124	119	–4	125	–5
Cotton ginning[c]	53	112	101	101	0	73	38
Flour mill and feed processing[c]	104	146	135	97	–28	104	–7
Seafood processing[c]	57	50	60	57	–5	55	3
Total primary industries (first-stage processing)	**4 164**	**4 545**	**4 150**	**4 117**	**–1**	**3 818**	**8**
Total primary industries	**19 361**	**20 964**	**19 872**	**19 447**	**–2**	**17 823**	**9**

[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, 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] 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 sugarcane 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 these estimates 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 2017

Livestock

Livestock disposals

Poultry

Forecast

The GVP for poultry for 2017–18 is forecast to be $640 million, 14% higher than DAF's initial forecast for 2017–18 and 16% higher than the average for the past 5 years.

Discussion

Queensland's poultry GVP for 2017–18 is expected to decrease by 2% from the previous financial year. This is partly due to the closure of the Baiada processing plant in Ipswich in January 2018. At the national level, rising domestic production—driven by productivity growth and supported by low feed costs—is expected to meet the increase in domestic demand for chicken meat.[2]

Pigs

Forecast

The GVP for pigs for 2017–18 is forecast to be $232 million, 3% lower than DAF's initial forecast for 2017–18 and 14% lower than the average for the past 5 years.

Discussion

The pig production forecast has been revised marginally downward, reflecting recently reviewed estimates by the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) for national pig production.

Since 2016–17, the national GVP for pigs has slowed, while the number of pigs slaughtered has been increasing. Low feed prices, as well as increasing competition from alternative meat industries and imported processed pork, have resulted in decreasing prices.

This trend is also reflected in Queensland's pig industry. Despite increasingly positive consumer attitudes towards pork, a perfect storm of events collapsed farmgate pig prices and diminished profitability for many pig producers.[3]

Livestock products

Eggs

Forecast

The GVP for eggs for 2017–18 is forecast to be $237 million, 3% lower than DAF's initial forecast for 2017–18 and 19% higher than the average for the past 5 years.

Discussion

The egg production forecast has been revised marginally downward, reflecting recently revised estimates by ABARES for national egg production.

In spite of this, egg consumption has continued to increase nationally due to population growth and changing consumption habits towards nutritious and affordable foods. Queensland's egg producers have increased capacity to meet this demand.

[2] ABARES 2018, *Agricultural commodities*, March quarter.

[3] Australian Pork Limited 2017, *Year in review 2016–17*, released 8 November.

Queensland's egg producers have also followed the national trend of expanding free-range egg production capacity. This is partly to meet increasing demand and partly to mitigate the risk of regulatory uncertainty regarding cage egg production. Investment in free-range capacity at the national level has been above short-term market growth, and this has put pressure on egg producers' margins.

Across the entire retail market, cage eggs are still the major seller. However, strong free-range supply has seen free-range grocery retail sales pass those of cage eggs for the first time. It remains to be seen whether this will hold as the market readjusts.

Exports of shell eggs have continued in the established Singapore and Hong Kong markets but have reduced overall because South Korea has replaced the capacity it lost to avian influenza and has resumed import tariffs. Queensland's egg producers are expanding into value-added egg products with a view to exploring domestic and export opportunities.[4]

Milk

Forecast

The GVP for milk for 2017–18 is forecast to be $225 million, 4% lower than DAF's initial forecast for 2017–18 and 3% lower than the average for the past 5 years.

Discussion

Production is forecast to fall by 5% in 2017–18 to around 397 million litres. Two of the major processors in Queensland have reduced farmgate prices paid to dairy farmers and this is already having a negative impact on production, with a number of farmers ceasing dairying. It is likely that this trend will continue over the next year, especially as input prices continue to increase.

Packaged milk sales for Queensland for 2017–18 are expected to remain close to the levels reached in 2016–17 at around 580 million litres. However, the GVP is forecast to fall as both production and prices fall.

Factors that could influence the Queensland dairy industry over the year ahead include:

- the impact of lower farmgate milk prices on production and farm numbers
- the outcome of an investigation by the Australian Competition and Consumer Commission into '$1 per litre' milk sold by major retailers
- the cost of inputs such as grain, hay and electricity.

Horticulture

Fruit and nuts

Mangoes

Forecast

The GVP for mangoes for 2017–18 is forecast to be $113 million, 18% higher than the October 2017 forecast and 50% higher than the average over the past 5 years.

Discussion

In the Mareeba–Dimbulah region, production improved (compared to last year's poor season) thanks to an early cold snap in June and continued mild weather. In April 2017, Cyclone Debbie caused some damage to mango trees, but the trees have recovered well following effective pruning by growers. Overall, Bowen had a much better season than last year and this has resulted in more fruit being harvested. Also, consumer demand for mangoes was strong over the Christmas period and supply is expected to remain strong through to March. Despite the greater supply, prices have held well due to the strong demand.

[4] Personal communication with Rowan McMonnies, Managing Director of Australian Eggs Limited, 23 February 2018.

Table grapes

Forecast

The GVP for table grapes for 2017–18 is forecast to be $65 million, 23% higher than the October 2017 forecast and 26% higher than the average over the past 5 years.

Discussion

Queensland's table grape production is forecast to be lower this year than last year but about average compared to previous years. In the preceding two seasons, overproduction in the market window pushed prices down to $30–40 per carton. The lower supply this year has kept prices well above the previous level at approximately $50 per carton, resulting in the higher revised GVP.

Avocados

Forecast

The GVP for avocados for 2017–18 is forecast to be $226 million, 6% lower than the October 2017 forecast and 36% higher than the average over the past 5 years.

Discussion

Avocado GVP is forecast to be lower due to production volume being marginally lower than expected. Wholesale prices are forecast to be about the same as for last financial year.

Lifestyle horticulture

Production nurseries

Forecast

There is no change to the October forecast GVP of $907 million for the production nursery sector.

Discussion

The forecast GVP has not been revised, but because of strong demand across the sector, it is considered to be conservative. Conditions remain strong across all markets for food, fibre and foliage plants (retail, landscape, commercial horticulture, forestry and revegetation stock), indicating a potential for further growth. For example, expansion in the horticulture sector, particularly in plantings of avocados and macadamias, has created a shortage of good-quality planting stock and there is a shortage of seedling plug stock for new foliage lines, despite increased production.

Despite its local and short-term impacts on roads and other infrastructure, the recent rain across the key production areas of the state is expected to provide long-term benefits to the nursery sector. High rainfall in the early months of 2018 has resulted in high water-storage levels in South East Queensland and a relaxation of water restrictions in North Queensland.

Turf

Forecast

On the basis of an improved data collection methodology introduced in early 2018, the GVP for turf for 2017–18 has been revised upwards to $327 million.

Discussion

Historically, value forecasts for the turf industry have been based on electronic surveys with relatively low response rates, targeted consultation and high-level industry knowledge. While these sources provided adequate information, the turf industry has recently embarked on an improved process for data collection using face-to-face interviews with industry members. This year, data has been collected from approximately 50% of Queensland's turf farmers, and these producers supply about 90% of the state's total turf production. This more extensive information has brought a higher degree of confidence to the GVP forecast.

Demand for turf in the residential, commercial and construction sectors remains high. To meet increasing demand, the turf industry has made significant investment in precision agriculture in the past 5 years. Improved practices include the use of variable-rate irrigation and controlled-release fertiliser, which deliver benefits to growers through reduced input costs and improved yields.

Despite its localised and short-term impacts, recent high rainfall across key production areas is expected to provide long-term benefits to the turf sector from improved access to water.

Other field crops

Sugarcane

Forecast

The forecast GVP for Queensland's sugarcane for 2017–18 is $1.125 billion. This is approximately $57 million lower than the October 2017 forecast and $336 million lower than for 2016–17. Total revenue from the 2017 Queensland crop, in raw-sugar equivalent, is expected to be $1.76 billion.

Discussion

The Queensland sugarcane harvest totalled 31.48 million tonnes for the 2017–18 season. This was 2.9 million tonnes lower than that achieved in the 2016–17 season and 800 000 tonnes lower than the October 2017 forecast.

The final average CCS (commercial cane sugar) of 13.3 achieved in 2007–18 was higher than the 12.92 units achieved in 2016–17.

The lower harvest and higher sugar content both resulted from conditions that were, on average, drier than the previous season. These conditions led to plants growing less biomass, which had the effect of concentrating sugar content. While the sugar content was higher than in 2016–17 due to drier conditions, rain late in the season resulted in the CCS for 2017–18 being 0.325 units lower than forecast in October 2017.

As at 22 February 2018, Queensland Sugar Limited estimated its harvest pool return to be $420 per tonne IPS (international polarity scale). This is $102 per tonne (19.5%) lower than for the equivalent date in 2017 but slightly higher than the October 2017 forecast of $416 per tonne.

ABARES anticipates that increased production in Thailand, India and the European Union will provide downward pressure on the world indicator price for raw sugar. However, this is unlikely to change significantly until 2019–20.

Other major field crops

Peanuts

Forecast

The GVP for peanuts for 2017–18 is forecast to be $35 million, 47% more than the October 2017 estimate of $24 million.

Discussion

The area sown to peanuts is estimated to have remained unchanged from the September quarter of 2017 at 10 000 hectares. However, due to solid rainfall received, particularly since early March, yields are forecast to be 40% more than initially expected, at 3.5 tonnes per hectare (up from 2.5 tonnes per hectare). However, to realise these yields, two more rainfall events of at least 50 millimetres are needed for late-planted crops. Peanuts are expected to reach maturity between the end of March (for early-planted crops) and the middle of June (for some crops sown later). The higher expected yields are forecast to take production to 35 000 tonnes, which is a significant increase from the 25 000 tonnes forecast in October.

Overall, high-quality peanut kernels are expected, given the good soil-moisture levels. This means only around 5% of grain will be used for crushing to peanut oil; the remainder will be edible and so will command a higher price. Currently the peanut price is $1000 per tonne, up 5% from the $950 per tonne estimated previously. Increased production coupled with a slight increase in price is forecast to take peanut GVP significantly higher.

Soybeans

Forecast

The GVP for soybeans for 2017–18 is forecast to be around $12 million, 3% above the forecast made in October 2017 of $11.7 million.

Discussion

The area sown to soybeans is estimated to be 11 800 hectares, 3% above the 11 483 hectares forecast previously. Yields are expected to fall marginally (1%) from 1.7 tonnes per hectare to 1.68 tonnes per hectare. For North Queensland, the area sown is estimated to be 5500 hectares, and about 1000 hectares of this is expected to be ploughed back into the soil as green manure. The area sown is estimated to be 1000 hectares in each of the other main growing regions (Central Queensland, Wide Bay, Burnett–Monto, Lockyer and Fassifern valleys, and Darling Downs). Yields are expected to vary from 2.5 to 3 tonnes per hectare. Total Queensland production is forecast to increase marginally to 19 850 tonnes, up 2% from the 19 525 tonnes forecast in October.

With continued good rainfall and optimum temperatures leading up to the April–May harvest, up to 90% of soybeans could be used as high-quality edible beans. However, excessive rain, dry weather or hot weather might increase the proportion of low-quality beans (for crushing) to up to 25% of crop production.

Taking an average of both possible outcomes, 86% of the crop will most likely be used as edible whole beans while 14% will go to crushing for soybean oil. Crushing beans sell for $500 per tonne, but edible beans attract a premium price between $600 and $650 per tonne (averaging $625 per tonne). Soybeans offer cane and grain growers a financially viable rotational crop with agronomic benefits, but there is significant competition from Canada and the United States in major soybean export markets such as Taiwan.

Overall, soybean price is expected to average around $608 per tonne. Slightly increased production coupled with a small increase in price is forecast to take soybean GVP marginally higher.

Sunflowers

Forecast

The GVP for sunflowers for 2017–18 is forecast to be slightly over $11 million, 46% below the October 2017 forecast.

Discussion

The area sown to sunflowers is estimated to be just 9300 hectares, 46% below the 17 100 hectares initially forecast. This is due to very dry winter and spring conditions causing poor soil-moisture levels and a lack of good planting opportunities. Yield is expected to remain the same as initially forecast, allowing for potential benefits of above-average rainfall received in February and March, particularly in Central Queensland. The smaller area sown is expected to decrease production from the 20 500 tonnes initially forecast to around 11 100 tonnes. The estimated price is unchanged, at $1000 per tonne. Overall, the smaller area sown is projected to take GVP significantly lower.

Queensland grain growers have been making consistent profits planting sunflowers, with end uses including crushing of regular and organic sunflower seeds for monounsaturated oil, hulling of sunflower kernels for confectionary manufacture, and use of whole seeds for bird and horse feed.[5] Sunflowers are usually grown in rotation with other crops. The health benefits of sunflower seeds provide a solid domestic market potential, and an added component to farm cash flow.

[5] Benjamin, C 2016, 'It's time for another look at sunflowers', *Queensland Country Life*, Toowoomba, 6 September, ‹http://www.queenslandcountrylife.com.au/story/4144882/its-time-for-another-look-at-sunflowers›, viewed 8 March 2018.

Summer cereal grains

Grain sorghum

Forecast

The GVP for sorghum for 2017–18 is forecast to be $276 million, 23% below the October forecast of $359 million.

Discussion

Due to overall low and patchy winter rainfall in 2017, the 6 months up till spring 2017 were exceptionally dry. This led to a poor start to the sorghum planting season in spring, with below-average rainfall across Australia's entire north-eastern cropping region. Soil-moisture levels varied from up to 50% in central Queensland to less than 30% in southern Queensland.[6]

Consequently, the area sown was smaller than expected at around 368 000 hectares, down 23% from the 480 000 hectares forecast in October. Also due to dry conditions, particularly in southern Queensland, overall yield is forecast to be 9% lower than initially expected. Yields are forecast to be up to 20% above the long-term median in central Queensland, but between 20% and 60% below the long-term median in southern Queensland. Above-average rainfall in February–March in central and south-eastern Queensland improved yield prospects. However, a wet harvest in March–April for early-planted sorghum may jeopardise grain quality and increase the risks of pests and disease. The smaller area sown coupled with lower yields is estimated to take production to 954 000 tonnes, down 33% from the 1 425 000 tonnes initially forecast.

The current grain market expectation is for a small sorghum harvest for Queensland. Despite some early February rain, it has arrived too late for many grain growers, with variable yields and quality expected for southern Queensland. As the planting window draws to an end, many areas intended for sowing will be left unplanted.

The estimate for current area sown is 54% below the 10-year average of 808 000 hectares. However, despite drier than average soil conditions and hot temperatures, the current yield forecast is 66% higher than the 10-year average.

The price is estimated to average $289 per tonne in the March quarter, which is 5% higher than the $276 per tonne estimated for the September quarter. The significant fall in production, however, is expected to more than offset the modest increase in price, taking GVP notably lower.

Maize

Forecast

The GVP for maize for 2017–18 is forecast to be $64 million, 10% below the October forecast of $71 million.

Discussion

The area sown to maize is estimated to be around 34 500 hectares, 11% below the 38 600 hectares forecast previously. This is due to dry winter and spring conditions, which reduced planting opportunities to below average. Consequently, yields are forecast to fall by around the same proportion (12%). The smaller area sown coupled with lower yields is projected to take production to around 176 000 tonnes, 20% lower than the previous forecast of 220 000 tonnes. The area sown for southern and central Queensland is estimated to be 32 500 hectares, and the northern Queensland area sown 1943 hectares. The average yield for southern and central Queensland is forecast to be around 5 tonnes per hectare, and the average yield for northern Queensland 7 tonnes per hectare. Production of 162 500 tonnes is forecast for southern and central Queensland, and 13 600 tonnes production is forecast for northern Queensland.

[6] Potgieter, A 2017, *Seasonal crop outlook: sorghum—November 2017*, The University of Queensland, Brisbane, ‹http://www.qaafi.uq.edu.au/industry/crop-outlook›, viewed 28 February 2018.

The price is estimated to have risen to $363 per tonne, up 13% from the $322 per tonne in September. However, reduced production is forecast to more than offset increased price, taking the GVP somewhat lower.

Mung beans

Forecast

The GVP for mung beans for 2017–18 is forecast to be $76 million, 37% below the previous forecast of $120 million.

Discussion

Due to dry conditions in spring and early summer, estimated plantings are lower at 80 000 hectares, 33% down from the 120 000 hectares forecast in October. Despite initially dry conditions, the industry is reportedly positive, given recent rain that prompted late plantings. This season, plantings have occurred on each rainfall, so there will be varying harvest dates. The crops planted in December are close to harvest and recent rain will most likely make crops reflower, while crops planted in January are now at the flowering stage and will benefit the most from the rain. The yield is forecast to average around 1 tonne per hectare, the same as initially forecast. Overall, smaller areas planted will reduce production to around 80 000 tonnes, still a sizeable crop. However, this is nearly 50% below the 5-year average of 118 000 tonnes.

The price is currently around $950 per tonne, 5% below the September level of $1000 per tonne. Lower than anticipated production coupled with a slightly lower price is forecast to take GVP lower. The current GVP forecast lies 28% below the 5-year average of $97 million. However, the amount of the current forecast indicates that mung beans are an economically significant Queensland summer crop.

Current issues and developments in Queensland's mung bean industry

The Australian Mungbean Association has a goal to reach an average production of 180 000 tonnes per year. Reportedly the biggest issue facing the industry is the unpredictability and variability of rainfall and temperature patterns in summer.

The association's industry development is currently focused on:

- research into better understanding and breeding out of mung bean's susceptibility to halo blight (a seed-borne bacterial disease) through a 4-year PhD scholarship
- research into improved varieties for sprouting to provide the sprout industry with more consistent grain quality
- continued promotion of mung beans as a viable summer crop option for growers to boost profitability and provide agronomic benefits to their farming system
- preparations as a joint-venture partner for the 2019 Australian Summer Grains Conference
- continual improvements to mung bean standards and seed programs
- preparations for a study tour to India in 2019
- increasing field days for growers and agronomists focusing on insect and disease management
- improved agronomy training courses for agronomists and growers
- continued involvement of Pulse Australia in supporting mung bean production.

Winter cereal grains

Wheat

Forecast

The GVP for wheat for 2017–18 (2017 winter crop) is forecast to be $282 million, 18% below the previous forecast of $346 million.

Discussion

The area sown to wheat is estimated to have been nearly 600 000 hectares, 10% above the 541 000 hectares previously forecast. Autumn rainfall was quite poor and patchy, causing low soil moisture. This, combined with poor winter rainfall, caused average yields to fall to around 27% below those initially expected.

Most grain cropping areas in southern and central Queensland received below to well below average rainfall in September. This, combined with above-average temperatures, reduced yields to below the long-term average (over 115 years). Crops planted earlier in central Queensland were less affected because their harvest was in spring. Due to dry conditions in autumn and early winter, few crops were planted early in southern Queensland. South-western Queensland cropping areas received particularly low rainfall, and their yields fell more than 30% below the long-term median, while yields for south-eastern and central Queensland were 10%–30% below the long-term median.[7] These yield outcomes do not account for areas that could not be planted at all due to insufficient rain.

Lower yields have more than offset the increased area sown, taking production 19% below the previous forecast of 1 137 000 tonnes to around 922 000 tonnes. The current production estimate lies 37% below the 10-year average of 1 464 190 tonnes. The reasons for this are twofold. First, the current yield is 5% lower than the 10-year average, but most notably, the area sown lies 26% below the 10-year average of around 808 000 hectares. The smaller area sown most likely reflects increased southern and central Queensland winter cropping areas being planted to chickpeas in 2017.

Over 2017–18 there has been strong demand for domestic wheat from feedlots. This, coupled with relatively poor wheat yields in 2017, has seen wheat exports drop significantly from the previous season.[8] The local shortfall in wheat supplies has been met in part by shipments of wheat and barley from South Australia into the port of Brisbane.

The average Australian Premium White (APW) 1 wheat price is estimated to be approximately the same now as in the previous quarter, at around $305 per tonne. Overall, lower production has reduced the GVP estimate. The current GVP estimate lies 30% below the 10-year average of around $405 million.

Barley

Forecast

The GVP for barley for winter 2017 (2017–18 crop) is estimated to be just $34 million, 54% below the previous GVP forecast of $74 million.

Discussion

Due to low and patchy rainfall in growing areas in autumn, planting conditions were dry. As a result, the estimate for area sown has fallen 7% from more than 92 000 hectares to 86 000 hectares. Persistent below-average rainfall over winter has led to poor grain fill, which is 45% below that initially forecast. The current estimate for area sown lies 14% below the 10-year average at around 100 000 hectares,

[7] Potgieter, A 2017, *Seasonal crop outlook: wheat—October 2017*, The University of Queensland, Brisbane, ‹http://www.qaafi.uq.edu.au/seasonal-crop-outlook-wheat›, viewed 28 February 2018.

[8] Lloyd, G 2018, 'Queensland grain exports stall', *Queensland Country Life*, Toowoomba, 12 February, ‹http://www.queenslandcountrylife.com.au/story/5222335/poor-season-causes-qld-grain-exports-to-stall›.

and the estimated yield lies 34% below the 10-year average of 2.1 tonnes per hectare. These deviations from the average reflect how the 2017 winter drought conditions impacted Queensland's grain growers. Spring rainfall leading to harvest time was also poor, except for some rain in September. The smaller area sown, coupled with significantly lower yields, has caused production to fall 45% from the initial forecast of 232 000 tonnes to 119 000 tonnes. The current production forecast lies 43% below the 10-year average of 210 000 tonnes.

The price has increased 12% from the $276 per tonne estimated in September 2017 to $310 per tonne, reflecting strengthening coarse grain prices globally and domestic demand from feedlots. However, significantly lower production has more than offset the price increase, causing a notable fall in GVP.

Chickpeas

Forecast

The GVP for chickpeas for 2017–18 is forecast to be $406 million, 36% below the October 2017 forecast of $633 million.

Discussion

The area sown is estimated to be around 503 000 hectares, marginally (1%) higher than the 500 000 hectares estimated in October. Due to overall dry conditions in autumn and winter, soil-moisture profiles were low, causing yields to fall around 30% from the 1.55 tonnes initially forecast to 1.1 tonnes per hectare. These lower yields are expected to take production down from the 776 000 tonnes forecast in October to 556 000 tonnes. Despite this, production is still almost double the 10-year average (for 2007–08 to 2016–17), due to the 140% larger area sown in 2017. Yields are 18% lower than the 10-year average.

In January 2018, India (the major export market for Queensland's chickpeas) placed an initial tariff on its pulse imports of 30%. Later in that month, this was raised to 40%, and on 1 March this was again raised to a punitive 60%. There has justifiably been serious concern in the local chickpea industry about the impacts of this tariff on the domestic chickpea price, and consequences for area sown and production. Fortunately, the majority of the 2017 Queensland chickpea crop was (reportedly) forward sold at around $800 per tonne before India's tariff placement, so the GVP for 2017–18 will not reflect the economic consequences of the tariff. However, chickpea plantings and price will most likely be significantly impacted in 2018 should this tariff continue. Some growers have already commenced fallowing their intended winter chickpea paddocks in favour of other crops such as maize.

The price is currently estimated at $730 per tonne, 10% below the $815 per tonne estimated in October. Lower price coupled with significantly contracted production due to dry conditions is estimated to take chickpea GVP notably lower than first anticipated.

Fisheries

Aquaculture

Forecast

The GVP for the aquaculture industry for 2017–18 is forecast to be $105 million. This is a decrease of about 16% from the October 2017 estimate of $125 million and is 3% less than the average over the past 5 years.

Discussion

Prawn farming remains the largest sector of Queensland's aquaculture industry. This sector is expecting a significant decrease in production from the previous season, and the farmgate value of prawns is predicted to reach $64.0 million, down 17.7% from the final estimate for 2016–17 of $77.8 million.

Barramundi, the second largest sector, is expected to increase production from the previous season. In 2017–18 it is predicted to achieve an estimated value of $30.0 million, which is a 5.6% increase from the final estimate for 2016–17 of $28.4 million.

The freshwater fish sector (primarily silver perch, Murray cod and jade perch) is estimated to be valued at $3.5 million. This is a slight increase on the final estimate for 2016–17 of $3.4 million.

The redclaw, oyster and hatchery sectors are expected to increase slightly on production levels achieved in 2016–17.

Appendix: The economic contribution of agriculture and the food supply chain, Queensland, 2015–16

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, we use '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:

Value of production inputs + gross value added = total value of output

That is:

Gross value added = value of output – 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 2 and Figure 3 are for the year 2015–16.

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

	Primary production	Manufacturing	Retail and services	Total
2015–16 estimates				
Value added ($b)	9.5	4.9	9.4	23.7
Employment ('000s)	58.8	49.6	196.9	305.3
2014–15 estimates				
Value added ($b)	7.6	4.8	9.1	21.5
Employment ('000s)	55.4	48.1	200.9	304.3
Percentage change 2014–15 to 2015–16				
Value added (%)	25	1	3	10
Employment (%)	6	3	–2	0

Source: DAF estimates based on ABS data from *Labour force, Australia, detailed, quarterly, November 2017* (cat. no. 6291.0.55.003), *Australian industry, 2015–16* (cat. no. 8155.0) and *Australian national accounts: state accounts, 2015–16* (cat. no. 5220.0).

Gross value added for agriculture and the food supply chain in Queensland for 2015–16 is estimated to be $23.7 billion. This makes up about 8% of the state's economic output. Just over 305 000 people were employed in agriculture and the food supply chain in 2015–16, accounting for 12% of all working Queenslanders.

The value of food processing and distribution in Queensland (incorporating manufacturing and retail and services) is estimated to be almost $14.3 billion for 2015–16. This sector employs around 246 500 people.

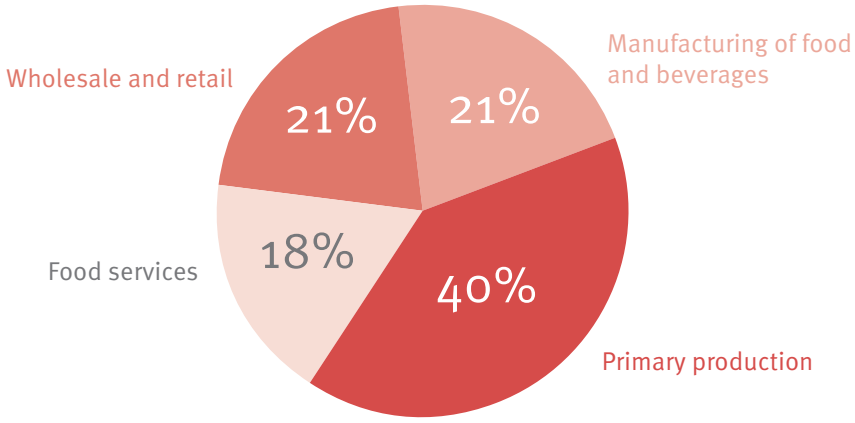

Figure 2 Value added in agriculture and the food supply chain, 2015–16

Source: DAF estimates based on ABS data from *Australian industry, 2015–16* (cat. no. 8155.0) and *Australian national accounts: state accounts, 2015–16* (cat. no. 5220.0).

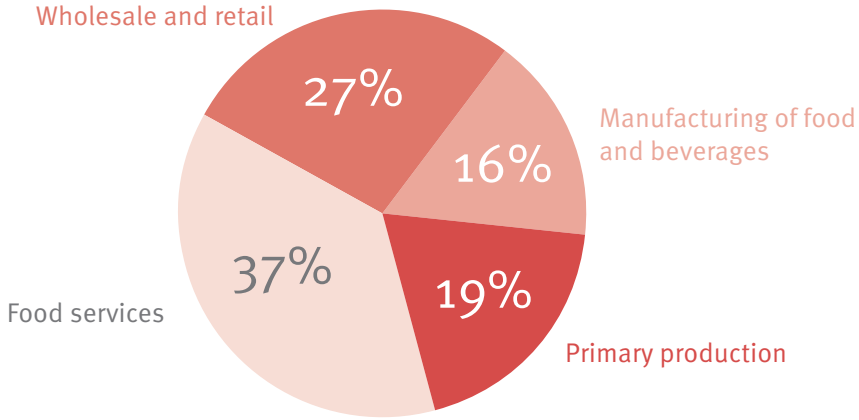

Figure 3 Employment in agriculture and the food supply chain, 2015–16

Source: DAF estimates based on ABS data from *Labour force, Australia, detailed, quarterly, November 2017* (cat. no. 6291.0.55.003).

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

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:

$$GVP = output \times price$$

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

The estimate for the 2015–16 GVP at the farm gate is $15.1 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.

The 2015–16 estimates for Queensland's primary industry (GVP) and the food supply chain (value added) total $29.4 billion.

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 2015–16 and 2014–15 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 (2017–18) or that part of the forecast year yet to be completed. DAF's updates take 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, 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. 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.

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