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Agricultural commodities

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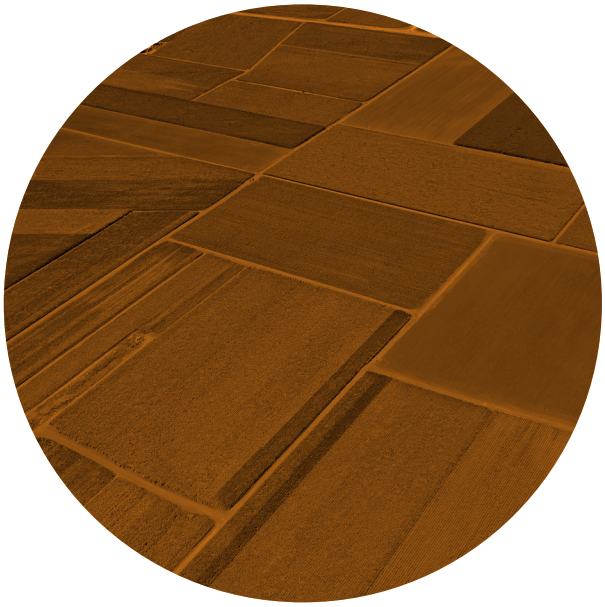

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Economic overview

Economic overview

Matthew Howden and Kirk Zammit

- In 2017 world economic growth was the highest since 2011 and is assumed to strengthen further to 3.9 per cent in 2018 and 2019.
- A risk to the outlook is the heightened threat of protectionism and its impact on economic growth, particularly in Asia.
- The Australian dollar is assumed to average US76 cents in 2018–19.

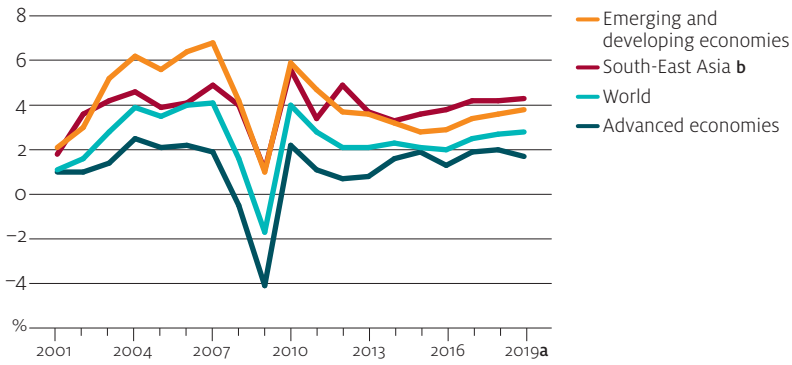
Global economic outlook

World economic growth rose sharply from 3.2 per cent in 2016 to 3.8 per cent in 2017, the highest rate since 2011. Global growth is assumed to be 3.9 per cent in 2018 and 2019, 0.2 percentage points higher than published in *Agricultural commodities: March quarter 2018*. This adjustment largely reflects revisions to growth in advanced economies.

The main trends for global growth remain unchanged from *Agricultural commodities: March quarter 2018*. While some monetary stimulus is being slowly withdrawn in a number of advanced economies, interest rates are assumed to remain low over 2018 and 2019. Expansionary fiscal policy settings in a number of countries—particularly the United States—are also expected to further support global growth in 2018 and 2019.

A lift in economic activity is reflected in the assumptions for growth in gross domestic product (GDP) per person. GDP per person is an indicator of income and purchasing power, and is an important determinant of food demand for emerging and developing economies. Rising incomes in these economies enable households to increase their expenditure on food. In emerging and developing economies, GDP per person is assumed to increase by 3.6 per cent in 2018 and 3.8 per cent in 2019. In South-East Asia growth is assumed to be 4.2 per cent in 2018 and 4.3 per cent in 2019, higher than the 10-year average of 3.8 per cent.

Growth in gross domestic product per person, 2001 to 2019



a ABARES assumption. **b** Indonesia, Malaysia, Thailand, the Philippines and Vietnam.
Sources: ABARES; International Monetary fund; United Nations Population Division

Risks to the global economic outlook for 2018 and 2019 appear to be broadly balanced. Global growth could exceed expectations given the momentum observed over the second half of 2017 and into 2018. Moreover, geopolitical risks appear to have lessened on the Korean peninsula following the Panmunjom Declaration on 27 April 2018 and the summit between US President Donald Trump and North Korean leader Kim Jong Un held on 12 June 2018.

However, the potential for increased protectionist measures and trade disputes among large economies, such as China and the United States, pose a downside risk to the global outlook. Geopolitical tensions in the Middle East and Korean peninsula could also disrupt economic growth. In financial markets, the necessary withdrawal of monetary stimulus, including increases in interest rates, could increase asset price volatility and dampen economic growth in regions such as South-East Asia, Australia's largest agricultural export market.

Key macroeconomic assumptions, 2016 to 2019

	unit	2016	2017	2018 a	2019 a
Economic growth					
World b	%	3.2	3.8	3.9	3.9
Advanced economies	%	1.7	2.3	2.4	2.2
United States	%	1.5	2.3	2.8	2.5
Japan	%	1.0	1.7	1.2	0.9
Eurozone	%	1.8	2.4	2.4	2.0
Germany	%	1.9	2.5	2.5	2.0
France	%	1.2	1.8	2.1	2.0
Italy	%	0.9	1.5	1.5	1.1
United Kingdom	%	1.8	1.8	1.6	1.5
Korea, Rep. of	%	2.8	3.1	3.0	2.9
New Zealand	%	3.6	2.7	3.1	3.5
Emerging and developing economies	%	4.3	4.7	4.9	5.0
Emerging Asia	%	6.4	6.3	6.4	6.4
South-East Asia **c**	%	4.9	5.3	5.3	5.4
China **d**	%	6.7	6.9	6.6	6.4
Taiwan	%	1.5	2.8	1.9	2.0
Singapore	%	2.0	3.6	2.9	2.7
India	%	7.9	6.4	7.5	7.8
Latin America	%	– 0.9	1.3	2.0	2.8
Russian Federation	%	– 0.2	1.5	1.7	1.5
Ukraine	%	2.3	2.5	3.2	3.3
Eastern Europe	%	3.1	5.8	4.3	3.7
GDP per person e					
Advanced economies	%	1.3	1.9	2.0	1.7
Emerging and developing economies	%	2.9	3.4	3.6	3.8
Emerging Asia	%	5.3	5.5	5.5	5.6
South-East Asia	%	3.8	4.2	4.2	4.3
Inflation					
United States	%	1.3	2.1	2.3	2.2
Interest rates					
US prime rate **g**	%	3.5	4.1	4.8	5.5
Australia	**unit**	**2015–16**	**2016–17**	**2017–18 a**	**2018–19 a**
Economic growth	%	2.8	2.1	2.8	3.0
Inflation	%	1.4	1.7	1.9	2.3
Interest rates **h**	% pa	4.0	3.7	3.6	4.0
Australian exchange rates					
A$/US$	US$	0.73	0.75	0.78	0.76
TWI for A$ **i**	index	62	65	65	64

a ABARES assumption. **b** Weighted using 2018 purchasing-power-parity valuation of country gross domestic product by the International Monetary Fund. **c** Indonesia, Malaysia, the Philippines, Thailand and Vietnam. **d** Excludes Hong Kong. **e** Expressed in purchasing power parity**. g** Commercial bank prime lending rates in the United States. **h** Large business weighted-average variable rate on credit outstanding. **i** Base: May 1970 = 100.

Sources: ABARES; Australian Bureau of Statistics; Indian Ministry of Statistics and Programme Implementation; International Monetary Fund; Reserve Bank of Australia; US Bureau of Labor Statistics; US Federal Reserve

Economic developments in Australia's main agricultural export markets

In March 2018 the National People's Congress set a new economic growth target for China of around 6.5 per cent. This is the same target that was set for 2017, when the economy ultimately expanded by 6.9 per cent. GDP for the March quarter 2018 showed that the economy grew by 6.8 per cent year-on-year. Economic growth continued to be supported by the services sector, as well as resilient growth in the secondary sector. Residential construction continued to grow strongly and private sector infrastructure picked up in the first three months of 2018. These activities, including a strong trade environment, continue to support the manufacturing sector. The manufacturing Purchasing Managers' Index rebounded in March 2018. It is assumed that economic growth in 2018 will be 6.6 per cent, just above the new growth target, before slowing to 6.4 per cent in 2019. These assumptions are consistent with a gradual deceleration as Chinese authorities focus on achieving quality growth and reforming the financial sector.

Economic growth in the United States is projected to rise to 2.8 per cent in 2018 and 2.5 per cent in 2019, revised up from *Agricultural commodities: March quarter 2018*. This reflects stronger growth prospects following implementation of the tax reform package at the beginning of the year and additional government spending from the February passage of the Bipartisan Budget Act of 2018. Given the already tight labour market, the fiscal stimulus is expected to put additional upward pressure on wages and inflation, and trigger a gradual increase in interest rates. Since *Agricultural commodities: March quarter 2018* the Federal Open Market Committee (FOMC) has increased interest rates twice, bringing the official interest rate to between 1.75 per cent and 2 per cent. They have also revised upwards their guidance for rate increases in 2018 and 2019. The possibility that the FOMC would need to increase rates at a faster than expected rate could destabilise financial markets and lower the outlook for the global economy. Another risk to the US and global outlook is the possibility of a deterioration in trade relations between the United States and countries that have large trade surpluses with them.

Economic data released since *Agricultural commodities: March quarter 2018* indicate ongoing strong growth in Japan and the Republic of Korea. Annual Japanese GDP remains in line with expectations of 1.2 per cent growth in 2018, despite GDP for Japan declining for the first time in two years in the March quarter. This annual growth rate exceeds Japan's potential rate of growth, estimated to be about 0.8 per cent. The tight labour market has continued to gradually exert upward pressure on wages and the labour force participation rate has risen further (61.9 per cent in April 2018), driven by an increase in female participation. The Korean economy expanded by 2.8 per cent year-on-year in the March quarter 2018. Since 2017 both countries have benefited from strong export demand and increased investment activity. A key risk for Korea's economic outlook, and the outlook for the region more broadly, is the geopolitical tension between the Democratic People's Republic of Korea and the United States. Tension appears to have eased slightly following peace talks between the Koreas on 27 April and a summit between the United States and the Democratic People's Republic of Korea on 12 June 2018, but the situation remains uncertain.

Economic growth in the eurozone is assumed to be 2.4 per cent in 2018 and 2.0 per cent in 2019, revised up from *Agricultural commodities: March quarter 2018*. This adjustment reflects expected stronger near-term growth, particularly for France and Germany and for other smaller eurozone countries. However, risks to the outlook remain due to high debt and banking sector weakness in some member countries (including Italy, the third-largest eurozone economy) and political uncertainty in Europe. These include negotiations over the United Kingdom leaving the European Union and an inconclusive result from Italy's March 2018 elections.

Economic activity in South-East Asia continues to be supported by favourable external conditions, government-led infrastructure investment and government policy reforms. However, the outlook is particularly vulnerable to external policy decisions around trade policy and interest rates. The possibility of trade disputes between countries and the implementation of trade-disrupting policies (including import tariffs) could reduce growth in the region—particularly for the highly trade-exposed economies of Malaysia, Thailand and Vietnam. Another key risk to the outlook is rising interest rates in advanced economies, particularly the United States, and implications this may have on attracting foreign direct investment in the region and on consumers and businesses exposed to increasing debt repayments.

Australian economy

The Australian economy is assumed to grow by 2.8 per cent in 2017–18 and 3.0 per cent in 2018–19, up from 2.1 per cent in 2016–17. Economic growth is assumed to be driven by non-mining investment and household consumption. Growth in non-mining investment is expected to continue to increase, given very favourable business conditions and expectations for stronger capital expenditure in 2018–19. Government-led infrastructure investment is also expected to continue to contribute to the pick-up in non-mining investment. Household consumption is assumed to increase in 2018–19, underpinned by a gradual increase in incomes and a decline in the savings rate.

In 2017–18 inflation is assumed to be 1.9 per cent, before rising to 2.3 per cent in 2018–19, reflecting an assumed increase in economic growth and a gradual reduction in spare capacity.

Risks to the outlook in the short term are broadly balanced. They largely relate to the pace of growth of non-mining investment and the durability of household consumption growth. A deterioration in business conditions as a result of external shocks or weakness in the domestic economy could reduce the pace of non-mining business investment. Similarly, after an extended period of low wages growth, pressure on household budgets could result in slower than expected household consumption growth. However, improving conditions in the labour market appear to have underpinned consumption growth over recent years despite weak wages growth.

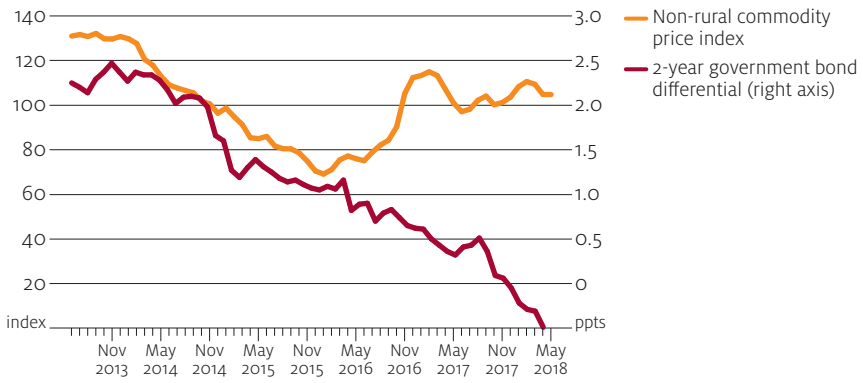
Australian dollar

In 2017–18 the Australian dollar is assumed to average US78 cents and have a trade-weighted value of 65. In 2018–19 it is assumed to depreciate to average US76 cents and fall to a trade-weighted value of 64.

A key determinant of Australia's exchange rate is the interest rate differential between Australia and major advanced economies, particularly the United States. Since *Agricultural commodities: March quarter 2018* the FOMC has raise interest rates twice, bringing the mid-point of the US official interest rate above the Australian equivalent (of 1.5 per cent) for the first time in 18 years. The FOMC also revised up their projections for further rate rises in 2018 and 2019. Higher yields are expected to continue to exert downward pressure on the Australian dollar.

Bulk commodity prices (iron ore, metallurgical coal and thermal coal) have been a source of upward pressure on the exchange rate. Prices for these commodities are assumed to moderate in the short term as demand from China slows and global supply increases. However, prices could remain relatively high as a result of supply-side reform in China aimed at restructuring its resource commodity production and enforcement of stricter environmental policies. Another upside risk to a higher Australian dollar is stronger than expected global demand for Australia's natural resources.

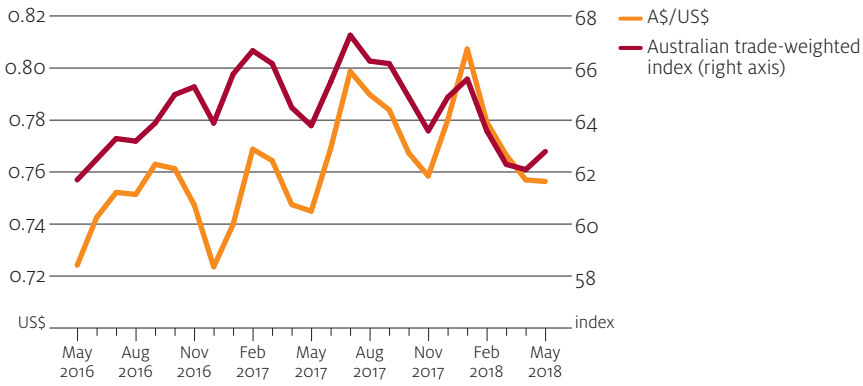
Determinants of the Australian dollar, June 2013 to May 2018



Note: Index 2016–17=100.
Source: ABARES; Reserve Bank of Australia; US Federal Reserve

Over the first five months of 2018, the Australian dollar depreciated against the US dollar by 6.2 per cent and on a trade-weighted basis by 5.3 per cent. The Australian dollar also depreciated relative to the currencies of our major trading partners, including China, the eurozone, Japan and the United States. This weakness largely reflects recent strong growth observed in those countries and regions and expectations for further declines in bulk commodity prices. Despite its recent depreciation, the Australian dollar has remained within a narrow band of between US72 cents and US81 cents for about two years.

Australian exchange rates, May 2016 to May 2018



Note: Index 1970=100.
Source: ABARES; Reserve Bank of Australia

Australian agriculture overview

Matthew Howden, Rohan Nelson and Kirk Zammit

- In 2018–19 the value of farm production is forecast to increase by 1.5 per cent to $61 billion.
- An increase in global economic growth and a decline in the global supply of some crops are forecast to support average farm export unit values.
- Downside risks to the Australian agricultural sector are the prolonged dry spell in some parts of Australia, and economic and trade factors facing Australia's key export markets.

Dry conditions pose risk to farm production forecasts for 2018–19

The value of farm production is forecast to be $61 billion in 2018–19, well above the 10-year average of $55 billion (in 2017–18 dollars). This is expected to support farm income in 2018–19. However, the poor seasonal conditions experienced in northern New South Wales and southern Queensland during 2017 threaten to continue through 2018.

The value of crop production in 2018–19 is expected to remain unchanged from 2017–18. Production forecasts have been lowered from *Agricultural commodities: March quarter 2018* because of lower than average autumn rainfall in some cropping regions. A dry start to the 2018 winter crop season has delayed planting in Queensland and central and northern New South Wales. This has constrained planting intentions and reduced yield prospects in these areas. Seasonal forecasts suggest dry conditions are likely to persist in south-east Australia, Queensland and South Australia. Timely in-crop rainfall will be critical for the development of winter crops in all regions because of lower than average soil moisture levels.

A change in the mix of grain crops is expected in 2018–19 due to the combination of seasonal conditions, agronomic factors and relative prices. Delayed and inadequate autumn rainfall has reduced opportunities to plant canola and pulse crops. Prices of grains compared with prices of oilseeds and pulses are also expected to add to incentives to plant barley and reduce canola and chickpea plantings.

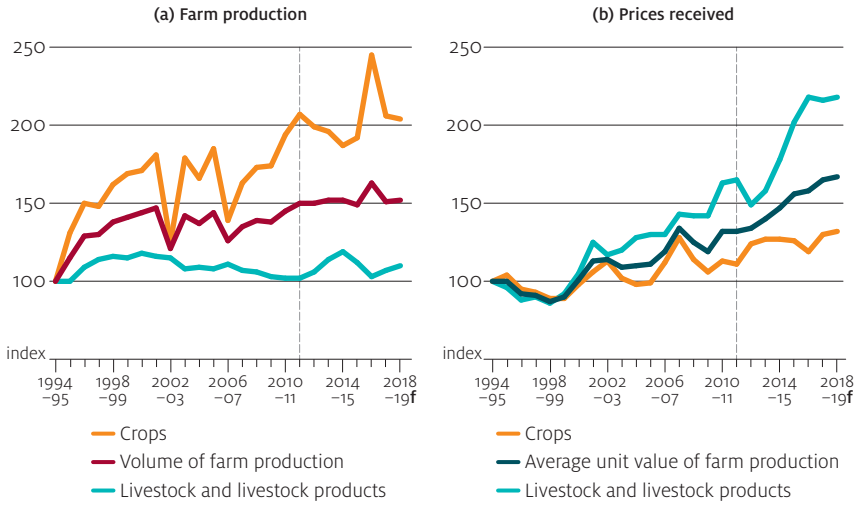
The value of livestock production is forecast to increase by 3 per cent in 2018–19. Strong demand for Australian lamb, live cattle and wool exports will more than offset the lower value of beef and veal production. Dry conditions affecting pasture growth in south-east Australia and high prices for sheep meat have led to increased turn-off and halted flock rebuilding. As of 19 June 2018, the response to the review of live sheep exports had not been finalised. The outcome could affect the profitability and volume of trade in live sheep. The value of dairy production is expected to increase modestly. However, the industry is facing the prospect of rising feed costs after consecutive years of low prices of grain and hay.

Volume of farm production relatively unchanged since 2011–12

The volume of Australia's farm production has plateaued over the past 5 years, following a lift in farm production from 2007–08 to 2011–12. The increase was due to an increase in the productivity of cropping following the Millennium Drought. While crop production has generally remained high, the overall volume has varied with seasonal conditions. Production of livestock and livestock products returned to its long-run average after peaking in 2014–15. This followed a three-year period of dry conditions and increased turn-off, particularly in Queensland.

From 2011–12 to 2017–18 the average price received for Australia's farm production increased by 25 per cent. This was driven mostly by a significant increase (32 per cent) in prices received for livestock and livestock products. The price of livestock products has risen because the ability of producers in major exporting nations to respond to growing world demand has been constrained by the time required to rebuild herds and flocks. In contrast, the global supply of grain is less differentiated and much more responsive to demand, which limits price increases.

Australian farm production, volume and price, 1994–95 to 2018–19



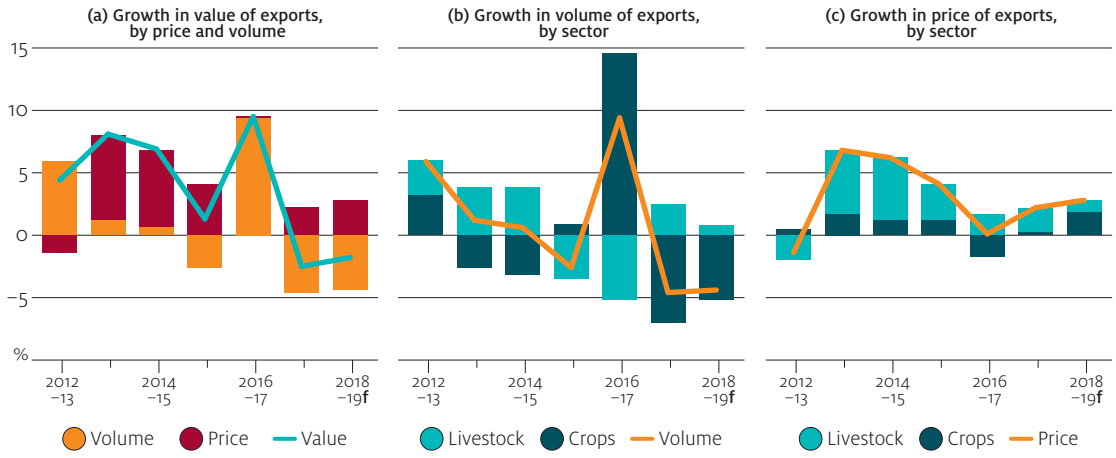
f ABARES forecast.
Note: Fisher chain volume and chain price indexes with a reference year of 1994–95=100.
Sources: ABARES; Australian Bureau of Statistics

Export earnings to be supported by prices

In 2018–19 export earnings are forecast to be $47 billion, slightly lower than in 2017–18 and assuming a return to average seasonal conditions following a forecast dry winter. The fall in export earnings is largely due to lower exportable supplies of coarse grains, pulses and canola and increased domestic demand for grain. Higher export earnings are forecast for beef and veal, cheese, cotton, lamb and wool due to strong demand from emerging Asia and advanced economies. Export earnings are also forecast to increase for wheat as the reduction in global supply lifts prices from the lows of 2016–17 and 2017–18.

Export earnings in 2018–19 are forecast to be supported by increases in prices received for Australia's agricultural exports. The index of unit export returns for Australian agricultural exports is forecast to increase by 2.8 per cent in 2018–19, following an estimated increase of 2.2 per cent in 2017–18. Forecasts of unit export returns for wheat and coarse grains have been revised up since *Agricultural commodities: March quarter 2018*. Returns for beef and veal have also been revised up as a result of higher than expected international prices.

Australian agricultural export performance, 2012–13 to 2018–19



f ABARES forecast.
Note: Fisher chain volume measures and chain Fisher price indexes with a reference year of 2017–18=100.
Source: ABARES; Australian Bureau of Statistics

Global demand and supply favours export returns

International prices for wheat and coarse grains have increased from historically low levels due to lower than anticipated global supplies in the first half of 2018. Global wheat production is expected to decline, driven by lower production in the Russian Federation and India. The world indicator prices for wheat (US no. 2 hard red winter, fob Gulf) and coarse grains (France feed barley, fob Rouen) each increased by around 22 per cent (in Australian dollars) over the 12 months to May 2018.

The world canola price (Europe rapeseed, fob Hamburg) remained unchanged in 2017. However, it has come under pressure in 2018 because of above average production expected in Canada and the European Union. Rapeseed prices were down by 7 per cent year-on-year in May 2018. A recent trade dispute between the United States and China is expected to have limited impact on the price of Australian canola.

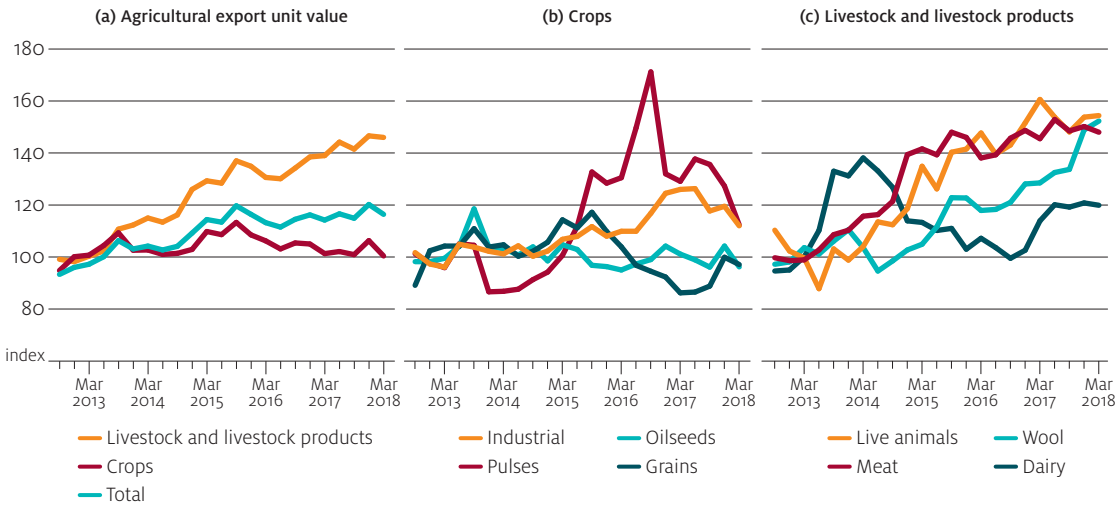
In contrast, the world benchmark price for sugar (Intercontinental Exchange, nearby futures, no. 11 contract) declined by 26 per cent year-on-year to May 2018, driven by record world supplies. Production has grown in Asia—particularly in India, where the 2017 monsoon rains improved cane yields.

Strong import demand from textile manufacturers in Asia has increased prices for cotton and wool. The Cotlook 'A' index increased by 8 per cent over the 12 months to May 2018, and the Eastern Market Indicator increased by 26 per cent. Protein demand in Asia—particularly for lamb and imported live cattle—is also supporting saleyard prices for sheep and cattle.

Dairy prices recovered somewhat during 2017 because of strengthening global import demand for dairy products. These recent price increases reflect supply concerns in New Zealand, the world's largest dairy exporter.

Recent trade tensions between the United States and China and geopolitical events on the Korean peninsula (see *Economic overview*) have had little impact on global economic activity and trade. However, they remain risk factors in the outlook for Australian agricultural trade.

Australian agricultural export unit returns indexes, September quarter 2012 to March quarter 2018

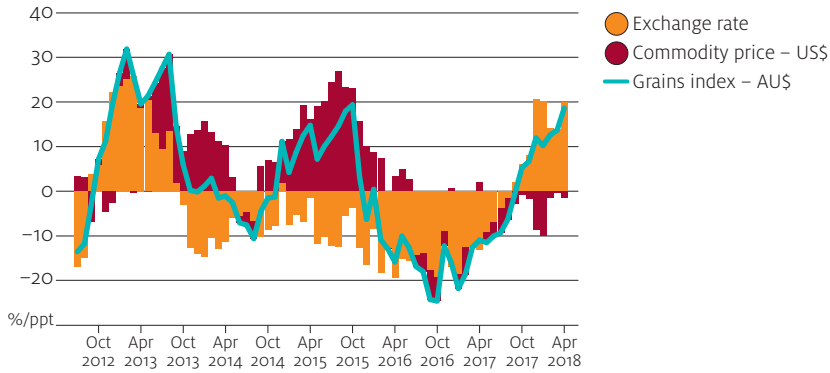


Note: Quarterly Fisher export price indexes with a reference year of 2012–13=100. Industrial crops defined as cotton, sugar and wine.
Source: ABARES; Australian Bureau of Statistics

The Australian dollar has remained within a narrow band of between US72 cents and US81 cents for about two years, and is now about 27 per cent lower than its peak in 2011–12. The lower Australian dollar is continuing to benefit farmers and exporters. In those markets where commodities are largely invoiced in US dollars, particularly grain, the lower Australian dollar has provided a buffer to low international commodity prices.

The price received for Australian grain exports is influenced by changes in the exchange rate and in international grain prices. Between 2013 and 2015 the price received for Australian grain exports increased because of a falling Australian dollar. This provided a buffer to Australian producers and exporters of declining international prices for grains from 2014 to 2016. The most recent increase in the price received for Australian grain exports has been due to the recovery in the international price of grains, a trend that has been increasing since the second half of 2017.

Contribution to growth in grains export unit value index, July 2012 to April 2018



Note: Australian grains index is an annually re-weighted monthly Fisher export price index.
Source: ABARES; Australian Bureau of Statistics; Reserve Bank of Australia

A large proportion of agricultural exports are invoiced in Australian dollars, including horticulture and beef and veal destined for Asian markets. The lower Australian dollar against the Chinese yuan, Japanese yen and South Korean won has made Australian agricultural exports to these countries more competitive compared with other major exporters, such as the United States.

Mixed outlook for farm incomes

A key downside risk to farm incomes is the potential for persistent dry conditions across large areas of agricultural regions in Australia. The Bureau of Meteorology's climate outlook for winter 2018 suggests that median rainfall is unlikely to be exceeded in south-eastern Australia.

Dam levels in the Murray–Darling Basin declined by 18 percentage points over the 12 months to May 2018, to 50 per cent of total capacity. Water allocation prices in the southern Murray–Darling Basin increased by 605 per cent year-on-year in May 2018 to $160 per megalitre. This is still well below the high prices of 2015–16 following the drought in Queensland and persistent dry conditions in New South Wales, Victoria and parts of South Australia. Higher water allocation prices will affect the profitability and incomes of producers and water holders, decreasing the profitability of those who need to purchase allocations and providing additional income for those who are in a position to sell allocations.

The dry conditions mean that Australian farms with livestock are facing rising input costs. The cost of fodder (hay, grains and supplementary feed) has increased because of reduced pasture availability. Local supply and demand conditions have led to a rise in local feed grain prices (wheat and barley) of around 60 per cent over the 12 months to May 2018, much more than the small recovery in international grain prices. Rainfall in south-east Australia in May slowed the rise in hay prices, but the seasonal outlook is for dry conditions to persist through winter.

Persistent dry conditions and the resulting reduction in production volumes are a downside risk to incomes on cropping farms. Incomes may receive some buffer through rising grain prices.

The cost of fuel can be considerable for farming enterprises. Diesel and petrol prices have increased by 12 per cent and 9 per cent respectively since the beginning of 2018, in line with the increase in international prices for crude oil. The rise in crude oil reflects reduced supply from the United States and the Middle East. Strong global demand and ongoing supply restrictions from the Organization of the Petroleum Exporting Countries (currently set to expire in late 2018) are assumed to continue and keep upward pressure on oil prices.

Prices of other inputs such as fertiliser have increased but remain relatively low. Fertiliser represents a significant proportion of total costs faced by dairy, grain and southern beef producers.

Policy and market access issues

Three ongoing domestic policy or legislative reviews have potential to affect Australian agriculture:

- The live sheep exports review recommendations are likely to result in reduced stocking density on ships. This could reduce the profitability of live exports and lead to structural adjustment throughout the industry, including an increase in domestic processing.
- A key issue for the review of the wheat port code is whether an industry code of conduct is the only or best means of limiting monopoly power associated with port terminal ownership.
- The review of the *Australian Charities and Not-for-profits Commission Act 2012* is yet to determine whether it will investigate the risks raised by the Productivity Commission about the charity status of agricultural trading companies in the grain and sugar industries.

Access of agricultural products to important markets may be affected by several factors:

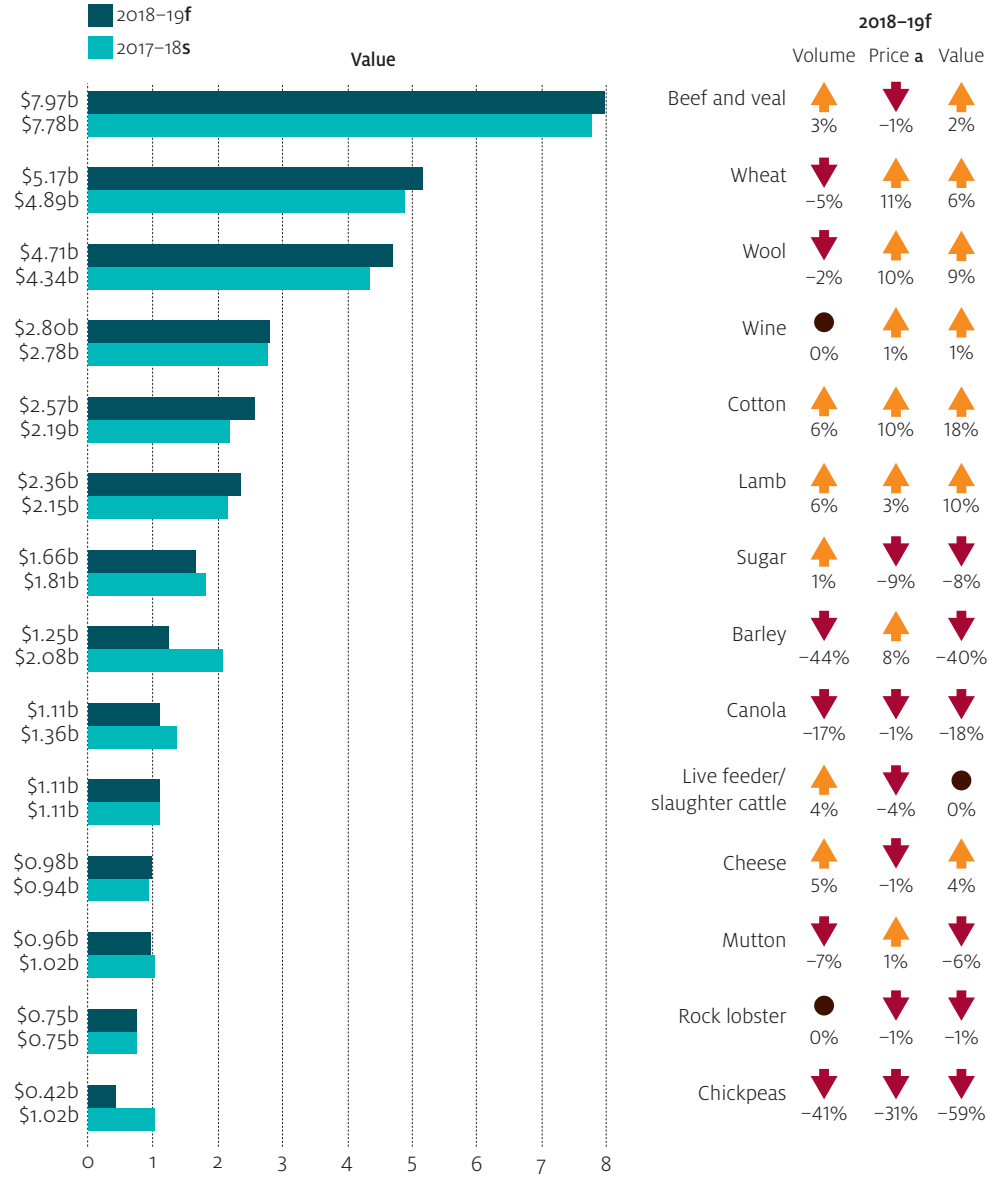
- The increasingly protectionist stance of the United States on manufacturing and intellectual property rights could lead to a number of retaliatory measures by its trading partners across sectors. This could disrupt traditional trade flows and create opportunities for other exporters.
- The Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), signed on 8 March 2018, will enter into force 60 days after six of the 11 signatories ratify the agreement. The aim is to have the CPTPP enter into force in 2018. However, as of 19 June, only Mexico had ratified the agreement. In Australia, the agreement is currently being considered by the Joint Standing Committee on Treaties.
- On 22 May 2018 EU leaders formally authorised the opening of negotiations for a free trade agreement between the European Union and Australia. Agriculture is among the sectors most likely to benefit from improved market access to the soon-to-be 27-member nation.

Major indicators of Australia's agriculture, fisheries and forestry sectors

Category		2013–14	2014–15	2015–16	2016–17 s	2017–18 s	2018–19 f	*% change*
Exchange rate	A$/US$	0.92	0.84	0.73	0.75	0.78	0.76	*– 2.6*
Australian export unit returns a								
Agriculture	index	100.0	106.2	110.5	110.6	113.0	116.2	*2.8*
Value of exports								
Agriculture	A$m	41,364	44,200	44,786	49,017	47,814	46,969	*– 1.8*
crops	A$m	22,318	21,574	22,521	28,013	24,600	22,858	*– 7.1*
livestock	A$m	19,046	22,625	22,265	21,004	23,215	24,111	*3.9*
Fisheries products	A$m	1,304	1,440	1,542	1,435	1,575	1,585	*0.7*
Forestry products	A$m	2,546	2,795	3,147	3,485	3,641	3,481	*– 4.4*
Total agriculture, fisheries and forestry exports	A$m	45,214	48,434	49,475	53,937	53,031	52,035	*– 1.9*
Gross value of production b								
Farm	A$m	51,479	54,362	56,643	62,310	60,500	61,402	*1.5*
crops	A$m	28,699	27,395	27,880	33,872	31,054	31,097	*0.1*
livestock	A$m	22,781	26,967	28,763	28,438	29,445	30,305	*2.9*
Fisheries	A$m	2,473	2,764	3,021	3,060	3,075	3,133	*1.9*
Forestry	A$m	1,840	2,025	2,270	2,571	2,343	2,155	*– 8.0*
Total agriculture, fisheries and forestry products	A$m	55,793	59,151	61,934	67,942	65,917	66,690	*1.2*
Volume of farm production c	index	122.2	122.3	120.8	131.7	122.9	126.1	*2.6*
crops	index	131.9	125.0	130.2	165.4	138.2	142.8	*3.3*
livestock	index	111.3	118.1	111.1	103.6	108.5	110.6	*1.9*
Production area and livestock numbers								
Crop area (grains, oilseeds and pulses)	'000 ha	22,559	22,909	21,337	24,369	23,435	22,741	*– 3.0*
Sheep	million	69.4	68.0	67.5	72.1	72.1	72.9	*1.2*
Cattle	million	29.1	27.4	25.0	26.2	27.1	27.8	*2.5*
Costs and returns								
Farm costs	A$m	37,957	38,441	38,516	39,912	40,330	42,541	*5.5*
Net farm cash income d	A$m	18,867	21,365	23,653	28,020	25,898	24,719	*– 4.6*
Net value of farm production e	A$m	13,522	15,921	18,127	22,398	20,169	18,862	*– 6.5*
Farmers' terms of trade g	index	98.2	103.9	109.2	110.1	111.1	108.3	*– 2.5*
Employment								
Agriculture, forestry and fishing	'000	312	318	321	304	na	na	*na*
Australia	'000	11,471	11,685	11,924	12,083	na	na	*na*

a Base: 2013–14 = 100. **b** For a definition of the gross value of farm production see Table 13. **c** Chain-weighted basis using Fisher's ideal index with a reference year of 1997–98 = 100. **d** Gross value of farm cash income less total cash costs. **e** Gross value of farm production less total farm costs. **f** ABARES forecast. **g** Ratio of index of prices received by farmers and index of prices paid by farmers; base: 1997–98 = 100. **s** ABARES estimate (excluding the exchange rate and employment figures).
Sources: ABARES; Australian Bureau of Statistics; Reserve Bank of Australia

Major Australian agricultural commodity exports



a All commodities are export unit returns in A$. **f** ABARES forecast. **s** ABARES estimate.

Seasonal conditions

Matthew Miller

- World production conditions for major grain and oilseed crops were mixed as at 31 May 2018.
- In Australia the first quarter of 2018 was marked by extended periods of particularly dry weather and well above average temperatures in much of western and southern Australia.
- Well above average temperatures and low rainfall during autumn have resulted in increased moisture stress in southern pastures and in early-sown winter crops such as canola, barley and oats.
- Recent rainfall in parts of Queensland appears to have benefited pasture production and fewer areas are affected by medium- to long-term rainfall deficiencies.
- Soil moisture levels across large areas of southern and eastern Australia have declined rapidly since the start of the year.
- Improved seasonal conditions during the Australian winter will be crucial for crop establishment and development.
- Without sufficient rainfall across some key growing regions in eastern Australia, area planted to winter crops and crop yields are likely to be below average.
- Insufficient rainfall could affect pasture production and consequently herd and flock rebuilding across south-eastern Australia.

Climatic conditions in major crop-producing countries

As at 28 May 2018, production conditions globally were generally favourable for corn (maize)and rice crops, but were mixed for wheat and soybeans (Map 1).

Grains

Production conditions for winter wheat are mixed in the northern hemisphere due to adverse climatic conditions across parts of Canada, the European Union, the Russian Federation, Ukraine and the US southern Great Plains. In the southern hemisphere, sowing of winter wheat has begun under generally favourable conditions. However, in Australia planting conditions are mixed, with favourable conditions in the west and low soil moisture constraining planting intentions in the east. Sowing of spring wheat in the northern hemisphere has begun under mixed conditions.

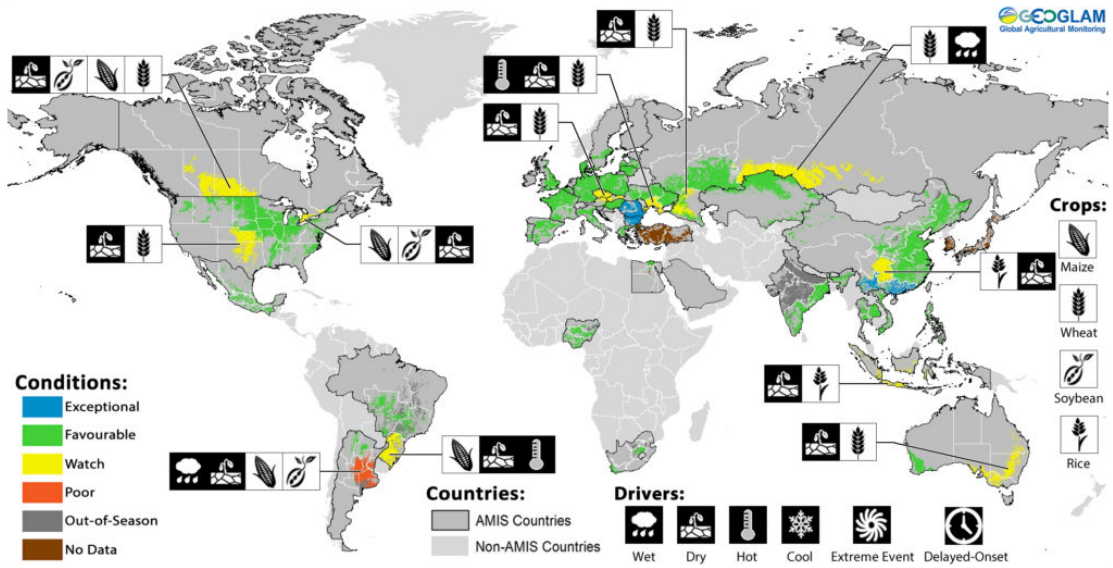
Production conditions for corn (maize) are mixed in the southern hemisphere. Dry conditions in Argentina have affected yields, and hot and dry conditions in Brazil have led to reduced plantings for its second-crop—its main and largest crop. Sowing is progressing in the northern hemisphere. In Canada, additional rainfall is needed in June to aid crop germination, emergence and growth.

Conditions continue to be favourable for rice across the majority of growing regions.

Oilseeds

Production conditions for soybeans are poor in the southern hemisphere due to adverse climatic conditions affecting production in Argentina. In the northern hemisphere, sowing is progressing under generally favourable conditions. In Canada, additional rainfall is needed during June to aid crop growth and development.

MAP 1 Crop conditions, AMIS countries, 28 May 2018



Note: Crop conditions data in main growing areas for wheat, maize, rice and soybeans are based on remotely sensed data, ground observations, field reports and input from national and regional crop analysts.
Source: Agricultural Market Information System

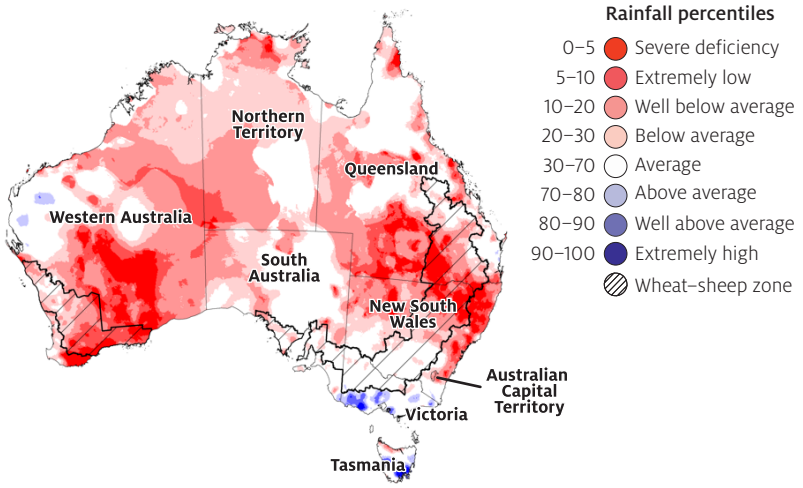
Climate outlook for Australia

Recent climatic conditions

Rainfall in May 2018 was generally well below average to below average across most of Australia (Map 2). Nationally, May rainfall was the third-lowest on record and the lowest for May since 2008. Severely deficient to below average rainfall was recorded across large areas of Queensland, northern and eastern New South Wales, Western Australia and the Northern Territory. In contrast, above average to extremely high rainfall was recorded in south-western Victoria and Tasmania. Much of the rain fell in a single event, when a complex low pressure system and strong cold front crossed the far south-east of Australia on 10 May.

May 2018 rainfall in cropping regions was generally well below average in Queensland, northern New South Wales and Western Australia and average in Victoria and South Australia.

MAP 2 Rainfall percentiles, Australia, 1 to 31 May 2018



Note: Rainfall for May 2018 relative to the long-term record and ranked in percentiles. This analysis ranks rainfall for the selected period compared with the historical average (1900 to present) recorded for that period.
Source: Bureau of Meteorology

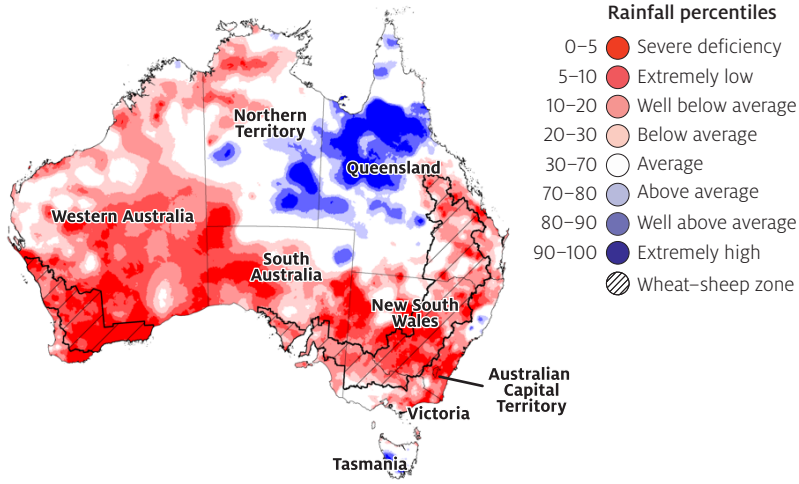
Much of the WA grains belt recorded rainfall deficiencies at the monthly scale. However, a rain-bearing frontal system on 25 and 26 May brought widespread falls of between 10 and 50 millimetres. This provided a boost for crops that germinated during earlier falls and is likely to support germination and establishment of most of the state's dry-sown winter crop. This system tracked to the east of Australia, bringing widespread rainfall of between 5 and 25 millimetres across cropping regions in southern and central New South Wales, Victoria and South Australia and consolidating the improved growing conditions resulting from widespread falls earlier in the month.

Autumn 2018 was particularly dry across much of southern and western Australia (Map 3). For much of southern mainland Australia, rainfall totals were amongst the lowest 10 per cent of historical records. For southern Australia as a whole, autumn rainfall was the second-lowest on record. Autumn rainfall totals in New South Wales, South Australia and Western Australia were among the 10 lowest years on record. Several stations in New South Wales and Western Australia had record low rainfall for the season.

In contrast, much of the south of the Northern Territory and western, central and northern Queensland recorded well above average to extremely high autumn rainfall. This was largely the result of a tropical low in early March and Tropical Cyclone Nora in late March.

In the cropping regions, autumn 2018 rainfall was variable in Queensland, generally well below average in Victoria and South Australia and severely deficient to extremely low across much of Western Australia and New South Wales.

MAP 3 Rainfall percentiles, Australia, 1 March 2018 to 31 May 2018

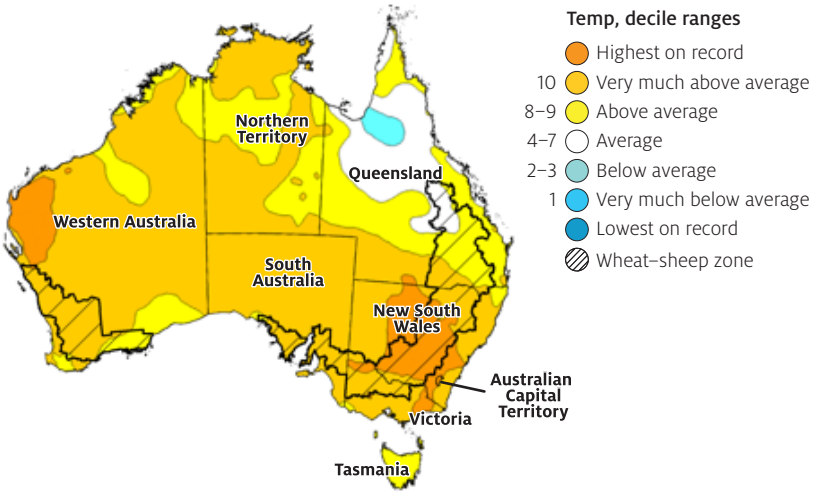


Note: Rainfall for March 2018 to May 2018 relative to the long-term record and ranked in percentiles. This analysis ranks rainfall for the selected period compared with the historical average (1900 to present) recorded for that period.
Source: Bureau of Meteorology

Unseasonal autumn heat

Autumn was exceptionally warm for Australia. Both the monthly mean and maximum temperatures were the fourth-warmest on record. The mean minimum temperature ranked just outside the top 10 years on record. Nationally, each autumn month was warmer than average, particularly April. Temperatures were more than 10 degrees above average for this time of year, resulting in significantly higher than average autumn mean maximum temperatures across southern Queensland, New South Wales, Victoria, South Australia, Western Australia and the Northern Territory (Map 4). Mean maximum temperatures for autumn 2018 exceeded 27°C across much of the country.

MAP 4 Mean temperature deciles, Australia, 1 March to 31 May 2018



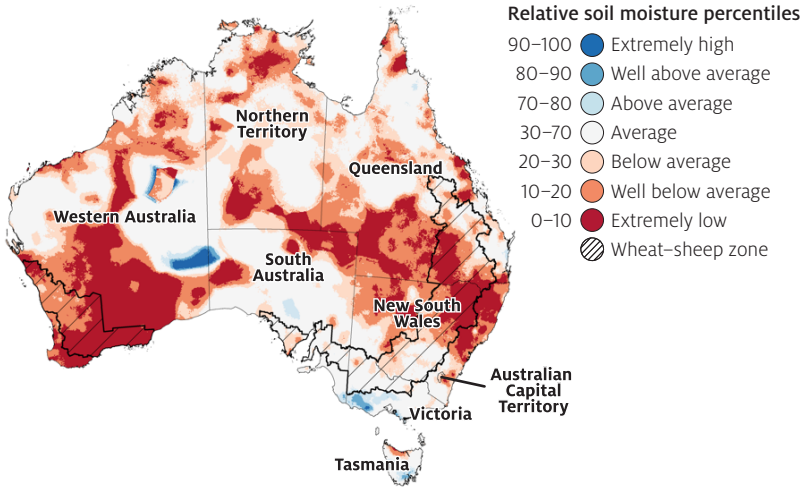
Note: Mean temperature for autumn 2018 relative to the long-term record and ranked in deciles. This analysis ranks the mean temperature for the selected period compared with the historical average (1911 to present) for that period.
Source: Bureau of Meteorology

Recent soil moisture levels

In May 2018 relative upper layer soil moisture was well below average to extremely low across large areas of southern Queensland, northern South Australia and the Northern Territory, the northern half of New South Wales and large areas of Western Australia (Map 5). Upper layer soil moisture was generally average across southern New South Wales, Victoria, South Australia, Tasmania and large areas of northern Australia.

In cropping regions, upper layer soil moisture was extremely low to well below average in southern Queensland, northern New South Wales and Western Australia. In contrast, it was generally average in southern New South Wales, Victoria and South Australia.

MAP 5 Modelled upper layer soil moisture, Australia, 1 to 31 May 2018

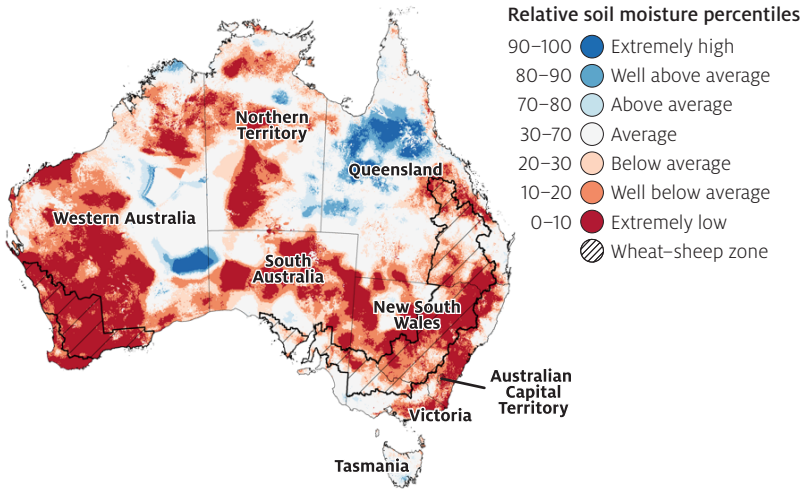


Note: Soil moisture estimates are relative to the long-term record and ranked in percentiles. Estimates are used to compare upper layer soil moisture from May 2018 and ranked by percentiles for each May in the 1911–2015 historical reference period. Upper layer soil moisture is defined as the soil surface to 0.1 metres in depth.
Source: Bureau of Meteorology

Relative lower layer soil moisture for May 2018 was extremely low to well below average across much of New South Wales, eastern Victoria, South Australia, the Northern Territory and much of Western Australia (Map 6). It was average to extremely high across most of Queensland, Tasmania and the southern agricultural regions of Victoria and South Australia.

In cropping regions, lower layer soil moisture was extremely low to well below average in New South Wales, parts of Queensland and Western Australia. It was variable in Victoria and South Australia, ranging from extremely low in the Mallee to average in most other cropping regions.

MAP 6 Modelled lower layer soil moisture, Australia, 1 to 31 May 2018



Note: Soil moisture estimates are relative to the long-term record and ranked in percentiles. Estimates are used to compare lower layer soil moisture from May 2018 and ranked according to percentiles for each May in the 1911–2015 historical reference period. Lower layer soil moisture is defined as 0.1 to 1.0 metres in depth.
Source: Bureau of Meteorology

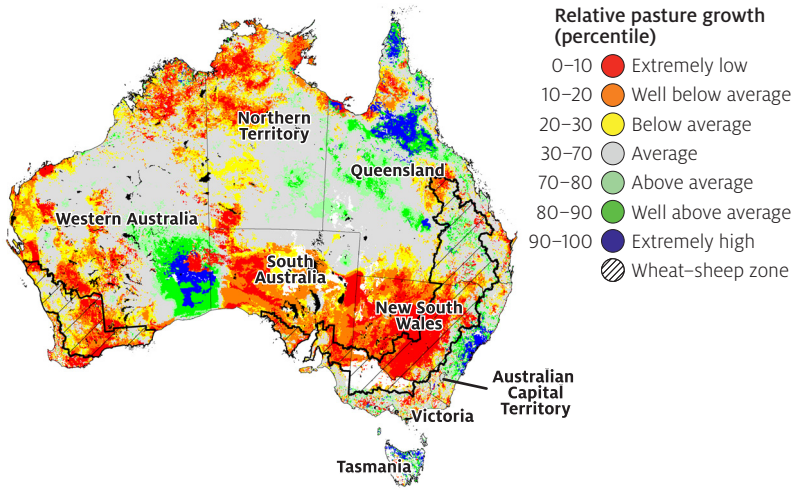
The relative soil moisture analysis presented in Map 5 and Map 6 shows that well above average temperatures and low rainfall during autumn have resulted in a rapid decline in soil moisture levels. This has led to increased moisture stress in southern pastures and in early sown winter crops such as canola, barley and oats. The hot, dry conditions and resulting lack of water in the soil profile are likely to result in increased demand for water for irrigated crops and pastures.

Recent pasture growth

For the three months to May 2018, modelled pasture growth was well above average to extremely high across parts of south-eastern Western Australia, northern and south-eastern areas of Queensland, coastal areas of New South Wales and parts of northern and eastern Tasmania. In contrast, modelled pasture growth was well below average to extremely low across much of the remainder of New South Wales, South Australia, scattered areas of Victoria, the west and north of Western Australia and the north of the Northern Territory. Modelled pasture growth was generally average across the remainder of the country (Map 7).

The well below average to extremely low pasture growth modelled across large areas of southern Australia is largely due to declining soil moisture levels as a result of hotter and drier than average conditions during autumn. Many livestock producers across southern Australia have been forced to purchase supplementary fodder or sell stock as a result of poor pasture production.

MAP 7 Relative pasture growth, Australia, 1 March to 31 May 2018



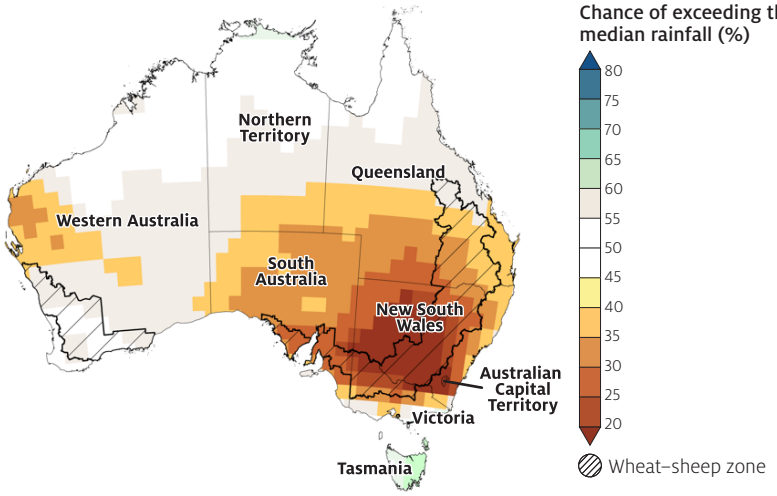
Note: AussieGRASS pasture growth estimates are relative to the long-term record and shown in percentiles. Percentiles rank data on a scale of zero to 100. This analysis ranks the pasture growth for the selected period against the average pasture growth for the long-term record (1957 to 2016). Pasture growth is modelled at 5 km² grid cells.
Source: Queensland Department of Science, Information Technology and Innovation

Climate outlook

The Bureau of Meteorology's climate outlook for June to August 2018 indicates that a drier than average winter is more likely across most of New South Wales, northern Victoria, eastern South Australia, southern Queensland, southern parts of the Northern Territory and isolated parts of western Western Australia. Rainfall is more likely to be above the median in eastern parts of Tasmania (Map 8). For the rest of the country, the chances of above or below median rainfall are roughly equal.

The June to August 2018 outlook reflects the neutral state of major climate drivers and does not suggest a strong shift towards wetter or drier conditions across most of Australia. When broadscale drivers are neutral, climate is often influenced by more local effects, such as coastal sea temperatures. For the Tasman Sea, mean sea level pressure was below average and ocean temperatures were warmer than average at the end of May. This is likely to weaken the westerlies that bring rain systems to south-east Australia.

MAP 8 Rainfall outlook, Australia, June to August 2018



Note: Shows the likelihood, as a percentage, of exceeding the 1981–2010 median rainfall for the upcoming three months. Median rainfall is defined as the 50th percentile calculated from the 1981–2010 reference period.
Source: Bureau of Meteorology

In early June 2018 the Bureau of Meteorology reported that the El Niño–Southern Oscillation (ENSO) remains in a neutral state—neither El Niño nor La Niña. Most international climate models indicate that ENSO is likely to continue in a neutral phase until August. Atmospheric and oceanic indicators of ENSO are largely at neutral levels. However, sea surface temperatures in the eastern equatorial Pacific Ocean are now warmer than average. Warming of waters in the tropical Pacific subsurface is likely to lead to further warming of the surface of the ocean in the eastern Pacific throughout the remainder of June.

Most international climate models surveyed by the Bureau of Meteorology indicate further warming of the tropical Pacific Ocean is likely from June onwards. The amount of warming varies. Some models predict close to the long-term average, but three of the eight models reach El Niño levels during the Australian spring. During El Niño years, rainfall in eastern Australia is typically below average in winter and spring. A neutral ENSO phase has little effect on Australian climate.

Soil moisture levels across large areas of southern and eastern Australia have declined rapidly since the start of the year. Therefore, improved seasonal conditions during the Australian winter will be crucial for crop establishment and development. Without sufficient rainfall across some key growing regions in eastern Australia, area planted to winter crops and crop yields in these regions are likely to be below average. Insufficient rainfall would also affect pasture production and herd and flock rebuilding across south-eastern Australia.

Agriculture

Crops

CROPS

↑6% to **US$243/t**[a] in 2018–19

Wheat

Stronger global demand and lower supply to drive wheat prices higher.

↑6% to **US$205/t**[b] in 2018–19

Coarse grains

Barley prices to increase due to falling world coarse grain stocks.

↓2% to **US$415/t**[c] in 2018–19

Oilseeds

Canola prices to fall, reflecting continued high global supply and lower import demand.

↓15% to **USc 11/lb**[d] in 2018–19

Sugar

Sugar prices to fall due to record world sugar supplies.

↑5% to **USc 90/lb**[e] in 2018–19

Cotton

World cotton prices to rise, driven by growing world demand for cotton textiles and clothing.

a US no. 2 hard red winter, fob Gulf. **b** France feed barley, fob Rouen. **c** Europe rapeseed, fob Hamburg. **d** Intercontinental Exchange, nearby futures, no. 11 contract (October to September). **e** Cotlook 'A' index.

Wheat

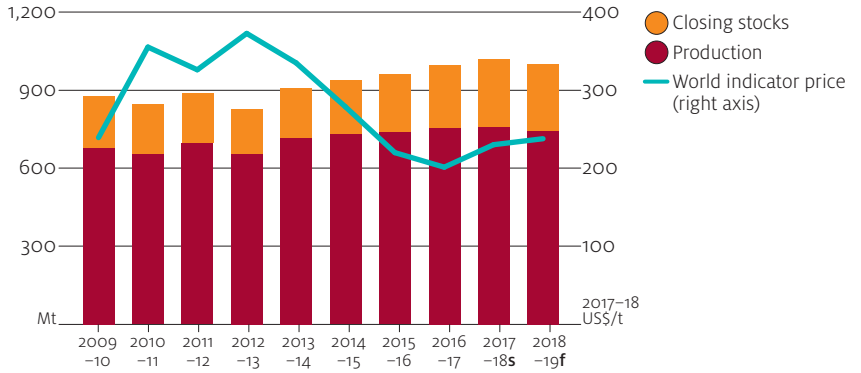
Tim Whitnall

- In 2018–19 world wheat prices are forecast to rise in response to stronger demand for wheat for human consumption and lower production in major exporting countries.
- Despite the forecast rise, world wheat prices are expected to remain well below the 10-year average in real terms.
- Total wheat production in the major exporting nations is forecast to fall due to lower production in the Russian Federation.
- Australian area planted to wheat is forecast to fall marginally, reflecting poor planting conditions in New South Wales.
- The value of Australian wheat exports is forecast to rise despite a lower volume of exports.

Higher demand and lower supply to lift prices

The world wheat indicator price (US no. 2 hard red winter, fob Gulf) is forecast to average US$243 per tonne in 2018–19, a 6 per cent rise from an estimated US$230 per tonne in 2017–18. Higher global demand for imports and lower production in major exporting nations are expected to put upward pressure on prices.

World wheat supply and price, 2009–10 to 2018–19



f ABARES forecast. s ABARES estimate.

Wheat demand growth to drive increased trade

World wheat consumption is forecast to rise slightly to 748 million tonnes in 2018–19. This is expected to be driven by increased demand for wheat for human consumption in major importing regions. Consumption of wheat for feed use is expected to remain largely stable because the cost of feed wheat relative to other feed grains such as corn is expected to remain largely unchanged, providing little incentive to use more wheat in livestock rations.

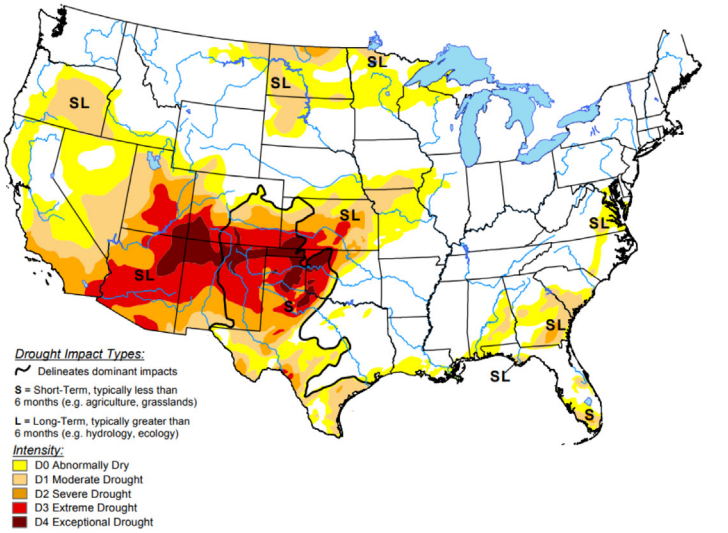
Global trade is forecast to grow because local supplies in many major importing regions are not expected to keep up with growing demand. Population growth, urbanisation and rising incomes are expected to result in higher import demand in Asia and Sub-Saharan Africa. Indian imports are forecast to increase as a result of an expected drop in crop quality following rains during harvest. Imports into the Middle East are also expected to rise following a drawdown in stocks over the past two years.

Lower production to result in lower global stocks

World production of wheat is forecast to fall by 2 per cent to 743 million tonnes in 2018–19. Total wheat production in major wheat exporting countries is forecast to fall by a similar rate. This is largely a result of lower production in the Russian Federation, which is forecast to fall by 14 per cent to 73 million tonnes. This is expected to be the result of a reduction in area planted to wheat and a reversion of yields from the record levels achieved in the previous year which resulted from exceptional seasonal conditions. Russia is the largest exporter of wheat and in 2017–18 accounted for an estimated 22 per cent of world exports. A smaller Russian crop in 2018–19 is therefore expected to have considerable impact on reducing world supply.

In 2018–19 US production is forecast to rise marginally. However, it is still expected to remain well below the 10-year average because poor growing conditions in major winter wheat areas in the Great Plains region will limit the yield potential for a second consecutive year.

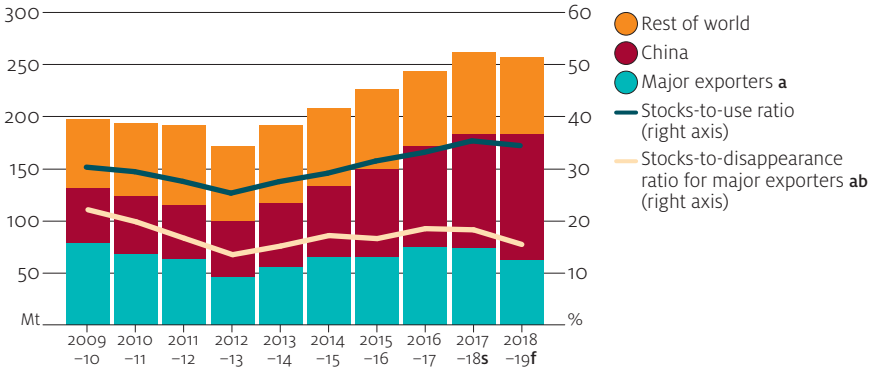
US seasonal conditions, 15 May 2018



Source: US Department of Agriculture

In 2018–19 lower supply and higher import demand will result in lower wheat stocks in major exporting countries. This is expected to more than offset continued growth of stocks in China and cause global closing stocks to fall by 2 per cent to a forecast 258 million tonnes. Lower availability means that markets will react more strongly to any adverse seasonal conditions. This could cause additional volatility in world prices leading into the 2019–20 harvest.

World wheat closing stocks, 2009–10 to 2018–19

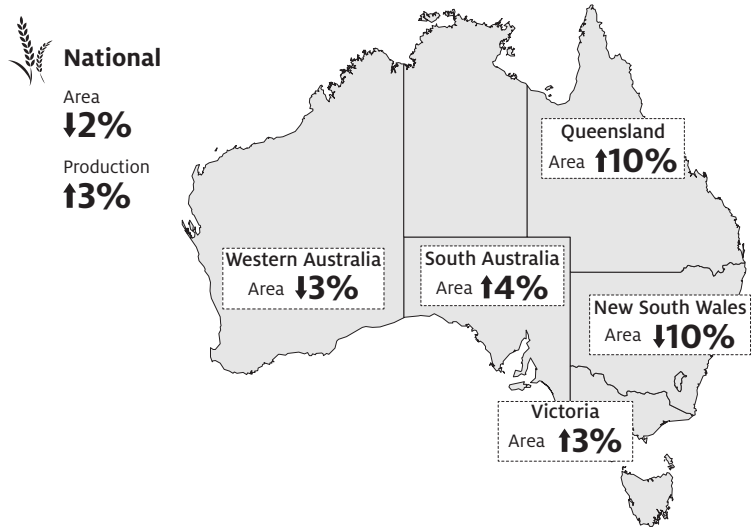


a Argentina, Australia, Canada, the European Union, Kazakhstan, the Russian Federation, Ukraine and the United States. **b** Disappearance defined as domestic consumption plus exports.
f ABARES forecast. **s** ABARES estimate.

Australian wheat plantings to fall marginally

In 2018–19 area planted to wheat in Australia is forecast to fall by 2 per cent to 12 million hectares. Planting conditions in northern New South Wales have been poor for wheat and relative returns are strong for competing feed grains such as barley.

Wheat area and production, forecast year-on-year change, Australia, 2018–19



Seasonal conditions during autumn 2018 were mixed but generally unfavourable for crop establishment. Timely rainfall in May across most parts of Western Australia, South Australia, Victoria and southern New South Wales facilitated sowing of winter crops. In contrast, very warm and dry conditions in most parts of Queensland and northern New South Wales depleted soil moisture and slowed planting.

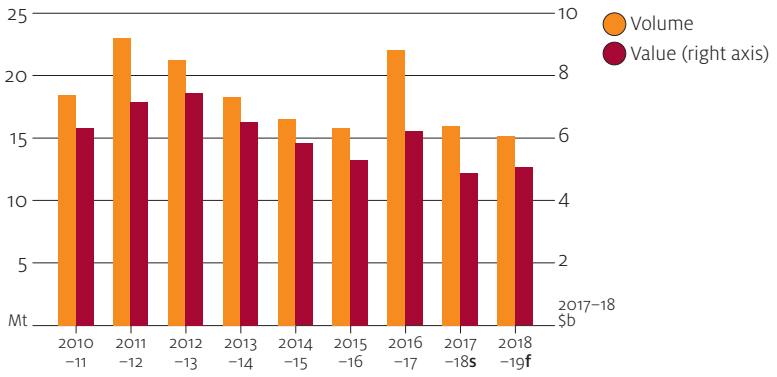
The Bureau of Meteorology's seasonal rainfall outlook for June to August 2018 indicates that a drier than average winter is likely for most Australian cropping regions. As a result, yields for 2018–19 are forecast to remain below the 10-year average but higher than the low levels achieved in 2017–18. If realised, wheat production is forecast to rise by 3 per cent to 21.9 million tonnes. However, below average stored soil moisture and a poor outlook for many cropping regions are significant downside risks to this production forecast. Timely and sufficient rainfall will be required to achieve forecast yields.

Value of wheat exports to rise despite lower shipments

In 2018–19 the volume of Australian wheat exports is forecast to fall by 5 per cent to 15.2 million tonnes. Lower exportable supplies are expected to be available because of lower carry-in stocks than in 2017–18 and strong domestic demand for feed grains as a result of dry conditions.

The average unit value of Australian wheat exports is forecast to rise by 11 per cent in 2018–19, reflecting higher world prices for wheat and an assumed depreciation of the Australian dollar. Australia mostly exports to Asian markets such as China, Indonesia, the Republic of Korea and Vietnam. Demand in Asia is expected to grow in 2018–19. However exports from major competitors such as the Black Sea region and the United States are expected to be constrained as a result of low or falling production. The rise in average unit value is expected to more than offset the fall in export volume and cause the value of Australian wheat exports to rise by 6 per cent to $5.2 billion.

Wheat exports, Australia, 2010–11 to 2018–19



f ABARES forecast. **s** ABARES estimate.

Outlook for wheat

Category	unit	2016–17	2017–18 s	2018–19 f	*% change*
World					
Production	Mt	754	758	743	*– 1.9*
Black Sea region **a**	Mt	114	127	114	*– 10.3*
China	Mt	129	130	129	*– 0.7*
European Union	Mt	144	151	150	*– 1.0*
India	Mt	86.0	98.5	93.5	*– 5.1*
United States	Mt	62.8	47.4	48.5	*2.3*
Consumption	Mt	736	740	748	*1.0*
human	Mt	504	513	521	*1.5*
feed	Mt	146	143	143	*– 0.1*
Closing stocks	Mt	244	262	258	*– 1.6*
Stocks-to-use ratio	%	33.1	35.4	34.4	–
Trade	Mt	175	177	184	*3.9*
Exports **b**					
Argentina	Mt	12.0	13.1	13.5	*3.1*
Australia **c**	Mt	22.1	16.0	15.2	*– 5.0*
Black Sea region **a**	Mt	53.2	64.0	61.5	*– 3.9*
Kazakhstan	Mt	7.4	8.1	7.7	*– 4.9*
Russian Federation	Mt	27.8	39.1	36.8	*– 5.9*
Ukraine	Mt	18.0	16.9	17.0	*0.6*
Canada	Mt	20.3	21.8	21.9	*0.5*
European Union	Mt	27.8	24.9	27.5	*10.4*
United States	Mt	28.7	24.8	26.2	*5.6*
Price **d**	US$/t	197	230	243	*5.7*
Australia					
Area	’000 ha	12,191	12,237	11,953	*– 2.3*
Production	kt	31,819	21,244	21,901	*3.1*
Exports **c**	kt	22,057	15,988	15,205	*– 4.9*
value	A$m	6,094	4,887	5,170	*5.8*
APW pool return	A$/t	268	305	322	*5.5*

a Kazakhstan, Russian Federation and Ukraine. **b** Local marketing years. **c** July–June years. **d** US no. 2 hard red winter wheat, fob Gulf, July–June. **f** ABARES forecast. **s** ABARES estimate.
Sources: ABARES; Australian Bureau of Statistics; International Grains Council; US Department of Agriculture

Coarse grains

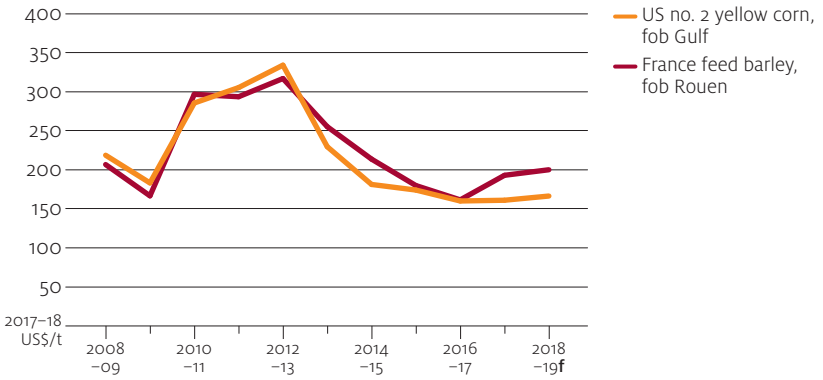
Nathan Pitts and Andrew Cameron

- World coarse grain indicator prices are forecast to increase in 2018–19 due to lower global supplies.
- Industrial use of corn is expected to increase, driven by greater biofuel use in China.
- Australian farmers are expected to increase the area planted to barley in response to favourable prices.

Prices to increase in response to falling supplies

The 2018–19 world coarse grain indicator price (US no. 2 yellow corn, fob Gulf) is forecast to be US$170 per tonne. This is historically low but 6 per cent higher than the 2017–18 estimate. In 2018–19 the world indicator price for barley (France feed barley, fob Rouen) is also forecast to average 6 per cent higher at US$205 per tonne. These increases are expected to be largely driven by a fall in coarse grain stocks as a result of rising feed and industrial use in China.

World coarse grain indicator prices, 2008–09 to 2018–19



f ABARES forecast.

South American production to increase

In 2018–19 world production of coarse grains is forecast to increase by 2 per cent to 1.3 billion tonnes due to increased South American corn production. Global area planted and average yields are both forecast to increase by 1 per cent.

Corn

World corn production is forecast to be just over 1 billion tonnes in 2018–19, driven by higher yields in South America. Corn production in Brazil is forecast to increase by 10 per cent to around 96 million tonnes in 2018–19. This reflects an expected return to more favourable seasonal conditions after reduced safrinha (second-season) production in some regions in 2017–18. Yields are forecast to increase by 7 per cent and planted area by 4 per cent. Maize production in Argentina, the second-largest producer in South America, is forecast to increase by 24 per cent to 41 million tonnes, driven by an assumed 27 per cent increase in yields following a dry 2017–18 season.

US production is forecast to decrease by 4 per cent to 357 million tonnes, assuming a return to average yields following record yields in 2016–17 and 2017–18. Global area planted to corn is expected to decrease marginally.

In 2018–19 Chinese corn production is forecast to increase by 4 per cent to around 225 million tonnes, following declines in 2016–17 and 2017–18. Area planted to corn in China is expected to be similar to 2017–18, when farmers reduced plantings in response to the removal of China's corn price support scheme in March 2016.

Barley

In 2018–19 world barley production is forecast to increase by 2 per cent to 147 million tonnes. This will be driven by a small increase in planted area as growers respond to higher prices. The area planted to barley is forecast to increase in all major producing countries, with the exception of Ukraine.

EU production is forecast to increase by 4 per cent to just over 61 million tonnes in 2018–19, following two consecutive years of falling production. Area planted to barley is forecast to increase by 2 per cent, and yields are assumed to return to average after a poor season the previous year.

Despite an assumed 2 per cent increase in area planted to barley in the Russian Federation in 2018–19, production is forecast to fall by 7 per cent to around 19 million tonnes. This reflects a return to average yields after the record yields achieved in 2017–18.

Consumption to grow

In 2018–19 world coarse grain consumption is forecast to increase by 2 per cent to just under 1.4 billion tonnes. This mainly reflects increasing demand for feed grains from livestock industries and continued growth in industrial demand, particularly for corn-based ethanol. Industrial use of barley is also expected to grow, particularly for malting barley used in beer production.

Corn

Consumption of corn in 2018–19 is forecast to increase by 2 per cent to just under 1.1 billion tonnes, reflecting continuing growth in demand for corn for feed and industrial use.

Chinese corn consumption is forecast to increase to a record 249 million tonnes in 2018–19, largely due to the proposed ethanol blending mandate boosting demand for industrial-use corn. An additional 40 million tonnes of corn per year would be required to reach the Chinese ethanol production target. This would rapidly deplete China's corn stocks. Increased Chinese ethanol production would also result in a rise in the co-production of livestock feed made from dried distillers grains with solubles (DDGS). Increased amounts of DDGS may reduce demand for other feed grains and feed supplements.

In 2018–19 US corn consumption is forecast to decrease marginally to around 317 million tonnes, with reductions in feed use more than offsetting increases in industrial use.

Barley

In 2018–19 world barley consumption is forecast to increase by 2 per cent to 147 million tonnes. Feed consumption is expected to grow by 3 per cent because of strong global feed demand from livestock industries. Demand for malting barley is forecast to remain strong as beer consumption continues to increase, particularly in Asia.

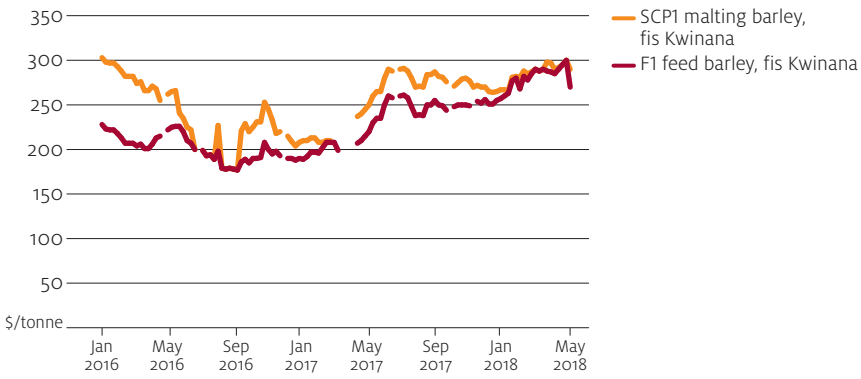
World stocks forecast to fall considerably

In 2018–19 world coarse grain closing stocks are forecast to fall by 13 per cent to 202 million tonnes, largely driven by decreases in corn stocks. World closing stocks of corn are forecast to fall by 15 per cent to 170 million tonnes. This mainly reflects a drawdown of stocks in China and the United States, as Chinese consumption continues to increase and US production falls. In 2018–19 world closing stocks of barley are forecast to increase by 5 per cent to 20 million tonnes.

Australian barley production to increase

In Australia, area planted to coarse grains is forecast to increase by 14 per cent to 6.0 million hectares in 2018–19, driven by increased barley and grain sorghum sowings. Area planted to barley is expected to increase by 10 per cent to 4.3 million hectares. This is a result of producers responding to strong domestic demand for feed grains. Assuming an average yield of 2.2 tonnes per hectare, barley production is forecast to increase by 3 per cent to around 9.2 million tonnes.

Barley prices, Kwinana, January 2016 to May 2018



fis Free in store.
Source: Farm Weekly

Australian coarse grain exports are forecast to decrease by 43 per cent to 4.7 million tonnes because of significantly higher domestic feed use. Low autumn rainfall in areas where livestock industries are concentrated has increased feed demand and prices. This situation is expected to continue into the first quarter of 2018–19 if the Bureau of Meteorology forecast for below median rainfall is realised.

Prices for domestic feed grain are near parity with prices for higher grade grain. As a result, a higher proportion of all grain production is expected to be sold into the domestic feed market in 2018–19.

Barley exports to China are expected to remain the largest component of coarse grain exports, due to strong Chinese demand for malting barley and feed grains. The export volume of coarse grains to China is expected to be supported by continued uncertainty about the ongoing trade dispute between China and the United States. China is expected to substitute US feed grain imports with imports from alternative suppliers.

Outlook for coarse grains

Category	unit	2016–17	2017–18 s	2018–19 f	*% change*
World					
Production	Mt	1,369	1,318	1,342	*1.8*
barley	Mt	147	144	147	*2.4*
corn	Mt	1,078	1,037	1,056	*1.9*
Consumption	Mt	1,331	1,347	1,373	*1.9*
Trade	Mt	199	191	197	*3.2*
Closing stocks	Mt	262	233	202	*– 13.4*
Stocks-to-use ratio	%	19.7	17.3	14.7	–
Corn price **a**	US$/t	157	161	170	*5.6*
Barley price **b**	US$/t	158	193	205	*6.0*
Australia					
Area	’000 ha	6,359	5,284	6,044	*14.4*
barley	’000 ha	4,834	3,878	4,264	*10.0*
grain sorghum	’000 ha	368	531	918	*72.8*
Production	kt	17,352	11,983	13,211	*10.2*
barley	kt	13,506	8,928	9,196	*3.0*
grain sorghum	kt	994	1,439	2,308	*60.4*
Exports	kt	10,760	8,132	4,667	*– 42.6*
value	A$m	2,821	2,333	1,501	*– 35.6*
Feed barley price **c**	A$/t	174	251	268	*6.8*
Malting barley price **d**	A$/t	188	261	289	*10.9*

a US no. 2 yellow corn, fob Gulf, July–June. **b** France feed barley, fob Rouen, July–June. **c** Feed 1, delivered Geelong. **d** Gairdner Malt 1, delivered Geelong. **f** ABARES forecast. **s** ABARES estimate.
Sources: ABARES; Australian Bureau of Statistics; International Grains Council; ITC Trade Map; UN Commodity Trade Statistics Database (UN Comtrade); US Department of Agriculture

Oilseeds

Nathan Pitts

- Growth in global production and uncertainty about Chinese tariffs on US imports are forecast to place downward pressure on prices in 2018–19.
- Chinese soybean imports are forecast to surpass 100 million tonnes.
- In 2018–19 Argentine soybean production is expected to boost global supply.
- Australian canola plantings are expected to fall as farmers substitute to barley and wheat.

Oilseed prices to fall

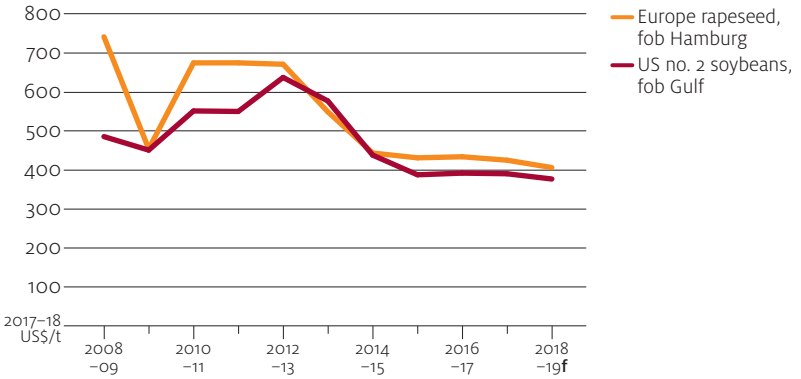
In 2018–19 the world oilseed indicator price (US no. 2 soybeans, fob Gulf) is forecast to remain relatively low at US$385 per tonne. This is due to growth in global soybean production and uncertainty about China placing tariffs on imports of US soybeans.

The price forecast is a 7 per cent upward revision from *Agricultural commodities: March quarter 2018*. This revision is mostly due to increasing prices at the end of 2017–18 resulting from lower than expected Argentine production. Argentina accounted for 18 per cent of world soybean production in the five years to 2016–17. Dry conditions late in 2017–18 reduced Argentine soybean production and stocks. In 2018–19 expected favourable seasonal conditions in Argentina are likely to reduce the average soybean price.

During the closing months of 2017–18 the world price of oilseeds has also been affected by the Chinese Government's April 2018 announcement that it will impose a retaliatory tariff on some imports from the United States, including soybeans (as of early June 2018, these tariffs had not been implemented). Following this announcement, the world oilseed indicator price fell relative to the export price of soybeans from South America. Continued uncertainty regarding the duration and outcome of these negotiations presents upside and downside risks to the world oilseed indicator price forecast.

In 2018–19 the world canola indicator price (Europe rapeseed, fob Hamburg) is forecast to remain low, decreasing by 2 per cent to average US$415 per tonne. This is expected to be driven by continued high production and exports from Canada and Ukraine. Any decrease in China's imports of US soybeans is not expected to offset the forecast decrease in the world canola price. This is because China's import demand for oilseeds is unlikely to shift from soybeans towards alternatives such as canola.

Oilseed indicator prices, 2008–09 to 2018–19



f ABARES forecast.

Argentine soybeans to drive supply growth

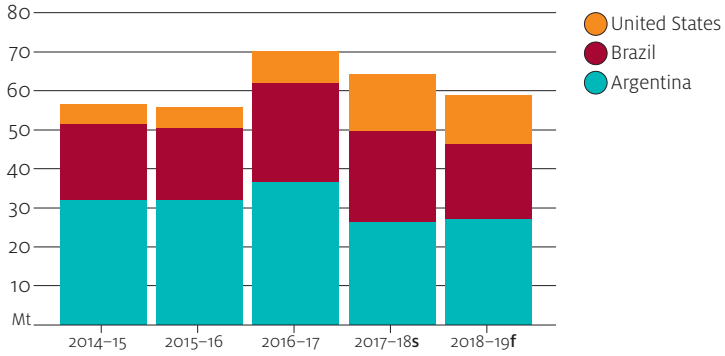
Global oilseed production in 2018–19 is forecast to increase by 4 per cent to reach a record 587 million tonnes. This is primarily due to a forecast 55 per cent increase in Argentine soybean production and yields returning to average following dry conditions in 2017–18. Production from other major soybean producers is expected to remain high, driven by the favourable profitability of soybeans relative to corn.

In 2018–19 production in Brazil and the United States is forecast to be 116 million tonnes and 117 million tonnes respectively. These are slight year-on-year changes but are high in historical terms. Harvested area in Brazil is expected to increase by 3 per cent to 36 million hectares. The US Department of Agriculture's Prospective Plantings survey estimates that US soybean planted area will fall marginally from record highs.

In 2018–19 global rapeseed and canola production is forecast to decrease marginally to 74 million tonnes from the estimated records of 2017–18. Production from major rapeseed and canola exporters (Australia, Canada and Ukraine) is forecast to decrease by 3 per cent to 26 million tonnes but to remain historically high.

World oilseed closing stocks in 2018–19 are forecast to increase slightly to 98 million tonnes. This follows an estimated 9 per cent decrease in 2017–18 primarily due to low Argentine soybean production.

Soybean closing stocks, major exporters, 2014–15 to 2018–19



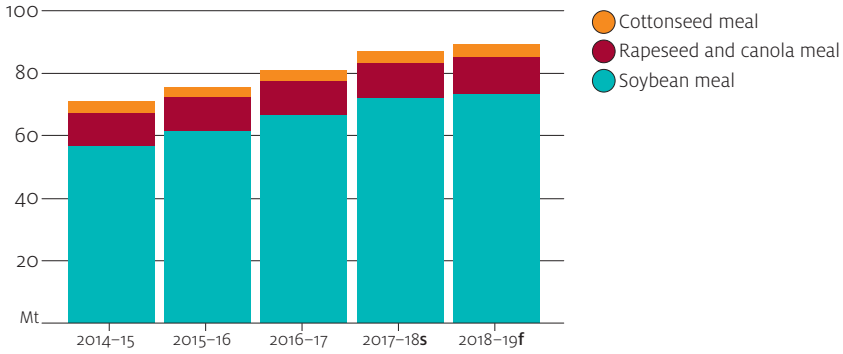
f ABARES forecast. **s** ABARES estimate.

Low prices to increase consumption

World oilseed consumption in 2018–19 is forecast to increase by 2 per cent to 586 million tonnes. Chinese soybean consumption is expected to increase by 5 per cent to reach 117 million tonnes. The increase in China is lower than previous years, reflecting higher import prices and slower growth in demand for oilseed meal as animal feed in China. However, low soybean prices are expected to stimulate consumption in other markets, particularly in other Asian countries and the European Union.

In 2018–19 consumption of rapeseed and canola is expected to reach 75 million tonnes, an increase of 3 per cent. This is expected to be largely driven by increased consumption in China. However, growth in Chinese consumption is expected to be constrained by limited global supplies and nutritional requirements limiting the substitution away from soybeans in pig and poultry feed rations. EU rapeseed consumption is expected to increase only marginally because US soybeans redirected from China will keep soybean meal competitively priced.

Feed consumption of select meals, China, 2014–15 to 2018–19



f ABARES forecast. **s** ABARES estimate.

Chinese soybean imports to surpass 100 million tonnes

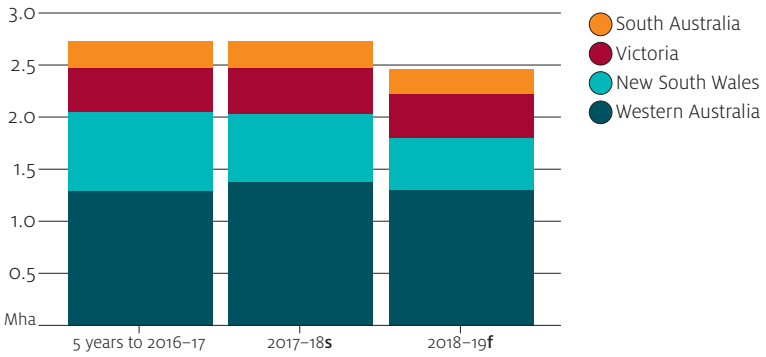
Global oilseed trade in 2018–19 is forecast to increase by 6 per cent to 185 million tonnes. Chinese soybean imports are expected to remain the largest component of world trade and be increasingly reliant on South American supply. Chinese soybean imports are forecast to increase by 3 per cent to 101 million tonnes. However, low stocks in South America mean that a significant proportion of Chinese imports will continue to be sourced from the United States regardless of the outcome of ongoing trade negotiations. Chinese imports from the United States will increase from around September when the US soybean marketing year begins and marketing from other major producers decreases due to counter-seasonal production.

Global rapeseed and canola imports in 2018–19 are forecast to decrease by 8 per cent to 16 million tonnes when increases in Chinese imports are more than offset by decreases elsewhere. Imports in the European Union are expected to decrease by 16 per cent because a higher proportion of consumption will be sourced from domestic rapeseed production.

Australian canola production to fall

Area planted to canola is expected to decrease by 10 per cent to 2.5 million hectares because of lower expected returns compared with cereal crops. Canola sowing is also expected to be limited by rotational constraints and unfavourable planting conditions in New South Wales and Western Australia. Production is forecast to decrease by 16 per cent to 3.1 million tonnes and yields are assumed to average 1.3 tonnes per hectare. According to the Bureau of Meteorology, winter rainfall is likely to be below median for most growing regions except Western Australia—presenting a downside risk to forecast yields.

Area planted to canola, by state, 2012–13 to 2018–19



f ABARES forecast. **s** ABARES estimate.

Canola exports in 2017–18 are estimated to be 2.4 million tonnes, revised down by 3 per cent since *Agricultural commodities: March quarter 2018*. Most Australian canola exports are sent to the European Union for use as biodiesel feedstock. The revised estimate is based on higher than expected competition from other biodiesel feedstocks—particularly soybean oil from Argentina. In 2018–19 Australian canola exports are forecast to decrease by 17 per cent to 2.0 million tonnes as a result of lower Australian production and ample export supplies in Canada and Ukraine.

Outlook for oilseeds

Category	**unit**	**2016–17**	**2017–18 s**	**2018–19 f**	***% change***
World					
Production	Mt	565	562	587	*4.4*
Consumption	Mt	546	572	586	*2.4*
oilseed meal	Mt	311	332	343	*3.3*
vegetable oil	Mt	185	193	198	*2.6*
Exports	Mt	167	174	185	*6.3*
Closing stocks	Mt	107	97.0	98.4	*1.0*
Stocks-to-use ratio	%	19.6	16.9	16.8	–
Soybean indicator price **a**	US$/t	384	390	385	*– 1.3*
Canola indicator price **b**	US$/t	425	425	415	*– 2.4*
Australia					
Total production	kt	5,644	5,269	4,402	*– 16.5*
winter	kt	4,319	3,677	3,101	*– 15.7*
summer	kt	1,325	1,592	1,301	*– 18.3*
Canola					
Production	kt	4,313	3,669	3,096	*– 15.6*
Exports **c**	kt	3,599	2,449	2,025	*– 17.3*
value	A$m	2,128	1,356	1,113	*– 17.9*
Price **d**	A$/t	530	515	514	*– 0.2*

a US no. 2 soybeans, fob Gulf. **b** Rapeseed, Europe, fob Hamburg, July–June. **c** July–June years.
d Delivered Melbourne, July-June**. f** ABARES forecast. **s** ABARES estimate.
Sources: ABARES; Australian Bureau of Statistics; US Department of Agriculture

Sugar

Benjamin K Agbenyegah

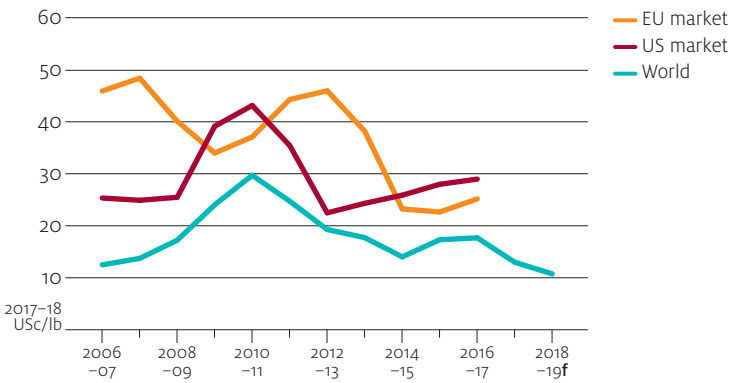
- Record world sugar supply is expected to drive prices down to a 16-year low in 2018–19.
- World sugar stocks are forecast to rise to record levels due to high carry-over stocks and world production exceeding consumption for the second year in a row.
- Returns to Australian canegrowers are forecast to fall to $30 per tonne.

World sugar prices to fall further

The world indicator price for raw sugar (Intercontinental Exchange, nearby futures, no. 11 contract) is forecast to fall by 15 per cent to average US11 cents a pound in 2018–19 (October to September). If realised, the world sugar indicator price would be the lowest since 2003–04, when the price was around US9 cents a pound (in 2017–18 dollars). In 2018–19 carry-over stocks are expected to reach record levels and production to be higher than consumption. If realised, world sugar supplies would exceed record levels.

Support policies in the European Union and countries such as India, Thailand and the United States are expected to continue to keep sugar prices well above the world price, providing an incentive for higher production.

Sugar prices, 2006–07 to 2018–19 a



a Year is October to September. f ABARES forecast.
Sources: European Commission; US Department of Agriculture

World sugar production to fall but remain high in 2018–19

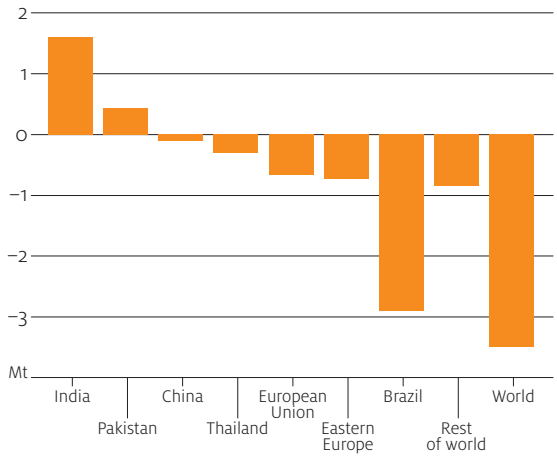
In 2018–19 world sugar production is forecast to decline by 3.5 million tonnes to 191 million tonnes. This decline is expected to be largely driven by a fall in sugar production in Brazil—the world's largest sugar producer.

Brazilian sugar production is forecast to fall by 8 per cent to 35 million tonnes in 2018–19 despite an expected rise in cane production. This fall is due to relatively low world sugar prices providing an incentive for Brazilian sugarcane mills to divert cane from sugar to ethanol production. Sugar as a share of cane production in Brazil is forecast to fall by 6 percentage points to 41 per cent.

In 2018–19 EU sugar production is forecast to be around 20 million tonnes, 3 per cent below 2017–18 levels. This decline is due to a return to average yields following the record yields achieved in major EU sugar-producing countries the previous year. Area planted to sugar beet is expected to remain high at 2 million hectares, driven by the continued government support provided to EU beet growers and removal of the EU production quota in October 2017.

Sugar production in India is forecast to increase by 5 per cent to a record 34 million tonnes in 2018–19. The 2017 monsoon rains boosted cane growth and improved cane yields and sugar recovery rates from the 2018–19 crop. Indian cane production is forecast to be 6 per cent higher at a record 420 million tonnes. Sugar production in China and Thailand is forecast to be slightly lower, following record production during the previous season.

Forecast change in volume of world sugar production, by country, 2018–19 **ab**



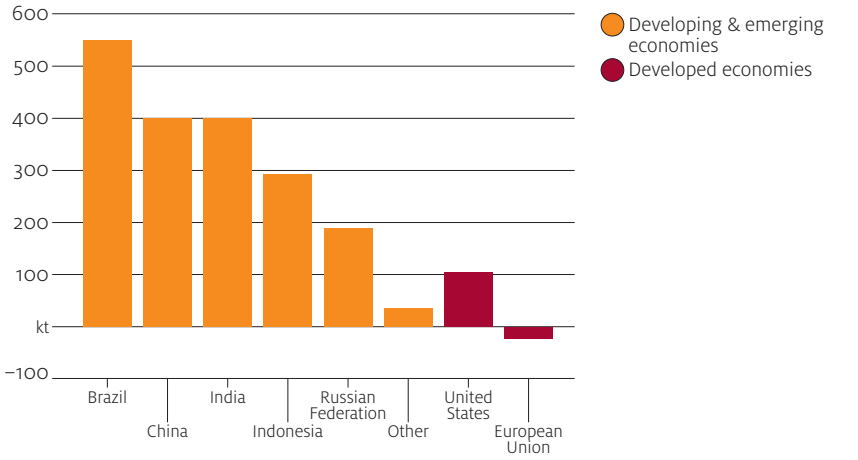
a Volumes are raw equivalents. **b** Year is October to September.
Sources: FO Licht; ISO; US Department of Agriculture

In 2018–19 world sugar exports are expected to be 2 per cent lower due largely to a fall in Brazilian production. Exports are expected to be further constrained by weaker world import demand, particularly in China, the European Union and the Russian Federation.

World sugar consumption to rise moderately in 2018–19

In 2018–19 world sugar consumption is forecast to rise moderately to 187 million tonnes, due mostly to falling prices. Longer-term demand continues to be driven by rising consumer incomes and population growth in developing and emerging economies. In more developed economies, growth in the demand for sugar is expected to be constrained by slow population growth, health-driven dietary changes and the shift to alternative sweeteners. With the exception of the European Union, consumption is forecast to rise slightly in all major sugar-consuming countries, including the Unites States. Sugar consumption is forecast to be stable in other developed economies, including Australia, Canada, Japan and New Zealand.

Forecast changes in volume of world sugar consumption, by country, 2018–19

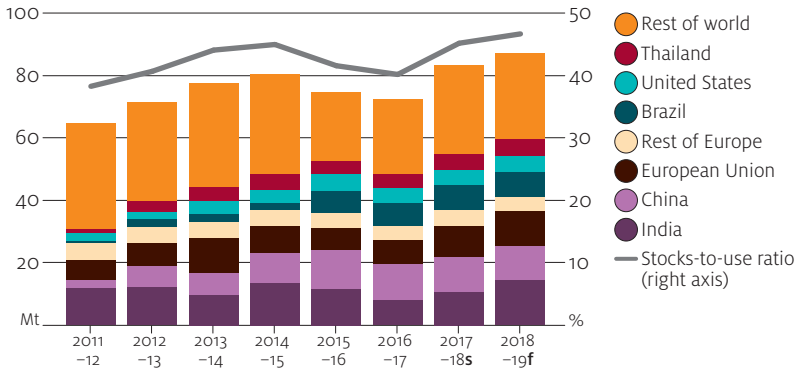


Sources: FO Licht; ISO; US Department of Agriculture

Record world stocks in 2018–19

World closing stocks of sugar are forecast to rise by 5 per cent to a record 87 million tonnes in 2018–19 due to world production exceeding consumption for the second year in a row. Production is forecast to increase most in China, the European Union, India, Thailand. The world stocks-to-use ratio is forecast to be around 47 per cent in 2018–19, up from 45 per cent in 2017–18.

World sugar stocks, by country, 2011–12 to 2018–19 a



a Volumes are raw equivalents and years are from October to September. f ABARES forecast. s ABARES estimate.
Sources: FO Licht; ISO

Outlook for Australian sugar in 2018–19

Low sugar prices to reduce Australian canegrower returns

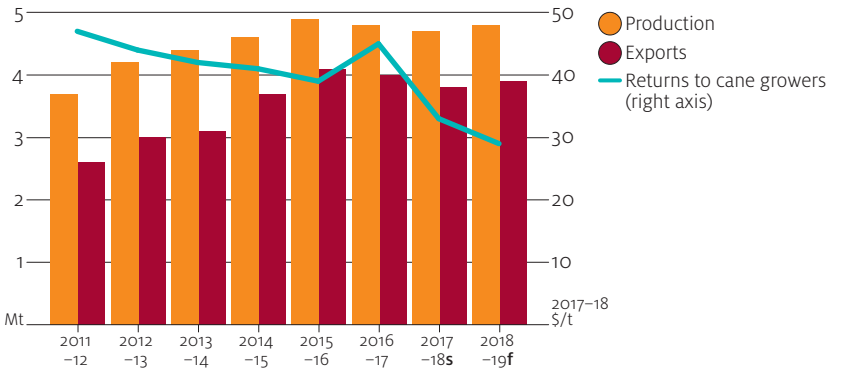
In 2018–19 falling world sugar prices are expected to reduce returns to Australian canegrowers by around 9 per cent to an average of $30 per tonne of cane cut for crushing. Returns are expected to be the lowest since 2007–08, when world sugar prices averaged US14 cents per pound (in 2017–18 US dollars) and growers received A$25 per tonne (in 2017–18 Australian dollars). Improved market access for Australian sugar could increase the volume of Australian exports but is unlikely to influence the price received.

Australian sugar production to increase slightly

Australian sugar production is forecast to increase by 3 per cent to 4.8 million tonnes in 2018–19. Cane production, area harvested and yields are expected to remain largely unchanged. Low prices, competition for a land and a shift by Queensland farmers to horticulture production are expected to continue to constrain growth in cane plantings.

Australian sugar exports are forecast to remain largely unchanged at around 3.9 million tonnes in 2018–19, reflecting stable domestic production. However, falling world prices are expected to reduce the value of sugar exports by 8 per cent to around $1.7 billion.

Sugar production, exports and returns to canegrowers, Australia, 2011–12 to 2018–19 a



a Production and exports are raw equivalents and years are from July to June. **f** ABARES forecast. **s** ABARES estimate.

Outlook for sugar a

Category	unit	2016–17	2017–18 s	2018–19 f	*% change*
World b					
Production	Mt	178	195	191	*– 1.8*
Brazil	Mt	41.1	37.9	35.0	*– 7.7*
Consumption	Mt	181	184	187	*1.6*
Exports	Mt	68.8	67.0	66.0	*– 1.5*
Closing stocks	Mt	72.5	83.2	87.4	*5.0*
Stocks-to-use ratio	%	40.2	45.2	46.7	–
Price	USc/lb	17.3	13.0	11.0	*– 15.4*
Australia c					
Area	’000 ha	372	380	385	*1.3*
Production	kt	4,804	4,700	4,830	*2.8*
Exports	kt	3,970	3,843	3,863	*0.5*
value	A$m	2,424	1,808	1,663	*– 8.0*
Returns to canegrowers	A$/t	44.4	33.5	29.7	*– 9.1*

a Volumes are raw value equivalent. **b** October–September years. **c** July–June years. **f** ABARES forecast. **s** ABARES estimate.

Sources: ABARES; Australian Bureau of Statistics; Australian Sugar Milling Council, Annual Review, Brisbane; F.O. Licht, International Sugar and Sweetener Report, World Sugar Balances, Ratzeburg, Germany; International Sugar Organization, London; US Department of Agriculture, Washington

Cotton

Benjamin K Agbenyegah

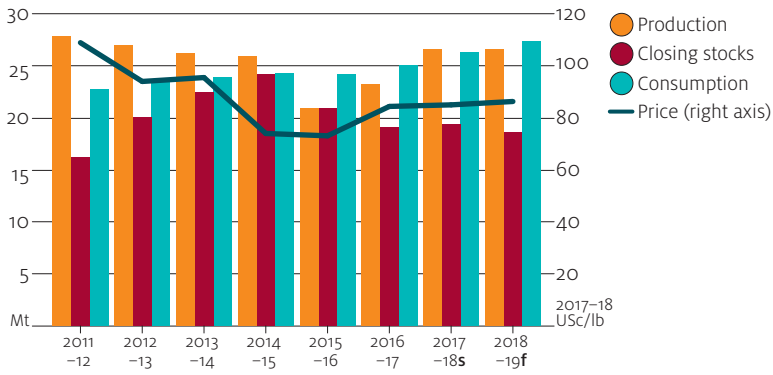
- Record world demand for cotton is expected to support prices in 2018–19.
- Australian cotton exports are forecast to rise in 2018–19 despite an expected decline in production.
- In 2018–19 returns to Australian cotton growers are expected to increase by 4 per cent to $658 per bale.

World cotton prices to rise in 2018–19

In 2018–19 the world indicator price for cotton (Cotlook 'A' index) is forecast to rise by 5 per cent to average US90 cents per pound. This forecast is supported by record world consumption of cotton, driven by growing world demand for cotton textiles and clothing. World cotton consumption is expected to exceed production in 2018–19, leading to reductions in world stocks and the stocks-to-use ratio.

In 2017–18 the world indicator price is estimated to average US86 cents per pound, up from around US83 cents per pound in 2016–17.

World cotton production, consumption, stocks and indicator price, 2011–12 to 2018–19 **a**



a August to July marketing year. **f** ABARES forecast. **s** ABARES estimate.

World cotton production to remain unchanged in 2018–19

In 2018–19 world cotton production is forecast to remain largely unchanged at around 27 million tonnes despite an expansion in planting. The profitability of cotton is expected to result in an increase in the world area planted to around 34 million hectares. Production is expected to fall in Australia and the United States, rise in Brazil, Pakistan and Turkey and remain stable in India and China.

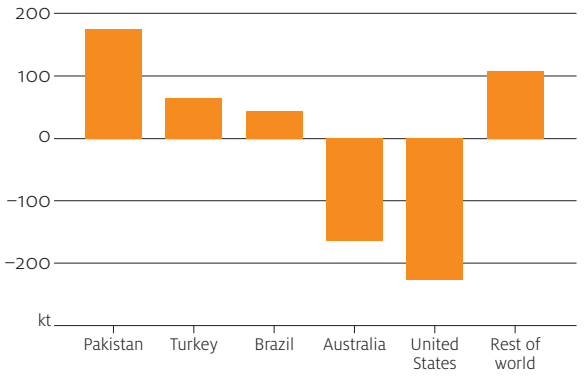
In 2018–19 cotton production in Pakistan is forecast to rise by 10 per cent to around 2 million tonnes. This is due to a 12 per cent increase in area planted to 2.9 million hectares. Expansion is being encouraged by rising domestic cotton prices and an expected increase in the availability of irrigation water. Average lint yield is expected to be lower because of damage caused by pink bollworm and whitefly.

Cotton production in Brazil is forecast to increase by 2 per cent to 1.9 million tonnes in 2018–19, mainly driven by increased planting. This is expected to be driven by higher domestic cotton prices and a recovery of the Brazilian economy.

In 2018–19 cotton production in India—the world's largest producer—is forecast to remain largely unchanged at 6.2 million tonnes. Area planted to cotton is expected to fall by 3 per cent to around 12 million hectares. This is expected to be offset by higher average lint yields, assuming that infestations of pink bollworm in central and south India are brought under control.

In 2018–19 US cotton production is forecast to fall by 5 per cent to 4.3 million tonnes despite a forecast rise in planted area. Area planted to cotton is expected to increase to 4.6 million hectares in response to favourable prices and government support. However lint yields are expected to return to an average of around 0.95 tonnes per hectare, following record yields in 2017–18.

Forecast changes in volume of world cotton production, by country, 2018–19

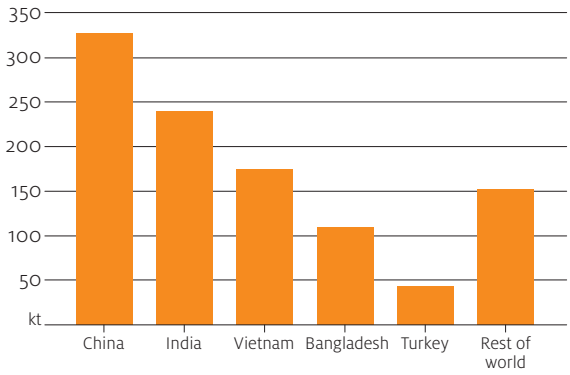


Record world cotton consumption in 2018–19

In 2018–19 world cotton consumption is forecast to rise by 4 per cent to a record of over 27 million tonnes. Demand for raw cotton is expected to be driven by strong global demand for textiles. Expansion of the middle class in emerging economies and the resulting rise in incomes are driving an increase in world demand for cotton-based textiles and clothing. Demand driven largely by concern about the environmental impact of synthetics is also encouraging cotton use in textiles.

In 2018–19 cotton consumption in China is forecast to rise by 4 per cent to 8.7 million tonnes—the highest in seven years. This is partly in response to lower domestic prices following reductions in government purchases. Consumption in India is forecast to reach a record 5.5 million tonnes, up by 5 per cent from 2017–18.

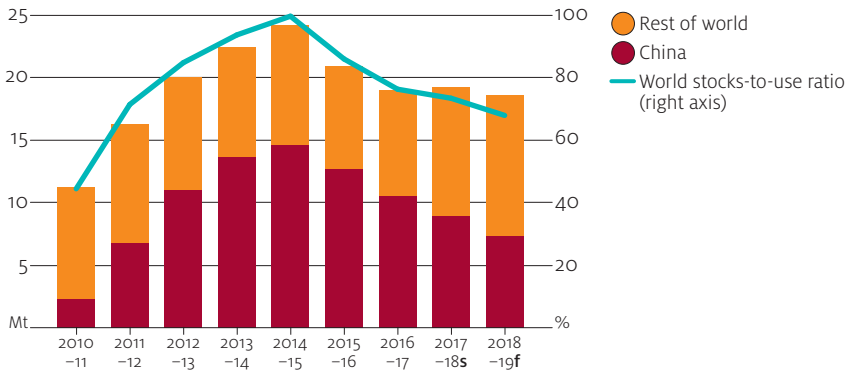
Forecast changes in volume of world cotton consumption, by country, 2018–19



World cotton stocks to decline in 2018–19

In 2018–19 world cotton stocks are forecast to be under 19 million tonnes, down by nearly 1 million tonnes from the previous production year, partly due to a significant fall in Chinese stocks. However, this is partially offset by a rise in stocks for the rest of the world. Chinese stocks are expected to fall by 18 per cent to 7.3 million tonnes by the end of the year. In contrast, stocks in the rest of the world are expected to increase by 7 per cent to around 11 million tonnes. The average world stocks-to-use ratio is expected to be 68 per cent in 2018–19, down from around 74 per cent in 2017–18.

World cotton stocks, 2010–11 to 2018–19



f ABARES forecast. **s** ABARES estimate.

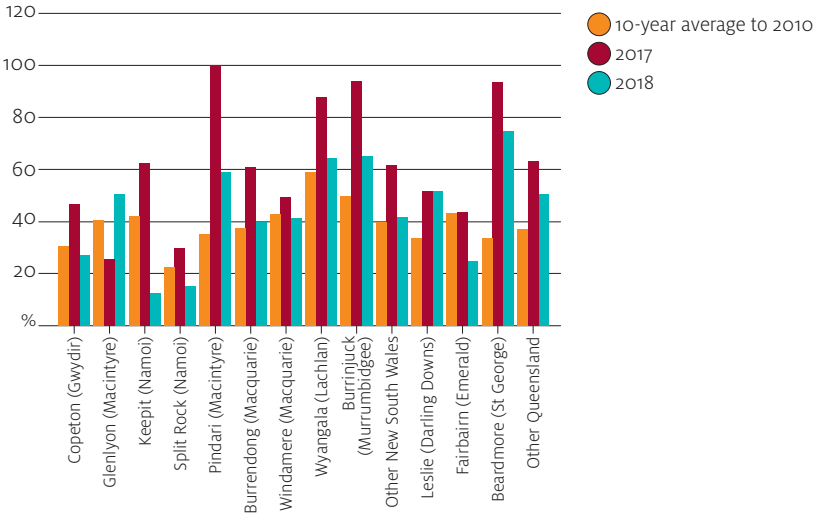
Outlook for Australian cotton in 2018–19

Production to fall in 2018–19

In 2018–19 Australian cotton production is forecast to fall by 21 per cent to 830,000 tonnes, largely due to a decline in cotton plantings. Cotton area is expected to be 415,000 hectares, down from 500,000 hectares the previous season. This is due to significantly reduced water levels in the irrigation dams serving cotton-growing regions, and low levels of stored soil moisture following dry seasonal conditions.

At 16 May 2018, public irrigation dams serving Australia's cotton-growing regions averaged 44 per cent of capacity, 18 percentage points lower than at the same date in 2017. Despite this decline, dam levels are still above the 10-year average to 2010 of 39 per cent, a period which included several years of severe drought.

Storage levels of main irrigation dams, at 16 May

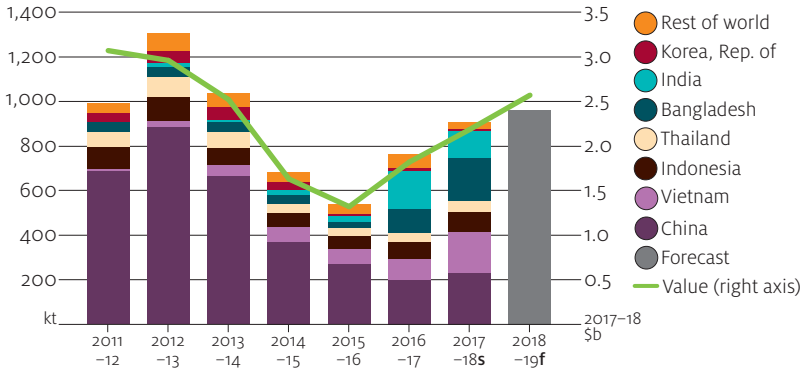


Source: Bureau of Meteorology

Australian cotton exports to rise despite a fall in production

In 2018–19 Australian cotton exports are forecast to increase by 6 per cent to 963,000 tonnes despite an expected decline in production. A drawdown of stocks from high production in 2017–18 is expected to help meet strong demand for high-quality cotton from Asian countries such as Bangladesh, China, India and Vietnam. Higher world prices are expected to contribute to an 18 per cent rise in the value of Australian cotton exports to around $2.6 billion in 2018–19.

Australian cotton exports, by destination, 2011–12 to 2018–19

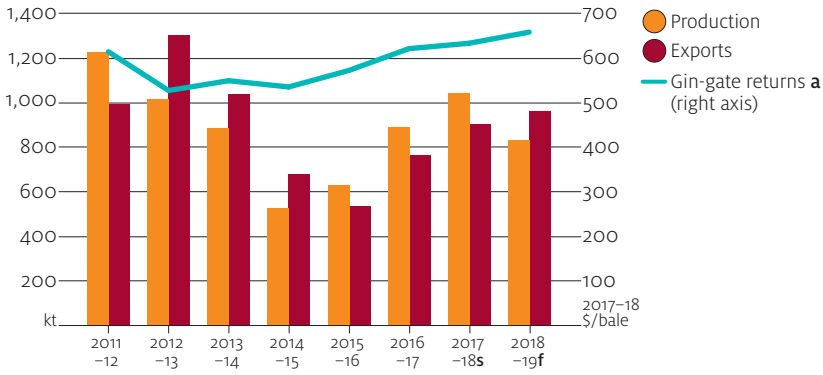


f ABARES forecast. **s** ABARES estimate.
Source: Australian Bureau of Statistics

Higher prices to support returns to Australian cotton growers in 2018–19

In 2018–19 returns to Australian cotton growers are forecast to increase by 4 per cent year-on-year to average $658 per bale (227 kilograms) of lint, including the value of cottonseed and net of ginning costs. This forecast assumes higher world cotton prices in 2018–19.

Cotton production, exports and gin-gate returns, Australia, 2011–12 to 2018–19



a Value of lint and cottonseed, less ginning costs. **f** ABARES forecast. **s** ABARES estimate.

Outlook for cotton [a]

Category	unit	2016–17	2017–18 s	2018–19 f	*% change*
World [a]					
Production	Mt	23.2	26.6	26.6	*na*
Consumption	Mt	25.0	26.3	27.3	*3.8*
Exports	Mt	8.2	8.7	9.1	*4.6*
Closing stocks	Mt	18.9	19.4	18.6	*– 4.1*
Stocks-to-use ratio	%	75.8	73.9	68.2	–
Cotlook 'A' index	USc/lb	82.8	86.0	90.0	*4.7*
Australia [b]					
Area harvested	'000 ha	557	500	415	*– 17.0*
Lint production	kt	891	1,044	830	*– 20.5*
Exports	kt	763	905	963	*6.4*
value	A$m	1,788	2,185	2,568	*17.5*
Gin-gate returns [c]	A$/bale	492	633	658	*3.9*

a August–July years. **b** July–June years. **c** Value of lint and cottonseed less ginning costs. **f** ABARES forecast. **s** ABARES estimate.

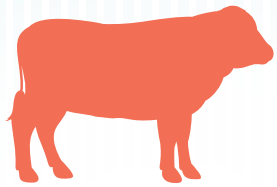
Sources: ABARES; Australian Bureau of Statistics; Cotton Australia Statistics; Cotton Outlook, Merseyside, United Kingdom; US Department of Agriculture, Washington

Agriculture

Livestock

LIVESTOCK

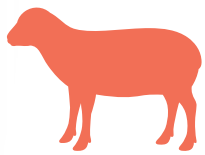
↓8%
to **420 Ac/kg**[a]
in 2018–19



Beef and veal

Australian cattle prices to fall due to higher production and competition in export markets.

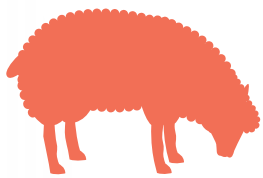
↑2%
to **625 Ac/kg**[b]
in 2018–19



Sheep meat

Lamb prices to rise, driven by strong export demand.

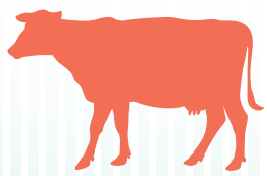
↑16%
to **1,990 Ac/kg**[c]
in 2018–19



Wool

Continued strong demand for superfine wool and limited supply growth to drive wool prices higher.

↑2%
to **48 Ac/L**[d]
in 2018–19



Dairy

Milk prices to rise due to a falling Australian dollar and increased competition for milk.

a Australian weighted average saleyard price of beef cattle. **b** Australian weighted average saleyard price of lamb. **c** Eastern Market Indicator price, clean equivalent. **d** Australian average farmgate milk price.

Beef and veal

Jack Mullumby

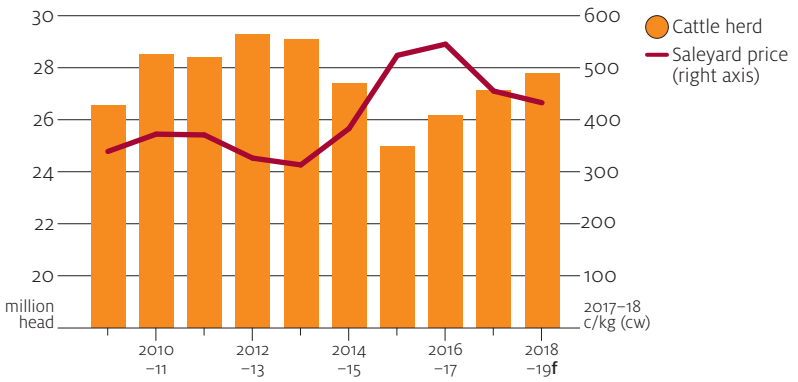
- Australian cattle prices are forecast to fall by 8 per cent but remain around 8 per cent above the 10-year average to 2016–17.
- Export prices for frozen beef are forecast to rise and chilled beef prices to fall.
- Beef production and exports are forecast to rise despite a fall in average carcase weights.

Saleyard prices to decline in 2018–19

In 2018–19 the weighted average saleyard price of beef cattle is forecast to fall by around 8 per cent to average 420 cents a kilogram. If realised, this would be around 8 per cent higher than the 10-year average to 2016–17. This forecast fall reflects rising cattle supplies in Australia and strong prices continuing to provide producers with an incentive to expand herds while maintaining a relatively high rate of turn-off. Assuming a return of average seasonal conditions after a dry winter, the Australian cattle herd is forecast to expand for the third consecutive year, rising by around 3 per cent to 27.8 million head in 2018–19. This is marginally higher than the 2013–14 peak of 27.1 million head.

Export prices for Australian beef are expected to fall slightly in 2018–19 after falling by around 2 per cent in the previous year. Prices for Australian chilled beef are forecast to average 4 per cent lower year-on-year as a result of weaker demand and increased competition in the Japanese market. Export prices for frozen Australian beef are forecast to rise by around 3 per cent as a result of tightening cattle supplies in the United States. US herd expansion is forecast to peak in 2018, restricting growth in US cattle slaughter and beef production, particularly in the second half of 2018–19.

Weighted average saleyard price and cattle herd, Australia, 2009–10 to 2018–19



f ABARES forecast.

Rising slaughter to be partially offset by lower carcase weights

In 2018–19 Australian cattle slaughter is forecast to expand by around 4 per cent to 8 million head. This increase mainly reflects an expansion in the opening cattle inventory. However, high cattle prices are expected to provide producers with an incentive to maintain a relatively high rate of turn-off.

Average cattle carcase weights are forecast to decline in 2018–19 by around 1 per cent from the record of 284 kilograms estimated in 2017–18. Rising feed costs are expected to limit growth in feedlot turn-off during 2018–19. Increased cow and heifer slaughter is also expected to reduce average cattle weights. As a result, Australian beef and veal production is forecast to increase by 2.5 per cent to 2.3 million tonnes (carcase weight) in 2018–19.

Increased exports in 2018–19

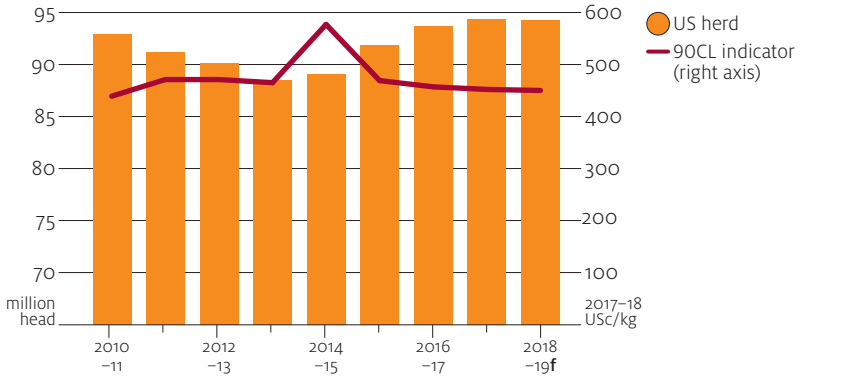
Australian beef exports are forecast to increase by 3 per cent to 1.1 million tonnes (shipped weight) in 2018–19, reflecting an increase in Australian beef and veal production. Most of the increase is forecast to be shipped to China, where strong income growth continues to drive demand for imported beef. In 2018–19 Australian beef exports to China are forecast to increase by 18 per cent to 160,000 tonnes, following a 30 per cent increase in 2017–18.

Slowing US herd expansion to support export prices

In 2018–19 Australian beef exports to the United States are forecast to remain largely unchanged at 230,000 tonnes. US production of lean manufacturing beef is forecast to rise throughout the year because higher feed prices are expected to provide US producers with an incentive to increase cow and heifer turn-off and consolidate breeding inventories.

The forecast increase in US cow slaughter is expected to slow local herd expansion, resulting in a marginal decline in the 2018 US cattle inventory to 94.3 million head. This is likely to limit the supply of cattle for slaughter in the second half of 2018–19, providing some support for prices of US cattle and Australian beef exports.
In 2018–19 the US 90CL frozen beef indicator price is forecast to increase by around 3 per cent to 465 cents per kilogram.

US 90CL frozen beef indicator price and cattle herd, 2010–11 to 2018–19



f ABARES forecast.
Note: US herd refers to 31 December inventory.

Reduced demand for imported beef in Japan

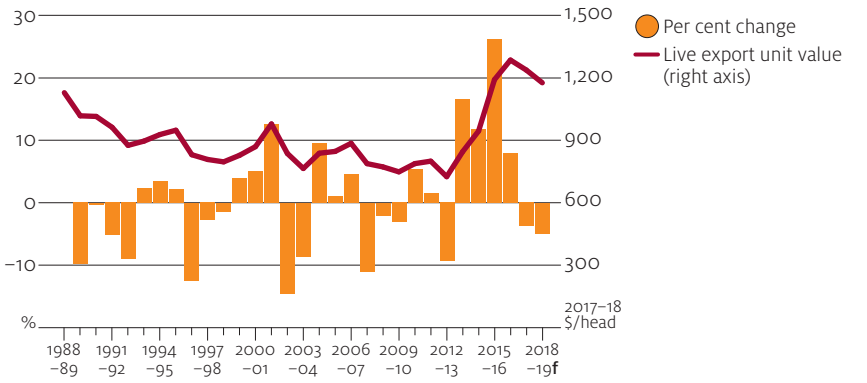
Japanese beef demand is expected to weaken in 2018–19, mainly as a result of slowing income growth and an ageing and declining population. Rising Japanese beef production is also expected to reduce demand for imports, particularly for chilled beef. Combined with continued strong competition from US exports, this is expected to place downward pressure on prices of Australian exports to Japan throughout the year. In 2018–19 the Japanese grassfed fullset indicator price is forecast to fall by 4 per cent to 610 cents per kilogram. During this period, Australian beef and veal exports to Japan are forecast to rise by 6 per cent to 320,000 tonnes. This increase will consist mainly of cheaper frozen cuts.

Increased live cattle exports in 2018–19 to offset lower prices

In 2018–19 the value of Australian live feeder slaughter cattle exports is forecast to fall slightly to $1.1 billion. This decline mainly reflects lower average cattle prices, which are forecast to fall by 4 per cent in 2018–19 to $1,200 per head. Despite this fall, prices for Australian live cattle exports are forecast to remain historically high, around 30 per cent above the $894 per head (in real terms) averaged between 1988–89 and 2016–17.

Live cattle exports are expected to rise by 4 per cent to 925,000 head. Indonesia and Vietnam are expected to remain the primary destinations, accounting for around 80 per cent of Australian live cattle exports. Demand in these markets remains strong and continues to be supported by rising incomes and limited growth in both cold storage infrastructure and local cattle supplies.

Live export unit value and year-on-year change, Australia, 1988–89 to 2018–19



f ABARES forecast.

Outlook for beef and veal

Category	unit	2016–17	2017–18 s	2018–19 f	*% change*
Cattle numbers **ab**	million	26.2	27.1	27.8	*2.6*
beef cattle **a**	million	23.6	24.5	25.1	*2.4*
Slaughterings	’000	7,423	7,904	8,200	*3.7*
Production	kt (cw)	2,069	2,249	2,305	*2.5*
Exports					
Japan	kt (sw)	274	303	320	*5.6*
United States	kt (sw)	204	232	230	*– 0.9*
China	kt (sw)	104	136	160	*17.6*
Korea, Rep. of	kt (sw)	179	167	170	*1.8*
World	kt (sw)	991	1,109	1,145	*3.2*
value	A$m	7,115	7,779	7,965	*2.4*
Live feeder/slaughter cattle exports **c**	’000	817	892	925	*3.7*
value	A$m	1,031	1,112	1,110	*– 0.2*
Prices					
Saleyard cattle	Ac/kg (cw)	535	455	420	*– 7.7*
United States import **d**	USc/kg	447	453	465	*2.6*
Japan import **e**	USc/kg	661	635	610	*– 3.9*

a At 30 June. **b** Includes dairy cattle. **c** Includes buffalo. **d** Cow 90CL US cif price. **e** Chilled grassfed fullset Japan cf price. **f** ABARES forecast. **s** ABARES estimate.

Sources: ABARES; Australian Bureau of Statistics; Meat & Livestock Australia

Sheep meat

Conrad Rees

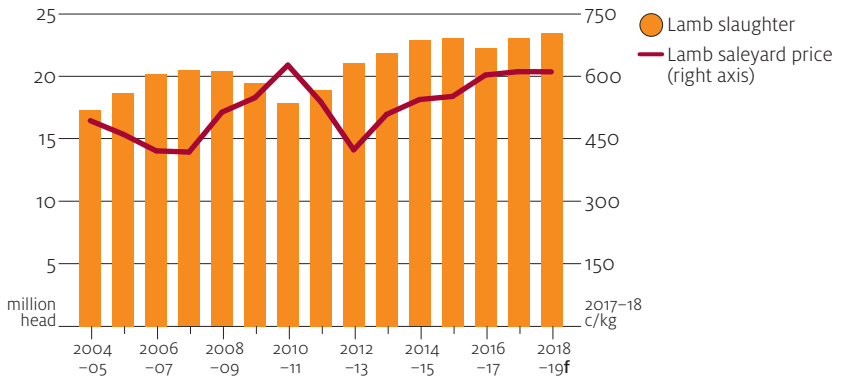
- Average saleyard lamb prices are forecast to rise in 2018–19, reflecting strong export demand.
- The value of Australian sheep meat exports is forecast to increase to $3.3 billion in 2018–19.
- Flock rebuilding to be constrained in 2018–19.

Saleyard prices to rise

Australian saleyard prices for lambs are estimated to have increased by 3 per cent to average 612 cents per kilogram in 2017–18, reflecting strong export demand. Poor seasonal conditions in major sheep-producing regions resulted in increased sheep turn-off in the six months to May 2018. As a result, average saleyard prices for sheep in 2017–18 are estimated to have remained relatively unchanged, averaging 418 cents per kilogram.

In 2018–19 growing export demand and limited flock rebuilding are forecast to place upward pressure on saleyard prices. Prices are expected to increase by 2 per cent to average 625 cents per kilogram for lambs and 425 cents per kilogram for sheep. These forecasts assume no change to live sheep exports.

Saleyard prices for lambs, Australia, 2004–05 to 2018–19



f ABARES forecast.

Sheep meat production to increase

In 2017–18 Australian sheep meat production is estimated to have increased by around 8 per cent to 723,000 tonnes (carcase weight). This reflects increased sheep turn-off due to poor seasonal conditions.

In 2018–19 continued high prices are expected to provide producers with an incentive to balance lamb turn-off with flock rebuilding. As a result, lamb slaughter is forecast to increase by 2 per cent to 23.5 million head. Assuming average seasonal conditions in 2018–19, sheep producers are expected to retain ewes for breeding. Australian sheep meat production is forecast to increase by 2 per cent to 735,000 tonnes.

Flock rebuilding to be constrained

Strong saleyard prices and widespread dry conditions provided producers with an incentive to increase turn-off rates in the second half of 2017–18, reducing the rate of growth in the national flock. As a result, the national sheep flock is estimated to remain relatively constant at around 72 million head.

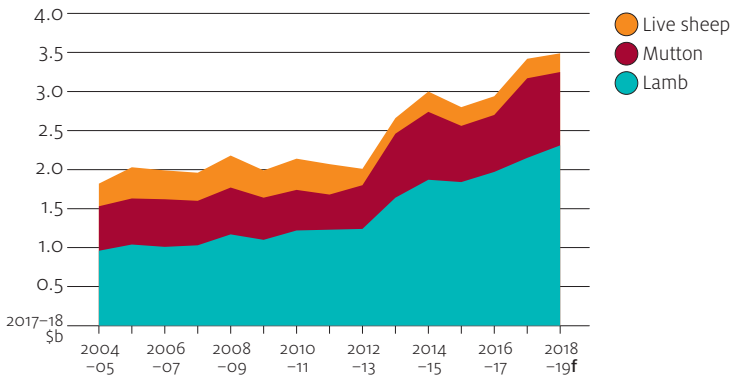
In 2018–19 if average seasonal conditions return after a dry winter, producers are expected to have an incentive to increase flock numbers. Expansion in the national flock is expected to be limited mainly to lamb-producing enterprises. The national flock is forecast to increase by 1 per cent to around 73 million head.

Exports of lamb to rise

In 2018–19 the total value of Australian sheep meat exports is forecast to increase by 4 per cent to $3.3 billion. Higher unit export values are expected to drive the increase in lamb exports. These exports are forecast to increase by 6 per cent to 285,000 tonnes (shipped weight). Mutton exports are forecast to fall by around 7 per cent to 165,000 tonnes.

Income growth and increased meat consumption in China is contributing to strong global demand for sheep meat, primarily lamb. A fall in the relative value of the Australian dollar is expected to contribute to the competitiveness of Australia's exports.

Value of Australian sheep exports, world, 2004–05 to 2018–19



f ABARES forecast.

Competition from New Zealand to continue

New Zealand is the largest sheep meat producer in the world and Australia's main competitor in export markets. In the 10 years to 2017, NZ exports fell by around 15 per cent when sheep farms were converted to dairies. Since then, the rate of conversion has slowed. In 2018–19 NZ sheep meat production is forecast to stabilise and compete strongly with Australian exports. Most of the increase in NZ exports is expected to go to the high-value EU and Chinese markets.

Live exports

The Australian Government has accepted all 23 recommendations made by Dr Michael McCarthy in the review of live sheep export conditions, subject to further testing and consultation regarding a recommendation relating to the heat stress risk assessment model. It is not yet clear what effect the government's overall response will have on the immediate profitability and volume of trade in live sheep.

Many of the recommendations are likely to require a reduction in the stocking density on ships, which will reduce the revenue that can be earned on each voyage. This is likely to reduce the profitability of live exports, and in the long term lead to structural adjustment by sheep farmers, exporters and domestic meat processors.

In the short term, the Australian Government has reaffirmed its policy not to ban live animal exports during the coming northern summer. Assuming minimal disruption to the trade, Australian live sheep exports are forecast to fall marginally to around 1.9 million head in 2018–19. This forecast reflects the expectation of reduced turn-off and assumes average seasonal conditions for the year and flock rebuilding after a dry winter. The value of Australian live exports is forecast to decline by 1 per cent to $250 million, representing 7 per cent of the total value of Australian sheep exports.

Outlook for sheep meat

Category	unit	2016–17	2017–18 s	2018–19 f	*% change*
Sheep numbers **a**	million	72.1	72.1	72.9	*1.1*
Slaughterings					
Lambs	’000	22,344	23,084	23,500	*1.8*
Sheep	’000	6,553	8,175	7,900	*– 3.4*
Production					
Sheep meat	kt (cw)	670	723	735	*1.7*
Exports					
Sheep meat	kt (sw)	390	446	450	*0.9*
value	$m	2,653	3,177	3,318	*4.4*
Live sheep	’000	1,851	1,950	1,900	*– 2.6*
value	$m	233	252	250	*– 0.8*
Prices					
Lambs **b**	c/kg (cw)	592	612	625	*2.1*
Sheep **b**	c/kg (cw)	415	418	425	*1.7*

a At 30 June. **b** Saleyard prices. **f** ABARES forecast. **s** ABARES estimate.

Sources: ABARES; Australian Bureau of Statistics; Australian Wool Exchange; Meat & Livestock Australia

Wool

Conrad Rees

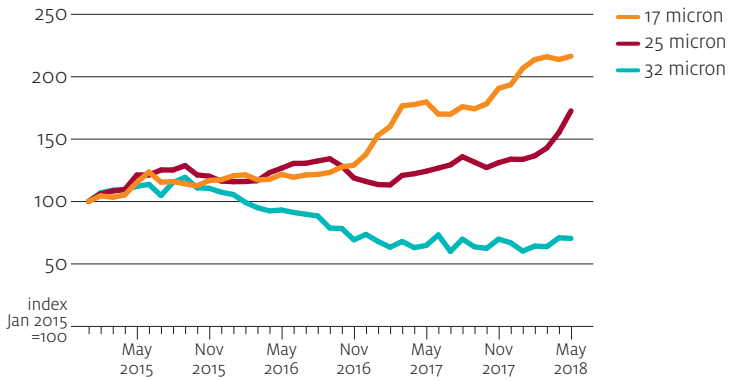
- The Eastern Market Indicator wool price is forecast to rise in 2018–19, reflecting strong demand for superfine wool.
- Wool is becoming increasingly less price competitive relative to alternative fibres.
- The value of Australian wool exports is forecast to increase to $4.7 billion in 2018–19.

Slow supply growth to support wool prices

The Eastern Market Indicator (EMI) wool price is estimated to have increased by 22 per cent in 2017–18 to average 1,723 cents per kilogram. Recent rises in the EMI mostly reflect strong demand for superfine wool (less than 19.5 microns) and slow supply growth placing further upward pressure on prices.

A trend towards crossbreeding for sheep meat production over the last decade has increased the proportion of coarser wools in absolute terms and as a proportion of Australia's total wool clip. In the 12 months to May 2018, average prices received for wool of different classes have continued to diverge. The average price of 17-micron wool was 27 per cent higher and 25-micron wool 37 per cent higher year-on-year. In contrast, the average price of 32-micron wool was down 3.8 per cent year-on-year.

Average wool prices, by micron, Australia, January 2015 to May 2018



In 2018–19 the EMI is forecast to rise by 16 per cent to average 1,990 cents per kilogram. This forecast mainly reflects limited growth in the global supply of superfine and fine wool, which is mostly produced in Australia. Global demand for wool is expected to be sustained over the outlook period. If realised, this forecast would see the EMI reach its highest point in real terms since 1988–89. However, it would still be 24 per cent below the record 2,612 cents per kilogram (2017–18 dollars) averaged in 1987–88.

World wool demand to continue to grow

Fine wool is a niche product in the global fibre market, accounting for around 1 per cent of world textile consumption in the five years to 2017. Processor demand for fine wool is driven by consumer demand for pure wool textiles and high-quality apparel such as suits. Forecast income growth in major textile-consuming markets—such as China, the United States and the European Union—is expected to support global fine and superfine wool demand over the short term.

Wool is becoming increasingly less price-competitive compared with alternative fibres. Over the 12 months to April 2018, the price of 21-micron wool in US terms increased by 16 per cent against the price of cotton and 21 per cent against polyester staple fibre. This is an incentive for manufacturers to substitute away from wool, which is expected to place some downward pressure on Australian wool prices towards the second half of 2018–19.

Australian wool production growth to be limited

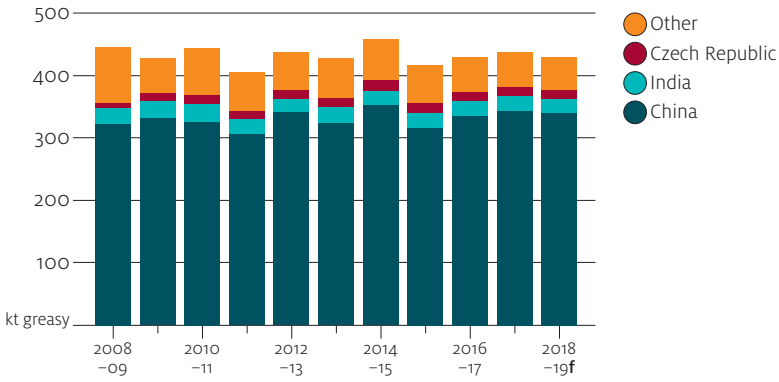
In 2017–18 Australian shorn wool production is estimated to increase slightly to 343,000 tonnes greasy. This estimate primarily reflects increased numbers of sheep shorn.

In 2018–19 shorn wool production is forecast to increase by 2.0 per cent to 350,000 tonnes. Assuming a return to average seasonal conditions following a dry winter, yields and the size of the national flock are expected to increase. Adverse seasonal conditions could limit flock rebuilding and reduce average fleece rates. Growth in the national flock is expected to be limited to sheep meat breeds and the Merino flock is forecast to remain relatively stable. As a result, production of superfine and fine wool is not expected to grow markedly during 2018–19. However, the proportion of superfine wool in the clip is expected to rise at the expense of fine grades. Continued productivity growth is expected to drive microns down for finer wool grades.

Value of Australian wool exports to rise

In 2018–19 the value of total Australian wool exports is forecast to rise by 9 per cent to $4.7 billion, supported by higher wool prices and increased export volumes. The majority of Australia's wool is expected to be shipped to China, the world's largest producer and exporter of woollen apparel and textiles. In the five years to 2016–17, China accounted for 77 per cent of Australian wool exports.

Wool exports, by destination, Australia, 2008–09 to 2018–19



f ABARES forecast.

Outlook for wool

Category	unit	2016–17	2017–18 s	2018–19 f	*% change*
Sheep numbers **a**	million	72.1	72.1	72.9	*1.1*
Sheep shorn	million	74.3	77.5	77.6	*0.1*
Wool production (greasy)					
Shorn	kt	340	343	350	*2.0*
Other **b**	kt	73.4	79.3	80.0	*1.3*
Total	kt	414	422	430	*1.9*
Exports					
Volume	kt (gr. eq.)	429	437	430	*– 1.6*
to China	kt (gr. eq.)	336	343	340	*– 0.9*
Value **c**	$m	3,617	4,339	4,712	*8.6*
Price					
Eastern Market Indicator **d**	c/kg	1,415	1,723	1,990	*15.5*

a At 30 June. **b** Includes wool on sheepskins, fellmongered and slipe wool. **c** Balance of payments basis. **d** Clean equivalent. **f** ABARES forecast. **s** ABARES estimate.

Sources: ABARES; Australian Bureau of Statistics; Australian Wool Exchange; Meat & Livestock Australia

Dairy

Andrew Cameron

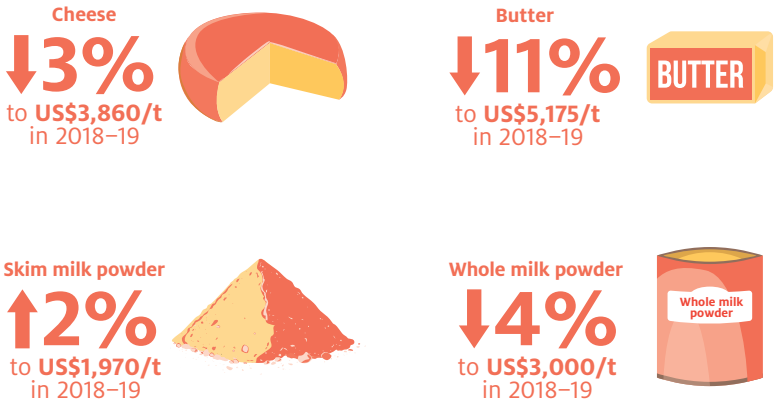
- Cheese, butter and whole milk powder prices are forecast to fall in 2018–19.
- Processor competition for Australian milk is expected to increase.
- The 2018–19 farmgate milk price is forecast to be 48 cents per litre.

World dairy prices forecast to fall

World prices for most dairy commodities are forecast to fall in 2018–19 in response to increased supplies from major exporters. The butter price is forecast to fall most in percentage terms (11 per cent) but is still expected to remain well above the 10-year average to 2016–17. An expected sell-off of EU intervention stockpiles is likely to limit potential increases in dairy prices. As a result, skim milk powder prices are expected to increase only slightly, in nominal terms, and remain below US$2,000 per tonne. World cheese prices are expected to fall as a result of higher US milk production creating greater exportable supplies of cheese.

An assumed fall in the Australian dollar in 2018–19 is expected to support the competitiveness of Australian exporters.

World dairy product price forecasts, 2018–19



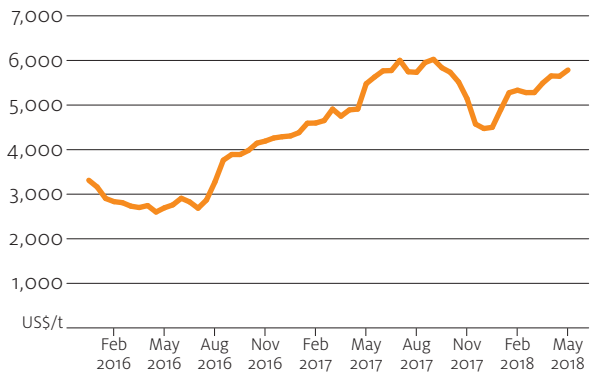
Note: Price movements shown in US dollars in nominal terms.

Global dairy market outlook

Increased butter exports expected to put downward pressure on prices

The world butter price increased significantly in the first months of 2018 in response to slower than expected exports from New Zealand and the European Union, which combined accounted for around 80 per cent of world butter trade in 2017. The world butter price is forecast to average just over US$5,800 per tonne in 2017–18, a 12 per cent upward revision from *Agricultural commodities: March quarter 2018*.

Global Dairy Trade butter prices, January 2016 to May 2018



Source: Global Dairy Trade

As the northern hemisphere enters the spring peak production period, additional exports of butter are expected to place downward pressure on world prices. EU butter exports for the three months to February 2018 were around 30 per cent higher than the same period last year. New Zealand milk production in the 2018–19 season is expected to increase after a weather-affected 2017–18. This is expected to increase NZ exports and contribute to an 11 per cent fall in the world butter price to US$5,175 in 2018–19.

EU starts skim milk powder stockpile reduction

In May 2018 the European Commission accepted bids on 42,000 tonnes of stockpiled skim milk powder. This followed a sale of 24,000 tonnes in April. These sales are the first meaningful reduction in the stockpile since it began accumulating in 2015. As at April 2018 the stockpile was around 330,000 tonnes. The successful bids were a 20 per cent discount on the prevailing market price for fresh powder. Liquidation of the stockpile is assumed to continue over the next 18 months, limiting any in skim milk powder prices.

Australian dairy outlook

Supplier competition expected to increase in 2018–19

Saputo Australia completed their acquisition of Murray Goulburn in late April 2018, after the Australian Competition and Consumer Commission accepted a court-enforceable undertaking from the company to divest the Koroit manufacturing plant in southern Victoria. In early May, Saputo Australia announced a retrospective increase for the 2017–18 season to $5.68 per kilogram of milk solids for all suppliers. The company is expected to announce an opening price for the 2018–19 season in June, but had not done so as of 15 June.

Several processors have publicly stated their intention to increase their supplier base in 2018–19. This is expected to provide some support for farmgate prices and incomes. Over winter and spring, farm incomes may come under pressure from rising supplementary feed and water costs. Fodder supplies are already limited in some regions. Water prices in southern regions have increased from historically low levels to near five-year averages. According to the Bureau of Meteorology's three-month rainfall outlook for June to August, median rainfall is unlikely for south-eastern Australia. This follows one of the warmest and driest Aprils on record.

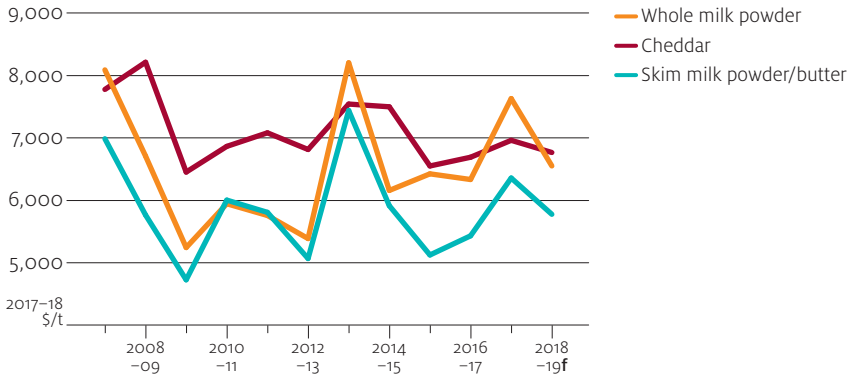
In 2018–19 farmgate prices are expected to remain relatively unchanged year-on-year, supported by export price premiums for dairy commodities. Australian farmgate prices are strongly correlated with export prices. The competitiveness of Australian exports is expected to be supported by an assumed fall in the Australian dollar.

Shifts in Australian production streams

In the first half of 2017–18 production of skim milk powder fell by 23 per cent and butter fell by 30 per cent. Processors are responding to price incentives to shift manufacturing to whole milk powders and cheese. Low skim milk powder prices have reduced returns to the skim milk powder/butter manufacturing stream.

Australian processors have made significant investments in cheese production capacity. Australian cheese production is estimated to increase by 6 per cent in 2017–18 and a further 2 per cent in 2018–19 to reach 365,000 tonnes. If realised, this would be the highest level of cheese production since 2005–06.

Indicative Australian export returns to manufacturing stream, 2007–08 to 2018–19



f ABARES forecast.
Source: Australian Bureau of Statistics, ABARES

Outlook for dairy

Category	unit	2016–17	2017–18 s	2018–19 f	*% change*
Australia					
Cow numbers **a**	’000	1,520	1,520	1,532	*0.8*
Milk yields	L/cow	5,930	6,086	6,116	*0.5*
Production					
Total milk	ML	9,015	9,250	9,370	*1.3*
market sales	ML	2,505	2,596	2,640	*1.7*
manufacturing	ML	6,510	6,654	6,730	*1.1*
Butter **b**	kt	100	73.0	73.0	*0*
Cheese **c**	kt	337	358	365	*2.0*
Whole milk powder	kt	60.0	75.0	72.0	*-4.0*
Skim milk powder	kt	222	175	181	*3.4*
Farmgate milk price	Ac/L	40.9	47.0	48.0	*2.1*
Value of exports	A$m	3,028	3,186	3,221	*1.1*
World prices					
Butter	US$/t	4,500	5,821	5,175	*– 11.1*
Cheese	US$/t	3,742	3,985	3,860	*– 3.1*
Skim milk powder	US$/t	2,356	1,931	1,970	*2.0*
Whole milk powder	US$/t	3,063	3,120	3,000	*– 3.8*

a At 30 June. **b** Includes the butter equivalent of butter oil, butter concentrate, dry butterfat and ghee. **c** Excludes processed cheese. **f** ABARES forecast. **s** ABARES estimate.
Sources: ABARES; Australian Bureau of Statistics; Dairy Australia

Statistical tables

Figures

Tables

FIGURE 1 Contribution to GDP Australia, chain volume measures, reference year 2015–16

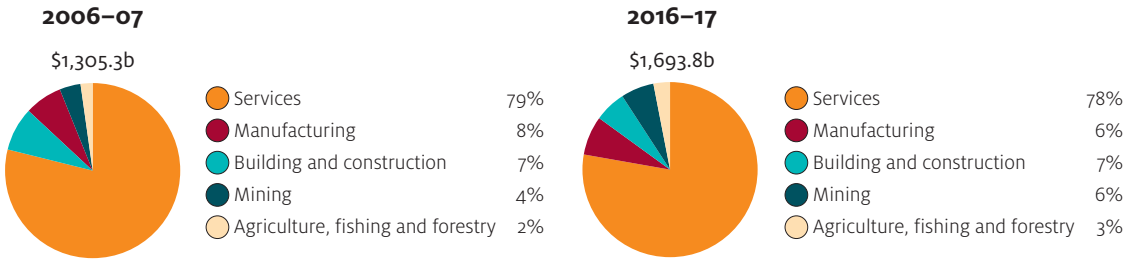


FIGURE 2 Markets for Australian merchandise exports in 2016–17 dollars

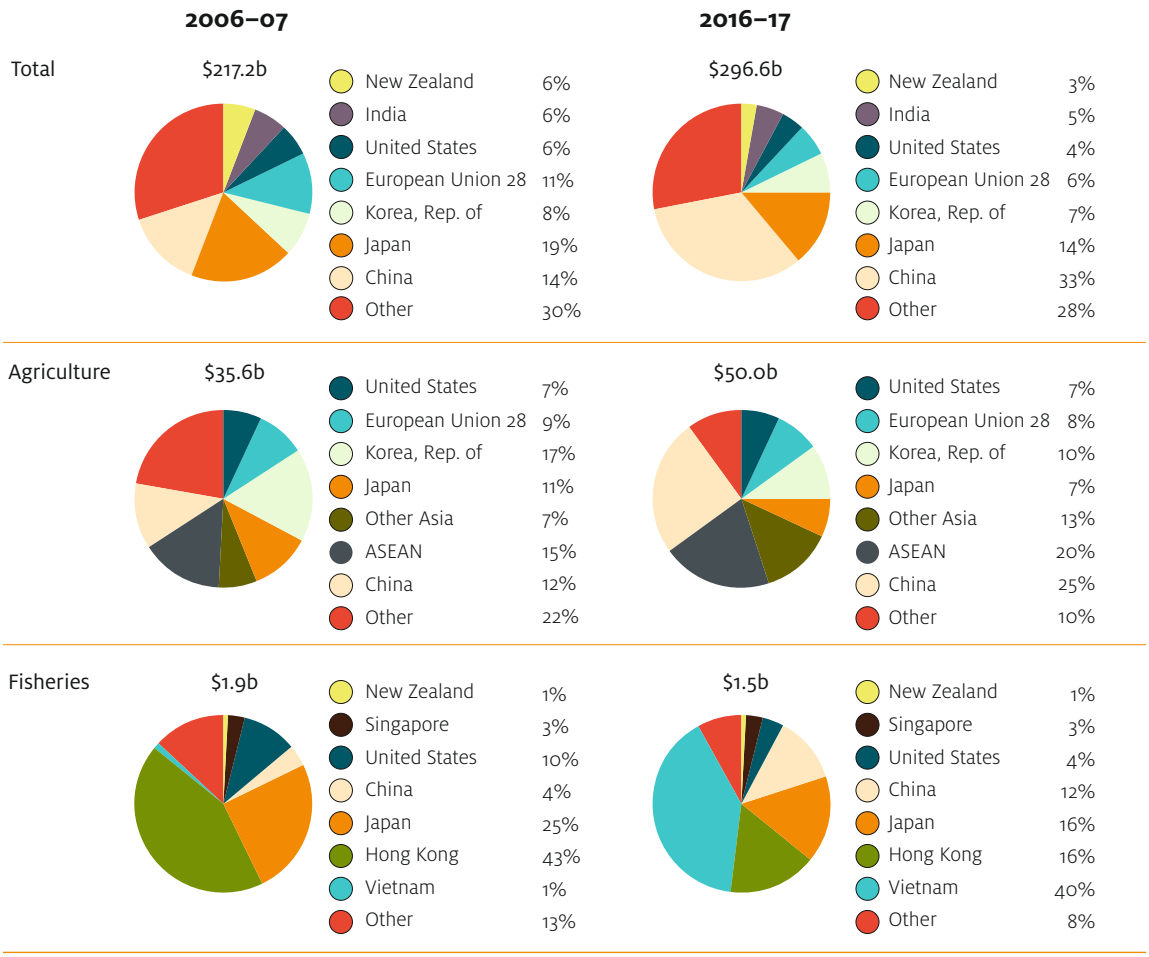


FIGURE 3 Sources of Australian merchandise imports in 2016–17 dollars

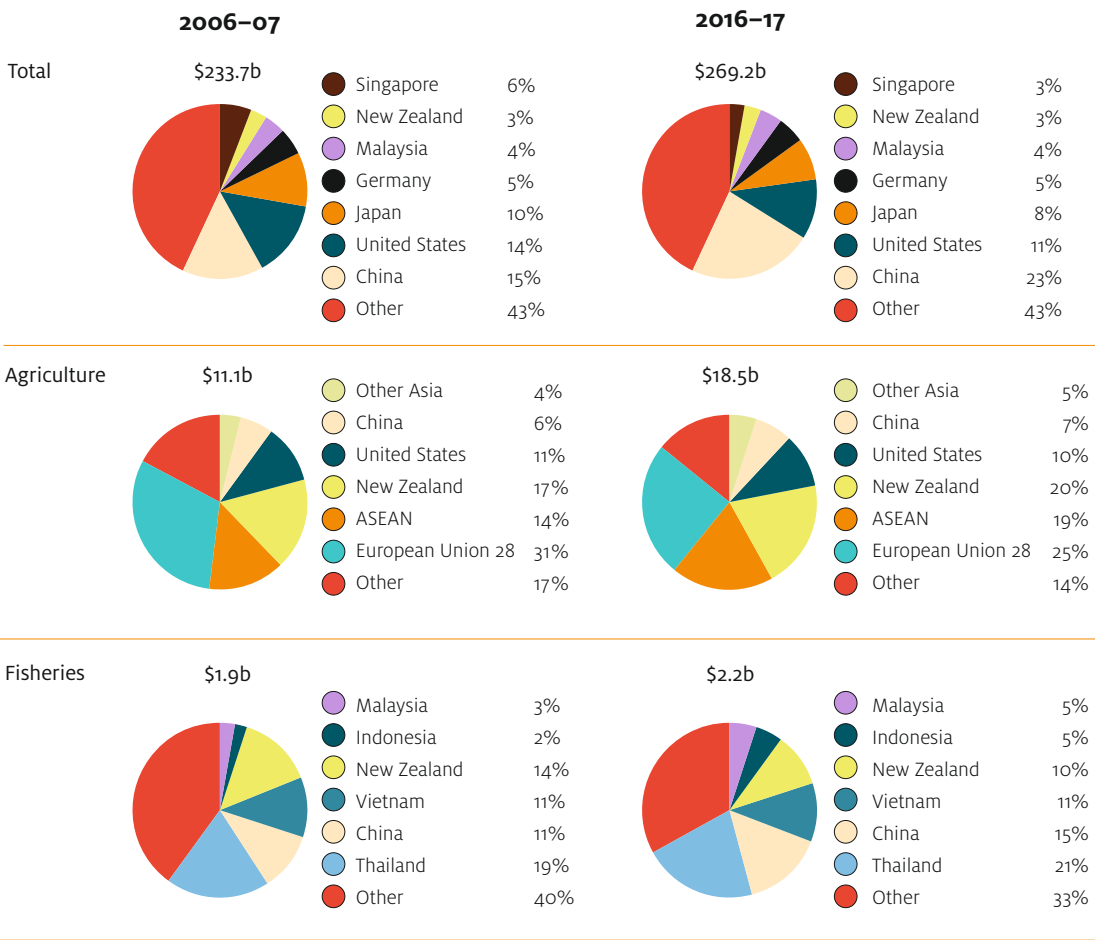


FIGURE 4 Principal markets for Australian agricultural, fisheries and forestry exports in 2016–17 dollars

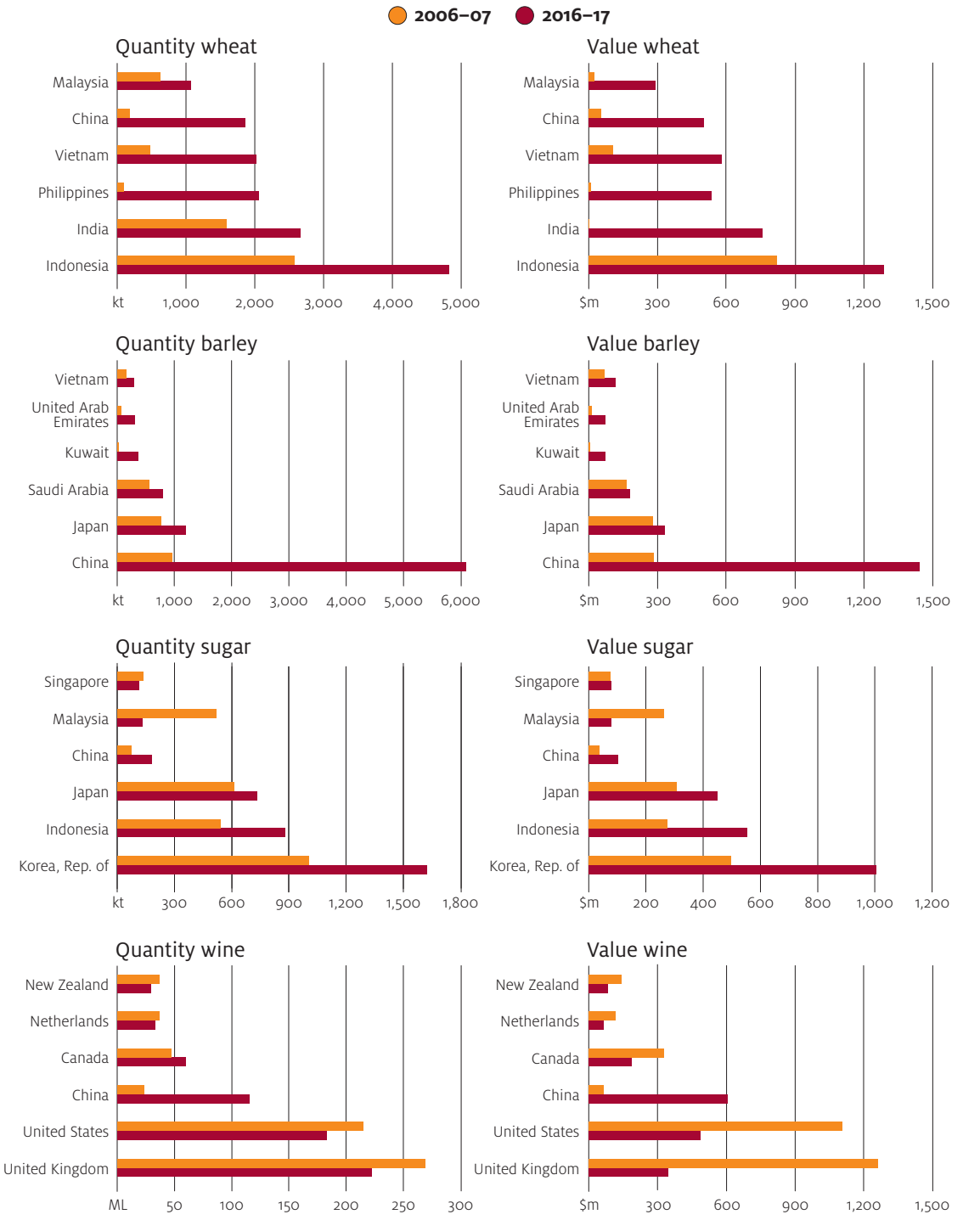


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FIGURE 4 Principal markets for Australian agricultural, fisheries and forestry exports in 2016–17 dollars continued

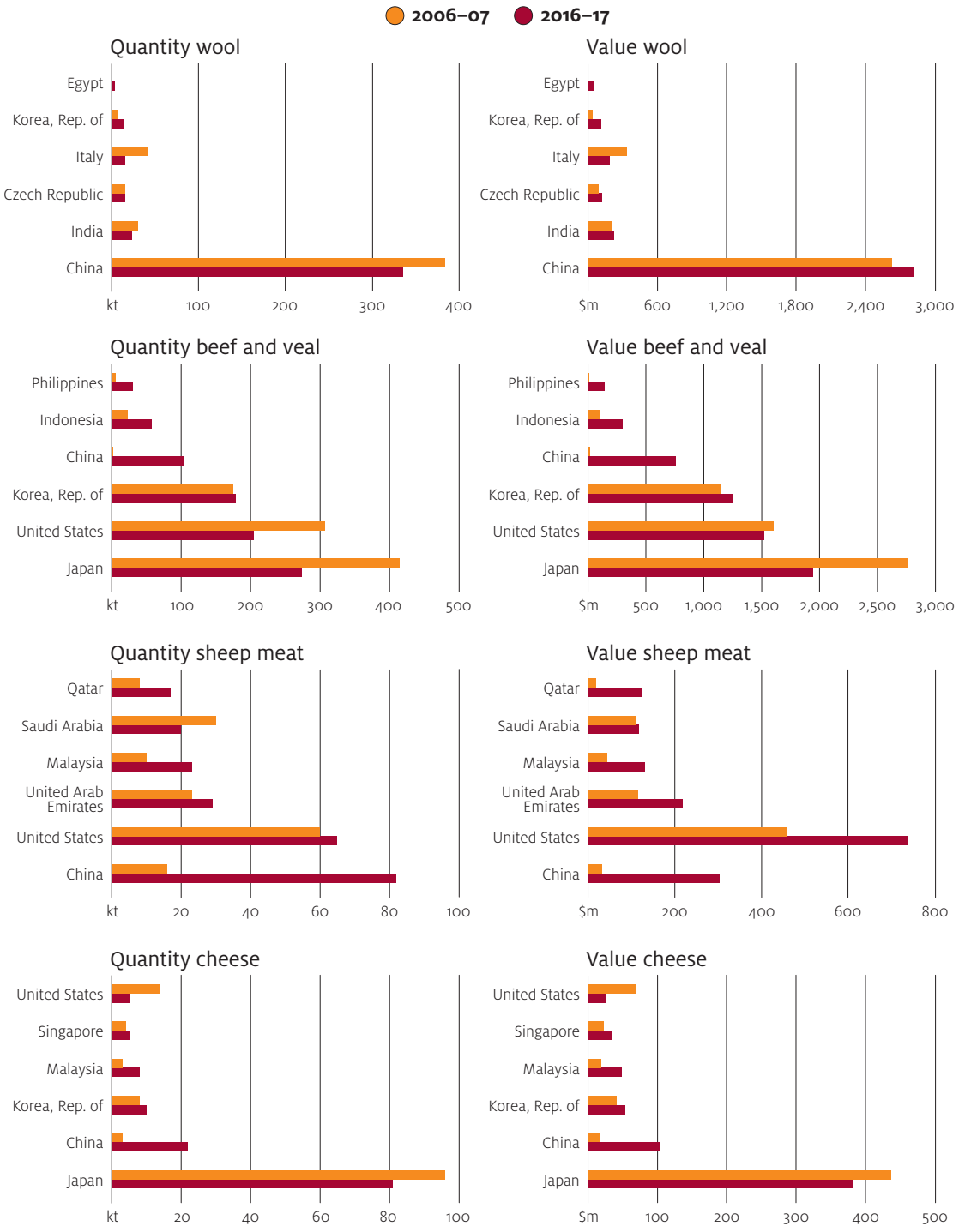

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FIGURE 4 Principal markets for Australian agricultural, fisheries and forestry exports in 2016–17 dollars continued

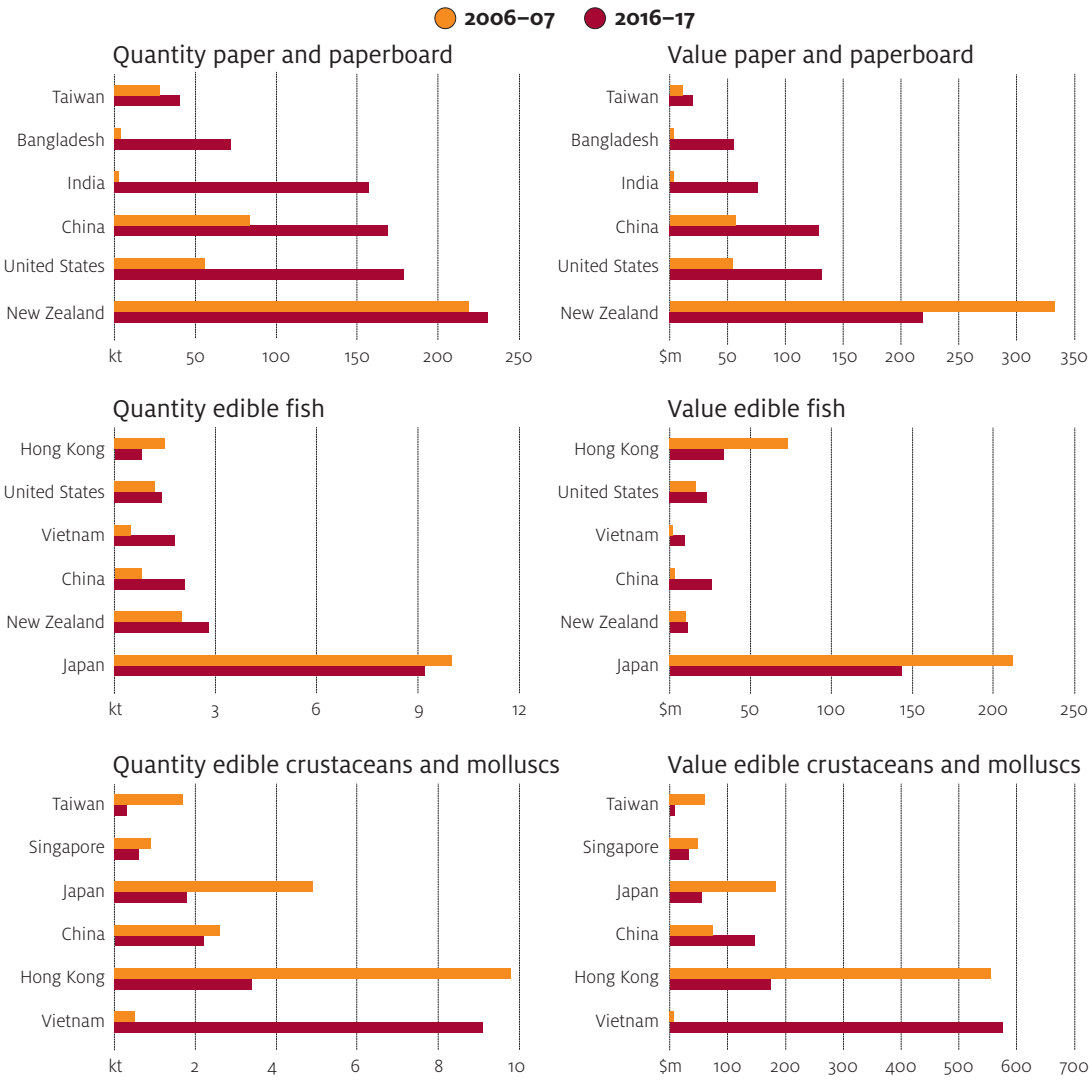


TABLE 1 Indexes of prices received by farmers Australia

Commodity	2013–14	2014–15	2015–16	2016–17	2017–18 s	2018–19 f
Crops						
Grains						
Barley	167.9	175.6	159.0	114.6	154.9	157.3
Canola	144.1	130.6	137.9	134.9	130.5	129.2
Grain sorghum	177.2	178.1	162.3	141.0	176.4	181.1
Lupins	176.4	149.3	185.0	141.4	133.8	228.3
Oats	156.0	183.1	224.0	174.0	184.0	175.3
Wheat	159.8	151.7	140.1	125.0	143.3	150.5
Total grains a	149.9	147.0	141.9	124.0	141.4	143.0
Cotton	103.9	104.4	111.7	123.4	121.5	124.3
Hay	160.9	169.6	176.4	179.3	184.5	184.5
Fruit	158.8	170.4	162.0	164.8	167.9	171.7
Sugar	125.4	127.2	117.8	126.0	109.0	99.3
Vegetables	174.1	179.1	172.9	175.8	179.2	183.2
Total crops	131.1	131.8	128.4	121.2	133.1	134.4
Livestock						
Livestock for slaughter						
Cattle	156.3	196.4	252.9	271.8	231.0	213.3
Lambs	201.8	233.4	236.2	291.6	301.2	307.8
Sheep	250.8	337.8	304.1	462.5	466.4	473.5
Live sheep for export	233.4	286.6	312.3	321.3	329.3	335.9
Pigs	151.7	156.4	181.0	170.7	133.8	142.1
Poultry	116.9	126.2	126.8	120.3	127.3	131.7
Total livestock for slaughter	161.2	192.4	227.5	245.5	224.7	218.2
Livestock products						
Wool	153.5	159.1	186.5	212.5	258.8	298.8
Milk	169.1	162.6	148.2	137.1	157.5	160.8
Eggs	112.7	114.6	112.7	113.7	114.8	116.1
Total livestock products	157.2	155.8	156.1	158.3	183.9	198.6
Store and breeding stock	169.2	209.7	260.1	298.5	270.2	255.4
Total livestock	157.4	177.8	201.5	215.1	210.4	210.7
Total prices received	142.9	152.4	161.0	162.0	167.6	168.6

a Total for the group includes commodities not separately listed. **f** ABARES forecast. **s** ABARES estimate.
Notes: The indexes for commodity groups are calculated on a chain-weighted basis using Fisher's ideal index with a reference year of 1997–98 = 100. Indexes for most individual commodities are based on annual gross unit value of production. Prices used in these calculations exclude GST. Series break in 2015–16. Prior to 2015–16 figures are based on establishments with an estimated value of agricultural operations (EVAO) of $5,000. From 2015–16 (inclusive) figures are based on establishments with an EVAO of $40,000.
Sources: ABARES; Australian Bureau of Statistics

TABLE 2 Terms of trade and indexes of prices paid by farmers Australia

Category	2013–14	2014–15	2015–16	2016–17	2017–18 s	2018–19 f
Farmers' terms of trade a	98.2	103.9	109.2	110.1	111.1	108.3
Materials and services						
Seed, fodder and livestock						
Fodder and feedstuffs	126.8	134.5	138.5	129.1	141.0	141.7
Seed, seedlings and plants	130.6	130.4	129.9	122.0	131.8	134.0
Store and breeding stock	169.2	209.7	261.1	298.5	270.2	255.4
Total seed, fodder and livestock	136.9	151.2	165.2	165.6	168.8	166.3
Chemicals	113.6	115.0	116.2	117.7	119.4	121.4
Electricity	185.7	176.4	178.9	181.9	200.1	204.6
Fertiliser	153.2	154.7	157.8	134.1	136.8	143.4
Fuel and lubricants	221.1	207.9	167.9	175.7	187.2	200.3
Total materials and services	150.8	155.1	159.1	158.7	162.7	165.2
Labour	163.5	166.3	168.6	171.5	174.8	178.8
Marketing	159.3	152.9	144.1	149.6	157.0	165.8
Overheads						
Insurance	195.2	198.5	201.3	204.7	208.7	213.4
Interest paid	85.3	79.5	74.8	68.4	68.6	77.5
Rates and taxes	160.6	163.4	165.6	168.4	171.7	175.6
Other overheads	155.8	158.5	160.7	163.4	166.6	170.4
Total overheads	110.6	107.1	104.1	99.8	100.9	109.0
Capital items	161.5	164.4	166.9	169.8	173.1	177.0
Total prices paid	145.5	146.7	147.4	147.2	150.9	155.6
Excluding capital items	143.9	144.9	145.5	145.1	148.7	153.5
Excluding capital and overheads	154.3	156.8	157.7	159.6	164.1	167.7
Excluding seed, fodder and livestock	147.3	145.5	143.5	143.2	146.9	153.2

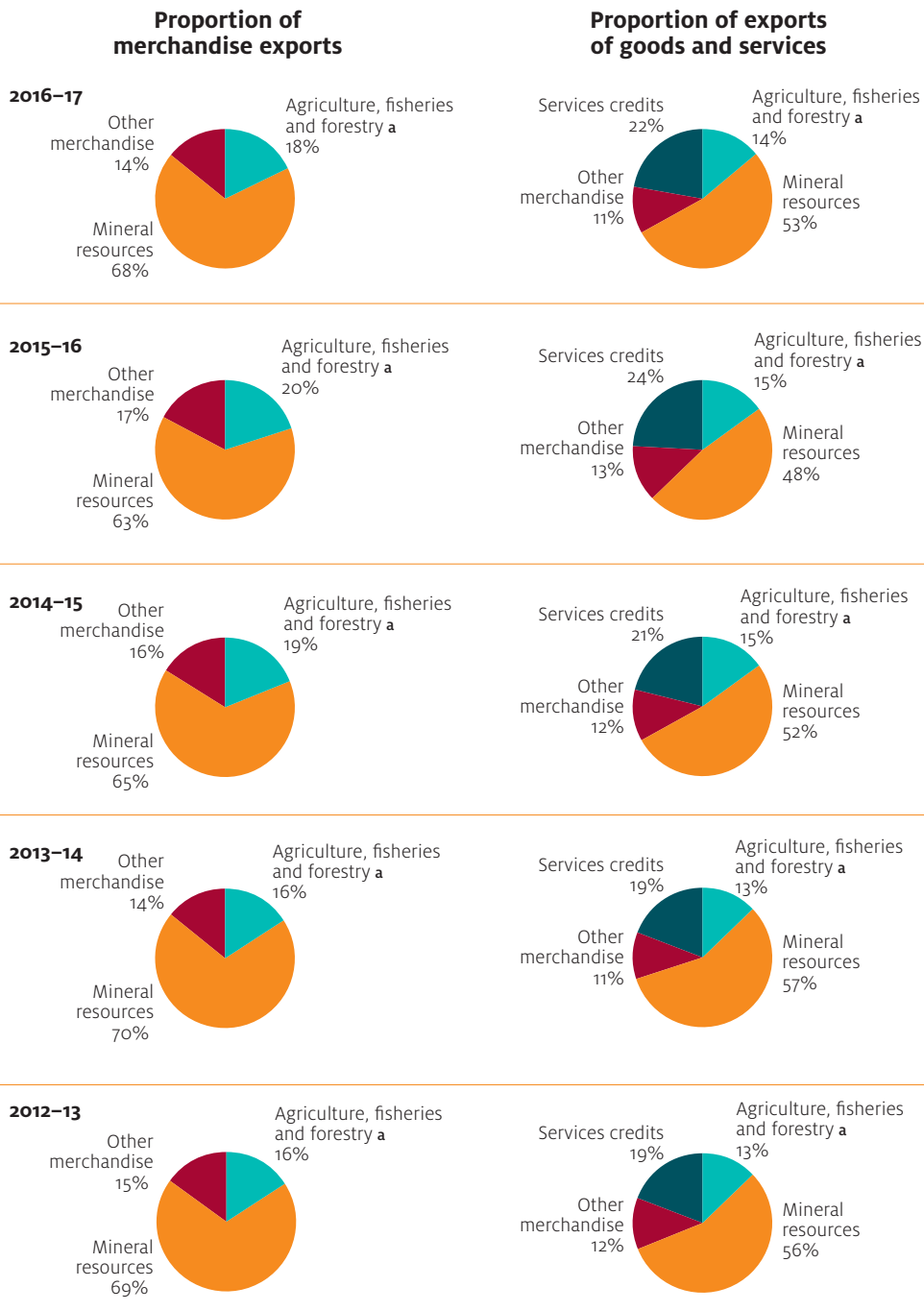
a Ratio of index of prices received by farmers and index of prices paid by farmers. **f** ABARES forecast. **s** ABARES estimate.
Notes: The indexes for commodity groups are calculated on a chain-weighted basis using Fisher's ideal index with a reference year of 1997–98 = 100. Prices used in these calculations exclude GST. Series break in 2015–16. Prior to 2015–16 figures are based on establishments with an estimated value of agricultural operations (EVAO) of $5,000. From 2015–16 (inclusive) figures are based on establishments with an EVAO of $40,000.
Sources: ABARES (compiled from various market sources); Australian Bureau of Statistics

TABLE 3 Farm costs and returns Australia

Category	unit	2013–14	2014–15	2015–16	2016–17	2017–18 s	2018–19 f
Costs							
Materials and services							
Chemicals	$m	1,406	1,455	1,510	1,505	1,461	1,519
Fertiliser	$m	2,091	2,121	2,169	1,837	1,832	1,955
Fuel and lubricants	$m	2,248	1,978	1,659	1,734	1,937	2,296
Marketing	$m	4,108	4,118	4,079	4,928	4,253	4,398
Repairs and maintenance	$m	4,529	4,922	5,267	5,937	5,931	6,217
Seed and fodder	$m	4,650	4,938	5,026	4,826	5,357	5,528
Other	$m	4,711	4,727	4,738	5,030	5,131	5,293
Total materials and services	$m	23,741	24,259	24,448	25,797	25,902	27,206
Labour	$m	4,364	4,303	4,145	4,310	4,480	4,679
Overheads							
Interest paid	$m	3,956	3,874	3,828	3,606	3,630	4,195
Rent and third-party insurance	$m	551	561	569	578	589	603
Total overheads	$m	8,871	8,738	8,542	8,494	8,699	9,477
Total cash costs	$m	32,612	32,997	32,990	34,291	34,602	36,683
Depreciation **a**	$m	5,345	5,444	5,526	5,621	5,729	5,858
Total farm costs	$m	37,957	38,441	38,516	39,912	40,330	42,541
Returns							
Gross value of farm production	$m	51,479	54,362	56,643	62,310	60,500	61,402
Net returns and production							
Net value of farm production **b**	$m	13,522	15,921	18,127	22,398	20,169	18,862
Real net value of farm production **c**	$m	14,453	16,730	18,789	22,826	20,169	18,446
Net farm cash income **d**	$m	18,867	21,365	23,653	28,020	25,898	24,719
Real net farm cash income **c**	$m	20,166	22,450	24,516	28,555	25,898	24,175

a Based on estimated movements in capital expenditure and prices of capital inputs. **b** Gross value of farm production less total farm costs. **c** In 2017–18 Australian dollars. **d** Gross farm cash income less total cash costs. **f** ABARES forecast. **s** ABARES estimate.
Notes: Prices used in these calculations exclude GST. Series break in 2015–16. Prior to 2015–16 figures are based on establishments with an estimated value of agricultural operations (EVAO) of $5,000. From 2015–16 (inclusive) figures are based on establishments with an EVAO of $40,000.
Sources: ABARES (compiled from various market sources); Australian Bureau of Statistics

FIGURE 5 Contribution to exports by sector, balance of payments basis Australia



a ABARES balance of payments adjusted to include agriculture, fisheries and forestry products classified as other merchandise by Australian Bureau of Statistics.
Sources: ABARES; Australian Bureau of Statistics

TABLE 4 Volume of production indexes Australia

Commodity	unit	2013–14	2014–15	2015–16	2016–17	2017–18 s	2018–19 f
Farm							
Grains and oilseeds	index	144.9	138.8	130.2	195.2	134.8	135.5
Total crops	index	131.9	125.0	130.2	165.0	138.6	138.1
Livestock slaughterings	index	127.7	137.0	127.3	116.5	124.3	127.4
Total livestock	index	111.3	118.1	111.1	103.7	109.2	111.5
Total farm sector	index	122.2	122.3	120.8	131.5	123.4	124.4
Forestry a							
Hardwood	index	107.5	121.9	135.4	152.3	159.5	135.9
Softwood	index	130.4	135.5	148.4	160.6	147.1	145.5
Total forestry	index	119.4	129.0	142.2	156.6	153.1	140.9

a Volume of logs harvested excluding firewood. **f** ABARES forecast. **s** ABARES estimate.

Notes: ABARE revised the method for calculating production indexes in October 1999. The indexes for the different groups of commodities are calculated on a chain-weighted basis using Fisher's ideal index with a reference year of 1997–98 = 100. Series break in 2015–16. Prior to 2015–16 figures are based on establishments with an estimated value of agricultural operations (EVAO) of $5,000. From 2015–16 (inclusive) figures are based on establishments with an EVAO of $40,000.

Sources: ABARES; Australian Bureau of Statistics

TABLE 5 Industry gross value added ab Australia

Industry	unit	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17
Agriculture, forestry and fishing							
Agriculture	$m	36,306	35,970	36,383	36,888	33,973	38,920
Forestry and fishing	$m	6,052	6,082	6,148	6,216	6,365	6,765
Total agriculture, fishing and forestry	$m	42,347	42,039	42,520	43,092	40,338	45,682
Mining	$m	70,739	77,449	85,599	91,960	97,655	100,294
Manufacturing							
Food, beverage and alcohol	$m	26,137	26,734	26,632	25,936	25,390	26,391
Petroleum, coal, chemical products, rubber	$m	21,649	20,435	20,251	19,710	19,197	18,944
Metal products	$m	17,921	16,465	16,790	16,244	15,449	15,213
Machinery and equipment	$m	22,457	21,367	20,134	19,855	19,318	18,018
Total manufacturing	$m	109,268	105,748	104,613	103,132	100,696	98,991
Building and construction	$m	124,253	128,920	134,607	131,098	129,902	125,033
Electricity, gas and water supply	$m	23,224	22,845	22,452	22,458	22,742	22,730
Taxes less subsidies on products	$m	108,831	110,499	110,839	112,443	116,832	118,222
Statistical discrepancy	$m	0.0	-1.0	-1.0	0.0	-1.0	– 3,525
Gross domestic product	$m	1,498,022	1,537,561	1,576,895	1,613,972	1,659,603	1,693,799

a Chain volume measures, reference year is 2015–16. **b** ANZSIC 2006.

Sources: Australian Bureau of Statistics (ABS), *Australian national accounts: national income, expenditure and product,* cat. no. 5206.0, Canberra; ABS, *Balance of payments, Australia* , cat. no. 5302.0, Canberra

TABLE 6 Employment **ab** Australia

Industry	unit	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17
Agriculture, forestry and fishing							
Horticulture **c**	'000	57.3	56.8	63.6	51.3	67.2	62.6
Sheep, beef cattle and grain	'000	129	107	107	115	93.5	91.5
Other crop growing	'000	9.5	13.6	6.4	4.7	3.4	3.8
Dairy cattle	'000	22.3	20.3	25.9	21.1	29.8	23.9
Poultry	'000	10.1	8.6	3.9	6.3	13.3	8.3
Other livestock **d**	'000	10.1	11.0	8.5	16.9	13.1	9.1
Other agriculture nfd	'000	38.8	43.6	55.2	59.0	61.9	51.2
Total agriculture	'000	277	261	271	275	282	251
Forestry and logging	'000	7.9	6.4	6.0	5.3	6.4	7.9
Forestry support services	'000	3.4	3.2	2.9	3.1	3.2	5.0
Aquaculture	'000	3.7	3.3	5.1	7.0	5.4	8.3
Fishing	'000	5.7	5.1	3.3	5.7	5.1	6.5
Hunting and trapping	'000	0.3	0.3	0.2	1.1	0.0	0.4
Fishing, hunting and trapping nfd	'000	1.0	0.6	0.1	0.4	0.5	0.7
Agriculture fishing and forestry support services **e**	'000	19.9	18.9	21.7	17.8	16.9	23.0
Total agriculture, fishing and forestry	'000	321	301	312	318	321	304
Manufacturing							
Food product	'000	186	190	188	198	194	201
Beverage and tobacco	'000	32.7	25.9	34.7	30.9	34.5	33.3
Wood product	'000	38.4	37.1	47.9	42.9	42.2	39.4
Pulp, paper and converted paper product	'000	15.2	14.7	13.6	13.2	12.9	18.2
Total manufacturing	'000	939	935	928	916	881	909
Total employment	'000	11,254	11,399	11,471	11,685	11,924	12,083

a Average employment over four quarters. **b** ANZSIC 2006. **c** Includes floriculture, fruit, nursery, vegetable, and tree nut growing. **d** Includes deer farming. **e** Includes agriculture, fishing and forestry support services not further defined.
Note: Australian Bureau of Statistics advises caution using employment statistics at the ANZSIC subdivision and group levels because estimates may be subject to sampling variability and standard errors too high for most practical purposes.
Source: Australian Bureau of Statistics, *Labour force, Australia,* cat. no. 6291.0.55.003, Canberra

TABLE 7 All banks lending to business **a** Australia

Industry	unit	Sep–16	Dec–16	Mar–17	Jun–17	Sep–17	Dec–17
Agriculture, fishing and forestry	$b	67.9	67.2	67.2	68.6	68.2	67.9
Mining	$b	32.5	31.9	29.4	27.4	26.1	25.1
Manufacturing	$b	45.3	47.7	45.7	47.1	46.3	44.9
Construction	$b	32.8	31.9	33.3	31.8	32.0	32.2
Wholesale and retail trade, transport and storage	$b	117	123	120	116	119	122
Finance and insurance	$b	179	185	187	286	268	270
Other	$b	438	453	457	465	469	470
Total	$b	912	939	939	1,042	1,028	1,032

a Includes variable and fixed interest rate loans outstanding plus bank bills outstanding.
Source: Reserve Bank of Australia, *Bank lending to business-selected statistics,* Bulletin Statistical Table D8

TABLE 8 Rural indebtedness to financial institutions Australia

Institution	unit	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17
Rural debt							
All banks **a**	$m	59,749	61,778	62,461	64,966	66,912	68,557
Other government agencies **b**	$m	2,076	2,236	2,451	878	977	1,142
Pastoral and other finance companies	$m	1,801	1,569	1,486	1,463	1,622	1,987
Large finance institutional debt **c**	$m	63,626	65,583	66,397	67,307	69,511	71,686
Deposits							
Farm management deposits	$m	3,532	3,721	4,139	4,604	5,068	6,095

a Derived from all banks lending to agriculture, forestry and fishing. **b** Includes the government agency business of state banks and advances made under War Service Land Settlement. **c** Sum of rural debt.

Sources: Department of Agriculture and Water Resources; Reserve Bank of Australia, *Estimated rural debt to specified lenders,* Bulletin Statistical Table D9

TABLE 9 Annual world indicator prices of selected commodities

Commodity	unit	2013–14	2014–15	2015–16	2016–17	2017–18 s	2018–19 f
Crops							
Wheat **a**	US$/t	317	266	211	197	230	243
Corn **b**	US$/t	219	173	168	157	161	170
Rice **c**	US$/t	429	420	386	394	419	409
Soybeans **d**	US$/t	547	418	373	384	390	385
Cotton **e**	USc/lb	90.6	70.8	70.4	82.8	86.0	90.0
Sugar **g**	USc/lb	16.8	13.4	16.7	17.3	13.0	11.0
Livestock products							
Beef **h**	USc/kg	440	550	450	447	453	465
Wool **i**	Ac/kg	1,070	1,098	1,256	1,415	1,723	1,990
Butter **j**	US$/t	4,498	3,483	3,146	4,500	5,821	5,175
Cheese **j**	US$/t	4,817	3,921	3,200	3,742	3,985	3,860
Skim milk powder **j**	US$/t	4,513	2,592	1,975	2,356	1,931	1,970

a US no. 2 hard red winter wheat, fob Gulf. **b** US no. 2 yellow corn, fob Gulf. **c** USDA nominal quote for Thai white rice, 100 per cent, Grade B, fob, Bangkok (August–July basis). **d** US no. 2 soybeans, fob Gulf. **e** Cotlook 'A' index. **f** ABARES forecast. **g** Nearby futures price (October–September basis), Intercontinental Exchange, New York no. 11 contract. **h** Cow 90CL US cif price. **i** Australian Wool Exchange Eastern Market Indicator. **j** Average of traded prices (excluding subsidised sales). **s** ABARES estimate.

Sources: ABARES; Australian Bureau of Statistics; Australian Wool Exchange; Cotlook Ltd; Dairy Australia; Intercontinental Exchange; International Grains Council; Meat & Livestock Australia; New York Board of Trade; US Department of Agriculture

TABLE 10 Gross unit values of farm products a

Commodity	unit	2013–14	2014–15	2015–16	2016–17	2017–18 s	2018–19 f
Crops b							
Grains							
Barley	$/t	267	280	253	197	281	303
Corn (maize)	$/t	297	330	326	320	315	307
Grain sorghum	$/t	300	301	275	238	323	364
Oats	$/t	213	250	306	242	268	338
Rice	$/t	340	395	419	313	463	358
Triticale	$/t	258	256	248	178	225	264
Wheat	$/t	316	300	277	231	286	291
Oilseeds							
Canola	$/t	555	503	532	559	543	542
Soybeans c	$/t	538	588	569	780	865	876
Sunflower seed c	$/t	660	756	652	1,125	905	701
Pulses							
Chickpeas	$/t	352	567	784	833	849	497
Field peas	$/t	419	413	449	328	297	291
Lupins	$/t	345	292	362	277	262	272
Industrial crops							
Cotton lint d	c/kg	229	199	226	257	256	283
Sugar cane (cut for crushing)	$/t	40.2	39.4	37.3	44.4	33.5	29.7
Wine grapes	$/t	441	476	544	565	539	551
Livestock							
Beef cattle	c/kg	304	382	492	529	450	415
Lambs	c/kg	410	474	480	592	612	625
Pigs	c/kg	300	310	358	338	265	281
Poultry	c/kg	209	226	223	215	228	236
Livestock products							
Wool	c/kg	604	626	734	836	1,018	1,176
Milk	c/L	50.5	48.5	44.2	40.9	47.0	48.0
Eggs	c/dozen	221	229	238	242	242	244

a Average gross unit value across all grades in principal markets, unless otherwise indicated. Includes the cost of containers, commission and other expenses incurred in getting the commodities to their principal markets. These expenses are significant. **b** Average gross unit value relates to returns received from crops harvested in that year, regardless of when sales take place, unless otherwise indicated. **c** Price paid by crusher. **d** Australian base price for sales in the financial year indicated. **f** ABARES forecast. **s** ABARES estimate.

Notes: Prices used in these calculations exclude GST. Series break in 2015–16. Prior to 2015–16 figures are based on establishments with an estimated value of agricultural operations (EVAO) of $5,000. From 2015–16 (inclusive) figures are based on establishments with an EVAO of $40,000.

Sources: ABARES; Australian Bureau of Statistics

TABLE 11 World production, consumption, stocks and trade for selected commodities [a]

Commodity	unit	2013–14	2014–15	2015–16	2016–17	2017–18 s	2018–19 f
Grains							
Wheat							
Production	Mt	717	730	737	754	758	743
Consumption	Mt	697	715	719	736	740	748
Closing stocks	Mt	191	207	226	244	262	258
Exports **bc**	Mt	157	153	166	175	177	184
Coarse grains							
Production	Mt	1,283	1,303	1,260	1,369	1,318	1,342
Consumption	Mt	1,229	1,259	1,273	1,331	1,347	1,373
Closing stocks	Mt	211	246	252	262	233	202
Exports **b**	Mt	165	186	163	199	191	197
Rice d							
Production	Mt	479	480	474	487	490	505
Consumption	Mt	479	476	473	486	487	507
Closing stocks	Mt	116	121	122	123	126	82.7
Exports **be**	Mt	42.5	41.3	39.4	44.3	44.4	39.0
Oilseeds and vegetable oils							
Oilseeds							
Production	Mt	504	537	520	565	562	587
Consumption	Mt	493	517	526	546	572	586
Closing stocks	Mt	77.7	93.4	88.6	107	97.0	98.4
Exports **b**	Mt	134	147	153	167	174	185
Vegetable oils							
Production	Mt	170	176	176	187	198	198
Consumption	Mt	170	173	178	185	193	198
Closing stocks	Mt	21.5	20.5	18.7	19.9	24.0	24.1
Exports **b**	Mt	70.1	76.6	74.8	75.3	80.3	83.3
Vegetable protein meals							
Production	Mt	282	299	306	318	332	342
Consumption	Mt	279	294	305	311	332	343
Closing stocks	Mt	13.8	15.4	16.7	23.5	22.7	21.7
Exports **b**	Mt	82.4	85.5	87.3	87.9	89.5	96.6
Industrial crops							
Cotton							
Production	Mt	26.2	26.0	20.9	23.2	26.6	26.6
Consumption	Mt	23.9	24.3	24.2	25.0	26.3	27.3
Closing stocks	Mt	22.4	24.2	20.7	18.9	19.4	18.6
Exports	Mt	8.9	7.7	7.6	8.2	8.7	9.1
Sugar							
Production	Mt	182	182	174	178	195	191
Consumption	Mt	176	179	180	181	184	187
Closing stocks	Mt	77.6	80.5	74.8	72.5	83.2	87.4
Exports	Mt	58.0	55.6	58.5	68.8	67.0	66.0

continued ...

TABLE 11 World production, consumption, stocks and trade for selected commodities **a** continued

Commodity	unit	2013–14	2014–15	2015–16	2016–17	2017–18 **s**	2018–19 **f**
Livestock products							
Meat egh							
Production	Mt	273	274	275	278	283	287
Consumption	Mt	267	269	269	272	277	285
Closing stocks	Mt	2.8	2.6	2.5	2.6	2.6	2.7
Exports **b**	Mt	28.8	28.3	29.6	30.4	31.2	32.5
Wool i							
Production	kt	1,155	1,160	1,155	1,154	1,156	1,158
Consumption **ej**	kt	1,147	1,164	1,155	1,154	1,156	1,158
Closing stocks **k**	kt	35.0	30.0	33.0	35.0	37.0	39.0
Exports **l**	kt	553	551	549	547	548	551
Butter eh							
Production	kt	9,651	9,904	10,014	10,193	10,435	10,597
Consumption	kt	9,038	9,204	9,443	9,670	9,950	10,148
Closing stocks	kt	250	332	308	348	328	271
Exports	kt	924	907	945	819	831	844
Skim milk powder ehm							
Production	kt	4,524	4,760	4,749	4,689	4,810	4,882
Consumption	kt	3,581	3,771	3,630	3,872	3,887	3,962
Closing stocks	kt	515	608	950	934	742	562
Exports	kt	1,968	2,083	1,996	2,198	2,288	2,400

a Figures sourced from external organisations may not be based on precise or complete analyses. **b** Excludes intra-EU trade. **c** Includes the grain equivalent of wheat flour. **d** Milled equivalent. **e** On a calendar year basis, e.g. 2015–16 = 2016. **f** ABARES forecast. **g** Beef and veal, mutton, lamb, goat, pig and chicken meat. **h** Selected countries. **i** Clean equivalent. **j** Virgin wool at the spinning stage in 65 countries. **k** Held by marketing bodies and on-farm in five major exporting countries. **l** Five major exporting countries. **m** Non-fat dry milk. **s** ABARES estimate.
Sources: ABARES; Argentine Wool Federation; Australian Bureau of Statistics; Capewools South Africa; Commonwealth Secretariat; Economic Commission for Europe; Fearnleys; International Grains Council; International Sugar Organization; International Wool Textile Organisation; Ministry of Agriculture, Forestry and Fisheries (Japan); New Zealand Wool Board; Poimena Analysis, Melbourne; UN Food and Agriculture Organization; Uruguayan Association of Wool Exporters; US Department of Agriculture

TABLE 12 Agricultural, fisheries and forestry commodity production Australia

Commodity	unit	2013–14	2014–15	2015–16	2016–17	2017–18 s	2018–19 f
Crops							
Grains							
Barley	kt	9,174	8,646	8,992	13,506	8,928	9,196
Corn (maize)	kt	390	495	400	436	383	371
Grain sorghum	kt	1,282	2,209	1,791	994	1,439	2,308
Oats	kt	1,255	1,198	1,300	2,266	1,119	1,120
Rice	kt	819	690	274	807	631	870
Triticale	kt	126	143	127	150	114	215
Wheat	kt	25,303	23,743	22,275	31,819	21,244	21,901
Oilseeds							
Canola	kt	3,832	3,540	2,775	4,313	3,669	3,096
Cottonseed	kt	1,252	746	890	1,260	1,477	1,174
Soybeans	kt	31.6	37.4	39.5	31.0	62.8	63.7
Sunflower seed	kt	17.9	30.4	25.1	17.1	30.8	43.6
Other oilseeds **a**	kt	26.5	21.5	19.9	22.4	30.1	24.3
Pulses							
Chickpeas	kt	629	555	875	2,004	1,028	616
Field peas	kt	342	290	205	415	289	213
Lupins	kt	626	549	652	1,031	631	581
Other pulses **b**	kt	620	564	611	1,269	907	768
Total grains, oilseeds and pulses	kt	45,726	43,459	41,250	60,341	41,982	42,562
Industrial crops							
Cotton lint	kt	885	528	629	891	1,044	830
Sugar cane (cut for crushing)	kt	30,521	32,360	34,828	36,507	33,500	33,941
Sugar (tonnes actual)	kt	4,364	4,572	4,920	4,804	4,700	4,830
Wine grapes	kt	1,438	1,608	1,752	1,841	1,690	1,750
Horticulture							
Fruit							
Apples	kt	267	295	308	314	305	310
Bananas	kt	254	252	354	413	315	320
Oranges	kt	350	338	399	332	330	335
Vegetables							
Carrots	kt	243	261	300	284	315	318
Onions	kt	256	315	265	263	270	274
Potatoes	kt	1,171	1,155	1,130	1,105	1,150	1,175
Tomatoes	kt	326	389	405	372	400	410
Livestock							
Slaughterings							
Cattle and calves	’000	9,473	10,103	8,796	7,423	7,904	8,200
Lambs	’000	21,899	22,867	23,131	22,344	23,084	23,500
Sheep	’000	10,066	9,022	8,127	6,553	8,175	7,900
Pigs	’000	4,778	4,924	5,000	5,160	5,289	5,572
Chickens	million	580	591	623	653	653	661
Live exports							
Cattle **c**	’000	1,133	1,379	1,258	917	987	1,025
Sheep **d**	’000	2,020	2,180	1,859	1,851	1,950	1,900
Goats	’000	81.2	91.0	80.7	29.6	19.6	15.0
Meat produced e							
Beef and veal	kt (cw)	2,464	2,662	2,344	2,069	2,249	2,305
Lamb	kt (cw)	474	507	516	506	523	541
Mutton	kt (cw)	228	214	196	163	200	194
Goat meat	kt (cw)	33.6	32.3	33.3	33.0	29.8	31.4
Pig meat	kt (cw)	360	371	378	397	408	430
Chicken meat	kt (cw)	1,084	1,116	1,191	1,230	1,225	1,250
Total meat produced	kt (cw)	4,644	4,902	4,658	4,398	4,635	4,752

continued ...

TABLE 12 Agricultural, fisheries and forestry commodity production Australia continued

Commodity	unit	2013–14	2014–15	2015–16	2016–17	2017–18 s	2018–19 f
Livestock products							
Wool **g**	kt (gr. eq.)	419	427	404	414	422	430
Milk **h**	ML	9,372	9,732	9,679	9,015	9,250	9,370
Eggs	million dozen	322	318	329	335	343	351
Butter **i**	kt	116	119	119	99.9	73.0	73.0
Cheese **j**	kt	311	344	344	337	358	365
Skim milk powder	kt	211	242	256	222	175	181
Whole milk powder	kt	126	96.8	66.1	60.0	75.0	72.0
Buttermilk powder	kt	11.1	11.6	10.7	8.7	7.0	11.3
Forestry products k							
Hardwood	'000 m^3	10,899	12,361	13,737	15,452	16,177	13,779
Softwood	'000 m^3	14,367	14,929	16,346	17,691	16,208	16,023
Total forestry products	'000 m^3	25,266	27,290	30,083	33,143	32,385	29,802
Fisheries l							
Tuna	kt	10.7	12.4	14.2	12.0	12.1	12.8
Salmonids **m**	kt	41.8	48.6	56.3	52.8	61.5	63.3
Other fish	kt	102	102	123	109	93.9	93.9
Prawns	kt	25.0	25.5	24.6	25.6	23.2	24.6
Rock lobster **n**	kt	10.5	10.3	10.1	10.6	10.6	10.7
Abalone	kt	4.7	4.6	4.2	4.3	4.2	4.1
Scallops	kt	4.4	4.3	5.0	6.1	6.1	5.7
Oysters	kt	11.6	11.0	11.3	11.9	9.1	11.3
Other molluscs	kt	5.9	7.2	7.6	7.9	7.3	7.3
Other crustaceans	kt	5.5	5.6	5.2	5.2	5.2	5.2

a Linseed, peanuts and safflower seed. **b** Faba beans, lentils, mung beans and navy beans. **c** Includes all bovine for feeder/slaughter, breeding and dairy purposes. **d** Includes animals for breeding. **e** Includes carcase equivalent of canned meats. **f** ABARES forecast. **g** Includes shorn wool (includes crutching), dead and fellmongered wool, and wool exported on skins. **h** Includes the whole milk equivalent of farm cream intake. **i** Includes the butter equivalent of butter oil, butter concentrate, dry butterfat and ghee. **j** Excludes processed cheese. **k** Excludes logs harvested for firewood. **l** Liveweight. **m** Includes salmon and trout production. **n** Includes Queensland bugs. **s** ABARES estimate.

Note: Series break in 2015–16. Prior to 2015–16 figures are based on establishments with an estimated value of agricultural operations (EVAO) of $5,000. From 2015–16 (inclusive) figures are based on establishments with an EVAO of $40,000.

Sources: ABARES; Australian Bureau of Statistics; Australian Fisheries Management Authority; Dairy Australia; Department of Fisheries, Western Australia; Department of Primary Industries, Parks, Water and Environment, Tasmania; Fisheries Queensland, Department of Agriculture, Fisheries and Forestry; Fisheries Victoria, Department of Primary Industries; Industry & Investment New South Wales; Northern Territory Department of Regional Development, Primary Industry, Fisheries and Resources; Primary Industries and Regions, Fisheries, South Australia; Pulse Australia; Raw Cotton Marketing Advisory Committee; South Australian Research and Development Institute; state and territory forest services; various Australian forestry industries

TABLE 13 Gross value of farm, fisheries and forestry production Australia

Commodity	unit	2013–14	2014–15	2015–16	2016–17	2017–18 s	2018–19 f
Crops							
Grains							
Barley	$m	2,453	2,417	2,277	2,658	2,504	2,788
Corn (maize)	$m	116	163	130	140	121	114
Grain sorghum	$m	384	666	492	237	465	840
Oats	$m	268	300	398	547	300	379
Rice	$m	279	273	115	252	292	312
Triticale	$m	32.4	36.7	31.6	26.7	25.5	56.9
Wheat	$m	7,998	7,124	6,170	7,366	6,082	6,378
Other cereals	$m	115	90.0	14.5	19.3	21.2	23.4
Oilseeds							
Canola	$m	2,129	1,782	1,476	2,412	1,993	1,678
Soybeans	$m	17.0	22.0	22.5	24.2	54.3	55.8
Sunflower seed	$m	11.8	23.0	16.4	19.2	27.8	30.6
Other oilseeds **a**	$m	25.6	26.3	19.3	25.7	33.8	33.8
Pulses							
Chickpeas	$m	222	315	685	1,669	872	306
Field peas	$m	143	120	91.8	136	86.1	62.0
Lupins	$m	216	160	236	285	165	158
Other pulses	$m	391	425	522	1,154	704	526
Total grains, oilseeds and pulses	$m	14,800	13,943	12,697	16,972	13,749	13,743
Industrial crops							
Cotton lint and cottonseed **b**	$m	2,004	1,184	1,530	1,934	2,916	2,408
Sugar cane (cut for crushing)	$m	1,226	1,276	1,299	1,622	1,122	1,010
Wine grapes	$m	672	765	953	1,040	911	965
Total industrial crops	$m	3,902	3,225	3,783	4,596	4,949	4,382
Horticulture							
Table and dried grapes	$m	331	343	453	504	485	513
Fruit and nuts (excl. grapes)	$m	3,187	3,512	4,225	4,234	4,463	4,820
Vegetables	$m	3,510	3,350	3,585	3,904	3,836	3,964
Nursery, cut flowers and turf	$m	1,247	1,252	1,296	1,572	1,603	1,639
Other horticulture nei **c**	$m	233	232	241	245	250	256
Total horticulture	$m	8,507	8,689	9,801	10,459	10,637	11,192
Other crops nei **d**	$m	1,490	1,538	1,600	1,845	1,720	1,780
Total crops	$m	28,699	27,395	27,880	33,872	31,054	31,097

continued ...

TABLE 13 Gross value of farm, fisheries and forestry production Australia continued

Commodity	unit	2013–14	2014–15	2015–16	2016–17	2017–18 s	2018–19 f
Livestock							
Slaughterings							
Cattle and calves **eg**	$m	7,495	10,175	11,536	10,940	10,112	9,567
Sheep **g**	$m	513	650	535	678	837	825
Lambs **g**	$m	1,943	2,401	2,477	2,998	3,199	3,381
Pigs **g**	$m	1,081	1,149	1,353	1,342	1,081	1,210
Poultry	$m	2,344	2,610	2,748	2,729	2,881	3,039
Goats	$m	80.5	120	167	203	147	160
Other slaughterings	$m	22.7	24.4	17.7	42.0	55.9	20.0
Live exports							
Cattle exported live **h**	$m	1,049	1,356	1,551	1,199	1,275	1,320
Sheep exported live **i**	$m	185	245	228	233	252	250
Goats exported live	$m	9.9	9.6	10.3	4.7	3.9	3.0
Total livestock j	$m	14,723	18,740	20,622	20,369	19,843	19,775
Livestock products							
Wool **k**	$m	2,530	2,676	2,965	3,458	4,299	5,055
Milk **l**	$m	4,729	4,722	4,282	3,687	4,348	4,498
Eggs	$m	710	729	783	808	829	855
Honey and beeswax	$m	88.0	101	110	116	127	122
Total livestock products	$m	8,057	8,227	8,140	8,069	9,603	10,531
Total farm	$m	51,479	54,362	56,643	62,310	60,500	61,402
Forestry products m							
Hardwood	$m	822	961	1,076	1,198	1,177	1,002
Softwood	$m	1,018	1,064	1,194	1,374	1,166	1,153
Total forestry products	$m	1,840	2,025	2,270	2,571	2,343	2,155
Fisheries products n							
Tuna	$m	147	161	171	148	158	178
Salmonids **o**	$m	543	631	718	756	867	895
Other fish **p**	$m	405	435	523	507	448	426
Prawns	$m	339	365	388	395	365	373
Rock lobster **q**	$m	588	668	695	673	676	690
Other crustaceans	$m	63.9	65.1	63.6	70.6	67.2	67.3
Abalone	$m	164	164	160	177	175	174
Scallops	$m	11.3	11.3	14.0	23.9	24.4	24.2
Oysters	$m	91.3	91.3	95.5	112	99.3	106
Pearls	$m	60.7	67.9	78.4	70.4	71.7	73.0
Other molluscs	$m	33.5	40.8	41.5	47.5	48.7	50.4
Other nei	$m	27.1	64.5	74.2	79.2	74.7	77.1
Total fisheries products	$m	2,473	2,764	3,021	3,060	3,075	3,133
Total agriculture, fisheries and forestry products	$m	55,793	59,151	61,934	67,942	65,917	66,690

a Linseed, safflower seed and peanuts. **b** Value delivered to gin. **c** Other horticulture includes mainly coffee, essential oils, spices, tea, vegetables for seed and other miscellaneous horticultural products. **d** Mainly fodder crops. **e** Includes dairy cattle. **f** ABARES forecast. **g** Excludes skin and hide values. **h** Includes all bovine for feeder/slaughter, breeding and dairy purposes. **i** Includes animals exported for breeding purposes. **j** Includes livestock disposals. **k** Shorn, dead and fellmongered wool, and wool exported on skins. **l** Milk intake by factories and valued at the farm gate. **m** Excludes logs harvested for firewood. **n** Value to fishers of product landed in Australia. **o** Includes salmon and trout production. **p** Includes an estimated value of aquaculture. **q** Includes Queensland bugs. **s** ABARES estimate.

Notes: The gross value of production is the value placed on recorded production at the wholesale prices realised in the marketplace. The point of measurement can vary between commodities. Generally the marketplace is the metropolitan market in each state and territory. However, where commodities are consumed locally or where they become raw material for a secondary industry, these points are presumed to be the marketplace. Prices used in these calculations exclude GST. Series break in 2015–16. Prior to 2015–16 figures are based on establishments with an estimated value of agricultural operations (EVAO) of $5,000. From 2015–16 (inclusive) figures are based on establishments with an EVAO of $40,000.

Sources: ABARES; Australian Bureau of Statistics

TABLE 14 Crop and forestry areas and livestock numbers Australia

Commodity	unit	2013–14	2014–15	2015–16	2016–17	2017–18 s	2018–19 f
Crop areas							
Grains							
Barley	'000 ha	3,814	4,078	4,108	4,834	3,878	4,264
Corn (maize)	'000 ha	52.3	59.6	53.3	67.8	56.1	61.0
Grain sorghum	'000 ha	532	732	521	368	531	918
Oats	'000 ha	715	854	821	1,028	742	693
Rice	'000 ha	74.9	69.7	26.6	82.2	60.2	85.7
Triticale	'000 ha	79.9	81.5	78.4	61.6	77.4	108
Wheat	'000 ha	12,613	12,384	11,282	12,191	12,237	11,953
Oilseeds							
Canola	'000 ha	2,721	2,897	2,091	2,681	2,729	2,461
Soybeans	'000 ha	24.9	20.2	20.8	16.7	37.4	32.6
Sunflower seed	'000 ha	17.1	25.4	22.8	16.1	17.3	36.9
Other oilseeds **a**	'000 ha	21.3	12.7	12.7	10.2	16.3	13.7
Pulses							
Chickpeas	'000 ha	508	425	677	1,069	1,116	528
Field peas	'000 ha	245	237	238	230	222	185
Lupins	'000 ha	387	443	534	515	518	445
Total grains, oilseeds and pulses b	'000 ha	22,559	22,909	21,337	24,369	23,435	22,741
Industrial crops							
Cotton	'000 ha	392	197	270	557	500	415
Sugar cane **c**	'000 ha	371	378	381	372	380	385
Wine grapes **d**	'000 ha	127	132	130	134	140	140
Livestock numbers e							
Beef cattle	million	26.3	24.6	22.3	23.6	24.5	25.1
Dairy cattle	million	2.8	2.8	2.7	2.6	2.6	2.7
Milking herd **g**	million	1.6	1.7	1.6	1.5	1.5	1.5
Total cattle	million	29.1	27.4	25.0	26.2	27.1	27.8
Sheep	million	69.4	68.0	67.5	72.1	72.1	72.9
Pigs	million	2.3	2.3	2.3	2.4	2.5	2.5
Sows	'000	266	271	240	242	251	253
Forestry plantation area							
Hardwood	'000 ha	963	928	928	908	na	na
Softwood	'000 ha	1,024	1,035	1,037	1,037	na	na
Total plantation area h	'000 ha	2,000	1,973	1,975	1,955	na	na

a Linseed, peanuts and safflower seed. **b** Total includes components not listed separately. **c** Cut for crushing. **d** Grapes for wine only. **e** At 30 June. **f** ABARES forecast. **g** Cows in milk and dry. **h** Includes areas where plantation type is unknown. **s** ABARES estimate.

Note: Series break in 2015–16. Prior to 2015–16 figures are based on establishments with an estimated value of agricultural operations (EVAO) of $5,000. From 2015–16 (inclusive) figures are based on establishments with an EVAO of $40,000.

Sources: ABARES; Australian Bureau of Statistics; Australian Sugar Milling Council, Annual Review, Brisbane; Cotton Australia, Australian cotton industry statistics - Cotton Annual, Sydney; Pulse Australia

TABLE 15 Average farm yields Australia

Commodity	unit	2013–14	2014–15	2015–16	2016–17	2017–18 s	2018–19 f
Crops							
Grains							
Barley	t/ha	2.4	2.1	2.2	2.8	2.3	2.2
Corn (maize)	t/ha	7.5	8.3	7.5	6.4	6.8	6.1
Grain sorghum	t/ha	2.4	3.0	3.4	2.7	2.7	2.5
Oats	t/ha	1.8	1.4	1.6	2.2	1.5	1.6
Rice	t/ha	10.9	9.9	10.3	9.8	10.5	10.2
Triticale	t/ha	1.6	1.8	1.6	2.4	1.5	2.0
Wheat	t/ha	2.0	1.9	2.0	2.6	1.7	1.8
Oilseeds							
Canola	t/ha	1.4	1.2	1.3	1.6	1.3	1.3
Soybeans	t/ha	1.3	1.9	1.9	1.9	1.7	2.0
Sunflower seed	t/ha	1.0	1.2	1.1	1.1	1.8	1.2
Pulses							
Chickpeas	t/ha	1.2	1.3	1.3	1.9	0.9	1.2
Field peas	t/ha	1.4	1.2	0.9	1.8	1.3	1.1
Lupins	t/ha	1.6	1.2	1.2	2.0	1.2	1.3
Industrial crops							
Cotton (lint)	t/ha	2.3	2.7	2.3	1.6	2.1	2.0
Sugar cane (for crushing)	t/ha	82.3	85.7	91.4	98.3	88.2	88.2
Wine grapes	t/ha	11.3	12.1	13.5	13.7	12.1	12.5
Livestock products							
Wool **a**	kg/sheep	4.4	4.5	4.4	4.6	4.4	4.5
Whole milk	L/cow	5,692	5,761	6,198	5,930	6,086	6,116

a Shorn (including lambs). **f** ABARES forecast. **s** ABARES estimate.

Note: Series break in 2015–16. Prior to 2015–16 figures are based on establishments with an estimated value of agricultural operations (EVAO) of $5,000. From 2015–16 (inclusive) figures are based on establishments with an EVAO of $40,000.

Sources: ABARES; Australian Bureau of Statistics; Dairy Australia; Pulse Australia

TABLE 16 Volume of agricultural, fisheries and forestry exports Australia

Commodity	unit	2013–14	2014–15	2015–16	2016–17	2017–18 s	2018–19 f
Farm							
Crops							
Grains							
Barley **a**	kt	7,124	6,208	5,498	9,537	7,400	4,113
Corn (maize)	kt	83.3	58.1	41.3	73.3	65.7	36.5
Grain sorghum	kt	701	1,205	1,075	729	290	313
Oats	kt	213	284	206	421	376	204
Rice	kt	544	461	314	219	372	397
Wheat **b**	kt	18,336	16,571	15,777	22,057	15,988	15,205
Oilseeds							
Canola	kt	3,194	2,445	1,946	3,599	2,449	2,025
Cottonseed	kt	464	167	147	316	243	316
Other oilseeds **c**	kt	13.6	5.8	10.0	9.8	11.8	22.3
Pulses							
Chickpeas	kt	562	674	1,140	1,970	1,100	647
Peas	kt	155	179	143	225	203	160
Lupins	kt	298	270	220	380	323	265
Other pulses	kt	771	597	588	1,252	975	721
Total grains, oilseeds and pulses	kt	32,458	29,124	27,106	40,789	29,797	24,426
Industrial crops							
Raw cotton **d**	kt	1,036	681	536	763	905	963
Sugar	kt	3,052	3,675	4,140	3,970	3,843	3,863
Wine	ML	717	745	727	786	860	858
Livestock and livestock products							
Meat and live animals							
Beef and veal	kt (sw)	1,214	1,376	1,196	991	1,109	1,145
Live feeder/slaughter cattle **e**	’000	1,006	1,295	1,114	817	892	925
Live breeder cattle **g**	’000	127	83.4	144	99.2	95.4	100
Lamb	kt (sw)	236	254	261	255	268	285
Live sheep **h**	’000	2,020	2,180	1,859	1,851	1,950	1,900
Mutton	kt (sw)	186	180	156	135	177	165
Pig meat	kt (sw)	27.7	28.5	27.9	30.7	34.3	37.5
Chicken meat	kt (sw)	38.2	36.0	27.3	35.4	38.1	41.4
Goat meat	kt (sw)	38.3	36.5	29.6	29.3	25.6	23.6
Live goats	’000	81.2	91.0	80.7	29.6	19.6	15.0
Wool							
Greasy	kt	295	325	296	313	321	319
Semi-processed	kt (gr. eq.)	35.2	41.4	34.8	30.9	26.8	25.0
Skins	kt (gr. eq.)	97.1	92.5	86.0	85.3	89.5	86.0
Total wool	kt (gr. eq.)	428	459	417	429	437	430
Dairy products							
Butter **i**	kt	49.3	43.6	33.6	21.4	17.4	18.4
Cheese	kt	151	159	172	167	175	183
Casein	kt	2.9	0.2	0.4	0.4	0.1	0.1
Skim milk powder	kt	143	186	181	153	151	148
Whole milk powder	kt	94.4	69.3	57.0	59.9	50.8	51.9

continued ...

TABLE 16 Volume of agricultural, fisheries and forestry exports Australia continued

Commodity	unit	2013–14	2014–15	2015–16	2016–17	2017–18 s	2018–19 f
Fisheries products							
Tuna	kt	11.0	12.1	13.8	10.7	11.7	12.2
Salmonids	kt	1.8	5.0	8.0	5.0	15.1	14.4
Other fish	kt	5.8	6.5	20.6	15.5	7.7	7.4
Abalone	kt	2.7	2.6	2.6	2.6	2.5	2.5
Prawns	kt	7.1	6.5	6.7	7.0	5.3	5.5
Rock lobster	kt	8.0	8.2	8.0	8.6	9.4	9.4
Other crustaceans and molluscs	kt	2.5	2.4	2.4	2.0	1.8	1.7
Total edible j	kt	38.9	43.3	62.1	51.4	53.5	53.1
Forestry products							
Sawnwood	'000 m^3	371	515	300	319	na	na
Wood-based panels	'000 m^3	184	185	197	191	na	na
Paper and paperboards	kt	1,207	1,168	1,130	1,243	na	na
Woodchips k	kt	4,776	5,707	6,393	7,100	na	na

a Includes the grain equivalent of malt. **b** Includes the grain equivalent of wheat flour. **c** Includes soybeans, linseed, sunflower seed, safflower seed and peanuts. Excludes meals and oils. **d** Excludes cotton waste and linters. **e** Includes buffalo. **f** ABARES forecast. **g** Includes dairy cattle and buffalo. **h** Includes breeding stock. **i** Includes butter concentrate and butter oil, dairy spreads, dry butterfat and ghee all expressed as butter. **j** Total non-edible export volume not available. **l** Includes particles. **s** ABARES estimate.
Sources: ABARES; Australian Bureau of Statistics; Department of Foreign Affairs and Trade; UN Commodity Trade Statistics Database (UN Comtrade)

TABLE 17 Value of agricultural, fisheries and forestry exports (fob) Australia

Commodity	unit	2013–14	2014–15	2015–16	2016–17	2017–18 s	2018–19 f
Agriculture							
Crops							
Grains							
Barley **a**	$m	2,199	2,137	1,790	2,427	2,081	1,254
Corn (maize)	$m	36.5	30.0	21.7	31.8	31.9	18.1
Grain sorghum	$m	253	424	364	212	103	142
Oats	$m	80.0	106	97.0	151	117	87.7
Rice **b**	$m	490	506	408	244	363	395
Wheat **c**	$m	6,103	5,547	5,120	6,094	4,887	5,170
Oilseeds							
Canola	$m	1,929	1,349	1,097	2,128	1,356	1,113
Cottonseed	$m	168	74.7	68.9	137	109	147
Other oilseeds **d**	$m	18.3	13.6	19.0	29.8	21.1	38.2
Pulses							
Chickpeas	$m	297	414	1,013	1,921	1,019	415
Field peas	$m	67.2	90.5	85.5	109	79.5	65.1
Lupins	$m	125	119	96.8	136	104	95.0
Other pulses	$m	530	541	584	964	565	500
Total grains, oilseeds and pulses	$m	12,296	11,352	10,764	14,583	10,836	9,440
Industrial crops							
Raw cotton **e**	$m	2,355	1,546	1,269	1,788	2,185	2,568
Sugar	$m	1,385	1,643	1,823	2,424	1,808	1,663
Wine	$m	1,847	1,983	2,184	2,366	2,778	2,796
Total industrial crops	$m	5,587	5,172	5,277	6,579	6,771	7,027
Horticulture							
Fruit	$m	724	755	1,072	1,086	1,169	1,239
Tree nuts	$m	610	734	930	820	902	1,022
Vegetables	$m	268	289	340	354	401	459
Nursery	$m	11.3	11.9	14.8	19.2	19.6	20.0
Other horticulture **g**	$m	220	230	252	281	287	293
Total horticulture	$m	1,833	2,019	2,609	2,561	2,778	3,034
Other crops and crop products	$m	2,601	3,031	3,872	4,289	4,214	3,358
Total crops	$m	22,318	21,574	22,521	28,013	24,600	22,858
Livestock and livestock products							
Meat and live animals							
Beef and veal	$m	6,422	9,040	8,495	7,115	7,779	7,965
Live feeder/slaughter cattle **h**	$m	795	1,163	1,280	1,031	1,112	1,110
Live breeder cattle **i**	$m	255	192	271	168	163	210
Lamb	$m	1,534	1,779	1,771	1,934	2,152	2,358
Live sheep **j**	$m	185	245	228	233	252	250
Mutton	$m	772	824	699	719	1,025	960
Pig meat	$m	93.9	110	128	124	130	137
Chicken meat	$m	53.7	58.1	49.8	54.1	65.8	67.4
Goat meat	$m	199	258	226	250	257	238
Live goats	$m	9.9	9.6	10.3	4.7	3.9	3.0
Total meat and live animals	$m	10,318	13,680	13,157	11,633	12,939	13,299
Wool							
Greasy **k**	$m	2,212	2,497	2,590	3,014	3,665	4,070
Semi-processed	$m	238	282	281	248	259	238
Skins	$m	426	375	412	355	416	404
Total wool k	$m	2,877	3,154	3,283	3,617	4,339	4,712

continued ...

TABLE 17 Value of agricultural, fisheries and forestry exports (fob) Australia continued

Commodity	unit	2013–14	2014–15	2015–16	2016–17	2017–18 s	2018–19 f
Dairy products							
Butter **l**	$m	243	198	156	111	130	125
Cheese	$m	765	823	859	847	942	976
Casein	$m	42.3	10.5	10.4	11.0	3.9	4.1
Skim milk powder	$m	708	682	516	454	432	403
Whole milk powder	$m	532	294	257	268	275	246
Other dairy products **m**	$m	904	868	1,202	1,336	1,403	1,467
Total dairy products	$m	3,194	2,876	3,001	3,028	3,186	3,221
Other livestock and livestock products	$m	2,657	2,916	2,824	2,727	2,750	2,879
Total livestock exports	$m	19,046	22,625	22,265	21,004	23,215	24,111
Total agricultural exports	$m	41,364	44,200	44,786	49,017	47,814	46,969
Fisheries products							
Tuna	$m	136	151	163	144	148	169
Salmonids	$m	17.4	48.1	79.9	58.9	162	154
Other fish	$m	72.5	72.1	111	103	100	88.4
Abalone	$m	170	174	182	187	189	187
Prawns	$m	101	94.2	114	114	87.4	93.5
Rock lobster	$m	590	691	693	676	754	749
Other crustaceans and molluscs	$m	51.6	62.3	74.1	48.5	49.0	44.9
Pearls	$m	144	111	95.9	75.4	56.5	73.9
Other fisheries products	$m	21.5	36.2	27.5	27.2	28.4	26.5
Total fisheries products	$m	1,304	1,440	1,542	1,435	1,575	1,585
Total forest exports	$m	2,546	2,795	3,147	3,485	3,641	3,481
Total agricultural, fisheries and forestry	$m	45,214	48,434	49,475	53,937	53,031	52,035

a Includes malt. **b** Includes the milled equivalent of rice flour. **c** Includes wheat flour. **d** Includes soybeans, linseed, sunflower seed, safflower seed and peanuts. Excludes meals and oils. **e** Excludes cotton waste and linters. **f** ABARES forecast. **g** Other horticulture includes mainly coffee, essential oils, spices, tea, vegetables for seed and other miscellaneous horticultural products. **h** Includes buffalo. **i** Includes dairy cattle and buffalo. **j** Includes breeding stock. **k** On a balance of payments basis. Australian Bureau of Statistics recorded trade data adjusted for changes in stock levels held overseas. **l** Includes ghee, dry butterfat, butter concentrate and butter oil, and dairy spreads, all expressed as butter. **m** Other dairy products include food preparations identified by industry as containing a high proportion of dairy products. **s** ABARES estimate.

Sources: ABARES; Australian Bureau of Statistics; Department of Agriculture and Water Resources, Canberra; UN Commodity Trade Statistics Database (UN Comtrade)

TABLE 18 Agricultural exports to China (fob) Australia

Commodity	unit	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17
Farm							
Crops							
Grains							
Barley **a**	$m	454	494	1,080	1,464	834	1,417
Grain sorghum	$m	3.9	98.0	215	410	350	179
Wheat **b**	$m	457	357	484	323	426	493
Other grains **c**	$m	0.1	5.7	0.2	0.4	0.7	0.3
Oilseeds	$m	116	344	627	317	13.6	148
Pulses	$m	4.3	1.3	0.6	16.9	20.0	7.3
Total grains, oilseeds and pulses	$m	1,035	1,300	2,407	2,531	1,645	2,244
Industrial crops							
Raw cotton **d**	$m	1,812	1,849	1,520	851	636	464
Sugar	$m	20.8	2.0	42.0	126	120	100
Wine	$m	209	241	202	269	416	595
Total industrial crops	$m	2,041	2,093	1,764	1,246	1,172	1,159
Horticulture							
Fruit	$m	10.0	27.6	37.4	64.2	187	258
Tree nuts	$m	11.5	36.4	37.1	38.6	62.7	73.6
Vegetables	$m	2.5	2.6	3.3	3.9	3.8	2.9
Nursery	$m	0.5	0.3	0.3	0.8	1.1	1.0
Other horticulture **e**	$m	3.0	3.0	2.9	4.5	4.9	5.0
Total horticulture	$m	27.5	69.9	81.0	112	260	340
Other crops and crop products	$m	66.0	65.3	119	361	802	1,078
Total crops	$m	3,170	3,528	4,370	4,250	3,878	4,822
Livestock and livestock products							
Meat and live animals							
Beef and veal	$m	59.1	408	787	758	867	747
Live breeder cattle **g**	$m	133	125	180	149	221	126
Lamb	$m	85.1	120	217	191	144	208
Mutton	$m	30.3	123	229	168	86.0	89.5
Other meat and live animals	$m	1.7	7.5	41.4	42.1	34.9	8.9
Total meat and live animals h	$m	309	784	1,454	1,309	1,352	1,179
Wool							
Greasy	$m	1,925	1,844	1,713	1,986	2,017	2,423
Semi-processed	$m	24.5	18.3	17.6	32.2	14.5	16.7
Skins	$m	369	337	378	336	385	329
Total wool	$m	2,319	2,200	2,109	2,354	2,417	2,769
Dairy products							
Butter **i**	$m	7.2	5.9	7.5	11.4	11.1	11.5
Cheese	$m	36.7	44.0	74.0	72.3	85.0	101
Casein	$m	1.3	1.0	0.9	0.2	0.3	0.0
Skim milk powder	$m	49.6	35.5	108	58.6	70.3	75.9
Whole milk powder	$m	11.2	55.7	159	19.9	82.4	78.0
Other dairy products	$m	185	208	151	173	427	552
Total dairy product exports	$m	291	350	501	335	676	819
Other livestock products	$m	613	629	756	828	648	535
Total livestock and livestock products	$m	3,532	3,962	4,820	4,826	5,093	5,302
Total agricultural exports	$m	6,701	7,489	9,190	9,076	8,971	10,124

a Includes malt. **b** Includes wheat flour. **c** Includes grains not separately listed (excluding rice). **d** Excludes cotton waste and linters. **e** Other horticulture includes mainly coffee, essential oils, spices, tea, vegetables for seed and other miscellaneous horticultural products. **g** Includes buffalo and dairy cattle. **h** Excludes value of live feeder slaughter for October 2015. **i** Includes butter concentrate and butter oil, dairy spreads, dry butterfat and ghee all expressed as butter.
Sources: ABARES; Australian Bureau of Statistics

TABLE 19 Agricultural exports to Indonesia (fob) Australia

Commodity	unit	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17
Farm							
Crops							
Grains							
Barley **a**	$m	10.4	7.1	6.4	5.4	4.7	2.8
Wheat **b**	$m	1,156	1,395	1,194	1,403	1,127	1,263
Other grains	$m	1.1	1.0	0.1	0.0	0.3	0.3
Oilseeds	$m	0.1	0.1	0.4	0.2	0.7	0.1
Pulses	$m	12.5	10.7	27.1	14.1	16.9	20.0
Total grains, oilseeds and pulses	$m	1,180	1,414	1,228	1,423	1,150	1,286
Industrial crops							
Raw cotton **c**	$m	282	220	174	136	130	183
Sugar	$m	302	316	467	519	476	541
Wine	$m	4.3	4.5	2.6	3.9	4.0	5.9
Total industrial crops	**$m**	588	540	644	659	610	730
Horticulture							
Fruit	$m	33.2	48.9	53.0	62.2	90.7	76.8
Tree nuts	$m	1.5	1.4	1.2	2.4	5.1	5.8
Vegetables	$m	10.9	12.4	11.1	6.0	10.0	9.4
Nursery	$m	0.1	0.0	0	0.0	0	0.1
Other horticulture **d**	$m	2.7	2.3	2.9	3.8	1.5	1.8
Total horticulture	$m	48.5	64.9	68.2	74.4	107	93.9
Other crops and crop products	$m	24.7	33.8	39.3	43.4	47.8	50.4
Total crops	$m	1,842	2,053	1,980	2,200	1,915	2,161
Livestock and livestock products							
Meat and live animals							
Beef and veal	$m	168	137	258	247	315	292
Live feeder/slaughter cattle **e**	$m	252	165	452	595	578	620
Live breeder cattle **e**	$m	2.4	9.4	8.8	5.0	7.2	15.9
Lamb	$m	8.8	7.8	4.5	7.1	7.6	8.7
Mutton	$m	1.3	1.6	1.2	4.1	6.2	5.8
Other meat and live animals **g**	$m	0.8	0.8	3.3	2.4	0.4	0.0
Total meat and live animals	$m	433	321	728	861	915	942
Wool	$m	0.4	0.3	0.9	0.6	0.5	0.4
Dairy products							
Butter **h**	$m	3.9	5.5	6.6	4.6	3.2	3.5
Cheese	$m	18.6	18.3	18.4	18.1	17.7	24.7
Casein	$m	7.2	9.4	9.7	0.0	0.0	0.4
Skim milk powder	$m	71.6	68.1	126	164	120	107
Whole milk powder	$m	34.0	18.0	37.3	8.0	2.9	3.0
Other dairy products	$m	39.1	28.4	38.8	56.5	51.2	61.0
Total dairy product exports	$m	174	148	237	251	195	200
Other livestock products	$m	113	146	143	140	121	150
Total livestock and livestock products	$m	721	615	1,109	1,252	1,231	1,293
Total agricultural exports	$m	2,562	2,668	3,089	3,452	3,146	3,454

a Includes malt. **b** Includes wheat flour. **c** Excludes cotton waste and linters. **d** Other horticulture includes mainly coffee, essential oils, spices, tea, vegetables for seed and other miscellaneous horticultural products. **e** Includes buffalo. **g** Includes buffalo and dairy cattle. **h** Includes butter concentrate and butter oil, dairy spreads, dry butterfat and ghee all expressed as butter.

Sources: ABARES; Australian Bureau of Statistics

TABLE 20 Agricultural exports to Japan (fob) Australia

Commodity	unit	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17
Farm							
Grains							
Barley **a**	$m	316	292	251	177	223	326
Grain sorghum	$m	219	202	16.2	2.3	0.6	2.1
Wheat **b**	$m	395	392	322	305	326	304
Other grains	$m	8.9	15.5	8.8	5.5	4.0	5.8
Oilseeds							
Canola	$m	47.4	71.7	113	175	62.7	83.8
Cottonseed	$m	30.9	36.1	30.9	23.3	27.3	18.8
Other oilseeds	$m	0.5	1.4	1.1	0.9	1.2	1.3
Pulses	$m	11.5	10.4	10.6	8.5	14.5	11.5
Total grains, oilseeds and pulses	$m	1,030	1,021	754	697	659	753
Industrial crops							
Raw cotton **c**	$m	62.6	27.6	31.9	25.4	26.6	30.8
Sugar	$m	211	198	244	164	233	439
Wine	$m	45.3	42.2	41.5	43.8	45.6	47.0
Total industrial crops	$m	318	268	318	233	306	517
Horticulture							
Fruit	$m	59.0	62.6	60.6	59.2	89.0	105
Tree nuts	$m	20.3	22.5	19.3	22.7	35.4	45.0
Vegetables	$m	40.8	41.1	39.1	37.6	44.1	50.7
Nursery	$m	2.9	2.6	1.8	1.7	2.0	5.0
Other horticulture **d**	$m	4.6	2.3	7.0	7.1	7.1	6.9
Total horticulture	$m	128	131	128	128	178	212
Other crops and crop products	$m	355	337	370	375	364	374
Total crops	$m	1,830	1,757	1,570	1,433	1,506	1,856
Livestock and livestock products							
Meat and live animals							
Beef and veal	$m	1,580	1,466	1,439	1,858	1,813	1,910
Live feeder/slaughter cattle **eg**	$m	19.7	14.6	15.1	14.4	14.7	22.1
Lamb	$m	62.7	56.3	75.5	86.0	72.0	83.1
Mutton	$m	25.0	16.9	28.8	27.3	35.1	32.2
Other meat and live animals	$m	3.9	4.8	5.1	6.9	8.3	12.0
Total meat and live animals	$m	1,691	1,559	1,564	1,992	1,943	2,060
Wool							
Greasy	$m	11.6	8.0	0.6	0.2	0.0	0.1
Semi-processed	$m	26.1	21.5	10.3	14.2	20.5	11.1
Skins	$m	1.6	1.0	1.6	1.8	1.7	1.5
Total wool	$m	39.3	30.4	12.5	16.2	22.2	12.7
Dairy products							
Butter **h**	$m	8.7	3.9	2.2	3.9	3.3	2.7
Cheese	$m	423	415	343	407	410	373
Casein	$m	21.5	16.8	20.4	5.4	4.9	3.1
Skim milk powder	$m	2.0	5.0	16.5	30.5	5.2	9.8
Whole milk powder	$m	0.7	0.4	0.0	0.1	0.0	0.0
Other dairy products	$m	45.9	68.0	38.6	33.4	38.8	39.4
Total dairy product exports	$m	502	509	421	481	462	428
Other livestock products	$m	301	293	276	291	361	365
Total livestock and livestock products	$m	2,532	2,391	2,273	2,780	2,789	2,865
Total agricultural exports	$m	4,363	4,148	3,843	4,213	4,295	4,721

a Includes malt. **b** Includes the grain equivalent of wheat flour. **c** Excludes cotton waste and linters. **d** Other horticulture includes mainly coffee, essential oils, spices, tea, vegetables for seed and other miscellaneous horticultural products. **e** Excludes breeding stock and includes buffalo for feeder/slaughter purposes. **g** Excludes value of live feeder slaughter for October 2015. **h** Includes butter concentrate and butter oil, dairy spreads, dry butterfat and ghee all expressed as butter.

Sources: ABARES; Australian Bureau of Statistics

TABLE 21 Agricultural exports to the Republic of Korea (fob) Australia

Commodity	unit	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17
Farm							
Crops							
Grains a							
Barley **b**	$m	94.3	87.2	116	116	95.7	77.8
Wheat **c**	$m	628	449	310	354	410	300
Corn (maize)	$m	12.3	19.6	22.6	21.6	13.2	23.6
Other grains **d**	$m	0.6	0.7	0.8	0.9	0.6	0.3
Oilseeds							
Cottonseed	$m	26.5	36.8	30.5	15.4	19.1	12.3
Other oilseeds	$m	1.3	3.2	5.9	2.1	4.8	4.5
Pulses	$m	35.7	74.0	57.0	68.4	25.0	49.8
Total grains, oilseeds and pulses	$m	799	670	542	578	568	468
Industrial crops							
Raw cotton **e**	$m	120	119	130	81.8	24.4	21.7
Sugar	$m	514	467	300	512	631	984
Wine	$m	8.8	10.2	7.6	10.5	13.1	13.5
Total industrial crops	$m	643	596	438	604	668	1,019
Horticulture							
Fruit	$m	4.9	6.6	6.0	9.6	12.3	9.0
Tree nuts	$m	2.6	2.3	3.9	10.8	17.6	14.5
Vegetables	$m	9.1	7.0	4.7	8.5	16.6	14.9
Other horticulture **g**	$m	1.7	1.9	2.7	1.9	1.9	3.1
Total horticulture	$m	18.2	17.8	17.4	30.7	48.5	41.5
Other crops and crop products	$m	135	141	166	156	174	245
Total crops	$m	1,595	1,425	1,163	1,370	1,459	1,773
Livestock and livestock products							
Meat and live animals							
Beef and veal	$m	654	703	892	1,068	1,324	1,228
Lamb	$m	14.6	13.6	24.0	32.0	48.9	95.7
Mutton	$m	4.3	3.9	5.7	7.1	8.8	10.1
Other meat and live animals	$m	5.9	5.6	8.1	13.3	13.3	17.5
Total meat and live animals	$m	679	726	930	1,120	1,395	1,351
Wool	$m	43.2	43.5	61.1	81.3	127	108
Dairy products							
Butter **h**	$m	9.2	6.9	6.3	9.6	14.3	9.6
Cheese	$m	31.0	29.8	26.1	32.0	39.2	53.1
Casein	$m	2.4	1.5	1.1	0.1	0.2	0.0
Skim milk powder	$m	23.3	19.3	26.5	24.6	13.6	19.6
Whole milk powder	$m	7.4	1.9	3.1	2.4	1.9	2.1
Other dairy products	$m	42.2	29.0	29.0	24.3	29.6	30.5
Total dairy products	$m	116	88.4	92.1	92.9	98.7	115
Other livestock products	$m	120	95.7	110	174	160	189
Total livestock and livestock products	$m	958	954	1,194	1,468	1,782	1,763
Total agricultural exports	$m	2,553	2,379	2,357	2,837	3,240	3,536

a Includes commodities subjected to ABS confidentiality restricitions. **b** Includes malt. **c** Includes wheat flour. **d** Includes grains not separately listed. **e** Excludes cotton waste and linters. **g** Other horticulture includes mainly coffee, essential oils, spices, tea, vegetables for seed and other miscellaneous horticultural products. **h** Includes butter concentrate and butter oil, dairy spreads, dry butterfat and ghee all expressed as butter.

Sources: ABARES; Australian Bureau of Statistics

TABLE 22 Agricultural exports to the United States (fob) Australia

Commodity	unit	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17
Farm							
Crops							
Grains, oilseeds and pulses							
Grains **a**	$m	0.2	1.2	1.7	0.3	0.1	0.1
Oilseeds	$m	19.7	49.9	66.2	21.6	1.5	20.4
Pulses	$m	5.0	4.0	4.8	4.4	4.5	7.6
Total grains, oilseeds and pulses	$m	24.8	55.1	72.7	26.3	6.1	28.1
Industrial crops							
Sugar	$m	120	54.2	31.0	52.7	77.9	73.2
Wine	$m	493	483	472	463	477	479
Total industrial crops	$m	613	537	504	515	555	552
Horticulture							
Fruit	$m	33.1	25.4	31.3	23.8	34.0	34.0
Tree nuts	$m	14.6	27.8	48.3	64.9	82.1	43.3
Vegetables	$m	4.9	5.0	6.4	8.0	8.7	9.5
Nursery	$m	1.7	1.5	1.5	1.7	2.1	2.0
Other horticulture **b**	$m	9.7	9.3	17.7	19.9	19.7	29.1
Total horticulture	$m	64.0	69.0	105	118	147	118
Other crops and crop products	$m	207	243	322	323	364	357
Total crops	$m	909	904	1,003	983	1,072	1,055
Livestock and livestock products							
Meat and live animals							
Beef and veal	$m	894	970	1,360	3,233	2,488	1,494
Lamb	$m	304	303	398	532	617	619
Mutton	$m	24.5	33.8	50.6	77.7	94.3	102
Goat meat	$m	55.6	72.6	82.3	155	155	182
Other meat and live animals	$m	0.0	0.1	0.2	1.2	0.3	0.3
Total meat and live animals	$m	1,278	1,379	1,891	3,999	3,355	2,398
Wool							
Greasy	$m	7.8	6.7	3.9	6.7	7.3	2.8
Semi-processed	$m	2.9	1.7	2.5	2.7	4.2	2.1
Skins	$m	0.0	0.5	0.3	0.1	0.0	0.1
Total wool	$m	10.7	8.9	6.6	9.5	11.6	4.9
Dairy products							
Butter **c**	$m	6.8	12.7	0.5	13.0	9.6	1.4
Cheese	$m	3.4	11.1	8.5	26.7	32.1	25.5
Casein	$m	6.5	8.9	4.2	0.9	1.4	2.9
Whole milk powder	$m	3.8	5.1	0.0	0.9	4.4	1.6
Other dairy products	$m	17.4	22.1	16.4	17.3	19.8	16.0
Total dairy products	$m	37.9	60.0	29.7	58.8	67.3	47.4
Other livestock products	$m	60.2	63.5	95.0	134	146	154
Total livestock and livestock products	$m	1,387	1,512	2,022	4,202	3,579	2,604
Total agricultural exports	$m	2,295	2,415	3,025	5,184	4,651	3,659

a Includes commodities subjected to ABS confidentiality restricitions. **b** Other horticulture includes mainly coffee, essential oils, spices, tea, vegetables for seed and other miscellaneous horticultural products. **c** Includes butter concentrate and butter oil, dairy spreads, dry butterfat and ghee all expressed as butter.

Sources: ABARES; Australian Bureau of Statistics

TABLE 23 Volume of fisheries products exports Australia

Commodity	unit	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17
Edible a							
Fish							
Live	kt	0.9	0.8	0.9	0.8	0.8	0.8
Tuna	kt	8.9	8.9	11.0	12.1	13.8	10.7
Salmonids	kt	5.8	2.6	1.8	5.0	8.0	5.0
Swordfish	kt	0.5	0.5	0.4	0.5	0.6	0.5
Whiting	kt	0.9	0.4	0.1	0.0	0.0	0.0
Other fish	kt	5.1	4.7	4.4	5.3	19.2	14.2
Total fish	kt	22.0	17.8	18.6	23.6	42.4	31.2
Crustaceans and molluscs							
Rock lobster	kt	6.9	7.8	8.0	8.2	8.0	8.6
Prawns	kt	5.4	3.9	7.1	6.5	6.7	7.0
Abalone	kt	3.1	2.8	2.7	2.6	2.6	2.6
Scallops	kt	0.4	0.4	0.5	0.3	0.4	0.4
Crabs	kt	0.8	0.4	0.4	0.6	0.6	0.5
Other crustaceans and molluscs	kt	1.7	2.1	1.6	1.6	1.5	1.1
Total crustaceans and molluscs	kt	18.4	17.5	20.3	19.7	19.7	20.1
Total edible fisheries products	kt	40.5	35.3	38.9	43.3	62.1	51.4

a Includes prepared and preserved.

Source: Australian Bureau of Statistics

TABLE 24 Value of fisheries products exports (fob) Australia

Commodity	unit	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17
Edible							
Fish							
Live	$m	32.0	30.7	34.2	29.9	30.2	31.6
Tuna	$m	163	163	136	151	163	144
Salmonids	$m	41.8	25.4	17.4	48.1	79.9	58.9
Swordfish	$m	4.2	3.9	3.9	4.4	6.9	7.5
Whiting	$m	2.5	1.4	0.2	0.1	0.0	0.1
Other fish	$m	46.2	34.2	34.2	37.7	74.3	63.5
Total fish	$m	289	258	225	271	355	306
Crustaceans and molluscs							
Rock lobster	$m	387	447	590	691	693	676
Prawns	$m	66.7	51.8	101	94.2	114	114
Abalone	$m	197	186	170	174	182	187
Scallops	$m	15.3	10.8	13.6	10.7	11.7	12.0
Crabs	$m	11.0	8.2	5.5	7.9	7.6	7.7
Other crustaceans and molluscs	$m	34.4	40.2	32.5	43.7	54.8	28.8
Total crustaceans and molluscs	$m	711	744	913	1,021	1,064	1,026
Total edible fisheries products	$m	1,001	1,002	1,138	1,293	1,418	1,333
Non-edible							
Marine fats and oils	$m	7.3	10.0	9.1	20.9	11.2	10.0
Fish meal	$m	0.4	1.0	0.7	1.0	0.5	1.1
Pearls **a**	$m	207	152	144	111	95.9	75.4
Ornamental fish	$m	2.3	3.8	2.0	1.9	2.1	2.4
Other non-edible	$m	9.4	6.5	9.7	12.3	13.8	13.8
Total non-edible fisheries products	$m	226	173	166	147	123	103
Total fisheries products	$m	1,227	1,175	1,304	1,440	1,542	1,435

a Includes items temporarily exported and re-imported.

Source: Australian Bureau of Statistics

TABLE 25 Volume of fisheries products imports Australia

Commodity	unit	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17
Edible a							
Fish							
Tuna	kt	40.8	46.9	50.1	49.2	44.9	47.9
Salmonids	kt	10.2	11.9	14.2	16.1	15.1	14.7
Hake	kt	5.3	6.1	4.5	4.9	5.1	5.7
Swordfish	kt	0.2	0.2	0.2	0.2	0.2	0.1
Toothfish	kt	0.1	0.2	0.2	0.1	0.2	0.1
Herrings	kt	0.9	1.8	0.9	1.1	2.2	0.8
Shark	kt	0.5	0.5	0.7	0.6	0.4	0.2
Other fish	kt	86.6	92.8	90.0	87.6	86.4	87.2
Total fish b	kt	144	161	161	160	154	157
Crustaceans and molluscs							
Prawns	kt	37.5	34.8	38.7	32.4	31.9	31.8
Lobster	kt	0.9	0.8	1.0	1.1	0.9	1.2
Crabs	kt	1.5	1.5	2.1	2.0	1.9	1.7
Mussels	kt	2.8	3.7	3.6	3.1	3.3	3.6
Scallops	kt	3.0	3.1	3.5	2.9	2.6	3.0
Squid and octopus	kt	17.0	19.9	23.2	22.3	23.4	23.9
Other crustaceans and molluscs	kt	7.3	4.1	4.8	4.0	4.2	4.3
Total crustaceans and molluscs	kt	69.8	67.9	76.7	67.8	68.3	69.5
Total edible fisheries products abc	kt	214	228	238	228	223	226

a Includes prepared and preserved. **b** Excludes live tonnage. **c** Includes other fisheries products not classified into fish or crustaceans and molluscs.

Source: Australian Bureau of Statistics

TABLE 26 Value of fisheries products imports Australia

Commodity	unit	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17
Edible a							
Fish							
Tuna	$m	206	258	296	284	275	303
Salmonids	$m	91.8	119	167	191	185	217
Hake	$m	20.9	23.4	19.5	21.8	23.6	23.1
Swordfish	$m	1.2	1.7	1.4	1.7	1.6	1.2
Toothfish	$m	1.3	2.2	3.0	3.5	8.2	4.7
Herrings	$m	4.2	5.1	4.5	3.9	5.7	4.2
Shark	$m	4.0	4.6	5.5	4.9	3.9	2.2
Other fish	$m	460	480	508	544	570	577
Total fish b	$m	789	894	1,005	1,055	1,073	1,132
Crustaceans and molluscs							
Prawns	$m	351	305	495	431	401	402
Lobster	$m	16.0	15.3	22.4	28.3	29.9	33.8
Crabs	$m	15.5	16.8	28.3	31.1	28.7	24.9
Mussels	$m	11.7	17.1	19.1	17.9	20.0	21.7
Scallops	$m	43.6	41.1	52.9	49.6	55.0	68.6
Squid and octopus	$m	90.4	97.7	114	112	135	167
Other crustaceans and molluscs	$m	57.0	40.7	44.0	42.9	50.7	49.8
Total crustaceans and molluscs	$m	585	533	776	712	720	768
Total edible fisheries products abc	$m	1,374	1,428	1,781	1,767	1,793	1,900
Non-edible							
Pearls **d**	$m	138	105	102	97.2	144	132
Fish meal	$m	34.2	43.3	43.2	64.3	61.7	60.8
Ornamental fish	$m	3.7	4.0	4.5	4.4	4.9	4.2
Marine fats and oils	$m	39.5	39.1	40.1	52.7	61.1	56.0
Other marine products	$m	17.1	29.0	30.4	22.2	21.3	22.7
Total non-edible fisheries products	$m	233	221	220	241	293	275
Total fisheries products	$m	1,607	1,648	2,002	2,008	2,086	2,175

a Includes prepared and preserved. **b** Includes live value. **c** Includes other fisheries products not classified into fish or crustaceans and molluscs. **d** Mainly re-imports.

Source: Australian Bureau of Statistics

TABLE 27 Value of Australian fisheries products trade, by selected countries Australia

Trade	unit	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17
Exports							
Edible (including live)							
Hong Kong	$m	479	317	209	192	224	203
Vietnam	$m	60.5	293	566	716	682	574
Japan	$m	255	236	192	192	205	194
China	$m	58.5	45.2	36.6	48.7	105	170
Singapore	$m	42.5	31.0	34.2	35.0	35.3	37.7
United States	$m	23.1	17.9	22.1	28.0	44.8	38.2
Taiwan	$m	17.5	9.8	13.7	15.1	20.9	13.4
Thailand	$m	18.1	9.3	8.0	10.0	9.4	11.8
New Zealand	$m	10.1	9.1	14.5	13.9	19.9	17.0
Malaysia	$m	7.7	7.8	9.9	11.2	7.5	17.5
Indonesia	$m	6.1	7.4	9.9	9.3	10.0	12.5
Non-edible							
Hong Kong	$m	96.6	54.3	74.6	55.9	53.2	29.3
Japan	$m	44.4	33.0	26.9	23.4	24.0	29.8
United States	$m	22.2	21.0	19.2	16.6	21.6	14.4
Imports							
Edible (excluding live)							
Thailand	$m	362	400	417	422	416	455
New Zealand	$m	197	206	207	190	200	215
China	$m	231	196	342	285	292	305
Vietnam	$m	174	163	232	233	243	243
Malaysia	$m	73.2	81.0	97.9	94.7	88.9	101
United States	$m	45.1	52.2	56.0	53.0	54.9	51.1
Indonesia	$m	36.3	50.9	73.5	85.6	89.5	78.8
Taiwan	$m	38.9	48.1	44.5	58.3	60.3	55.4
South Africa	$m	31.3	35.1	31.6	27.5	27.7	26.5
Denmark	$m	25.3	32.2	44.8	58.2	47.7	61.8
Norway	$m	27.1	29.9	45.4	68.1	66.8	91.3

Source: Australian Bureau of Statistics

TABLE 28 Volume of forest products exports Australia

Commodity	unit	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17
Volume							
Roundwood	'000 m^3	1,806	1,516	2,363	2,616	3,685	4,323
Sawnwood							
Softwood roughsawn **a**	'000 m^3	198	207	268	300	247	265
Softwood dressed	'000 m^3	12.9	3.0	4.6	25.5	10.8	8.2
Hardwood roughsawn	'000 m^3	25.9	20.2	73.2	117.2	19.1	27.5
Hardwood dressed	'000 m^3	14.6	6.7	25.4	72.6	23.3	18.8
Total sawnwood	'000 m^3	252	237	371	515	300	319
Railway sleepers	'000 m^3	8.1	8.3	17.0	13.9	7.4	6.3
Wood-based panels							
Veneers	'000 m^3	106	51.6	63.7	50.1	45.2	78.1
Plywood	'000 m^3	18.1	36.4	35.8	13.9	30.5	36.5
Particleboard	'000 m^3	4.5	1.9	5.5	11.3	10.8	4.7
Hardboard	'000 m^3	1.9	2.4	2.7	10.9	21.3	3.9
Medium-density fibreboard	'000 m^3	79.3	52.4	74.9	78.0	85.2	66.2
Softboard and other fibreboards	'000 m^3	4.6	1.1	0.9	21.4	3.9	1.2
Total wood-based panels	'000 m^3	214	146	184	185	197	191
Paper and paperboard							
Newsprint	kt	29.6	71.6	84.5	56.2	49.8	193
Printing and writing	kt	132	139	153	141	139	95.7
Household and sanitary	kt	26.2	11.5	19.7	23.1	17.0	15.6
Packaging and industrial	kt	933	906	950	948	924	939
Total paper and paperboard	kt	1,121	1,127	1,207	1,168	1,130	1,243
Recovered paper	kt	1,403	1,506	1,449	1,397	1,420	1,354
Pulp	kt	1.3	0.2	0.1	0.1	0.2	0.2
Woodchips **bc**	kt	4,150	3,806	4,776	5,707	6,393	7,100

a Softwood roughsawn includes softwood dressed from January 2017. **b** Bone dry tonnes. **c** Includes particles.

Note: Components may not add to totals due to rounding.

Sources: ABARES; Australian Bureau of Statistics

TABLE 29 Value of forest products exports (fob) Australia

Commodity	unit	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17
Value							
Roundwood	$m	175	155	292	313	438	598
Sawnwood							
Softwood roughsawn **a**	$m	54.8	61.4	75.2	74.1	67.6	69.3
Softwood dressed	$m	3.2	2.4	2.9	11.2	7.4	5.4
Hardwood roughsawn	$m	23.3	19.6	22.5	19.9	17.1	29.0
Hardwood dressed	$m	6.9	6.4	7.2	4.5	11.0	6.1
Total sawnwood	$m	88.2	89.9	108	110	103	110
Railway sleepers	$m	2.8	2.9	2.5	1.9	1.7	1.5
Miscellaneous forest products **b**	$m	64.8	76.3	88.6	97.9	141	170
Wood-based panels							
Veneers	$m	50.6	24.5	29.0	26.9	24.1	40.3
Plywood	$m	2.2	4.1	2.9	2.9	4.2	4.4
Particleboard	$m	1.4	1.4	1.4	1.6	2.3	1.9
Hardboard	$m	1.8	2.1	2.0	2.4	7.0	3.4
Medium-density fibreboard	$m	26.3	18.5	25.7	27.3	27.9	22.5
Softboard and other fibreboards	$m	0.7	0.2	0.4	6.3	1.1	0.3
Total wood-based panels	$m	83.0	50.8	61.5	67.3	66.5	72.8
Paper and paperboard							
Newsprint	$m	15.5	36.2	59.1	38.9	33.4	96.9
Printing and writing	$m	120	117	139	146	128	95.8
Household and sanitary	$m	63.7	32.8	48.7	59.6	53.2	37.5
Packaging and industrial	$m	518	526	605	657	683	680
Total paper and paperboard	$m	717	712	853	901	898	910
Paper manufactures **c**	$m	134	132	132	109	102	110
Recovered paper	$m	240	230	241	241	249	260
Pulp	$m	0.7	0.2	0.3	0.3	0.4	0.7
Woodchips **d**	$m	729	611	768	954	1,149	1,252
Total wood products	$m	2,235	2,059	2,546	2,795	3,147	3,485

a Softwood roughsawn includes softwood dressed from January 2017. **b** Includes such items as builders carpentry, cork, eucalyptus and tea tree oils, gums, mouldings, packing cases, parquetry flooring, resins, wooden doors, and other miscellaneous wood articles. Excludes wooden furniture. **c** Includes other paper articles that have had some further processing. **d** Includes particles.

Note: Components may not add to totals due to rounding.

Sources: ABARES; Australian Bureau of Statistics

TABLE 30 Volume of forest products imports Australia

Commodity	unit	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17
Volume							
Roundwood	'000 m^3	1.1	1.3	0.6	0.8	1.8	0.5
Sawnwood **a**							
Softwood roughsawn	'000 m^3	239	247	271	291	241	220
Softwood dressed	'000 m^3	470	443	449	608	540	506
Hardwood roughsawn	'000 m^3	45.9	41.3	41.4	42.7	38.6	28.8
Hardwood dressed	'000 m^3	36.1	28.4	24.7	26.4	22.3	31.9
Total sawnwood	'000 m^3	791	759	786	968	841	787
Wood-based panels							
Veneers	'000 m^3	14.7	12.6	8.6	12.5	14.1	14.6
Plywood	'000 m^3	293	278	287	341	357	405
Particleboard	'000 m^3	67.2	72.2	95.1	94.6	89.2	124
Hardboard	'000 m^3	69.1	59.8	86.2	81.7	91.4	99.2
Medium-density fibreboard	'000 m^3	91.1	76.6	65.3	85.1	88.8	98.3
Softboard and other fibreboards	'000 m^3	7.1	5.6	5.1	6.7	7.4	6.3
Total wood-based panels	'000 m^3	542	505	548	622	648	747
Paper and paperboard							
Newsprint	kt	121	84.7	75.2	76.3	69.3	64.9
Printing and writing	kt	1,174	1,155	1,172	1,040	960	861
Household and sanitary	kt	118	159	123	142	155	164
Packaging and industrial	kt	333	385	357	392	410	427
Total paper and paperboard	kt	1,746	1,783	1,727	1,651	1,595	1,516
Recovered paper	kt	2.6	3.7	4.6	3.9	1.5	1.7
Pulp	kt	256	263	297	302	281	299
Woodchips **bc**	kt	1.2	1.2	1.7	2.3	1.9	2.7

a Excludes railway sleepers. **b** Bone dry tonnes. **c** Includes particles.

Sources: ABARES; Australian Bureau of Statistics

TABLE 31 Value of forest products imports Australia

Commodity	unit	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17
Value							
Roundwood	$m	0.7	0.9	0.8	0.6	1.7	4.0
Sawnwood							
Softwood roughsawn	$m	105	100	111	128	112	108
Softwood dressed	$m	248	246	281	382	361	345
Hardwood roughsawn	$m	44.3	41.5	45.7	57.2	55.1	43.9
Hardwood dressed	$m	50.8	35.0	30.8	34.3	27.7	37.3
Total sawnwood	$m	448	423	468	601	555	535
Miscellaneous forest products **a**	$m	756	769	946	1,102	1,304	1,204
Wood-based panels							
Veneers	$m	20.8	19.1	15.4	22.4	23.6	21.3
Plywood	$m	183	184	210	264	300	349
Particleboard	$m	26.1	26.9	35.5	37.8	41.0	52.4
Hardboard	$m	53.9	47.5	71.6	67.0	69.2	68.2
Medium-density fibreboard	$m	36.3	32.3	35.2	45.3	51.3	50.7
Softboard and other fibreboards	$m	3.2	2.1	2.7	3.0	4.0	4.0
Total wood-based panels	$m	323	311	370	439	489	546
Paper and paperboard							
Newsprint	$m	90.6	57.9	48.9	48.3	43.6	40.1
Printing and writing	$m	1,217	1,151	1,194	1,123	1,036	877
Household and sanitary	$m	187	244	208	254	305	296
Packaging and industrial	$m	543	590	654	728	845	883
Total paper and paperboard	$m	2,037	2,043	2,105	2,153	2,230	2,096
Paper manufactures **b**	$m	486	446	537	582	662	648
Recovered paper	$m	0.7	0.9	2.0	1.3	0.3	0.5
Pulp	$m	164	154	203	217	222	215
Woodchips **c**	$m	2.0	2.7	3.2	3.2	3.9	4.7
Total wood products	$m	4,217	4,151	4,636	5,099	5,468	5,253

a Includes such items as builders carpentry, cork, eucalyptus and tea tree oils, gums, mouldings, packing cases, parquetry flooring, resins, wooden doors, and other miscellaneous wood articles. Excludes wooden furniture. **b** Includes other paper articles that have had some further processing. **c** Includes particles.

Note: Components may not add to totals due to rounding.

Sources: ABARES; Australian Bureau of Statistics

TABLE 32 Value of Australian forest products trade, by selected countries a

Trade	unit	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17
Exports							
China	$m	535	474	542	817	1,342	1,620
Hong Kong	$m	39.3	16.5	10.3	12.6	11.5	21.5
Japan	$m	579	394	21.2	316	444	459
Korea, Rep. of	$m	39.8	33.4	44.3	38.1	37.3	42.3
Malaysia	$m	112	72.9	87.6	70.6	71.1	88.6
New Zealand	$m	305	270	292	297	318	328
Taiwan	$m	68.4	68.3	56.8	73.5	110	118
Imports							
China	$m	800	913	1,110	1,321	1,497	1,479
Finland	$m	120	205	221	184	160	143
Germany	$m	148	135	163	150	156	146
Indonesia	$m	342	313	348	427	495	448
Malaysia	$m	236	227	249	270	306	306
New Zealand	$m	634	557	605	646	673	624
United States	$m	298	304	339	361	347	355

a Value of wood products trade to selected countries may exclude data where ABS confidentiality restrictions apply.

Sources: ABARES; Australian Bureau of Statistics

Abbreviations

lb	pound	454 grams
kg	kilogram	2.20462 pounds
t	tonne	1,000 kilograms
kt	kilotonne	1,000 tonnes
Mt	megatonne	1,000,000 tonnes
L	litre	1.761 pints
kL	kilolitre	1,000 litres
ML	megalitre	1,000,000 litres
GL	gigalitre	1,000,000,000 litres
ha	hectare	2.471 acres
m^3	cubic metre	1.307 cubic yards
c	cent (Australian)	
A$	dollar (Australian)	
$m	million dollars (Australian)	
DM	deutschmark	
ECU	European currency unit	
€	euro	
£	pound sterling	
USc	cent (United States)	
US$	dollar (United States)	
¥	yen	
cif	cost, insurance and freight	
cw	carcase weight	
sw	shipped weight	
fas	free alongside ship	
fob	free on board	
fot	free on truck	
na	not available	
nec	not elsewhere classified	
nei	not elsewhere included	
nfd	not further defined	
ABARE	Australian Bureau of Agricultural and Resource Economics	
ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences	
ABS	Australian Bureau of Statistics	
ANZSIC	Australian and New Zealand Standard Industrial Classification	
BAE	Bureau of Agricultural Economics (now ABARES)	
BRS	Bureau of Rural Sciences (now ABARES)	
CIS	Commonwealth of Independent States	
EVAO	Estimated value of agricultural operations	
FAO	Food and Agriculture Organization of the United Nations	
USDA	United States Department of Agriculture	

All values and prices are in nominal terms unless stated otherwise.

Small discrepancies in totals are generally caused by rounding. Zero is used to denote nil or a negligible amount.

The 'Biosphere' Graphic Element
The biosphere is a key part of the department's visual identity. Individual biospheres are used to visually describe the diverse nature of the work we do as a department, in Australia and internationally.

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