NSW GOVERNMENT
Department of Primary Industries

NSW PRIMARY INDUSTRIES PERFORMANCE DATA & INSIGHTS 2019

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Contents

Foreword

Minister for Agriculture and Western NSW

As the NSW Primary Industries sector continues to manage the impacts of one of the worst droughts on record, it has been heartening to see the outpouring of support our farmers have received from right across the state.

Our farmers and regional communities represent so much more than the pure economic contribution they make to the NSW economy.

Rural and regional life in NSW is part of our collective identity, and when our farmers are battling tough conditions the whole state feels their pain.

But even in the face of these extreme conditions, the results in many sectors underline the continuing strength and future potential of primary industries in NSW.

The NSW Government has committed $1.8 billion since 2015 to ensure our farmers have every assistance in managing their businesses through drought, and we will continue to stand by them so they are prepared to make the most of conditions when they finally improve.

In the meantime, we are focused on finding ways to continue to protect the rights of our farmers to run their businesses safely and effectively, such as the recently passed Right to Farm legislation and amendments to biosecurity regulations.

While some areas of primary industries are experiencing buoyant market conditions despite the drought, I have no doubt the current seasonal conditions are the most pressing challenge for many producers and communities, and for the sector more broadly.

Drought is, and will continue to be, an urgent priority for this Government. We must ensure our farmers and communities know they have our support, and we must ensure that support is fit for purpose and accessible.

I look forward to better seasons ahead for all of us, and I thank our farmers and communities and acknowledge their continued efforts and the valuable contribution they make.

The Hon. Adam Marshall, MP

Director General NSW Department of Primary Industries

The 2018-19 season has been one of the most challenging in memory, and has affected every primary industries sector in every corner of the state.

The headline figure in this year's Performance Data and Insights publication - that NSW primary industries achieved an economic output of $15.9 billion - reflects the underlying strength and long-term viability of the sector.

However, that overall story is threaded through with the more personal stories of the innumerable daily battles our farmers have fought - nursing key stock through the season, watching subsequent crops fail, and facing bushfires in the dry conditions.

Like everyone here at the NSW Department of Primary Industries (DPI), I am extremely proud of what our sector has achieved in a very difficult year.

I am also in awe of the continued courage displayed by those individual farmers and farming families that we at DPI have the privilege to work with and stand beside.

DPI is here to build stronger primary industries.

We do this by delivering applied research that boosts the bottom line of farming businesses across the state, and by administering critical drought support measures, and by connecting with the communities, industries and people of NSW.

And even as we continue to stand with our farmers to manage the remainder of the current drought, our focus on delivering solutions to help them make the most of better conditions to come, remains unwavering.

Scott Hansen

https://www.dpi.nsw.gov.au/about-us/publications/pdi/2019

Executive Summary

NSW primary industries reached an estimated Output of $15.9 billion in 2018-19.

The 2018-19 financial year was marked by intense and widespread drought which continues to present serious challenges to our primary producers.

However, the total value of NSW primary industries (excluding the service industries of hunting and recreational fishing) remained strong when considered against prevailing conditions, estimated at $11.9 billion.

The annual value of crop production was seriously affected by the drought, estimated to have declined by 48% to $2.5 billion, driven by a 63% fall in winter crop production and a 56% fall in summer crop production.

These falls in production were partially offset by increases in domestic demand for stockfeed which left little surplus for export and saw average farmgate grain prices rise.

This pattern was repeated across many of the major commodities, with drought-driven decreases in production buffered by increases in farmgate prices, which helped reduce the impact on the value of the primary industries sector as a whole.

The value of the livestock, and livestock product industries, is estimated to have increased 4% to $6.7 billion, driven partially by increased turn-off rates for beef cattle and sheep but also record prices for some commodities.

Farmgate prices for livestock and livestock products rose 7% on average, driven by robust global export demand.

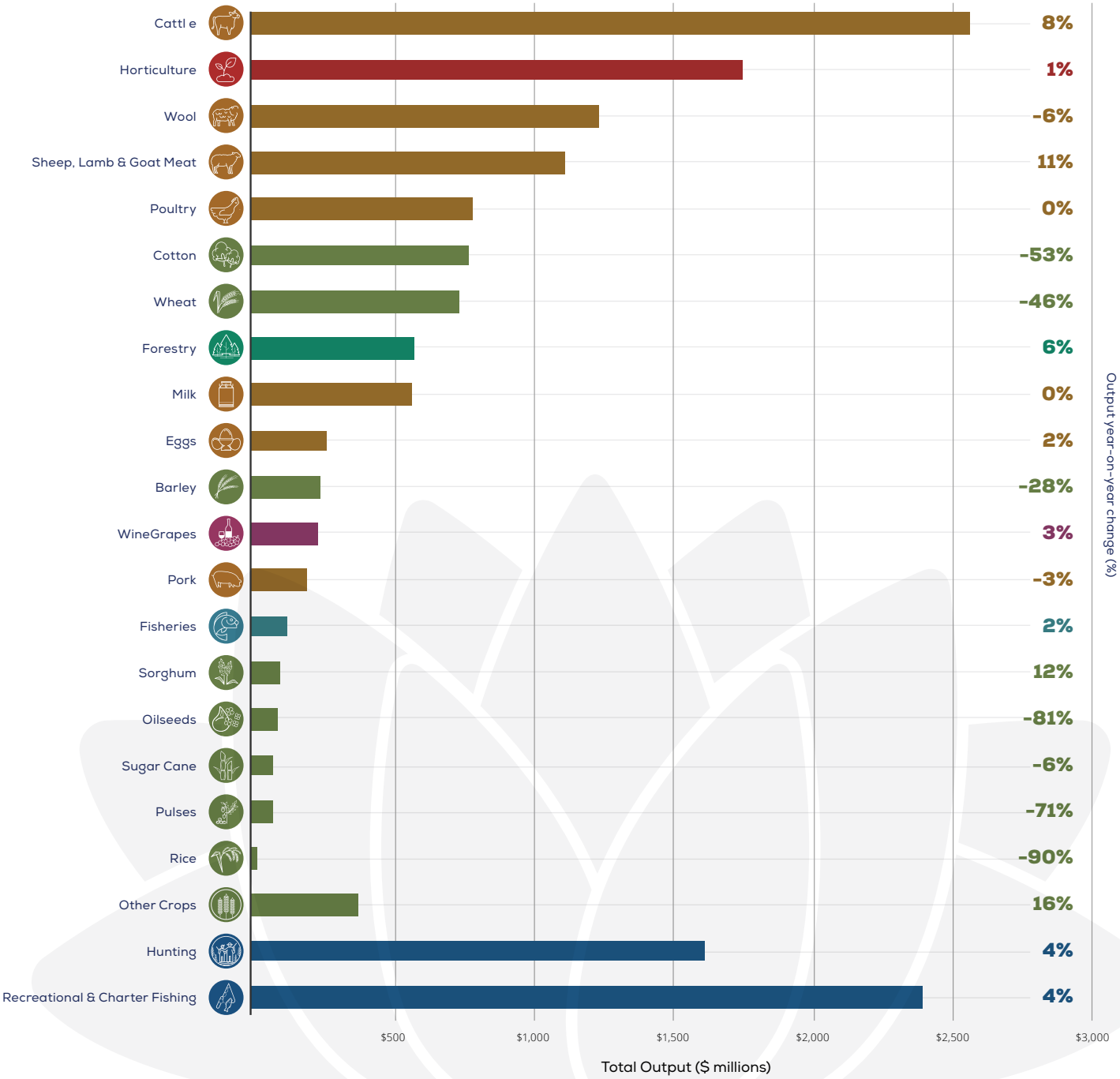
Our $765 million commercial fisheries and forestry sectors also continued to grow and play a vital part in the state's diverse primary industry sector.

Recreational fishing, including charter fishing, and hunting and game management activities once again performed strongly with a combined estimated expenditure of $4 billion. The value of these critical recreational activities extends beyond their pure economic value and is part of the state's rich natural resource base which, with diligent management, will be enjoyed by future generations.

NSW primary industry exports earned $5 billion (excluding cotton exports with an estimated value of $1.1 billion*), with large increases in beef, sheep, and wool exports driven by both higher volumes and prices. DPI continued to work to ensure our exporters are well positioned in existing markets while also ensuring new market access opportunities for producers.

This publication profiles the key drivers for a diverse range of production across the state. Analyses of major factors and output performance for each industry follows, in addition to stories highlighting the diversity of DPI's programs. Key industry statistics and drivers are contained in the appendices.

Total Estimated Primary Industries Output 2018-19



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Key Export Markets

Exports of NSW primary industry products were valued at approximately $5.01 billion[87], down 7% year-on-year. Due to state level data restrictions on cotton exports imposed in 2018, the adjusted estimated export value is $6.12 billion[y], similar to the estimated value in 2017-18. Primary industry exports, as defined by DPI, represented around 9.3% of total NSW exports in 2018-19.

China remains NSW's largest export market valued at a record $1.97 billion, an increase of 12% year-on-year. The importance of China in our agricultural supply chains has become even more pronounced, reaching an equal record market share of 39%, which is likely understated due to the cotton data limitations. Exceptional demand for beef and sheepmeat was influenced by a range of factors such as African swine flu, US-China trade tensions, and lower tariffs under the China/ Australia Free Trade Agreement driving changes in demand.

Exports to the United States grew also strongly in 2018-19, up 13% year on year and NSW second largest market at $616 million. This was underpinned by an increase in demand for sheep and goat meat which grew by 24% to $238 million. Exports to Japan grew by 9% year on year to a 12 year high of $612 million. This market growth was driven by gains across the board for major exports, with beef and sheep meat demand growing, while the combined growth of nut (macadamias) and wheat exports adding an additional $29 million in 2018-19.

NSW livestock exports featured prominently with beef ($1.8 billion) and sheep meat ($927 million) both reaching record levels in 2018-19. Wool exports ($812 million), mainly to China, were only second to last year's record exports. Strong livestock export growth was recorded over most key markets, while Saudi Arabia reached $73 million on the back of beef and sheep meat demand.

Cropping exports were severely impacted by the drought conditions in 2018-19, although they were clouded by restrictions on the state level cotton export data. Excluding cotton, all other cropping exports were down 78% to just $222 million as much of the reduced grain and fodder production was retained onshore for domestic consumption and animal feed supplementation.

Horticultural exports were one of the strongest growing sectors in 2018-19, with the total export value reaching $459 million, up 26% year on year. Exports to China flourished with industries like nuts, citrus, grapes and cherries all recording substantial growth. Many of these industries have benefited from improved market access requirements.

United States
Exports of nuts to the United States grew by an enormous 294% to $35 million, with Macadamias driving growth

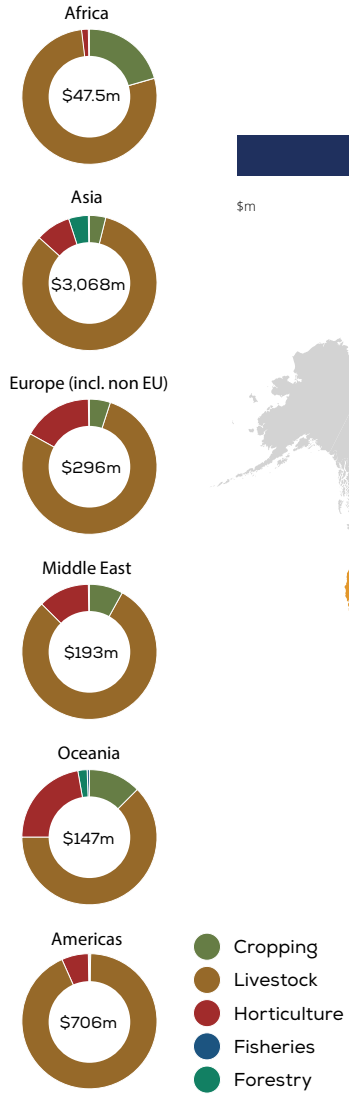
Indonesia
Strong growth in grape, citrus and stone fruit exports to Indonesia due to improved access to the market

China
China became the highest value beef export market, with the value more than doubling in 2018-19

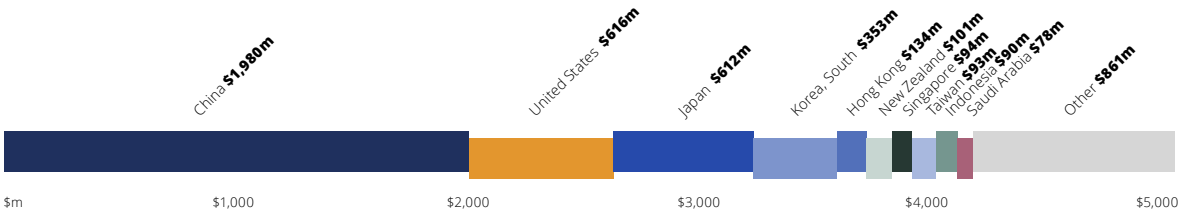
India
Pulse export plummeted due to lack of production and restrictive import tariffs on chickpeas to India

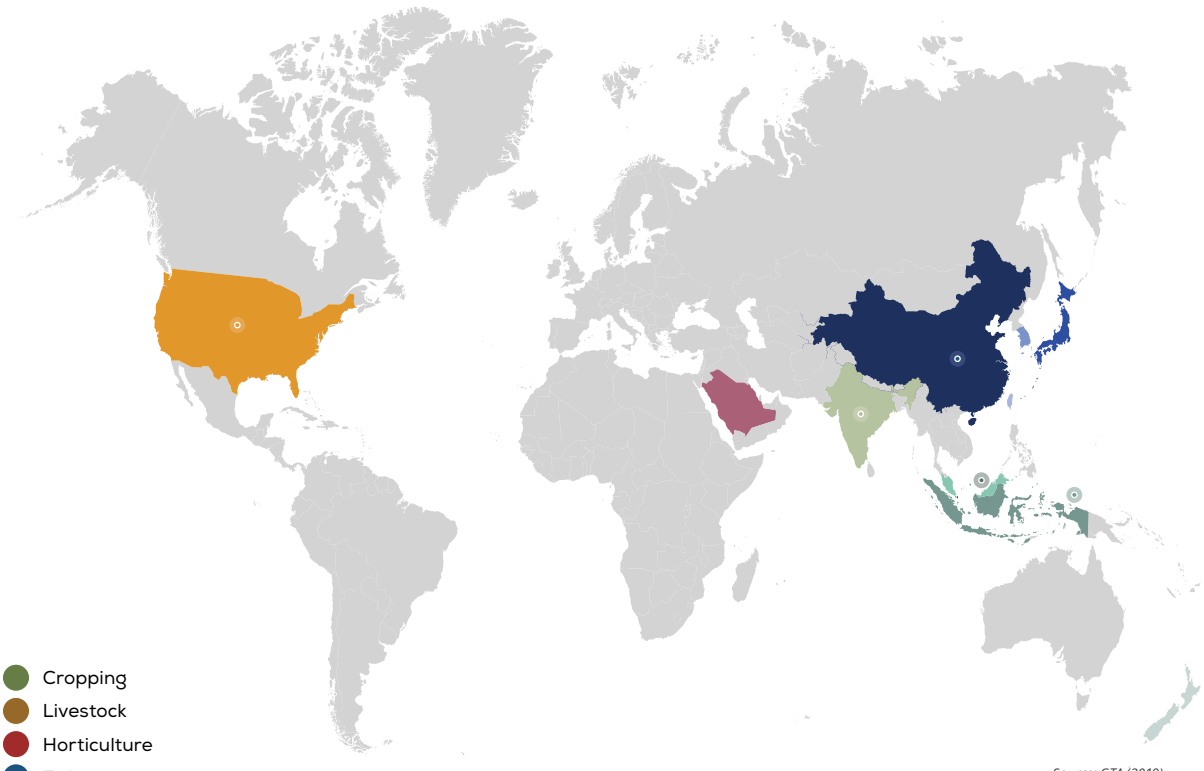
Malaysia
Exports of dairy and dairy products to Malaysia grew 19% with milk and concentrated cream underpinning growth

NSW Exports to



Top 10 export destinations





Source: GTA (2019)

https://www.dpi.nsw.gov.au/about-us/publications/pdi/2019

Macroeconomic Conditions

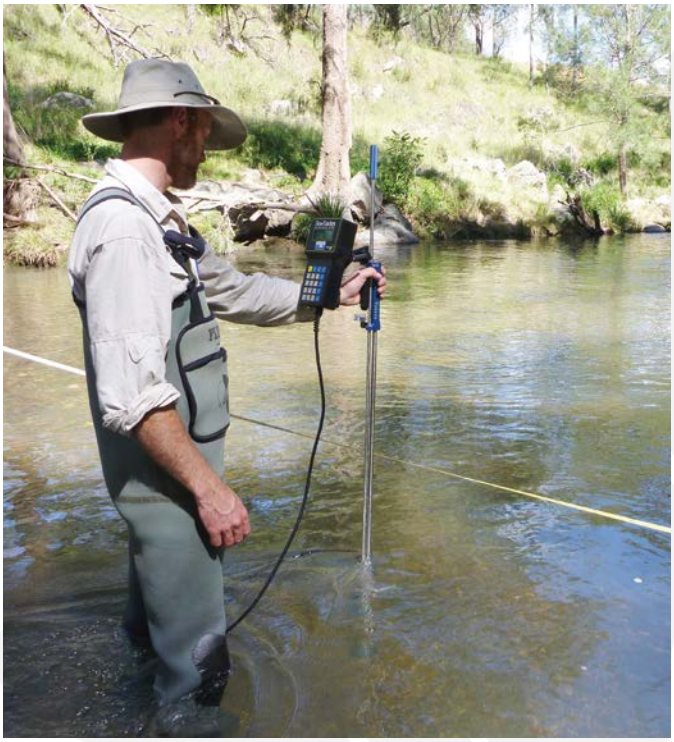
Domestic

Feed Grain Demand

Farmers in NSW faced challenging conditions with higher feed costs, low water availability and high water costs in addition to drought.

Hay and grain were in short supply on the east coast and domestic prices surged. Hay prices reached $600 per tonne in northern NSW[156] in September 2018.

Grain prices reached their highest point in winter and spring 2018 with low supplies available and high feed demand from livestock producers. Wheat prices reached $410 per tonne in the Central West region in August 2018, and $495 per tonne in the Bega region in October 2018. The additional demand for hay and grain from cattle and sheep producers squeezed margins further for dairy, pig and poultry farmers[156].



Water

Low general security water allocations in NSW led to higher prices, as more buyers competed for lower water volumes[157].

The Murrumbidgee regulated river ended the year at 7% allocation for general security water licences. With 0% general security allocations at the end of the year[158], the NSW Murray and Lower Darling river regions had emergency drought restrictions in place, limiting use to town water supply, domestic and stock use and permanent plantings.

Approximately 4.9 million ML in water allocations were traded in the southern Murray Darling Basin in 2018-19, 31% less volume than last year[171].

Prices for water entitlements in NSW increased substantially over 2017-18 levels, particularly for High Security entitlements, with the volume weighted average price 58% higher at $5,564 per share (average of all regulated river water sources). General Security entitlements were 32% higher in 2018-19 at $1,929 per share (average of all regulated river water sources), with most of the trading occurring in the NSW Murray and Murrumbidgee[171].

International

Trade Tensions

The economic growth of some of Australia's key trading partners eased in late 2018 and continued at a moderate pace in early 2019; a slowdown compared to 2017 and early 2018[159]. The escalation in trade tensions between the US and China, lower consumer confidence in the EU, and natural disasters in Japan were major reasons for the slowdown[163].

The trade tensions in the US and China caused a slowdown in global trade and created uncertainty among businesses due to the unpredictability of tariff changes and expectations around future policy directions[162]. China increased tariffs on many American agricultural commodities in April 2018, including pork, wine and many fruit and nuts[164]. In November 2018 China announced an anti-dumping investigation into Australian barley, which has caused uncertainty among grain growers and had not been resolved by the end of the financial year.

Trade Opportunities

Exchange rate: The Australian dollar depreciated against major currencies over 2018-19 which benefitted export-oriented commodities. The average value of the Australian dollar was 72 US cents over the year, compared to 77 US cents in 2017-18. There were similar declines against the Chinese Yuan and the Japanese Yen, Australia's major agricultural trade partners[161].

Partnerships and trade agreements: During 2018-19 the Comprehensive and Progressive Agreement for Trans-Pacific Partnership came into force for Australia and a number of trading partners. Australia also concluded negotiations for preferential trade agreements with Hong Kong and Indonesia that had not yet come into force.

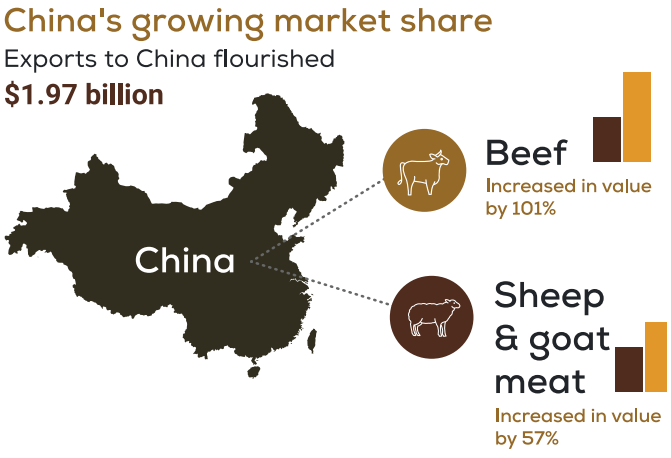
African Swine Fever

African Swine Fever is a highly contagious viral disease that affects domesticated and wild pigs. It was first reported in the Liaoning province in China in August 2018. Since then there have been outbreaks reported in every province in China. As at July 2019 China had reported 155 outbreaks of African Swine Fever to the World Organisation for Animal Health[165].

China is the world's largest consumer of pork and has the largest herd of approximately 442 million head, over half of the world pig population. Official estimates indicate the herd has decreased by 32% over the year to July 2019[166], which would imply a reduction of approximately 140 million head[164]. The USDA estimates pork production in China will fall by 6 million tonnes by the end of 2019.

The shortfall in supply increased pork prices and meant Chinese consumers have increased demand for beef, sheep and lamb meat, poultry and plant proteins. For NSW there was a 101% increase in the value of beef exports and a 57% increase in value of sheep and goatmeat exports to China.

With the reduction in the pig population there was also a significant fall in demand for soybeans.



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OVERVIEW

Cropping

The estimated combined Output of NSW broadacre cropping industries was $2,498 million, down 48% year-on-year. Despite production issues including low water allocations and high water prices, cotton remained the main contributor to total cropping Output by value. Wheat Output fell by an estimated 46% but was the state's second largest crop by value.

Total area planted to winter crops decreased by an estimated 46% to 3 million hectares and winter crop production fell an estimated 63% to 2.9 million tonnes[6]. This was 74% below the 10-year average.

Autumn 2018 was the state's warmest autumn on record and second consecutive drier than average start to the winter cropping season in most northern NSW cropping regions[6]. Conditions were characterised by widespread soil moisture deficit and below average rainfall. Available crop information showed that the production base of the state was under considerable stress. Some areas of the south east and south central of the state received rainfall in early winter, which provided late sowing opportunities, but overall, the extreme dry conditions severely limited sowing opportunities for winter crops across much of the state[67].

In-field conditions during early- to mid-winter were very poor, with very low crop production. Areas that received late sowing opportunities in the south of the state received little follow-up rainfall, and, with crops risking failure or substantially reduced yields, many producers chose to graze or bale sown crops.

Total area planted to summer crops decreased by an estimated 33% to 385,000 hectares and summer crop production fell an estimated 56% to 1.3 million tonnes[6]. This was 52% below the 10-year average.

The summer cropping season commenced under a wide range of on-ground conditions. Drought conditions intensified, particularly to the west of the state. While some isolated storms were recorded, they were ineffective for significant crop production and provided only minimal opportunities for dryland summer cropping. Water storages remained at extremely low levels, and low general security water allocations saw irrigators competing for the reduced water volumes. Extreme heat was experienced across NSW in January 2019, with 90% of the state experiencing its warmest January in history. This heatwave exacerbated the effects of ongoing drought and impacted the minimal area of summer crop that had been planted[67].

Domestic feed markets and supply constraints were the key driver of values in 2018–19. For those fortunate enough to supply the market, stock feed returns provided notable support to many grain and mixed farming enterprises. Sorghum Output in particular benefitted from higher prices and only marginally lower production year-on-year. A significant increase in hay and silage prices supported other crop Output.

Cropping estimated Output 2018-19

Boost for biosecurity collections

NSW DPI's entomology and plant pathology collection holds over half a million preserved scientific specimens. More than $1 million in funding has been allocated to upgrade and modernise the collection. The official pest and disease record for NSW, these collections are irreplaceable and are incredibly important to industries and the environment. They will be digitally photographed, recorded and stored for easier access and sharing, which is critical to quick and effective responses to biosecurity incursions.

Online at https://www.dpi.nsw.gov.au/about-us/publications/pdi/2019

CROPPING

Cotton

Output $763m est. Down 53% yoy

Production down 56%

Value of exports to China, up 98% est

Cotton production more than halved in 2018–19 as poor seasonal conditions, low water allocations and high water prices impacted producers. Output value declined by 53%, with low production slightly offset by stronger prices. The value of exports to China increased by 98%, driven by trade tensions between the US and China.

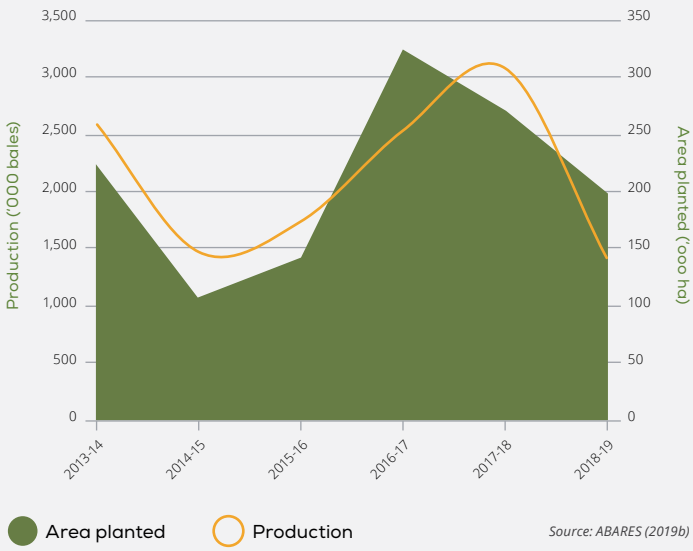
Production

NSW is the main producer of cotton in Australia, growing approximately two thirds of the national crop on average. Production fell by more than half, down 56% year-on-year.

Area planted was down 35% to 227,000 hectares[5; 6] as a result of drier and warmer than average seasonal conditions during October and November 2018, the typical window for planting cotton. These conditions were compounded by low water allocations and soaring water prices.

Yields dropped by 37% year-on-year and were 33% lower than the Australian average due to low water availability and little follow-up rain to carry the crop through in some regions. Irrigated cotton crop yields ranged from 7 to 14 bales per hectare and as much as one-fifth of dryland crops in Northern NSW were ploughed in from lack of water[11].

NSW area planted and production



Source: ABARES (2019b)

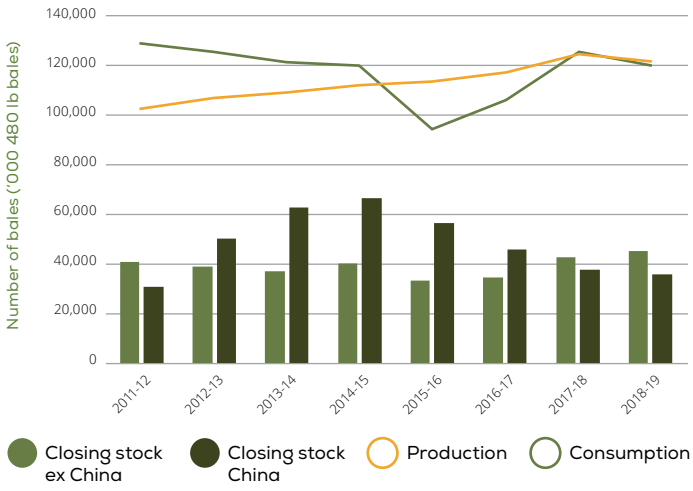
Price

The global Cotton A index fell 21%, driven by projected higher stocks outside of China, a tough demand outlook for US cotton exports as a result of US-China trade tensions and strong competition from synthetic fibres[122; 143].

While international prices faced 32-month lows, Australian prices were resilient and reached high levels. Prices were supported by a depreciated Australian dollar and strong demand from traditional export markets, particularly China[6; 122; 100].

Global consumption outweighed supply with world stocks at continued low levels of approximately 80 million bales. Lower global production from the previous year coupled with higher consumption were the primary drivers[140].

Global supply and demand



Source: (USDA, 2019b)

Australian cotton export markets

Circle size denotes export value

Source: GTA (2019)

Trade

NSW export data was not available due to confidentiality restrictions. As in 2017–18, from a national perspective China was Australia's largest market (the majority of the export market share for 'unidentified country' in the chart is assumed to be attributable to China). The value of Australia's exports to China (combined with an unidentified market) increased 98% year-on-year, driven by China's falling reserves and trade tensions[87].

Macroeconomic Conditions

Australia was China's largest supplier of cotton with approximately 26% market share in 2018–19[143]. As trade tensions between the US and China escalated and China applied retaliatory tariffs of 25% against US cotton, opportunities arose for Australia to supply more to China. There were expectations of a US-China truce within Australia's cotton export window but this did not occur[100].

The ChAFTA also eliminated the 15% tariff on cotton seeds for Australian producers[23].

The decline in global cotton prices has made cotton more competitive and more affordable to the ever increasing number of middle class consumers from developing economies. However, consumption is expected to slow down as global economic growth slows[5; 122].

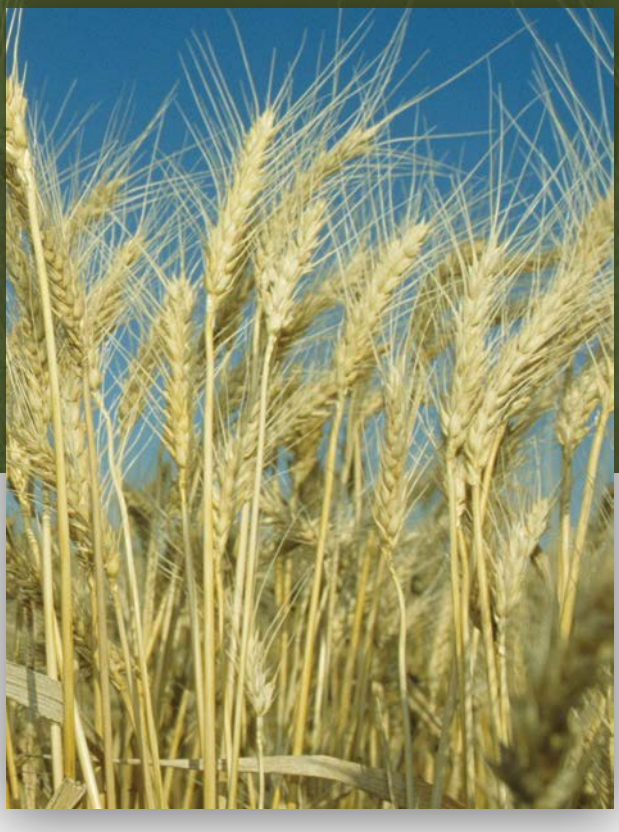
DPI research harnessing fungus to fight invasive weeds

NSW DPI, in collaboration with Melbourne University, is harnessing a naturally occurring fungus to tackle Noogoora burr, an invasive weed which causes major impacts on agriculture and the environment in eastern Australia. Noogoora burr hosts pest insect species and fungal pathogens which affect cotton, including environmental pests and *Verticillium dahliae* which causes Verticillium wilt – a major concern for the cotton industry.

Online at https://www.dpi.nsw.gov.au/about-us/publications/pdi/2019

CROPPING

Wheat



Output $735m est. Down 46% yoy

Production and yields impacted by low rainfall

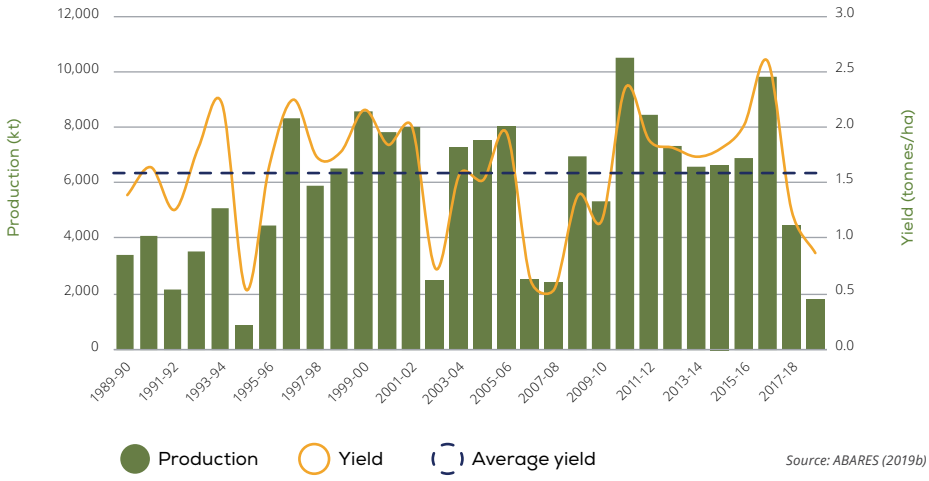
Prices responded as demand for feed grains increased

The 2018–19 season was tough for wheat producers, with patchy planting moisture and little in-crop rainfall leading to limited plantings and low yields. The lack of stock feed on the east coast meant wheat was in high demand, with local prices outstripping gains on the US futures markets. Recent US -China trade tensions have presented some short-term opportunities for NSW wheat producers, but perhaps some long-term challenges.

Production

Seasonal conditions made the year very difficult for growers in 2018–19, with severe rainfall deficiencies across most of the state. Southern areas received some rainfall to begin the season, however follow-up rainfall to finish the crop was mostly elusive. Ultimately, the area planted and yields did not reach potential, resulting in a significantly smaller harvest of an estimated 1.8 million tonnes, down 74% on the 10-year moving average[6].

Production and yield



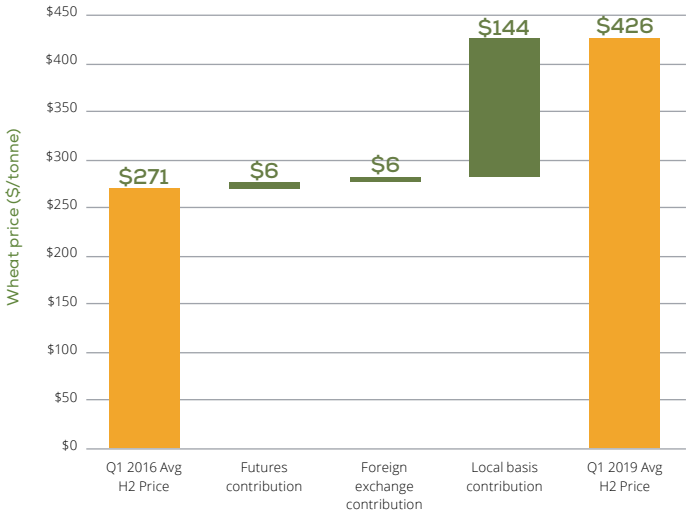
Source: ABARES (2019b)

Price

Global wheat consumption outstripped production in 2018–19, resulting in wheat stocks falling by a modest 2% to 275.5 million tonnes[142]. The driving factor behind this was a projected decline in global production, with production in the EU, China, Russia and Australia all falling significantly.

Wheat futures rallied in response to the global production issues with prices averaging an estimated USD 194 per tonne, up 6.1% from the previous financial year[119]. With the east coast drought increasing grain demand for supplementary feeding in an already tight supply situation, prices received domestically were further amplified. Add to this a declining Australian dollar, and farmers who managed to harvest benefited from an increase in the average ASW delivered Sydney price of approximately 30% to $415 per tonne[9].

Contribution to wheat price increase



Source: Quandl (2019); RBA (2019); ABARES (2019e)

Trade

Top markets were Japan, Vietnam, New Zealand & Italy

= 69%

$65 million of total exports

Low production meant that NSW had a limited exportable surplus and export volumes dropped by 85% to just 225,185 tonnes, most of which was from the 2017–18 season crop[87]. Further, increased domestic demand from the livestock industry to maintain herds, meant that supplementary imports of as much as three million tonnes of grain from the large WA crop could have been sent to cover the east coast shortfall[15].

The markets supplied shrank in 2018–19 with some notable omissions in India, Kuwait, Yemen and very little into the Philippines. The top markets for the year were Japan, Vietnam, New Zealand and Italy which combined made up 69% of the $94 million total wheat export value. Nearly the entire durum crop was exported to Italy with a value of $10 million[87]. Exports to Indonesia suffered due to supply constraints as well as Indonesia's ability to access Black Sea region wheat[26].

Macroeconomic Conditions

Global wheat production was expected to decline by 4% year-on-year in 2018–19. However, this should be viewed in the context that production is expected to be higher than the 10-year average and this will be the first season in five years that production will not break new records[142].

Protecting wheat from fungus

NSW DPI scientists have identified a new Septoria tritici blotch (STB) resistant wheat gene (Stb19) which could be harnessed in future breeding programs to protect crops from the costly fungal disease. Genetic mapping in varieties 'Lorikeet' and 'Summit' show strong links with two significant genetic markers which, together with the newly discovered Stb19, delivers a significant increase in genetic resources to breed STB resistant wheat.

Online at https://www.dpi.nsw.gov.au/about-us/publications/pdi/2019

CROPPING

Barley

Output $246m est. Down 28% yoy

Lowest production since drought in 2002–03

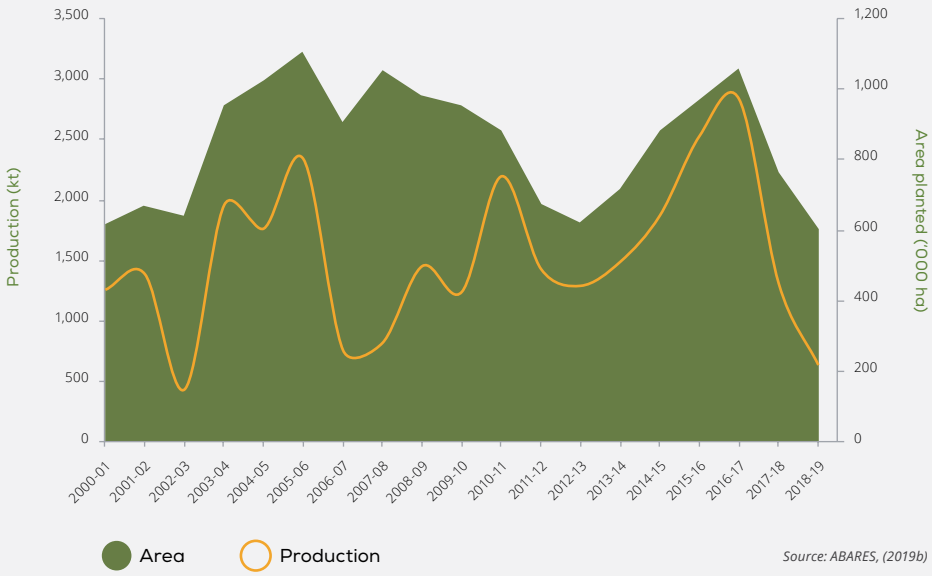
Tight supplies led to the highest average price for barley

Barley production was the lowest since the Millennium drought, at only 630,000 tonnes. Prices were generally higher due to the tight supply of feed grains across the east coast. The Chinese anti-dumping investigation was an ongoing concern for growers.

Production

Barley production was historically low, down to 630,000 tonnes, the lowest since the Millennium drought in 2002–03. The area planted was 600,000 hectares, which accounted for approximately 20% of the winter cropping area. Yields suffered in the harsh weather conditions, down to 1.1 tonnes per hectare, nearly half the decade average[6].

Barley area planted and production



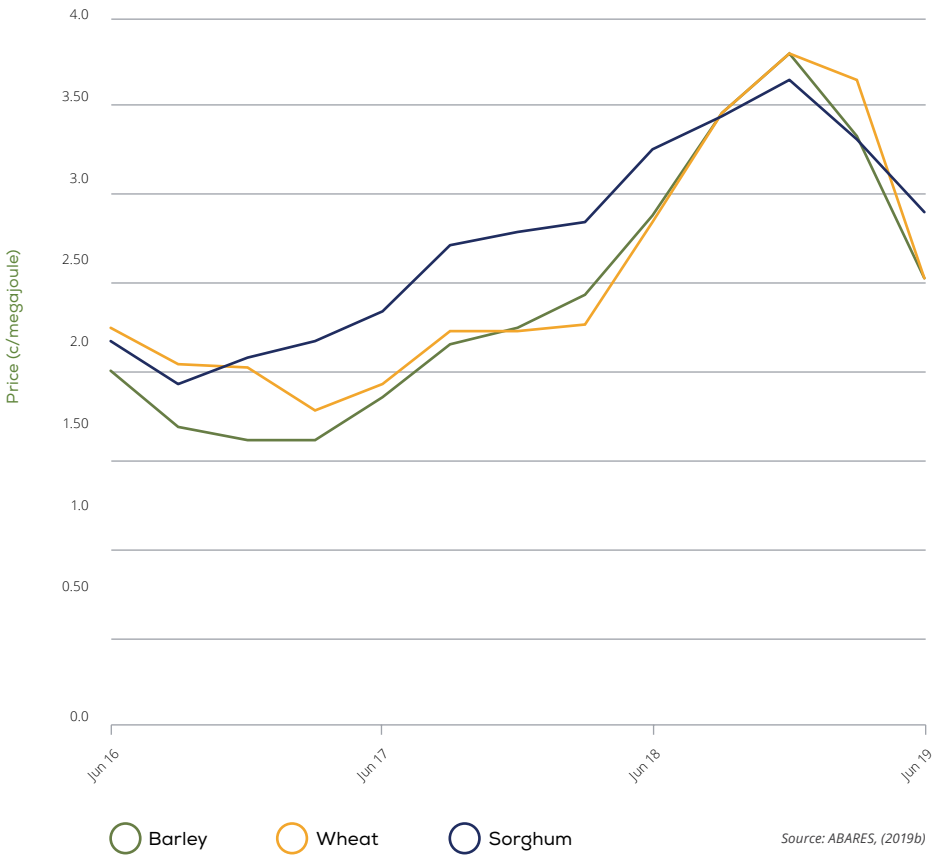
Source: ABARES, (2019b)

Price

The average price for feed barley (delivered Sydney) was $390 per tonne, 43% higher year-on-year due to scarce supply[6]. Prices increased steadily through the year as drought conditions continued through to harvest. The announcement by China of an anti-dumping investigation into Australian barley exports caused a sharp decline in prices across Australia[98], but this effect was short-lived. Prices peaked in December at $440 per tonne for feed barley, before steadily declining to $365 per tonne at the end of the financial year.

The wheat-barley spread fluctuated significantly over the year, staying at around $20 per tonne in late 2018, widening to $65 per tonne in February, then closing again over the year to June. As the wheat-barley spread closed, wheat became more economic to include in feedlot rations. Feed wheat had similar costs per megajoule to barley for much of the year, though in early 2019 as the barley price declined, it became cheaper at 3.33 cents per megajoule[51].

Feed grain costs



Source: ABARES, (2019b)

Macroeconomic Conditions

Australia was the sixth largest barley producer, after Russia, Germany, France, Spain and Canada[142;71]. Production was lower in all major producing countries aside from Canada, with drought conditions in Germany, the largest barley producer in Europe. The drought in Germany affected the market for malting barley, with beer producers purchasing some feed barley to meet production[127].

China, a major destination for barley exports, announced an anti-dumping investigation into Australian barley in 2018, asserting that prices for both malting and feed barley in 2017 were lower than the domestic prices[110]. The investigation may allow China to place a provisional tariff on Australian barley once it releases preliminary findings, and is expected to affect the industry in 2019–2025. This was a serious development, as China is the largest export market for Australian barley.

Maximising productivity and grain quality

NSW DPI led the GRDC funded Southern Barley Agronomy Project conducted across NSW, Victoria and South Australia. The key findings of the research indicated that sowing date is the most critical factor in maximising productivity and grain quality of barley. The research sought to uncover whether different varieties respond differently to different management. Key considerations to variety choice include adaptation to drought and heat stress conditions as well as grain size and test weight.

CROPPING

Sorghum

Output $98m est. Up 12% yoy

Lowest production level since 1993–94

Trade war saw a halt in US sorghum exports to China

A harsh season reduced sorghum production to its lowest level in 25 years. Prices were higher and disruptions felt in global sorghum markets resulted from tensions between the US and China. China introduced tariffs on US sorghum and halted imports for much of 2018–19.

Production

Estimated sorghum production was 275,000 tonnes in 2018–19, down 1.4% on the previous year and the lowest production level since 1993–94. Yields were down to 2.5 tonnes per hectare, with a high proportion of crops fed off early before harvest[6].

Rain in northern NSW in October encouraged planting to sorghum, but extended dry periods during summer placed the crop under pressure[81; 102]. Sorghum that was planted earlier in the window or into stubble fared better in the dry conditions[102]. Late-season rain in December benefited yields in some pockets across NSW including parts of Moree[85], though rains were not widespread across the northern part of the state.

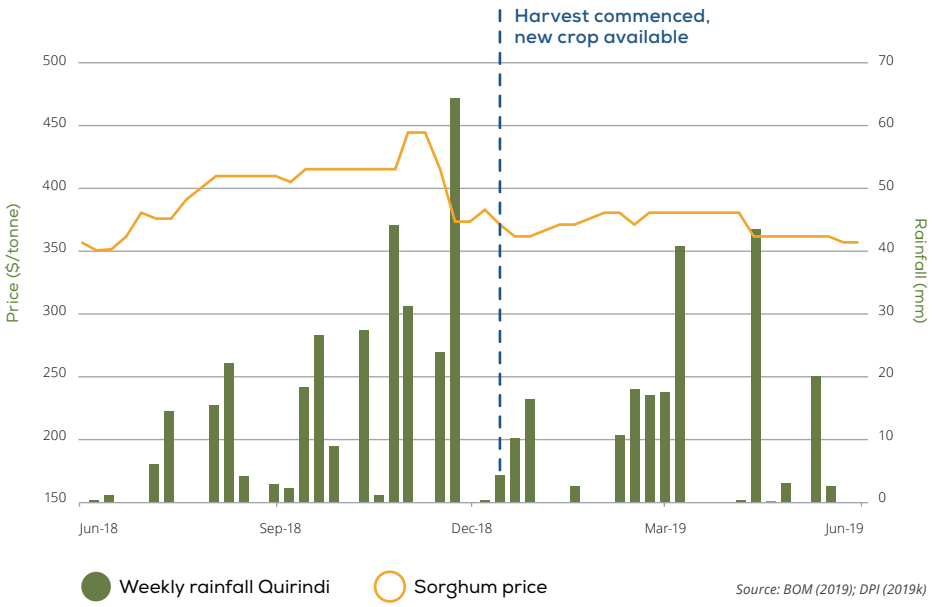
Sorghum production in NSW was the lowest in 25 years. Even in 2002–03 and 2006–07, two years where drought had significantly affected production, sorghum production was higher at 531,000 tonnes and 385,000 tonnes, respectively[6].

Price

Higher prices partially offset lower production, averaging $399 per tonne, delivered in Sydney[5]. This was 30% higher than the average price in 2017–18.

Occasional rain encouraged grain buyers with expectations of continued demand from the livestock sector, particularly in late 2018, which saw sorghum prices increase[118] and also encouraged plantings in NSW and Queensland. Prices peaked at $445 per tonne in December 2018 ahead of harvest, before returning to $355 per tonne in June. With a shortage of feed grains across east coast Australia, there was speculation that sorghum would be reintroduced to feedlot rations as prices fell in early 2019[40].

Sorghum prices and Quirindi weather



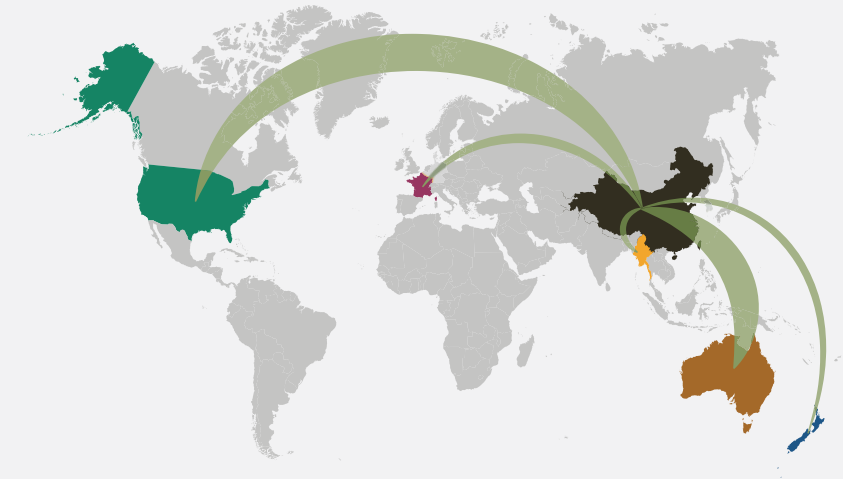
Source: BOM (2019); DPI (2019k)

Macroeconomic Conditions

China, the largest consumer of sorghum, imports most of its sorghum from the US. Of the US$1.0 billion imported by China in 2017, US $967.3 million came from the US. In February 2018, China launched an anti-dumping investigation into sorghum imports from the US and introduced a tariff deposit based on the value of shipments, which was later halted before trade talks between the two countries[128].

Despite this, sorghum has been a commodity affected by the US-China trade war, with weekly export data showing that no sorghum was exported from the US to China between November 2018 and April 2019, a duration not seen over the previous five years[149]. With the low production in NSW, there was no capacity to fill the resulting supply gap.

Exports to China 2017 - 2018



USA export value **$967,305,267 USD**

New Zealand export value **$56,660 USD**

France export value **$22,980 USD**

Australia export value **$87,425,561 USD**

Myanmar export value **$26,701 USD**

Source: UN (2019)

Agricultural research partnership to optimise yield

NSW DPI, the GRDC, the Queensland Department of Agriculture and Fisheries and the University of Queensland are partnering to provide long-term profitability for Australian grain and pulse growers, with Northern NSW growers particularly set to benefit. A new $1.3 million investment in regionally-specific sorghum and mungbean research is aimed at improving productivity, optimising yield, and will assist with the expansion of local and export markets.

Online at https://www.dpi.nsw.gov.au/about-us/publications/pdi/2019

CROPPING

Oilseeds

Output $94m est. Down 81% yoy

Production just 647kt, down 68% yoy, the lowest in 10 years

US-China trade dispute affecting international markets

Significant reductions in oilseed production have resulted from ongoing poor seasonal conditions. Prices responded to competition between crushers and graziers for the limited canola and cottonseed harvests. Low production levels and strong domestic demand saw minimal export volumes, although international demand for oilseeds remains strong.

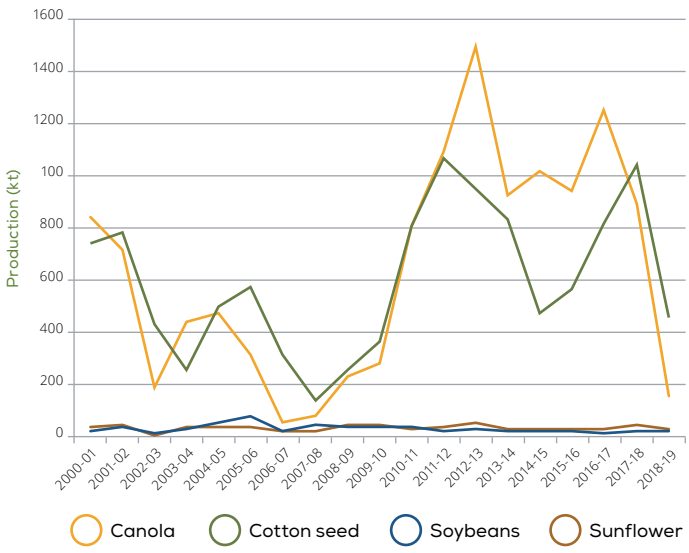
Production and Price

The total area planted to oilseeds fell 64% year-on-year, with canola down 78%. Cottonseed and soybean plantings were down 35% and 32% year-on-year respectively, while sunflower plantings remained steady[6].

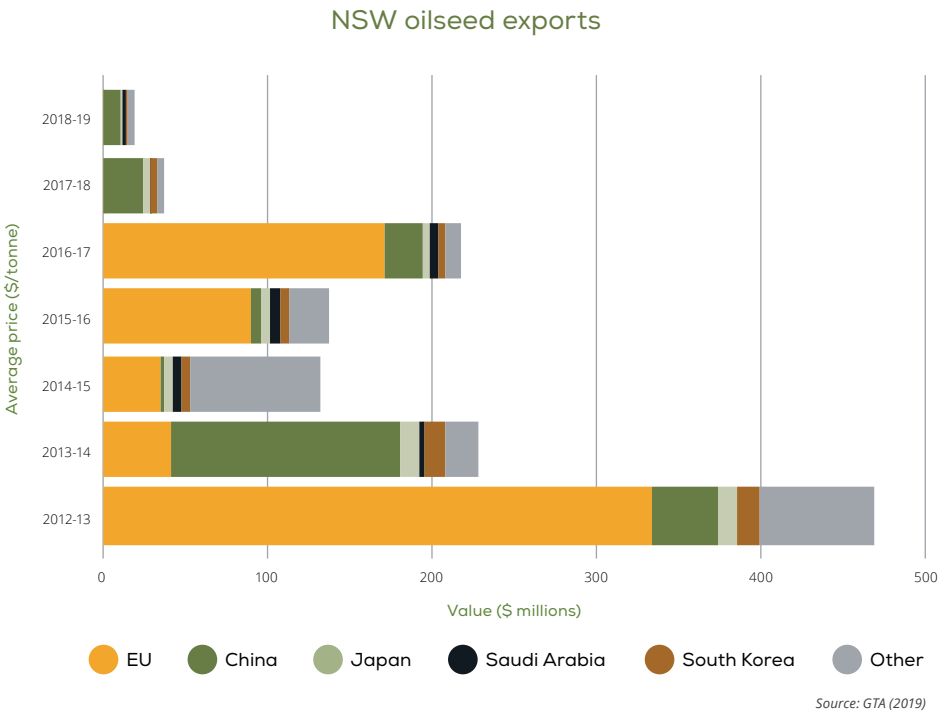
Ongoing poor seasonal conditions resulted in oilseed production of just 647,000 tonnes, down 68% year-on-year. The canola crop was the smallest since the drought year of 2008–09 in eastern Australia, at just 152,000 tonnes. Yields were affected by the very dry season, causing patchy, late establishment of the crop. Further, large areas of the crop were sprayed out, grazed or cut for silage and hay[6; 29].

Prices responded to the decreased production, with canola prices at Port Kembla up 13% on average on 2017–18 prices[61].

Oilseed production



Source: ABARES (2019b)



Source: GTA (2019)

Trade

The EU has, in recent years, been Australia's major market for oilseed exports, and took 78% of exports in 2016–17. However, with huge NSW production declines in recent years and a fall in total export value to $18.2 million in 2018–19 from $468.4 million in 2012–13, the EU has sought supplies outside of NSW. As a result, the EU's share of NSW exports fell to 0.3% in 2018–19, with a value of just $51,964[87].

China has also become a key oilseed trading partner. With the EU's share of exports falling to virtually nil in 2017–18 and 2018–19, China took 57% of total NSW exports, albeit of a significantly reduced volume. Other key export markets in 2018–19 were Japan, Saudi Arabia and South Korea[87].

Macroeconomic Conditions

World oilseed consumption is increasing. Rising incomes continue to lift Chinese demand for meat, and subsequently for high-protein animal feed such as soybean meal. In the short term, more Chinese soybean consumption is expected to be sourced from domestic stocks. However, with continued growth in consumption, demand for imports will increase[5].

Tariffs imposed by China on imports of US soybeans resulted in a significant drop in Chinese imports of US soybeans. Only partially offset by increased South American imports, total Chinese soybean imports fell by 8% in 2018. With shortfalls in imported protein meals, Chinese food and meal processors substituted soybeans with other protein sources, including canola meal. This resulted in increased imports of canola from Australia and Canada[5].

A fall in the world price of soybeans resulted from the trade dispute, any further escalation of which will continue to negatively affect the price of and demand for soybeans[5].

Canola blackleg breakthrough

NSW DPI, with research partners, identified multiple canola genes that could be used to develop new varieties with long-term resistance to blackleg disease and global application. The three-year international study detected eight regions with resistance to blackleg on the canola genome across diverse environments in Australia, the UK and France. Blackleg disease is caused by the fungus *Leptosphaeria maculans*, a devastating pathogen which threatens canola production worldwide.

CROPPING

Sugarcane

Output $80m est. Down 6% yoy

Production increased by 7% yoy

Prices reached 10-year low

Although NSW producers coped relatively well with the adverse weather conditions, the industry faced a tough year with global sugar oversupply putting a dent in industry revenue.

Production

Production fared well despite seasonal conditions characterised by drought and severe frost.

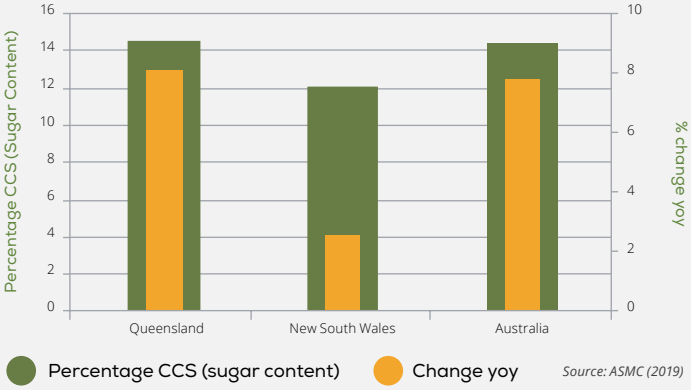
The area harvested was up 4% on the previous year to 16,208 hectares, resulting in a crush of 2 million tonnes, up 7% year-on-year and equivalent to 6% of Australia's total sugarcane[33]. Production reached 245,674 tonnes IPS, an increase of 9% over the previous year[33]. One positive outcome from the dry conditions was that it helped lift national Commercial Cane Sugar content by 8% from 13.3 to 14.3 units[121].

The NSW season falls across financial years with harvest generally commencing in June. This means that production for the 2018–19 financial year consists mostly of the 2018 harvest and a small part of the 2019 harvest. The 2018 season was hit by severe frost in some parts of northern NSW, which resulted in a higher percentage of one year cane being harvested, up by 5% from the previous year[134].

NSW yields increased by 4%, reaching 125 tonnes of cane per hectare. However, the national average declined by 4%[33], with extreme weather (including dry conditions followed by cyclones and flooding) in Queensland, the largest producer of sugar in Australia[121].

Sugarcane yield 2018

Sugar content 2018

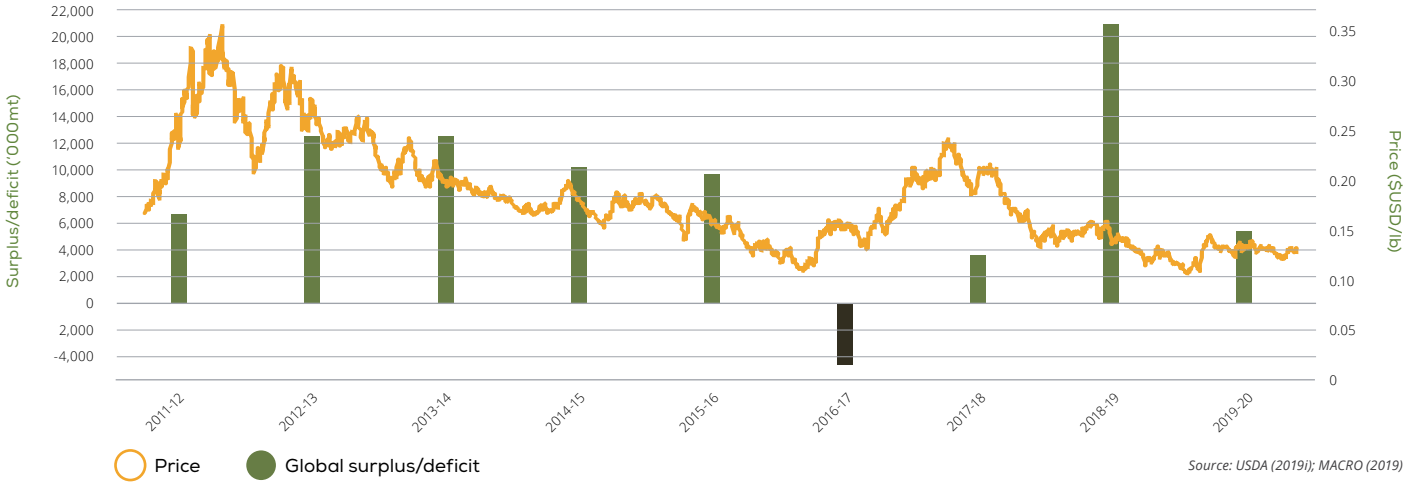


Source: ASMC (2019)

Price

Record-level global closing stocks in 2017–18 saw prices continue their downward slide, slumping to 10-year lows in late 2018 before they recovered slightly during early 2019[121; 92; 133]. As Australia accounts for less than 3% of global sugar production, it is traditionally a price taker in the global market[92].

Global supply/demand balance and price



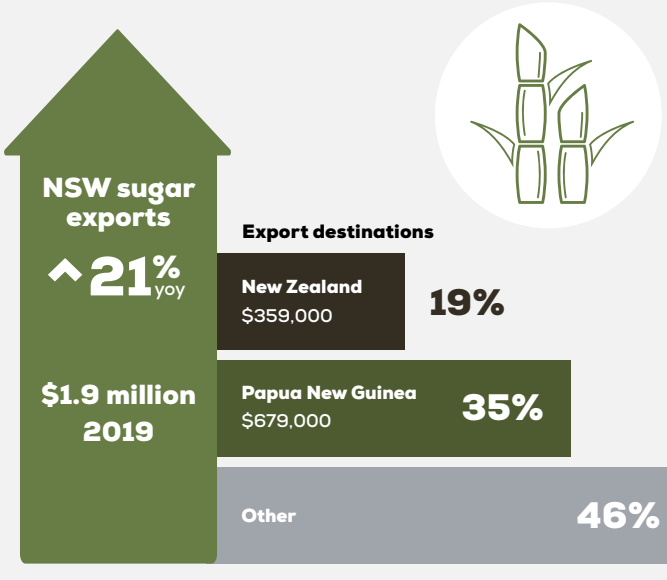
Source: USDA (2019i); MACRO (2019)

Macroeconomic Conditions

Many countries including India, Thailand, the US, the EU and China, continue to receive government support and maintain protectionist policies for their domestic sugar industries. This has distorted the market and led to the global oversupply of sugar[5].

Recent years have seen the allocation of sugarcane to ethanol production in Brazil, formerly the largest producer of sugar (India is currently number one). High oil prices and decarbonisation energy policies provided sugar mills with incentives to produce ethanol rather than sugar. As a result, Brazil's 2018–19 sugar production dropped by 24%. This has taken some pressure off rising global closing stocks and depressed prices[5; 150].

Human consumption of sugar remained relatively constant for the 2018–19 year, up by 0.2% to 174 million tonnes[150].



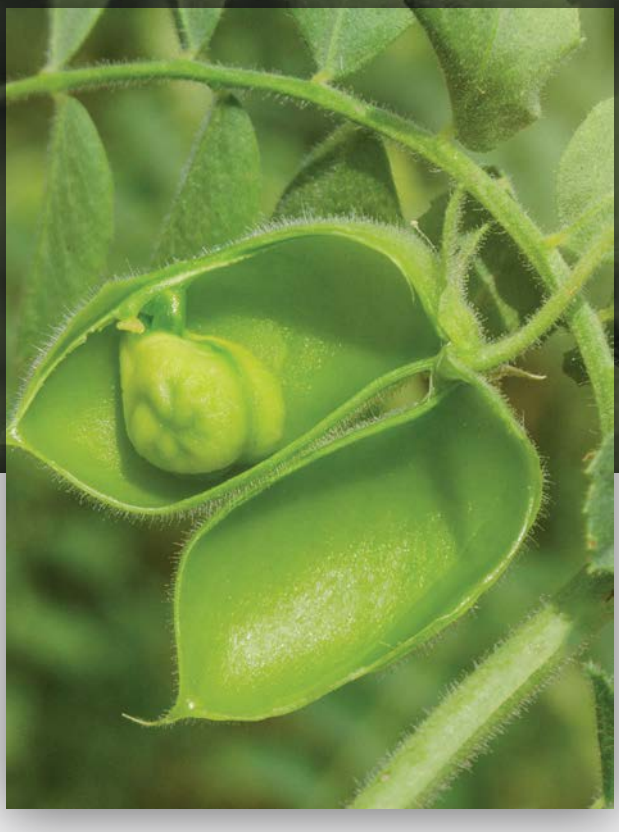
Collaboration on nitrogen use efficiency

NSW DPI, in partnership with Southern Cross University and Sunshine Sugar, assessed nitrogen stores in 32 soils of sub-tropical sugarcane in North East NSW to improve understanding of nitrogen supplied from mineralisation. This research informs the development of decision support tools for growers to evaluate the potential production and product impacts of using certain enhanced efficiency fertilisers in the context of the individual farm system.

Online at https://www.dpi.nsw.gov.au/about-us/publications/pdi/2019

CROPPING

Pulses



Output $75m est. Down 71% yoy

Production down 79% yoy

Prices supported by stockfeed demand

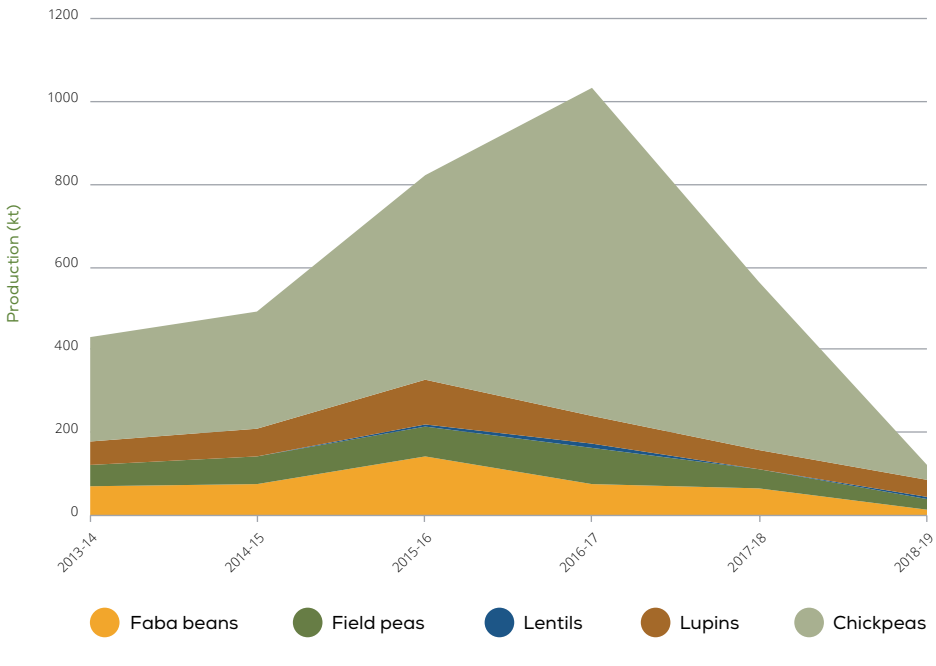
The decrease in Output was due to a smaller area sown, with NSW recording its lowest production level in 16 years. Prices were supported by the supply deficiency and livestock feed demand.

Production

Production dropped to 120,000 tonnes, down 79% year-on-year and down 80% on the five-year average[6]. The area planted fell 82% year-on-year, as growers responded to Indian import tariffs and low prices experienced in the previous season. Many chose to replace pulses with other winter cropping programs. Dry seasonal conditions delayed sowing and establishment, and severe frost events in late winter and spring further limited the yield potential of the remaining crop[86].

Chickpeas were hit the hardest, with production down 91% year-on-year to the lowest production level in 23 years[6]. This plunge in production was in stark contrast to the rapid surge in production only three seasons ago. Faba beans also experienced a considerable decline in production, down 80% year-on-year off the back of an 87% fall in area planted[6].

Pulse production



Source: ABARES (2019b)

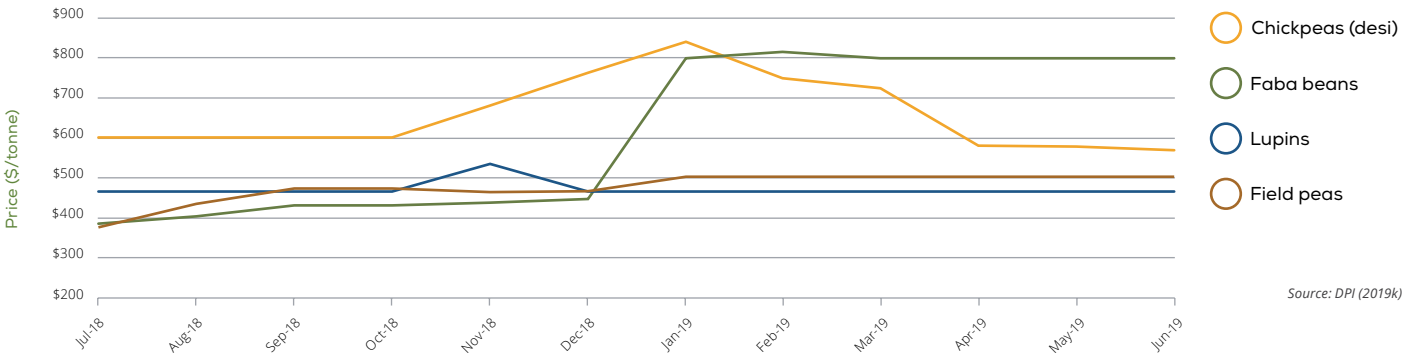
Price

Domestic prices were largely influenced by developments in India and seasonal supply issues. Enduring import tariffs on chickpeas and peas (60% tariff for chickpeas and 50% for peas) continued to impact trade into India, our largest and most valuable pulse trading destination. Prices were volatile and despite the demand uncertainty, were largely supported by the limited domestic supply, high livestock prices which increased demand for pulse-based stockfeeds, and the relocation of product to other export markets[120].

Faba bean prices were the standout, up 89% year-on-year, with prices escalating in summer beyond that of chickpeas to reach a seasonal high of $867 per tonne in February[61]. Values were supported by extremely tight domestic feed supplies, which limited the export surplus, a global shortage of faba beans, and increasing demand from Egypt and Saudi Arabia, which drove strong competition in export markets[120].

Chickpea prices were volatile but remained remarkably resilient despite the tariff burden. Domestic chickpea prices were down 13% on the three-year average and 6.3% year-on-year, to reach an average of $657 per tonne[61].

Pulse prices

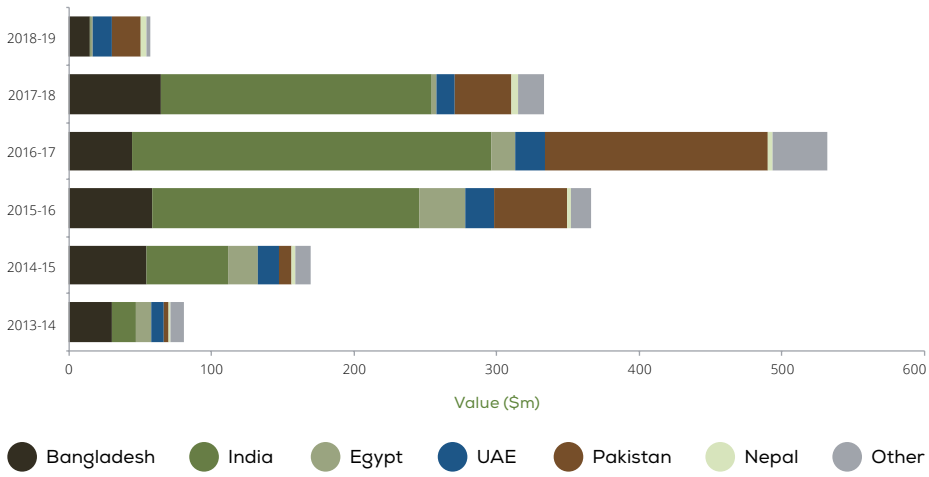


Source: DPI (2019k)

Trade

The NSW crop was so small it offered minimal tonnage for export, and export volumes fell by 46% to just 27 million tonnes[87]. Total export value also fell 83% year-on-year as the market responded to the relative absence of India and the lack of domestic supply. Pakistan and Bangladesh were our largest trading partners, accounting for more than 70% of the state's exports by value[87].

NSW export market share



Source: GTA (2019)

Support for NSW lupin growers

A NSW DPI and Local Land Services surveillance operation in the Riverina is helping protect the state's $65 million lupin industry from anthracnose. Lupin crops are inspected to ensure the devastating disease is under control and help save growers an estimated $5.5 million in annual control costs. This season's surveillance was the third and final year of the operation to eradicate anthracnose from NSW following a 2016 outbreak. Last year inspections of crops found no evidence of the disease.

CROPPING

Rice

Output $24m est. Down 90% yoy

Production down 92% yoy

Yield remained high at 13.5 tonnes per hectare

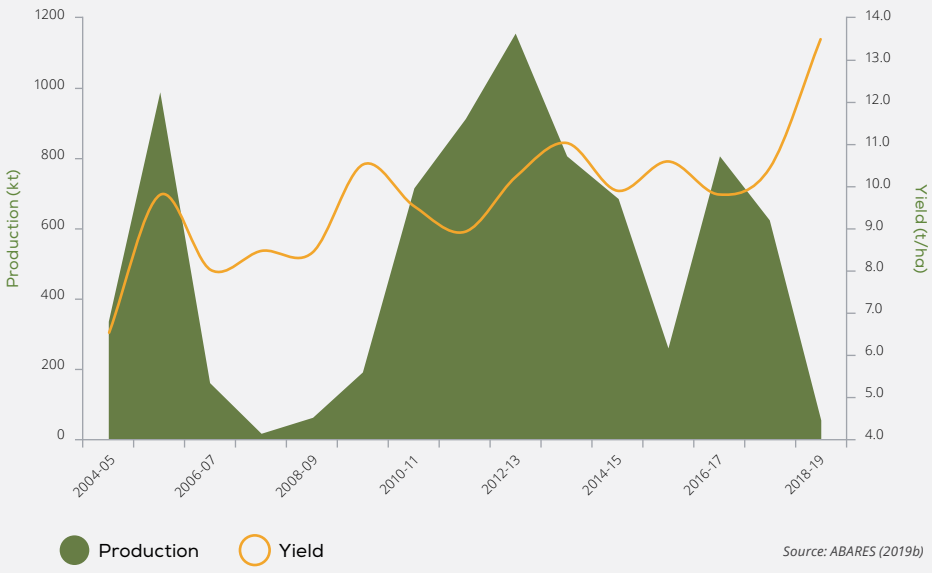
The low availability and rising price of irrigation water were ongoing concerns for growers throughout the season and resulted in the lowest area planted since 2007–08 at only 4,000 hectares. Despite this, export demand remained robust, with stocks from a number of strong growing years available to the market.

Production

Rising irrigation costs and low water allocation in the Murray Valley and Murrumbidgee Irrigation Area saw a 93% year-on-year decrease in area planted to 4,000 hectares – the lowest area planted since 2007–08 during the Millennium drought. Production was just 54,000 tonnes, a 91% year-on-year drop[6]. The significantly reduced production placed upward pressure on prices locally.

Despite low production, Australian rice yields remain among the highest in the world[46].

Production and yield



Source: ABARES (2019b)

Price

Prices were up significantly year-on-year to $454 per tonne, a 17% increase[5].

Following positive trading conditions in December 2018, growers received an additional payment of $25 per tonne for all varieties delivered in the 2018 crop year. The adjusted pool price range for medium grain variety Reiziq was between $385 and $410 per tonne[84].

Fixed price contracts for rice harvested in 2019 were offered at $500 per tonne for medium grain Reiziq and up to $650 per tonne for the specialty variety Koshihikari on a 'hectares planted' basis[136]. SunRice, built by the Australian rice industry, moved from a listing on the NSX to the ASX in April 2019 following the approval of shareholders.

The listing provides SunRice with better access to equity capital with the aim of increasing paddy prices for rice growers and driving shareholder value[137].

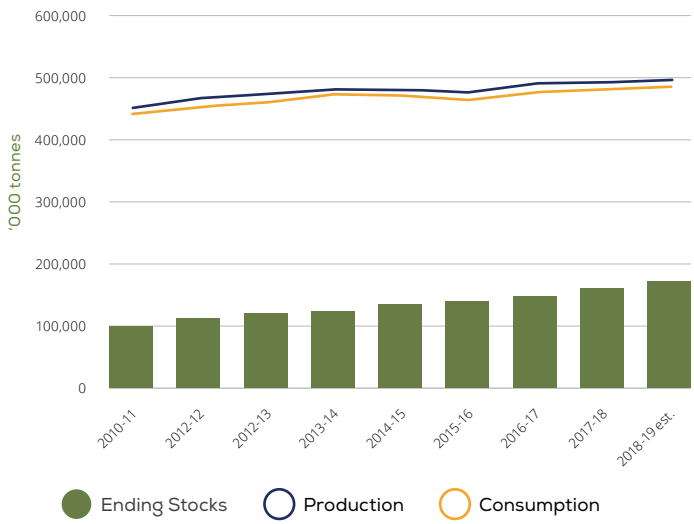
Trade & Macroeconomic Conditions

Global rice stocks increased 6% during 2018–19 with China accounting for the majority[145]. Both global consumption and production increased year-on-year with consumption increasing at a greater rate than production for the first time since 2013–14.

As medium grain exporters, both Australia (due to low supply) and Egypt have faded from the market, while China has emerged as a major rice exporter as it seeks to sell off excess supplies. China's medium grain exports have entered markets that were previously importing from the US and Australia. Prices are a significant motivation; while US medium grain is at a premium at $925 per ton, Chinese medium grain prices are half of that[145, 146].

In 2018, Australia and 10 other countries signed the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). A free trade agreement, the CPTPP benefits Australian producers through tariff reductions and new market access. This includes access for rice products into Japan for the first time in 20 years[172].

Global rice supply, consumption & ending stocks

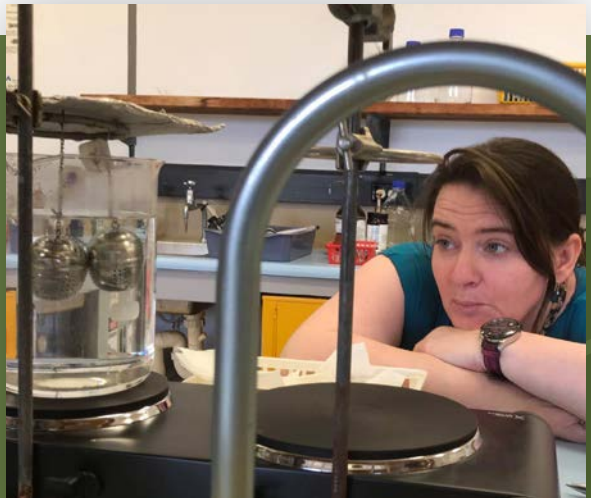


Source: ABARES (2019b)

Outlook

Australian rice exports are expected to drop further, as continued drought conditions and poor water availability will reduce supplies for the 2019–20 season. Traditionally a significant medium-grain exporter in strong production years, Australia is forecast to be a net importer for the coming year[147].

Global rice production is also expected to fall in 2019–20, with adverse weather conditions affecting planting and yields in the US, North Korea and Thailand[147].



Cooking properties of stored rice

NSW DPI's Rice Cereal Chemistry Team, an integral part of the Rice Breeding Program in Australia and funded under the Australian Rice Partnership Project II, is seeking to understand the interaction of nitrogen fertiliser use with stored rice quality. The research evaluates cooking properties including cooking time, solid loss in water, volume expansion and texture of cooked grain to explore the interaction of genetics, environment, agronomy and post-harvest practices on rice quality.

OVERVIEW

Livestock

The estimated combined Output of NSW meat and livestock products was $6,733 million, up 4% year-on-year.

The value of the livestock industries was estimated to have increased 4% year-on-year, driven partially by increased turn-off rates but also record prices for sheepmeat, goats and wool. Farmgate prices for livestock and livestock products rose 7% on average, driven solely by robust global export demand. The Output for livestock (meat) was $4,671 million, up 7% year-on-year, with beef cattle the main contributor by value. Livestock products Output (milk, eggs and wool) was $2,062 million, down 3% year-on-year, with the main contributor by value being wool.

Field conditions for extensive livestock industries in 2018-19 were generally unfavourable, with the sustained drought conditions further eroding available pasture and stock water reserves. Drought feeding resulted in an unprecedented rise in demand for hay and feed grains, and many producers struggled to source feed for their livestock. Cattle and sheep slaughter remained at historically high levels resulting in the continued reduction in the size of the breeding herd and potential pool of available finished stock.

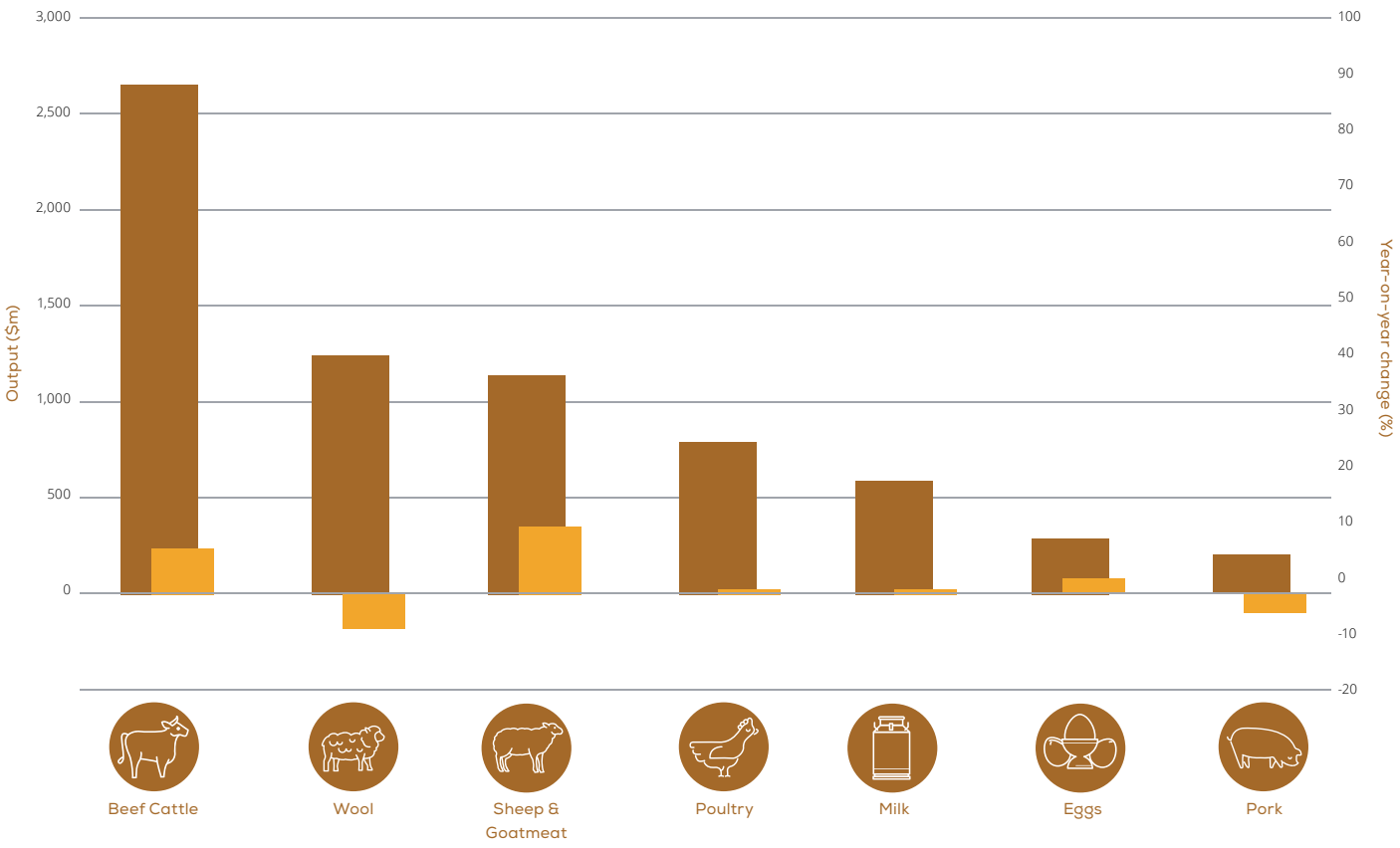
Significant feed gaps followed the widespread failure of the 2019 autumn growing season which extended into the winter period. As the drought continued, increasing numbers of producers faced an extended period of hand-feeding. Many producers took advantage of the grazing or fodder opportunities provided by failed winter crops.

The seasonal conditions during winter 2018 were poor, with limited pasture availability and, despite the warmer-than-average temperatures, widespread soil moisture deficits prevented further pasture growth. Pasture conditions in the North Coast fared relatively better than other regions of NSW, but, despite some rainfalls in mid-autumn, these regions were also drying off.

Spring and summer highlighted the critical state of stock water supplies, with large parts of NSW having dam surface areas in the lowest 20% of capacity (relative to the highest level recorded since January 2000)[52]. Critically low levels were identified in most LLS regions and despite some isolated thunderstorms in December, stock water reserves remained low across large parts of NSW, particularly in the most extensive areas of concern in the Western, North West and Central West. Extreme heat events over the summer also placed further pressure on stock water resources and demand.

Intensive livestock industries also faced very challenging operating conditions. High feed prices affected the cost of production across the sector and placed producer margins under pressure. The dry conditions had a detrimental effect on milk supply but poultry meat and egg supply remained relatively stable.

Livestock estimated Output 2018-19



eCommerce mission to China

NSW DPI has developed and piloted a program combining intensive business workshops with a trade mission to China to provide an opportunity for NSW agribusinesses access to promote their products to the lucrative Chinese eCommerce market. Participation in the program provides the opportunity to develop and strengthen online marketing skills, gain a better understanding of China's cross-border trade and critical government and commercial insights including marketing, logistics, culture and risk.

Online at https://www.dpi.nsw.gov.au/about-us/publications/pdi/2019

LIVESTOCK

Beef Cattle

Output $2,588m est. Up 8% yoy

Slaughter rates reflected dry conditions

Exports to China increased 101% in value yoy

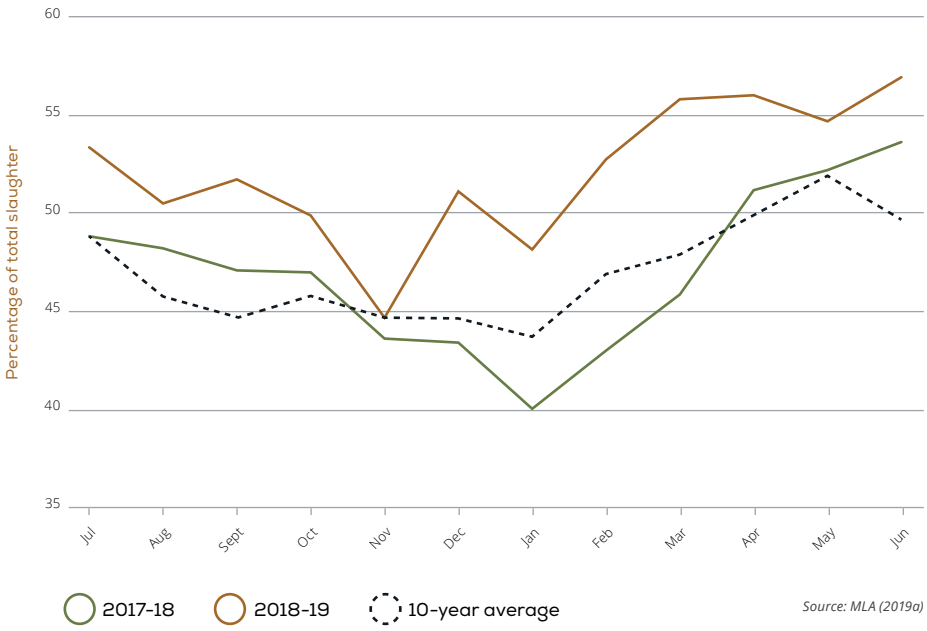
The value of the industry increased by an estimated 8% to $2,588 million, with increased supply and buoyant prices helping to support the industry's value during the dry season. Robust export demand remained, particularly from China, with a record 63 million kilograms of beef traded.

Production

Dry conditions persisted across many of the state's key cattle production areas compelling many producers to continue to offload stock, and furthering the herd liquidation. Slaughter reflected the high turnoff rate, up 12% year-on-year, and propelled almost entirely by an increase in female slaughter, up 23% on 2017–18 volumes and equated to 52% of the total state adult slaughter for 2018-19[107].

The high slaughter rate resulted in an increase in total beef production, up 7% year-on-year to 535,540 tonnes carcase weight[107]. Adult carcase weights were down 4% year-on-year, reflecting the unfavourable seasonal conditions and the higher female slaughter rate[107].

Female slaughter



Source: MLA (2019a)

Price

NSW saleyard indicator prices fell year-on-year, with the increase in supply the motivating factor. Sustained dry conditions resulted in weakening demand for light and restocker cattle but despite the prolonged decline, prices continued to trade within a relatively stable range between 450 and 650 cents per kilogram carcase weight.

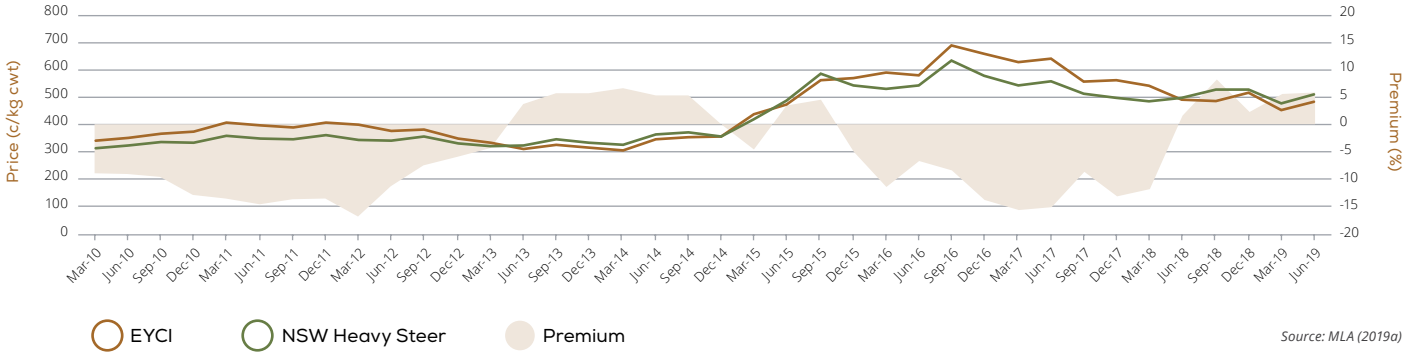
Heavy steer prices were the exception, up on average 2.4% year-on-year[107]. A tightening of heavy cattle supplies as producers struggled to feed cattle to finished weights saw NSW heavy steers trading at an average premium of 28 cents or 5% during 2018–19[107].

Restocker demand deteriorated under the pressure of the dry, resulting in an oversupply of cattle for processors and feedlots.

As a result, the EYCI only averaged 483 cents per kilogram for the year, 10% lower than 2017–18. The indicator declined throughout the year to a low of 385 cents per kilogram in early March 2019, the lowest price since April 2015. Despite the decline, the market was still high from a historic perspective, 10% above the 10-year average[107].

The medium cow indicator fell 6% year-on-year to its lowest point in four years, reflecting the lack of confidence in the season and subsequent high female slaughter rate[107]. Despite the surge in production, cow prices were somewhat supported by solid export beef prices, with the average 90CL price (manufacturing beef to the US) gaining ground, up 6% year-on-year[107].

Young cattle vs finished cattle



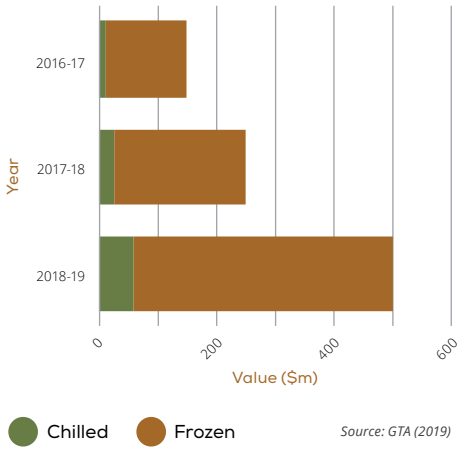
Source: MLA (2019a)

Trade

Global demand remained strong for Australian beef exports in 2018–19, with solid competition from global suppliers boosting prices during a time of increased supply. NSW exported a total of 219,000 tonnes of beef, valued at $1.8 billion, an increase in value of 22% year-on-year[87].

Asian demand continued to fuel exports. China is the main driver behind this export growth, absorbing an additional 30,000 tonnes (or 91% year-on-year growth) and increasing in value by an incredible 101% year-on-year to more than $500 million[87]. This increase in value came from both high and low value cuts, with both up by 126% and 98% respectively year-on-year[87]. As a premium product, chilled beef comprises only a small proportion of China's total beef imports. Despite the dominance of the lower-value frozen beef market, there is a trend towards a greater proportion of chilled exports, which more than doubled year-on-year to 12% of total trade[87]. China is the state's fourth largest chilled beef export market (by quantity) after Japan, the US and South Korea.

Value of beef exports to China



Source: GTA (2019)

Ensuring premium beef is a forensic certainty

NSW DPI and Charles Sturt University researchers are developing a simple forensic test to help certify premium grass-fed and grain-fed beef products. Set to benefit both consumers and local beef producers, the technology is particularly suited to overseas markets where adulteration issues can compromise the integrity of Australian beef, and could help maintain market access for our premium products in high value markets.

LIVESTOCK

Wool

Output $1,226m est. Down 6% yoy

Record breaking price of 2,116c in August 2018

Exports to Thailand up 877% yoy

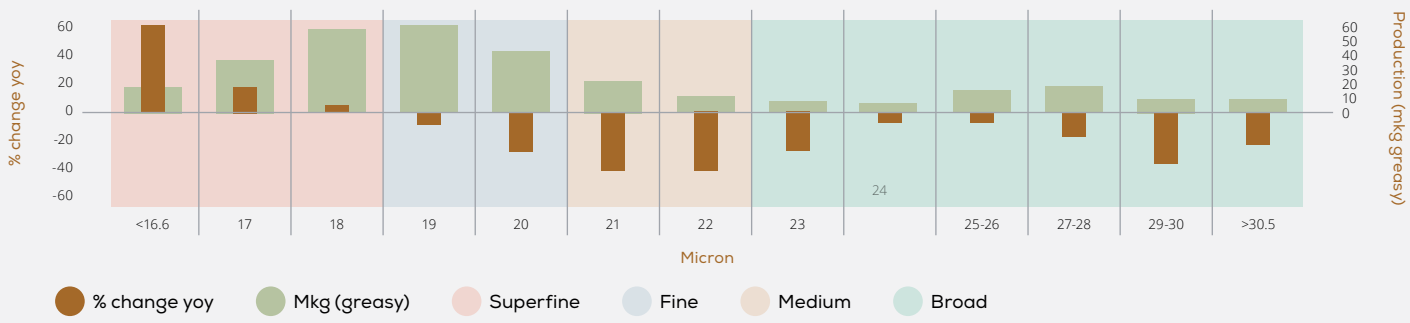
Record breaking wool prices eased pressures brought on by the continued drought, including increased costs and reduced wool yields and supply. While the wool industry fared better than many, the reduction in flock size and average wool cut per head contracted Output by 6% to $1,226 million (still well above the five-year average).

Production

Production was significantly down with wool sales dropping 16% to 98,000 tonnes, impacted by an estimated 9% decline in the wool cut per head[19; 36]. Continued dry conditions and destocking resulted in the national flock size nearing century low levels[73]. Fewer sheep to shear and lower fleece weights led to a significant decline in wool yield – 16% below the five-year average[36].

The severe seasonal conditions also resulted in an increased proportion of superfine wools (18.5 microns or less) and 25% decrease in the supply of the traditionally popular fine and medium wools[5].

Australian wool production by micron type

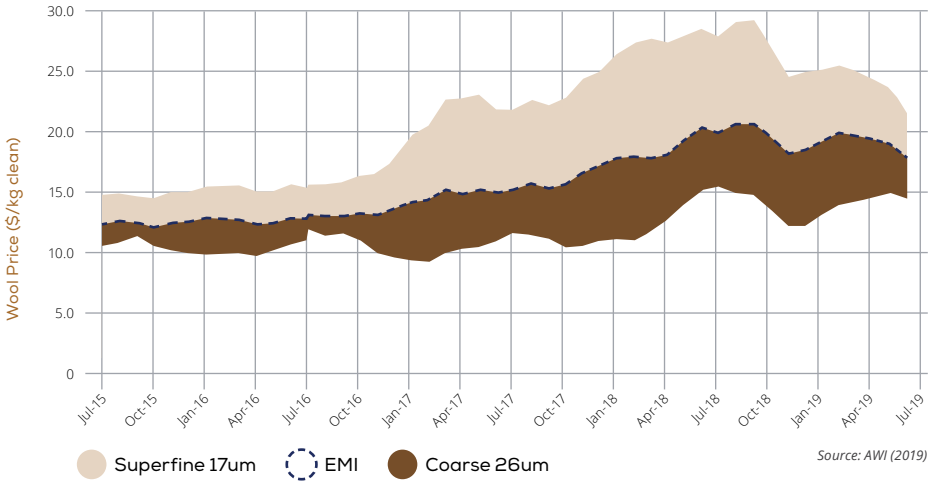


Source: AWI (2019)

Price

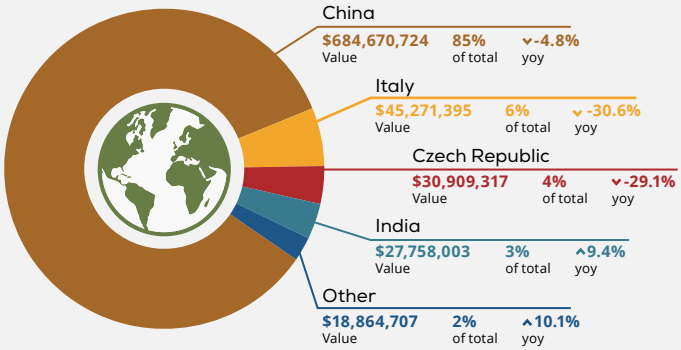
Following in the footsteps of the previous year, nominal wool prices again broke records in 2018–19 with the Eastern Market Indicator (EMI) peaking at a record high of 2,116c in August 2018. Prices continued to be well above the five-year average (by 25%)[106], but tapered off and ended the season at 1,715 cents per kilogram as growing uncertainty on a range of fronts started to impact demand[36]. The average price over 2018–19 was 1,939 cents per kilogram, the highest on record and 12% higher than the previous year[36].

Wool price spread relative to EMI



Source: AWI (2019)

NSW wool exports



Trade

The value of wool exports fell by 7% year-on-year and volume by 17% as a direct impact of lower wool production; however, major trading partners and their market share has remained fairly consistent for the last several years. The export market continued to be dominated by China and remained steady year-on-year, accounting for 85% of the value of wool exports. Exports to Thailand jumped 877% making up 1% of market share, while for the more traditional markets of Italy and the Czech Republic, export values fell by 31% and 29% respectively[87].

Outlook

The outlook in the short term is filled with uncertainty as wool production, exports and value will continue to decline as a result of reduced sheep numbers from the drought but also the growing trade insecurity caused by the US-China trade dispute. Chinese manufacturers may hold off wool purchases and potentially substitute to lower-cost fibre alternatives, particularly if mills attempt to avoid trading losses as a result of the high greasy wool prices.

However, on the positive side, once the rain does come, it is expected that farmers will rebuild their sheep flocks as medium-term global demand is expected to trend upwards and outweigh supply[5].

Income and population growth in our key markets will assist the wool outlook in the medium term. A booming middle class, principally in China, and rising household incomes in emerging and developing countries will fuel demand for high value premium woollen products[5].

Genetics gives insight to Merino profitability and performance

NSW DPI's Merino Bloodline Performance 2007-2008 report delivers genetic data for Merino breeders and commercial wool producers, allowing them to identify the relative performance of bloodlines and fine-tune their breeding programs. Dereminants of profitability allow producers to compare bloodlines on a profit per head or dry sheep equivalent basis.

Online at https://www.dpi.nsw.gov.au/about-us/publications/pdi/2019

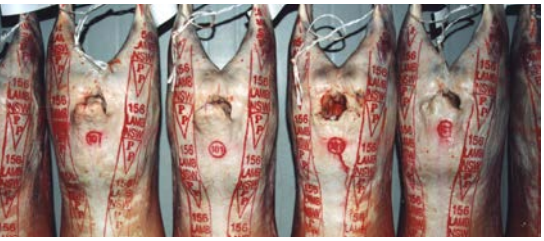
LIVESTOCK

Sheepmeat

Output $1,096m est. Up 11% yoy

Growth in domestic production and price

Positive industry sentiment tempered by dry conditions



Robust international demand and a falling exchange rate supported exports and in turn, domestic prices, with some saleyard indicators reaching record heights. Unfortunately, many producers were unable to capitalise on the record high prices, forced to buy feed or turn-off stock in response to the deteriorating conditions.

Production

The dry conditions of 2017–18 resulted in extensive de-stocking and an increased sheep slaughter rate. This trend continued in 2018–19, albeit at a slightly reduced rate. Total sheepmeat production was down 3% year-on-year to 187,536 tonnes carcase weight[107].

Sheep slaughter was up 10% year-on-year to 2,740,116 head[107] with the protracted drought conditions forcing many producers to reduce their flocks even further, retaining only core breeding stock. High mutton prices also worked as an incentive to further maintain the high turn-off rates with the NSW saleyard mutton price increasing in value by 47% in the final quarter of 2018–19[107]. The seasonal conditions and high feed costs had an adverse effect on average sheep carcase weights, down 6% year-on-year[107]. The increase in sheep slaughter saw mutton production increase 4% year-on-year, up 40% on the 10-year average[107].

Lamb slaughter was down 6% year-on-year to 4,890,004 head[107]. Farmers struggled to feed lambs to slaughter weights and, combined with the significant ewe cull in 2017–18 and poor marking rates, lamb slaughter declined to levels similar to that in 2013–14. The fall in slaughter, combined with a slight 0.6% decline in average lamb carcase weight, drove a 6% fall in lamb production[107].

Production and slaughter

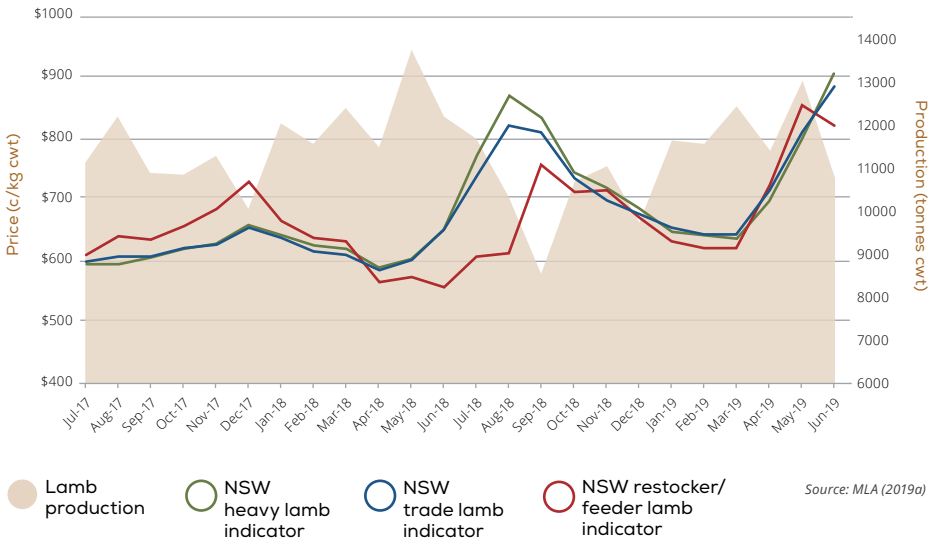
Source: MLA (2019a)

Price

It was an extremely positive year for saleyard prices, rising to historic highs in winter 2019, supported by robust international demand.

Lamb prices were exceptional yet volatile, driven by the significant seasonal supply fluctuations. The NSW Trade Lamb Indicator averaged 738 cents per kilogram carcase weight in 2018–19, up 20% year-on-year and up 26% on the five-year average[107]. The NSW Saleyard Mutton Indicator averaged 470 cents per kilogram carcase weight, up 8% year-on-year and up 24% on the five-year average[107].

Lamb production and price



Source: MLA (2019a)

Definition of 'lamb' changed to benefit Australian farmers

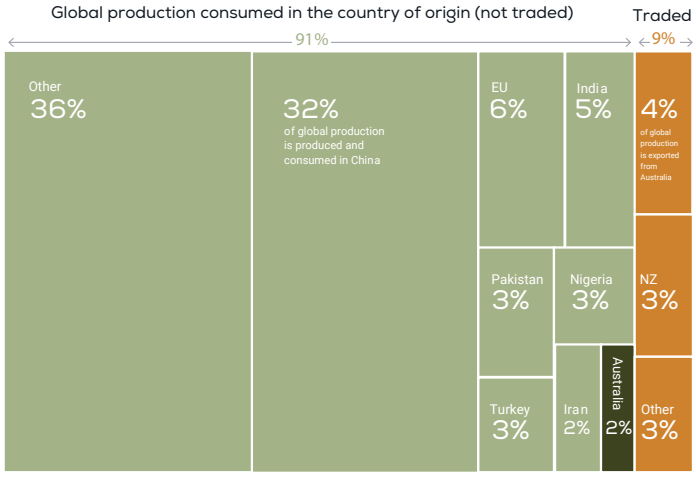
The federal Government has amended the definition of lamb in Australia's export legislation, meaning farmers can sell sheep as lamb even after the animal has two permanent incisor teeth, so long as the teeth have not begun to wear. This will enable Australian farmers to expand export opportunities by selling more lamb into lucrative global markets, and bring Australia in-line with New Zealand, our main export competitor. The new legislation came into effect on the 1 July 2019 and will be consistent with the new AUS-Meat definitions.

Trade and Macroeconomic Conditions

Strong global demand, a weak Australian Dollar and limited New Zealand supply resulted in new records for NSW export values in 2018–19. The total value of sheepmeat exports rose 25% year-on-year to $927 million[87]. This growth in demand was largely driven by China and the US, which remained the top markets, accounting for 63% of total exports by value[87].

While global sheepmeat production continued to increase, it remains a relatively minor protein in terms of global supply[131]. Production is consumed mostly in the country of origin with only a few countries having a trade surplus[109]. Australia and New Zealand account for more than 70% of the global sheepmeat trade.

Global sheepmeat production



Source: MLA 2019c

Tips for sheep producers

NSW DPI is working with producers, encouraging condition scoring of ewes before joining and pregnancy scan after joining with feed and heat stress having an impact on lambing. Ewes with a condition score of at least 2.5 are more likely to conceive than those in a poorer condition while pregnancy scanning identifies dry, single and twin bearing ewes allowing feed to be matched or ewes to be joined again.

LIVESTOCK

Poultry

Output $785m est. Up 0.3% yoy

NSW share of national production increased during the year

Rising feed costs have created challenges for the industry

Per capita consumption of poultry in Australia continued to rise driven by its affordability relative to other animal proteins. Production in NSW increased as slaughter rates outpaced the national average. Costs of production rose in line with rising feed costs, however prices were more stable than in other livestock sectors, reflecting the intensive nature of the production system.

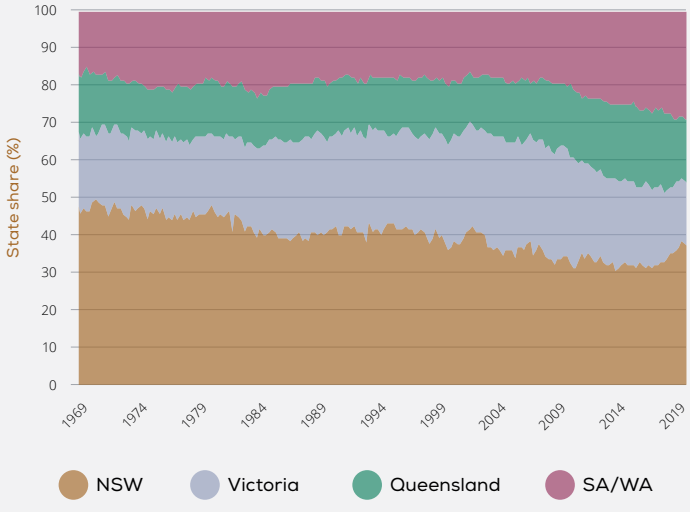
Production

NSW chicken production was up 11% in 2018–19 driven by a 4.4% increase in slaughter and a 6.1% increase in average bird weight[19], and outpaced the national average during the year. As an affordable protein relative to beef and lamb, demand for poultry meat remains strong. Since 2017, NSW's share of national production has increased from 32% to 38%, reversing a decline that commenced in the 1960s.

The chicken industry has made substantial improvements in feed efficiency. In 1975, it required 2.5 kg of feed to produce 1 kg of chicken meat. In 2018, it took only 1.75 kg of feed to produce 1 kg of chicken meat[21].

Despite the fact that no meat chickens are reared in cages and the use of hormones in chickens is illegal, 80% of Australians still believe hormones are fed to chickens to make them grow faster, and 72% believe meat chickens are reared in cages[21].

State share of poultry meat production



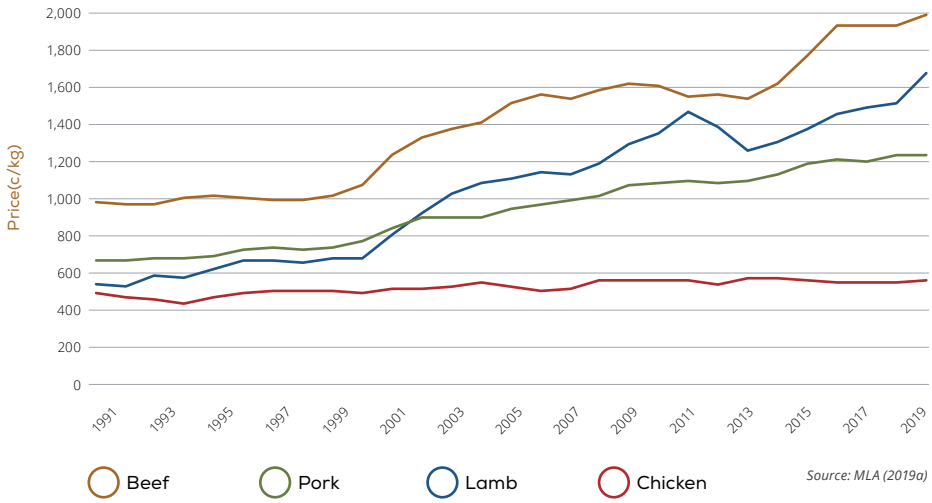
Source: ABS (2019d)

Price

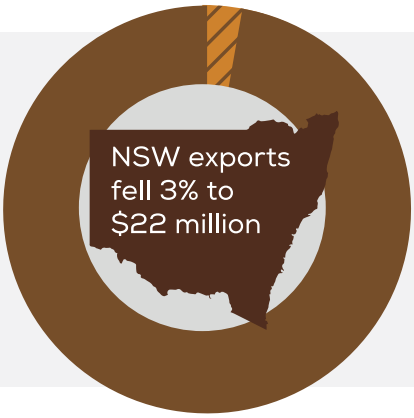
As processors control substantial parts of the poultry meat supply chain, producer prices reflect both the price received by contract growers and other costs (including feed costs) incurred in rearing poultry to the processing stage. There is a reasonable correlation between feed prices and the price received by processors[95]. Producer prices are estimated to have risen by 1.4% in 2018–19[5].

Retail prices were up 2.8% in 2018–19. Driven by improvements in production efficiency, retail prices have traditionally risen more slowly than alternative meats[107].

Average retail prices



Source: MLA (2019a)



Trade

Australia exports a relatively small amount of poultry meat, primarily to other countries in Asia. NSW exports fell 3% during 2018–19 to $22 million[87]. The fall in exports reflects some decline in competitiveness due to rising costs of production as a result of the drought.

Outlook

The outlook for poultry meat is relatively stable compared to other livestock sectors. While costs of production are rising and strong competition from supermarkets will continue to put pressure on prices, processors are well positioned to gain efficiencies and recover some of the rising costs. Higher prices for competing animal proteins will also improve poultry meat's competitive position.

Modelling avian influenza outbreaks

NSW DPI contributed to research comparing avian influenza (AI) risks between poultry sectors. There is concern that growing demand for free-range products could increase the number of high pathogenic AI (HPAI) outbreaks by increasing the potential for low pathogenic AI (LPAI) introduction to commercial flocks from wild birds. Models were developed to understand the effect of a shift to free-range farming on the risk of HPAI outbreaks, and how poultry housing interacts with a risk of introduction of LPAI from wild birds.

Online at https://www.dpi.nsw.gov.au/about-us/publications/pdi/2019

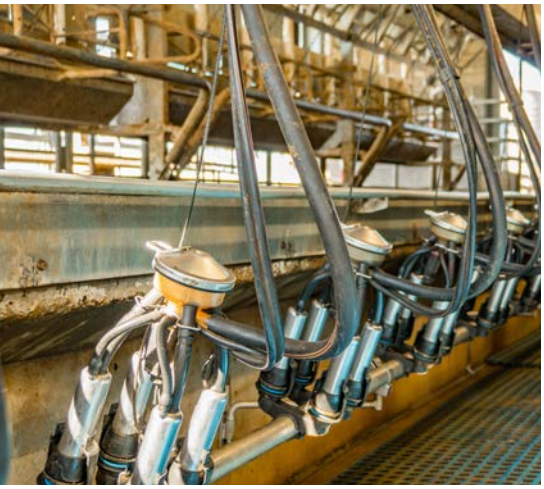
LIVESTOCK

Milk

Output $568m est. Up 0.2% yoy

Increased fodder and water costs impacted dairy farm profitability

Major supermarkets ended $1 per litre milk



The dairy industry experienced very difficult conditions during the year, suffering significant declines in productivity and farm profitability. The drought impacted production and large increases in the cost of fodder and water resulted in many farms operating at a loss. Farmers responded to higher costs by reducing their herd sizes and, in extreme cases, exiting the industry. With processors competing for a more limited supply of milk and export markets recovering, farmgate prices were stable and started to increase by the second half of the year.

Production

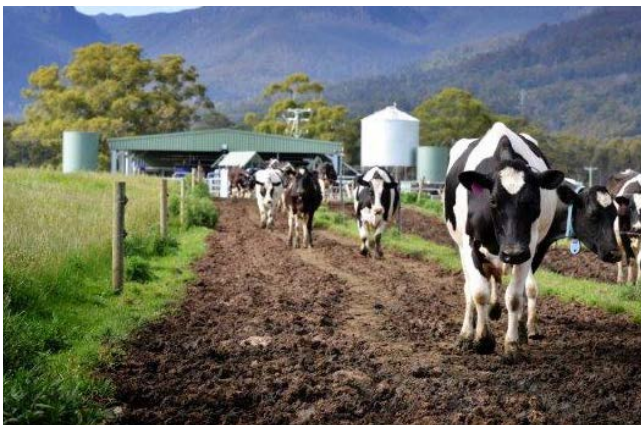
Milk production was significantly impacted by the drought, falling 5.4% year-on-year[43] and accelerating as the year continued. The lack of rain in northern production systems and very high costs of fodder reduced productivity. In the south, the lack of rain, zero water allocations and increasing competition for water from permanent horticultural crops limited opportunities for growing fodder. Production falls were largest in northern regions[43]. Overall, production was lower than at any time since 2007-08[3].

Milk supply vs farmgate price

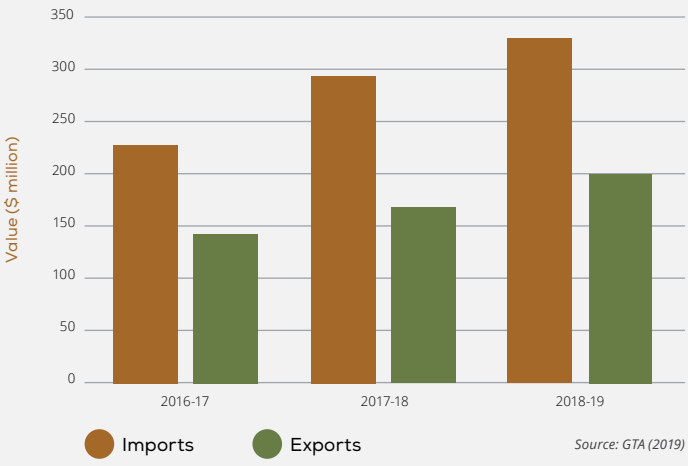
Source: ABARES (2019b); DA (2019a)

Price

Farmgate milk prices varied considerably across NSW depending on the production system used, individual contracts with processors, milk quality and the final use of the raw milk. In general, farmgate prices are higher in northern NSW, and lower in southern NSW. In northern NSW, raw milk primarily supplies the domestic drinking milk market, whereas in the south, raw milk supplies processed product and export markets. As raw milk production fell, processors competed more aggressively for supply, resulting in an estimated 9.7% rise in farmgate milk prices to 55.3 cents per litre during 2018–19[44].



NSW dairy imports and exports



Source: GTA (2019)

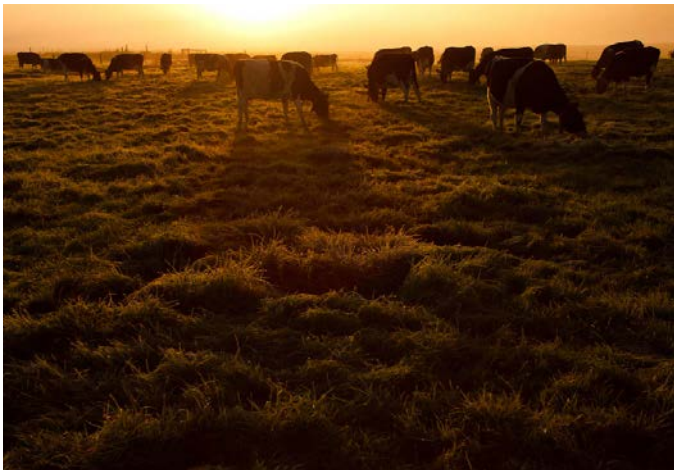
Macroeconomic Conditions

Domestic demand for dairy products remained solid, with growth in volume of all retail categories led by cheese products. The overall value was supported by increasing retail value rather than by volume, even in the drinking milk category, as the major retailers lifted prices on private label milk and introduced a drought levy. A global shortage of butter increased global prices significantly, which pushed up the price of dairy spreads by more than 12%[22].

International markets stabilised somewhat. Export prices were weak in the first half of the year but recovered from November 2018[79], with demand from China continuing to underpin global markets. Australian exports prices were also supported by a weaker currency.

Outlook

The industry continues to face serious seasonal challenges, which are expected to place increasing pressure on production. Farmgate prices are correlated with supply. As processors are struggling to secure sufficient supply to operate their facilities efficiently and meet global demand they are expected to increase farmgate prices to attract additional supply. These increases may not be sufficient to cover higher dairy input costs and larger price increases may be required to prevent further farm exits. Nevertheless, processors must be able to compete on price in international markets, limiting their ability to pay materially higher farmgate prices.



Improvement in dairy herd quality

NSW DPI has invested in upgrades and new infrastructure at the Tocal dairy to improve productivity of the breeding program. Implementation of new technology, such as management software, along with regular monthly herd health checks have contributed to significant improvement in breed quality. Reproductive data results indicate improvements with 100 day in calf rate increasing, conception rate of 44%, and herd average of just over 2kg of milk solids/cow/day.

LIVESTOCK

Eggs

Output $269m est. Up 2% yoy

Egg consumption is estimated to have risen by 3.4% yoy

Price competition and rising feed costs challenged industry profitability

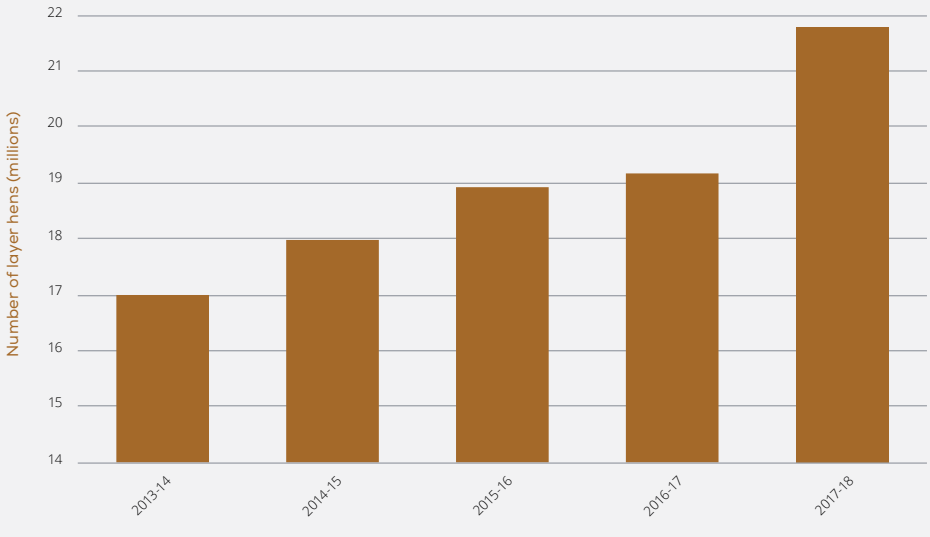
The industry faced very difficult operating conditions during the year. An oversupply in free range eggs with little reduction in caged egg production capacity forced down the price of all eggs in the market and accelerated the number of consumers switching to free range eggs. Oversupply and weaker pricing, combined with high feed costs representing 50% to 70% of producer's input costs, placed producer's margins under significant pressure. Towards the end of the year, farmgate prices started to improve but feed costs remained very high.

Production

Production is estimated to have increased during 2018–19. At the end of 2017–18, the number of layer chickens in egg production had increased by more than 13%, which had a significant impact on production during 2018–19[35]. Industry investment in new free range facilities, prompted by the introduction of a national mandatory legal definition for free range eggs in March 2016, contributed to the increase in layer chickens.

Per capita consumption increased by 3.4%[94] as a result of lower retail prices and the continuing popularity of eggs as an affordable source of protein. However, this demand was outpaced by increased supply.

Layer hens in production

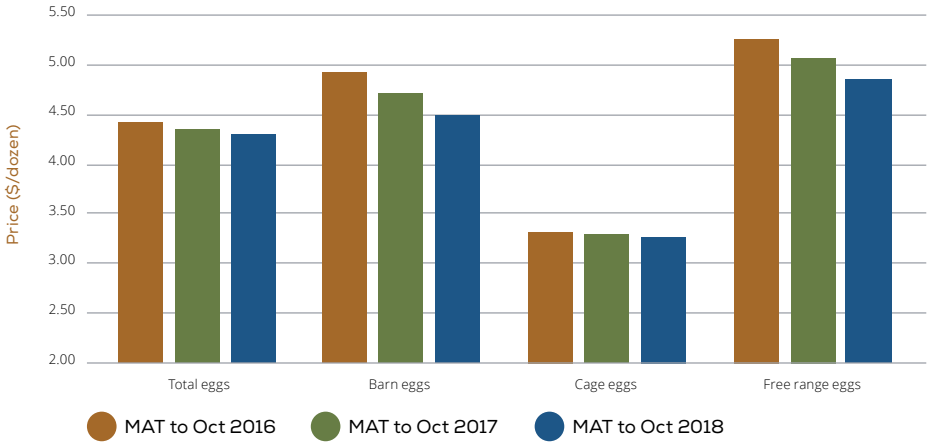


Source: AUSTEGG (2018)

Price

The average retail price of eggs increased by 0.8% in 2018–19[16]. The price increase masked price falls in individual categories as consumers switched their preference away from cage produced eggs to higher priced alternatives, in particular free range, which now represent more than 50% of supermarket sales by volume and more than 55% by value[74]. The oversupply of free range eggs pushed the price of this category down, making it more affordable and encouraging consumers to switch from other categories, such as cage eggs. Towards the end of the year, the oversupply situation began to resolve resulting in some shortages in certain categories, improving farmgate prices.

Eggs average price



MAT - Moving Annual Total

Source: FARMPRIDE (2018)

Trade

International trade in eggs is small and can be volatile, often influenced by international disease outbreaks. NSW exports fell 25% during 2018–19, primarily as a result of a decline in exports to South Korea and the Philippines as their local industries recovered from avian influenza[87]. Exports to New Zealand increased due to a shortage in local production as the industry struggled with adapting to new animal welfare standards phasing out cage produced eggs[87].

Outlook

The relatively low farmgate price and high feed costs continue to be the biggest challenges facing the industry. Feed prices are unlikely to moderate significantly in the short term. However, an emerging shortage of cage eggs may provide some wholesale price relief for farmers. Resolving animal welfare debates around caged egg production, while maintaining and improving biosecurity controls, are also issues facing the industry. Domestic demand for eggs, however, remains robust and is expected to continue growing. Eggs remain an important and popular source of protein, especially for lower income families.

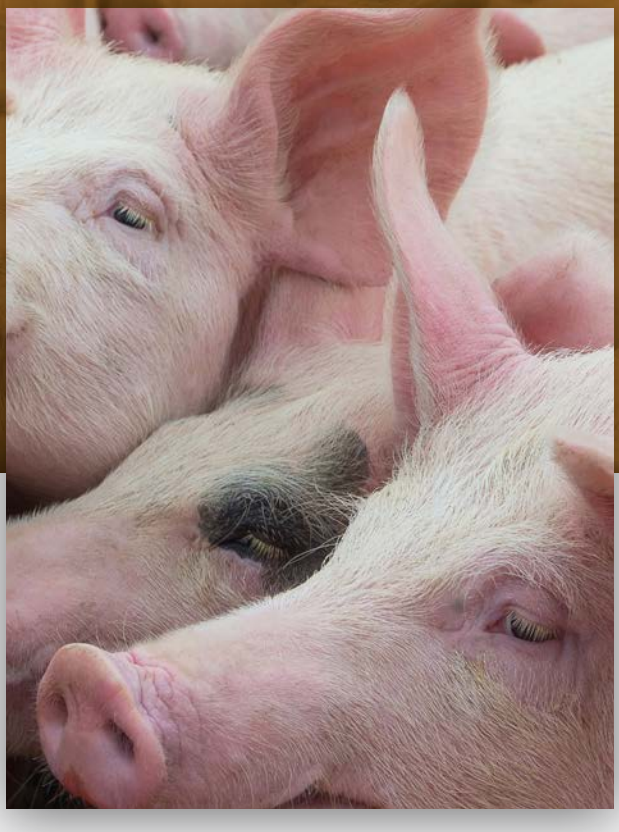
Charlotte teaching children about free-range egg production

NSW DPI's Schools Program picture book series encourages agricultural learning. 'Charlotte' introduces children to free-range egg production including the ranging yards, feeding and how 84,000 eggs are collected and packed each day! 'Charlotte' joins 'Bosley and Bruce' who tell children about genetics and herd management, and will soon be joined by 'Freda' from Tocal dairy. The books are beautifully illustrated, colourful, and engaging and include information to support teachers.

Online at https://www.dpi.nsw.gov.au/about-us/publications/pdi/2019

LIVESTOCK

Pork



Output $194m est. Down 3% yoy

Industry struggling with high feed prices

African swine fever outbreaks affecting international markets

Pork producers have been hit with rising feed costs and continued falling production. Despite the removal of tariffs under the China/Australia Free Trade Agreement (ChAFTA) and global supply shortages associated with African swine fever outbreaks, domestic producers will struggle to take advantage of international opportunities.

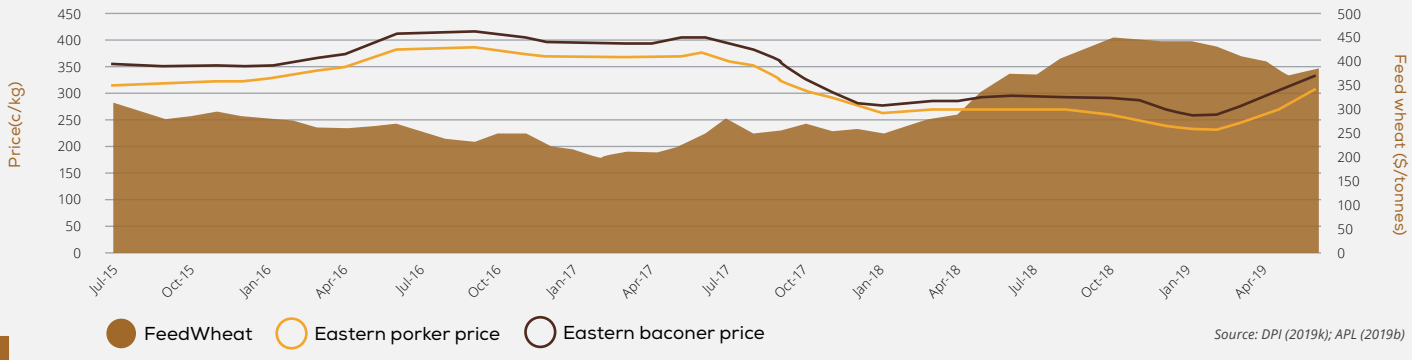
Price

Pig prices continue to suffer the consequences of oversupply and despite moderate gains for key indicator weights throughout the year, rising input costs, particularly for grains, meant that many production systems remain frustratingly close to or below the cost of production. Eastern states porker and baconer prices were up year-on-year with average porker prices increasing 13% to an average 325 cents per kilogram and baconers up 5% to 294 cents per kilogram[32]. But, despite the year-on-year increases, prices still remain well below the three-year average.

The ongoing financial impact of oversupply was further aggravated by increased grain prices. Grain commonly forms the main cost of pig feed and, with significant increases in the price of grain, this had a significant impact on many producers cost of production.

Domestic consumption trends continued to reflect a positive demand story with per capita pig meat consumption remaining relatively steady at 27.2 kilograms. Retail pork prices continue to remain competitive against beef and lamb, with the Sydney consumer price index for pork remaining steady against an average nominal rate increase of 3% for beef and 12% for lamb[16].

Pork and feed wheat prices



Source: DPI (2019k); APL (2019b)

Production

The oversupply crisis experienced over the last few years appears to be slowly abating. Pig meat production declined to 63,621 tonnes[31] down 5% from the five-year production peak in 2017–18. This decline in production can be attributed to a number of factors including a decreased slaughter rate, decreases in average carcase weights, a fall in the number of breeding sows, and an increase in the number of businesses exiting the industry.

Slaughter rates decreased to 861,000 pigs, down 5% year-on-year, influenced by low pig prices and rising feed costs (APL, 2019). This decrease was most apparent in the porkers class (30–54 kilograms dressed weight) with a 25% fall year-on-year[31]. The number of sows slaughtered was also up, 9.3% year-on-year. This, combined with a 10% decline in the closing sow numbers for 2017–18[18], indicates a significant reduction to the breeding herd.

The number of pig farming businesses decreased 47% year-on-year[18]. Despite the decrease in the number of pig farming businesses, production has remained relatively steady supporting a move towards greater consolidation with a trend towards larger, vertically-integrated production systems[91].

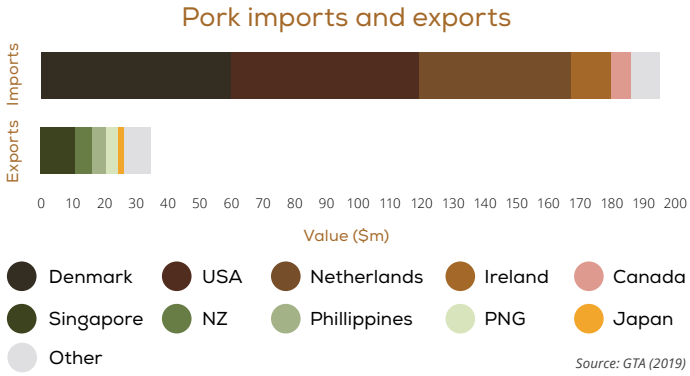
Trade

Exports of pork fell 4% year-on-year to a value of $30.1 million, with 31% of exports going to Singapore and 16% to New Zealand[87].

Comparatively, imports of pork products were more than five times greater than exports at $168.4 million. Imports came predominantly from the US, Denmark and the Netherlands, which account for 31%, 30% and 25% of imports by value respectively[87].

As all imported pig meat is required to be processed, unprocessed Australian pig meat faces no competition in the domestic fresh pork market. However, processed Australian pig meat costs more than imports, largely due to high feed costs. As a result, consumer preferences for fresh meat determine demand for Australian pig meat.

Substitution by Australian consumers of fresh pork for lower cost processed imports or other meats (such as chicken) is an ongoing risk for the industry[5].



Macroeconomic Conditions

Australian biosecurity protocols require all imported pig meat to be processed[5]. Following recent international outbreaks of African swine fever (ASF) additional measures were put in place to reduce the risk of introducing ASF to Australia[4]. The virus is very hardy and can survive in dried or cured pork products[72; 48].

Outbreaks of ASF have now occurred in all Chinese provinces. Culling and the rapid depletion of China's sow herd due to ASF, has resulted in an evolving protein supply gap (estimated to be close to 8.2 million tonnes needed in 2019), which will impact on global meat markets[39]. While pork and poultry will be the proteins of choice to fill the supply gap, the additional demand will likely have flow-on effects across proteins and boost the already strong beef and sheepmeat markets[108].

Tariffs on Australian pork were eliminated on 1 January 2019 under the ChAFTA[45]. However, given the high proportion of small and medium sized producers, and the rigorous regulatory process and cost to export, it is unlikely Australian pork producers will look to fill the protein hole left by ASF. A minor player by world standards, the Australian pork industry struggles to reliably deliver the quantities expected by major importers[30].

Improved pig biosecurity

NSW DPI and partners, through a Commonwealth White Paper initiative, sought to better understand non-English speaking background (NESB) pig producers and identify effective ways to communicate with this sector. Following the ASF outbreak in China, communications materials aimed at NESB producers were developed to boost biosecurity awareness and to highlight the risks of bringing pork products into Australia and swill feeding.

Online at https://www.dpi.nsw.gov.au/about-us/publications/pdi/2019

LIVESTOCK

Goatmeat

Output $8m est. Down 24% yoy

Goat prices outstripped lamb and mutton prices

US market takes 70% of national exports

Although official statistics valued the NSW goat industry at approximately $10 million in 2017–18, analysis of supply, slaughter and price data by DPI suggests that the value was closer to $92 million in 2017–18 and $68 million in 2018–19 respectively[17; 97; 107; z].

With the majority of the industry based in the western half of NSW, amplified drought conditions took a toll on goat numbers and, in turn, slaughter rates. The reduced supply, along with growing global demand resulted in high goat prices, which helped alleviate on-farm financial impact.

NSW is home to the majority of the national goat herd, although most goat processing and export takes place interstate. Where applicable, the below analysis looks at national data trends, which are underpinned by NSW supply.

Production

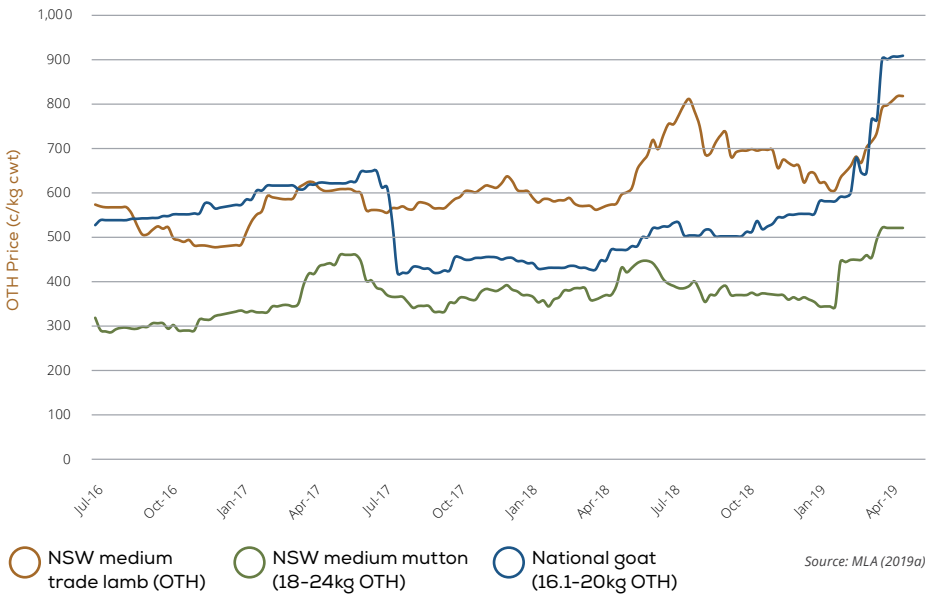
NSW has the largest population of rangeland goats nationally, with the state contributing more than 53% of goat supply for processing over the past three years[97].

While the dry conditions amplified production challenges, the NSW goat population had already declined from a peak of 5.8 million head in 2016 (estimated). An aerial survey in 2019 estimated the herd at 3.9 million head, a 33% decline from the peak[113]. The reduced goat population was reflected in an estimated 31% year-on-year drop in national slaughter levels[97].

Price

Goat prices spent most of the previous year within a consistent range, however they started 2018–19 with a steady rally that has gathered momentum. Gradual price gains were achieved almost weekly until May 2019 when supply shortages, combined with strong demand from the US market, meant overwhelming support for prices. As a result, goat prices jumped to record levels of 940 cents per kilogram carcase weight, a 106% increase from the lows of October 2017[107], with some contracts offered for as much as $10 per kilogram carcase weight. Consequently, goat price indicators surpassed the strong lamb prices for the second time in three years[38].

Goat and sheepmeat prices



Source: MLA (2019a)

Trade

Exports of goat and goatmeat from NSW ports are limited as the majority of NSW goats are transported interstate for processing and export. National goat exports are centred on the US market, where approximately 70% of exports are destined[87].

Although national exports declined 21% to $178 million in 2018–19 due to lower supply, recent years have seen significant export market growth. When comparing the latest three-year average export earnings to the corresponding period 10 years prior, national exports have seen massive growth in all major markets except Malaysia. This was headlined by 278% growth in exports to the US and 1256% growth in exports to South Korea over this period.

Goatmeat underpins the market, making up 96% of the total export value. The balance is live goat exports, which tend to be directed to Malaysian, Chinese and Indonesian markets.

National goat and goatmeat export markets

- USA — 70% of total exports — $124,452,755
- Taiwan — 6% of total exports — $10,740,135
- South Korea — 5% of total exports — $9,673,144
- Canada — 4% of total exports — $7,739,944
- Trinidad & Tobago — 4% of total exports — $7,642,058
- China — 3% of total exports — $5,260,093
- Japan — 2% of total exports — $4,425,058
- Malaysia — 2% of total exports — $4,360,932
- Hong Kong — 0.5% of total exports — $809,531
- Other — 1% of total exports — $2,599,431

Source: GTA (2019)

Increasing kid numbers to boost profit in goatmeat

NSW DPI, along with MLA and CSU, initiated a project to explore on-farm productivity improvements to boost goat reproductive efficiency and increase supply to meet international demand by growing kid numbers. By addressing knowledge gaps around factors influencing kid survival and causes of kid loss in goatmeat production systems the project has the capacity to substantially improve kid survival rates, potentially a key profit driver for the goatmeat industry.

OVERVIEW

Hunting and Recreational Fishing

The estimated combined industry Output of hunting and recreational fishing in 2018–19 was $3,959 million. The recreational and charter fishing industry was estimated at $2,363 million, with $1,596 million attributed to hunting and game management.

Both hunting and recreational fishing activities support a range of businesses and jobs within the NSW economy. Expenditure on these activities – including on equipment, transport (including vehicles and fuel), accommodation, food and drinks, etc. – generate a range of social and economic benefits.

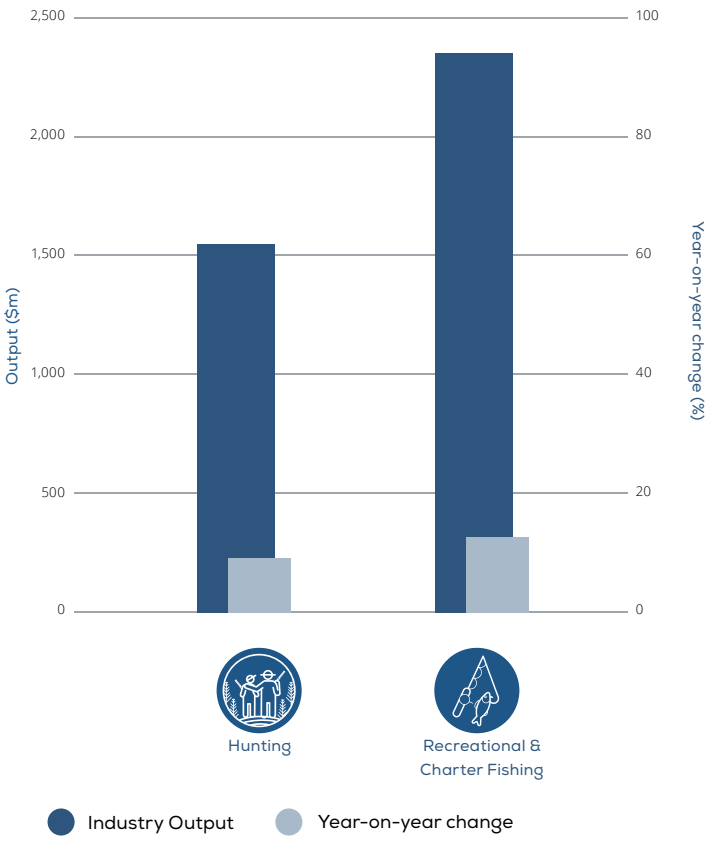
Expenditure based valuation approaches have been used for this sector and are considered comparable with GVP measures. Market valuation techniques are not appropriate as there is no catch or harvest sold, and they do not capture all the community benefit elements of recreational fishing and game hunting.

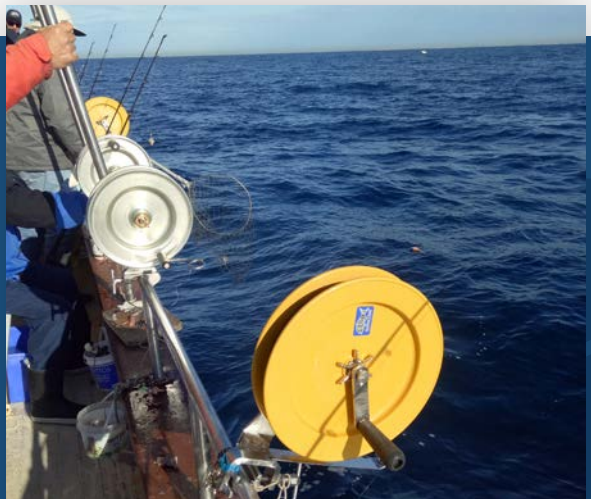
In NSW, both recreational fishing and game hunting activities are regulated through licences. Revenue from licence sales is used to directly support these sectors, generating additional social and economic benefits.

All money raised by the NSW Recreational Fishing Fee is placed into the Recreational Fishing Trusts and spent on improving recreational fishing in NSW. Projects encompass fishing enhancement, access and education programs, research, and compliance activities.

Similarly, all money received for game hunting licence fees goes into a trust that directly benefits NSW Game Hunting Licence holders. The money helps support the activities of the Game and Pest Management Advisory Board, funds research demonstrating the impact of hunting on the native environment, and game hunting compliance activities

Hunting and Recreational Fishing estimated Output 2018-19





Charter fishery monitoring

NSW DPI's Recreational Fisheries Monitoring Program collects high quality information to assess recreational fisheries, including the Charter Fishery. Trained observers on board charter vessels collect data on species caught, the size composition of the catch, fleet fishing effort and extent, as well as interactions with wildlife and fisher demographics. To date, the module has collected data from 170 observer trips with 40 participating operators featuring 1,300 fishing clients, 10,000 fish caught and 3,600 wildlife observations.

Online at https://www.dpi.nsw.gov.au/about-us/publications/pdi/2019

RECREATIONAL AND CHARTER

Fishing

Expenditure $2,363m est. Up 4% yoy

Over 49,900 fish and other species caught recreationally in 2017–18

99 Recreational Fishing Trusts projects, worth $11,953,123, approved during 2017–18

In 2018–19, fishers spent an estimated $2,363 million on recreational ($2,338 million) and charter ($24 million) fishing activities. This expenditure supports regional communities, generating a range of social and economic benefits.

Participation and Effort

Recreational fishing continues to be a very popular activity. During 2017–18, a statewide survey of over 434,000 long-term (one and three years) licence holders was undertaken and provided information on who went fishing, how much fishing was done, where fishing occurred and what was caught. During the 12-month survey period, more than 1,600 fishers reported close to 11,000 fishing events and a total catch of more than 49,900 fish and other species[58].

The charter boat fishery also provided a platform for monitoring recreationally-caught species. Charter operators completed logbooks reporting data on catch and effort and more than 40 operators also hosted scientific observers as part of an on-board monitoring program.

Information collected included fisher demographics, fishing effort, wildlife observations and fish measurements.

During 2017–18, 119 charter boat businesses operated in NSW waters and undertook almost 7,500 fishing trips. Around 86,000 anglers took charter trips, up from around 80,000 in 2016–17. With 20% of charter clients from inland regions of NSW, interstate or overseas, the sector was an important contributor to regional economies through expenditure on travel, accommodation and meals, in addition to charter fees[62; 63].

The combined information from these programs will contribute to the ongoing sustainable management of fisheries resources.

Charter fishing catch and effort

	Snapper	Yellowtail Scad	Bluespotted Flathead	Blue Mackerel	Teraglin	Grey Morwong	Flathead (other)	Sweep	Redfish	Fisher Days
NORTHERN	12,692	8,010	6,663	4,439	3,958					58,792
CENTRAL	4,483		11,841			7,249		3,372	3,075	16,983
SOUTHERN	6,320		17,259	4,442		5,989	6,353			10,461

Top 5 finfish species per region; retained catch only.

Source: DPI (2019l)

Catch

The charter fishing sector recorded the capture of 174 different species of finfish, cephalopods and crustaceans. The top five species caught (by number) were Bluespotted Flathead (35,800), Snapper (23,500), Grey Morwong (14,400), Yellowtail Scad (12,900) and Blue Mackerel (10,400)[62; 63].

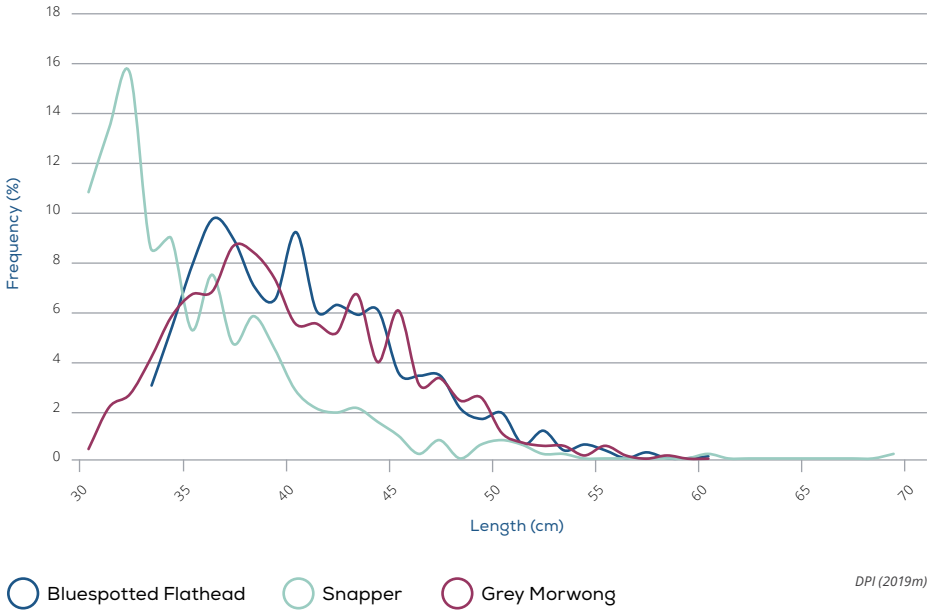
Top Species

Bluespotted Flathead
35,800

Snapper
23,500

Grey Morwong
14,400

Size composition of key charter fishery species

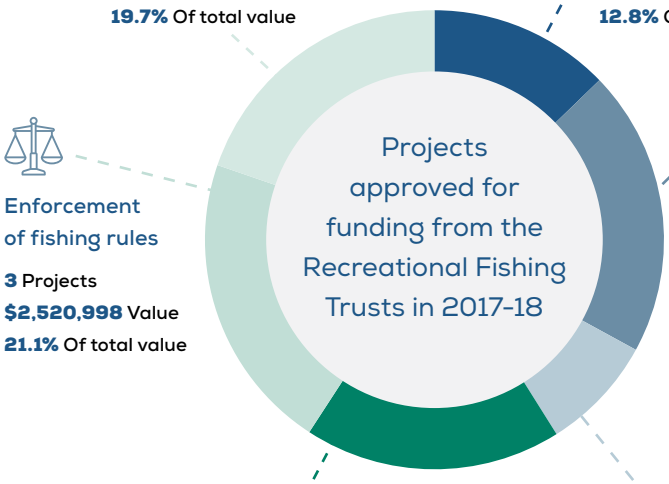


DPI (2019m)

Recreational Fishing Trusts

Funds raised by recreational fishing fees are placed into Recreational Fishing Trusts and spent by NSW DPI, fishing clubs, organisations, councils, universities and others, across a range of projects, to improve the experience for recreational fishers in NSW. Charter boat exemption certificate fees are also paid into the trusts and allow their customers to fish without an individual fishing licence. The trusts are regulated by law and overseen by committees made up of recreational fishers[64].

Under six different platforms, a total of 99 projects were approved for funding from the Recreational Fishing Trusts during 2017–18, with a total value of $11,953,123[65].



Research on fish and recreational fishing
19 Projects
$2,357,975 Value
19.7% Of total value

Aquatic habitat protection and rehabilitation
33 Projects
$1,525,749 Value
12.8% Of total value

Enforcement of fishing rules
3 Projects
$2,520,998 Value
21.1% Of total value

Enhancing fisheries – artificial reefs, stocking, FADs
15 Projects
$2,413,742 Value
20.2% Of total value

Recreational fishing education
14 Projects
$2,164,760 Value
18.1% Of total value

Fishing access and facilities
15 Projects
$969,899 Value
8.1% Of total value

Survey of recreational fishing in NSW

NSW DPI's Recreational Fisheries Monitoring Program (RFMP) collects information to enable the sustainable management of fisheries resources. Biennial state-wide surveys of recreational fishing are conducted with a randomly-selected sample of long term (1 & 3 year) recreational fishing licence holders, who report their household's fishing activities throughout a 12 month period. A detailed report will be available in early 2020 for the recent 2017-18 survey. A new survey has also commenced and will provide comparable information for 2019-20.

Online at https://www.dpi.nsw.gov.au/about-us/publications/pdi/2019

Hunting

Expenditure $1,596m est. Up 4% yoy

Hunting is an important part of feral animal management

Hunters activity in state forests has increased 39%

Regulated hunting activities generate a range of social and economic benefits. In 2018–19, the expenditure by hunters on activities and products was estimated at $1.6 billion.

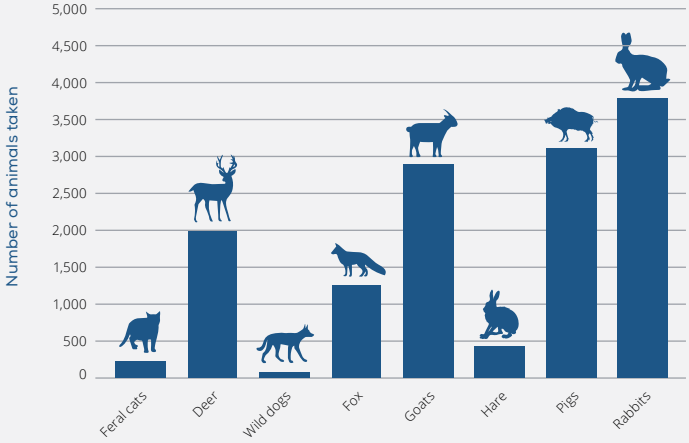
Benefits

The effect of introduced animals on the natural environment can be devastating. Hunting is recognised as one of a number of tools used in the management of both introduced and wildlife species and also as a legitimate recreational pursuit[56]. Hunting in NSW is currently well regulated by the DPI and NSW Police in conjunction with other Government agencies through strong strategic partnerships and community engagement. Hunting has the potential to contribute to pest control objectives through the increased harvest of problem wildlife species and the involvement of hunters in integrated pest control operations. Hunting also provides extensive social benefits to participants who engage in active outdoor recreation with family and friends, harvest clean organic meat and reconnect with the land and the natural world.

Regulated hunting is permitted on public lands for hunters with a valid and appropriate hunting licence. NSW state forests are working forests and must accommodate a range of recreational activities and primary production such as grazing, apiary and timber harvesting. Community access and environmental obligations must be carefully managed and hunting is a mutually beneficial part of this balance[56].

Licensed hunters harvested 29,485 deer in NSW across all land tenures[57]. Hunters' activity in state forests increased 39% during 2018–19. Increased animal harvest by hunters coupled with an increased focus on illegal hunting by the DPI Game Licensing Unit and NSW Police will continue to support farmers by reducing grazing competition and reducing direct costs borne by farmers having to respond to illegal hunting incursions on their lands.

2018-19 harvest in state forests



Source: DPI (2019i)

Regulating hunting

The NSW DPI Game Licensing Unit regulates hunting in NSW with NSW Police. A range of programs are administered to ensure hunting in NSW is conducted safely, ethically and sustainably. The programs include licensing, communications and stakeholder engagement, education and awareness, wildlife management, and compliance and enforcement.

Move Beyond Compliance

40,000+ Deer and feral species removed by licensed hunters

9,949 Facebook likes, 10,116 Subscribers

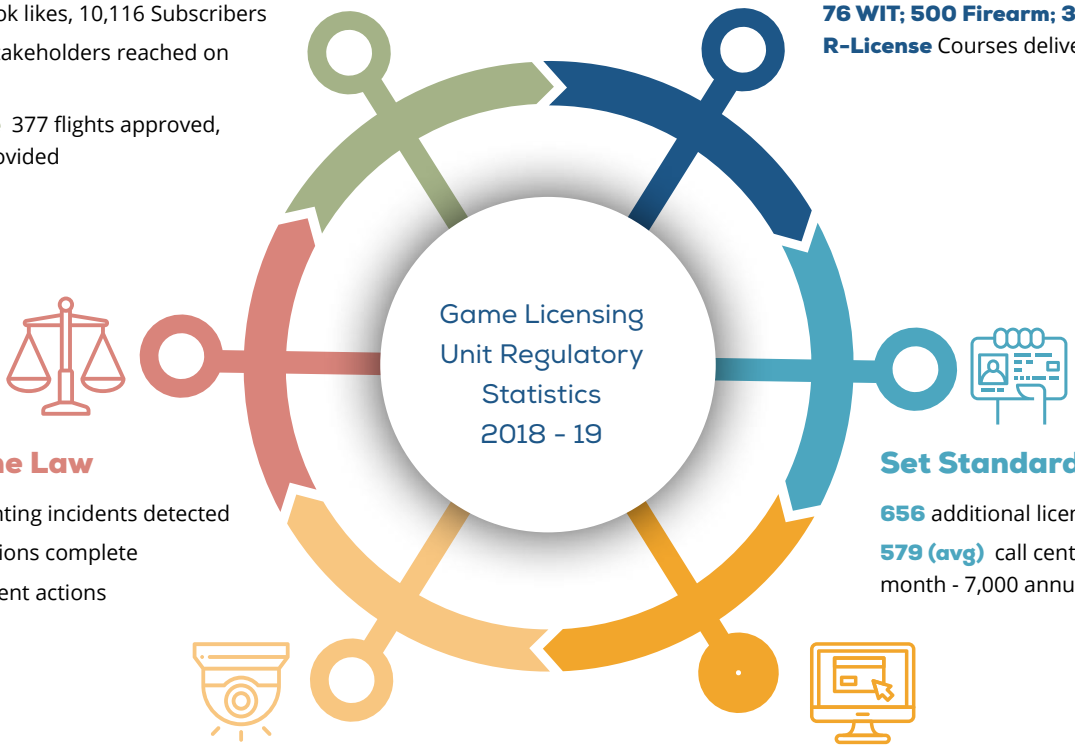
1.9+ million Stakeholders reached on social media

Project Drone 377 flights approved, 179 advices provided

Education

112,568+ Education and awareness items disseminated

76 WIT; 500 Firearm; 3,000 R-License Courses delivered



Enforce the Law

499 Illegal hunting incidents detected

209 Investigations complete

156 Enforcement actions

Set Standards

656 additional licence holders

579 (avg) call centre inquiries per month - 7,000 annually

Monitor Compliance

216 On ground operations totalling 4,291 man hours

377 Licence holder field contracts - 91% compliant

65 Electronic surveillance operations totalling 16,710 surveillance hours

Support to Comply

13 Trade shows attended

26,067 (avg) eNewsletter deliveries per month, (44.7% open rate) - 313,000 annually

54,000 (avg) Website hits per month, 650,000 annually

Source: DPI (2019j)

Farmers have their say on game and pest management

NSW DPI supports the Game & Pest Management Advisory Board which represents the interests of licensed hunters and makes recommendations to the Minister and DPI. The Board holds meetings in regional areas, enabling landholders to have their say on game and pest management and share information on key issues. Landholders can have useful discussions and learn more about the measures in place to support legal hunters in NSW.

Horticulture

Output $1,729m est. Up 1% yoy

Demand from Asia continues to drive export growth

Nuts are the largest horticultural export market by value

Industry momentum in 2018–19 was driven by unprecedented demand from Asia, favourable commodity outlooks, new capital, and new technologies. The vast number and range of commodities produced by the sector continued to grow, with production shifting to accommodate significant increases in apricots, avocados, sweet corn, cauliflower and turf.

At the date of publication, detailed industry information is not available, consequently the following production and price commentary analyses 2017–18 industry data.

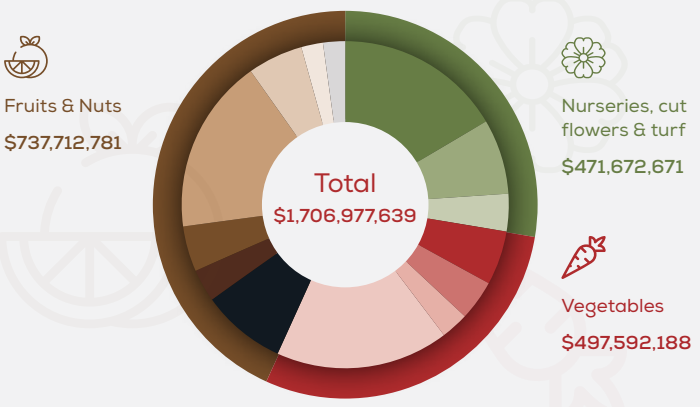
Horticulture

Horticulture Output in 2018–19 equated to $1,729 million, 11% of NSW total gross primary production. The area dedicated to production increased 5% year-on-year to 96,251 hectares[18].

Growing conditions in 2017–18 were characterised by above average temperatures and a very mild winter. Rainfall at the start of summer was well above average in south-eastern parts of the state. However by the end of summer, conditions had begun to deteriorate with declining soil moisture levels and reduced availability of water for irrigation.

The value of horticultural exports for 2018–19 experienced year-on-year growth to reach $458 million, partly driven by increased export volumes. Asia continued to be the main destination, with 65% of all exports by value arriving in these markets. Total horticultural exports to China grew 56% in value to $102 million – the first time more than $100 million. Exports to Japan grew 45% to $57 million and the Singapore market saw 29% growth to $22 million[87].

Output 2017-18



Source: ABS (2019b)

Nuts

Nut production totaled 29,580[ag] tonnes in 2017–18, up 10% year-on-year[88]. Almonds were the largest single nut industry by quantity, producing 9,288 tonnes, up 8% year-on-year, while macadamias were the most valuable nut industry, producing 7,484 tonnes at a value of $93 million[88; 17]. As orchards matured, the majority of nut varieties saw small year-on-year increases. Efficiencies of scale were generated as plantings were expanded by both established growers and new industry entrants.

Nuts remained the largest horticultural export market by value in 2018–19, increasing 25% year-on-year to $241 million[87], largely due to higher prices and improvements in market access. The majority of the growth in value continued to come from China, assisted by the ChAFTA elimination of the 10 to 25% tariff on all nuts on 1 January 2019. Exports to Japan also saw very positive growth with a 49% year-on-year increase in value[87]. Although domestic consumption increased, with 3.1kg of nuts supplied per capita[88], the majority of demand came from international markets.

Nut production

ISWE - In-Shell Weight Equivalent
KWE - Kernel Weight Equivalent

Source: HIA (2019a)

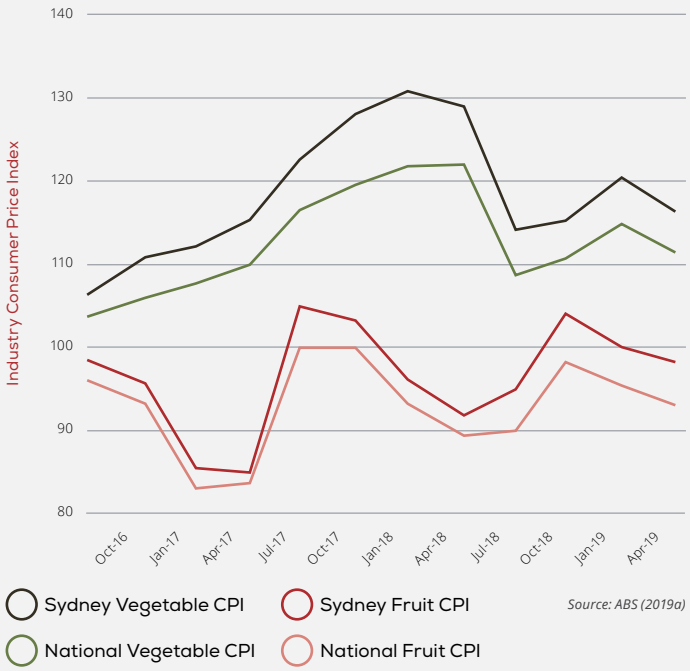
Vegetables

In 2017–18, vegetable growers produced a wide range of crops, with more than 33 individual commodities. Total fresh production increased 1.7% year-on-year to 317,534 tonnes[88], mainly due to an increase in the area planted (16,032 hectares) and a bumper spring harvest[18]. Of these vegetables, 89% were grown outdoors, 9% undercover, and 3% in hydroponic systems[2].

Sydney consumer price indices for vegetables fell by an average nominal rate of 9% year-on-year, only slightly more than the national average of 7%[16]. Prices dipped due to exceptional growing conditions and increased supply.

The value of fresh vegetable exports for 2018–19 increased 3% year-on-year, due in part to strong growth in the key export markets of Singapore, Thailand and Malaysia, and an increase in the total volume of exports[87]. Singapore is the largest and most valuable export market for vegetables, worth $6.2m in 2018–19, an increase of 15% year-on-year.

Sydney and National Fruit and vegetable CPI



Source: ABS (2019a)

Fruit

NSW produced 492,746 tonnes of fruit in 2017–18, up 2% year-on-year[88]. Oranges remained the largest single fruit industry by quantity and value, producing 268,068 tonnes at a value of $143 million[88; 17].

Sydney consumer price indices for fruit remained steady[16].

Fresh fruit exports from NSW for 2018–19 were sent to a wide range of destinations, and totaled $106 million, or 46,000 tonnes, up by an astounding 23% year-on-year[87]. Improved market access into China and increased demand for fresh Australian produce drove growth, with exports to China up 99% in value year-on-year. Oranges accounted for 91% of the total fresh fruit volume exported to China.

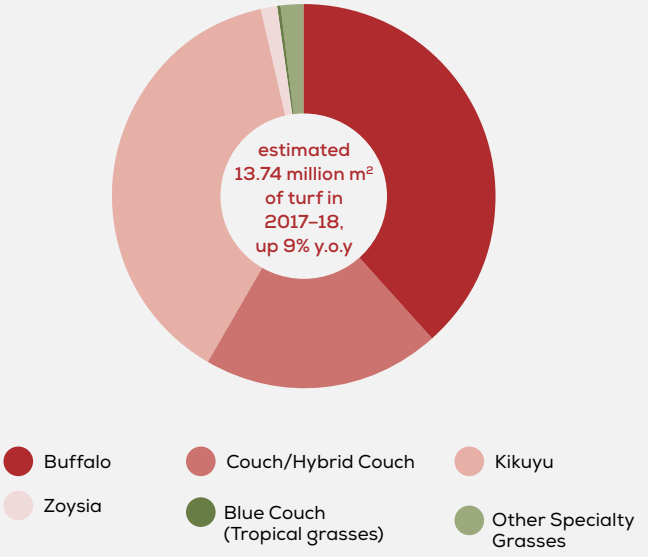
Nursery, cut flowers and turf

Robust growth in demand for greenlife and increased grower confidence[112] resulted in an increase in the area dedicated to nursery production (live plants grown for landscaping, revegetation, retail supply and starter plants for commercial fruit, vegetable and forestry production), up 9% year-on-year to 1,057 hectares in 2017-18[18]. Despite this increase in area, the value of production declined 4% year-on-year[17].

The area dedicated to cut flower production almost doubled, up 90% year-on-year in 2017–18[18]. This was due to a massive increase in outdoor field production as opposed to undercover, most likely related to the demand for Australian native flowers. The value of outdoor production rose 262% year-on-year[17].

NSW (incl. ACT) produced an estimated 13.74 million metres square of turf in 2017–18, up 9% year-on-year[89]. Buffalo and Kikuyu were the most common variety grown, accounting for 77% of total production. Demand growth has been hindered somewhat in recent years by the growth in high-density living and competition from artificial turf products.

Turf production



*Includes NSW and ACT production

Source: THIA (2019b)

Cherries into China

NSW DPI, in collaboration with the Australian Government and China market teams, has enabled NSW cherries to be air-freighted to China within four days of harvest.

NSW DPI supported amendments to import air freight protocols for the regulated China market by addressing technical issues and scientific requirements, and providing ongoing innovation and on-farm research.

Wine Grapes

Output $235m est. Up 3% yoy

Extreme summer heat affected yield in some regions

Exports increased 4% in value

Enduring dry conditions, low water availability, and summer heatwaves resulted in a fall in wine grape crush. Vineyards in the Riverina and the Hunter Valley were the hardest hit by the summer heatwaves.

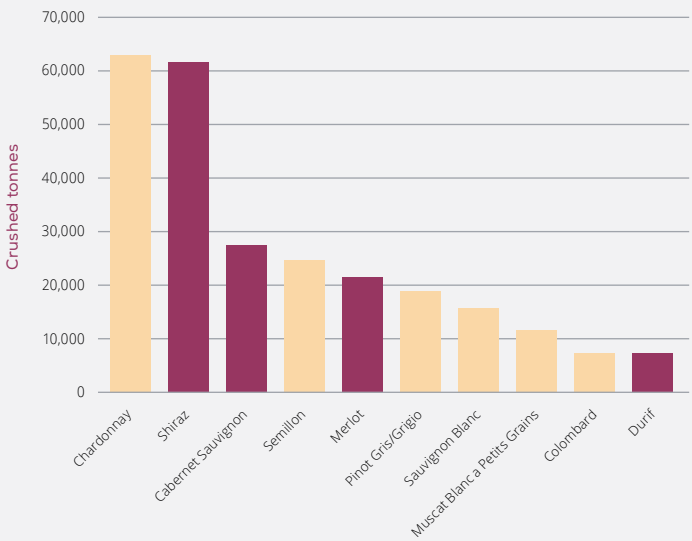
Production

The area planted to wine grapes of bearing age was up year-on-year to 33,505 hectares, an increase of 11%[18], equating to an estimated 102,929 kilometres of vine rows[78]. The total NSW crush was up 1% year-on-year to 321,941 tonnes[151].

Predicted extreme heat events over the summer saw a late start to the 2019 vintage[34]. The dry conditions delayed bud burst in some regions, which meant that both red and white varieties ripened one after the other, or all together, resulting in a rush to harvest. The extreme heat and poor water availability had a small effect on yields, particularly for those growing grapes in the warm climate zones.

Red varieties performed better than white varieties in terms of yield. The red variety crush increased by 8.4%, while the white variety crush decreased 3.6% year-on-year[151].

Top 10 varieties crushed



Source: WA (2019)

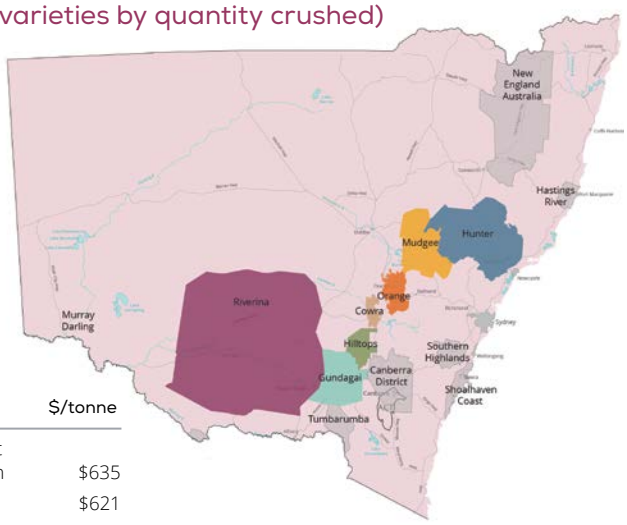
Price

The weighted average domestic purchase price of wine grapes remained relatively stable, rising slightly by 16% year-on-year to reach $510 per tonne[151]. Strong export demand helped support prices with the average export price and wine grape price strongly linked, and export growth underpinning higher prices for wine grapes[27].

Wine grape prices are influenced by different factors including the cost of production, grape characteristics, yield and demand for particular varieties. These characteristics vary between different vineyards and between different regions. Warmer inland regions generally produce more grapes at a lower cost than temperate and cool-climate regions[27]. These grapes are generally used to produce wines sold at a lower price point or used to produce bulk-wine. The average price of warm climate grapes was $557 per tonne with cool climate grapes averaging $1,243 per tonne[151].

The Wine Equalisation Tax (WET) reforms, with a reduced rebate cap in July 2018, appear to have started discouraging bulk wine production, boosting wine grape prices[93]. This potential outcome was highlighted in the Senate Standing Committee report into the Australian wine and grape industry, February 2016, which noted that introduction of the producer rebate "had unintended consequences in subsidising the production of bulk wines leading to an overall reduction in price"[135].

Regional Variety Price
(top 3 varieties by quantity crushed)



Cowra	$/tonne
Carbernet Sauvignon	$635
Merlot	$621
Shiraz	$710

Gundagai	$/tonne
Carbernet Sauvignon	$784
Durif	$658
Merlot	$659

Hunter	$/tonne
Carbernet Sauvignon	$2,271
Durif	$1,404
Merlot	$1,223

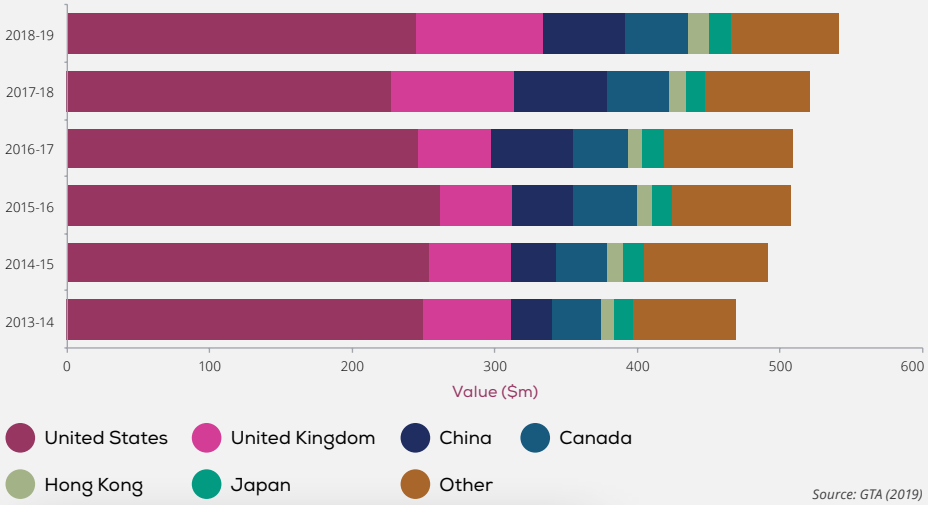
Orange	$/tonne
Carbernet Sauvignon	$1,191
Merlot	$1,266
Shiraz	$1,471

Hilltops	$/tonne
Carbernet Sauvignon	$1,031
Merlot	$935
Shiraz	$1,133

Mudgee	$/tonne
Carbernet Sauvignon	$979
Merlot	$1,300
Shiraz	$1,465

Riverina	$/tonne
Carbernet Sauvignon	$597
Durif	$661
Merlot	$565

NSW wine exports



Source: GTA (2019)

Trade

Global demand for NSW wine remains strong with exports increasing by 1% in volume and 4% in value in 2018–19. Exports to Hong Kong were the standout, increasing 31% in value year-on-year. The Japanese market also performed well with an 8% increase in value. The Chinese market, which has demonstrated steady growth over the last few years, recorded a drop in both value (down 11% year-on-year) and volume (down 40% year on year) in 2018–19[87].

VineWatch

NSW DPI began publishing VineWatch as an initiative of the Viticulture Skills Development Program 2014-19. VineWatch is a newsletter containing regionally customised alerts and resources to help vineyard management, provide seasonal updates, pest and disease information, and DPI viticulture events. The newsletter is published fortnightly during growing season and monthly out of the growing season with more than 80 editions since it was first published in August 2015.

Online at https://www.dpi.nsw.gov.au/about-us/publications/pdi/2019

Fisheries

Output $181m est. Up 2% yoy

Continued export demand for premium seafood

Value of Sydney Rock Oyster industry continues to increase

DPI analysis estimated the value of the fishing industry during 2018-19 at $181.3 million, up 1.9% year-on-year. The aquaculture sector continued to grow, up by an estimated 2.1%, complimented by an increase in the wild harvest sector of an estimated 2% year-on-year.

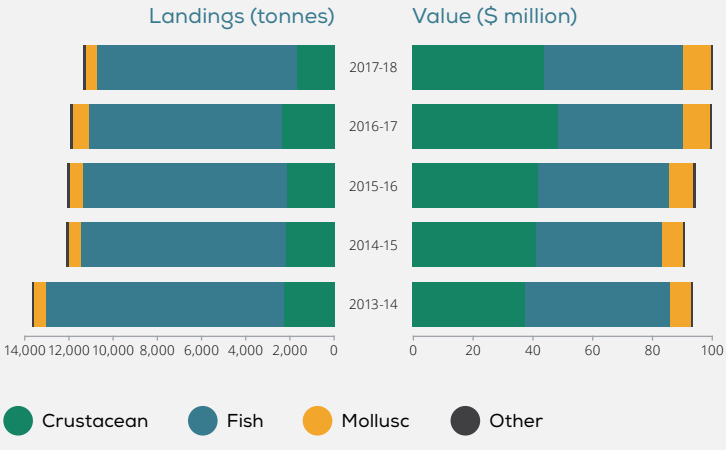
At the date of publication, detailed industry information is not available, consequently the following production and price commentary analyses 2017–18 industry data.

Wild Harvest

The wild harvest commercial fishery sector accounted for 55.9% of the total value of the fishing industry in 2017–18. While the value of the sector was up marginally from 2016–17, at $99.5 million, landings (tonnes) were down almost 5%[53].

Fish remained the biggest contributor by volume to catch, with 9,025 tonnes landed (up 3.3% year-on-year) and a value of $45.6 million. Crustaceans accounted for just 15% of the total catch weight (1,698 tonnes) however, with a much higher average price per tonne ($25,626 compared to $5,051 for fish), they account for 43.7% of total value, at $43.5 million. These prices reflect supply and demand levels as well as the gourmet nature of species such as lobsters, crabs and prawns[53].

Commercial wild harvest output



Source: DPI (2019c)

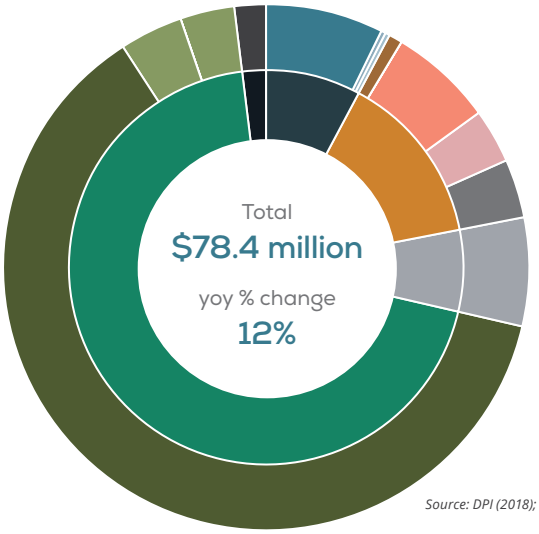
Aquaculture

Aquaculture output grew by 12% in 2017–18, to reach $78.4 million – 44.1% of total fisheries Output. This growth was largely driven by Sydney Rock Oysters, up 19.8% year-on-year, and by far the largest aquaculture sector, contributing 62% of the total aquaculture value[50; 54]. Unprecedented investment, and a focus on tourism and marketing, has driven industry development and its transition from small, family operators to a modern business focus[104].

In contrast, Pacific Oysters fell by 35% year-on-year to $3 million. Production was impacted by outbreaks of Pacific Oyster Mortality Syndrome in several estuaries in recent years; environmental stressors; and interstate disease events that limited the availability of seed stock[104; 50; 54].

Mixed fortunes were experienced by smaller sectors of the industry. Black Tiger Prawn value fell by 26% year-on-year, with a 21% drop in production[50; 54]. In addition to industry restructure, interstate outbreaks of White Spot disease drove the development of disease mitigation strategies, which included reduced stocking densities[104].

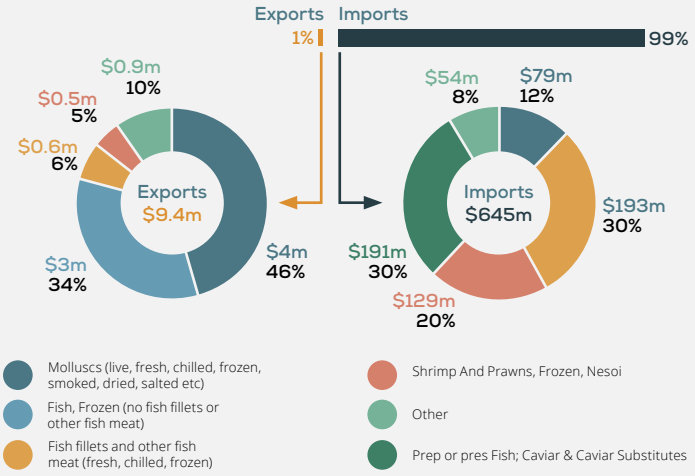
Aquaculture Output 2017-18



Source: DPI (2018); DPI (2019b)

- Crustaceans
  - Black Tiger Prawn
  - Yabby
  - Yabby (bait)
- Hatchery species
- Other species
- Mollusc
  - Sydney Rock Oyster
  - Pacific Oyster
  - Native Oyster
  - Oyster Spat
- Freshwater Fish
  - Barramundi
  - Golden perch
  - Murray Cod
  - Rainbow Trout
  - Silver Perch

NSW seafood product trade



Trade

NSW (and Australia as a whole) is a net importer of seafood products. In 2018–19, NSW seafood product imports reached $647.9 million, up 9% year-on-year and 69 times greater than its exports of $9.4 million[87].

Key markets for seafood exports were China, Vietnam and Japan. Imported products were primarily sourced from Thailand and other South East Asian countries (48.9%), and China (13.4%). Imports were dominated by lower value products, such as canned tuna and frozen fish fillets and prawns.

Supporting our seafood future

NSW Government's *Supporting our Seafood Future* grants program aims to unlock the potential of our seafood industry by boosting the value of the industry and seeing more local seafood on plates. The program is designed to build marketing and promotion capability within fishing businesses through matched funding grants. Around 86% of seafood eaten in NSW is currently imported, creating a huge opportunity to increase the production and consumption of local seafood and drive economic growth in NSW.

Online at https://www.dpi.nsw.gov.au/about-us/publications/pdi/2019

Forestry

Output $578m est. Up 6% yoy

No new plantations established in 2017–18

Production up by 4% (224,000 m³)

Production continued to increase in 2017–18, however no new plantations were established. A softening housing market reduced domestic demand for softwood. Strong international demand for woodchips, particularly from China, drove exports up, continuing the trend seen over recent years.

At the date of publication, detailed industry information is not available, consequently the following production, plantation and price commentary analyses 2017–18 industry data.

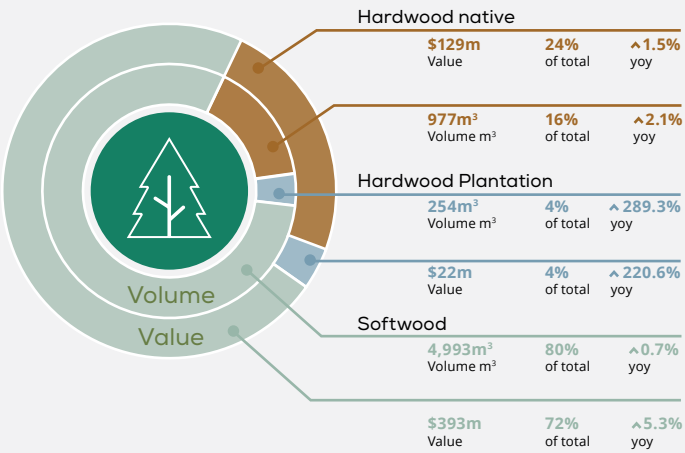
Production

NSW log production in 2017–18 continued to increase up by 224,000 cubic metres or 4% year-on-year with softwood production up 1% year-on-year to 4.99 million cubic metres and hardwood production up 20% year-on-year to 1.23 million cubic metres.

Hardwood production accounted for just 20% of production by volume, and came from both native and plantation forests, from which 977,000 and 254,000 cubic metres of logs respectively were harvested.

Pulplogs, harvested mainly for woodchip exports and domestic paper, paperboard and panel production, represented 41% of the NSW harvest in 2017–18. Sawlogs and veneer logs made up 56%. Sawlogs and veneer logs, from which high-quality structural and appearance grade products are manufactured, were primarily for the domestic market[7; 8].

Volume and value of logs harvested

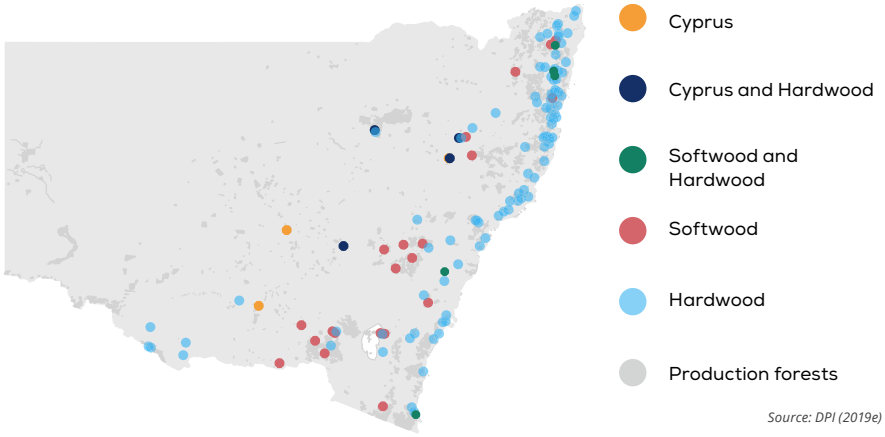


Source: ABARES (2019c)

Plantations

NSW had 393,200 hectares of commercial plantations in 2017–18, steady year-on-year. It was the second largest total area of Australia's states and territories second to Victoria's 420,600 hectares. Softwood plantations accounted for 78% of commercial plantations at 306,000 ha with hardwood plantation area of 87,100 hectares. No new plantations were established in NSW in 2017–18[7; 8].

Wood processing facilities



Source: DPI (2019e)

Trade

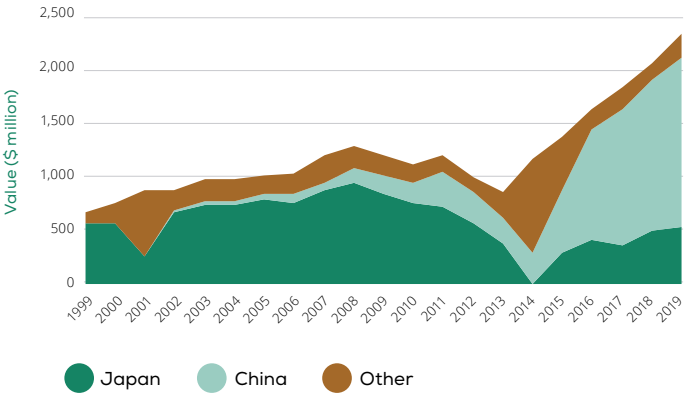
In 2017–18, Australian forestry exports increased to $2,351 million, an increase of 12.6% on 2017–18 and more than double 2013–14 exports. State level export data is unavailable[87].

After the virtual loss of the Japanese market in 2013–14, China has emerged as Australia's key export market. Forestry exports to China were up 12.8% year-on-year, accounting for 68% of the total[87].

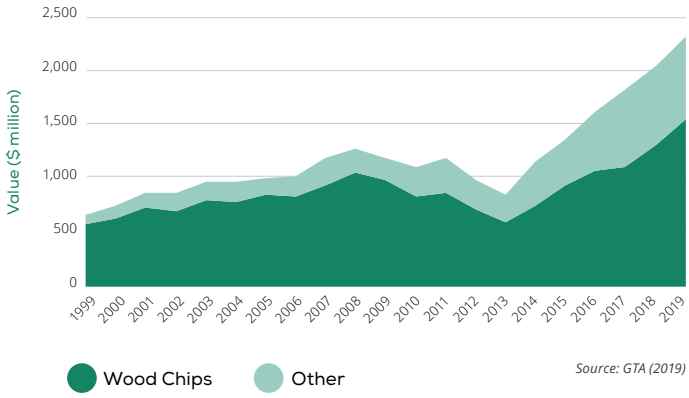
Australian forestry and wood product exports tend to be higher volumes of less processed and lower value products, such as woodchips (mainly from hardwood plantation pulplogs) and roundwood (mostly from softwood plantation sawlogs). Imports are lower volumes of more processed and higher value products, including paper, wood-based panels, sawnwood and miscellaneous forest products[7].

Demand from Asia, especially China, pushed woodchip prices to record highs, with the price for premium chips beyond $260 per bone-dry tonne[12].

Australian forestry exports - Destination



Australian forestry exports - Product



Source: GTA (2019)

Employment and value added

In 2018-19, employment in forestry and related industries was down by 15% year-on-year to 22,381 jobs. Industry value added (measured as production less intermediate inputs), was estimated at $2.8 billion, an increase of 13% over the year[7; 20].

Thinning regrowth benefits biodiversity

Thinning regrowth benefits biodiversity - NSW DPI Forest Science Unit lead a project funded by the NSW Environmental Trust and supported by Forestry Corporation of NSW to consider the effects of thinning on biodiversity in dense cypress pine regrowth forest. Silvicultural thinning is a common forest management technique, and the project found an overall positive relationship between thinning and many forest species.

Online at https://www.dpi.nsw.gov.au/about-us/publications/pdi/2019

Statistics Tables & Sources

Data supporting individual industry narratives can be downloaded by scanning the QR code below.

A statistics table is available for each industry. These include data on industry output, production, price, export and import values, and trade balance figures, as well as industry specific information.

Consolidated data tables are also available which provide comparisons of output, production, price, exports, imports, trade balance, and jobs and business data across industries.

The data is provided for the last five financial years, with percent change figures.

Scan the QR code for 2019 tables

End Notes

a GVP data is based on the ABS new threshold of $40k with the exception of livestocl, livestock products, forestry & fisheries which are sourced elswhere

b Includes other cereals, other broadacre crops, hay & silage

c Goat meat not defined explicitly for each year, but assumed from historic data. ABS intermittently indicates this does not include Rangeland ("Feral") Goats.

d DPI estimate only, subject to revision

e Goat production data sourced from a seperate source to GVP data. Production data includes rangeland & managed goats

f Sydney & Pacific Rock Oysters only

g Wine is excluded from the total, due to classification wine becomes a processed product post farm gate and therefore excluded

h Includes but not exclusive to other cereals, other broadacre crops, hay & silage, animal products n.e.d

i Due to confidentiality, ABS export data restrictions have been applied and values are under-reported as a result

j Includes Maize, Oats & Triticale. Hay & silage is excluded from this data

k DPI estimate calculated as average total employment over four quarters to May 2018 of labour force employment data by relevant to each industry. Relevant ANZSIC divisions are Agriculture, Forestry and Fishing (division A) and relevant sub divisions of Manufacturing (division C). Data was sourced from ABS (2018f)

l DPI estimate using the same ANZSIC classifications in footnote l. Data is based on June 2017 using source ABS (2017g)

m Negative values denote a net import trade flow

n From 2010-11 onwards, GVP is based on the ABS new EVAO threshold of greater than $40k, prior to this values are based on EVAO of greater than $5k

o Some values excluded due to lack of data availability

p 2016-17 data and prior is sourced from ABARES, while data since 2017-18 is sourced from Dairy Australia. Data may not be directly comparable

q Implied price basis ABARES (2019c) GVP & production data

r Subject to revision

s GVP is sourced sperately to Agriculture GVP and EVAO threshold differs

u Average over 4 quarters Sydney CPI data

v Data is wine grape crush data sourced from WA (2019), which is separate to production data provided by the ABS

w Hunting, Recreational & Charter fishing output value is an estimate of participant expenditure on these activities

x 2015-16 Charter Fishing revenue figures were incomplete, figures are distorted to the downside as a result

y Adjusted estimate is based on the NSW cotton five-year average market share of national exports which are available

z Value estimate is calculated using the number of goats supplied from NSW, an annual national average carcass weight and an average OTH goat price for 2018–19.

aa Data shown is only from defined GI regions where the total collected tonnage exceeds 1000 tonnes.

ab 2018–19 Sheep flock numbers estimated

ac Business count represents only businesses with an Estimated Value of Agricultural Output (EVAO) of $40,000 or more. Total agricultural businesses can be found in the statistics tables of this publication.

ad Regional forestry estimates are derived using forestry type Volume Weighted Production (VWP) and forestry hectares by NRM region. VWP data sourced from ABARES (2019), and forestry hectares sourced from ABS (2019b).

ae Regional commercial fisheries and aquaculture data has been estimated from a variety of data sources and Department technical knowledge. Aquaculture data sourced from DPI (2018), Wild Caught Fisheries data sourced from DPI (2019).

af Kernel weight equivalent – except for pistachios and walnuts which are as in-shell weight


SOUTH LOG
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