SNAPSHOT OF Australian Agriculture 2021

This Insights report describes the current state of Australian agriculture, with the aim of providing key information and statistics in one place. It covers eight key aspects of Australian agriculture: its role in the broader economy, trends in production, industry structure and productivity, risk management, agricultural employment, government support, trade and impacts of the COVID-19 pandemic.
Agriculture's place in Australia

Australian agriculture accounts for:

- 55% of Australian land use (427 million hectares, excluding timber production in December 2020) and 25% of water extractions (3,113 gigalitres used by agriculture in 2018–19);
- 11% of goods and services exports in 2019–20;
- 1.9% of value added (GDP) and 2.6% of employment in 2019–20 (Figure 1).

The mix of Australian agricultural activity is determined by climate, water availability, soil type and proximity to markets. Livestock grazing is widespread, occurring in most areas of Australia, while cropping and horticulture are generally concentrated in areas relatively close to the coast (Figure 2).

**FIGURE 2** Agricultural production zones

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**FIGURE 1** Selected contributions of agriculture

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<th>%</th>
<th>10</th>
<th>20</th>
<th>30</th>
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<td>Rural employment</td>
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<td>National employment</td>
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<td>Gross domestic product</td>
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Sources: ABS Water Account (cat. 4610); Catchment scale land use of Australia – update December 2020, ABARES; ABS Balance of Payments (cat. 5302); ABS Labour Survey (cat. 6291); ABS National Accounts (cat. 5206)

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**Agricultural land**

- Grazing native vegetation
- Grazing modified pastures
- Cropping including crop/pasture rotation
- Horticulture
- Other uses
- Wheat–sheep

* Exaggerated to improve visibility.

Sources: Wheat-sheep zone – Agricultural and Grazing industries Survey, 2016, ABARES; Catchment scale land use of Australia - update December 2020, ABARES; ABS Agricultural Commodities, Australia–2018–19 (cat 7121)
Agricultural production is growing

Australia has a diverse agricultural, fisheries and forestry sector, producing a range of crop and livestock products (Figure 3). The gross value of agricultural, fisheries and forestry production has increased by 7% in the past 20 years in real terms (adjusted for consumer price inflation), from approximately $62 billion in 2000–01 to $67 billion in 2019–20 (Figure 4).

Drivers of output growth over the past 20 years vary by sector:

- In cropping, long-term falls in real prices have been offset by volume growth, as producers have improved productivity by adopting new technologies and management practices.
- In livestock, higher prices have been the main driver of growth (Figure 5), reflecting growing demand for protein in emerging countries and also some temporary factors, such as drought in the United States and disease outbreaks such as African Swine Fever in meat importing countries.

### FIGURE 3  Agriculture, fisheries and forestry value of production, by commodity, 2019–20s

- **Wheat**: 8%
- **Coarse grains**: 4%
- **Pulses**: 2%
- **Canola**: 2%
- **Sugar cane**: 2%
- **Wine grapes**: 1%
- **Cotton**: 0%
- **Other grains & oilseeds**: 0%
- **Other crops**: 3%
- **Other livestock products**: 25%
- **Other livestock**: 2%
- **Sheep & lambs**: 8%
- **Milk**: 7%
- **Wool**: 5%
- **Poultry**: 4%
- **Pigs**: 2%
- **Fruit & nuts**: 8%
- **Vegetables**: 7%
- **Other horticulture**: 4%
- **Forestry**: 4%
- **Fisheries**: 4%

### FIGURE 4  Agricultural, fisheries and forestry production, 2000–2001 to 2019–20s

### FIGURE 5  Volume driving increased cropping value and price driving increased livestock value, 2000–01 to 2019–20s

- **Volume**: 36%
- **Price**: 28%
- **Value**: 24%

Note: Estimates relate to the agricultural sector only (they do not include fisheries and forestry). Crops include horticulture. Values represent the growth in each variable over the past 20 years (not the proportion of growth that can be attributed to each factor). Values are smoothed using a 5-year moving average. Prices and values are in real terms (adjusted to remove the effects of inflation). Source: ABARES
The farm population is diverse and constantly changing

In 2018–19, there were 89,400 agricultural businesses with an Estimated Value of Agricultural Operations (EVAO) of $40,000 or greater in Australia (ABS 2020a). There were an estimated 57,300 broadacre and dairy farm businesses in 2018–19. Of these, 36% were classified as beef industry farms, 19% sheep industry farms, 14% wheat and other crops industry farms, 14% mixed livestock-crops industry farms, 10% dairy industry farms, and 8% sheep-beef industry farms. For broadacre farms, the biggest changes to the farm population since 1978–79 have been a decline in the total number of farms, a decline in the share of mixed livestock-crops farm businesses and an increase in the share of beef industry farm businesses (Figure 6).

**FIGURE 6** Number and share of broadacre and dairy farm businesses, by industry, 1978–79 to 2018–19

Economic performance is driven by the most productive farms

Australian farmers have historically achieved strong productivity growth, increasing the volume of output produced from a given set of inputs. Agricultural productivity growth has been stronger over the long term than what has been seen in most other sectors of the Australian economy. It has also been comparable to farmers in other high income countries. This growth has been driven by improvements in technology and structural change.

Industry-level trends in performance are driven by the largest and most productive farms. For example, indicative analysis suggests that if all broadacre farms had the same output per hectare as the highest performing 20% of farms, the total value of broadacre agricultural output would be around 24% above current levels, and farm cash income would be around 46% above current levels1. Smaller farms are less profitable on average than their larger counterparts but they compare favourably with the average Australian household, with comparable income, lower debt and greater net wealth.

A range of factors has supported the growth of large farms (those with receipts above $1 million per year in real terms) from around 3% to 14% of the farm population over the past 4 decades. Their share of total output value has increased markedly, from 25% to around 59% (Figure 7).

The structure of Australian farms reflects market conditions, which tend to see the best managers operating the largest farms. As the number of farms has decreased, farm sizes have increased in terms of both total receipts and land area. Increased farm size has also supported improved productivity through several channels: access to better technology; better and more flexible labour management (which supports higher labour productivity); better knowledge management; diffusion of better farm management practices; and access to positive economies of scale. All these changes have been enabled by the deregulation of most agricultural markets and economy-wide microeconomic reforms.

1 Estimates of output by farm size were constructed separately for livestock and cropping farms in individual ABARES regions and aggregated to the national level using ABARES survey weights. Comparing farms within particular regions and industries helps to control for differences in land quality and climate conditions which cause significant variations in farm performance across Australia. Because of these differences the estimates presented here should be viewed as illustrative only, since the increases in production and profitability that are feasible from an agronomic perspective will be different.
Productivity growth plays a crucial role in offsetting the impacts on farm profit from ongoing declines in output prices relative to input prices – known as farm terms of trade. Prices for Australian producers are set on international markets, meaning Australian farmers must produce an internationally competitive product to be profitable. Maintaining productivity growth and continued innovation is therefore required if Australia is to remain internationally competitive.

In recent years, agricultural productivity growth has slowed for several reasons. These include deteriorating seasonal conditions and less intense research and development efforts. While there is evidence that crop producers are adapting to changing climate conditions, and in so doing have partly restored productivity growth, this has not been enough. Further adaptation efforts will be required to restore productivity growth to past levels.

Employment on Australian farms is significant and varies throughout the year

Labour is a key input to Australian agriculture. On-farm employment, including work by farm owners, has fallen by 25% over the past 3 decades (ABS 2020b). Australian farms employed 326,000 workers on average during 2018–19, including full-time, part-time, casual and contract employees (Figure 8). Broadacre farms are the largest employers in Australian agriculture, followed by fruit, grape and nut farms, vegetable farms and dairy farms (Martin, Randall & Jackson 2020).

FIGURE 8 Peak workforce, nature of agricultural employment, 2018–19

Note: Farm size categories are defined in real terms (adjusted for inflation).
Income is measured as farm cash income (total cash receipts minus total cash costs).
Source: ABARES
Variation in total employment on farms is the result of changes in the use of casual and contract labour throughout the year. In 2019 the total number of casual and contract workers employed on farms peaked in February and was at its lowest in June, reflecting the timing of relatively labour-intensive operations, such as planting and harvest. Horticultural farms tend to use relatively large amounts of casual and contract labour at key times of the year, while broadacre and dairy farms tend to use this kind of labour more consistently through the year.

**Around 70% of agricultural output is exported**

Australia exports around 70% of the total value of agricultural, fisheries and forestry production. Export orientation of each industry can vary by commodity type. Wheat and beef, which are large sectors, are more export-focused than dairy, horticulture and pork (Figure 9).

In real terms the value of agricultural exports has fluctuated between $40 billion and $60 billion since 2000–01 (Figure 10). Meat and live animals has been the fastest-growing export segment, growing 86% over the period, followed by horticulture up 64% and forest products up 16%.

**FIGURE 9** Australian agriculture is export orientated

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Export Share</th>
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<tbody>
<tr>
<td>Sugar</td>
<td>86%</td>
</tr>
<tr>
<td>Beef &amp; veal</td>
<td>75%</td>
</tr>
<tr>
<td>Mutton &amp; lamb</td>
<td>73%</td>
</tr>
<tr>
<td>Canola</td>
<td>72%</td>
</tr>
<tr>
<td>Wheat</td>
<td>71%</td>
</tr>
<tr>
<td>Rice</td>
<td>52%</td>
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<tr>
<td>Dairy products</td>
<td>40%</td>
</tr>
<tr>
<td>Fruit &amp; nuts</td>
<td>31%</td>
</tr>
<tr>
<td>Pig &amp; poultry</td>
<td>5%</td>
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</tbody>
</table>

Global agricultural demand is growing very strongly, reflecting rising per capita incomes as well as population growth, but export competition is also increasing. Asia is the fastest growing export region for the Australian agriculture, fisheries and forestry sectors.

- Exports to Australia’s eight largest markets in Asia increased by 62% to $33 billion over the 20 years to 2019–20 and accounted for 62% of the total value of agricultural, fisheries and forestry exports in 2019–20.

- China is Australia’s largest export market for agricultural, fisheries and forestry products, at $16 billion in 2019–20. Exports to China are about 5 times larger than they were in 2000–2001.

- Asian demand is projected to double between 2007 and 2050, providing opportunities for exporters of high-value, high-quality agricultural and food products.

### Australian farmers manage significant risk and variability

Australian agricultural producers manage significant variability, including a highly variable climate and volatile commodity prices. These factors generate substantial variation in farm output, greater than that experienced by farmers in most other countries and greater than that experienced by business owners in other sectors of the Australian economy (Keogh 2012).

Australian farmers have a number of effective strategies for managing risk, including maintaining relatively high levels of equity, liquid assets and borrowing capacity, using inputs conservatively, diversifying across enterprises and locations and earning off-farm income. Well-managed farms are better prepared for droughts and other risks, such as global price shocks, and not all farmers in regions affected by drought experience economic or financial hardship. For example, over the past 20 years an average of 50% of broadacre farms generated more than $50,000 (in real terms) in farm cash income in a given year. But this proportion varied substantially with seasonal conditions and prices. In the 2006–07 drought year, just 33% of farms generated more than $50,000 income, whereas 52% of farms managed to do so in the 2019–20 drought year.

### Australian farmers receive low levels of government support

Government support of Australia’s agricultural sector is very low compared to the 37 member countries of the Organisation for Economic Co-operation and Development (OECD) and other major emerging agricultural producers (Greenville 2020). The average level of support (as a share of gross farm receipts) for all countries was 11.7% between 2017 and 2019, compared to Australia at just 2.3% (Figure 11).

Australia’s national competition policy and pro-competitive reforms have resulted in lower agricultural support over time. These reforms have been consistent with Australia’s obligations to the World Trade Organization. Government support for agriculture is primarily via investments in sector capacity, such as research and development. Tools such as farm management deposits and income tax smoothing help farms manage risks that can arise from Australia’s variable climate.

Keeping subsidies low is important for both Australian producers and international markets. Australia’s reform experience shows that deregulating the agriculture sector and removing distorting forms of support spurs overall sector growth, increasing participation in global markets and the contribution that agriculture makes to the rural and national economy.
Australia has implemented a comprehensive trade strategy

Over the past 15 years, Australia’s trade agreements have provided access to new and growing markets, and have supported the competitiveness of our products abroad (Duver & Qin 2020). There are only a few of Australia’s major trading partners where a preferential trade agreement is not yet in place. These include the European Union, the United Kingdom and India. Negotiations with these trading partners are underway. The pursuit of FTAs with new partners will remain of key importance to Australia’s future trade agenda, as will the ongoing review and upgrade of existing FTAs to ensure they continue to support our competitiveness.

Trade agreements provide options for exporters (Figure 12). An agreement can reduce the concentration risks associated with supplying a single market by reducing tariffs and making products more competitive. However, some commodity exports remain more concentrated towards a single market. This may be driven by prices or the composition of the global supply chain.

FIGURE 12 Indicators of Australia’s export market concentration for key commodities, 2019–20

Source: ABARES

Note: The all-country average includes all OECD countries, non-OECD EU Member States, and the 13 Emerging Economies. The OECD average does not include the non-OECD EU Member States. Latvia and Lithuania are included only from 2004. The 13 Emerging Economies include Argentina, Brazil, China, Colombia, Costa Rica, India, Indonesia, Kazakhstan, the Philippines, Russian Federation, South Africa, Ukraine and Vietnam.

Source: OECD 2020
Agriculture was resilient despite COVID-19 uncertainty

COVID-19 was a major event for Australia’s agricultural, forestry and fisheries sector in 2019–20, but the sector demonstrated an ability to adapt and transition to new opportunities (Greenville, McGilvray & Black 2020). Because food is an essential good, demand does not fall significantly in times of crisis, although the types of goods being demanded through the pandemic shifted away from high-value products consumed typically in the hospitality sector (e.g. wine and seafood) to foods consumed at home. Disruptions to domestic and international food supply chains early in 2020 were largely resolved, allowing agricultural trade to remain resilient through the pandemic. International food processors continued to operate and demand Australian products as inputs; and the resurgence of international textile and wood products manufacturing strengthened export demand for these products throughout 2020–21.

One of the lasting challenges of COVID-19-related travel restrictions has been the reduced availability of farm workers from overseas and higher airfreight costs for exporters of high-value commodities. Horticulture, some intensive production, and meat processing industries have been most affected by the reduced number of overseas workers. The result been increased costs of production for these industries and potentially lower horticultural production, as producers find it difficult to harvest. Exports of high-value and highly perishable products, such as live seafood and fresh produce, have also faced cost increases given the reduced supply of cargo space on flights to key export markets.
References and further reading


Greenville J, Analysis of government support for Australian agricultural producers, Australian Bureau of Agricultural and Resources Economics and Sciences, Canberra.


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