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Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES)
GPO Box 858 Canberra ACT 2601
Telephone 1800 900 090
Web agriculture.gov.au/abares

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We acknowledge the Traditional Custodians of Australia and their continuing connection to land and sea, waters, environment and community. We pay our respects to the Traditional Custodians of the lands we live and work on, their culture, and their Elders past and present.

About the Agricultural Commodities Report

The *Agricultural Commodities Report* contains ABARES forecasts for the value, volume and price of Australia's agricultural production and exports.

Underpinning the forecasts contained in the *Agricultural Commodities Report* are ABARES outlook for global commodity prices, demand and supply. Each edition of the report factors in how changes to this outlook affect Australian producers and the value of their produce. Important risks to the outlook are also considered and discussed in each report.

A 'medium term' (5 year) outlook is published each year in the March edition of the *Agricultural Commodities Report*. Each June, September and December edition contains a short-term outlook. In June, the forecast period is to the end of the next Australian financial year (July to June). In September and December, the forecast period is to the end of the current Australian financial year.

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1 Overview

Grace Anthony

$80b
Value of production in 2023–24

Agricultural overview

Value to fall 14% from record value of $92 billion in 2022–23.

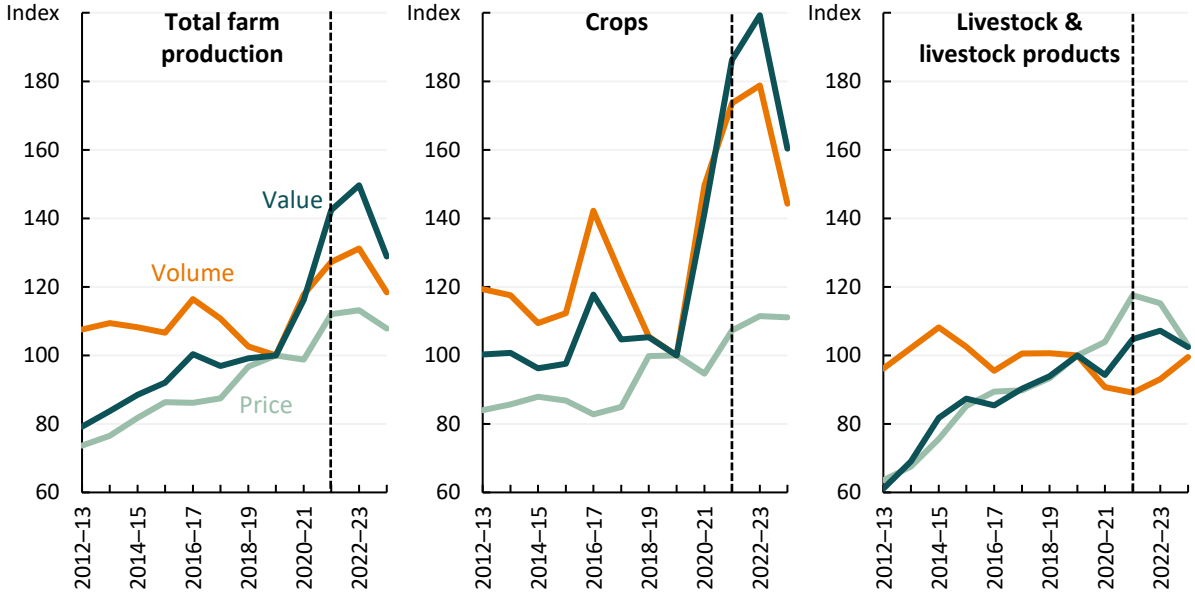
Key points

- The value of agricultural production is forecast to fall by 14% to $80 billion in 2023–24.
- Expected drier conditions will cause crop production to fall from record levels in 2022–23.
- Global prices for most commodities expected to decline in 2023–24 reflecting higher global supply.
- Lower domestic production and global prices to reduce export values by 17% to $65 billion in 2023–24.

Value of agricultural production to fall from record high

The gross value of agricultural production is forecast to fall by $13 billion to $80 billion in 2023–24 ($86 billion including fisheries and forestry production), still the third highest result on record. The fall in agricultural production is driven by lower crop production values ($11 billion lower). This mainly reflects lower crop production volumes due to reduced crop yields as a result of expected drier conditions from the developing El Niño and forecast positive Indian Ocean Dipole (Figure 1.1). In addition, prices for most agricultural commodities are forecast to fall as global prices ease from recent highs.

Figure 1.1 Annual value, volume and price of agricultural production



Note: Index 100 = 2019–20; data to the right of dotted line indicate estimates and forecasts.
Source: ABARES; ABS

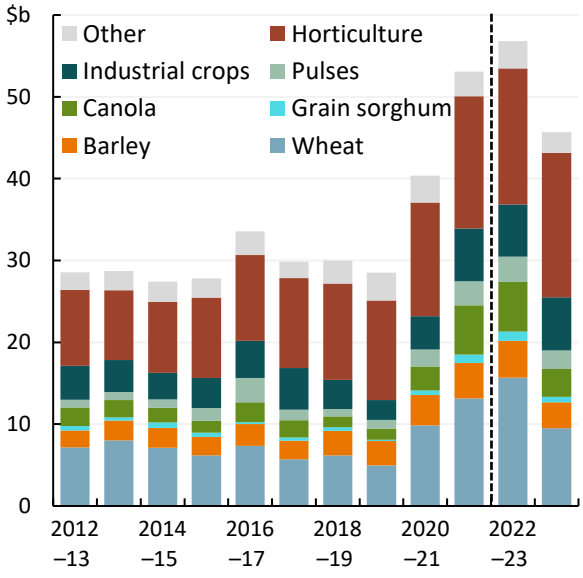
The forecast for total farm production values in 2023–24 has been revised up by around $900 million from the *June 2023 Agricultural Commodities Report*. Crop production values have been revised up by around $1.6 billion reflecting better-than-expected rainfall in June and July which has boosted production volume estimates in some regions. By contrast, livestock and livestock products have been revised down by around $700 million largely reflecting recent price data.

Lower crop production and prices to drive lower production values

In 2023–24 Australian crop production volumes are forecast to fall by 19% from record highs in 2022–23 as expected drier conditions reduce soil moisture and crop yields (see *Seasonal Conditions*). At the same time, domestic prices for most crops are expected to fall in 2023–24. Domestic crop prices largely follow global prices, which are expected to fall because of higher global crop production and lower price volatility compared to last year. As a result, the **gross value of crop production** is expected to fall by $11 billion to $46 billion in 2023–24 (Figure 1.2). Lower production and prices for a few key crops are driving the expected fall in production value (Figure 1.3):

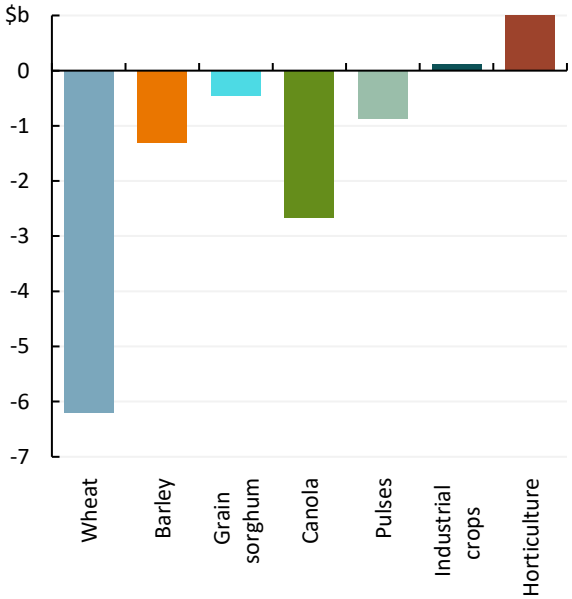
- **Wheat** is driving around half of the decrease in value, falling by $6.2 billion.
- The values of **canola** ($2.7 billion lower) and **barley** ($1.3 billion lower) have also fallen. **Pulses**, **sorghum**, and **cotton** (part of industrial crops) values are also all forecast to fall, down by $1.6 billion collectively.

Figure 1.2 Gross value of annual crop production



Note: Data to the right of the dotted line indicate estimates and forecasts; Industrial crops includes wine, cotton and sugar.
Source: ABARES; ABS

Figure 1.3 Expected change in crop values, 2022–23 to 2023–24



Note: Industrial crops includes wine, cotton and sugar.
Source: ABARES; ABS

Higher horticulture, wine grapes and sugar production values in 2023–24 are expected to slightly offset the total fall in crop production values (Figure 1.3):

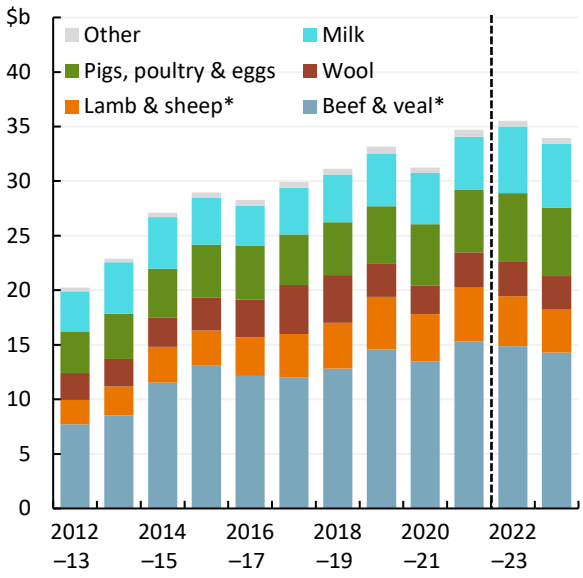
- **Horticulture** is expected to increase by $1 billion to reach a record $18 billion, reflecting higher production and increasing domestic fruit and vegetable consumption.
- **Sugar** production values are expected to rise by $300 million reflecting strong global prices.

- **Wine grape** values are expected to rise by around $100 million to $1 billion as drier conditions are expected to boost production by reducing diseases such as powdery mildew which affected the 2022–23 crop.

Lower prices driving down the value of livestock and livestock products

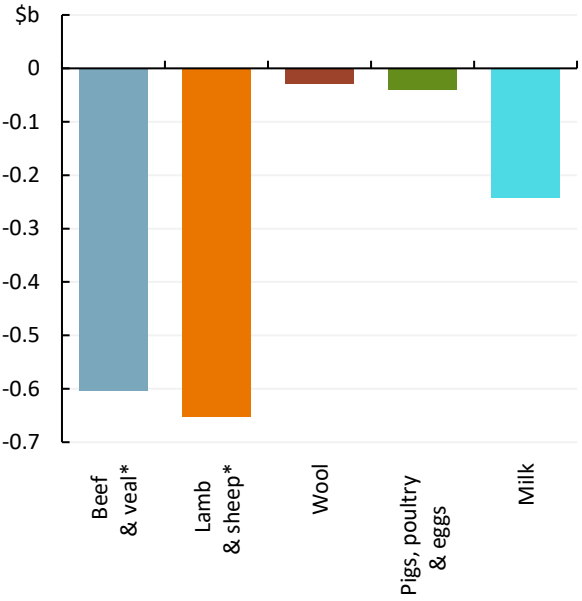
The **value of livestock production** is also expected to fall in 2023–24 as lower prices outweigh higher production volumes (Figure 1.4). Livestock production volumes are expected to rise as the drier weather and resulting lower pasture availability increase livestock turn-off rates. Beef and veal production is forecast to rise by 14% and sheep meat production by 6%. A small increase in milk production is also expected despite lower dairy cow numbers, as good pasture quality and falling fodder prices increase milk yields and drier conditions support better dairy cow health.

Figure 1.4 Gross value of annual livestock and livestock products production



Note: Data to the right of the dotted line indicate estimates and forecasts; *includes live exports.
Source: ABARES; ABS

Figure 1.5 Expected change in livestock and livestock product values, 2022–23 to 2023–24



Note: *includes live exports.
Source: ABARES; ABS

Despite higher production volumes, the value of livestock production is expected to fall by $1.6 billion to $34 billion in 2023–24 because of lower prices. Livestock prices are forecast to fall because of lower domestic restocking demand and higher global beef and sheep meat supply in 2023–24. Milk prices are also expected to fall as an oversupply of milk in China is lowering Chinese demand at the same time as world milk production increases. The forecast decrease in the value of livestock production is mainly driven by (Figure 1.5):

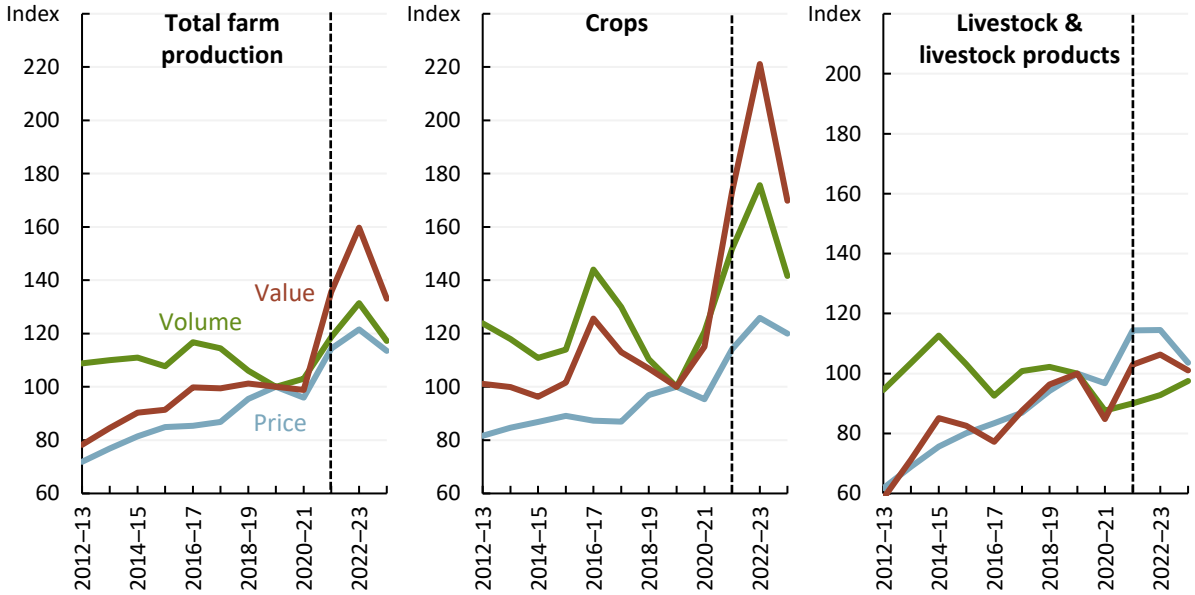
- **Beef and veal** production values falling by $600 million to $14.3 billion.
- **Sheep meat** production value by around $700 million to $3.9 billion.
- **Milk production** value declining by around $200 million to $5.9 billion.
- **Pigs, poultry and eggs** and **wool** production values, both down slightly to $6.3 billion and $3.1 billion respectively.

Export values to fall reflecting lower production and prices

Agricultural export values are forecast to fall by $13 billion from a record level to $65 billion in 2023–24, mainly because of lower crop export values. The total value of agriculture, fisheries and forestry exports is forecast to be $70 billion, down from $83 billion in 2022–23. Despite the forecast fall, agricultural export values are still expected to be the third highest on record.

The fall in export values is almost entirely driven by lower **crop export values** which are expected to fall by $12 billion in 2023–24 to $39 billion. Lower production and export volumes, as well as easing global prices for grains and oilseeds are the main drivers (Figure 1.6). **Livestock export values** are also expected to decrease, down by $1 billion to $27 billion. This mainly reflects lower export prices for most livestock and livestock products because of higher global supply.

Figure 1.6 Annual value, volume and price of agricultural exports



Note: Index 100 = 2019–20; Data to the right of dotted line indicate estimates and forecasts.
Source: ABARES; ABS

Global crop prices are expected to fall in 2023–24 from the highs of the last two years as global supply continues to improve. In particular, **global coarse grains and oilseed** supply is expected to increase with record production of corn and soybeans in 2023–24 from global exporters such as the United States, Brazil and Argentina. Higher global supply is also expected to reduce Australian barley export prices, however, the recent removal of tariffs on Australian barley to China will support Australian prices somewhat and represent a significant opportunity for Australian exporters.

Despite falling global crop prices overall, restricted supply for some commodities will likely see prices remain elevated for some crops in 2023–24. **Global wheat** supply is forecast to fall slightly in 2023–24 with substantially lower production in Australia and Russia. Ongoing uncertainty around Black Sea exports following Russia's withdrawal from the Black Sea Grain Initiative also means global grain and oilseed prices are expected to endure further volatility in 2023–24. In addition, **global rice prices** are expected to remain elevated following India’s recent ban on non-basmati white rice exports to stabilise domestic supply. The decision has constrained global rice available for export and saw global prices rise to a 12-year high in July this year. **Global sugar prices** also remain elevated reflecting relatively low exports from key producers including Thailand and India, and robust global demand.

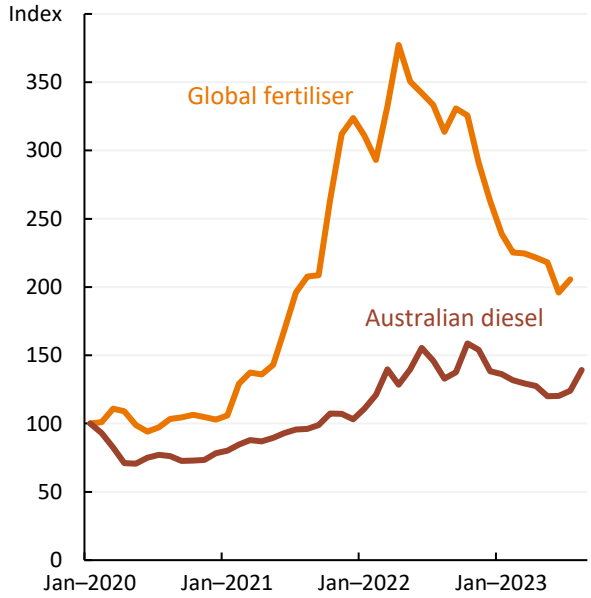
Australia is in a unique position to capitalise on key Asian export markets in 2023–24 given Australia's proximity to the region. For example, economic growth and consumption are expected to remain resilient in southeast Asia, supporting demand for Australian agricultural exports. Rising consumption growth in China to date following the removal of pandemic restrictions in late 2022 is also supporting demand for Australian agricultural exports including mutton and beef. Additionally, Australia's relatively low exchange rate – expected to average US68 cents in 2023–24 – should support the value of exports in the short term as most agricultural exports are contracted in US dollars. For exports contracted in Australian dollars, a longer-term lower Australian dollar would further increase the competitiveness of Australia's agricultural exports.

High inflation and input costs pose an ongoing challenge

Despite easing from recent peaks in 2022, **fertiliser and diesel** prices are expected to remain relatively elevated over 2023–24 (Figure 1.7) (see *Economic Overview*). In addition, Australian fertiliser supplies have been constrained over the start of 2023–24 because of greater-than-expected demand in some regions (see *Australian Crop Report*). **Labour** and **finance costs** for agricultural businesses have also grown strongly over 2023 reflecting rising interest rates and high competition for skilled workers given record low unemployment.

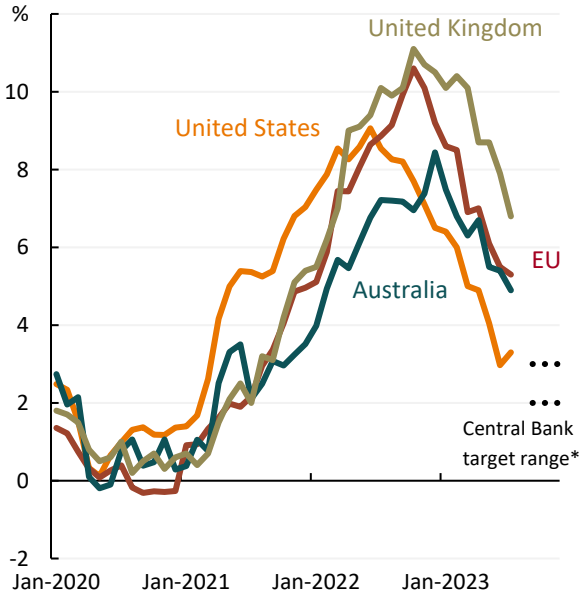
In addition, while **inflation** has eased across most economies from peaks in late 2022, it remains above central bank targets (Figure 1.8); along with higher interest rates, this is reducing household purchasing power and demand for some of Australia's agricultural exports.

Figure 1.7 Monthly price indices, Australian dollars



Note: Index 100 = Jan-2020; Fertiliser includes DAP, phosphate rock, potassium chloride, TSP and urea world prices.
Source: ABARES; Australian Institute of Petroleum; World Bank.

Figure 1.8 Annual inflation, selected countries



Note: Inflation for Australia is sourced from the ABS Monthly Consumer Price Index Indicator; *Central bank targets range from 2–3% for selected economies.
Source: ABS; European Commission; UK Office for National Statistics; US Bureau of Labor Statistics.

2 Economic Overview

Fred Litchfield

Key points

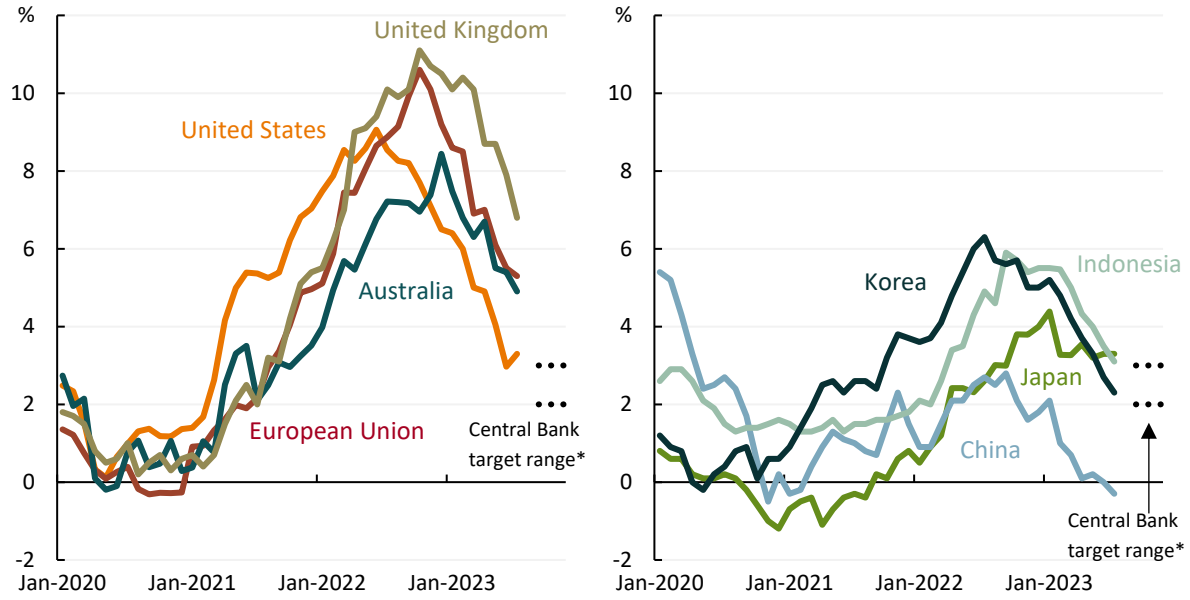
- Global growth revised up for 2023 and 2024 but still expected to be below average.
- Consumption growth in Australia's major agricultural trading partners is expected to be steady.
- Australian household consumption to slow further.
- The Australian dollar is expected to remain relatively neutral over 2023–24.
- Labour costs and other agricultural business inputs remain elevated.

Global economic growth revised up in 2023 and 2024

Global economic growth expectations for 2023 and 2024 have improved since the *June Agricultural Commodities Report* because of resilient consumer spending in key economies. The upgrade is driven by steady consumption growth in many advanced economies despite continuing high inflation and increased interest rates. Low unemployment to date has supported consumer spending on services. Partially offsetting the upgrade for global growth in 2023 is slowing momentum in the Chinese economy after an initial rebound in the first half of 2023.

Inflation remains above central bank targets across most advanced economies, which is eroding household purchasing power (Figure 2.1). The services sector is now driving inflation in most economies, rather than goods or energy. Higher wages growth, without corresponding increases in productivity, have contributed to higher prices for consumers. Monetary policy tightening by central banks in response to inflation has raised the cost of debt servicing and further eroded household disposable incomes.

Figure 2.1 Annual inflation, selected countries



Note: Inflation for Australia is sourced from the ABS Monthly Consumer Price Index Indicator; *Central bank targets range from 2–3% for most selected economies.

Source: ABS; Bank Indonesia; European Commission; Korea National Statistics Office; National Bureau of Statistics of China; Statistics Japan; UK Office for National Statistics; US Bureau of Labor Statistics.

Household consumption globally is expected to slow over the remainder of 2023 and weigh on growth in 2024 as the lagged impacts of higher interest rates flow through to debt repayments and household budgets. Savings buffers built up during the pandemic are now below pre-Covid levels in most advanced economies. This leaves consumers with less scope to maintain spending in the face of expected higher unemployment and higher interest payments, or a re-acceleration in inflation.

World Gross Domestic Product (GDP) growth is expected to be 3.0% in 2023 and 2024 (Figure 2.2). This is an upgrade of 0.3 and 0.1 percentage points respectively since the *June Agricultural Commodities Report*, but still well-below the 10-year pre-pandemic average annual growth of 3.7%.

Mixed demand outlook across major trading partners

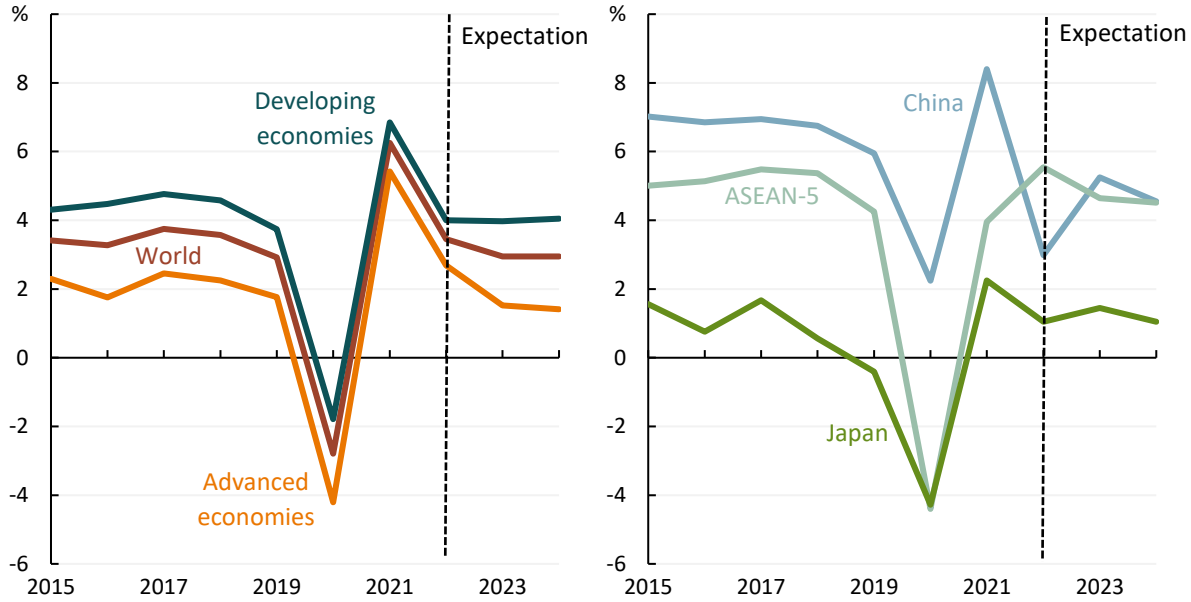
China's economic rebound in 2023 has slowed relative to expectations, driven by weak construction and manufacturing activity, however, services consumption growth has improved. GDP growth is expected to be 5.2% in 2023 (Figure 2.2), a 0.2 percentage point downgrade since the *June Agricultural Commodities Report*, but a significant rebound on the 3.0% growth in 2022. The property and financial sectors remain vulnerable due to high corporate debt levels and weak housing demand. However, high-tech manufacturing such as microelectronics, and services such as domestic tourism, have seen strong growth. Overall, China's consumption growth is much stronger than during 2022, but aggregate demand remains subdued, with year-on-year inflation negative in July (Figure 2.1). Services spending could weaken over 2023–24 if confidence remains low and debt levels high. Supplementary government fiscal support has been relatively minimal to date. However, further interest rate cuts are likely to support the economy, with GDP growth expected to decline to 4.5% in 2024.

Economic prospects in **southeast Asia** have been revised up since the *June Agricultural Commodities Report*. GDP growth for the ASEAN-5 (Indonesia, Malaysia, Philippines, Singapore, Thailand) is

expected to be only slightly below trend in 2023 and 2024 (Figure 2.2). Inflation peaked at a lower rate in most Asian economies compared to the United States and the European Union and since late-2022, has decelerated to be near central bank targets (Figure 2.1). Lower inflation has supported household disposable incomes and helped consumer spending stay relatively resilient. However, exports have declined because of weaker demand from advanced economies.

Japan's economic growth is also expected to be around trend in 2023 (Figure 2.2). Supportive monetary policy and improved mobility in supply chains has offset weak international demand affecting manufacturing activity. Inflation has increased from a low base and is higher than wages growth; this has placed pressure on household disposable incomes and consumption growth. Economic growth is expected to decline slightly in 2024.

Figure 2.2 Annual real GDP growth, selected economies



Note: GDP growth weighted using IMF 2022 purchasing power parity valuation of country GDP. ASEAN-5 includes Indonesia, Malaysia, Philippines, Singapore, and Thailand.
Source: ABARES; IMF.

Australian domestic consumption growth to decline further

Australia's economy grew strongly over 2022–23 but is expected to decline over 2023–24 reflecting slowing household consumption. Subdued household consumption growth reflects several factors:

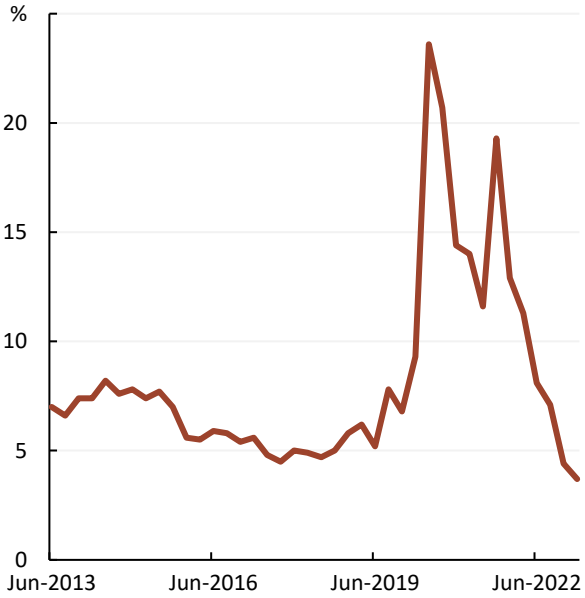
- Inflation remains high at 4.9% year-on-year in July (Figure 2.1); together with higher interest rates, this has reduced household disposable incomes.
- The volume of retail spending per person declined by 1% in the June quarter, the fourth straight quarterly decline (Figure 2.3).
- Discretionary spending is expected to weaken in 2023–24 given household savings rates are at near record lows, unemployment is expected to increase, and the full transmission of interest rate rises is yet to be fully felt by all mortgage holders (Figure 2.4).
- Conversely, improving household wealth from rising house prices and market expectations suggesting monetary policy will ease in 2024, could boost household consumption.

Despite declining household consumption growth for goods, spending on food products is usually inelastic. Global research indicates that a 1% decline in household budgets generally leads to a smaller percentage decline on food spending. This is found particularly in advanced economies, with consumers instead reducing spending on non-discretionary products. However, within food categories such meat and vegetables, consumers facing budget pressures are likely to substitute into cheaper options. This is especially the case for low-income households that spend a greater proportion of household income on food. Reduced demand for more price-sensitive food products will likely contribute to lower farmgate prices for some agricultural commodities over 2023–24.

Figure 2.3 Quarterly Australian retail turnover per capita, chain volume

Note: Retail turnover seasonally adjusted.
Source: ABARES; ABS.

Figure 2.4 Quarterly Australian household saving ratio



Note: Net household savings divided by gross household disposable income.
Source: ABS.

Australian dollar to remain relatively low

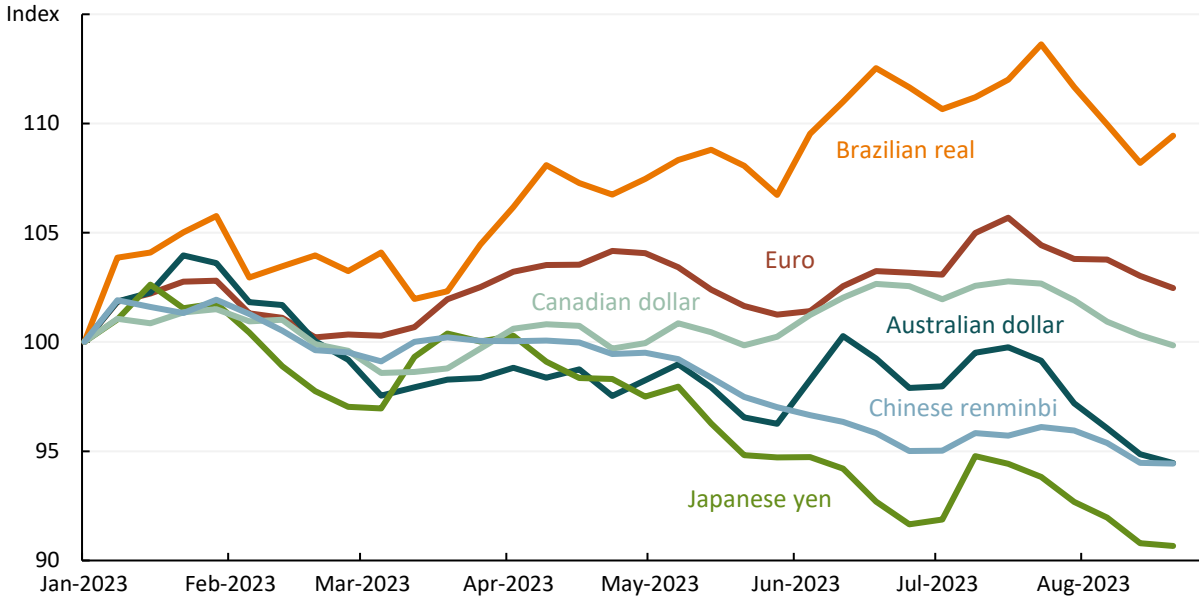
The Australian dollar is expected to average US68 cents in 2023–24, relatively steady compared to the US67 cents in 2022–23, but 7% below the previous 5-year average. Weaker than expected momentum in the Chinese economy, particularly in natural resource reliant sectors such as construction and manufacturing, weighed on the Australian dollar in August. Over the remainder of 2023–24, counteracting economic forces are keeping expectations for the Australian dollar relatively balanced:

- Market pricing suggests the US Federal Reserve will begin cutting interest rates before the Reserve Bank of Australia, improving the relative yield of Australian dollar denominated assets, such as government bonds. This typically increases demand for Australian dollars and leads to an appreciation against the US dollar.
- However, the Australian economy could soften more quickly than expected relative to the US economy over the coming months, leading to the RBA easing monetary policy earlier. This would likely lead to the Australian dollar depreciating further.

The Australian dollar has trended relatively lower against the US dollar compared to our major agricultural export competitors in 2023 (Figure 2.5). A comparatively lower Australian dollar over a sustained period increases the competitiveness in international markets of Australia's agricultural exports contracted in Australian dollars. For most agricultural exports, which are contracted in US dollars, a weaker Australian dollar increases the Australian dollar value of these contracts.

The US dollar has also been broadly stronger than the currencies of major agricultural importers in 2023, such as China and Japan. This has raised the cost of agricultural imports for these countries relative to domestic products, which if sustained would likely reduce import demand.

Figure 2.5 Relative weekly exchange rates against the US dollar, selected economies



Note: Index 100 = week ending 6 January 2023.
Source: Federal Reserve Economic Data.

Key input costs to remain elevated

High prices for **fertiliser and diesel** – which have increased farming costs for Australian businesses in recent years – have eased from peaks in 2022 (Figure 2.6). Nonetheless, global fertiliser prices are expected to remain relatively elevated over 2023–24 due to strong demand and higher natural gas prices (a critical input to global fertiliser manufacturing). Natural gas prices are likely to rise leading into the European winter. In addition, Australian fertiliser supplies have been constrained over the start of 2023–24 due to greater-than-expected demand in some regions. Australian diesel prices are closely tied to global oil demand and supply dynamics, such as the recent OPEC+ production cuts; but also a lower Australian dollar. Given this, prices are expected to remain somewhat elevated over the remainder of 2023–24.

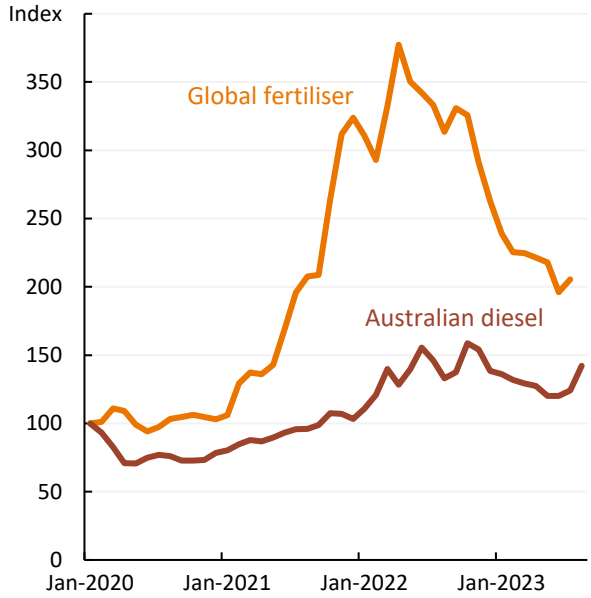
By contrast, container **freight shipping prices** have declined considerably over 2022–23 and are now back at pre-pandemic levels across the world. This has supported global supply chains returning to normal mobility and reduced freight costs along the agricultural supply chain.

Finance costs have increased significantly for businesses in Australia over 2023. Debt is an important source of funding for ongoing working capital and new investments for many Australian agricultural businesses. Higher interest rates have increased the level of income required to service debt, with

interest payments increasing from an estimated 3% of farm expenditure in 2021–22 to 8% in 2022–23.

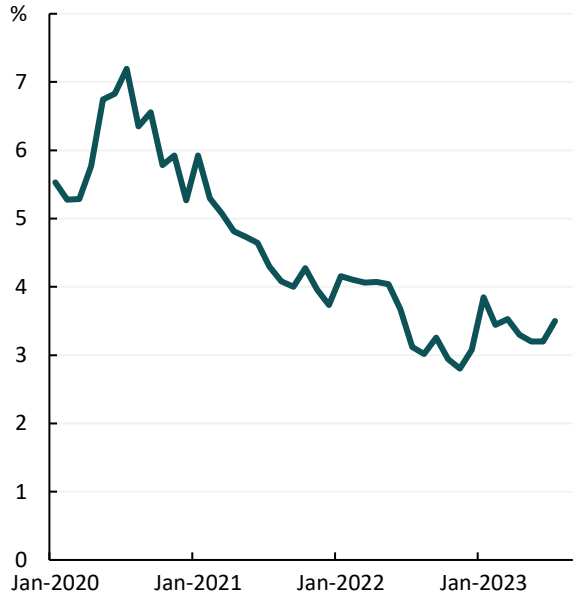
Labour costs for Australian businesses have continued to grow strongly over 2023. Initially, wages increased to attract staff in a tight labour market. Now with the number of temporary migrants back working in agriculture at pre-pandemic levels, high labour costs in the industry are mostly being driven by unemployment near record lows (Figure 2.7), creating increased competition for skilled workers. In addition, recent increases to award and minimum wages for workers across the economy, partly in response to ongoing high inflation, has led to higher labour costs. The Reserve Bank of Australia expects average wage growth to increase slightly over 2023–24 even as inflation subsides, potentially reducing business profit margins.

Figure 2.6 Monthly price indices, Australian dollars



Note: Index 100 = Jan-2020. Fertiliser includes DAP, phosphate rock, potassium chloride, TSP and urea world prices.
Source: ABARES; Australian Institute of Petroleum; World Bank.

Figure 2.7 Australian regional unemployment rate, monthly



Source: ABARES; ABS.

3 Seasonal Conditions

Kavina Dayal and Matthew Miller

Seasonal conditions

Hot and dry spring 2023 to impact Australian crop & pasture production.

Key points

- Global crop production in 2023–24 projected to remain above 2022–23 levels despite extreme weather events and developing El Niño.
- Australia is expected to face a hot and dry spring in 2023.
- Severe rainfall deficiencies are starting to emerge across several Australian agricultural regions.
- The northern Australia rainfall onset is likely to be later than usual for 2023–24.

Climate and Agronomy

Prices for Australia's agricultural commodities are largely set in world markets. The climatic and agronomic conditions faced by producers in importing countries influence the demand for agricultural exports. Similarly, climatic and agronomic conditions experienced in exporting countries influence the amount of competition between exporters in world markets.

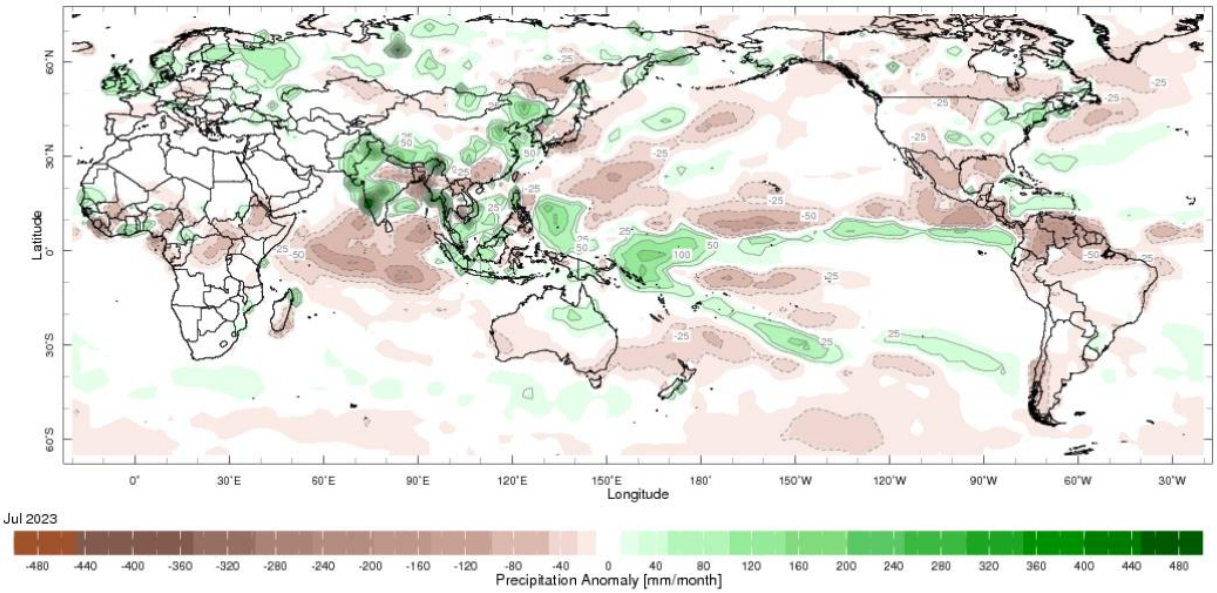
The forecast volume of global grain and oilseed production in 2023–24 is expected to be slightly lower than in the *June Agricultural Commodities Report*. A downwards adjustment to wheat and coarse grain production – reflecting below average rainfall and above average temperatures in recent months – has more than offset an upwards revision in rice production, while oilseed production remains unchanged. In Australia, the volume of crop production in 2023–24 is forecast to be lower, while the forecast volume of livestock production is expected to be higher than in the *June Agricultural Commodities Report*. This reflects lower than expected rainfall in some key crop production regions and increased livestock slaughter with the expected El Niño conditions.

Global Climate

Extreme weather events impact northern hemisphere

A broad range of crop production outcomes is being recorded across global grain and oilseed producing regions as a result of variable climatic conditions. July 2023 was wetter than average for most of northern Europe, in the region from the Black Sea and Ukraine to northwestern Russia, over north-eastern North America, north-eastern China, across India, southeast Asia, and the United Kingdom, northern and eastern Australia and in parts of southern Brazil (Figure 3.1). Days of heavy rain have caused severe flooding in China's major grain producing region in the northeast, affecting summer crops. However, July rainfall in other grain and oilseed producing regions in the northern hemisphere has brought relief to those areas that experienced a dry and hot end to spring and early summer. These falls are likely to curtail further reductions in crop yields.

Figure 3.1 Rainfall anomaly map for July 2023

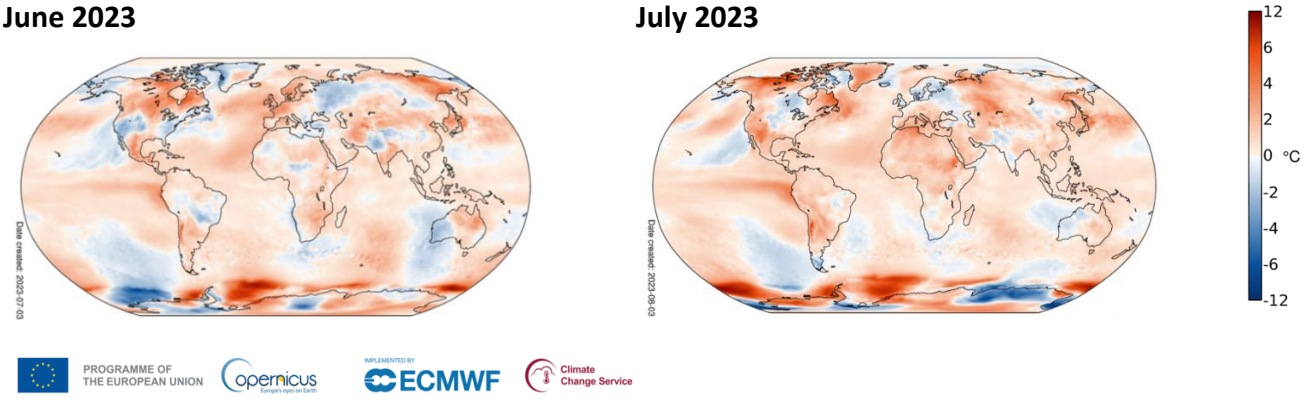


Note: This map shows 3-month seasonal precipitation anomalies in units of mm/season based upon precipitation estimates from the CAMS_OPI dataset. The period used for computing the climatology is 1991–2020. Green areas on the map indicate where precipitation was above the long-term normal for the season, and brown areas on the map indicate where precipitation was below normal. Contours are drawn at increments of +/- 50, 100, 200, ... 1000 mm/season.
Source: Columbia University; IRI

Much of Canada and the western United States were dry in July and the conditions in Canada produced many wildfires. While these wildfires have had little direct impact on grain and oilseed producing regions, smoke plumes have covered large areas of Canada and the northern United States reducing available sunlight and limiting crop growth at the peak of the growing season. The Asian monsoon had a variable start across south Asia, with excess rainfall recorded in western India, while rainfall deficits were evident across eastern India, southeast Asia and southern China.

June and July 2023 had the highest global surface temperature on record (Figure 3.2). The average global temperature for July was the highest on record and was 0.72°C warmer than the 1991–2020 July average. A series of heatwaves across countries bordering the Mediterranean Sea, across northern China, the Midwest and north of the United States and much of Canada, coupled with dry conditions have hampered the growth of crops such as spring wheat, corn and soybeans.

Figure 3.2 Global temperature anomaly maps



Note: Surface air temperature anomaly for June and July 2023 relative to the June and July average for the period 1991–2020.
Source: Copernicus Climate Change Service/ECMWF.

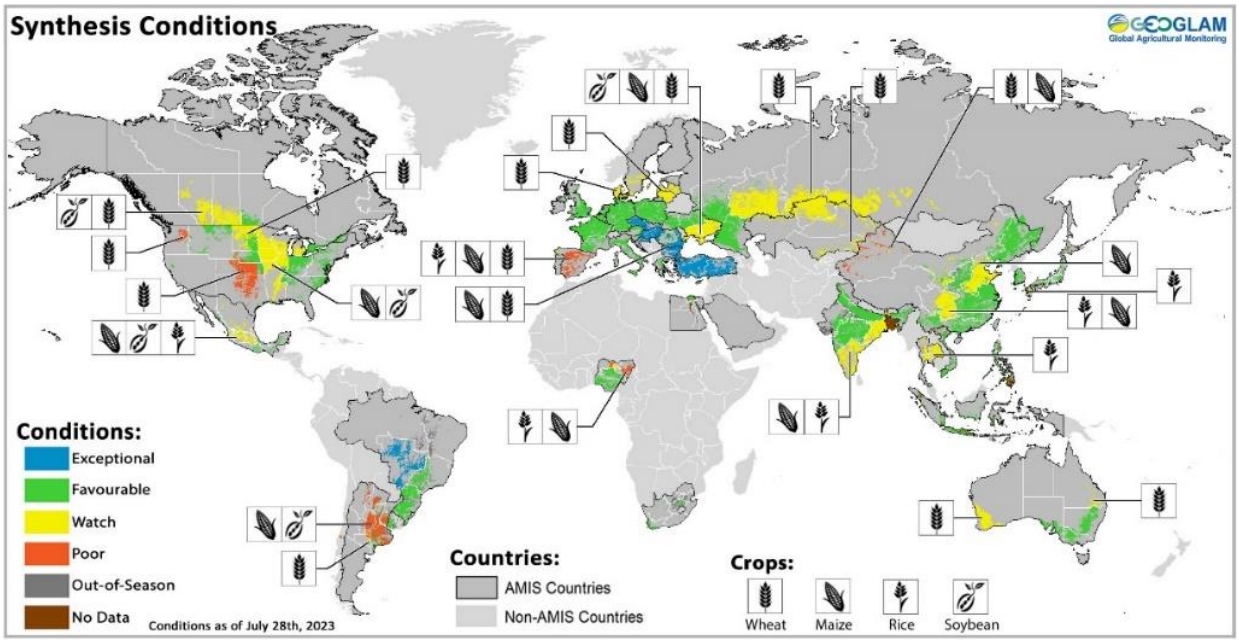
Current global crop conditions vary across regions

At the end of July, conditions were mixed for wheat, corn, rice, and soybeans (Figure 3.3). Winter wheat harvesting is progressing in the northern hemisphere while spring wheat is developing, and the southern hemisphere experienced improved growth conditions following July rains. Corn harvesting is nearing completion in Argentina under poor conditions, while droughts persist in the northern hemisphere as rains ease. Early-season rice harvests continue in China while kharif transplanting picks up in India, and conditions are favourable in southeast Asia except for Thailand. Recent rains improved soybean conditions in the United States and China, while sowing in India caught up after an initial delay.

The United States Department of Agriculture's (USDA) August World Agricultural Supply and Demand Estimates (WASDE) report indicates the following global production levels for these four major grain and oilseed crops in 2023–24:

- **Wheat** is down by a modest 3.3 million tonnes from the USDA's July estimate, which is reflected in a decline in Canada and the EU's wheat production. However, the projected 2023–24 total production is higher than the 2022–23 estimate by 3.4 million tonnes.
- **Corn** is down by 11 million tonnes compared to the July estimate, which is reflected in a decline in China, the US and Russia's corn production. However, the 2023–24 projected total production is higher than the 2022–23 estimate by 62 million tonnes.
- **Soybean** is down by a modest 2.5 million tonnes from the July estimate. However, 2023–24 total production is expected to be 33 million tonnes higher than the 2022–23 estimate, which is reflected in the increased projected soybean production in South America.
- By contrast, **Rice** remains similar to its July estimate of 520 million tonnes. However, this projected 2023–24 total production is 8 million tonnes higher than the 2022–23 estimate, which reflects an increase in rice production in Pakistan and Myanmar.

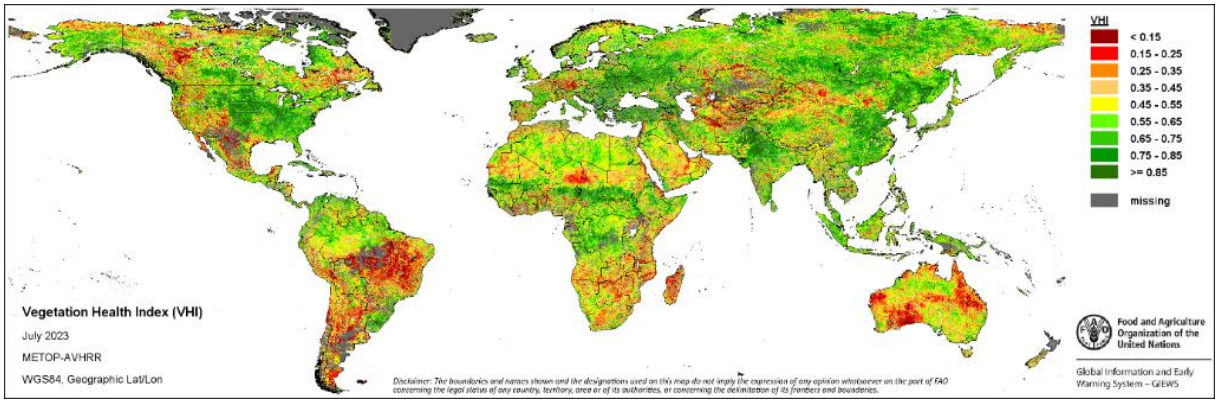
Figure 3.3 Global agricultural conditions status as of July 28, 2023



Source: GEOGLAM Crop Monitor Pasture and rangeland conditions

Analysis of the Vegetation Health Index (VHI) for July 2023 indicates poor vegetation conditions across parts of tropical and southern Africa, much of South America, across western and eastern Australia, parts of northern Europe, Mexico, and the western United States and Canada, due to prolonged dryness and drought conditions in many areas (Figure 3.4). Poor vegetation health is likely to reduce the availability of grass for direct grazing and increase the reliance on other fodder, such as feed grains, to supplement livestock diets and maintain production. This is likely to lead to increased domestic feed grain consumption in affected areas and possibly constrain exportable supplies of grain. See the Weekly Climate Update for the latest 3-month average pasture production in Australia.

Figure 3.4 World Vegetation Health Index - July 2023



Note: The VHI is a composite index. It combines both the Vegetation Condition Index (VCI) and the Temperature Condition Index (TCI). The TCI assumed that high temperatures tend to cause a deterioration in vegetation conditions. A decrease in the VHI would, for example, indicate relatively poor vegetation conditions and warmer temperatures, signifying stressed vegetation conditions, and over a longer period would be indicative of drought.
Source: FAO

Global climate outlook

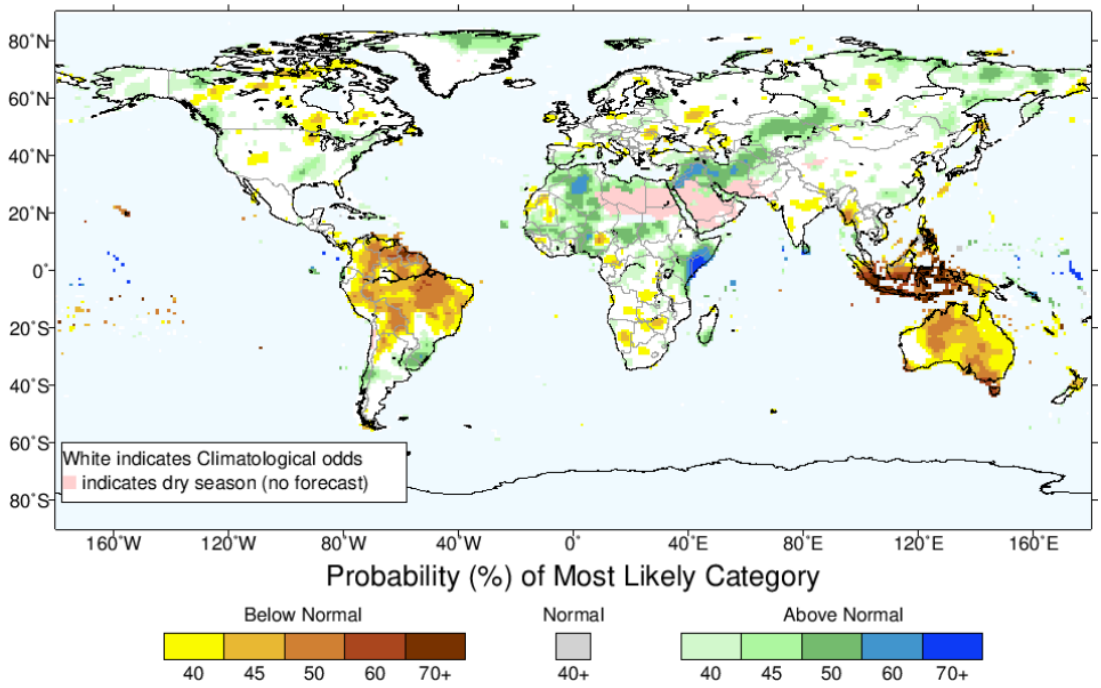
Developing El Niño to drive global climatic conditions through the remainder of 2023

The Bureau of Meteorology has yet to officially declare that an El Niño event is underway, despite most international meteorological organisations, including the World Meteorological Organisation, announcing that an El Niño event is already established in the Pacific.

This is largely due to definitional differences, but what both the Bureau of Meteorology and most international meteorological organisations agree on is that the Australian 2023 spring is likely to be drier and hotter than usual.

This expected El Niño event will be the dominant driver of global rainfall conditions in the coming months. A drier than normal spring 2023 is forecast for Australia, northern South America and the Maritime Continent (Figure 3.5). If realised this is likely to have a deteriorating effect on grain and oilseed production.

Figure 3.5 Global rainfall outlook for spring: September to November 2023



Note: IRI multi-model probability forecast for precipitation for September-October-November 2023; Issued August 2023.
Source: Columbia University; IRI

Between September to November 2023, Africa is expected to receive average to well above average rainfall. North America is expected to receive generally average rainfall with pockets of regions receiving above average (such as northwest and southeast United States and northern Canada) and below average (such as southwest United States and western and eastern Canada) rainfall. The United Kingdom, Europe, eastern Ukraine and Russian Federation are expected to receive average to below average rainfall. Average rainfall is expected across much of India, except parts of the northwest where below average rainfall is likely and the south where above average rainfall is likely. Rainfall in China is expected to be generally average with isolated areas receiving above average (central and northern) and below average (western and eastern) rainfall.

A positive Indian Ocean Dipole, which is likely to develop in early spring, will further influence climate conditions in countries along the Indian Ocean rim with wetter conditions in eastern Africa and southern India and drier conditions in the Maritime Continent and central and south-eastern Australia.

Australian Climate, Water and Production Conditions

Highly variable June to July rainfall was recorded nationally, with much of northern and central Australia being extremely wet from unseasonal rains and a series of cold fronts, while the west and coastal east were extremely dry (Figure 3.6). June was also warmer than average (7th highest on record since 1910 for June) nationally, as was July (9th highest on record since 1910 for July).

Following a dry May 2023 across most winter cropping regions, average to above average June rainfall benefitted crop and pasture growth and boosted root zone soil moisture levels across southern **New South Wales**, **Victoria**, **South Australia** and central and southern **Western Australia**. In contrast, below average to average June rainfall was insufficient to arrest further declines in soil moisture across northern **New South Wales**, **Queensland** and northern cropping areas of **Western Australia.** In northern **New South Wales** and **Queensland** these dry conditions have likely led to a significant decline in winter crop yields, they would have aided timely completion of summer crop harvest, such as cotton and sorghum.

Unseasonal high rainfall in July in **Queensland** brought some relief to the northern cropping regions, halting any further decline in yields. However, it was insufficient to boost sub-soil moisture reserves, which are very much at below average levels. July rainfall was variable across **New South Wales**, **Victoria** and **South Australia** ranging from below average to average, providing sufficient moisture to maintain average or better production conditions in most regions except for northern **New South Wales.** In **Western Australia,** July rainfall was highly variable ranging from well below average across the northern and eastern fringes of the cropping region, to below average in the central region, to average in the south. There have been numerous reports that rainfall has only been enough to sustain crop growth and provided little improvement to soil moisture levels.

August to date rainfall (as at 20 August 2023) has been generally average across much of southern **New South Wales**, **Victoria**, eastern **South Australia**, and southern **Western Australia.** This has maintained close to average or better than average crop and pasture production levels across most southern growing regions and close to average soil moisture levels (Figure 3.7). However, little to no August rainfall across northern **New South Wales, Queensland,** western **South Australia**, and northern **Western Australia** has seen a further decline in soil moisture levels and is expected to further lower crop and pasture production in these areas.

Following variable production conditions during the 2023 winter, the expected El Niño conditions may lead to further declines to both winter and dryland summer crop production and is likely to lead to low pasture and fodder production. A drier than normal spring will negatively impact winter crop yields and may lead to a decreased area sown to summer crops. El Niño also presents a risk of both heat stress and elevated late frost risk. While the latest scientific research indicated a reduction in the number of frost events in recent decades in the southeastern Australia, the frost season length has increased and some areas in the south experience their last frost in late October. Frosts during flowering and the grain filling stage (i.e., in spring) can reduce crop yields.

Figure 3.6 June-July rainfall decile

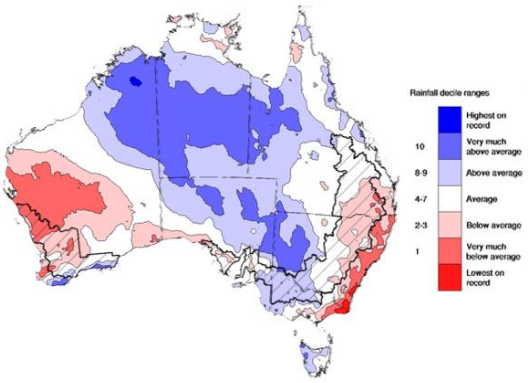
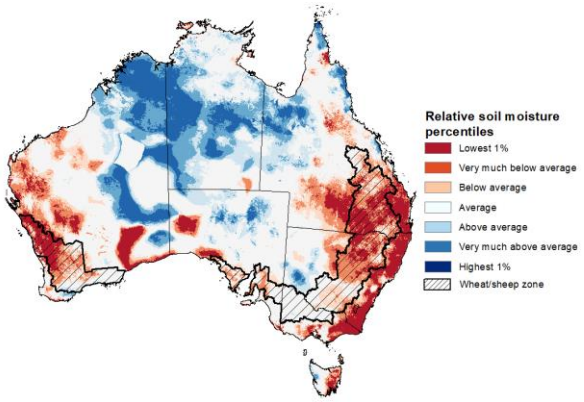


Figure 3.7 Relative Root Zone Soil Moisture on 20 August 2023



Source: Bureau of Meteorology; Australian Water Outlook; ABARES

Irrigated crops

Reservoir storage levels have improved slightly in the Murray-Darling Basin water supply system. On 24 August 2023 the volume of water held in Murray–Darling Basin storages were around 20,983 GL, or around 94% of total capacity. While this is 2% or 507 GL less than at the same time last year, it remains the second highest level since 2016–17.

High water storage volumes, high irrigation allocations, substantial levels of carryover water, historically low irrigation allocation prices and improved planting conditions are all likely to lead to strong irrigated crops and horticulture production in 2023–24.

Australian Climate Outlook

Hot and Dry spring 2023 is expected

Below median spring rainfall is likely to very likely (60% to greater than 80% chance) for much of Australia (Figure 3.8). Among several factors, this forecast takes into account the developing El Niño and positive Indian Ocean Dipole. There is 75% chance of spring rainfall being less than 25 millimetres across large areas of central and northern Australia (Figure 3.9). Parts of the tropical north, southwest Western Australia and much of eastern Australia are likely to receive up to 200 millimetres and western Tasmania is expected to receive in excess of 300 millimetres rainfall.

In cropping regions, below median rainfall is more likely, with a 75% chance of receiving between 25 and 100 millimetres across most winter cropping regions, except for northern cropping regions in Western Australia where falls are expected to be below 25 millimetres. In areas with average or higher levels of soil moisture, if realised, these falls may be sufficient to support close to average plant growth. In areas with low soil moisture, such as southern Queensland, north-western New South Wales and northern and eastern Western Australia, these probable below average rainfall totals are unlikely to be sufficient to sustain average levels of crop and pasture production, particularly with higher temperatures and increased water demand for crops and pastures in spring.

Figure 3.8 Chance of exceeding the median rainfall

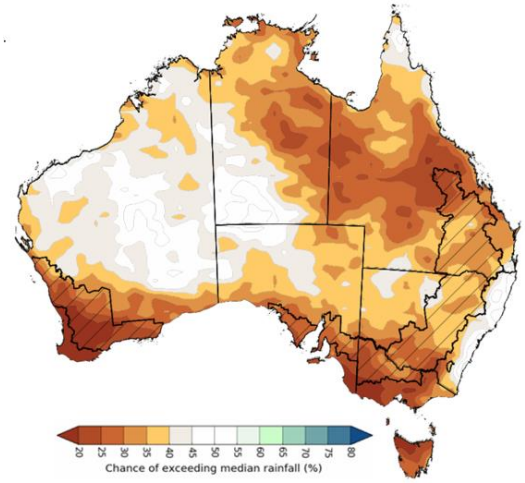
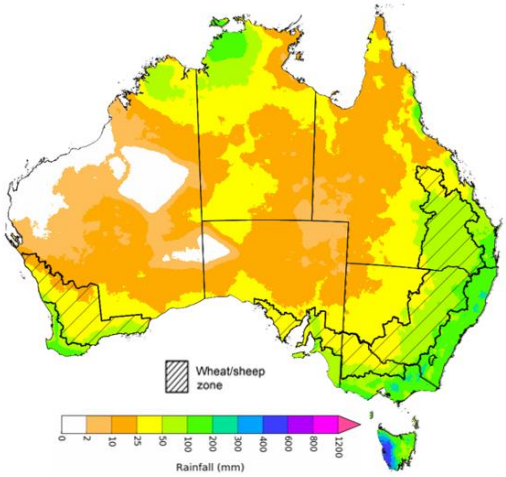


Figure 3.9 Rainfall totals that have a 75% chance of occurring in September to November 2023



Source: Bureau of Meteorology; ABARES

There is also an over 60% chance of daytime and nighttime temperatures exceeding the spring median across Australia. In addition to moisture availability, spring temperatures are an important determining factor in final crop yield outcomes for winter crops. This is due to crops being highly sensitive during flowering and grain filling growth stages if they experience high temperatures (> 35°C) or low temperatures (< 2°C). Both heat stress and frost can negatively impact crop yield.

Later than usual northern rainfall onset is likely

The northern rainfall onset outlook provides an indication of the timing of the first significant rains after the dry season. The onset occurs when the total rainfall after 1 September reaches 50 millimetres. This is considered approximately the amount of rainfall required to stimulate plant growth and provide northern Australian livestock producers with their first indication on the season ahead and assist with pasture and herd management decisions.

Parts of coastal Queensland and the western Top End typically accumulate 50 millimetres by late October or early November, spreading further south and inland over following weeks. The southern inland regions of the Northern Territory and Queensland, as well as western parts of Western Australia usually have the latest northern rainfall onset, around mid-January. During El Niño years, the onset date tends to be later than normal, while during La Niña years, the northern rainfall onset tends to be earlier than usual (Figure 3.10).

A later than usual 2023–24 northern rainfall onset is likely for most of northern Australia (Figure 3.11). This includes most of Queensland, the Northern Territory and northern Western Australia where there is a 60-70% chance of later than usual rainfall onset. However, an early rainfall onset is likely for some inland areas of Gascoyne and interior districts of Western Australia and Yulara district in the Northern Territory.

Figure 3.10 Median onset dates in El Niño years

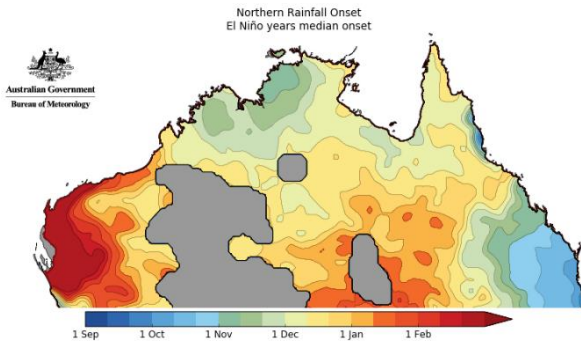
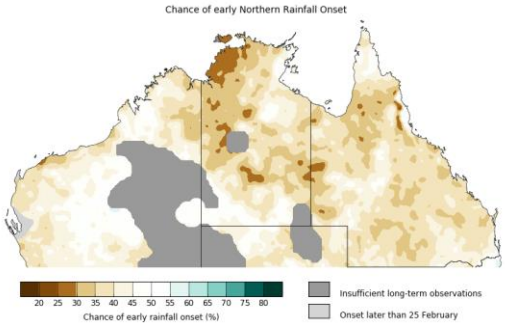


Figure 3.11 Chance of Northern rainfall onset in 2023–24



Source: Bureau of Meteorology

A later than normal northern rainfall onset across cropping regions of eastern Australia is likely to allow uninterrupted harvesting of winter crops, but impede the early sowing of summer crops, especially in areas that have already received below average rainfall throughout winter. The expected delayed onset is likely to see lower than normal pasture production across much of Australia's tropical north, with livestock conditions and the maintenance of herd numbers relying on pasture grown throughout the previous wet season. However, an early onset across central Australia will boost soil moisture for northern pastures in those areas.

4 Wheat

Emily Dahl

Key points

- Value of Australian wheat production to fall in 2023–24 to $9.5 billion, the fourth highest on record.
- Value and volume of Australian wheat exports to fall in 2023–24 from previous year record highs.
- Wheat production to fall due to drier conditions in northern cropping regions.
- World wheat prices to fall in 2023–24 reflecting easing supply uncertainty.

Value of wheat production to fall in 2023–24

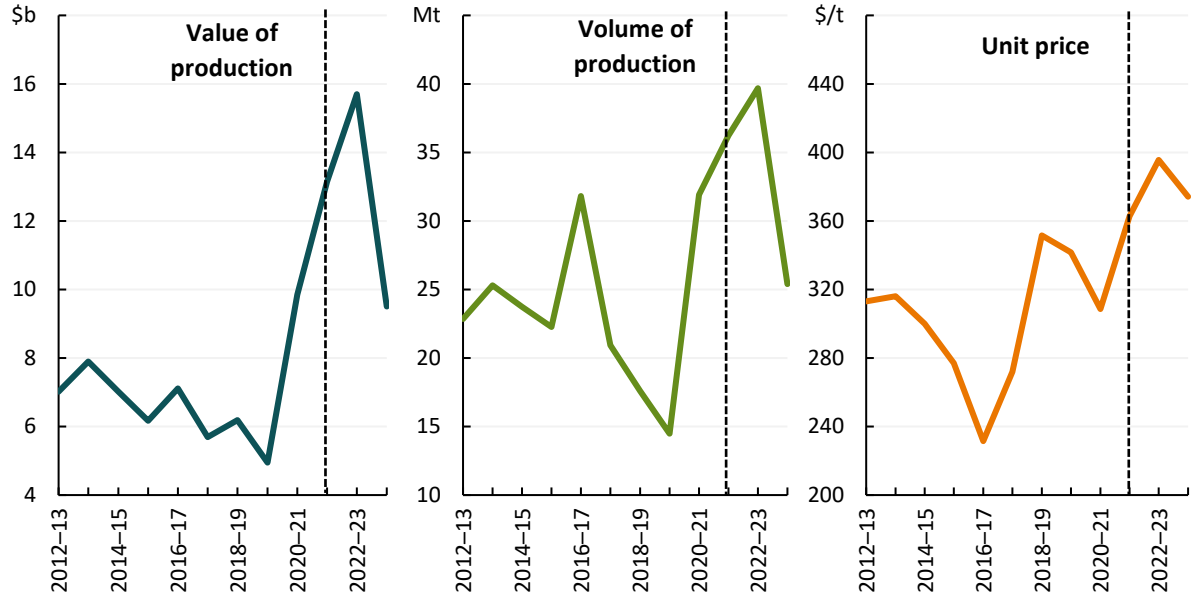
The gross value of Australian wheat production is forecast to fall by 39% to $9.5 billion in 2023–24. Despite being a significant fall from the estimated 2022–23 record of $15.7 billion, this is still well above average and would be the fourth highest value on record (Figure 4.1).

The forecast fall in value is driven by easing world prices and lower Australian production. World wheat prices are forecast to remain below the previous year's highs because of easing supply uncertainty, but remain elevated. Australian wheat production is expected to decrease following three consecutive record production years:

- Dry conditions in northern cropping regions will likely see Australian wheat production fall in 2023–24, with yields forecast to be below average.
- This is likely to be partially offset by more favourable winter crop prospects in southern cropping regions where stored soil moisture and early winter rainfall were beneficial for winter crops.
- While El Niño is expected to develop and reduce production prospects, the extent to which it influences Australian rainfall and temperatures presents a key downside risk to the outlook. Analysis of past El Niño events suggests that climate impacts can be variable. If conditions are even drier and hotter than expected, this is likely to see crop prospects deteriorate further in regions where winter crops have little soil moisture.

The gross value of Australian wheat production forecast for 2023–24 is $200 million lower than in the *June Agricultural Commodities Report*. This largely reflects a slight downwards revision in wheat production volumes owing to lower-than-expected winter rainfall in some regions.

Figure 4.1 Annual gross value, volume and unit price of Australian wheat production



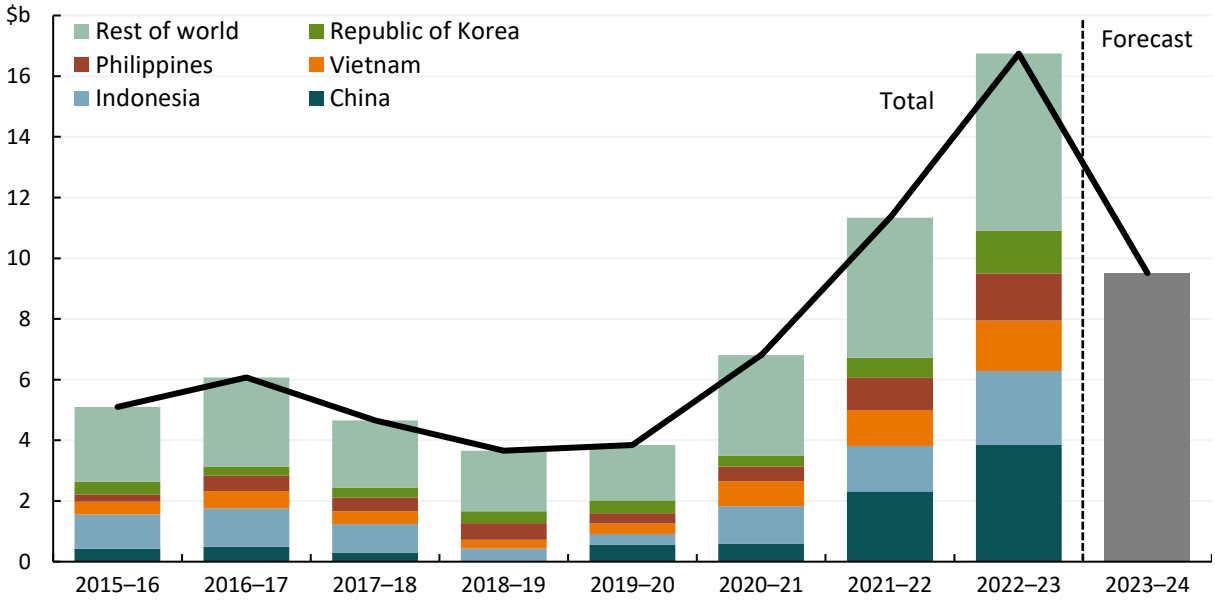
Note: Data to the right of the dotted line indicate estimates and forecasts.

Source: ABARES; ABS

Value of wheat exports to remain above average

The value of Australian wheat exports is forecast to fall to $9.5 billion in 2023–24. Although a significant fall from the 2022–23 record value of $16.7 billion, this is still 36% above the 10-year average to 2022–23. Relatively high export values are expected because of high exportable supply supported by record 2022–23 production, and relatively high prices forecast for 2023–24. Major Asian markets continue to be the largest export destinations for Australian wheat, by value and volume. In 2022–23, Australia's top five wheat export destinations – China, Indonesia, Vietnam, the Philippines and the Republic of Korea – accounted for 65% of total wheat export values (Figure 4.2).

Figure 4.2 Annual Australian wheat export values by destination



Note: Reported in financial years, 1 July to 30 June. Data to the right of the dotted line indicate estimates and forecasts.

Source: ABARES; ABS

Australian wheat prices to fall alongside lower world prices

The Australian wheat export price (Australian Premium White) is forecast to decline by 6% in 2023–24, averaging $490 per tonne. This reflects falling world prices because of easing supply uncertainty outside of Ukraine across major wheat producing countries following the northern hemisphere harvest. Nonetheless, wheat prices are forecast to remain relatively elevated in 2023–24. The Russian Federation's withdrawal from the Black Sea Grain Initiative and uncertainty surrounding Black Sea exports will likely add volatility to world grain markets in 2023–24 and keep international prices elevated (see Box 4.1).

Box 4.1 Black Sea remains a source of global uncertainty

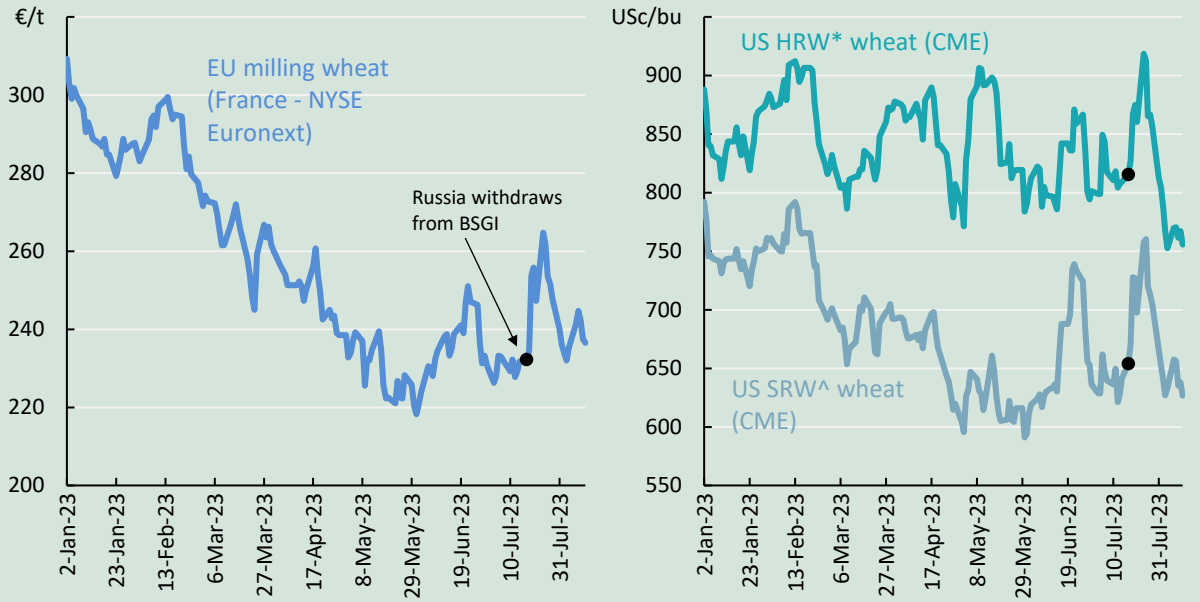
The Russian Federation withdrew its participation in the Black Sea Grain Initiative (BSGI) on 17 July 2023. The BSGI – established following the Russian Federation's invasion of Ukraine – had facilitated ongoing Ukrainian grain exports out of the Black Sea. After the grain export corridor came into effect, volatility in grain markets settled resulting in some moderation in prices, but world grain prices have remained relatively high.

The Russian Federation's withdrawal from the BSGI has reduced Ukraine's ability to export grain and other agricultural products. Ukraine still has capacity to export via alternative non-seaborne routes including the Danube River ports and via rail and road. Nonetheless, Ukrainian grain exports are expected to fall considerably in 2023–24.

The Russian Federation's withdrawal caused world wheat prices to rally sharply to a 3-month peak as tensions in the Black Sea escalated and global uncertainty concerning Ukrainian exports heightened (Figure 4.3). Reports of strikes on Ukrainian ports and retaliatory strikes on Russian Federation vessels and a major grain hub raised concerns about a large-scale disruption to exports from the Black Sea.

However, global wheat futures prices have since retreated (Figure 4.3). This is supported by reports of continued shipments and competitive offers from the Russian Federation. Reports of expanding alternative export routes for Ukraine also helped limit increases in wheat prices. However, uncertainty surrounding Ukrainian grain exports may continue to be a source of volatility in the short term.

Figure 4.3 Daily international wheat futures prices



Note: *Hard red winter; ^soft red winter.
Source: International Grains Council

Australian production and exports to fall

Australian wheat production is forecast to fall by 36% to 25.4 million tonnes in 2023–24. This is below the 10-year average to 2022–23 of 26.4 million tonnes. While production is forecast to fall overall, varying seasonal conditions across Australia point to different state-level outlooks (see Australian crop report):

- Planting and establishment conditions were unfavourably dry in Queensland, northern New South Wales and northern cropping regions of Western Australia. This has led to crops experiencing moisture stress, with wheat yields forecast to be below average.
- By contrast, wheat crops in southern New South Wales, Victoria, South Australia and southern cropping regions of Western Australia have developed well following early winter rainfall and have excellent yield potential heading into spring.
- The increased chance of an extremely dry spring is expected to negatively affect yield potential. Crop prospects in regions where winter crops have little soil moisture will likely deteriorate further.

Lower production is expected to reduce **Australian wheat exports**; wheat export volumes are forecast to fall to 20.4 million tonnes in 2023–24. This is 10% above the 10-year average to 2022–23 of 18.6 million tonnes.

World wheat production to fall from record high

World wheat production is forecast to remain above average in 2023–24 at 791 million tonnes, falling slightly from the record 2022–23 world wheat crop. The fall is driven by lower production in major exporting countries including Australia, Kazakhstan and the Russian Federation. These

reductions in production are expected to more than offset higher production in Argentina and the United States. Wheat production in Canada, the European Union and Ukraine are estimated to be similar to 2022–23 production volumes. Changes in production in the Russian Federation, Argentina and the United States are expected to impact world wheat production in 2023–24:

- **Russian Federation** wheat production is forecast to fall from a record high but remain well above average in 2023–24, however, wet conditions have delayed harvesting in some regions. High Russian Federation export volumes are expected to continue in 2023–24, supported by high production and discounted prices.
- A shift from dry to wet conditions (due to the influence of El Niño) in **Argentina** is expected to cause a rebound in wheat production in 2023–24. Sowing has progressed under mixed conditions as soil moisture starts to recover.
- In the **United States**, total wheat production is set to increase to 47.2 million tonnes in 2023–24, yet this is 10% below the 10-year average to 2022–23. Persistent dryness has limited the yield potential of wheat in the United States, leading to below-average production. An increase in US winter wheat production is forecast for 2023–24, partially offset by a fall in spring wheat production. US wheat exports are forecast to remain below average in line with below-average production.

Rising food and feed use underpins world demand for wheat

World wheat demand is forecast to rise slightly in 2023–24, reflecting an increase in food consumption and feed use.

- Demand for milling wheat is expected to rise in line with population growth, remaining strong given it has few substitutes and is used to produce staple food products such as bread, pasta and noodles. However, pressure on disposable incomes from rising prices is expected to weigh on demand from some importing countries (see Economic Overview).
- World feed demand is expected to rise slightly in 2023–24, supported by higher use of feed wheat in China, where record rainfall during the wheat harvest adversely affected grain quality. However, in the European Union and key feed importing countries in South-East Asia, feed wheat demand is expected to be constrained in 2023–24 reflecting increased use of competitively priced corn.

Opportunities and challenges

Increased chance of a dry spring

The latest 3-month rainfall outlook (September to November), issued by the Bureau of Meteorology on 24 August 2023, suggests that spring is likely to be drier than average across major cropping regions in Australia. The increased chance of an extremely dry spring presents a significant downside risk to the 2023–24 winter cropping season. Spring rainfall could be insufficient to restore depleted soil moisture required for plant growth, resulting in lower yield potential.

Tight fertiliser supplies following surge in demand may reduce yield potential

Better-than-expected seasonal conditions have led to a sudden surge in demand for nitrogen fertiliser in south-eastern Australia, tightening domestic nitrogen fertiliser supplies. Urea – a type of nitrogen fertiliser – is often applied by farmers to improve crop yield potential. Renewed fertiliser

supplies are anticipated soon, with a shipment expected to arrive at Geelong in mid-September. Growers typically apply urea by the end of winter to maximise yields. This raises concerns that late application – following the mid-September shipment – may reduce the effectiveness of nitrogen application and that yield potential cannot be realised, leading to lower overall wheat production.

5 Coarse Grains

Tom Killalea

b France feed barley, fob Rouen.

Barley

Barley prices to fall due to rising coarse grain production.

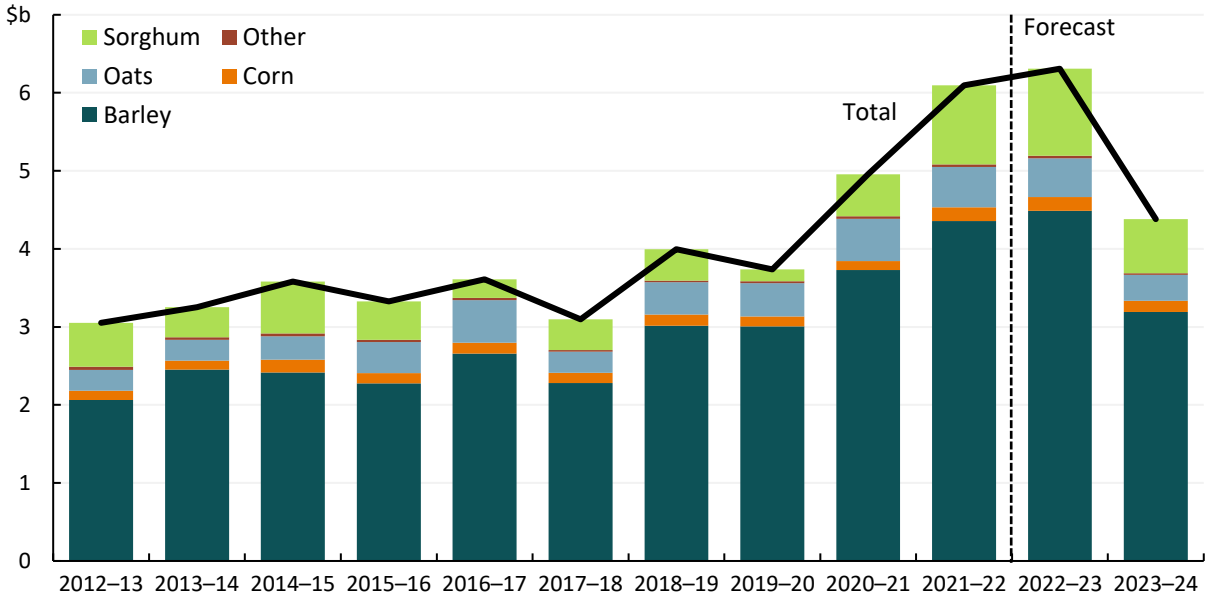
Key points

- Value of Australian barley production to fall by 29% in 2023–24 to $3.2 billion.
- Value of Australian sorghum production to fall by 41% to $661 million in 2023–24.
- Production to fall below the long-term average due to expected drier conditions.
- World coarse grain prices to soften as higher world corn production outpaces growth in demand.
- High barley export values expected following the reopening of the Chinese market.

Value of Australian barley and sorghum production to fall

In 2023–24, the gross value of barley production is forecast to decrease by 29% to $3.2 billion, while the gross value of sorghum production is forecast to fall by 41% to $661 million (Figure 5.1). Despite these falls, both barley and sorghum production values are forecast to be the fourth highest on record. The declines reflect a broader moderation in international grain prices, along with an expected reduction in barley and sorghum production from record levels in 2022–23.

Figure 5.1 Annual value of Australian coarse grain production



Note: Data to the right of the dotted line indicates estimates and forecasts

Source: ABARES; ABS

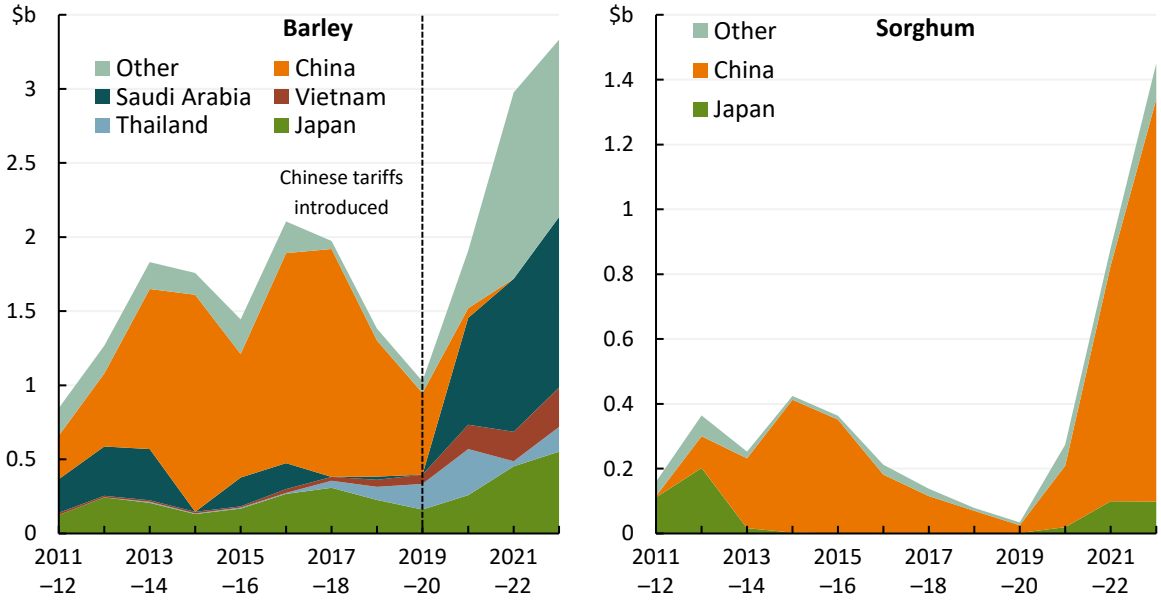
The gross value of barley production forecast for 2023–24 is around $300 million higher than expected in the *June Agricultural Commodities Report*. This largely reflects a slight upward revision to barley production volumes – owing to better-than-expected rainfall in southern cropping regions during June – and slightly higher price forecasts reflecting recent data. The gross value of sorghum production forecast for 2023–24 is broadly consistent with expectations in the *June Agricultural Commodities Report.*

Value of coarse grain exports moderating from record highs

The value of barley exports is forecast to decrease by 19% to $2.7 billion in 2023–24 reflecting falling export prices and lower export volumes. The introduction of tariffs on Australian barley into China in May 2020 saw Australian barley exports shift towards the Middle East and other parts of Asia (Figure 5.2). Following the recent removal of Chinese tariffs, Chinese purchases of Australian malting barley are expected to resume by the end of 2023. This will likely support Australian barley export prices.

The value of sorghum exports is forecast to fall by 55% to $656 million in 2023–24 due to lower export volumes and prices. The volume of sorghum exports is expected to decline by 52% to 1.4 million tonnes driven by lower production. However, export volumes are expected to remain well above the 10-year average. China continues to remain the largest export destination for Australian sorghum, accounting for over 80% of total exports volumes in 2022–23 (Figure 5.2). Falling prices for Australian sorghum exports reflects increasing world supply, particularly from the United States.

Figure 5.2 Annual Australian barley and sorghum export values by major export destination



Note: Dotted line indicates the introduction of China's tariff on Australian barley imports in May 2020.
Source: ABS

High world corn supply to lower Australian coarse grain prices

Domestic Australian barley prices are forecast to ease in 2023–24 despite lower domestic and global barley production. Higher global coarse grains supply (driven by corn) is expected to place downward

pressure on all coarse grain prices including barley. This comes as corn – the world's largest coarse grain export – drives global feed grain market fundamentals, affecting the demand and price for other grains. Nonetheless, prices remain elevated supported by sustained global demand for animal feed as well as growing demand for biofuels (see *Oilseeds*). Increasing global corn supply in 2023–24 is expected to cause:

- The world indicator price for corn (fob Gulf, US) to decrease by 18% to average US$250 per tonne (Figure 5.3).
- The world indicator price for barley (fob Rouen, France) to decrease by 10% to an average of US$262 per tonne (Figure 5.3).
- The Australian feed price (Geelong feed) to fall by 4% to an average of $308 per tonne (Figure 5.4).
- The Australian malting price (Geelong Malting) to fall by 1% to an average of $370 per tonne (Figure 5.4).

Despite the forecast fall, world barley prices are forecast to remain elevated, at 17% above the 10–year average to 2022–23. This comes as lower global production and steady demand means global barley stocks are expected to remain tight.

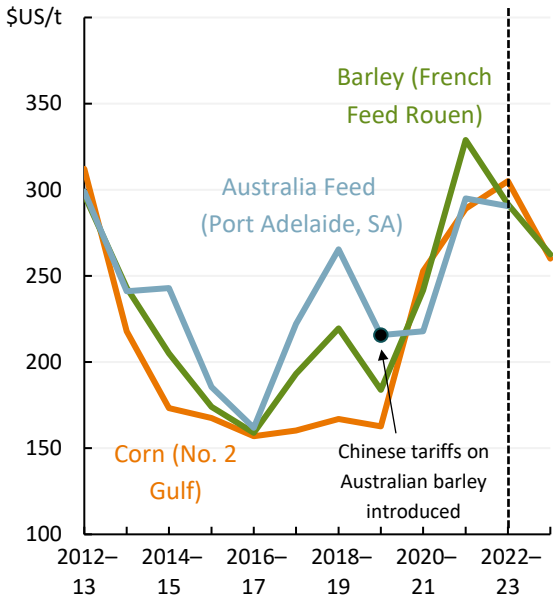
Australian barley export prices are also expected to improve relative to international markets in 2023–24. Since July 2020, Australian barley exports have traded at a relative discount in world coarse grain markets (Figure 5.3). This has been in part due to the prohibitive tariffs placed on Australian barley exports into the high-valued Chinese market. The removal of these tariffs is expected to see Chinese demand for Australian malting barley increase, lifting the price of Australian barley on global markets relative to competitors (Box 5.1).

Box 5.1 China lifting tariffs good news for Australian barley export share

In August 2023, the 80.5% tariffs on Australian barley bound for China were lifted. The introduction of these tariffs in May 2020 saw Australian barley exports to China effectively cease, with Australian exporters shifting towards markets in the Middle East and other Asian countries such as Japan, Vietnam, and Saudi Arabia (Figure 5.2).

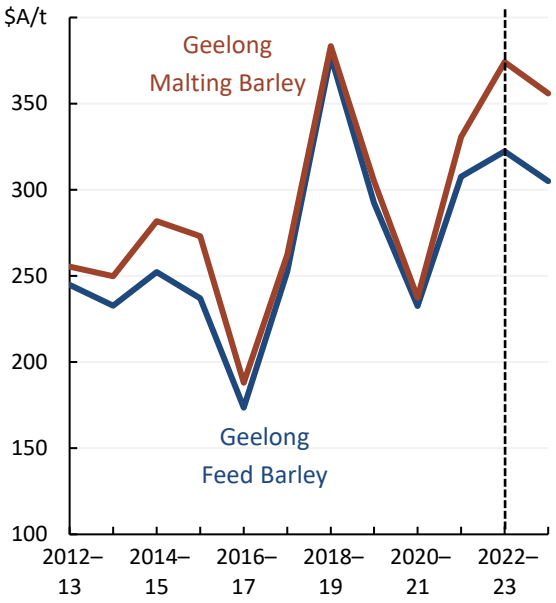
The removal of these tariffs represents a significant opportunity for Australian barley exporters to increase their market share as they regain market access to the world's largest market for barley. Over the remainder of 2023–24, trade flows may shift again to service Chinese demand. In addition, Australian barley export prices can be expected to increase relative to international prices, as the Chinese malting barley market typically trades at a premium. Australia's geographical proximity to China also provides a freight advantage compared to some other trading partners.

Figure 5.3 Average annual coarse grain export prices



Note: Data to the right of the dotted line indicate forecasts.
Source: ABARES; IGC; Jumbuk AG; USDA

Figure 5.4 Average annual Australian domestic coarse grain prices



Note: Data to the right of the dotted line indicate forecasts.
Source: ABARES; IGC; Jumbuk AG; USDA

Australian coarse grain production down from record highs

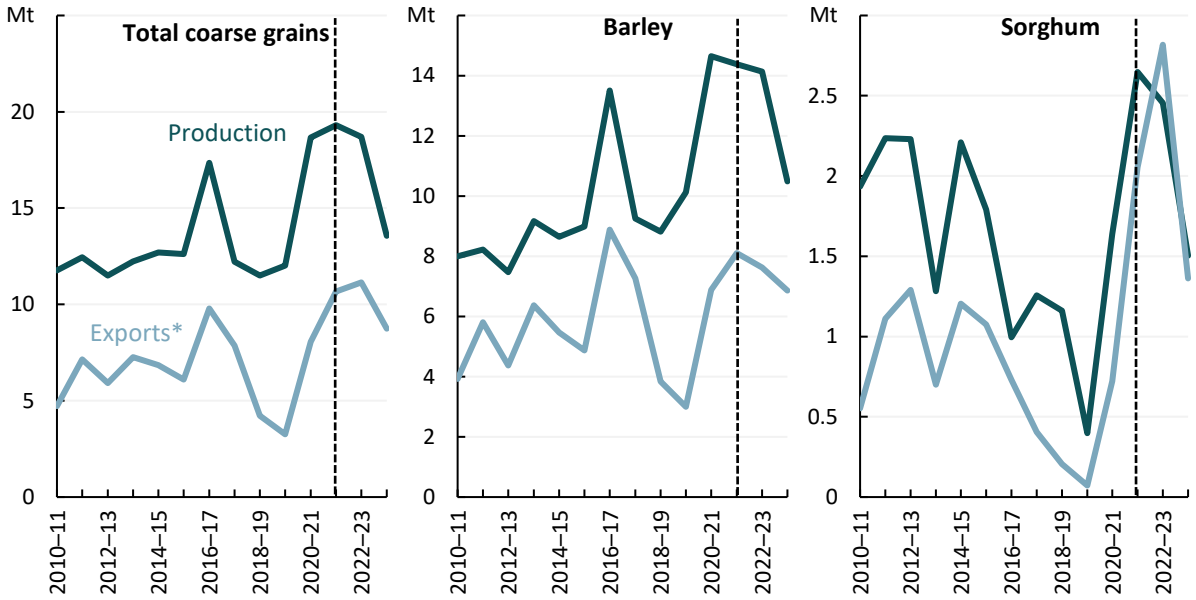
Australian barley production is forecast to decline by 26% to 10.5 million tonnes in 2023–24, approximately 6% below the 10-year average (Figure 5.5). The forecast fall in production is driven by expected drier conditions reducing yields in key barley producing states. However, full soil moisture profiles across cropping regions in South Australia and Victoria – following better-than-expected June rainfall – have benefited crop establishment and growth.

Area planted to barley is expected to increase by 3% to 4.2 million hectares in 2023–24. This is largely because of the crops ability to withstand drier conditions compared to wheat and canola.

Grain sorghum production is forecast to decrease by 39% to 1.5 million tonnes in 2023–34, slightly below the 10–year average to 2022–23 (Figure 5.5). Below average soil moisture levels and below average rainfall forecasts for spring in northern New South Wales and southern Queensland are expected to reduce sorghum area planted. Area planted is forecast to fall by 22% to 527 million hectares in 2023–24 but remain 1% above the 10–year average.

Consistent with falling production, Australian coarse grain export volumes are expected to fall in 2023–24. Australian **barley export volumes** are expected to fall by 10%, and **sorghum export volumes** by 52% (Figure 5.5).

Figure 5.5 Annual Australian coarse grain production and export volumes



Note: Data to the right of the dotted line indicate estimates and forecasts, 2022–23 export data is estimated using ABS data.
Source: ABARES; ABS

Rebound in corn production boosts world coarse grain supply

World coarse grain production is forecast to increase in 2023–24 to 1.5 billion tonnes, close to the 2021–22 production record. Higher corn production in Argentina and the United States is expected to more than offset lower barley production in key exporting countries such as Russia, the European Union and Australia.

World barley production is forecast to decline by 6% to 143 million tonnes in 2023–24. This is driven by reduced area planted and a weaker yield potential across major producing areas such as the European Union, Russian Federation, Ukraine, and Australia more than offsetting higher production in Argentina:

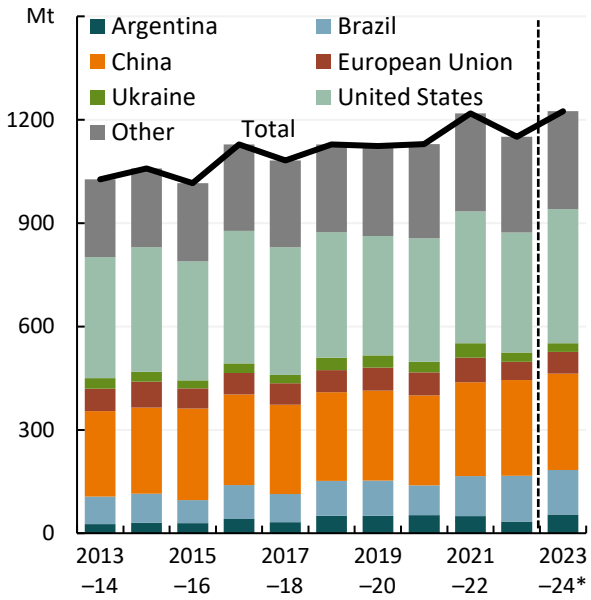
- In the **European Union**, barley production is expected to decline by 6% to 48 million tonnes as continued dry weather has lowered yields and production prospects within southern regions. Heavy rains across central and northern Europe in late-July are also likely to reduce production.
- In the **Russian Federation** barley production is expected to decline by 11% to 19 million tonnes due to a smaller area planted.
- Barley production in **Ukraine** remains subject to ongoing conflict, with initial figures suggesting a 7% decline in production to 5.7 million tonnes.
- Barley production in **Argentina** is expected to increase by 18% to 5.4 million tonnes reflecting relatively good soil moisture availability in the key growing provinces of Buenos Aires.

World barley stocks are expected to remain tight in 2023–24. Closing stocks are forecast to be lower in the European Union, Russia, and Australia, supporting relative demand for Australian barley.

World corn production is expected to increase by 5% in 2023–24 to 1.2 billion tonnes driven by higher production in the United States and European Union (Figure 5.6):

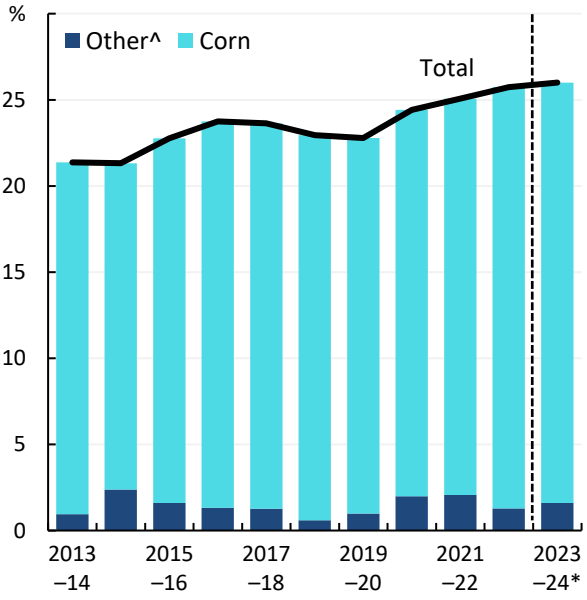
- The **United States** will continue to be the world's largest corn producing country in 2023–24, with production expected to increase by 10% to 383 million tonnes. Area harvested is forecast to increase by 9% to 35 million hectares. This reflects a substitution from oilseed crops such as soybeans due to higher relative corn prices and more favourable weather conditions for corn at planting. An increased plant is expected to outweigh drought conditions in much of the Midwest corn belt, which is reducing yield prospects.
- **European Union** production is expected to increase by 14% year-on-year overall. However, recent hot and dry conditions for the start of planting season is impacting production prospects in some countries, including France, Italy and Spain.
- In **China** production and area harvested are expected to remain relatively steady.
- South American production prospects are mixed, as evolving El Niño conditions are expected to reduce production prospects in **Brazil**, whereas **Argentina** is on track to increase production year-on-year.

Figure 5.6 Annual global corn production



Note: Data to the right of the dotted line indicate forecasts; *USDA forecast
Source: ABARES; USDA

Figure 5.7 Annual feed grain use in China, share of world use



Note: Data to the right of the dotted line indicate forecasts; ^Includes other feed grains such as corn, oats and barley; *USDA forecast.
Source: ABARES; USDA

World coarse grain demand remains robust

Global coarse grain demand is expected to rise in 2023–24 driven by higher corn demand. **World corn consumption** is forecast to increase to 1.2 billion tonnes in 2023–24, with higher feed uptake due to softening prices. Nonetheless, growth in coarse grain supply is expected to outpace the growth in demand, driving down world prices:

- **China** is the largest global consumer of coarse grains and drives global feed demand (Figure 5.7). China's corn imports are forecast to remain high in 2023–24 due to the large pig herd and strong consumer demand for meat, with imports needed to supplement insufficient domestic feed production. Historically, China has been reliant on the United States and Ukraine for imports. However, given the ongoing war in Ukraine and high US corn prices, China has diversified into new markets, such as Brazil.
- In the **United States**, corn consumption is expected to increase by 2% in 2023–24, largely reflecting higher domestic feed consumption due to lower prices. In addition, drought conditions throughout most of the US Midwest has reduced pasture availability, placing increased demand on feed grains.

World barley consumption is expected to decrease by 4% to 144 million tonnes, reflecting constrained supply.

Global industrial consumption of coarse grains is expected to remain strong. Falling corn prices are placing downward pressure on input costs for ethanol production, incentivising major corn producing countries such as Brazil and the United States towards greater industrial consumption. Biofuel demand is also increasing for other grains, such as oilseeds (see *Oilseeds*).

Opportunities and challenges

Dry conditions and the development of El Niño

The Bureau of Meteorology's latest 3-month rainfall outlook (September to November) issued on 24 August 2023, suggests that spring is likely to be drier than average across major cropping regions in Australia tied to the potential onset of an El Niño event. This presents a significant challenge to the 2023–24 winter cropping season. Spring rainfall could be insufficient to restore depleting soil moisture required for plant growth, resulting in lower yield potential. Yield prospects in regions where barley crops have little soil moisture will likely deteriorate. In addition, for barley producing areas with higher rainfall, the shortage of available fertilisers may impact potential yields (see *Wheat*). This will also weigh on the summer crop growing season in 2023–24.

Black Sea Grain Initiative

The Black Sea Grain Initiative – established following the Russian Federation's invasion of Ukraine – has facilitated ongoing Ukrainian grain exports out of the Black Sea. The Russian Federation's recent withdrawal in participation from the Initiative creates uncertainty surrounding Black Sea exports and will likely add volatility to world grain markets in 2023–24, keeping international prices relatively elevated (See *Wheat Box 1.1*).

6 Oilseeds

Gaby Coulthard

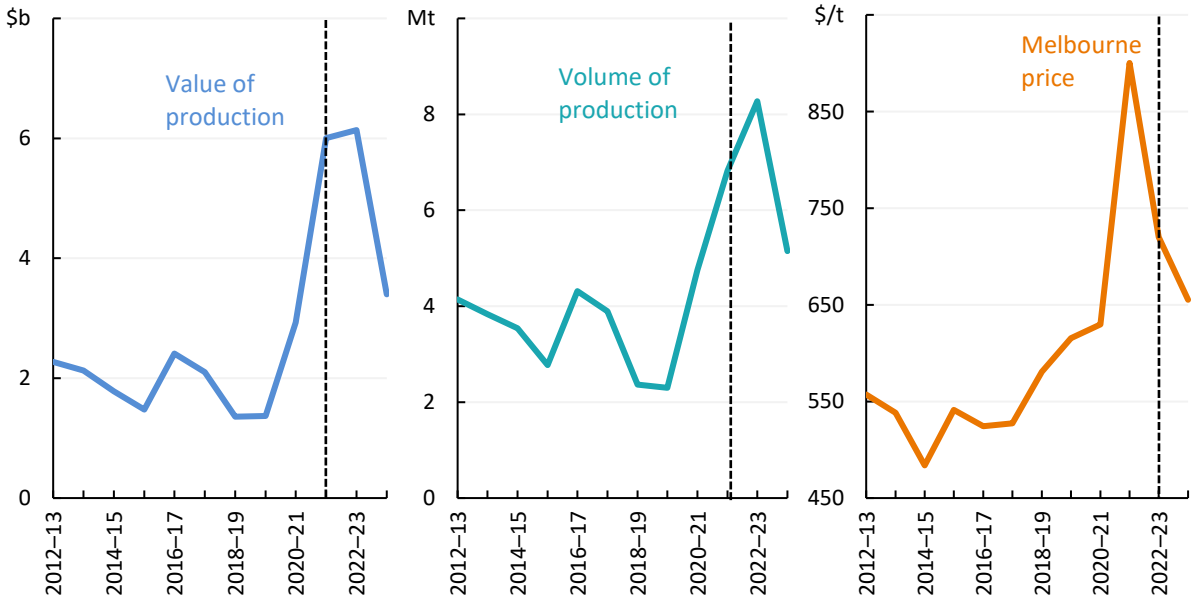
Key points

- Gross value of canola production to fall to $3.4 billion in 2023–24 following record highs.
- Value and volume of Australian canola exports to fall in 2023–24.
- Australian canola prices are forecast to fall by 9% in 2023–24, averaging $655 per tonne.
- Global oilseed prices to fall as growing global oilseed supply to outpace growth in demand.

Value of canola production to fall in 2023–24

The gross value of Australian canola production is forecast to fall by 44% to $3.4 billion in 2023–24, down from record levels in 2022–23 and 2021–22 (Figure 6.1). Falling canola prices coupled with a decrease in canola production are expected to drive the value of canola production down. Australian canola production is forecast to fall by 38% to 5.2 million tonnes with a return to drier seasonal conditions, particularly in key producing states such as Western Australia and New South Wales. However, canola production for 2023–24 will remain 20% above the 10-year average (Figure 6.1). World canola prices are expected to ease in 2023–24 but remain elevated.

Figure 6.1 Annual value, volume and price of Australian canola production



Note: Data to the right of the dotted line indicate estimates and forecasts.

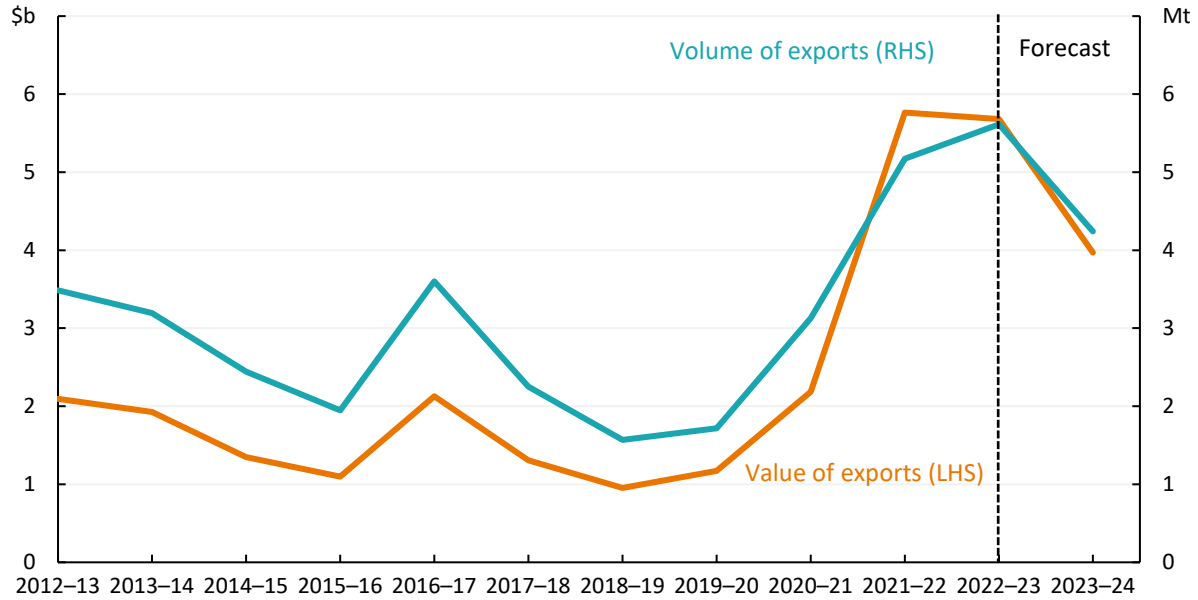
Source: ABARES; ABS; Jumbuk Ag

The gross value of canola production forecast for 2023-24 is consistent with expectations in the *June Agricultural Commodities Report*. A slight upwards revision to canola production volumes – owing to better-than-expected rainfall in recent months – is offset by slightly lower price forecasts.

Value and volume of Australian canola exports to fall

The value of Australian canola exports is expected to decrease by 30% to $4.0 billion in 2023–24, reflecting weaker production and export volumes (Figure 6.2). Despite this fall, the forecast export value remains 68% above the 10-year average. Export volumes are expected to decrease by 24% to 4.2 million tonnes in 2023–24 from elevated levels in 2022–23 and 2021–22. Lower exports will be driven by lower production resulting from drier seasonal conditions mostly in Western Australia and New South Wales.

Figure 6.2 Annual Australian canola exports



Note: Data to the right of the dotted line indicate estimates and forecasts.

Source: ABARES; ABS

Global oilseed prices expected to fall

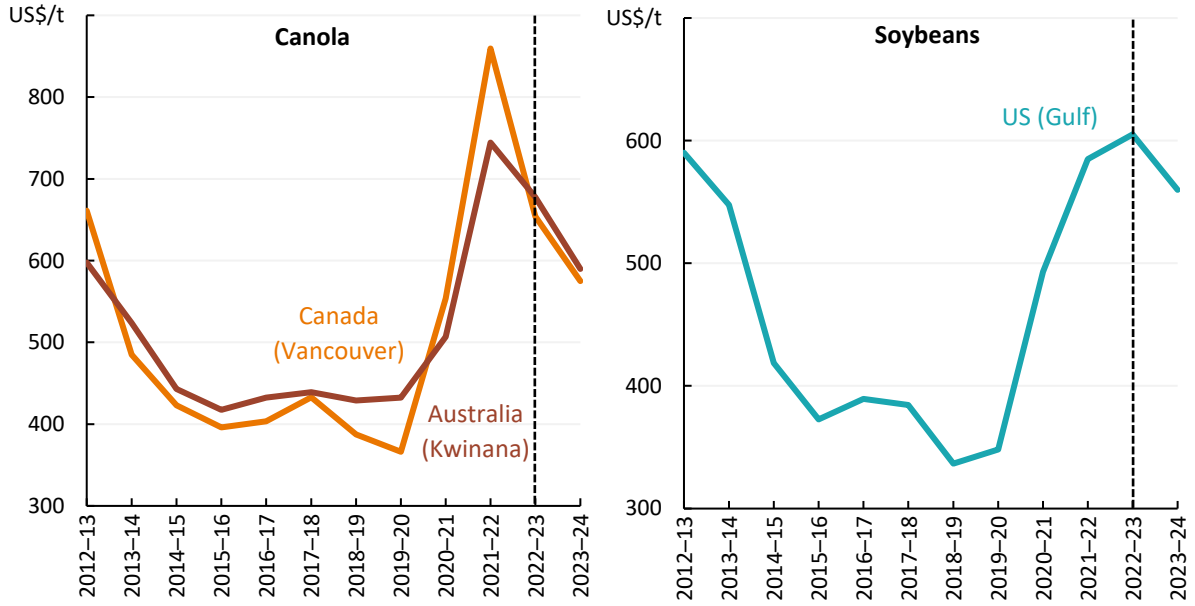
Canola prices to fall in 2023–24 with reduced volatility

The Australian canola price is forecast to average $655 per tonne in 2023–24, 9% lower than the average of $720 per tonne in 2022–23. This reflects lower than expected volatility in global canola markets. The Western Australian export price is forecast to fall, down by 14% to $861 or US$590 per tonne in 2023–24 from elevated prices in 2021–22 and 2022–23 (Figure 6.3). Australian canola prices are expected to fall along with the Canadian canola price (ABARES' world indicator price) which is forecast to fall by 12%, to an average US$575 per tonne in 2023–24. Australian canola is expected to trade at a premium price compared to Canadian canola, due to lower Australian production being available for export. Despite forecast falls, canola prices are expected to remain elevated in 2023–24 reflecting strong global demand.

Soybean prices to fall in 2023–24 amidst higher global supply

Global soybean prices are forecast to fall following expected higher production in Brazil and Argentina (Figure 6.3). This reflects expected favourable seasonal conditions in the key growing regions in South America. The US (Gulf) soybean price is expected to maintain a premium over the Brazilian soybean price driven by record production forecast for Brazil compared to an expected fall in US soybean production. While US and Brazilian soymeal export prices have been trading at similar levels, the price gap is much more pronounced for soybean oil. This is tied to domestic biodiesel mandates in the United States that increase domestic use for soybean oil.

Figure 6.3 Average annual export prices for canola and soybeans



Note: Data to the right of the dotted line indicate estimates and forecasts.

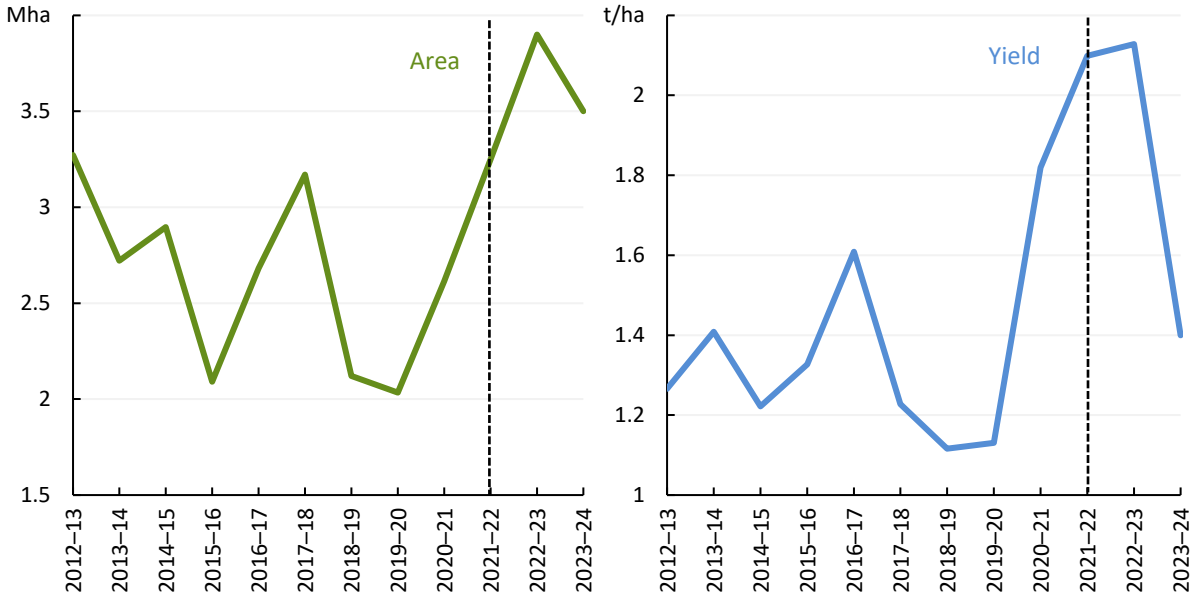
Source: ABARES; International Grains Council

Canola production to fall in 2023–24

Given expected below-average spring rainfall and lower crop yields, Australian canola production in 2023–24 is forecast to fall by 38% to 5.2 million tonnes from record production volumes in 2022–23 (Figure 6.1). Production is expected to remain 20% above the 10-year average to 2022–23, reflecting above-average area planted. The expected development of El Niño conditions is forecast to result in a dry outlook for spring. This is likely to lower yields, especially in regions where canola crops have little soil moisture:

- **Area planted** is forecast to fall by 11% to 3.5 million hectares in 2023–24, still 25% above the 5-year average and the second highest on record (Figure 6.4). Area planted is expected to fall driven by lower price signals at the time of seeding relative to the previous year. In addition, the drier climate outlook has seen some planting shift from canola to crops such as wheat and barley as they are more resilient to persistent dry conditions. Nonetheless, area planted is forecast to remain elevated as the second-highest area planted on record in 2023-24, reflecting ongoing elevated canola prices and high expected returns.
- **Yields** are forecast to fall by 30% to 1.5 tonnes per hectare in 2023-24 (Figure 6.4). This is 11% below the 5-year average and reflects less favourable seasonal conditions and lower rainfall.

Figure 6.4 Annual Australian canola area, and yield



Note: Data to the right of the dotted line indicate estimates and forecasts.
Source: ABARES; ABS

Global oilseed supply expected to rise

In 2023–24 **global oilseed production** is expected to rise by 7% to 671 million tonnes. This rise is primarily driven by higher soybean production, partially offset by lower canola production:

Global soybean production is expected to increase by 9% to 403 million tonnes in 2023-24 driven by an increase in production in Argentina and Brazil because of favourable crop conditions (Figure 6.6).

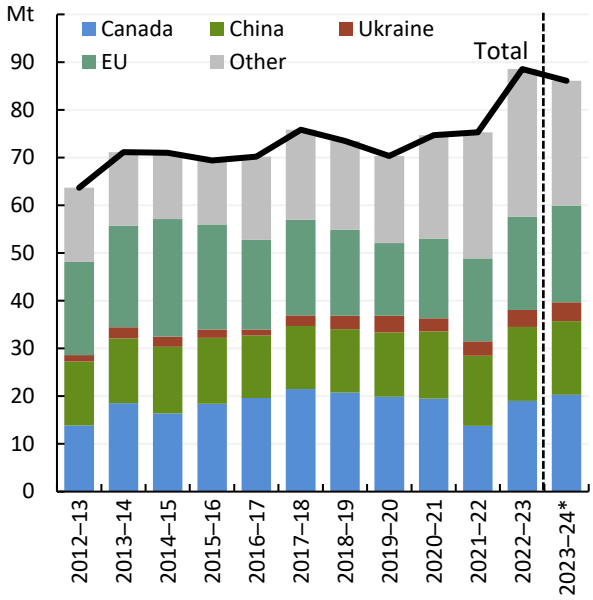
- Following prolonged drought in 2022–23, soybean production in **Argentina** is expected to rebound as El Niño brings a higher likelihood of rainfall and a recovery from drought.
- Production in **Brazil** is also expected to increase in 2023-24. Despite lower rainfall expected in Brazil's northern and central regions, production in the south – responsible for around half of Brazil's soybean production – is expected to more than offset any production shortfall from these regions.

Global canola production is expected to decrease by 3% to 86 million tonnes in 2023-24 driven by lower Australian production (Figure 6.5). Partially offsetting this fall will be a rise in production in the European Union:

- Canola production in the **European Union** is expected to grow by 3% to reach 20.2 million tonnes in 2023-24, which would represent 23% of world canola production. This rise in production reflects expected higher average yields and an increase in area planted. Seasonal conditions for 2023–24 pose some risk for dryness in southern parts of the EU, however, this is not likely to impact major canola producing countries such as France and Germany.
- **Canadian** canola production is expected to remain steady at 19 million tonnes. Growing conditions in Canada are strong following the easing of drought conditions which impacted canola production in western Canada in 2021 and 2022.

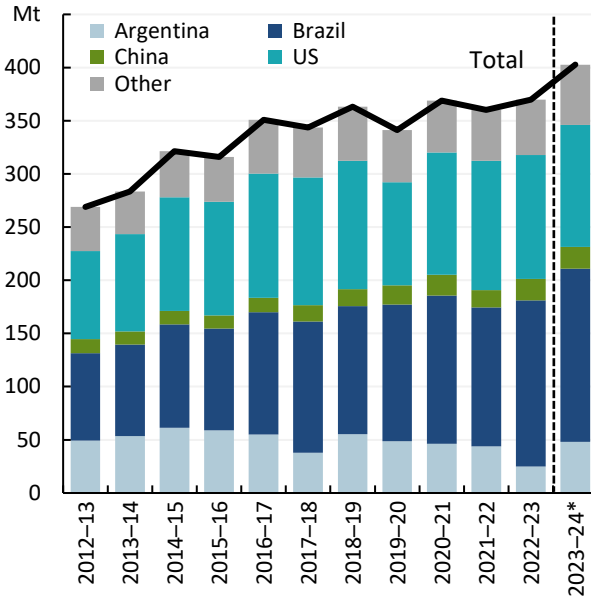
Global canola exports are expected to fall in 2023–24 reflecting lower global production. Lower Australian exports are driving this decrease, slightly offset by higher Canadian exports.

Figure 6.5 Global canola production



Note: Data to the right of the dotted line indicate forecasts; *2023-24 forecast is USDA forecast in marketing years.
Source: USDA

Figure 6.6 Global soybean production



Note: Data to the right of the dotted line indicate forecasts; *2023-24 forecast is USDA forecast in marketing years.
Source: USDA

Global demand for oilseeds expected to increase

Global oilseed demand is expected to increase modestly in 2023-24, reflecting a continued rise in demand for both canola and soybeans for domestic consumption and industrial use for biodiesel production. The main contributing factors to demand for oilseeds are domestic crushing demand for feed use, food use and industrial use for biodiesel. With the impact of dry conditions on production, Australian canola exports will likely decrease resulting in importing countries purchasing more from other suppliers and shifting demand to other oilseeds. Demand for soybeans is expected to remain strong in 2023–24 reflecting elevated Chinese imports as Chinese domestic demand outpaces supply. Nonetheless, growth in global oilseed supply is expected to outpace growth in demand, leading to an overall moderation in global oilseed prices.

World biodiesel demand is expected to rise in 2023-24 reflecting expanding domestic biodiesel mandates. For example, in the United States the growth in the US Environmental Protection Agency's Renewable Fuel Standard program will likely drive up US demand for biodiesel. Higher demand for biodiesel will likely increase the price premium of vegetable oils over protein meals as oilseed crushing to service biodiesel demand will also increase protein meal supply. The US soybean oil export price demonstrates this premium, with the price increasing by 35% from the three months to the start of August 2023; the gap for soybean meal has increased because of relatively weak demand for feed following a contraction in the size of the US cattle herd. The sharp increase in US soybean oil prices is expected to negatively impact US demand for soybean oil.

As well as contributing to biodiesel demand, government programs are also driving up global biodiesel supply. For example, the US Renewable Fuel Standard Program and Indonesia’s Biodiesel B35 mandate both require greater domestic use of biodiesels. In Indonesia, this has prompted the country to increase their biorefining capacity by almost 50% since 2020.

Opportunities and challenges

Dryness impacting canola production for 2023–24

Dry conditions associated with the expected onset of an El Niño event is forecast to reduce canola production in Australia. However, potentially drier seasonal conditions could further negatively impact canola production and yields. For example, an extremely dry spring across Australia could reduce yield potential for the remainder of the 2023–24 winter cropping season, representing a downside risk for Australian canola production. Lower soil moisture over the next three months could have significant flow on effects for future harvest seasons in Australia, as well as for the rest of 2023–24.

By contrast, El Niño climate conditions are likely to have a positive effect on oilseed production in the European Union, reflecting a higher rainfall outlook. As such, El-Niño-like conditions present a greater challenge for canola production in 2023–24 for Australia.

Canada is also an area to watch for persistent drought: although less dry compared to the last two years, Southern Alberta and Western Saskatchewan are currently the two driest regions in Canada and also the two largest producers of canola. As severe drought persists across Western Canada, this poses a significant risk to forecast yields and production which could have a negative impact on exports and prices. However, high Canadian carry-in stocks will provide a buffer against the forecast decline in output.

7 Horticulture

Christian Creed

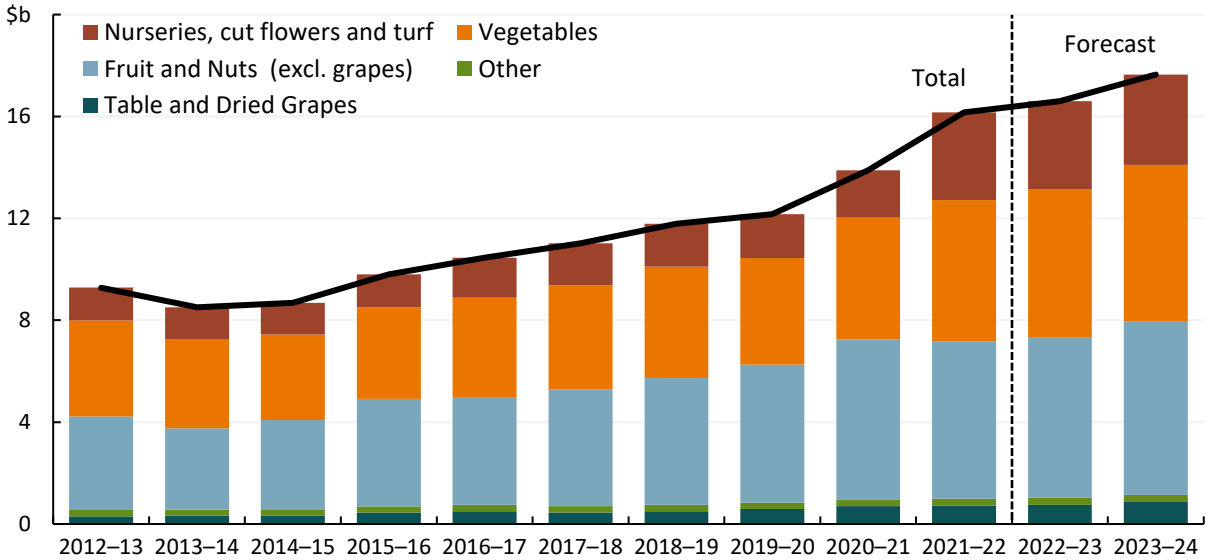
Key points

- Gross value of production to rise to $17.6 billion in 2023–24 driven by higher production.
- Exports to rise by 9% to $3.7 billion in 2023–24 driven by higher production.
- Drier conditions are unlikely to have a major impact on Australian horticulture production.
- Growth in global supply expected to outpace global demand in 2023–24.

Higher production volumes push up production values

In 2023–24, the gross value of horticulture production is forecast to rise to a record $17.6 billion, up by 6% from $16.6 billion in 2022–23 (Figure 7.1). The expected rise in production value reflects higher production volumes. Despite drier seasonal conditions expected in major horticultural regions, high water levels and improving labour availability are expected to boost production volumes throughout 2023–24.

Figure 7.1 Annual value of horticultural production



Note: Data to the right of the dotted line indicate estimates and forecasts.
Source: ABARES; ABS

The increase in horticulture production value in 2023–24 is driven by:

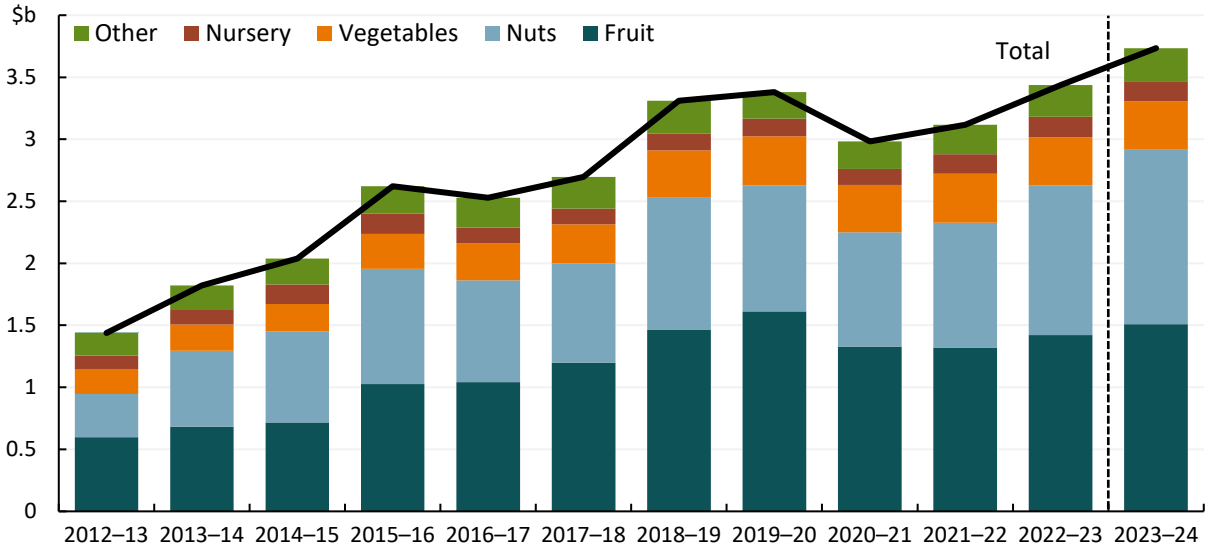
- Fruit and nuts (excluding table grapes), forecast to increase by 8% to $6.8 billion.
- Vegetables, forecast to grow by 6% to $6.2 billion.

The gross value of horticulture production forecast for 2023–24 is around $500 million lower than expectations in the *June Agricultural Commodities Report*. This reflects a sight downwards revision to production volumes accounting for lower expected yields for some fruit and vegetables.

Higher export volumes push export values to record high

The value of horticulture exports in 2023–24 is expected to rise by 9% to a record $3.7 billion, driven by higher horticultural production volumes (Figure 7.2). A low Australian dollar, relative to currencies of other major trading partners and export competitors, is also expected to support demand for Australian horticultural products in 2023–24. The value of fruit and nut exports are expected to see the largest rise, growing by 6% and 17% respectively.

Figure 7.2 Annual value of horticultural exports



Note: Data to the right of the dotted line indicates forecasts.
Source: ABARES; ABS

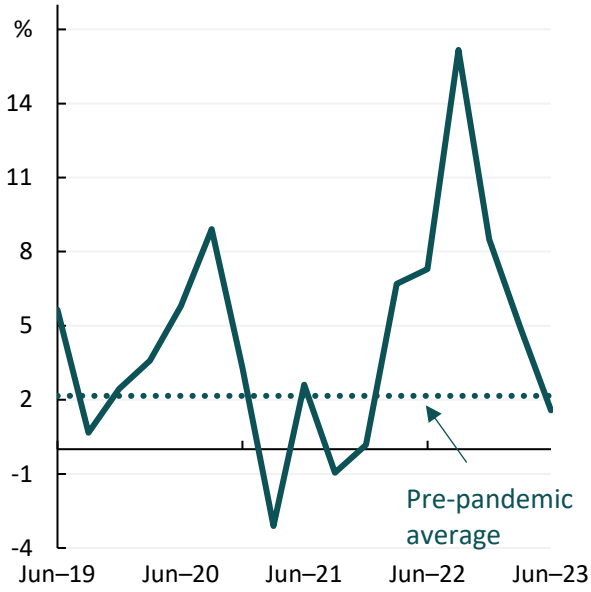
Easing price growth to support domestic demand

National fruit and vegetable inflation returning to pre-flood growth

Nationally, growth in fruit and vegetable prices has declined considerably. In 2021–22, severe flooding in key horticulture regions of Queensland and New South Wales reduced the availability of some fresh fruit and vegetables, driving up domestic price growth.

However, the effects of the flooding on production have subsided, leading to a moderation in price growth. Quarterly data for June 2023 shows that year-ended fruit and vegetable inflation is currently at 1.6%. This is broadly in line with the pre-pandemic year-ended average quarterly inflation growth of 1.4% (Figure 7.3).

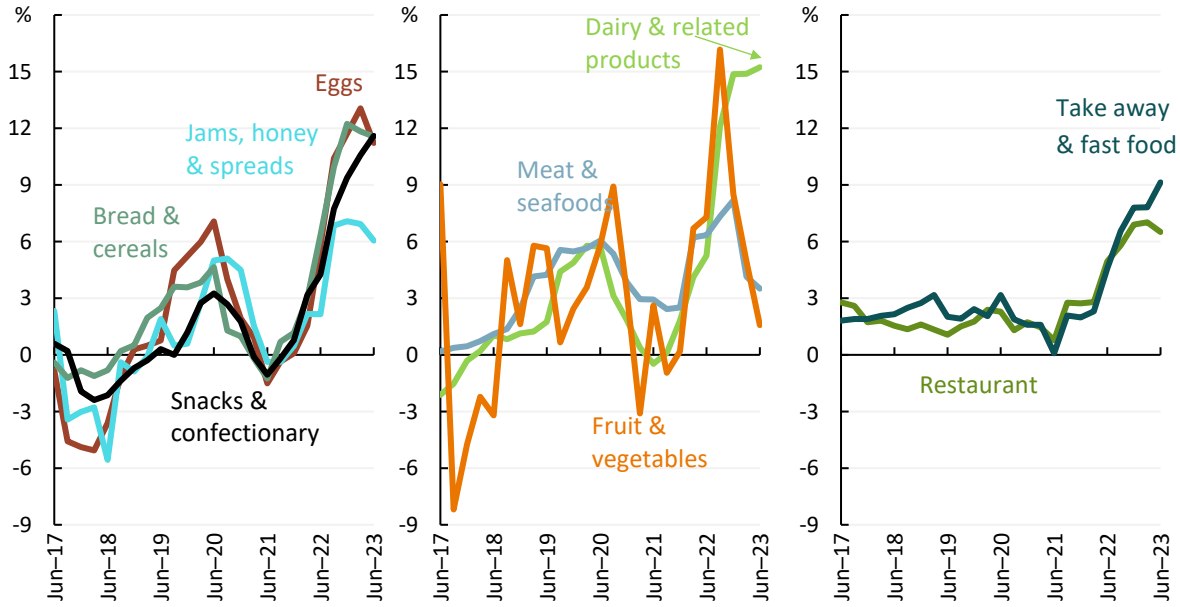
Figure 7.3 Quarterly fruit and vegetable inflation, year-on-year change



Note: *5-year year-ended quarterly average to Dec-2019.
Source: ABS

While the level of current fruit and vegetable inflation is still high, growth is lower than other food categories (Figure 7.4). Easing fruit and vegetable prices relative to other food options are likely to support demand for these products; ongoing price growth differences could see some consumers substitute away from other food groups breads and cereals towards fresh produce.

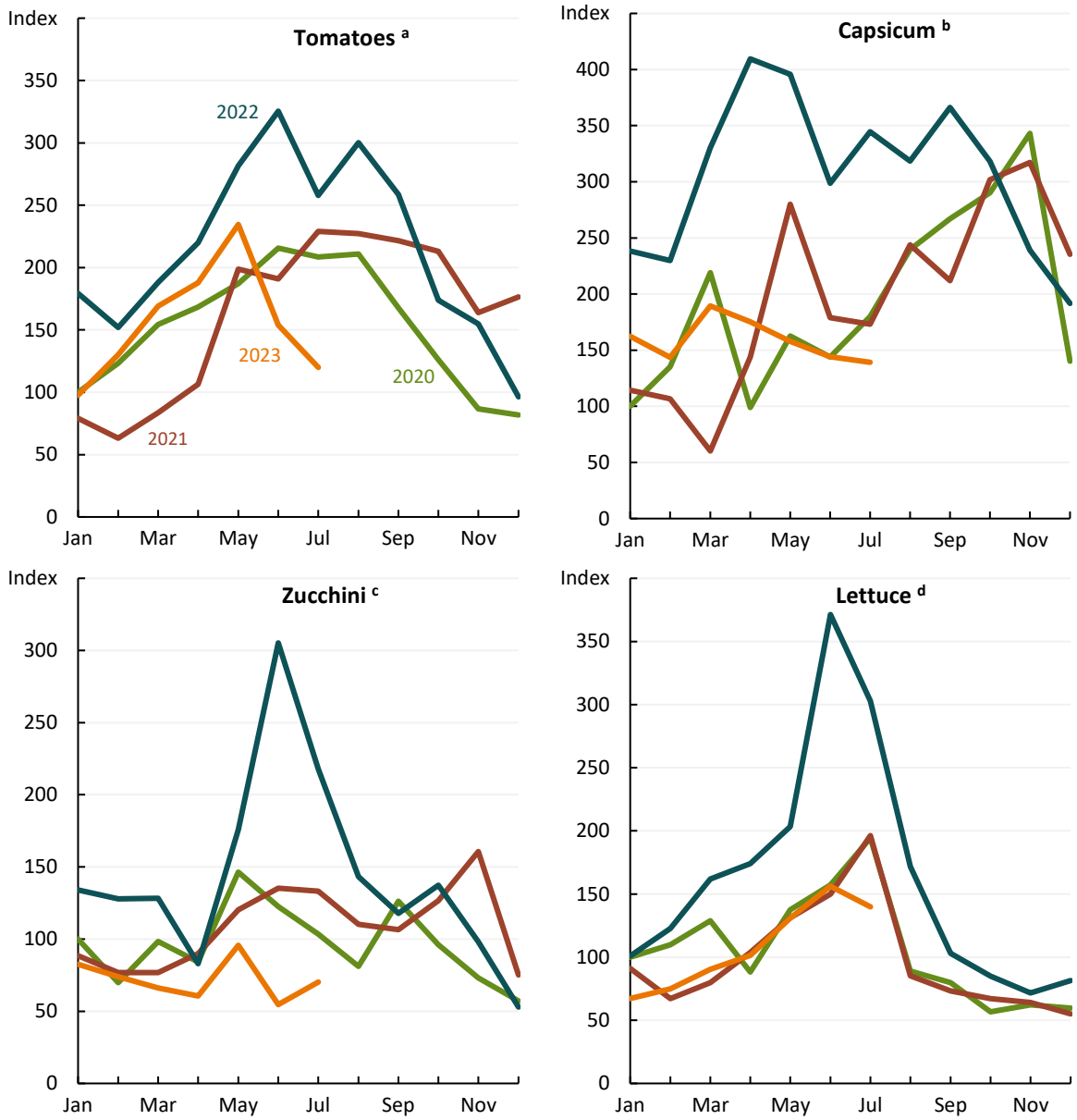
Figure 7.4 Quarterly Australian food inflation, year-on-year change



Source: ABS

Although fruit and vegetable prices are still increasing, some retail prices of individual products are lower in 2023 compared to 2020 to 2022 (Figure 7.5). This is likely to further support demand for these products.

Figure 7.5 Monthly retail fruit and vegetable prices, selected produce



Note: Index 100 = Jan 2020; a) 5kg truss tomato carton; b) 10kg red capsicum carton; c) 10kg green zucchini carton; d) Carton Iceberg.

Source: ABARES; Data fresh

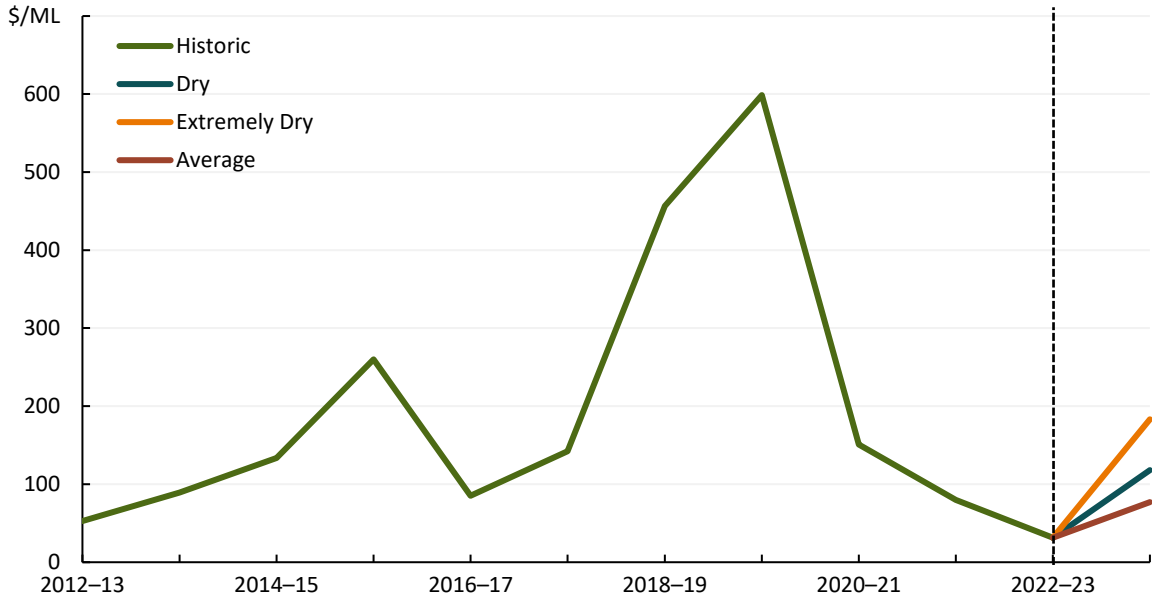
Horticulture production and export volumes to rise

Horticultural production volumes are expected to rise by 7% in 2023–24. This is underpinned by a 7% increase in vegetable production to 2,808 thousand tonnes. Historically low water prices and high water storage levels to date, will help mitigate the impacts on yield from expected drier seasonal conditions in 2023–24. Other factors supporting production include improved labour availability and strong expected demand from overseas markets for key products such as almonds.

Historically low water prices will mitigate the impact of drier conditions

The expected onset of El Niño in 2023–24 is likely to lead to drier conditions across Australia, particularly across much of Eastern Australia. Drier conditions are likely to put upwards pressure on water prices. However, historically low water prices and high water storage levels currently observed are expected to moderate the pressure on water prices. ABARES' latest Water Market Outlook reported that under the likely average scenario, average water allocation prices are expected to remain well below recent highs (Figure 7.6). Ongoing low water prices will continue to support horticultural production.

Figure 7.6 Annual Australian water allocation price, varying climate scenarios



Source: ABARES

Note: ABARES Scenario analysis refers to the average water allocation price for all regions in the Murray-Darling Basin and is based on rainfall and inflows to storages of the following percentiles: Average scenario - Rainfall is in the 50th percentile of historical levels and, in 50 years out of 100, inflows to storages exceed those experienced in this scenario. Dry Scenario - Rainfall is in the 10th percentile of historical levels and, in 90 years out of 100, inflows to storages exceed those experienced in this scenario. Extreme Dry Scenario - Rainfall is in the 1st percentile of historical levels and, in 99 years out of 100, inflows to storages exceed those experienced in this scenario.

A recovery in horticultural labour supply to boost production

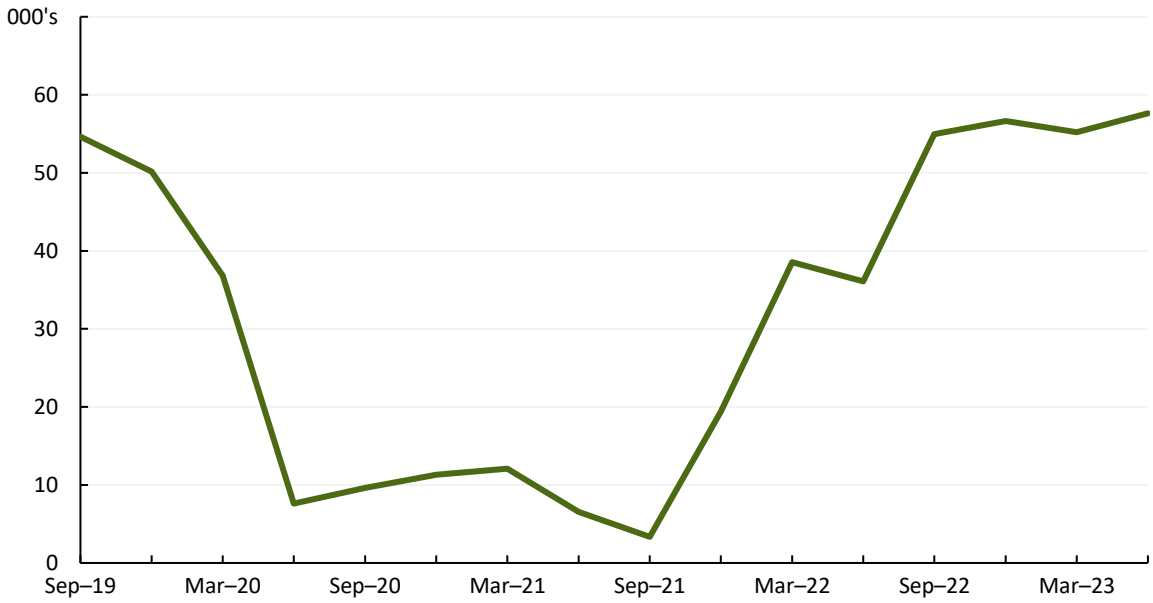
The recovery of the seasonal workforce to pre-pandemic levels is expected to support a rise in horticultural production in 2023–24. In 2019–20 and 2020–21, COVID-19-induced border closures constrained horticultural production by reducing the availability of seasonal workers; this impacted horticultural labour supply given the sector's reliance on the short-term seasonal workforce:

- Worker availability for short periods during the year is critical for labour-intensive operations (such as planting and harvest) on many horticulture farms.
- These short-term periods when labour-intensive operations occur can suit the labour availability of some overseas workers, such as Working Holiday Makers (WHM).

The Working Holiday Maker (WHM) visa approval rate fell sharply at the start of the pandemic, reaching a low of around 3,000 approvals in September 2021. During 2021–22, labour shortages in horticulture resulted in reduced volumes of harvested produce in some regions, with around 17% of

horticulture farms indicating lack of labour as a leading cause of crop loss in that year. WHM visa holder numbers have recovered following the reopening of international borders and have now exceeded pre-pandemic levels (Figure 7.7).

Figure 7.7 Working Holiday Maker Visa approvals



Source: Department of Home Affairs

The expansion of the **Pacific Australia Labour Mobility (PALM)** scheme over the last two years has also boosted labour supply for agriculture. Current estimates suggest that roughly 30 thousand PALM scheme workers are employed across agriculture.

While horticultural labour supply has improved overall in recent years, broadening the scope of occupations for WHM regional work requirements to accommodate economy-wide labour shortages has reduced the number of WHM visa holders in horticulture. Pre-COVID-19 estimates for WHM visa holders employed in agriculture were around 25–30% and post COVID estimates are around 15%, with horticulture using around 90% of WHM-labour in agriculture. Compounding this, the Australia-UK Free Trade Agreement (A-UKFTA), entered into force on 31 May 2023, removed the requirement for British backpackers to complete farm work as previously required; this has also reduced the availability of short-term labour from the seasonal workforce.

While labour supply has improved, labour costs have also increased across the economy (see *Economic Overview*). Ongoing high labour and other input costs are pressuring some farm margins which could temper the expected increase in horticultural production in 2023–24.

Free trade agreements and other trade initiatives to boost Australian exports

Horticulture export volumes are expected to increase by 6% to 787 thousand tonnes in 2023–24, driven by higher production volumes. Recent free-trade agreements that have improved market access through lower tariffs and higher quotas will also support export volume growth:

- The A-UKFTA saw the immediate elimination of tariffs often larger than 10% on most Australian horticultural exports.

- The Australia-India Economic Cooperation and Trade Agreement (ECTA) which entered into force on 29 December 2022 includes reduced tariffs for key horticultural exports (for example, citrus fruits, almonds, macadamia nuts, avocados, and berries).

In addition, a new government-industry partnership is expected to invest $130 million to support export biosecurity measures and market access for Australian horticultural exports through the Fresh and Secure Trade Alliance (FASTA). This program is expected to enhance Australian horticultural producers' biosecurity surveillance and detection procedures, data collection processes and risk management strategies. All of these measures are expected to improve market access for horticultural exporters.

Global horticultural supply and demand to increase

World supply expected to increase

Global horticulture supply is anticipated to rise modestly, primarily driven by better growing conditions in major producing countries. Changing weather patterns towards conditions associated with an El Niño weather system are likely to support overall production volumes. However, conditions are likely to have varying effects on the different major horticultural producers and exporters. Over the next three months, horticultural regions across parts of India are likely to experience drier than average conditions. However, much of China, the EU as well as southern parts of the US are predicted to record average or better than average rainfall. This will ultimately impact the yield and production of horticulture in these regions.

US citrus supply affected by a production shock

Despite improved growing conditions and rising global supply, the gross value of horticultural production in the United States is not expected to grow strongly over the next few years. This is largely attributed to shifting consumer preferences towards more competitively priced fruit and vegetable imports.

In addition, some US horticultural industries have faced challenges recently; the US citrus crop fell by 26% in 2022–23, after a colder-than-average season and Hurricane Ian affected production volumes. An outbreak of citrus greening is also forecast to deplete the 2023–24 crop, reducing production volumes by around 50% from 2022–23. This is likely to reduce US citrus export volumes for 2023–24.

World horticulture demand expected to grow modestly

Global demand for horticultural commodities is expected to increase modestly in 2023–24 but be outpaced by growth in global supply. Steadily rising populations and real incomes across several emerging markets will support increases in demand. However, ongoing high inflation in many advanced economies will weigh on real incomes of consumers, partially offsetting this rise.

Opportunities and challenges

Major export markets present opportunities for growth

Changes to global citrus production opens opportunities for Australian exporters

Falling citrus production in major producing markets has provided an opportunity for Australian exporters to meet excess demand in regions such as the United States. Additionally, lower export volumes from the major producers provides a large opportunity for Australian exporters in other key citrus export markets such as Japan, Canada, and the Republic of Korea.

Extreme weather events endanger horticultural growing regions

High rainfall over the previous three years has led to exceptional growing conditions for vegetation in many agricultural areas. Wetter years have also made it more difficult to conduct hazard reduction burns. As such, fire warnings have highlighted the increased likelihood of bushfires throughout southeastern Australia and much of northern NSW, key growing regions for horticulture. Bushfire risk presents ongoing challenges for horticultural and other agricultural producers.

8 Wine and wine grapes

Tim Kane

Key points

- Gross value of wine grape production forecast to increase by 12% to $961 million in 2023–24.
- Value of wine exports set to further decline in 2023–24 to $1.9 billion.
- Australian prices to fall as oversupply of wine persists in 2023–24, particularly for red varietals.
- Australian production potential constrained by low prices despite better growing conditions in 2023–24.
- Global oversupply of bulk wines is putting continued pressure on exporters and prices.

Production values to recover from a disease-affected year

The gross value of wine grape production is forecast to increase by 12% in 2023–24 to $961 million as production recovers from exceptionally high rainfall through 2022–23. In 2023–24, expected drier conditions are forecast to reduce the instance of mildew and allow better access to vines where waterlogging has been an issue. This will better enable active management of disease and pests and higher production.

The value of **red wine grape varietals** is forecast to increase by 5% in 2023–24 driven by higher production prospects (up by 17%). However, the increase in production is largely offset by falling prices for red varietals reflecting sluggish demand and an oversupply of red wine in inland regions.

By contrast, the value of **white wine grape varietals** is expected to rise strongly in 2023–24 (up by 24%). The increase is driven by higher expected higher production volumes (up by 27%) as production recovers from low levels in 2022–23, somewhat offset by slightly lower white grape prices. Prices for white varietals are expected to fall by much less than for red varietals as the white wine market is more balanced, meaning that there is sufficient demand to ensure that previous vintages are not stored across multiple successive seasons and are instead bottled or sold. As a result, most major white varietals produced in 2022–23 were either allocated or sold.

Since the *June 2023 Agricultural Commodities Report,* the value of wine production has been revised down, reflecting final survey data available from the Wine Australia *National Vintage Report 2023*. This data showed that prices for wine grapes in some key regions had fallen even further than expected in June, as the survey was being finalised. The downward revision to prices in 2022–23 indicates a slower market than expected for red varietals and is expected to mean weaker demand in the 2023–24 crush, as issues with oversupply of red wines persist. Accordingly, prices for 2023–24

are expected to be lower than previously forecast, and the yield of wine grape production has been revised down to reflect less volumes of red wine grapes expected to be demanded by winemakers for 2023−24.

Low demand and global prices to weigh on export values

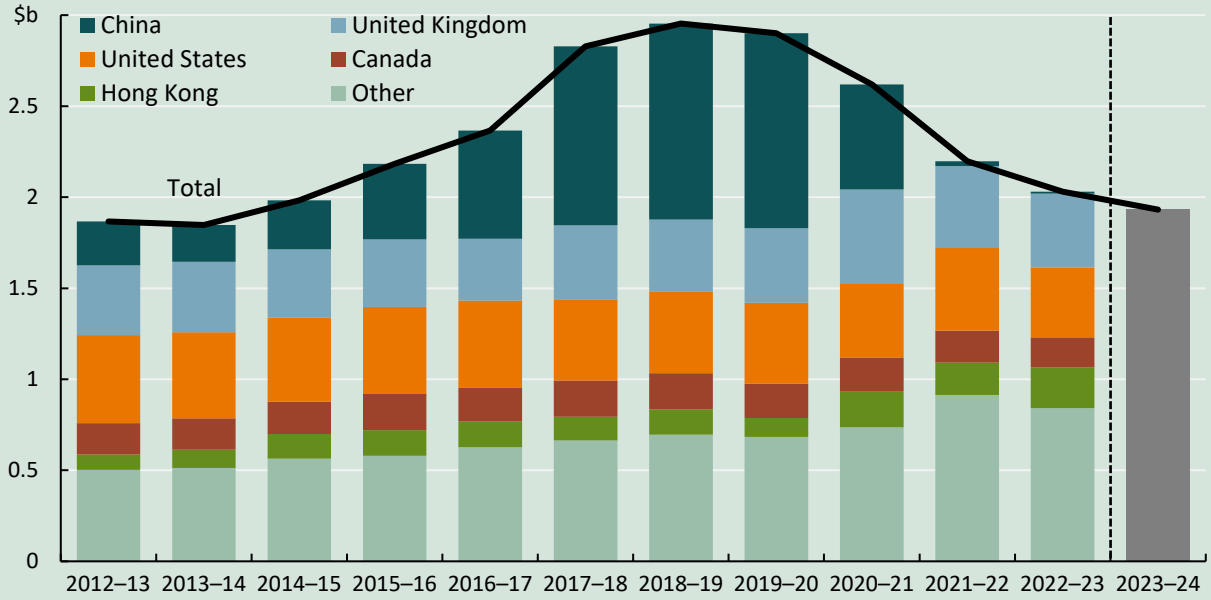
Wine export values are expected to decrease by 5% to $1.9 billion in 2023−24. A forecast 1% increase in export volumes is expected to be more than offset by a 6% fall in prices for exports:

- **Wine export prices** have fallen reflecting a longer−term trend of declining global consumption of wine and subdued household consumption owing to high inflation and cost of living pressures in recent years. Lower discretionary spending on goods such as wine has seen a shift to lower prices paid for wines exported. Inflation has eased from its peak in late 2022, and is expected to ease further in 2023−24, however, cost of living pressures and constrained consumption are expected to continue to weigh on exports. On the supply side, Australia's excess red varietal inventories and high stocks in other major producing countries is also expected to weigh on global prices, incentivising some Australian exporters to offload bulk red wines at low prices.
- **Wine export volume** is forecast to increase by 1% to 644 million litres in 2023−24 as falling prices make Australian wines more competitive. Despite declining export values in 2022−23 and steady volumes of wine exported to the biggest traditional markets of the United States and United Kingdom, growth in some non-traditional Asian markets was strong. The volume of Australian wine sold to the Philippines, Thailand and Vietnam combined increased by 50% in 2022−23, albeit from a low base. This may reflect the focus that exporters have put into diversifying international markets following the introduction of Chinese tariffs on Australian wine in 2020 – then Australia’s highest value market. Similar export patterns are expected to continue into 2023−24.

Box 8.1 The composition of Australian wine exports continues to evolve

The composition of Australia’s wine trade has evolved significantly over the past few years. Australian wine export values rose rapidly between 2013−14 and 2018−19 reflecting growth in the Chinese market. With the introduction of exceptionally high tariffs on Australian wine into China in May 2020, the value of exports to China fell sharply (Figure 8.1). Additionally, Australian wine export values to the United States have declined steadily over the last decade, offset somewhat by higher export values to Hong Kong and other growing Asian markets. Finally, while export values to the United Kingdom jumped in 2020−21 following the onset of COVID-19, they have since declined to pre-pandemic levels. Despite the Australia-UK free trade agreement (A-UKFTA) coming into force in May 2023, the United Kingdom announced higher government taxes on wine around the same time. As such, while Australian imports into the United Kingdom wine market are now relatively more competitive, the additional tax, and current cost of living pressures are expected to reduce gains achieved through A-UKFTA in the short term.

Figure 8.1 The value of Australian wine exports peaked in 2018−19



Note: Data to the right of the dotted line indicates forecasts.
Source: ABS; ABARES

Prices for premium and non-premium wines to fall

Wine grapes prices are forecast to fall by 7% to reach an average of $602 per tonne in 2023−24. The forecast fall is driven by lower **red wine grape prices** (down by 10%) as oversupply and subdued demand continue to challenge the industry, and as production is forecast to increase. **White wine grape prices** are also forecast to fall, albeit by much less (down by 2%), reflecting stronger demand for white wine and more balanced market.

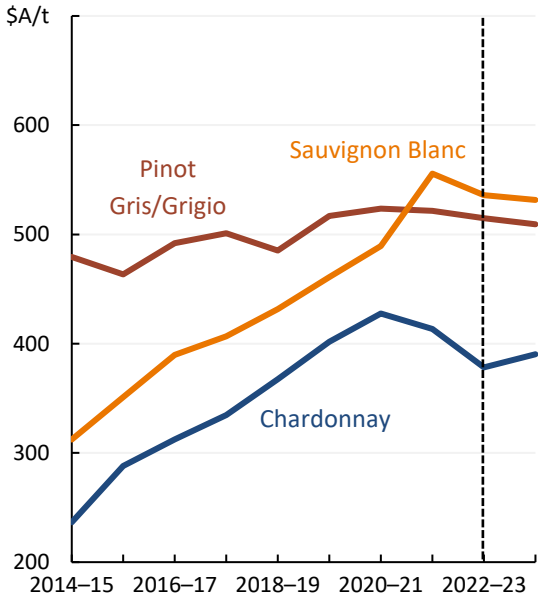
Price movements for red and white wine grapes differed substantially across climate and price points in 2022−23:

- In **cool climate regions** and in premium wine grape markets, prices for both red and white varietals were strong, reducing the national price fall in 2022−23. Prices remained elevated largely because of lower production volumes which fell by 15% in cooler climate regions. In addition, consultation conducted as part of the *September Agricultural Commodities Report* suggests that while domestic consumers have been moderating their consumption, they are consuming more expensive wines on average. A larger share of wine consumed domestically is from the premium wine market, where sales have not declined by much over recent years, maintaining solid demand for premium wines. Overall, cool climate grape prices rose by 4% in 2022−23.
- For **warm inland regions**, prices fell on average across both red and white wine grapes in 2022−23. Overall, average prices fell by 11% across the three warm inland regions, with red varietals falling by 21% on average. The Riverland region was worst affected, with average prices for red varietals falling by 31% and white varietals by 9%, despite a substantially reduced crush size.

The price outlook for 2023−24 is also mixed:

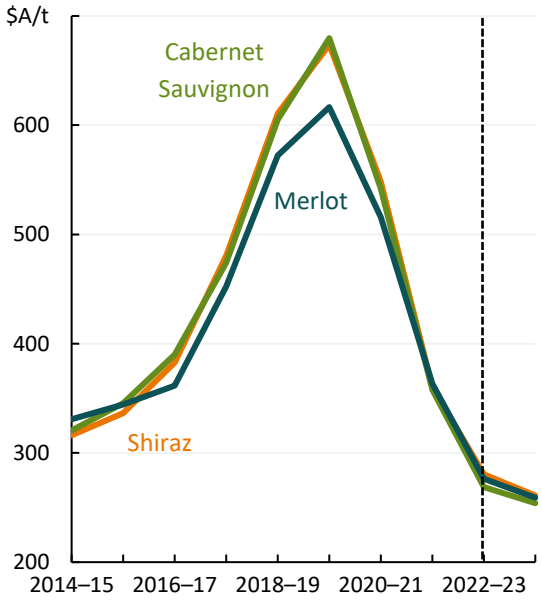
- **Cool climate** grape prices are expected to ease only slightly as production prospects improve and demand for these wines remains relatively steady.
- By contrast, average **warm inland** grape prices are expected to continue to fall 2023–24 (Figure 8.2 and Figure 8.3). This reflects production increases and subdued demand – particularly for red varietals – in domestic and international markets. In addition, some minimum pricing contracts in industry are expected to expire before the next crush, which may push average prices down further for grapes in these regions.

Figure 8.2 Average price per tonne of white grape varietals in warm inland regions



Note: Data to the right of the dotted line indicate estimates and forecasts.
Source: Wine Australia; ABARES

Figure 8.3 Average price per tonne of red grape varietals in warm inland regions



Note: Data to the right of the dotted line indicate estimates and forecasts.
Source: Wine Australia; ABARES

Further price falls – particularly for major red varietals in warm inland regions which are currently around $277 per tonne – could make vine harvesting economically unviable. Industry consultation suggests that some wine makers are looking to cap the tonnes per hectare they are willing to contract with producers at well below current production levels. If undertaken more broadly, this would reduce the overall crush, and could weigh on growers' revenue. However, it would help prevent prices from falling too much further if production is constrained.

Higher Australian production to add to global over-supply

Australian wine grape production is forecast to increase by 21% to 1.6 million tonnes in 2023–24 as production recovers from unfavourable conditions in 2022–23. After widespread heavy rainfall and waterlogging in 2022–23, expected drier weather is forecast to reduce the risk of mildew, provide better opportunity for growers to actively manage the issue through improved access to vineyards for spraying. These factors will all support higher potential production in 2023–24.

While wine grape production is forecast to increase, any higher production potential will likely be constrained by ongoing oversupply and extremely low prices for bulk red wines. In turn, this is expected to lower the harvest for some lower-priced varietals due to lack of sufficient demand at the

lower end of the market. Where winemakers are unable to sell existing stock, some grapes are expected to be left on the vine as high inventories make harvest economically unviable. This is expected to result in lower yields despite favourable growing conditions.

Falling domestic consumption of Australian wine is also likely to curtail production potential. Lower per capita wine consumption has been driven by moderation and health concerns, and in the last 12 to 18 months has been exacerbated by cost-of-living pressures. Despite falling consumption overall, Australians are buying more premium wine. This has resulted in solid production and demand for premium wines, which represents a growing share of the wine produced in Australia. This trend is likely to continue in 2023−24 but be constrained by subdued household consumption growth (see *Economic Outlook*).

Given the oversupply of red varietals globally, prices are expected to fall for low-priced bulk wine exports in 2023−24. This expectation extends the trend from 2022−23 in which the price of bulk wine fell, particularly for red varietal exports, contributing to lower export values. For example, the volume of Australian wine exports to Canada increased by 43% in 2022−23, yet the export values fell by 7%. Similarly, the volume of Australian wine exported to the United States remained constant in 2022−23 while export values fell by 15%. Nevertheless, there are some positive signs for Australian wine exports in emerging markets closer to Australia such as Thailand, Vietnam and the Philippines.

Wine is over supplied globally, particularly in red varietals

Major wine producing regions globally are facing similar challenges to the Australian wine sector given the global oversupply of commercial red varietals and relatively balanced market for white varietals (although the latter market is staring to slow). High global competition and falling wine consumption globally have weighed heavily on prices. This has been compounded by inflationary pressures which have reduced household disposable incomes and further added to declining sales.

Global wine oversupply for red varietals is likely to continue. In the **United States**, large Californian wineries have been offloading large inventories which is reducing winemakers' demand for grapes, even with slightly smaller crops due to mildew from cooler, wetter weather and a severe tropical storm. Both **Spain** and **South Africa** have substantial quantities of red and white varieties at competitive prices, which will contribute to high global supply and lower international prices.

However, ongoing climatic challenges are expected to create issues for crop production in major wine producing countries in 2023−24, tempering global supply. Heatwave, hailstorms and mildew pressures in localised regions of **Italy** are likely to reduce the 2023 harvest to below average. Other major European producers, such as **France** and **Spain** are on track for more average crops, despite recent drought in both and ongoing issues with mildew in **France**. Similarly, unseasonably warm temperatures mean the snowpack may not provide adequate spring and summer water levels to realise production potentials in **Chile**.

World demand on the decline

World demand for wine has been steadily declining since before the COVID-19 pandemic driven by changing preferences for alcoholic beverages, along with increased moderation or abstinence – particularly among younger consumers. COVID-19 saw a spike in consumption in some key markets, such as the United Kingdom, and temporary increases in disposable income (due to constrained

spending alternatives and higher savings rates). However, this has been eroded by the ensuing inflationary cycle and falling disposable incomes globally. While inflation is expected to ease in 2023–24, it is unlikely to arrest the current trend of declining global demand for wine.

Opportunities and challenges

Return to the Chinese market would ease oversupply pressures

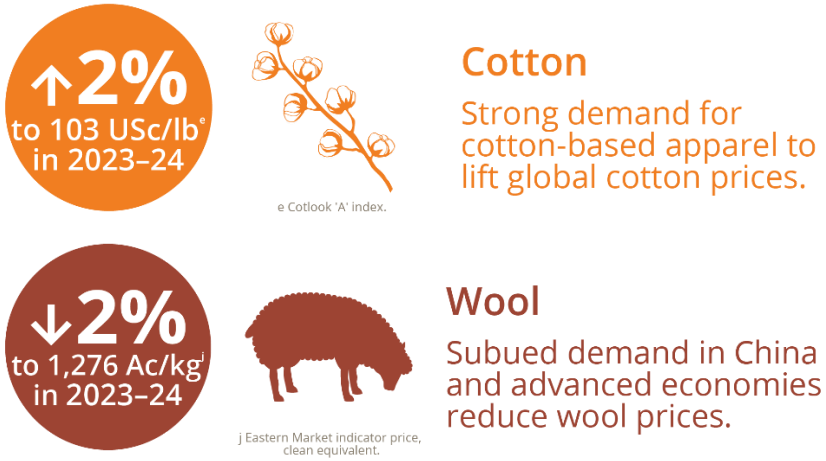
Loss of access to the Chinese market in 2020 due to the introduction of high tariffs presented enormous challenges to Australian wine exporters. There is muted optimism in the wine industry that China may be in a position to reconsider these tariffs going forward, as has been the case with barley exports from Australia (see *Coarse grains*). If tariffs were lifted, this would present a positive opportunity for Australian wine exporters. While it likely would not stop waning global demand for wine or completely alleviate ongoing oversupply issues, it would be a welcome reprieve for the current oversupply of Australian red vintages.

With oversupply of red grape varietals, input costs may out-weight potential revenues

As the Australian wine industry grapples with the oversupply of red wines, winemakers are likely to limit their appetite for purchasing grapes in next year's vintage. Not only does this put downward pressure on already low prices for some red varietals, it also creates a disincentive for growers to harvest their crops. With prices likely to fall further, and production potential increasing, individual wine grape growers will have to consider whether they are likely to recoup their input costs before committing to producing on a large scale. This may mean that some producers could be put in a position where it is no longer profitable to produce grapes for the 2023−24 year.

9 Natural Fibres

Angela Cao



Key points

- The value of cotton to fall by 8% to $3.2 billion in 2023–24.
- The value of wool to remain stable at $3.1 billion in 2023–24.
- Global cotton prices to rise because of both increased consumption and falling production.
- Global wool prices to fall reflecting lower demand and stable world supply.

Value of cotton and wool production to decrease

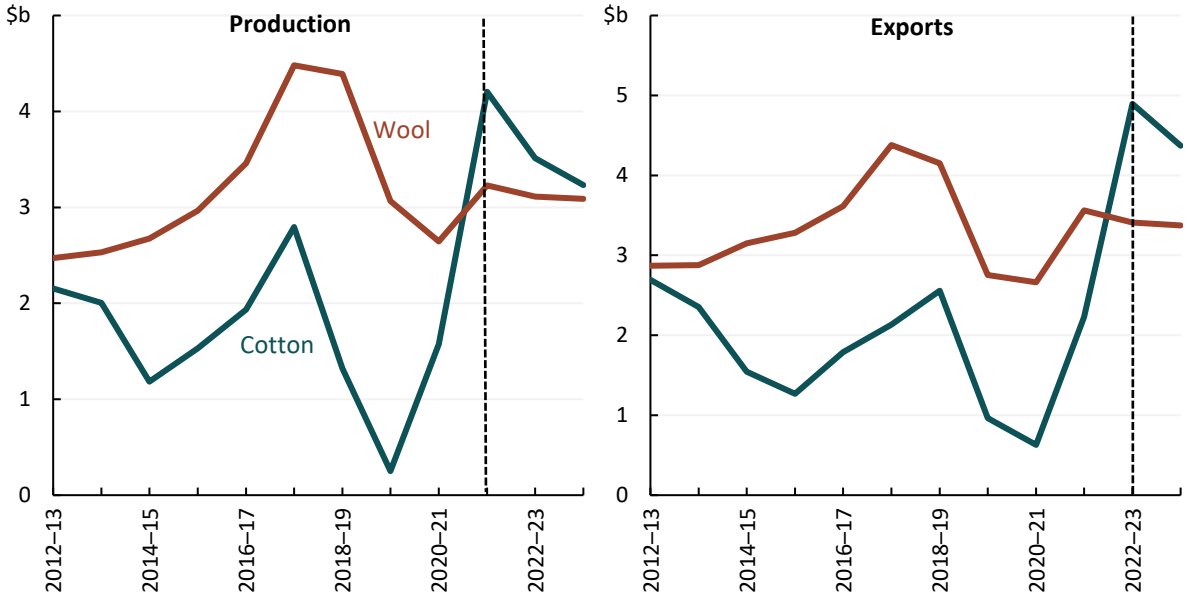
The **gross value of cotton production** is forecast to fall to $3.2 billion in 2023–24, down by 8% from an estimated $3.5 billion in 2022–23 (Figure 9.1). This is broadly consistent with expectations at the time of the *June Agricultural Commodities Report*. The falling production value reflects lower production volumes outweighing higher cotton prices.

Global cotton prices are expected to increase by 2% to an average of US103 cents per pound in 2023–24, driven by expected higher consumption and lower production. Australian cotton production is forecast to decrease by 8% to 1.2 million tonnes (or 5 million bales) in 2023–24 as drier climate conditions are expected to reduce the area planted to cotton.

The **gross value of wool production** is forecast to remain stable at $3.1 billion in 2023–24 as increased wool production is offset by lower prices (Figure 9.1). Wool production volumes are expected to increase as the sheep flock grows with relatively high feed availability (see *Sheep Meat*). However, wool prices are expected to fall as declining disposable incomes in major export markets, such as the European Union and the United States, reduces discretionary spending on woollen apparel. Increased Australian wool production is also expected to weigh on prices as Australia is the world's largest producer of premium wool.

The gross value of wool production forecast for 2023–24 is around $200 million lower than in the *June Agricultural Commodities Report*. This broadly reflects a downwards adjustment of the forecast for wool prices, reflecting recent price data.

Figure 9.1 Annual value of cotton and wool production and exports



Note: Data to the right of the dotted line indicates estimates and forecasts.
Source: ABARES; ABS

Natural fibres export values to fall

The **value of cotton exports** is forecast to decline to $4.4 billion in 2023–24 (down by 11% from a record $4.9 billion in 2022–23) driven by a fall in production volumes outweighing higher prices (Figure 9.1). Export volumes are expected to fall as drier conditions reduce Australian cotton production. However, cotton export volumes are expected to remain 68% above the 10-year average to 2022–23 reflecting strong demand for Australia's high-quality cotton and proximity to key export markets. Global cotton prices are expected to increase slightly in 2023–24 because of reduced global cotton supply and increased demand for yarn. However, global cotton stocks remain high, which when sold is expected to offset some of the increase in global cotton prices.

The **value of wool exports** is forecast to remain relatively steady at $3.4 billion in 2023–24 reflecting only marginally lower prices offset by stable production (Figure 9.1). High auction pass-in rates and increased storage utilisation amongst wool growers and brokers reflect the current market sentiment of relatively low demand for luxury wool fibres.

Cotton prices to rise while wool prices fall

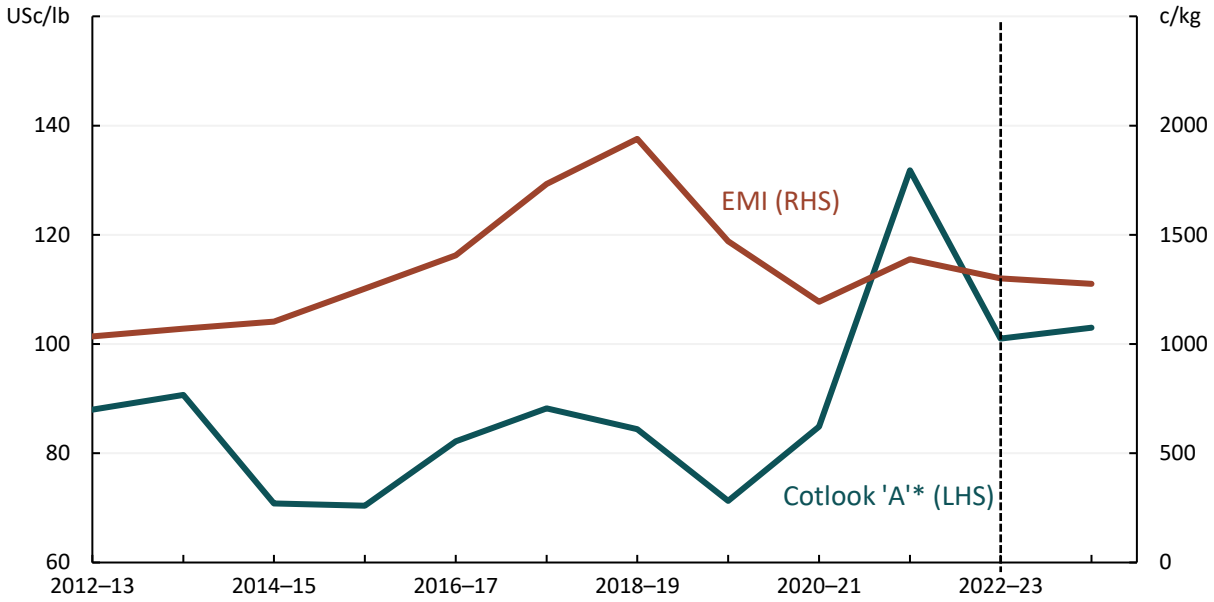
The **Cotlook 'A' Index** (a benchmark of international medium grade raw cotton prices) is forecast to increase to an average of US103 cents per pound in 2023–24, up by 2% compared to 2022–23 marketing year (Figure 9.2). Higher cotton prices reflect expected falling global supply and a slight increase in global demand:

- **Global cotton supply** is expected to decrease as poorer seasonal conditions reduce production in many major cotton exporting countries. Lower global supply is expected to be offset somewhat by improving production in Pakistan.

- **Global cotton demand** is expected to rise as strong demand from Vietnam outweighs subdued demand from China. Australian cotton exports to emerging markets in South-East Asia and India have grown strongly in recent years, especially to Vietnam.

Cotton prices in 2023–24 is expected to be 18% higher than the 10-year average, despite high volatility in recent years (Figure 9.2). The Cotlook 'A' Index declined sharply in late 2022–23 (marketing year) reflecting subdued demand expectations. However, current price futures have priced in rises relative to 2022–23, reflecting an expectation of higher cotton demand in 2023–24.

Figure 9.2 Average annual Cotlook 'A' Index and Eastern Market Indicator prices



Note: Data to the right of dotted line indicates forecasts; *Marketing year (August-July)
Source: ABARES; AWEX; Cotlook

The **Eastern Market Indicator** (EMI; an index of Australian wool prices used internationally) is forecast to fall to an average of 1,276 cents per kilogram in 2023–24, down by 2% compared to 2022–23 (Figure 9.2). Expected lower wool prices are driven by both a reduction in global demand for luxury woollen garments (particularly from the United States and China) and increased global supply. In contrast, Chinese buyers have recently taken advantage of low prices and increased import volumes of Australian coarse wool.

The EMI tracked steadily throughout 2022–23 despite a large volume of wool being brought to market. However, the EMI declined sharply in the last week of June, closing at 1,126 cents per kilogram – a 20% year-on-year decrease not observed since June 2020 – reflecting deteriorating buyer sentiment for wool. The rapid fall caused uncertainty surrounding future prices, incentivising some local brokers to dispose of lower grade wool in favour of finer fibres. While prices in early 2023–24 have shown signs of stabilising, they continue to reflect subdued demand for wool.

Cotton production to decrease but wool production to rise

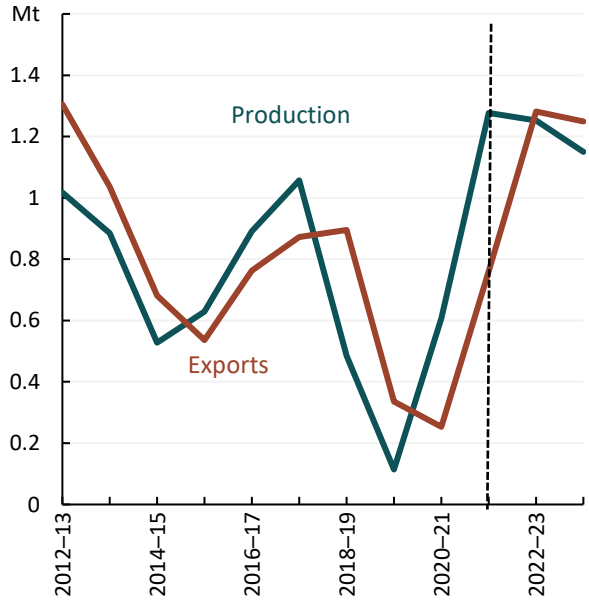
Cotton production to fall driven by lower area planted

Cotton production in Australia is forecast to decrease to 1.2 million tonnes in 2023–24, down by 8% from 1.3 million tonnes in 2022–23 (Figure 9.3) largely reflecting a lower area planted:

- **Area planted** to cotton is forecast to decrease to 560,000 hectares in 2023–24, down by 16% from 667,000 hectares in 2022–23 (Figure 9.4). Drier seasonal conditions are expected to incentivise growers to reduce the area planted to cotton. However, since cotton prices are fluctuating at a relatively high level, area planted is expected to still be at near record high levels.
- **Aggregate cotton yields** are expected to increase to 2.1 tonnes per hectare in 2023–24, up from 1.9 tonnes per hectare in 2022–23 (Figure 9.4). A higher proportion of Australian cotton is forecast to be irrigated. Drier conditions are expected to support the plant development of irrigated crops, increasing yields slightly. Improving irrigated cotton yields are expected to more than offset lower dryland cotton yields from the expected hot and dry climate effects.

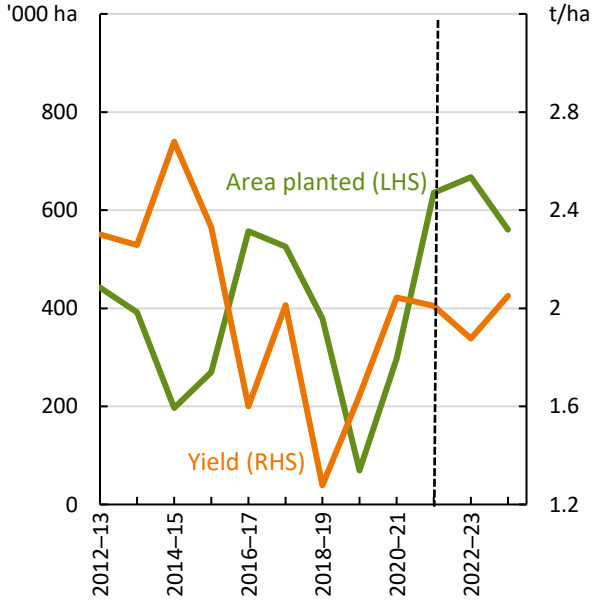
Despite a forecast fall in area planted to cotton, planting in 2023–24 will be supported by high levels of water storage in the Murray-Darling Basin following three consecutive years of above average rainfall. The Water Market Outlook indicates high water storage levels and unused water balances (which are likely at or near account limits) will carry over into 2023–24. This is expected to help buffer producers (especially irrigated cotton producers) from expected drier seasonal conditions. Irrigated cotton has made up over 80% of production over the last decade to 2022–23 and is typically higher yielding than dryland cotton. By contrast, dryland cotton yields will likely be more affected by drier conditions due to its reliance on timely rainfall to support crops.

Figure 9.3 Annual volume of cotton production and exports



Note: Data to the right of dotted line indicate estimates and forecasts.
Source: ABARES; ABS

Figure 9.4 Annual cotton area planted and yield



Note: Data to the right of dotted line indicate estimates and forecasts.
Source: ABARES; ABS

Cotton export volumes are forecast to fall by 3% to 1.2 million tonnes in 2023–24 reflecting lower cotton production; this would still be the second highest export volume on record (Figure 9.3). Despite lower cotton production, high closing stock levels from 2022–23 are expected to keep export volumes elevated. Export volumes will be supported by strong demand from importing countries such as Vietnam, Indonesia, and India. Easing inflationary pressures in these countries are also expected to support Australian exports in 2023–24.

Wool production to increase driven by a larger sheep flock

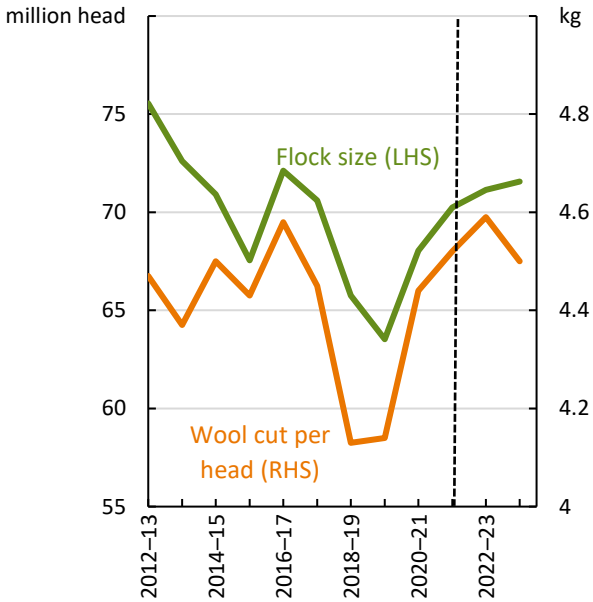
Total wool production is expected to increase slightly in 2023–24 as higher sheep slaughter, due to drier seasonal conditions, leads to greater non-shorn wool production. **Shorn wool production** is forecast to remain relatively stable at 324 thousand tonnes in 2023–24 (Figure 9.5), as the forecast increase in the larger sheep flock is offset by a fall in the sheep shorn ratio and wool cut per head (see *Sheep Meat*). Wool production is forecast to be driven by:

- Growth in the **sheep flock**, up by 1% to 71.6 million head in 2023–24 (Figure 9.6). Pasture availability remains relatively high following favourable weather conditions in 2022–23, but the drier seasonal conditions are expected to slow flock rebuilding.
- Fall in **wool cut per head**, down by 2% to 4.5 kilograms (Figure 9.6). Producers are expected to shear more lamb than ewes in the upcoming season. In addition, drier conditions over spring and summer are forecast to weigh on pasture growth and therefore, wool cut per head. However, this is expected to be partially offset by the fodder reserves accumulated over recent years. As a result, wool cut per head is expected to remain above the ten-year average as pasture availability remains relatively high.

Figure 9.5 Annual volume of total wool production and exports

Note: Data to the right of dotted line indicate estimates and forecasts; Total wool production includes shorn wool, sheepskins, shorn and fellmongered wool.
Source: ABARES; ABS

Figure 9.6 Annual sheep flock size and wool cut per head



Note: Data to the right of dotted line indicate estimates and forecasts.
Source: ABARES; ABS

Total **wool export volumes** are forecast to decrease by 4% to 443 thousand tonnes (Figure 9.5). Export volumes are expected to remain above production levels as inventories are drawn down by wool brokers. China – a major importer of Australian wool – is expected to reduce consumption of luxury woollen apparel (especially for finer microns) in 2023–24 reflecting challenging economic conditions. However, demand for coarse wool is expected to sustain export volumes as low prices incentivise buyers to add to existing high stock levels.

Global cotton production to fall, wool remains stable

Global cotton production is forecast to decrease by 4% in 2023–24 marketing year to 24.8 million tonnes (109 million bales), driven by poorer seasonal conditions. Lower production in China, India, Brazil, the United States and Australia is expected to outweigh higher production in Pakistan:

- **China's** cotton production is expected to fall by 14%. Cooler-than-normal temperatures early in the growing season as well as floods, mudslides and heatwaves are expected to weigh on production. Recent heatwaves in the Xinjiang province, a region that produces around 90% of China's cotton, are also expected to damage crops and weigh on cotton yields.
- **India's** cotton production is expected to fall by 2% in 2023–24. The Farm Service Agency in Mumbai expects cotton producers to shift to higher-yielding crops because of lack of demand for textile products in advanced economies. In addition, recent heavy rainfall and flooding in Mahendragarh and Charkhi Dadri districts damaged cotton crops at the flowering stage, with the impact to total national production yet to be determined.
- **Brazilian** production is anticipated to decrease by 5%, down from record highs, driven by continued high production costs and competition for land from other crops.
- **United States** cotton production is expected to decrease by 3% as anticipated drier climate conditions weigh on yields across West Texas, where over 50% of US cotton is produced. Despite the fall in production, national area planted is expected to rise as the country moves away from record levels of crop abandonment in 2022–23 because of low rainfall.
- Conversely, **Pakistan's** cotton production is expected to increase by 40% in 2023–24 from a low base in 2022–23. In 2022–23, severe flooding in Pakistan damaged crops, lowering yields. The rebound is expected to continue despite wet weather slowing the pace of cotton seed arrivals.

Global cotton closing stocks are expected to fall by 3% in 2023–24 as inventories are drawn down to service global demand in the face of lower global production. Despite this, cotton inventories are expected to remain relatively high as large stocks were accumulated during the pandemic.

Global wool supply is expected to remain steady in 2023–24. Australian wool export and production volumes are expected to remain high, but supply will be offset somewhat by lower production in New Zealand. New Zealand's wool production is expected to fall because of the country's declining sheep flock; this reflects several factors including afforestation for carbon farming.

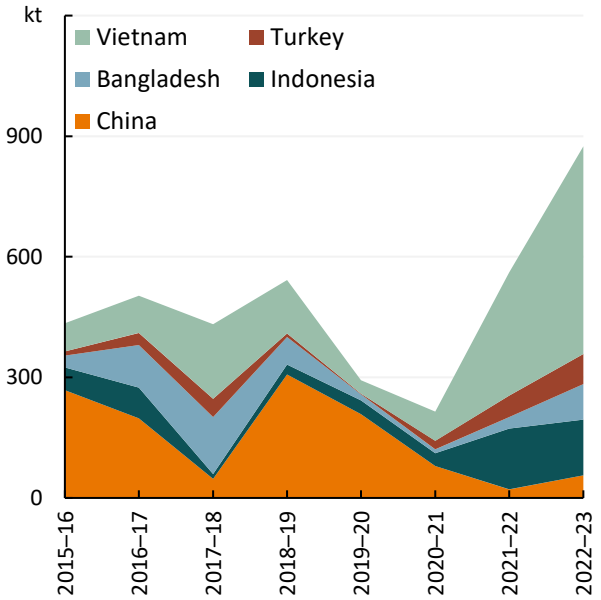
Global cotton demand to remain stable, wool to decline

Global cotton demand is expected to be resilient over 2023–24 driven by demand in emerging economies:

- **Vietnam's** demand for cotton is expected to rise in 2023–24 as international demand for cotton garments increases (Figure 9.7). Lower real disposable incomes across many advanced economies and growing preference for sustainable fibres are expected to cause consumers to buy cotton garments compared to more expensive natural fibres. As a large manufacturer of cotton garments, this is expected to increase Vietnam's demand for cotton. Australian cotton exports to Vietnam have grown rapidly over the past two years, with Vietnam accounting for 33% of Australian cotton export volumes in 2022–23.

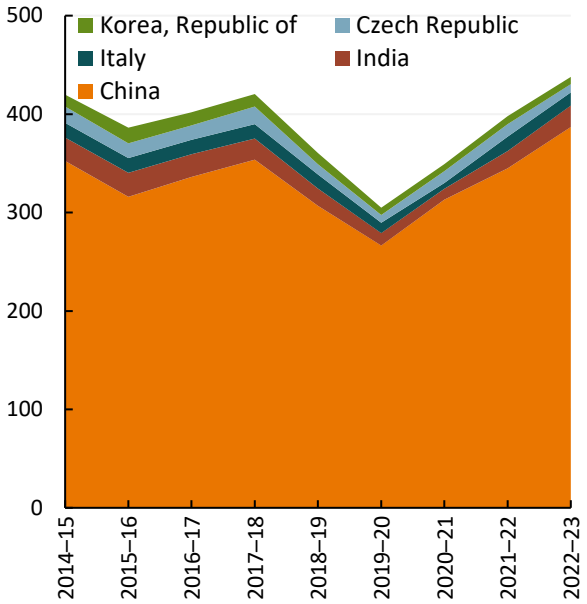
- Cotton demand from other **southeast Asian** countries is expected to remain relatively robust in 2023–24.
- By contrast, **China's** demand for cotton is expected to remain subdued in 2023–24. Reduced cotton production has led China's Government to sell cotton from state reserves instead of significantly increasing imports. China has a tariff quota system which regulates cotton import volumes through tariff measures, this is expected to limit cotton imports in 2023–24.

Figure 9.7 Annual volume of Australian cotton exports, top 5 export destinations*



Note: *Top five export destinations based on average annual export volumes from the five years to 2022-23.
Source: ABARES; ABS

Figure 9.8 Annual volume of Australian wool exports, top 5 export destinations*



Note: *Top five export destinations based on average annual export volumes from the last five years to 2022-23.
Source: ABARES; ABS

Conversely, **global wool demand** is expected to fall slightly in 2023–24:

- High inflation and interest rates have reduced real disposable incomes in **advanced economies**, reducing discretionary spending on luxury woollen garments.
- Demand from **China** is expected to remain subdued in 2023–24 as challenging economic conditions suppress demand for woollen garments (see *Economic Overview* for more context). China is currently Australia's largest export market for shorn wool, accounting for more than 80% of Australia's wool export volumes in 2022–23 (Figure 9.8).

The Australian dollar is expected to remain relatively weak in 2023–24. This will help increase the competitiveness of Australian export prices in international markets during a time of subdued economic activity and support demand for Australian exports (see *Economic Overview*).

Opportunities and challenges

Investment in cotton gin raises production potential

Construction of a cotton gin north of Kununurra in Western Australia has commenced. This is expected to reduce burgeoning cotton supply in the region and reduce logistical costs for producers. The project is also expected to enhance the region's competitiveness through higher levels of

production, improved cotton quality, and adding value to raw local cotton. It will also benefit the region's livestock sector as cotton seeds removed from ginning can be used as feed.

Export opportunities to Cambodia

The Cambodia Investment Board (CIB) has approved over US$50 million to establish textiles and garment manufacturing facilities across the country. With most Australian cotton exported to India and southeast Asia, Cambodia may also emerge as a significant consumer of Australian cotton.

10 Beef and veal

Alistair Read

Key points

- Gross value of production to fall by 4% to $14.3 billion in 2023–24 driven by lower prices.
- Domestic production volumes to increase as drier seasonal conditions reduce pasture availability and increase turn-off.
- Global beef supply to increase slightly driven by rising beef production in Australia and Brazil.
- Global beef demand to remain relatively stable.

Value of production to fall slightly with lower prices

The gross value of beef and veal production and live cattle exports is forecast to fall to $14.3 billion in 2023–24, down by 4% from an estimated record of $14.9 billion in 2022–23.

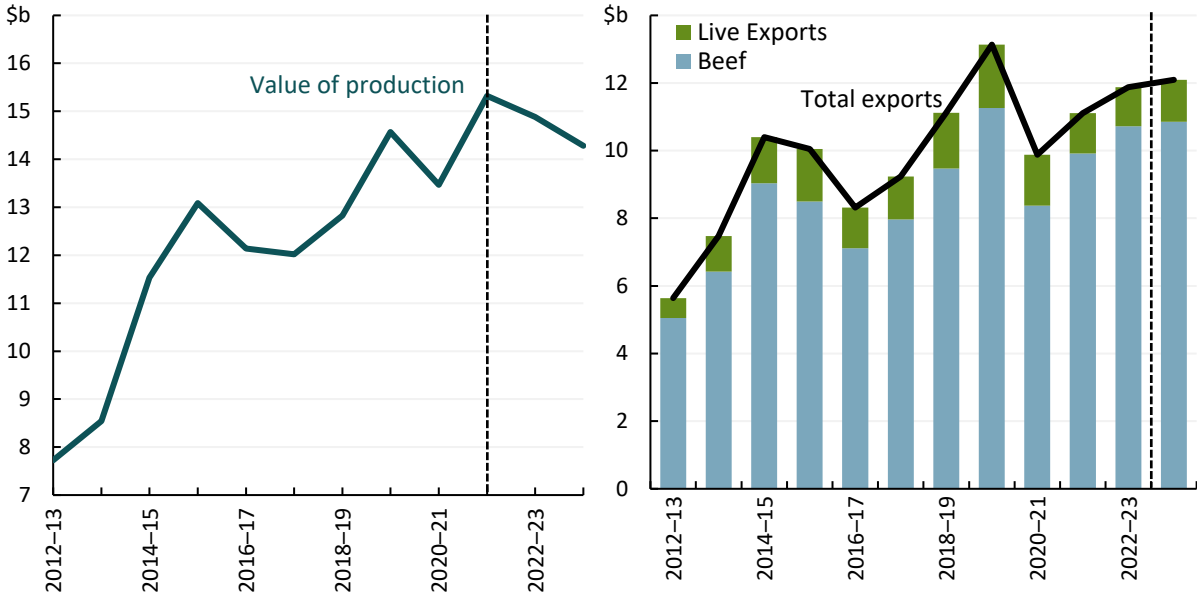
The average saleyard price of cattle is forecast to fall to 560 cents per kilogram in 2023–24, 15% lower than the average of 662 cents per kilogram in 2022–23. Falling cattle prices reflect the increased supply of cattle to saleyards as both a large cattle herd and drier seasonal conditions increase cattle turn-off. Beef and veal production is forecast to rise by 14% to 2,293 kilotonnes in 2023–24 as higher slaughter numbers more than offset lower cattle weights.

The forecast value of beef and veal production in 2023–24 is $0.4 billion lower than in the *June Agricultural Commodities Report*. A downwards adjustment to average saleyard prices for cattle – reflecting recent price data – has more than offset a small upwards revision in beef production.

Value of exports to rise with higher export volumes

The export value of Australian beef, veal and live cattle is forecast to increase to $12.1 billion in 2023–24, up 2% from $11.9 billion in 2022–23 (Figure 10.1). Higher export values are expected as increased export volumes outweigh lower export prices for both beef and live cattle. Drier seasonal conditions in Australia are expected to increase both cattle turn-off and beef production. This increase in supply is expected to lower export prices for Australian beef, however, strengthening demand from the United States and China is expected to moderate the decline in prices.

Figure 10.1 Gross value of annual beef and veal production and exports



Notes: Data to the right of dotted line indicate estimates and forecasts.
Source: ABARES; ABS

Cattle and beef prices to fall with drier seasonal conditions

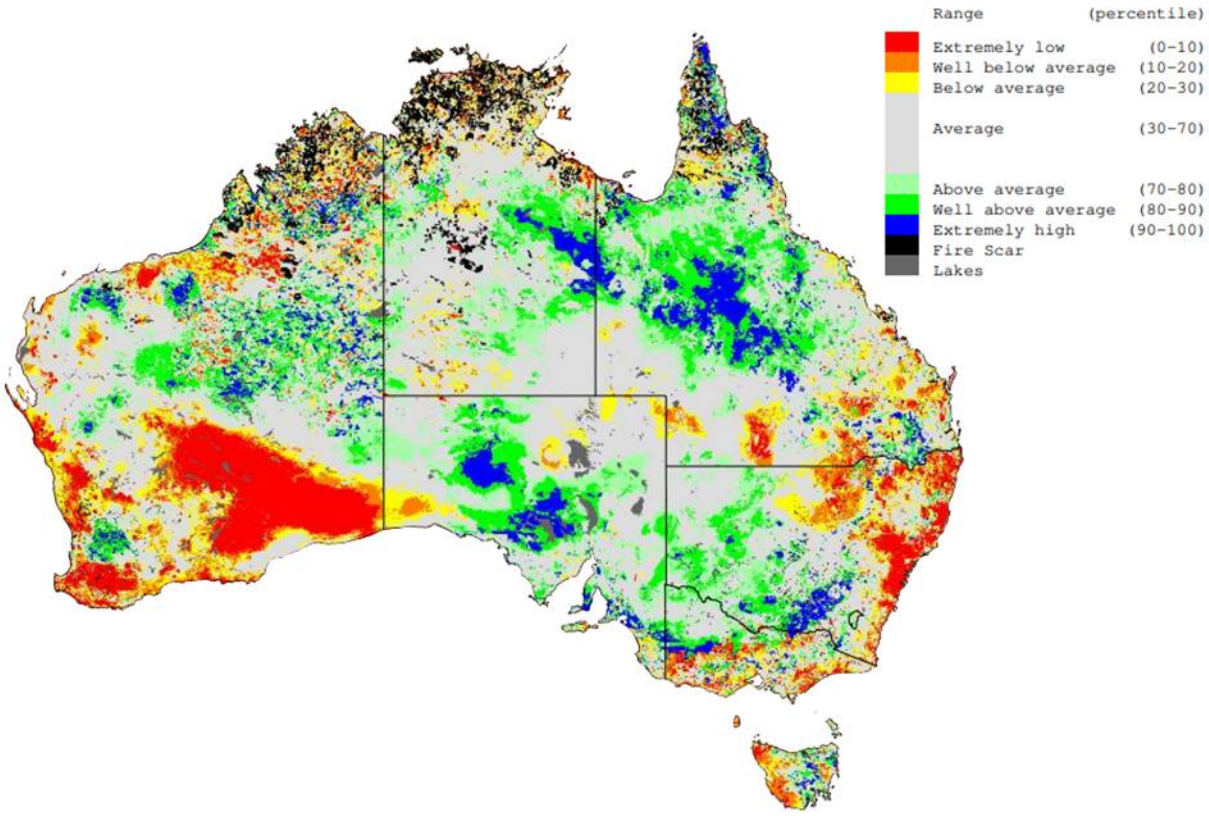
Average saleyard prices for cattle are forecast to fall to 560 cents per kilogram in 2023–24, down 15% from 662 cents per kilogram in 2022–23, reflecting higher cattle supply in saleyards at the national level (Figure 10.3).

The expected onset of both El Niño conditions in the second half of 2023, and a positive Indian Ocean Dipole (IOD) event from August are expected to generate drier seasonal conditions across Australia (see *Seasonal Conditions* for more context). In 2023–24, drier conditions are expected to reduce pasture availability and increase supplementary feed prices. This is expected to reduce farm demand for cattle, raise turn-off rates, increase cattle supply in saleyards and lower saleyard prices. However, cattle saleyard prices are expected to remain above their long-term average, supported by strong global demand for Australian beef exports.

Saleyard prices in northern Australia continue to maintain a premium over southern Australia despite the recent implementation of export restrictions on Australian live cattle exports to Indonesia and Malaysia. Better pasture availability and a delayed start to the northern rebuilding cycle have supported restocker cattle demand in northern Australia, pushing northern cattle prices higher. Conversely, an outlook for significantly drier seasonal conditions have effectively ended restocking activity, placing downward pressure on southern cattle prices.

Most of northern Australia experienced a good wet season and above average rainfall from May to June, leading to good soil moisture and average pasture growth. Pasture health and availability remain high in the cattle regions of central and northern Queensland, the Northern Territory and northern Western Australia (Figure 10.2).

Figure 10.2 Total standing dry matter (TDSM) percentile, 31 July 2023

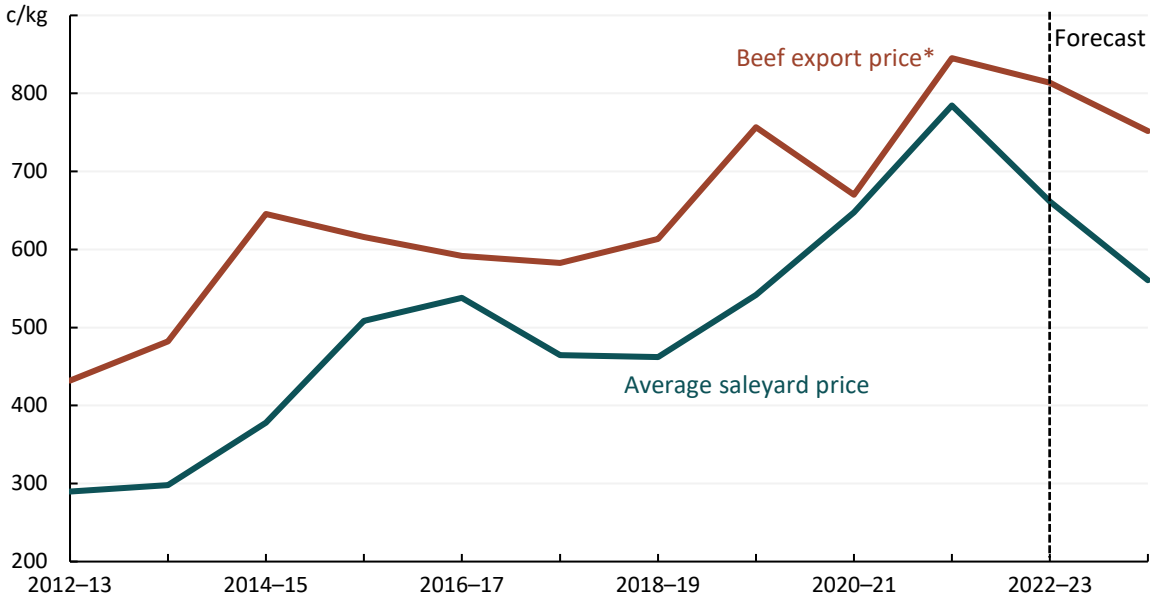


Source: AussieGRASS

Australian beef export prices are forecast to fall as rising global beef supply – particularly from Australia and Brazil – outweighs stronger demand from China and the United States (Figure 10.3). Global beef prices are expected to fall by less than average Australian saleyard prices as growth in the supply of cattle to Australian saleyards is forecast to be larger than the growth in global beef supply. This difference is expected to benefit domestic processors as the price margin between the cattle they buy and the exported beef they sell increases. Comparatively higher global beef prices will likely incentivise Australian processors to focus on supplying the export market rather than the domestic market.

Nonetheless global beef prices are expected to remain elevated. The Russian Federation's withdrawal from the Black Sea Grain Initiative is expected to keep grain input prices both elevated and volatile, increasing global production costs for grain-fed beef. This is expected to pressure beef producer margins and support global beef prices.

Figure 10.3 Australian average cattle saleyard price and export price



Note: Data to the right of dotted line indicate estimates and forecasts; *The US 90CL CIF price is used as the Australian beef export price. This price is converted into Australian cents per kilogram.
Source: ABARES; MLA

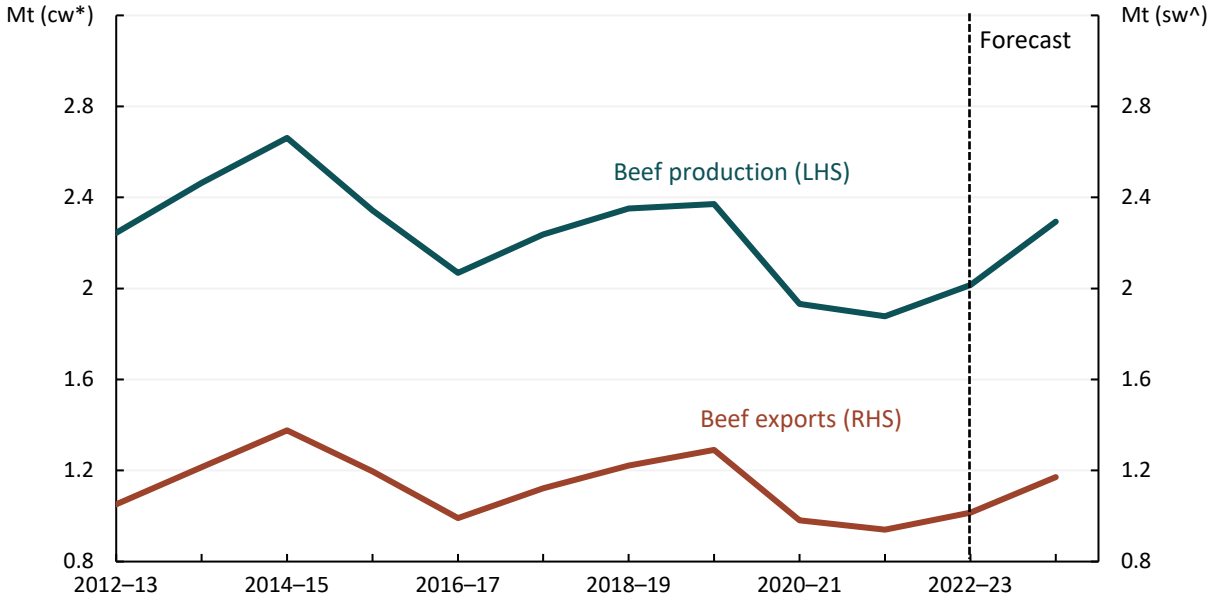
Beef production and exports rising with increased slaughter

Australian beef and veal production volumes are forecast to rise by 14% to 2,293 kilotonnes (carcase weight) in 2023–24 as an increase in cattle slaughtered more than offsets lower cattle weights (Figure 10.4):

- **Cattle slaughter** is forecast to increase to 7.4 million head in 2023–24 (up by 18% from 6.3 million head in 2022–23). A larger Australian cattle herd and drier seasonal conditions are expected to increase cattle turn-off, increasing cattle slaughter and beef production. The Australian cattle herd is expected to increase to 26.3 million head in 2023–24 due to favourable conditions in Northern Australia. If realised, this would be the largest Australian cattle herd since 2014–15.
- **Cattle slaughter weight** is forecast to fall to an average of 307 kilograms per head in 2023–24 (down by 3% from 319 kilograms per head in 2022–23). Lower cattle weights are expected because of lower feed availability relative to 2022–23 and a higher proportion of female cattle being slaughtered. However, average cattle slaughter weights are expected to be the third highest on record after both 2021–22 and 2022–23.

Beef export volumes are expected to rise by 15% to 1,171 kilotonnes (shipped weight) in 2023–24 driven by increased domestic beef production (Figure 10.4).

Figure 10.4 Annual volume of Australian beef and veal production and exports



Note: Data to the right of dotted line indicate estimates and forecasts; *carcase weight; ^shipped weight.
Source: ABARES; ABS

Slaughter capacity is not expected to constrain livestock slaughter during 2023–24 despite higher slaughter rates. Industry liaison conducted by ABARES ahead of the *September Agricultural Commodities Report* suggests that processors are operating near current capacity. However, if processor profitability and the cattle supply in saleyards remains strong, processors may need to increase slaughter capacity. Processors would likely achieve this by moving to double shifts or operating 6 days a week. However, industry liaison suggests that increasing slaughter capacity could potentially be delayed by labour constraints.

Live cattle export volumes to increase with lower domestic cattle prices

Live cattle export volumes are expected to increase by 27% to 750,000 head in 2023–24 as higher live feeder/slaughter cattle exports outweigh lower live breeder cattle exports:

- **Live feeder/slaughter cattle** exports are expected to increase to around 652,000 head in 2023–24 (up by 34% from 486,000 head in 2022–23). Falling Australian saleyard prices and shipping costs will reduce the price of live cattle exports and help support demand from key export partners such as Indonesia (assuming a timely resolution of recent export suspensions) and Vietnam. Several factors are expected to constrain further live feeder/slaughter export growth:
    - Demand from Indonesia remains subdued; consumers are spending less and trading down into cheaper products such as Indian buffalo meat and chilled products.
    - Export availability of animals in Northern Australia, particularly in the Northern Territory is relatively low. This is because the herd rebuild is still underway in Northern Australia following a strong wet season and many cattle have been moved further south over recent years. However, the recent wet conditions in northern Australia and drying conditions in southern Australia will incentivise producers to hold more heifers in northern Australia. This is expected to increase the availability of cattle for live export from the start of 2024.
    - Indonesia's recent suspension on live cattle exports on 28 July 2023 from four major Australian exporting facilities is expected to weigh on the volume of live cattle exports in early 2023–24.

However, as Australia remains free of Lumpy Skin Disease (LSD), this forecast assumes a timely resolution to export suspension that does not have a significant impact on Australia's live cattle exports to Indonesia in 2023–24.

  - The Malaysian Government has also temporarily suspended all live cattle and buffalo exports from Australia. The decision will not greatly impact Australian live exports as Malaysia is a minor export destination (accounting for less than 2% of Australia's live cattle exports in 2022–23).

- **Live breeder cattle** exports are expected to fall to around 98,000 head in 2023–24 (down by 7% from 105,000 head in 2022–23) reflecting lower Chinese demand. Live breeder cattle exports are predominantly live dairy breeder exports to China. An oversupply of milk in China has led to the culling of cattle and reduced China's demand for live dairy breeder cattle from Australia. This is expected to outweigh the impact of New Zealand's recent ban on live cattle exports by sea (see *Dairy* for more information).

Rising world beef supply to lower beef export prices

World beef supply is expected to rise as increased production in Australia and Brazil outweigh a small decline in United States beef production:

- **Australia** is the world's third largest beef exporter. As a result, the substantial increase in Australian beef production will contribute to higher global beef supply.
- **Brazil's** beef production and exports are expected to increase slightly in 2023–24. Over the last decade, the volume of Brazilian beef available for export has increased significantly. Growing Chinese import demand, a strengthening Sino-Brazilian trade relationship, and a persistent depreciation of the Brazilian real has led to strong growth in export returns. This has incentivised more Brazilian beef to be exported rather than sold domestically, increasing global supply.
- **United States** beef production is expected fall in 2023–24 but remain historically high. The US herd rebuilding cycle is now expected to start in late 2024 or early 2025; this is expected to start tightening global beef supply from late 2023 as US slaughter rates start to fall. Herd destocking continues as parts of the central United States remain very dry. Although slaughter numbers have started to fall, this is most likely attributable to a smaller herd size. The proportion of female cattle in feedlots and being slaughtered remains high, signalling that the US herd remains in a destocking phase.

World demand for beef to remain stable

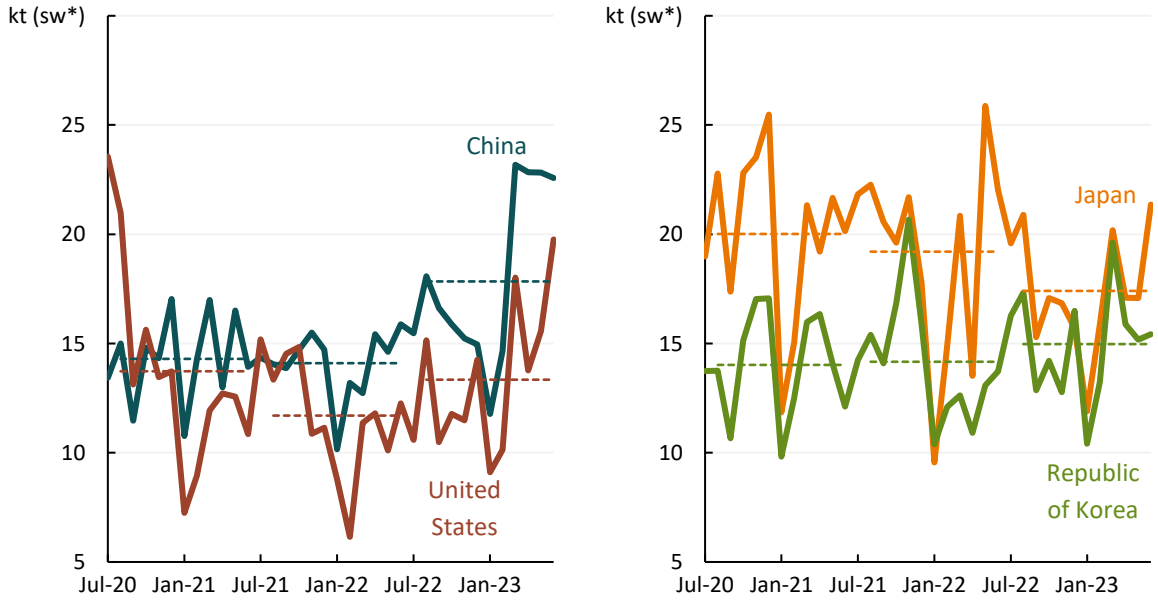
World demand for Australian beef is expected to remain relatively stable in 2023–24 as increased demand from China and the United States is offset by reduced demand in Japan and the Republic of Korea:

- **China's** demand for Australian beef is expected to improve over 2023–24 following the relaxation of pandemic restrictions midway through 2022–23. Australian beef exports to China have been relatively strong recently despite China's economic recovery losing momentum in recent months. Australia's beef export volumes to China in March, April and May 2023 were the largest since May 2020 (Figure 10.5). Chinese beef importers appear to be becoming more price sensitive due to the

challenging economic conditions; falling Australian beef export prices in 2023–24 expected to support strong Chinese demand.

- **United States** demand for Australian beef is also expected to rise slightly as US herd destocking continues, increasing US import demand. Australian beef exports to the United States have risen sharply over recent months (Figure 10.5); driven in part by a widening price gap between US and Australian lean grinding beef.
- **Japan's** demand for Australian beef is expected decline slightly in 2023–24. Australian beef export volumes to Japan were relatively weak throughout 2022–23 and this is expected to continue into 2023–24 (Figure 10.5) with weaker household consumption. Japan's cold store beef inventory has also steadily increased to record levels. Japan's cold stores of imported beef are up to 30% higher year-on-year. This is expected to weigh on Japanese demand and limit inventory space for Australian beef exports.
- The **Republic of Korea's** demand for Australian beef is expected to fall slightly in 2023–24. The country's cattle herd is near historic highs. This herd is beginning a destocking phase, increasing beef production, and placing downward pressure on demand for Australian beef exports. Economic growth in the Republic of Korea has been below trend in 2023, weighing on consumer spending on products including beef. A survey conducted by the Korea Rural Economic Institute in January 2023 suggested imported beef consumption fell in 2022 in large part due to high beef prices.

Figure 10.5 Monthly volume of Australian beef and veal exports by destination



Note: Dotted Lines indicate fiscal year averages; *shipped weight.
Source: ABARES; ABS

Opportunities and challenges

Biosecurity remains a key risk for the livestock industry

Foot-and-mouth disease and lumpy skin disease (LSD) have both been reported in Indonesia and other countries to Australia's north. If introduced to Australia, these diseases would reduce market access for Australia's exports and be extremely disruptive to Australia's livestock industry. The

Australian Government is continuing to work with industry and the Indonesian Government to develop and strengthen prevention and preparedness measures.

On 28 July 2023, the Indonesia's Agriculture and Quarantine Agency (IAQA) advised the Australian Government's Department of Agriculture, Fisheries and Forestry that LSD had been detected in 13 cattle exported from Australia to Indonesia. Although these cattle were imported from Australia, LSD was only detected some time after the cattle arrived in Indonesia where LSD has become endemic.

Following this detection, Indonesia suspended exports from four Australian export facilities. These four export facilities have previously accounted for a significant amount of Australia's live cattle exports. This leaves 28 registered establishments that can export live cattle to Indonesia. This export suspension could have large implications for Australia's live cattle industry if kept in place.

Furthermore, the Malaysian Government has suspended Australian live cattle exports citing LSD concerns and following Indonesia's decision. While Malaysia's decision in isolation will not greatly affect Australian live cattle exports as a minor export destination, if other countries follow suit, the implications could be larger.

The Australian Government has confirmed that LSD has never been detected in Australia, and Australia remains free of the disease. The Australian Government is working with Indonesian and Malaysian authorities to reassure them that all animals exported from Australia comply with all requirements, including being free of LSD.

Australia-UK Free Trade Agreement entered into force on 31 May 2023

The Australia-UK Free Trade Agreement (A-UKFTA) entered into force on 31 May 2023. The FTA will remove tariffs from over 99% of Australian goods. Tariff elimination periods vary by product, ranging from immediately upon entry into force to ten years.

This agreement is expected to benefit Australian beef exporters, providing immediate access to substantial duty-free transitional quotas for beef. Within 10 years, tariffs on all Australian agricultural goods will be completely eliminated.

Australia facing increased competition in key export markets

Australia's competitors are gaining increased access to key markets for Australian livestock and livestock products.

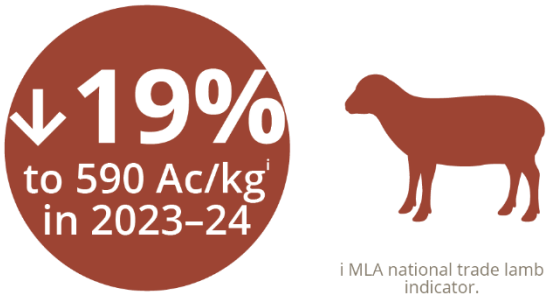
On 22 March 2023, Japan relaxed restrictions on Canadian processed beef imports which had existed since the discovery of bovine spongiform encephalopathy (BSE) in Canada in 2003. In 2022, Canada was forecast to have been the world's eighth-largest beef exporter, and Japan was Canada's second largest beef export market in 2021. Japan's relaxation of restrictions on Canadian processed beef could encourage other trade destinations such as China, the Republic of Korea and Taiwan to also relax beef trade restrictions.

The Brazilian and Indonesian Governments recently signed protocols that provide Brazilian exporters market access for live cattle into Indonesia. While Australia has exclusively supplied live cattle to Indonesia for over 30 years, record high cattle prices in Australia are incentivising Indonesian buyers to consider other markets. Increased market access for Brazil will increase the competition for Australian live cattle exports to Indonesia.

Brazil's ability to export live cattle may be affected after a ruling by a Brazilian federal judge to ban all live cattle exports from Brazil. The ruling, currently nonbinding, will take effect if it is deemed legally compliant by a higher federal court and accepted by the Brazilian Government.

11 Sheep Meat

Jasmine Rollan



Key points

- Value of sheep meat production to fall by 14% to $3.9 billion in 2023–24 reflecting lower prices.
- Production volumes to rise as drier seasonal conditions increase turn-off rates.
- Value of sheep meat exports to fall by 16% to $3.8 billion in 2023–24 reflecting lower export prices.
- Global sheep meat supply to increase, driven by higher Australian production.
- Global sheep meat demand to rise, driven by economic recovery in China and the Middle East.

Value of production to ease following lower prices

The gross value of production for sheep meat (includes lamb, mutton and live sheep) is forecast to fall to $3.9 billion in 2023–24, down by 14% from an estimated $4.6 billion in 2022–23 (**Figure 11.1**). The forecast fall in production values is driven by lower saleyard prices more than offsetting higher production.

The average saleyard prices of both lamb and sheep are forecast to fall as drier seasonal conditions increase the supply to saleyards. Drier seasonal conditions and a larger sheep flock are expected to increase turn-off, slaughter rates and sheep meat production.

The gross value of production for sheep meat in 2023–24 is $0.4 billion lower than in the *June Agricultural Commodities Report*. A downwards adjustment to average saleyard prices for sheep meat – reflecting recent price data – has more than offset a small upwards revision to sheep meat production.

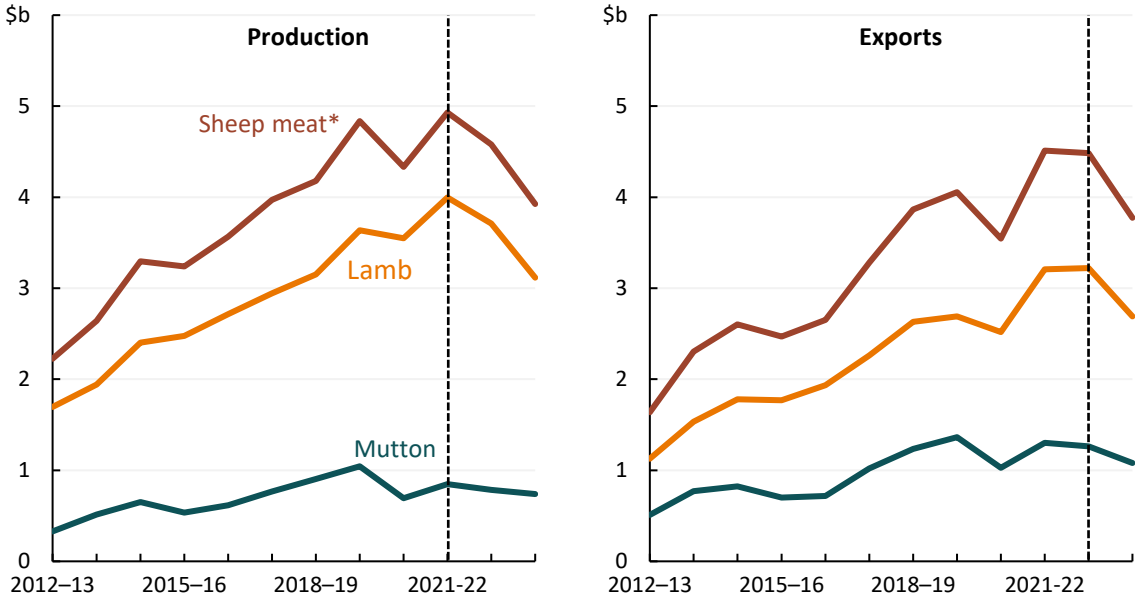
Rising export volumes to support high export values

The value of sheep meat exports is forecast to fall to $3.8 billion in 2023–24, down by 16% from an estimated $4.5 billion in 2022–23 (Figure 11.1). Export values are expected to fall as lower export prices outweigh higher export volumes:

- The value of lamb exports is expected to fall to $2.7 billion in 2023–24, down by 16% from an estimated $3.2 billion in 2022–23.
- The value of mutton exports is forecast to decrease to $1.1 billion in 2023–24, down 14% from an estimated $1.3 billion in 2022–23.

Export prices are expected to decrease in 2023–24 as higher global sheep meat supply more than offsets an increase in global demand. Rising global sheep meat supply is driven by higher production from Australia – the world's largest sheep meat exporter. Global demand is expected to rise slightly as falling demand from the United States – the world's largest importer by value – is more than offset by higher demand from China and the Middle East.

Figure 11.1 Annual value of sheep meat production and exports



Note: Data to the right of dotted line indicate estimates and forecasts; *includes both lamb and mutton.
Source: ABARES; ABS

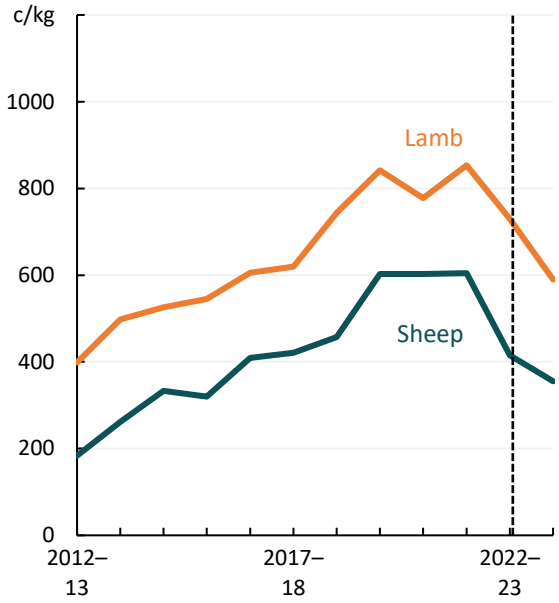
Rising turn-off and drier conditions to drive down prices

Average saleyard prices for both lambs and sheep are forecast to fall in 2023–24 as drier seasonal conditions result in lower restocking demand and increased turn-off rates (Figure 11.2).

Expected El Niño like conditions and a positive Indian Ocean Dipole (IOD) event in late 2023 will generate drier seasonal conditions across Australia (see *Seasonal Conditions* for more context). Drier conditions are expected to reduce pasture availability, constraining flock growth and restocker demand. As such, the supply of sheep and lambs in saleyards is expected to increase, driving down prices:

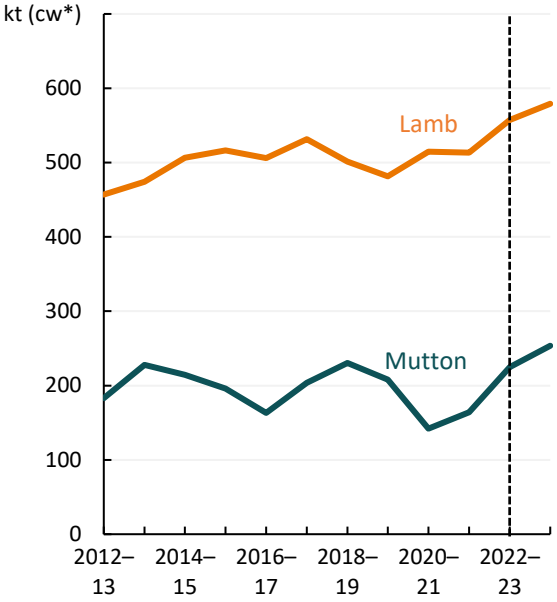
- **Lamb saleyard prices** are forecast to fall to 590 cents per kilogram in 2023–24 (down by 19% from 730 cents per kilogram in 2022–23). Saleyard prices for restocker lambs are expected to fall as drier seasonal conditions slow the increase in flock size. A large supply of lambs is also expected due to several years of robust flock growth and strong lambing rates.
- **Sheep saleyard prices** are forecast to fall to 355 cents per kilogram in 2023–24 (down by 15% from 415 cents per kilogram in 2022–23). The supply of sheep available for slaughter is expected to increase following several years of flock growth. Drier conditions in 2023–24 will incentivise farmers to cull older stock (including older retained breeding ewes), non-performing ewes, and cast-for-age sheep. Sheep saleyard prices are expected to fall by less than lamb saleyard prices because of higher growth in demand from processors and exporters for mutton than lamb.

Figure 11.2 Average annual lamb and sheep saleyard prices*



Note: Data to the right of dotted line indicates forecasts;
Source: ABARES; MLA

Figure 11.3 Annual lamb and sheep production volumes



Note: Data to the right of dotted line indicate estimates and forecasts; *carcase weight
Source: ABARES; ABS

Drier weather and a large flock size to increase production

Sheep meat production volumes (captures lamb and sheep) are expected to increase by 6% to 823 kilotonnes (carcase weight) in 2023–24. The increase is largely driven by higher mutton production as increased slaughter rates more than offset lower carcase weights (Figure 11.3):

- **Mutton production** is expected to increase to 243 kilotonnes in 2023–24 (up by 10% from 221 kilotonnes in 2022–23) reflecting a high supply of sheep following several years of flock growth. Higher slaughter volumes are offset by slightly lower slaughter weights.
    - **Sheep slaughter volumes** are expected to increase by 10% to approximately 9.5 million head in 2023–24. Processors are likely to allocate more kill space to mutton due to lower labour requirements and strong Chinese demand for mutton. Hence, mutton slaughter is expected to increase at a faster rate than lamb slaughter.
- **Lamb production** is expected to increase to a record 579 kilotonnes in 2023–24 (up by 4% from 557 kilotonnes in 2022–23) due to high slaughter volumes. Drier seasonal conditions are expected to reduce pasture availability and encourage higher turn-off rates year-on-year.
    - **Lamb slaughter volumes** are expected to increase by 4% to approximately 24 million head in 2023–24. A strong lamb season is expected in spring 2023 due to the large flock, high numbers of breeding ewes, high marking rates and lambing rates. However, lamb turn-off is expected to be somewhat constrained as processors prioritise mutton slaughter and US demand for lamb remains subdued. Therefore, lambs are expected to be promoted to sheep at a higher rate year-on-year despite drier seasonal conditions.

The **sheep flock** is expected to increase to 71.6 million head in 2023–24 (up by 1% from 71.1 million head in 2022–23) as the high proportion of breeding ewes and high lambing rates outweigh higher

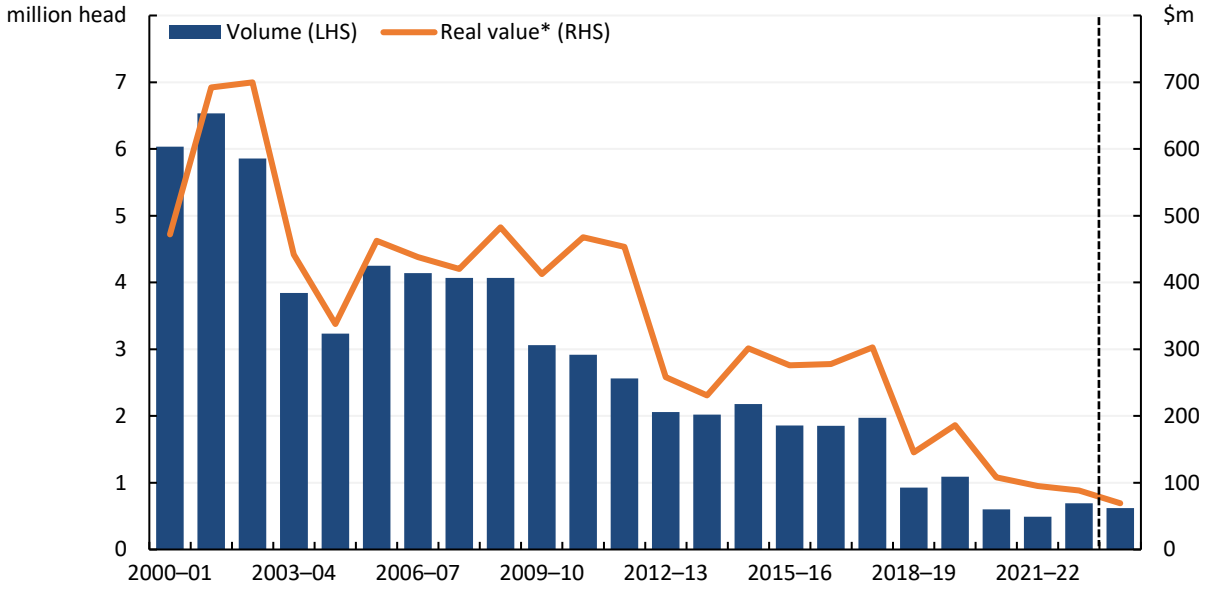
slaughter rates. Relatively high pasture availability and retained soil moisture at the start of the year are expected to support good joining conditions and lambing rates in 2023–24.

Carcase weights for lamb and sheep are expected to fall in 2023–24 but remain relatively high. Drier conditions are expected to lower feed availability throughout the year, slightly hindering the ability of lambs and sheep to gain weight. Additionally, a higher proportion of female lambs, ewes and merinos are expected to be slaughtered which lowers overall carcase weights. Carcase weights have followed an increasing trend since around 2012–13 due to a shift in flock composition towards meat breeds (see Box 1.3 in the *June Agricultural Commodities Report*) and improvements in genetics.

Sheep meat **export volumes** are expected to increase to 528 kilotonnes in 2023–24 (up by 5% from 502 kilotonnes in 2022-23) reflecting the increase in sheep meat production.

Live sheep export volumes are expected to fall by 10% to 620,000 head in 2023–24 (Figure 11.4) due to the declining Western Australian flock size constraining the availability of sheep for live export. Live sheep export volumes have trended down over the past 20 years reflecting the long-term decline in the Western Australian sheep flock. Almost all Australian live sheep exports are from Western Australia.

Figure 11.4 Annual live sheep exports, value and volume



Note: Data to the right of dotted line indicates forecasts; *2023–24 Australian dollars
Source: ABARES; ABS

Box 11.1 Live sheep exports by sea policy assumed unchanged for September Agricultural Commodities Report

The Australian Government has committed to phasing out live sheep exports by sea, with an independent panel to advise on possible approaches. The panel has conducted stakeholder consultation across the Australian livestock export supply chain, animal welfare organisations, trading partners and other interested parties. The panel is due to provide its report to the Minister for Agriculture, Fisheries and Forestry by 30 September 2023.

The Australian Government has confirmed the phase out will not take effect during this term of Parliament. As such, ABARES' *September Agricultural Commodities Report* assumes no significant policy change to live sheep exports by sea during the outlook period.

Rising Australian sheep meat supply to weigh on global prices

Global sheep meat supply is expected to rise in 2023–24 driven by higher Australian production outweighing lower New Zealand production. Increased supply of Australian sheep meat is expected to drive down global export prices:

- **Australian** production and exports of sheep meat in 2023–24 are expected to rise, placing downward pressure on global prices. Australia is the world's largest exporter of sheep meat, exporting around 48% of global sheep meat exports in 2021–22.
- By contrast, **New Zealand** production is expected to fall in 2023–24 driven by a long-term decline in the NZ sheep flock. Lower lambing rates, fewer breeding ewes and structural shifts in local land use to forestry and carbon farming are also driving down production. New Zealand is the world's second largest sheep meat exporter.

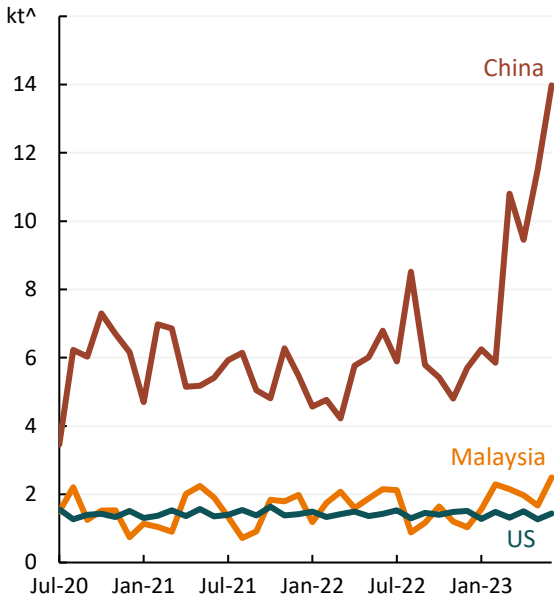
Demand for sheep meat to rise

Global demand for sheep meat is expected to rise in 2023–24 driven by higher demand from China, the Middle East and the Republic of Korea outweighing lower demand from the United States. Falling global sheep meat prices are expected to increase both global sheep meat demand and consumption, particularly in price-sensitive markets. However, this will only partially offset the impact of higher global sheep meat supply.

- **China's** demand for sheep meat is expected to increase year-on-year in 2023–24 as consumer spending improves following the removal of pandemic restrictions in December 2022. Since then, Australia's mutton export volumes to China have increased significantly (Figure 11.5). Other factors are also expected to support this historic rise in exports:
    - Chinese consumers appear to be becoming more price sensitive, reflecting challenging economic conditions. Falling global prices for lamb and mutton have likely incentivised higher demand from China.
    - African Swine Fever continues to constrain pork production in China. This is expected to incentivise Chinese consumers to continue consuming mutton as a protein substitute.

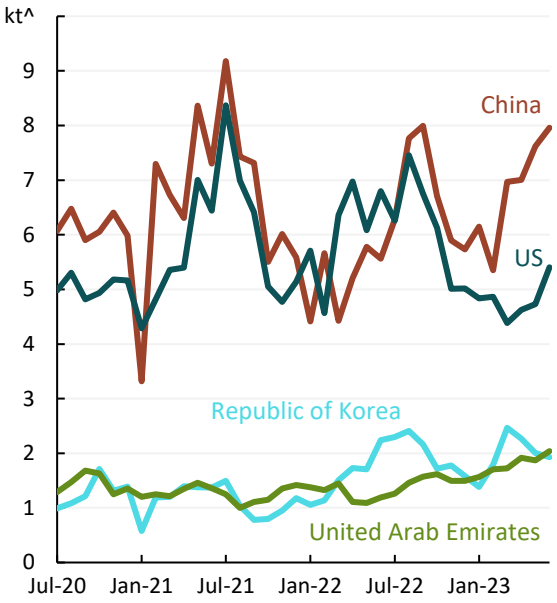
- Demand for sheep meat in the **Middle East** is expected to increase as the region's post-pandemic recovery supports higher consumption, tourism and population growth. Lamb export volumes to the United Arab Emirates have grown strongly in recent months (Figure 11.6).
- Demand in the **Republic of Korea** is expected to remain strong. Australia's lamb export volumes to the Republic of Korea were relatively high in 2022–23 despite lower economic growth (Figure 11.6).
- Demand from the **United States** is expected to be subdued. The United States is Australia's highest value market for sheep meat, importing predominantly higher value fresh or chilled lamb cuts. Falling real disposable incomes and a subdued economic outlook are likely to lead to weaker consumption in retail and food service channels. As such, consumers are expected to substitute away from lamb – a premium product – trading down towards lower-value cuts of meat.

Figure 11.5 Monthly mutton exports volumes, seasonally adjusted*



Note: *Seasonally adjusted by ABARES using the 'seasonal' package; ^shipped weight
Source: ABARES; ABS

Figure 11.6 Monthly lamb exports volumes, seasonally adjusted*



Note: *Seasonally adjusted by ABARES using the 'seasonal' package; ^shipped weight
Source: ABARES; ABS

Opportunities and challenges

Biosecurity remains a key risk for the livestock industry

Foot-and-mouth disease has been reported in Indonesia and other countries to Australia's north. If introduced to Australia, these diseases would reduce market access for Australia's exports and be extremely disruptive to Australia's livestock industry. The Australian Government is continuing to work with industry and the Indonesian Government to develop and strengthen prevention and preparedness measures.

Australia-UK Free Trade Agreement entered into force on 31 May 2023

The Australia-UK Free Trade Agreement (A-UKFTA) will remove tariffs from over 99% of Australian goods. Tariff elimination periods vary by product, ranging from immediately upon entry into force to ten years.

This agreement is expected to benefit Australian livestock exporters, providing immediate access to substantial duty-free transitional quotas for sheep meat. Within 10 years, tariffs on all Australian agricultural goods will be completely eliminated.

12 Dairy

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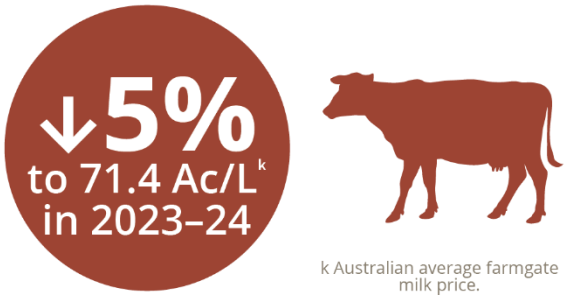


Key points

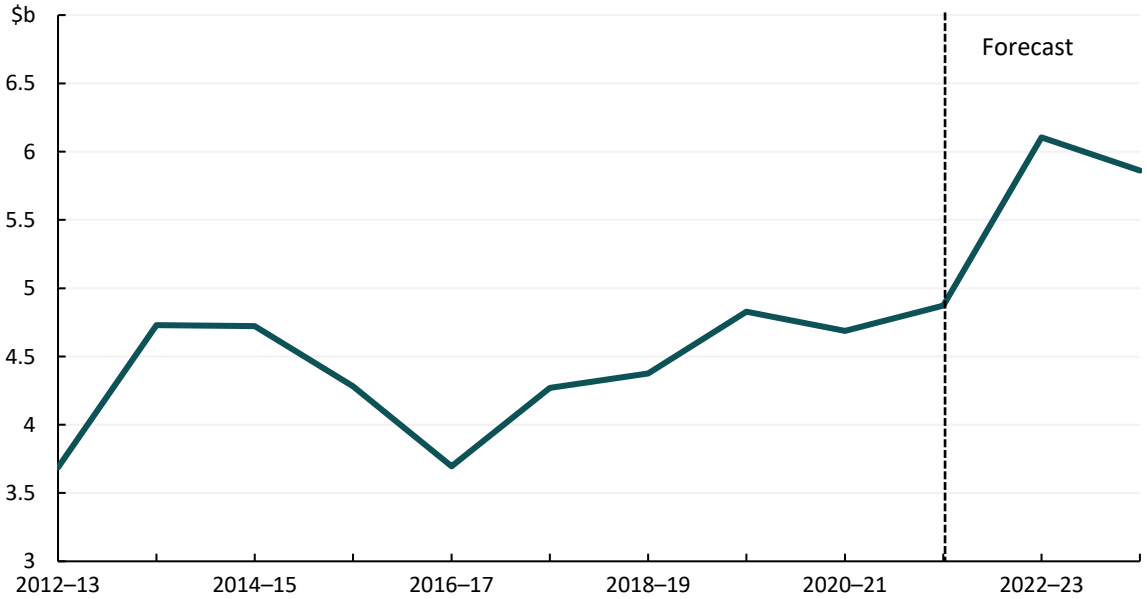
- Gross value of milk production to fall by 4% to $5.9 billion in 2023–24.
- Declining farmgate milk prices forecast to more than offset higher milk production.
- Global dairy prices to fall as global supply rises slightly and demand from China weakens.

Value of production to fall due to lower milk prices

The gross value of milk production is forecast to fall slightly to $5.9 billion in 2023–24, down by 4% from an estimated record of $6.1 billion in 2022–23 (Figure 12.1). The forecast fall in production value is driven by lower farmgate milk prices outweighing expected higher milk production.

Farmgate milk prices are forecast to fall to 71.4 cents per litre in 2023–24, 5% lower than the estimated 75.1 cents per litre in 2022–23. Nonetheless, farmgate milk prices remain historically high, driven by high competition for milk supply between milk processors. Milk production is expected to rise by 1% to 8.2 billion litres in 2023–24 as higher milk yields outweigh lower cow numbers.

Figure 12.1 Gross value of annual milk production



Note: Data to the right of dotted line indicate estimates and forecasts.

Source: ABARES; ABS

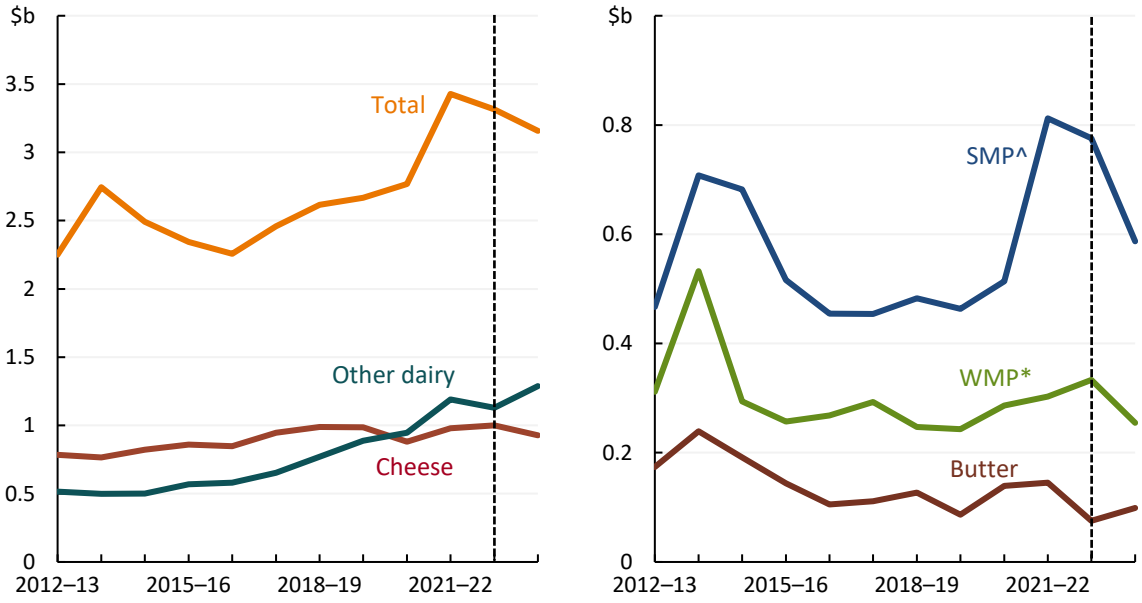
The forecast value of milk production in 2023–24 has been revised up by $300 million compared to the *June 2023 Agricultural Commodities Report*. This is driven by both an upwards revision to farmgate milk prices, reflecting the announcements of farmgate milk prices in July, and a small increase in milk production.

Value of dairy exports to decrease reflecting lower prices

The value of dairy exports is forecast to fall by 5% to $3.2 billion in 2023–24 (Figure 12.2). This reflects lower export prices more than offsetting by higher export volumes for most dairy products:

- **Cheese** to fall to $928 million (down by 7% from $1.0 billion in 2022–23).
- **Skim milk powder** to fall to $587 million (down by 24% from $776 million in 2022–23).
- **Whole milk powder** to fall to $255 million (down by 24% from $333 million in 2022–23).
- By contrast, **Butter** is expected to rise to $99 million (up by 31% from $75 million in 2022–23) reflecting increased export volumes.

Figure 12.2 Annual value of Australian dairy product exports



Note: Data to the right of dotted line indicate estimates and forecasts; *Whole milk powder; ^Skim milk powder.
Source: ABARES; Dairy Australia

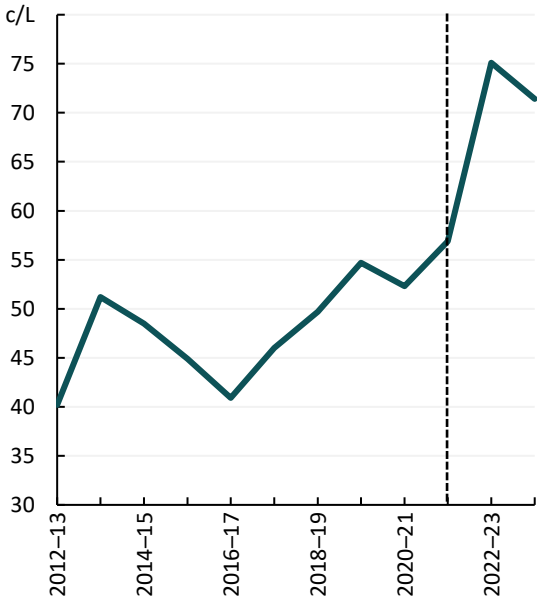
Farmgate milk prices fall by less than dairy export prices

The Australian **farmgate milk price** is forecast to fall by 5% to 71.4 cents per litre (approximately $9.44 per kilogram of milk solids) in 2023–24 (Figure 12.3). This reflects lower export prices and a small increase in domestic production in 2023–24. However, farmgate milk prices are forecast to remain historically high – 38% above the five-year average to 2021–22. Any farmgate milk price step-ups in 2023–24 are expected to be small as domestic prices are relatively high compared to world dairy prices.

High farmgate milk prices are being driven by strong competition between milk processors to secure supply. Australian milk production has declined consistently since 2001–02, which has led to significant excess processing capacity (Figure 12.6). This has caused competition between processors

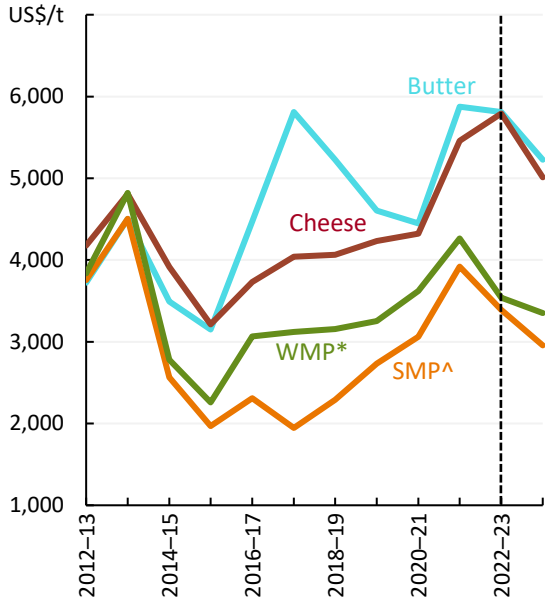
to secure milk supply and minimise processing facility underutilisation. Similar to 2022–23, the combination of high farmgate milk prices and lower global export prices are expected to pressure processor profitability margins and discourage investment in milk processing facilities.

Figure 12.3 Average annual Australian farmgate milk price



Note: Data to the right of dotted line indicate estimates and forecasts.
Source: ABARES; Dairy Australia

Figure 12.4 Average annual Australian dairy product export prices



Note: Data to the right of dotted line indicate estimates and forecasts; *Whole milk powder; ^Skim milk powder.
Source: ABARES; Dairy Australia

Export prices for all Australian dairy products are expected to fall in 2023–24 as demand for dairy products from China falls and global milk production rises slightly (Figure 12.4). **Cheese** prices are expected to fall the most (down by 13% to US$5,013 per tonne), followed by **skim milk powder** (down by 13% to US$2,954 per tonne), **butter** (down by 10% to US$5,225 per tonne and **whole milk powder** (down by 5% to US$3,350 per tonne).

Box 12.1 Australian dairy product export prices methodology update

ABARES' methodology for Australian dairy product export prices has been updated to incorporate a new, more accurate, data series from Dairy Australia. ABARES' previous measure used a simple average of Dairy Australia's monthly spot price report which included minimum and maximum exporter spot prices for that month. ABARES published the annual average export spot price for Australian dairy products based on these monthly averages.

ABARES now uses a weighted average of monthly spot prices provided by Dairy Australia. This series weights the reported spot prices accounting for the size of the dairy exporter. This ensures that the export price accounts for the volume of dairy products exported at each price. As a result, there has been a slight revision to historical export prices for Australian dairy products.

Many Australian dairy products currently sell at a premium in world markets driven by limited Australian supply and a preference among trading partners for Australian dairy products (Box 12.2).

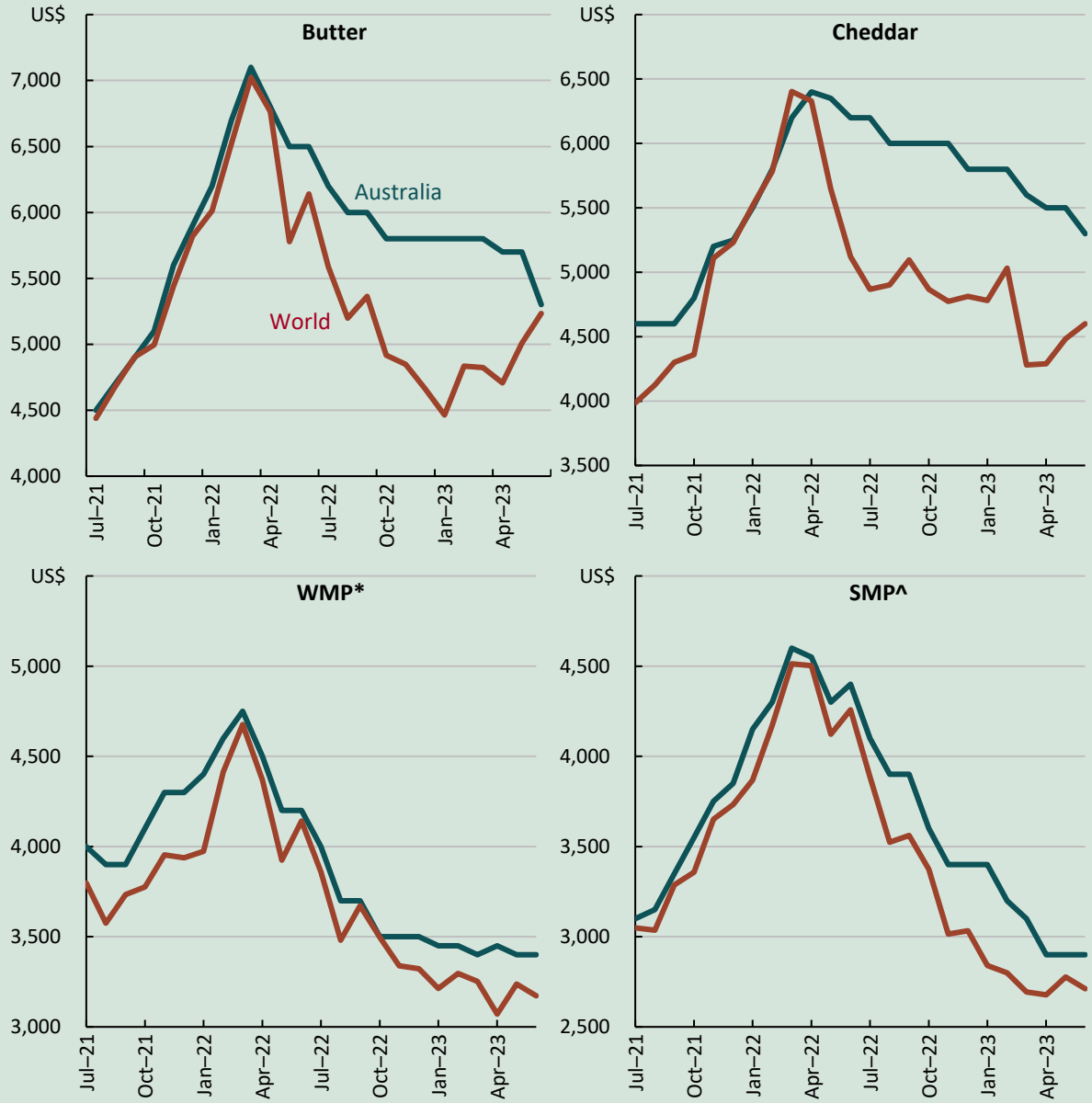
Box 12.2 The price differential between Australian dairy export prices and world prices is shrinking

Australian dairy exports generally receive a small price premium over world dairy prices. However, since mid-2022 Australian dairy exports have received prices that are substantially higher than world prices – particularly for butter and cheddar – but this premium has diminished over recent months (Figure 12.5). The price premium can be attributed to both a preference for Australian products among importers and a reduced supply of Australian dairy products for export due to a large (5%) decline in domestic milk production during 2022–23. Together, these factors have allowed Australian dairy exporters to negotiate prices that are at a premium to world prices.

This price premium, particularly for cheddar cheese, has helped insulate Australian dairy exporters from the relatively sharp decline in world dairy prices since March 2022. The premium was likely an important factor that helped milk processors retain a profit margin in 2022–23 while paying record high farmgate milk prices.

Australia's price premium has diminished in recent months and is expected to fall in 2023–24. This falling margin could reflect some importers switching to cheaper alternatives to Australian dairy products to improve their profit margin. Industry liaison conducted by ABARES ahead of the *September Agricultural Commodities Report* suggests that some international processors in importing countries are considering adjusting their manufacturing specifications so that they can purchase cheaper dairy products from non-Australian exporters, such as New Zealand. This would reduce both the demand for Australian dairy exports and reduce the price premium.

Figure 12.5 Monthly Australian and world prices for dairy products



Note: The weighted average of Dairy Australia's Indicative International Spot Price Report is used for Australia's export prices; Global Dairy Trade (GDT) prices are used for the world prices; *Whole milk powder; ^Skim milk powder.
Source: Dairy Australia; Global Dairy Trade (GDT)

Milk production to grow, driving increased export volumes

Australian **milk production** is expected to increase by 1% to 8.2 billion litres in 2023–24 as higher milk yields slightly outweigh a smaller dairy herd (Figure 12.6):

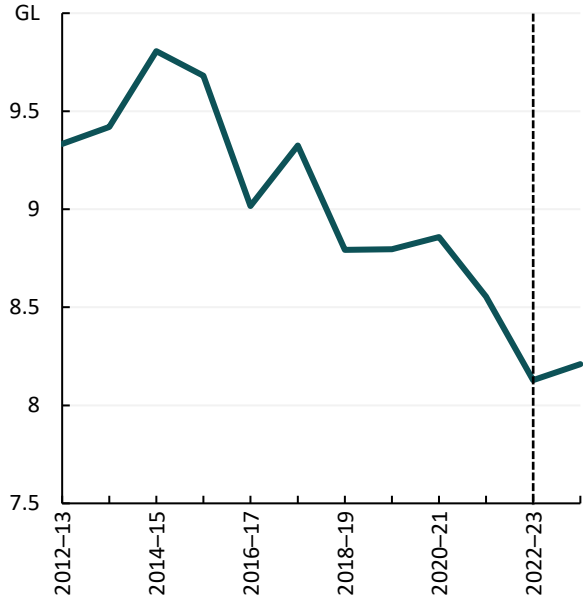
- **Milk yields** are forecast to rise by 2% in 2023–24 reflecting drier seasonal conditions across eastern Australia. These conditions are expected to improve pasture quality and reduce animal health issues associated with wet conditions such as mastitis and lameness. Fodder prices have fallen slightly but they remain elevated. Fodder prices are expected to continue falling in the second half of 2023, increasing the feed availability for dairy cattle which improves milk yields.
- **Dairy cow numbers** are forecast to fall by 1% in 2023–24, driven by ongoing falls in the number of dairy farms.

- Falling dairy farm numbers are likely to be motivated by several factors. High land values may incentivise dairy producers to sell dairy operations. In addition, buyers often look to expand existing broadacre operations rather than invest in dairy farming. However, this is expected to be somewhat offset by the large decline in cattle prices which will disincentivise dairy farmers from both culling cattle and diversifying into beef production.
- Conversely, live dairy breeder export volumes to China are expected to be subdued in 2023–24, supporting Australian dairy cow numbers. An oversupply of milk in China, which has led to culling of dairy cows, is expected to reduce Chinese demand for live dairy breeder cattle from Australia. This reduction in Chinese demand is expected to outweigh the impact of New Zealand's recent ban on live cattle exports by sea.

The year-on-year decline in milk production has slowed since the start of 2023 (Figure 12.7). This is likely driven by both drier seasonal conditions and from the large decrease in production towards the end of 2021–22. Year-ended monthly milk production increased for the first time in almost two years in May 2023, growing by 1.4% relative to May 2022. However, much of this increase is because of the particularly low level of production in May 2022 (8.4% lower year-on-year).

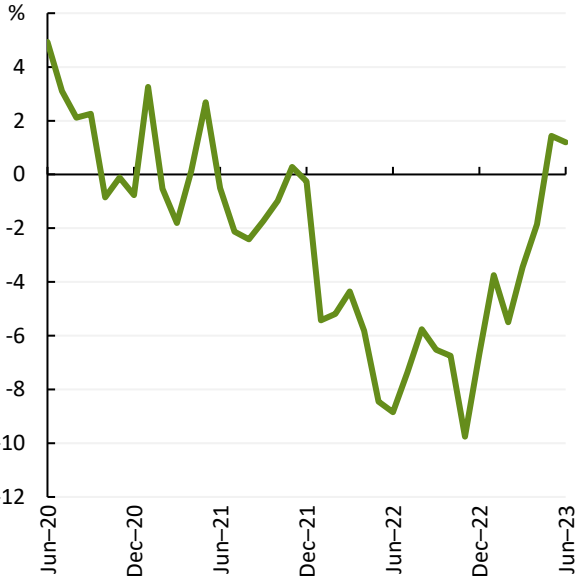
The Australian dairy industry is still experiencing issues with labour shortages, particularly on dairy farms, however, this is not expected to constrain dairy production in 2023–24. There are also signs that labour constraints are beginning to ease in certain regions following the resumption of migration to Australia post-COVID-19.

Figure 12.6 Average annual Australian milk production volumes



Note: Data to the right of dotted line indicate forecasts.
Source: ABARES; Dairy Australia

Figure 12.7 Year-ended change in monthly Australian milk production

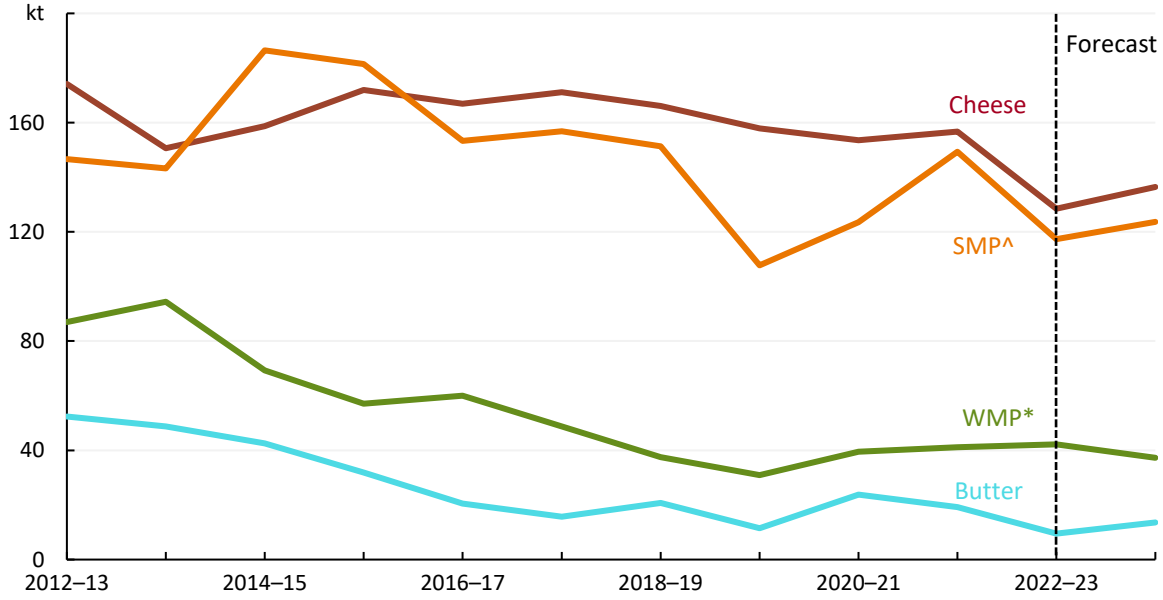


Source: ABARES; Dairy Australia

Dairy product production and export volumes are expected to rise slightly in 2023–24 due to a small increase in domestic milk production (Figure 12.8). The volume of dairy exports is forecast to rise to 679 kilotonnes in 2023–24, up by 2% from 663 kilotonnes in 2022–23.

- **Butter** production is expected to rise by 5%. Butter export volumes are expected to rise to 13.6 kilotonnes in 2023–24 (up by 43% from 9.5 kilotonnes in 2022–23).
- **Cheese** production is expected to rise by 2%. Cheese export volumes are expected to rise to 136 kilotonnes in 2023–24 (up by 6% from 128 kilotonnes in 2022–23). Relatively, high export prices and recent industry investment in cheese production are expected to incentivise processors to increase both cheese production and exports.
- **Skim milk powder** production is expected to rise by 2%. High domestic margins on co-products from the production of skim milk powder (products made with milk fats such as cream) are expected to continue to incentivise production. Skim milk powder export volumes are expected to rise to 124 kilotonnes in 2023–24 (up by 5% from 117 kilotonnes in 2022–23).
- **Whole milk powder** production is expected to fall by 12%. Whole milk powder export volumes are expected to fall to 37.2 kilotonnes in 2023–24 (down by 12% from 42.2 kilotonnes in 2022–23). China's combination of both a large stockpile of whole milk powder and a stalled economic recovery is expected to weigh on whole milk powder prices and disincentivise production.

Figure 12.8 Average annual Australian dairy product export volumes



Note: Data to the right of dotted line indicate estimates and forecasts; *Whole milk powder; ^Skim milk powder.
Source: ABARES; ABS

World milk production to rise

World milk production in 2023–24 is expected to rise slightly relative to 2022–23. Higher Australia, New Zealand, the United States and Argentina milk production is expected to outweigh lower production in the European Union (Figure 12.9):

- **United States** milk production is expected to grow in 2023–24. Improved seasonal climate conditions in 2022–23 ended the drought-like conditions for most dairy regions in the United States. Above average rainfall is expected in 2023–24, driven by the expected onset of El Niño conditions. This is forecast to improve pasture quality and quantity, increasing milk yields.
- **New Zealand** milk production is expected to grow slightly in 2023–24. In 2022–23, New Zealand experienced wet seasonal climate conditions and flooding. In 2023–24, seasonal conditions are

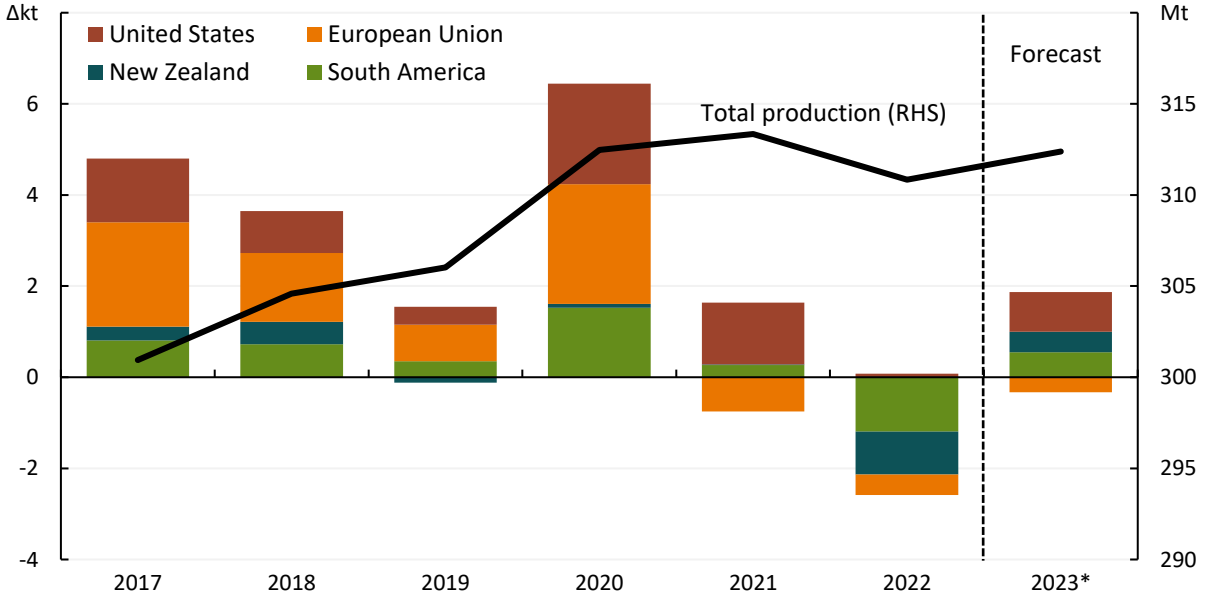
expected to be drier than average, but the combination of drier conditions and high levels of soil moisture will likely increase feed availability and quality.

- **Argentinian** milk production is expected to increase in 2023–24. The expected onset of El Niño conditions is forecast to generate wetter than average seasonal conditions in Argentina. This is forecast to end dry conditions in Argentina and increase pasture availability.
- **European Union** milk production is expected to fall slightly in 2023–24. Dairy farmers in the European Union are beginning to be impacted by an increase in animal welfare and environmental regulatory burden. This is raising the workloads of owner-operators, which could be a disincentive to stay in the industry. Additionally, dairy farmers in the European Union are still experiencing challenges in securing labour. Recent heat wave conditions are also expected to weigh on milk production.

Recently dairy export volumes from major producing countries have increased by more than milk production. This is because falling disposable incomes have reduced domestic dairy consumption (especially in the European Union and the United States), which has increased the supply of dairy products available for export.

Higher exportable supply is expected to weigh on global dairy prices. In addition, the Russian Federation's withdrawal from the Black Sea Grain Initiative – and resulting higher volatility in grain prices – will likely pressure dairy farmers margins, especially in the European Union. Tighter margins discourage dairy farmers from expanding milk production capacity.

Figure 12.9 USDA annual milk production for major dairy exporting regions



Note: Calendar years; Oceania includes Australia and New Zealand; South America includes Argentina and Brazil; *Forecasts for milk production (both total and country level) are USDA forecasts.
Source: ABARES; USDA

Chinese demand to remain subdued

China's demand for Australian dairy products is expected to remain subdued in 2023–24 due to both high levels of Chinese milk production and challenging economic conditions.

China has experienced high levels of domestic milk production, causing a fall in domestic milk prices. The oversupply of milk due to the expansion in the Chinese herd size over recent years is the key driver behind low domestic milk prices in China. Low milk prices, combined with elevated costs of inputs such as grain, are particularly affecting smaller Chinese producers. Despite some Chinese producers culling dairy cattle and selling the beef to cover operating costs, China's milk production experienced strong growth over the first half of 2023.

Low farmgate milk prices and excessive milk supply in China has caused many Chinese dairy processors to produce milk powders for storage. As a result, China's domestic stockpile of milk powder is expected to remain high throughout 2023–24, placing downward pressure on global prices for dairy products, particularly milk powders.

At the same time, China's economic recovery following the relaxation of COVID-19 restrictions has slowed relative to expectations. Consumer spending on goods has remained relatively low, reducing demand for dairy products and Australian dairy imports.

Opportunities and challenges

Biosecurity remains a key risk for the livestock industry

Foot-and-mouth disease and lumpy skin disease have both been reported in Indonesia and other countries to Australia's north. If introduced to Australia, these diseases would reduce market access for Australia's exports and be extremely disruptive to Australia's livestock industry. The Australian Government is continuing to work with industry and the Indonesian Government to develop and strengthen prevention and preparedness measures.

Australia-UK Free Trade Agreement entered into force on 31 May 2023

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Australia-EU Free Trade Agreement

The comprehensive Australia-EU Free Trade Agreement (A-EUFTA) is currently under negotiation. The A-EUFTA aims to improve market access for Australian agricultural goods, including dairy exports to the European Union.

Abbreviations

$m	million dollars (Australian)
£	pound sterling
¥	yen
€	euro
A$	dollar (Australian)
ABARE	Australian Bureau of Agricultural and Resource Economics
ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences
ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
AFMA	Australian Fisheries Management Authority
ANZSIC	Australian and New Zealand Standard Industrial Classification
ASMC	Australian Sugar Milling Council
AWEX	Australian Wool Exchange
b	billion (Australian)
BAE	Bureau of Agricultural Economics (now ABARES)
BRS	Bureau of Rural Sciences (now ABARES)
c	cent (Australian)
CBA	Commonwealth Bank of Australia
cif	cost, insurance and freight
CIS	Commonwealth of Independent States
CL	Chemical Lean
CME	Chicago Mercantile Exchange - Chicago Board of Trade
cw	carcase weight
DAWR	Department of Agriculture and Water Resources (now Department of Agriculture, Fisheries and Forestry)
DFAT	Department of Foreign Affairs and Trade
DM	deutschmark
doi	digital object identifier
ECU	European currency unit
EMI	Eastern Market Indicator
EU	European Union
EVAO	estimated value of agricultural operations
FAO	Food and Agriculture Organization of the United Nations
fas	free alongside ship
fob	free on board
fot	free on truck
GDP	Gross Domestic Product

$m	million dollars (Australian)
GL	gigalitres (1,000,000,000 litres)
GST	Goods and Services Tax
ha	hectare (2.471 acres)
IGC	International Grains Council
IMF	International Monetary Fund
ITC	International Trade Centre
kg	kilogram (2.20462 pounds)
kL	kilolitre (1,000 litres)
kt	kilotonne (1,000 tonnes)
L	litre (1.761 pints)
lb	pound (454 grams)
m	million (Australian)
m3	cubic metre (1.307 cubic yards)
ML	megalitre (1,000,000 litres)
MLA	Meat & Livestock Australia
Mt	megatonne (1,000,000 tonnes)
na	not available
NAFTA	North American Free Trade Agreement
nec	not elsewhere classified
nei	not elsewhere included
nfd	not further defined
no.	number
NT	Northern Territory
org	organisation
RBA	Reserve Bank of Australia
Rep.	Republic
sw	shipped weight
t	tonne (1,000 kilograms)
UN	United Nations
US$	dollar (United States)
USc	cent (United States)
USDA	United States Department of Agriculture