

This report offers a comprehensive overview of the global beef industry and Australia’s trade relationship with the world.

Summary

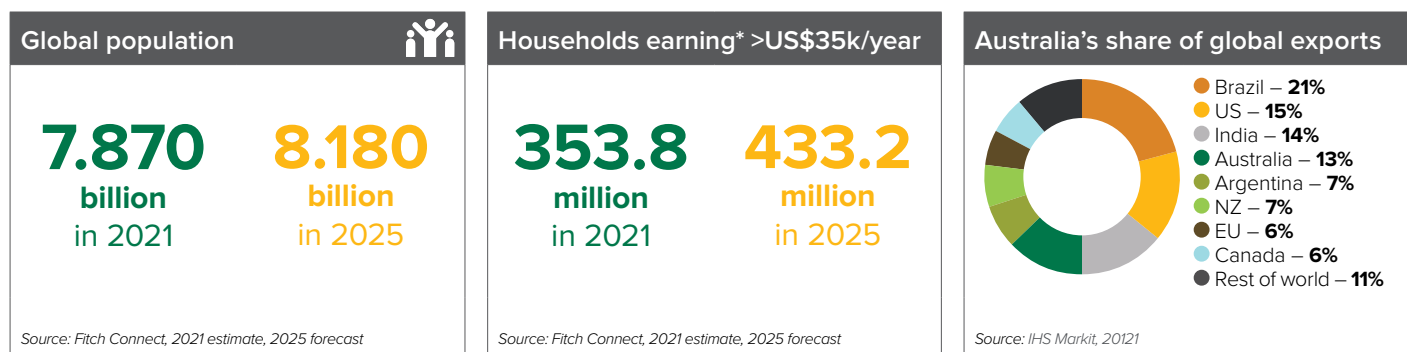
The outlook for Australian beef is strong in 2022. After several years of lower supply and disruptions brought on by COVID-19, exports are projected to rise over 2022 as prices remain high in international markets. Although Australia only accounts for 4% of global beef production, it accounted for 13% of exports globally in 2021 and has consistently been one of the top three global exporters for decades.

Global opportunities for Australian beef

- Australian beef production is expected to grow in 2022 as the current restocking phase matures.
- Falling American production is likely to reduce exports to South Korea, China, and Japan, opening opportunities for Australian exporters.
- Rising incomes and growing interest in beef across key Asian markets are increasing the size of markets for Australian producers and exporters.

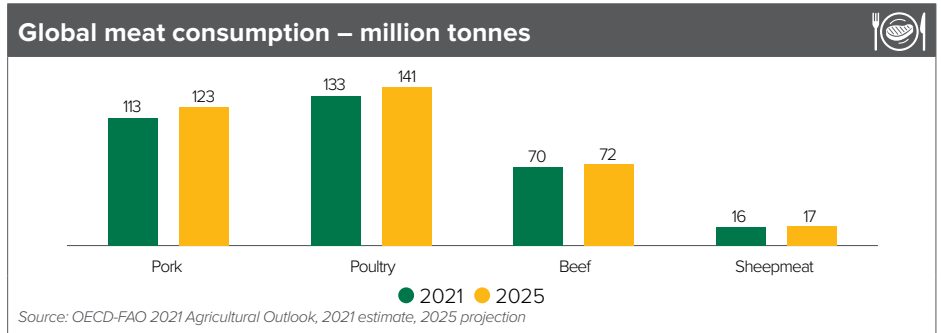
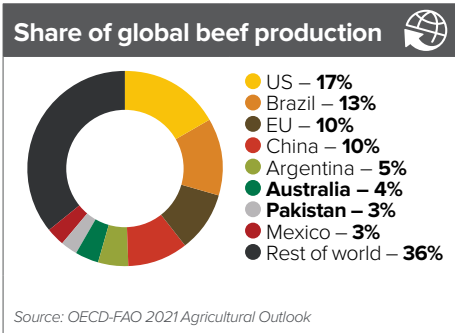
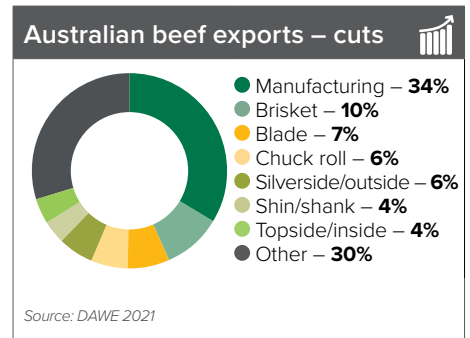
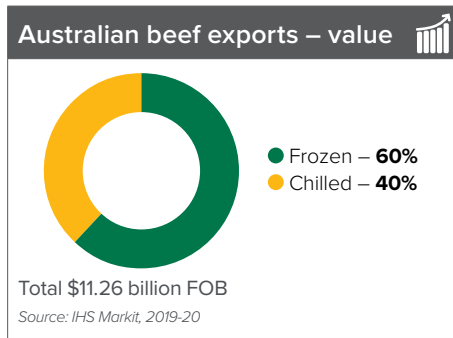
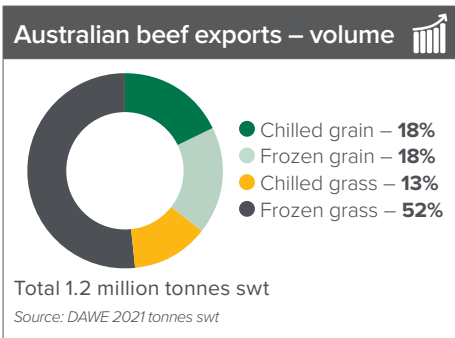
Global challenges for Australian beef

- Global meat consumption growth is slowing down and competition in existing markets will be more intense than in the previous decade.
- Key production inputs including grain, oil and fertilizer, are trading at very high levels and are expected to continue to rise in price.
- Technical advancements have lowered the cost of alternative proteins (plant-based and cultivated meats) as consumer interest towards them grows.



* includes: EU, Egypt, Bahrain, Iran, Jordan, Kuwait, Qatar, Saudi Arabia, UAE, US, Canada, Mexico, Japan, Korea, China, Australia, ASEAN, Taiwan and Hong Kong.
 Disposable income = earnings after taxes and social security charges.





KEY ISSUES

COVID-19

The emergence of the Omicron COVID-19 variant demonstrated the continued risk COVID-19 poses to global markets, despite the widespread rollout of vaccines.

In 2021, the Delta variant of COVID-19 spread to New South Wales, Victoria, and the ACT, causing lockdowns, border closures and business closures that lowered domestic foodservice spending and disrupted production. The remaining states avoided extended lockdowns but the need to prevent outbreaks hampered port access and drastically reduced the number of planes flying in and out of Australia, making export difficult.

Foodservice

The foodservice sector has been one of the most pandemic-impacted industries, with wide-scale shutdowns and operating restrictions across most markets. Operators in the foodservice sector that pivoted to takeaway or delivery models were able to withstand the impacts of COVID-19 more successfully. With the reduction in international travel, this has also contributed to the slowdown of the foodservice industry, particularly in markets with large tourism industries such as Vietnam and Japan.

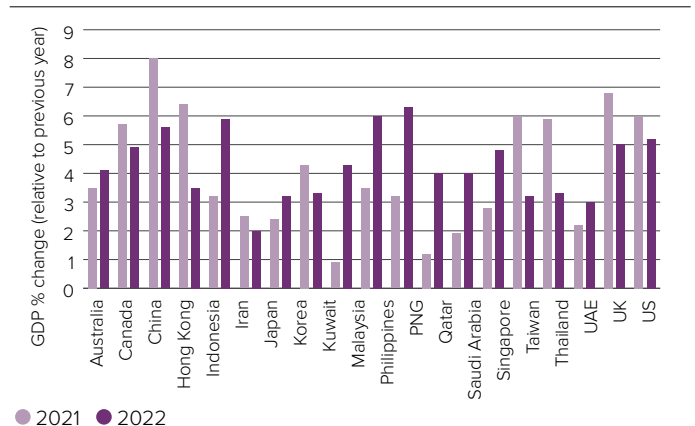
Retail

Retail meat sales performed well off the back of the decline in foodservice activity due to COVID-19, with consumers spending more time cooking at home. There was increased interest in country of origin, driven by a preference for food that promotes good nutrition, immunity, and overall health.

Global economic growth

2021 saw the economy take a strong rebound after huge shocks in 2020. The world economy is estimated to have grown by 5.9% in 2021 and emerging markets continued to lead growth, outperforming developed markets. Despite this, output growth in 2022 is forecast to slow due to above-target inflation, supply chain challenges and the invasion of Ukraine by Russia in early 2022. Beside these issues, it is too early to rule out the resurgences of new COVID-19 variants and renewed restriction measures which could impact the economy. Therefore, economic performance in the year is heavily dependent on factors that are largely unpredictable.

Global economic growth projections



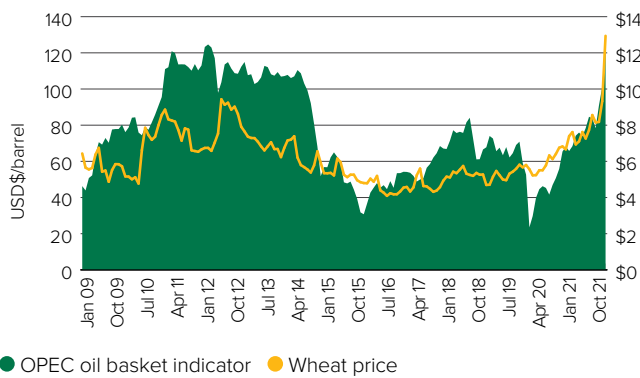
Commodity prices

2021 saw productivity growth around the world, increasing demand for input commodities. For example, the OPEC reference basket hit \$84 in 2021, up 72% from the 2020 average. High oil prices had a strong spillover effect on other commodities such as fertilizer, leading to higher input costs for key food crops. As a result, 2021 was a year of record price rises and a good year for many commodity producers.

Livestock enterprises also benefited from the food price rally and reinvested more in production for the next year.

In addition to the supply constraints seen in 2021, Russia's invasion of Ukraine has led to huge price increases in several key commodities. In March 2022, the OPEC reference basket of oil prices reached US\$128/barrel, while wheat prices reached an all-time high of US\$12.87/bushel.

Wheat and oil prices (2009–2022)



Source: OPEC, Macrotrends, MLA calculations

These price increases further exacerbate the risk posed by inflation and make it more likely that consumer purchasing power will drop.

Inflation

In 2021, the prices of goods and services rose above the targeted rate, causing concerns about the potential impact on consumer spending, interest rates and corporate margins. Sustained supply chain disruptions, elevated energy prices and higher wage costs passed through to consumer prices, curbing consumer demand. However, the adverse effects of price upswings on consumer spending were offset by the increase of household savings, reflected in generally heavier-than-usual consumption of goods in 2021.

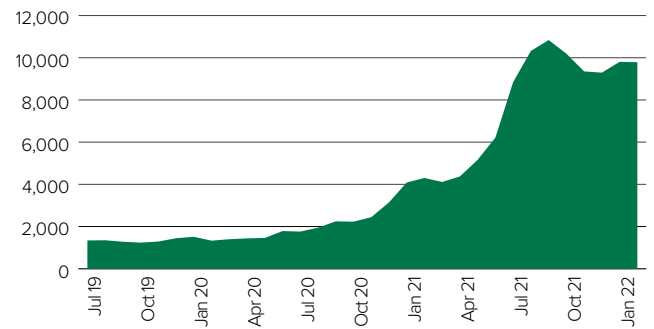
The first two months of 2022 have seen an escalation of trends seen in 2021 – and with them, the potential risk of above target inflation. Compounding the surge in commodity prices and ongoing effects of supply chain disruption, supply side shocks have lowered growth outlooks in major markets and increased the price of key inputs to agricultural production.

Despite this, the low unemployment rate in Australia has kept wage rises slower than other developed nations. As well, the Australian inflation rate is considerably lower than that of comparable states. As such, while inflation is a risk in international markets, the outlook domestically remains relatively positive.

Trade and logistics

As beef production is expected to increase in 2022, a key challenge industry is expected to encounter will be consistent access to reliable shipping lines and efficient processing through the supply chain. Between February 2020–2022, the price of containerized shipping increased by 467% and the price of Australian containerized airfreight rose by 91%. Prices have remained high so far in 2022 but are expected to fall from the second half of the year as major increases in shipping capacity come online and the container backlog on the major LA–Shanghai route slowly clears, increasing capacity across Pacific Ocean routes as a whole.

Shanghai containerized freight index (2019–2022)



Source: Freightos

In addition to increased prices, supply chain disruption and increasing costs have made international shipping difficult for many exporters. This is especially difficult in Australia, which is relatively remote to begin with – meaning that the number of vessels docking in Australian ports fell over 2020 and 2021, reducing the consistency of export opportunity and increasing risk to exporters.

This poses a particular risk for chilled shipments. 2021 saw multiple instances of chilled shipments being severely devalued or rejected entirely as cargo ships were forced to wait to dock for weeks past their initial due date.

Many of these issues were the result of shifts in consumer behaviour brought about by COVID-19 and the undersupply of dockworkers affected by COVID-19 related isolation rules. If pandemic-related disruption abates, it is expected that shipping companies will be better able to maintain consistency in routes and keep to timetables. However, the recent rise in oil prices and disruption to supply chains brought on by the ongoing war in Ukraine is likely to foster supply chain volatility in 2022 and keep prices high compared to the historically low rates seen between 2008 and 2019.



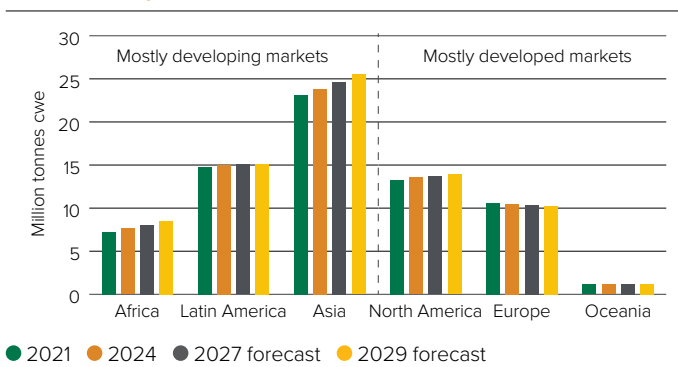
GLOBAL CONSUMPTION

Consumption forecasts

Global consumption of beef is projected to increase by 0.75% annually between 2022 and 2025 (Source: OECD-FAO 2021) through a combination of both income and population growth, primarily in Asia. This growth is expected to be matched by 0.75% annual increases in global production over the same period.

Beef's share of consumption is expected to decline 0.31% in the same period to 13% of total meat consumption, as poultry and fish production both grow slightly. This trend is mostly apparent in developing nations. Developed nations are expected to eat beef in roughly the same proportions in 2026 as 2022, while for developing nations, the higher growth in protein consumption is led by poultry.

Beef consumption forecasts



Source: OECD-FAO 2021 Agricultural Outlook

Note: Middle East and North Africa (MENA) is split across Africa and Asia

Beef is also expected to remain a premium protein, costing 78% more per tonne than the average protein. This will represent a small improvement from 2021, as the price of poultry is expected to grow slightly faster than other proteins.

Beef consumption levels vary across the world but are often determined by factors including:

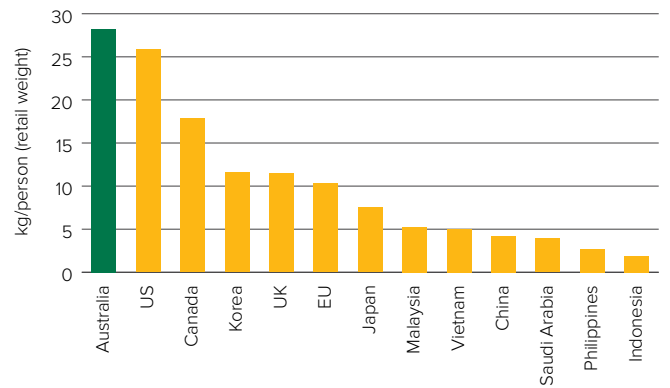
- economic growth and consumer purchasing power
- population growth and demographics
- consumer dietary preferences associated with culture and religion
- a history of local meat production and consumer familiarity
- competition from other proteins and relative prices
- trade policies and market access
- resilience of supply chains
- urbanisation and cold chain environments.

Increasingly, consumption in developed markets is also being guided by health perceptions, environmental considerations and animal welfare claims. While in some markets, these consumer trends have supported the rise of the alternative protein industry, it remains relatively niche. However, it may potentially play a growing role in the protein landscape in the years ahead.

Global consumer trends

Beef has a long history of consumption in many markets around the world and constitutes a major dietary component in some countries. Beef encompasses a wide range of products, from low value offal and manufacturing product to highly marbled premium wagyu – all of which play a unique role depending on the country and consumer segment.

Beef consumption per capita in 2021

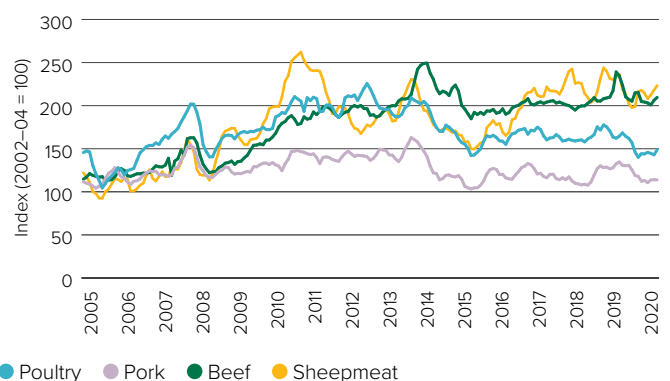


OECD-FAO 2021 Agricultural Outlook

In many western countries, beef is viewed as the most superior and delicious meat, often being considered a family favourite. However, the role of beef differs in many Asian and Middle Eastern countries, where proteins such as pork (in Asia) or seafood, chicken and sheepmeat (in the Middle East) play a larger role in consumer diets.

Several trends around the world that favour both grassfed and grainfed beef as well as other points of difference such as breed and raising claims provide Australia's broad production system with numerous opportunities to target growing segments.

World meat price indices



Source: Food and Agricultural Organisation




There are several broad trends affecting beef consumption globally in both the foodservice and retail channels, with growth in consumer demand for:

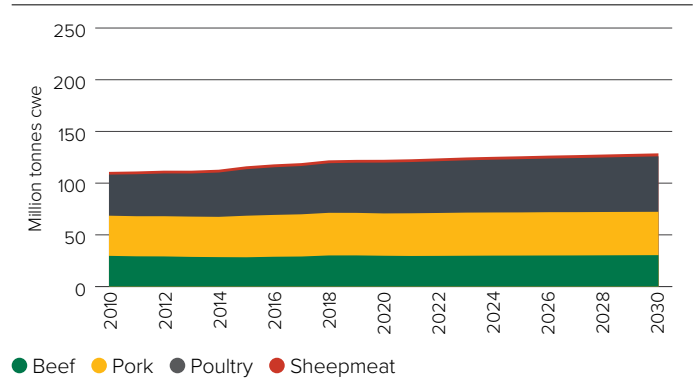
- fresher and less processed offerings
- more customised meals
- more international cuisines
- messaging relating to provenance and health (e.g. 'grassfed', 'free from', 'natural')
- growth of e-commerce and different delivery methods
- more convenient, on-the-go offerings
- smaller but higher quality premium portions.

Consumer perceptions of beef and competing proteins can also vary significantly from market to market. For instance, the economic development of a country influences typical consumer purchasing drivers, with developing countries focusing more on freshness and safety while developed markets focus on quality and points of difference. Given the diversity of Australian beef, understanding consumer needs and what drives purchasing decisions in each market is essential.

For the latest outlook on Australian export markets, visit: mla.com.au/prices-markets/overseas-markets/

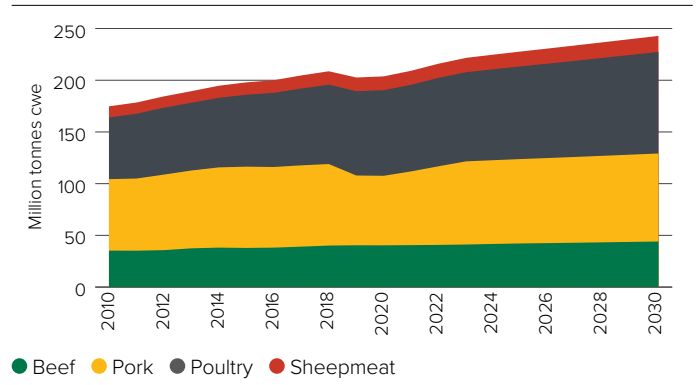


Global meat consumption: developed economies



Source: OECD-FAO Agricultural Outlook

Global meat consumption: developing economies



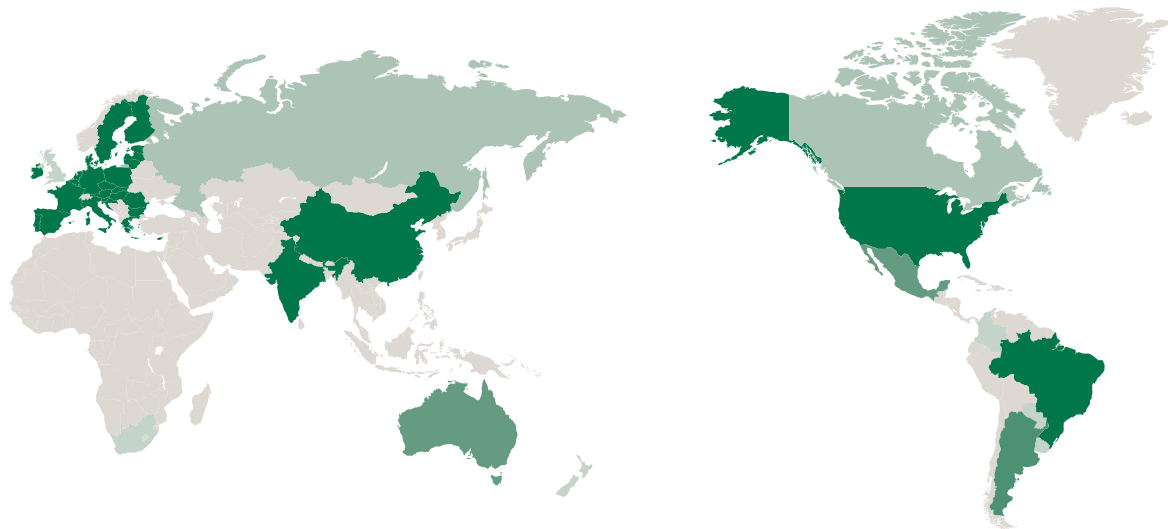
Source: OECD-FAO Agricultural Outlook

GLOBAL PRODUCTION AND SUPPLY

Global beef production remained constant in 2021 at roughly 57.6 million tonnes. 2021 saw lower than expected production in Brazil due to the emergence of atypical BSE and lower Australian production, which was largely balanced out by increases in production in North America, where production grew by 3.3% to over 16 million tonnes.

These trends are expected to reverse in 2022, leading to a slight increase to 58.1 million tonnes. Australian production is projected to increase 6.2% to 2.1 million tonnes, while Brazilian production is projected to grow 4.5% to 9.3 million tonnes and North American production is expected to fall by 1.9% overall.

Global beef production

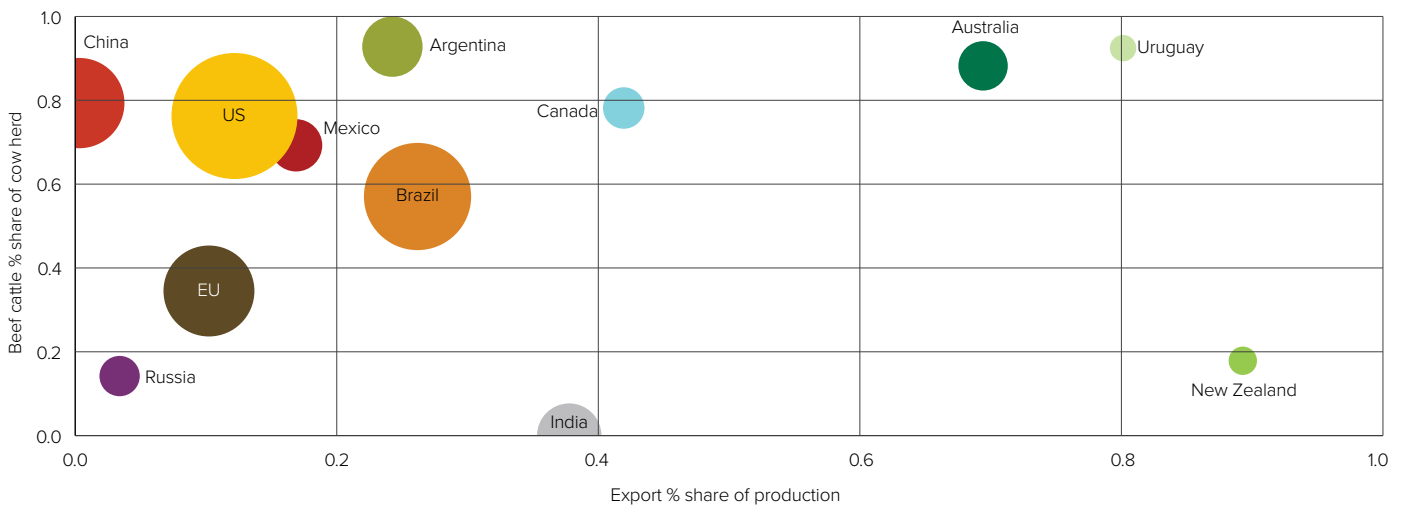


Source: USDA, 2021 volumes



Production systems and supply chains vary greatly around the world. Beef production in New Zealand, the EU and India is mainly a by-product of large dairy industries. However, at one extreme, New Zealand is almost entirely export focused, while the EU is domestically oriented.

Production mix



Source: USDA, 2021
Bubble size reflects 2021 production

Meanwhile, most producers in North and South America produce beef cattle, but the genetic makeup of the herd varies. North American producers primarily finish *Bos taurus* cattle on grain, and South American producers utilize a mix of *Bos taurus* and *Bos indicus* cattle, fed predominantly on grass.

South American producers produce a variety of breeds and use various methods to breed and finish cattle. Among them is Uruguay, with a beef industry similar to Australia which uses *Bos taurus* genetics, traceability systems and an export focus. Despite this, it remains a much smaller competitor in global markets and produces predominantly grassfed beef.

Competitive landscape

The bulk of beef consumption growth over the past decade has been in the developing world, particularly Asia, with forecasts for the next decade indicating a similar trend. However, surplus production remains centred in North and South America and Australasia. These production and consumption imbalances drive global trade. Additionally, reduced tariffs, improved cold chains and the development of governing institutions supported the growth of the global beef trade over the past two decades. In 2021, 17% of beef production was traded internationally – higher than poultry, pork and sheepmeat.

Australia exports approximately 70% of beef production – far more than most but comparable to New Zealand and Uruguay – and as such, is heavily exposed to currency fluctuations, the health of the global economy and market access changes. Australia is a major player when it comes to beef exports, particularly in providing high value product backed by integrity and quality assurance systems.

The Australian outlook is for increased supply in 2022, with beef exports forecast at approximately 1.06 million tonnes. Forecast declines in production from the United States will increase demand in Australia’s high value export markets, while continued production growth in Brazil will lead to further competition for Australian manufacturing beef and live cattle exports to China, South-East Asia and the Middle East and North Africa region.

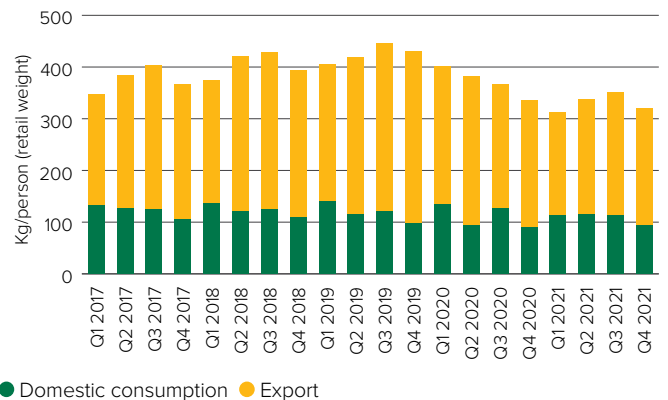
While production trends paint part of the picture, market access changes, such as the increasing number of South American plants gaining export approval for China, could have a far greater competitive impact on Australian beef in some markets.

Australia

Following severe drought in 2018–19, significant rainfall across the east coast in 2020–21 has resulted in substantially increased pasture availability. The resulting herd rebuild has depressed overall beef production but has also substantially increased herd numbers.

In 2021, total production fell 11% to 1.87 million tonnes and slaughter rates dropped 16% to 12.46 million head, while the total cattle herd grew 6% to 26.1 million head and is forecast to grow to 27.2 million head in 2022.

Australian export and domestic consumption



Source: DAWE

As the herd rebuild matures in 2022, production is expected to grow 13% in 2022 to 2.1 million tonnes, while exports are expected to grow 15% to 1.6 million tonnes cwe.

The Australian feedlot sector has grown out of an effort to mitigate periods of climate variation and enable a consistent supply of beef, ensuring Australia continues to produce high volumes of quality beef year-round and a steady supply of product to both domestic and international markets. 2021 was the first year in which 50% of Australian beef was grain fed, underpinning export consistency in key markets such as South Korea, where large increases in grain fed export volume compensated for lack of grassfed supply.

The quality and safety of Australian beef is guaranteed by two key programs of Australia's red meat integrity system, which include:

- the National Livestock Identification System (NLIS)
- Livestock Production Assurance (LPA).

These two key programs work together to protect the disease-free status of Australian red meat, as well as maintain Australia's reputation as a clean, safe and natural producer and exporter of red meat.

Meanwhile, the consistent eating quality of beef is guaranteed through the Meat Standards Australia (MSA) grading program, which has been developed to improve the supply of consistently high quality beef to the consumer. A record number of cattle went through this system in 2021, comprising 50% of the national kill. The MSA system takes all factors that affect eating quality into account and is recognised as a world-leading eating quality program.

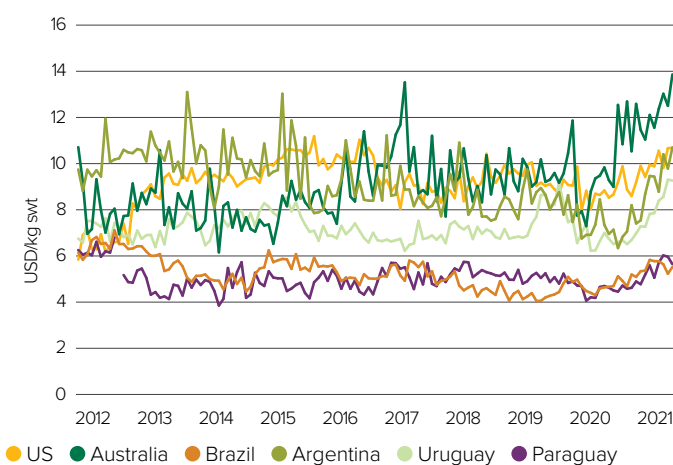
For the latest outlook on Australia's red meat integrity system visit: integritysystems.com.au

Cost of production

Although it is one of the most efficient countries to breed and grow out calves – largely due to the high levels of broadacre labour efficiency and economies of scale – Australia is less competitive in finishing cattle relative to other major producers. This is as a result of high costs of store cattle, land, labour, regulatory requirements and feed. High on-farm costs are compounded by additional expenses in the supply chain, particularly in processing cattle, where Australia's costs are twice that of Brazil and 24% more than the United States (Source: AMPC). With a high reliance on exports, Australia also faces greater freight and supply chain costs, as well as tariffs in some markets, compared with other major producers servicing similar domestic markets.

Prior to 2015, cattle prices in Australia closely tracked with South American prices on a currency-adjusted basis. However, the separation in markets following the 2014–15 Australian drought has not reversed, partly due to relatively tight supplies of finished cattle in Australia and the Brazilian real and Argentine peso coming under significant downward pressure in recent years and both dropping dramatically in 2019.

Global beef export prices



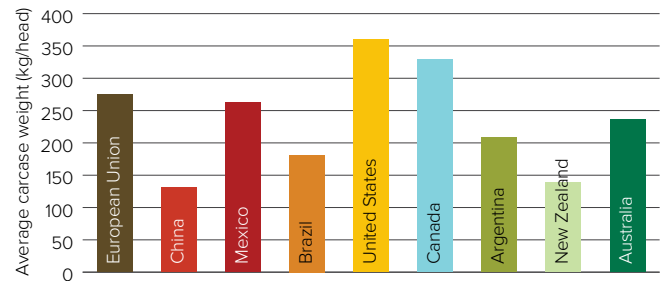
Source: IHS Markitt

While elevated prices are positive for Australian producers, high slaughter and supply chain costs mean that Australia must continue to focus on improving efficiency and increasing the value proposition for consumers in order to remain competitive.

United States

The United States is the world leader in beef production, utilising extensive grain feeding systems that enable quick weight gain and efficient outputs. US cattle are among some of the heaviest in the world and impressive economies of scale allow the US to compete strongly with other global producers where land, labour and cattle are substantially cheaper.

Global carcass weights

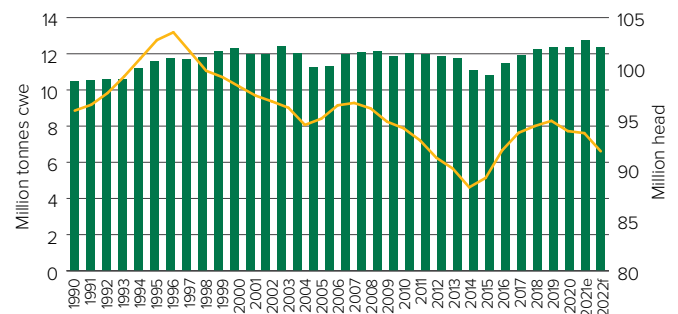


Source: USDA

The US remains a major competitor for Australia, with a strong presence in Japan, South Korea and China. Since the 2020 signing of the US-China Phase One Trade Agreement, the United States has enjoyed preferential access to the Chinese market. This has allowed exports to increase 74% in 2021 and the value of those exports jump 182% to \$2.08 billion – the highest ever.

The US can produce high quality beef, with grainfed cattle of *Bos taurus* genetics making up the majority of production, while developed cold chain infrastructure and modern slaughter facilities provide the capability to export chilled product.

US beef production and herd size



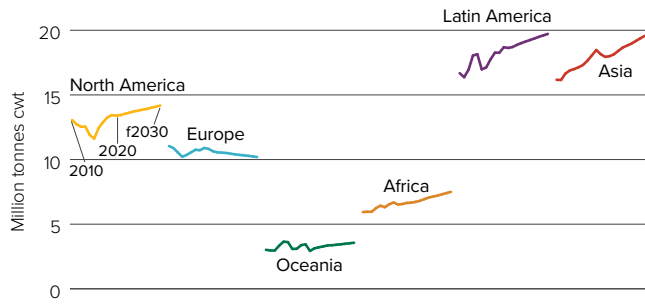
● Beef production (LHS) ● Herd size January (RHS)

Source: USDA

The US cattle herd follows a fairly consistent cyclical pattern which is expected to contract in 2022, underpinned by reduced cow-calf profitability, increased female slaughter and an eventual smaller calving. Additionally, increased grain and fertiliser costs are expected to disproportionately affect American production as its production system is relatively mechanised and becomes more dependent on input commodities to maintain high production.



Regional beef production growth (2009-f2030)



Source: FAO-OECD 2021 Outlook

Brazil

Brazilian beef production is expected to continue growing in coming years, underpinned by a slowly expanding herd, the opening of new land for grazing, greater availability of slaughter cattle and strong international demand. Brazil lags the efficiency of Australia in producing beef but has been catching up in recent years as it adopts new practices and technologies.

Compared to Australia and the US, the Brazilian herd is less productive, giving it greater ability to lift future production from efficiency gains rather than from greater resource use. Both investment and modernisation have improved production efficiency, with Brazil increasing beef production by 3.7 million tonnes (or 55%) carcass weight (cwt) since the beginning of the millennium. Brazil has been a key contributor to global production growth in recent years, a trend that is set to continue in 2022.

The Brazilian herd is predominantly comprised of *Bos indicus* breeds finished on pasture and destined for the commodity beef trade. However, Brazilian livestock operations are increasingly using an 'industrial cross' of local *Bos indicus* Nelore cattle with US–Argentine Angus genetics. This industrial cross combines the feed efficiency and meat quality benefits derived from Angus cattle with the heat and tick tolerance found in the *Nelore* breed.



Brazilian *Bos indicus* Nelore cattle

In encouraging news for the nation, Brazil's grain feeding capabilities are building. In 2019, around six million cattle were finished on grain in Brazil – almost doubling from a decade prior but dwarfed by the 40 million processed overall. While feedlots currently only account for approximately 10% of Brazil's meat production, this is expected to double over the next five years.

However, Brazil has faced challenges in maintaining access to key markets due to outbreaks of BSE and ESG concerns. In September 2021, the detection of atypical BSE led to Brazil enacting a voluntary export ban and several importing markets enacting their own import bans. Notably, China's import ban lasted 102 days – substantially longer than the previous 10-day ban enacted in 2014 – and caused the price of fat cattle in Brazil to drop 15% over the period.

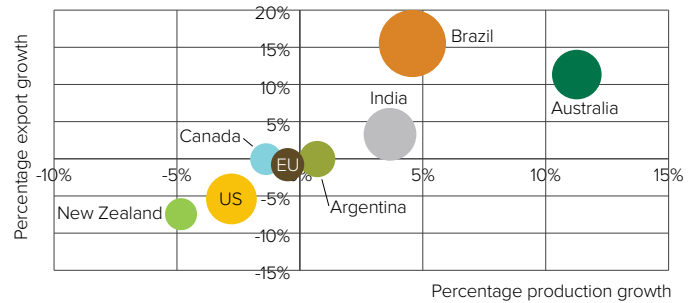
Additionally, eight European supermarket chains announced commitments to cease importing Brazilian beef products in December 2021, citing concerns over deforestation in the Amazon rainforest. Although Brazilian exports to the EU only made up 7% of Brazilian exports in 2021, exports to Europe were

17% more valuable per unit than the Brazilian average. The concerns listed by retailers were also mirrored by officials in the United States, which represents a much bigger export opportunity.

For the latest outlook on Australian beef supply, visit: mla.com.au/cattleprojections



Production and export forecasts



Source: USDA Foreign Agriculture Organisation, 2022

Note: Bubble size shows expected 2022 export volume. Percentage growth shows 2022 forecast relative to 2020 levels

Argentina

Argentina produces a mix of commodity and high-quality beef, with the herd made up of predominantly *Bos taurus* genetics. Grainfed cattle account for close to a third of Argentinian cattle turned off. Argentinian beef exports in 2022 are tentatively expected to increase as production is forecast to grow, with herd numbers recovering following drought in 2019 and 2020.

Argentina's beef export situation improved substantially in 2015 following the removal of a 15% export tariff, export restrictions and currency controls overvaluing the peso. However, recent years have seen a surge in inflation and a collapse of the Argentinian peso. The combination of these factors has lent support to the commercial viability of exporting beef rather than selling it locally, resulting in the proportion of Argentinian beef exported lifting from 7% in 2015 to 25% in 2020.

This increase in exports led to domestic price increases, spurring an export ban in late May 2021 and export quotas in September. The effect of these measures has been an 18% year-on-year decline in exports in the second half of 2021, compared to a 20% year-on-year increase in the first six months of the year. The low peso means that Argentinian beef remains highly competitive on world markets and very expensive domestically – meaning that the most important variable in future export volume remains potential state restrictions.

European Union (EU)

The EU is a significant producer of beef, but most production is derived from a dairy-based herd and consumed domestically. After an increase during 2013–19 due to a restructuring of the dairy sector, EU beef production began to decline in 2020 and is expected to continue falling long-term until 2030.

Nevertheless, in 2021, beef production was estimated at 6.8 million tonnes cwe – over three times that of Australia. France holds the position as the largest beef producer in the region, accounting for 17% of EU production, followed by Germany (13%) and the UK (11%). In 2021, domestic beef production was estimated to account for 94% of total EU beef consumption.

The EU is a high-cost producer of beef, remaining heavily protected from the global market while being subsidised through the EU Common Agricultural Policy. Most Australian exports to the EU go through the European Union Cattle Accreditation Scheme and are either exported under the tariff-free EU Grainfed Quota or the Hilton High Quality EU Quota, which carries a 20% tariff. The majority of beef production in the EU is traded internally through Europe, with much of the remainder destined for the UK.

China

China is the world's third largest beef producer. By global standards, China's production system is characterised by smaller-scale producers and abattoirs. An inability for local production to keep up with increasing demand has led to a surge in imports in recent years. China's domestic beef production shortfall is expected to continue expanding over the next five years, with short-term fluctuations in local production – which still account for over 70% of consumption – likely having a significant impact on import requirements.

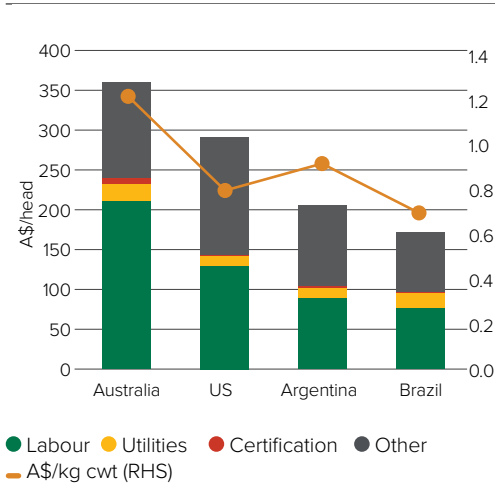
India

Indian buffalo meat (IBM) is a commodity product and sets the world price floor. IBM is a by-product of the large Indian dairy industry, made up of many smallholders. India does not have Foot and Mouth Disease (FMD)-free status, restricting access to many countries. Therefore, it predominantly exports to developing and price sensitive markets in South-East Asia and the Middle East.

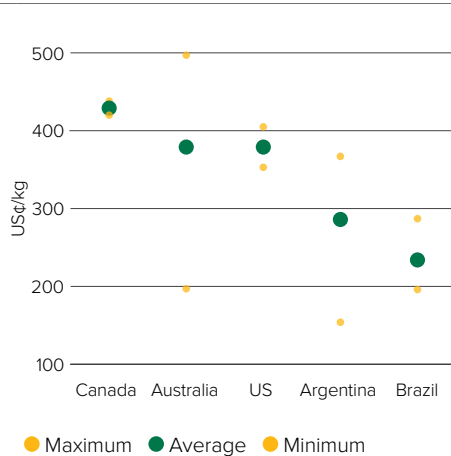
IBM production expanded rapidly throughout the 2000s as the dairy sector grew and buffalo began being utilised for meat. However, it has slowed recently. While a massive industry, IBM production remains sensitive to domestic politics, with some Hindu groups emboldened by the Modi government calling for its outright ban. More than half of IBM production is consumed domestically, predominantly by India's Christian and Muslim populations.

Indian buffalo meat exports increased by 8.9% in 2021, mostly to price sensitive, lower income markets as a substitute for beef. While India's agricultural infrastructure isn't as developed as that of some other beef producing nations, the underlying potential of the country means the Indian government has prioritised developing the agriculture sector due to its importance to economic growth.

Cattle slaughter costs*



On-farm cost of finishing cattle**



Source: * AMPC (analysis of regulatory and related costs in red meat processing) 2015-16 typical operating slaughter costs, excluding cost of cattle. ** Agri-benchmark 2018 typical farm/feedlot cash cost of total beef enterprise.

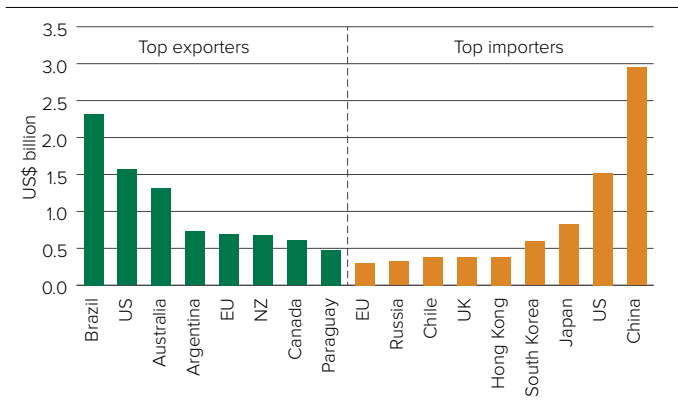
For more information on Australia's comparative cost of production, visit:

ampc.com.au/2018/10/Analysis-of-Regulatory-and-Related-Costs-in-Red-Meat-Processing

mla.com.au/prices-markets/Trends-analysis/agribenchmark

GLOBAL TRADE AND DEMAND

Top beef exporters and importers



Source: USDA-FAO, 2021 estimate
*All figures are in tonnes, cwe.

Major global markets

United States

Consumer trends

Globally, the US has the highest number of households earning disposable incomes over US\$35,000 and US\$75,000 per year. This affluent consumer base, combined with large and increasing meat consumption, means the country remains highly attractive and influential in the global protein trade landscape. Opportunities exist for Australian red meat to enhance its profile in the US thanks to growing demand from consumers for natural, healthy and environmentally sustainable products.

The US is one of the largest global consumers of animal proteins, with the level of meat consumption near maturity. Going forward, the opportunity for value growth within the beef category will be to increase export value through premium products like chilled grassfed beef, rather than through increased volume of conventional beef exports.



Australian exports

In 2021 Australia was the USA's third-largest supplier overall, exporting 135,000 tonnes of beef to the US.

However, in net terms, Australia was the second largest supplier.

Canada and Mexico, the two largest suppliers, are party to the North American Free Trade Agreement (NAFTA), which allows for deep economic integration between the three nations.

Australian exports to the US were worth US\$1.15 billion in 2021 and the average value of Australian exports per tonne are higher than any other major exporter.

The two main 'streams' of Australian beef are manufacturing trimmings and higher-end grassfed beef. Approximately half (50.1%) of Australian exports in 2021 by volume were lean manufacturing cuts and made up the bulk of frozen shipments.

The other major stream is chilled, grassfed beef for retail or food service. Grassfed Australian beef is considerably cheaper than American grassfed beef and many American consumers consider 'grassfed' to be a marker of health and quality in beef.

In 2021, the average cost of chilled beef cuts exported to the United States was US\$11.94/kg, compared to US\$6.37/kg for frozen beef. This means that even though frozen beef makes up 63.5% of Australia's US exports by volume, it only makes up 45.8% of its total revenue.

For a detailed overview of Australia's primary beef markets, visit: mla.com.au/market-snapshots

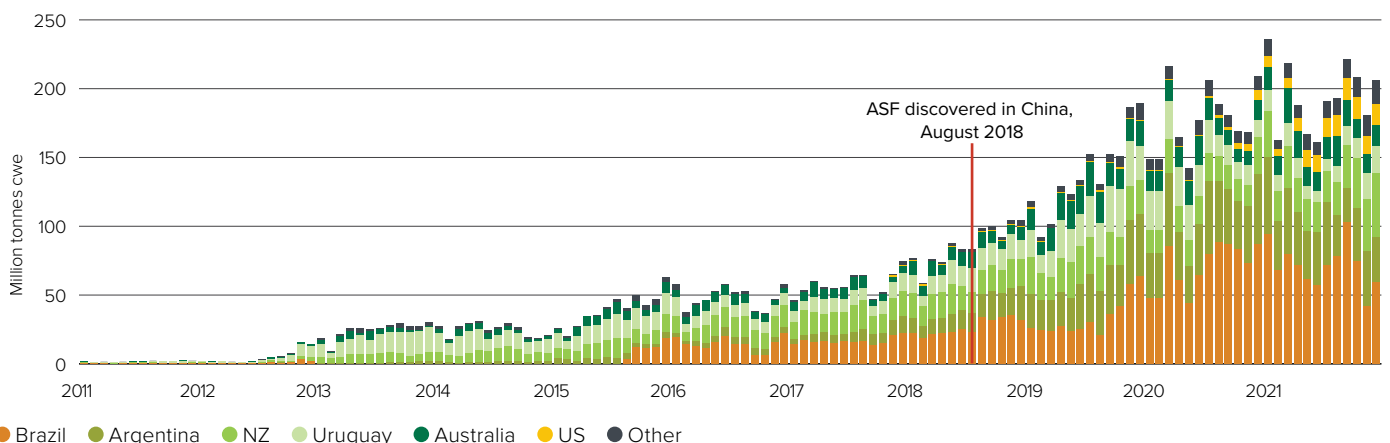
China

Consumer trends

China has transformed from being a minor import market in 2010 to the world's largest imported beef market in 2021, with growth accelerated by the spread of ASF and the subsequent decline in pork production in China. However, China's beef import expansion was underway well before the onset of ASF. It is expected that population and income growth across the country will continue to drive importation growth in the long-term.

Chinese consumers consider beef a superior protein, making it a family favourite due to its high nutritional value and great taste. Barriers to more frequent consumption, apart from price, are driven by perceptions that beef is more difficult to prepare, as well as less fresh and less tender compared to other proteins. However, in urban upper middle-class households, there is increasing exposure to western-style steaks, sausages, pasta dishes and burgers, both at home and via foodservice.

Evolution of China beef imports



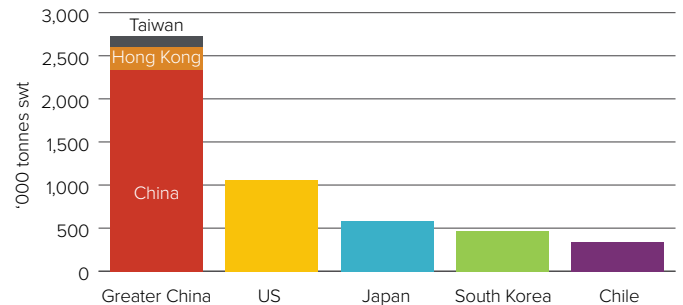
Source: IHS Markitt, 2021 figures

Australian exports

In 2021 Australia was the USA's third-largest supplier overall, exporting 135,000 tonnes of beef to the US.

In 2021, Australia exported 148,000 tonnes of beef to China, a 24% decline from 2020. During this time, China was the destination for 20% of Australian exports and was Australia's fourth largest trading partner. Meanwhile, Australia was China's sixth largest trading partner, accounting for 7% of beef imports and generating a total of US\$1.45 billion in bilateral trade.

Global top three imported beef markets



Source: IHS Markitt, 2021 figures

This fall came despite large increases in demand for beef inside of China. Lower production and technical access issues, as well as the suspension of licensing in nine production facilities in 2019, have hampered Australian exports into the market.

As a result, Brazil remains the largest exporter to China, shipping over one million tonnes of beef in 2021. However, the emergence of atypical BSE in September 2021 severely hampered exports in the final three months of 2021, falling by 28% year-on-year. Despite this, South America is the most common point of origin for Chinese beef imports, with Brazil, Argentina, Uruguay and Paraguay making up 68% of total imports in 2021.

Meanwhile, the United States increased exports into China by 74% in 2021, to 144,000 tonnes. Alongside lowered exports from Australia and disruption from Brazil, the United States has privileged access to the Chinese market that allows it to export very high volumes. The US-China Phase One Trade Deal, first signed in 2020, allowed for American self-certification of processing plants, as well as allowing American hormonal growth promotant (HGP) treated product to enter the Chinese market for the first time since 2007.

Prospects for Australian exports in 2022 remain unclear. Ambassador Xiao Qian, the recently appointed Chinese Ambassador to Australia, has struck a significantly softer tone regarding Chinese-Australian relations than past officials, but no concrete steps have yet been taken to improve technical access into the market.



Japan

Consumer trends

A balanced diet based on variety, quality and good flavour is highly important for Japanese consumers. When coupled with the country's low food sufficiency rate, Japan is a major importer of various food products from global suppliers, including beef. While the country's economic growth is subdued compared with many neighbouring markets in Asia, Japanese consumers have a strong interest in healthy living and will continue to demand high volumes of quality imported proteins. Despite flat population growth, beef consumption is projected to increase in Japan due to growing per capita consumption.

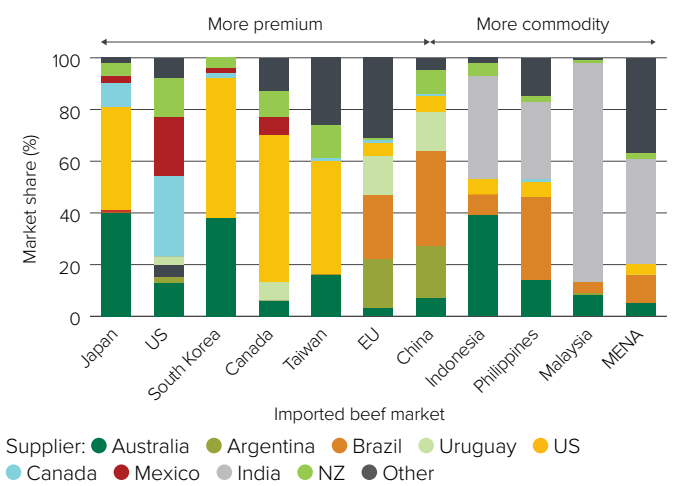
Beef is considered the most premium protein in the country with its good taste, underpinned by a strong emotional connection and a unique flavour experience. Japan's restaurant sector is one of the most developed in the world in size and sophistication, with a diverse range of global cuisines and price points available to consumers.

Australian exports

Japan was Australia's largest export market for beef in 2021 and was the destination for 26% of Australian exports. While exports to Japan fell by 13% to 234,000 tonnes, this was a softer drop than the overall 15% decline in Australia's export volume. Despite the lower volume, high beef prices kept their total export value at US\$1.5 billion – only a 1% decline from 2020.

Australia was the source of 40% of Japanese imports in 2021, which is down from 44% in 2020 but maintains Australia's position as Japan's largest beef import partner. The second largest, the United States, saw a 9% drop in export volume while Canada and New Zealand saw 30% and 35% increases in exports respectively. Despite this, Canadian and New Zealand exports remain marginal, and Australia and the US remain the largest suppliers of beef in Japan by far.

Competition in Australia's major markets



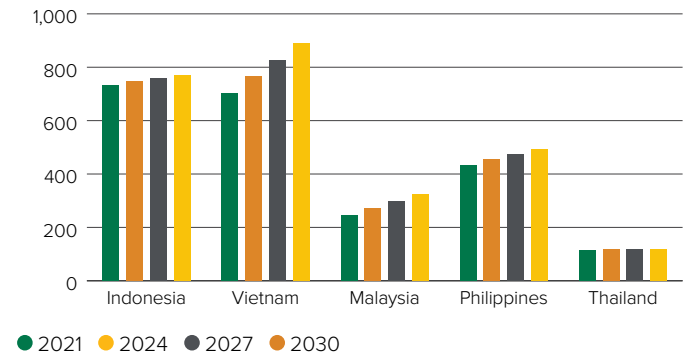
Source: IHS Markitt, 2021 figures

South-East Asia

Global consumer trends

This dynamic and fast-growing region is diverse in economic status, cultural background and market size. Improving household incomes and changing consumer tastes in the region are driving a rapid rise in red meat consumption, particularly in urban cities of developing markets. South-East Asia consumers associate beef with superiority and good taste, which typically drive them to pay a premium for it. Consumers also have positive perceptions of imported beef products, with 'premium quality' and 'better taste' being commonly perceived benefits.

South-East Asia consumption projections



Source: OECD-FAO 2021 Agricultural Outlook

Australian exports

In 2021, Australia exported 111,000 tonnes to South-East Asia, 3.9% more than 2020. The Philippines, Vietnam and Thailand collectively saw a 28% increase in exports, balancing out Indonesia and Singapore, which saw 5.4% and 40.5% declines respectively.

Developing markets in South-East Asia represent a major export opportunity for Australian producers. The large, rapidly growing consumer bases in South-East Asia are proximate to Australia and rapidly growing in purchasing power, raising the prospect of higher-valued exports and increased volume over the coming years.

In Indonesia and the Philippines – the two largest markets in the region – manufacturing cuts make up 41% and 82% of total exports, whereas in Singapore, the wealthiest market in the region, manufacturing cuts only make up 2% of exports and the most common cuts are striploins.

South Korea

Global consumer trends

Beef plays an important role in the Korean diet and is the most favoured meat in Korea. It has the strongest positive consumer associations for many influential factors that drive consumers' purchase decision-making when considering between meat proteins. These include 'family's favourite', 'taste' and 'nutritional benefits, especially for growing children'. Beef is also regarded as the most superior meat, with consumers willing to pay more for it.

Food safety and country of origin are important factors for Korean consumers, particularly when it comes to making beef purchasing decisions. Assurance of food safety and country of origin have become particularly critical for Korean consumers. Australian beef has a strong competitive advantage on the safety front and is highly trusted by Korean consumers, just behind the local Hanwoo beef, largely owing to the perceived 'good nature of Australia'.

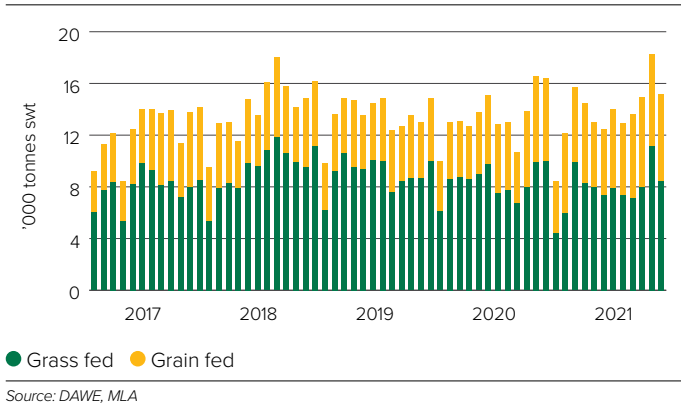
Australian exports

In 2021, South Korea was the second-largest export destination for Australian beef, with 165,000 tonnes shipped to the destination. This represented 38% of beef imports over the year, making Australia the second-largest source of South Korean beef imports.

Of Australia's major markets, South Korea was the only one in which volume increased over 2021. This was largely due to uplift in grainfed exports, which increased by 18.3% to 71,000 tonnes. This contrasts with grassfed exports, which fell by 6.8% to 94,000 tonnes.



South Korean imports from Australia



Meanwhile, the largest exporter to South Korea was the United States, which exported 250,000 tonnes over the year. Given the projected fall in American production and export over 2022 and 2023, Australia has an opportunity as a more 'reliable' exporter to South Korea. This is as the export-oriented industry present in Australia is able to consistently ship grainfed beef, while the US is primarily oriented towards domestic markets and is less consistent as a supplier.

Australia's market access

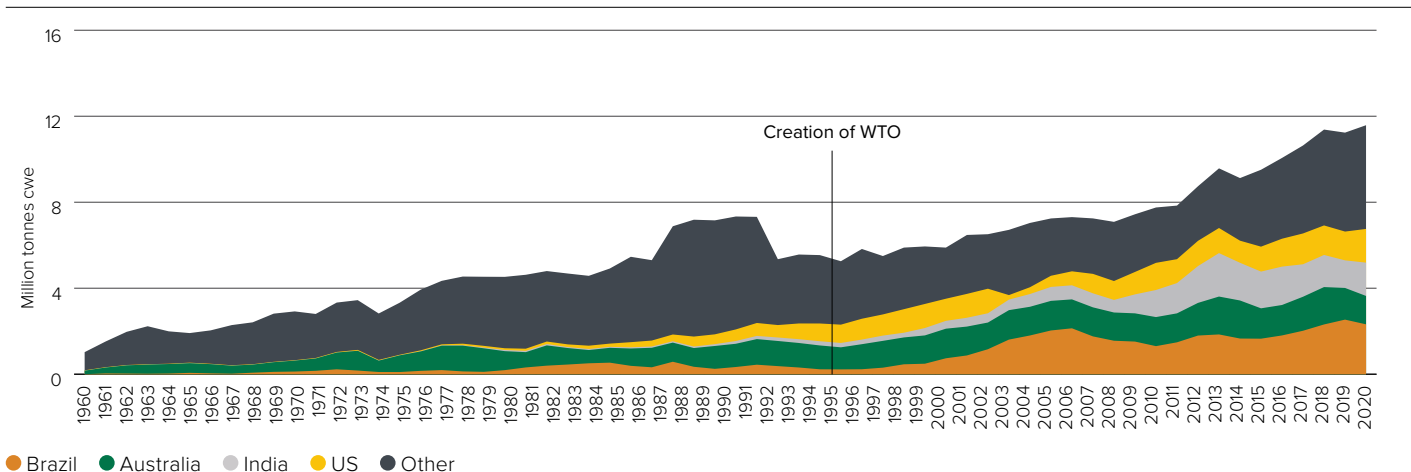
With growth in the Australian domestic market limited, open trade is central to the ongoing viability of the beef industry and pursuing unrestrained entry to global customers remains critical. Australia's access to export markets has generally improved over the past three decades, led initially by multilateral negotiations through the World Trade Organization and more recently through a series of bilateral and regional free trade agreements (FTAs). While these agreements have resulted in tariffs and quotas becoming less restrictive or non-existent, non-tariff barriers (NTBs) still impede Australian beef exports.

Australia's access to global markets is underpinned by strong animal health and food safety credentials, having never had a case of bovine spongiform encephalopathy (BSE) and being host to world-leading traceability systems. Subsequently, Australia has successfully negotiated technical access to a diverse array of export markets.

The newest opportunity for Australian exporters comes from the Australia-United Kingdom Free Trade Agreement (A-UK FTA), signed in 2021.

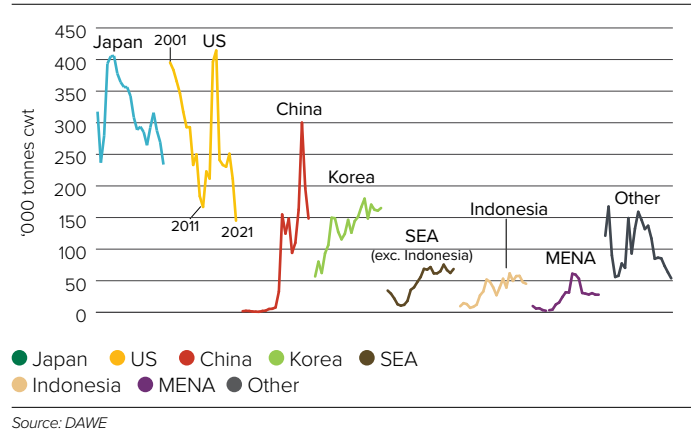
This agreement will dramatically enhance access for Australian beef into a high value, historically important market. This will be done initially under a quota and safeguard but then will eventually transition to unrestricted trade.

Beef trade growth over time



Indeed, Australian beef has some of the best market access globally, with most product facing less than a 25% tariff when entering key export markets. Australian exports to the US are tariff-free under the 428,214-tonne quota, while free trade agreements with Japan, South Korea and China are leading to progressively lower tariffs over time, with most tariffs to be abolished or severely curtailed by 2030.

Australian beef exports (2001-21)



Despite this, however, Australia has a modest tariff disadvantage to the United States in China and South Korea and has faced significant difficulty maintaining technical access into the Chinese market since 2020.

These technical access issues, and other similar NTBs, pose a challenge to Australian exports even as tariffs and quotas loosen in key markets. NTBs include a wide array of measures such as establishment listings, packaging and labelling requirements, unnecessary inspection and testing and excessive shelf-life requirements. Often such measures are enforced universally and don't reflect Australia's strong track record for food safety and animal health or the quality of product. In some instances, the onset of COVID-19 has compounded the impact of existing NTBs or ushered in new measures altogether.

For example, the deregistering of nine processing plants in 2020 has had a considerable impact on Australian exports into China, making 60% of Australian production ineligible for access and making consistent supply difficult for importers to guarantee.

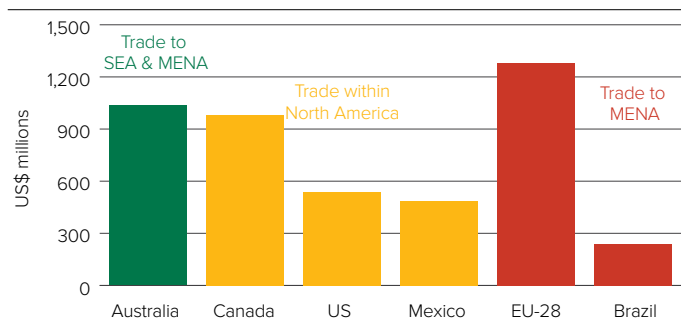
As such, substantial gains can be unlocked for Australian exporters and overseas consumers by amending rules to reflect science and a risk-based approach to managing trade.



Live exports

Australia is a leading long-haul exporter of live cattle globally, with trade links to supply chains in South-East Asia and the Middle East. Trade dynamics allow Australia to be the leading, if not sole, supplier of cattle to many countries. However, the high cost of Australian cattle presents a significant challenge in often price-sensitive markets.

Value of exports for major live cattle suppliers



Source: UN Comtrade, 2021 exports

Indonesia is the leading destination for Australian feeder cattle. Broadacre pastoral production in northern Australia is very suited to raising calves but less so at finishing cattle, while efficient Indonesian feedlots can utilise by-products from palm oil and other crops as low-cost feed options. A lack of cold chain infrastructure and the dominance of wet markets also supports

the customer preference for freshly slaughtered cattle. Australian exports to Vietnam are based on similar fundamentals, however, the trade is predominantly made up of slaughter cattle, as feedlot capabilities are not particularly developed. Vietnam's feedlot industry is an exception to this with expected development in the coming years.

Major live export trade flows also exist across North America, primarily comprised of feeder cattle from Mexico and Canada destined for US feedlots, as well as finished cattle from Canada and the US crossing the border to be killed in either country. While Mexico has traditionally exported over one million cattle a year to the US, the synergies and sea-freight infrastructure are not in place to ship large quantities to South-East Asia.

Brazil, another major exporter of cattle, previously focused shipments within South America. However, its attention has since shifted to the Middle East and particularly Turkey. While Brazil's FMD status is a barrier for exporting cattle to Indonesia, FMD is already an endemic disease in Vietnam – Australia's second largest market – and the two countries signed an agreement in 2021 allowing live export from Brazilian producers, with the first shipment arriving in September.

Although cheaper than Australian cattle, the distance from Brazil to Vietnam makes the route relatively uneconomic in usual circumstances. This shipment occurred in the context of supply chain difficulties for Vietnamese importers and very high cattle prices in Australia, meaning that this route is unlikely to be sustainable in the long term.

Major global markets

	Australia	NZ	US	Mexico	Canada	Brazil	Argentina	Uruguay	India	China	EU-27
Cattle head (million head)*	23	10	93.6	17	11.1	252.7	53.5	12.0	305.5	95.6	76.5
Dairy % of cow herd**	12%	82%	23%	31%	22%	43%	7%	7%	100%	21%	65%
Cattle and calf slaughter (million head)*	6.4	4.7	34.4	6.5	3.8	36.5	13	2.4	38.6	47.4	23.3
Cattle exports (million head)*	0.8	0.12	0.51	1.2	0.66	0.06	–	0.2	–	–	1.05
Beef and veal production ('000 cwt)*	1,900	745	12,736	2,120	1,450	9,325	3,000	595	4,100	6,830	6,835
Total domestic consumption ('000 tonnes cwt)*	605	81	12,718	1,975	1,035	7,065	2,279	147	2,550	9,763	6,586
Domestic share of production	31%	9%	88%	84%	58%	75%	76%	19%	62%	100%	90%
Per capita domestic consumption (kg/person cwe)***	28.2	10.3	25.8	8.9	17.8	23.7	37.2	–	0.5	4.2	10.3
Beef exports ('000 tonnes swt)†	968	503	1,109	268	441	1,560	560	416	1,027	–	457
Chilled % share of exports†	27%	8%	43%	88%	75%	11%	16%	10%	2%	–	55%
Average export price (\$US/kg)††	\$9.36	\$7.55	\$11.17	\$9.62	\$9.55	\$6.82	\$6.52	\$7.75	\$3.89	–	\$7.52
Top three export markets†	Japan, South Korea, China	China, US, Japan	South Korea, Japan, Mexico	US, Japan, Canada	US, Japan, China	China, HK, Chile	China, Chile, Israel	China, Netherlands, US	Egypt, Malaysia, Vietnam	–	UK, B&H, Philippines

Source: *USDA, MLA (Aust.) 2021 estimate; **USDA 2021 estimate; ***MLA (Aust.), FAO-OECD 2020 estimate, USDA 2020 estimate; †IHS, DAWR (Aust.) 2021 actual

