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Western Australia’s Primary Industries: 2021-22 Economic Overview

D. Maharjan
Department of Primary Industries and Regional Development, Western Australia

S. Akbari
Department of Primary Industries and Regional Development, Western Australia

A.K. Abadi Ghadim
Department of Primary Industries and Regional Development, Western Australia, amir.abadighadim@dpird.wa.gov.au

P. Mattingley
Department of Primary Industries and Regional Development, Western Australia

I. Wilkinson
Department of Primary Industries and Regional Development, Western Australia

See next page for additional authors

Authors
D. Maharjan, S. Akbari, A.K. Abadi Ghadim, P. Mattingley, I. Wilkinson, J. Tan, J. Van Staden, and M. Radhakrishnan

GOVERNMENT OF WESTERN AUSTRALIA

Department of Primary Industries and Regional Development

Protect
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Innovate

Western Australia's Primary Industries: 2021-22 Economic Overview

Important disclaimer

Produced by the Policy, Innovation and Performance, Strategy and Coordination, and Agribusiness, Food and Trade branches.

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Gordon Stephenson House
140 William Street PERTH WA
6000 Telephone:
(08) 6551 4444
Website: dpird.wa.gov.au

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Acknowledgment

DPIRD acknowledges the contribution of the Department's subject matter experts in supporting the project team to publish the report.

Acknowledgment of Country

DPIRD acknowledges the Traditional Custodians of Country, the Aboriginal people of the many lands that we work on and their language groups throughout Western Australia, and recognises their continuing connection to the land and waters. DPIRD respects the continuing culture of Aboriginal people and the contribution they make to the life of our regions and we pay our respects to Elders past, present and emerging.

About this booklet

The Western Australia's Primary Industries: 2021-22 Economic Overview (WAPIEO) is developed by DPIRD in partnership with the Forest Products Commission.

The WAPIEO has a trade focus and provides a single source for consistent statistics and insights on observed industry trends.

- The WAPIEO is based primarily on 2021-22 economic indicators from the Department of Treasury, DPIRD data, and statistics from the Australian Bureau of Statistics (ABS), in line with the release cycle dates of final ABS data.
- All values are in Australian dollars. The GVAP data (gross value of agricultural products) is from the ABS: Value of Agricultural Commodities Produced (cat.no 7503.0 and VACPDCNAT).
- For all industries, other than Horticulture, the data reported in the production value graphs is drawn from ABS, Grain Industry of Western Australia (GIWA) and Australian Bureau of Agriculture and Resource Economics (ABARES) data sets. Where data is missing DPIRD has made informed estimates of production.
- Horticultural statistics are drawn from several sources including the ABS, the Agricultural Produce Commission, Australian Horticulture Statistics Handbook and industry. A major study was conducted valuing Horticulture in 2019-20, it is not possible to conduct this level of analysis each year and so projections are based on the 2019-20 data amended to reflect changes in the Consumer Price Index (CPI).
- The agrifood industries statistics are drawn from a study utilising ABS data using value chain modelling to value the agrifood value chain and the total export share of WA agrifood products. Due to the nature of the model and the data requirements, re-calculating the output of this study each year may not be possible.
- Export data is from the ABS monthly International Merchandise Trade subscription, with DPIRD analysis. Further export data is sourced from the ABS in customised data reports. These figures are used in the respective commodity export graphs.
- Export values published in this edition of the WAPIEO differ slightly from previous editions. This is due to DPIRD reviewing some agrifood export codes for accuracy and consistency.
- Forestry industry exports are not presented in this booklet, as data is not publicly available.
- Please note that for some graphs and tables, the figures and percentages presented do not always add to the total and/or 100% due to rounding.

Director General Statement

Western Australia's primary industries sector is a significant contributor to the state's economic diversification. Supported by strong international trading relationships, it is also a major export industry with around 60% of our agriculture, fisheries, forestry and food production exported to over 150 international markets.

The agriculture, fisheries and forestry industries are also significant contributors to our economy, generating growth and jobs throughout the regions and in metropolitan areas.

With agricultural production in excess of $10 billion a year from 2017-18 to 2021-22, and exports more than $8 billion per year over the same period, WA's established primary industries sector presents a significant opportunity to add more value to our world-class produce beyond the farmgate. This will ensure the food, fodder, fibre, and beverage industry can continue to meet emerging trends in global consumer demand and enable more people across the world to enjoy a taste of our pristine state.

This publication is designed to give an overview of the statistics relating to the value of primary production carried out in WA and show trends that have occurred in recent times. It also shows the value of our exports, along with the major destinations for our primary production.

I hope you find the information presented in this overview informative and useful.

Heather Brayford PSM

Director General

December 2023

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1 Department Profiles

1.1 Department of Primary Industries and Regional Development

The Department of Primary Industries and Regional Development (DPIRD) supports Western Australia's (WA) primary industries and regions.

We work collaboratively with the public and private sectors and deliver through partnerships in science, research and development, regulation and industry development.

DPIRD is committed to growing and protecting WA's agriculture, fisheries, aquaculture and food sectors. In 2021-22, WA exported around $12.2 billion in agriculture, fisheries, aquaculture and food and fibre products. The top three products exported were wheat, canola and barley.

DPIRD supports the primary industries sector to increase its value by capitalising on growing global demand for food and fibre while safeguarding our state's natural resources. Our approach is to:

- **Protect** - through stewardship of our people, land and aquatic resources.
- **Grow** - our primary industries and regions through balancing social, economic and environmental drivers, and
- **Innovate** - through a culture of inquiry and adaptation.

Agriculture and food

As an economic development agency, DPIRD conducts targeted research and development and fosters innovation to enable the sector to overcome barriers for growth and increase its contribution to the state economy.

Our staff collaborate with industry, delivering services across more than 100 million hectares of the state and to agribusinesses along both the supply and value chains. We also provide a range of resources and information to support agrifood businesses and educate the WA community.

WA's agrifood sector offers premium products that are sustainably and ethically produced, of known provenance and exceptional quality.

As well as being the nation's largest grain-producing region, WA is a significant producer of Australia's meat and livestock, dairy, wool, horticulture, fisheries and honey products.

WA is globally renowned for being free from major animal and plant pests and diseases common in many other parts of the world. Strict quarantine requirements ensure this status is maintained for the benefit of local producers and consumers around the globe. This, combined with a focus on innovation, research and development, allows the sector to meet the specific requirements of domestic and overseas customers.

The sector places a high value on overseas markets, with agriculture being our second major export industry. WA exports around 60% of the value of its agricultural and food production.

For the past decade, about 70% of our agrifood exports have been destined for Asia, with China, Japan and the Philippines being our largest markets by value in 2021-22.

With growing demand for premium agrifood products, especially in Asia, WA is in a strong position to build on its reputation as a reliable supplier of clean, safe and high-quality food to overseas markets.

The industry is a significant source of employment and continues to be the lifeblood of many rural and regional communities, with the broader sector provided jobs for around 180,000 people in 2021-22.

Fisheries

DPIRD is responsible for conserving, sustainably developing and sharing the use of WA's aquatic resources and their ecosystems for the benefit of present and future generations.

We work closely with the Western Australian Fishing Industry Council (WAFIC), Recfishwest and other key stakeholders to sustainably manage the state's fisheries and aquatic resources. This is demonstrated by the percentage of WA fish stocks not being at risk from fishing having been above 95% for the past ten years.

This outcome is achieved through monitoring and assessing the risks to fish stocks and associated ecosystems to determine the appropriate level of regulation for commercial and recreational fishing activities plus the effective enforcement and education of these regulations.

DPIRD manages commercial fisheries, which include the rock lobster, pearl oysters, prawns, scallops, abalone and finfish fisheries which are collectively worth $254 million in exports in 2021-22.

DPIRD also manages various recreational fisheries that operate across the state which are accessed by more than 649,000 people annually.

To achieve its legislative responsibility, DPIRD carries out monitoring, research, management, surveillance, enforcement and education activities along the state's 12,895 km coastline and out to the edge of Australia's exclusive economic zone, which extends 200 nautical miles (370 km) from the coast. The management of all fishing activities is underpinned by the world-class scientific research we undertake.

Aquaculture

DPIRD is responsible for regulating aquaculture in WA. The Department also operates a range of aquaculture facilities and infrastructure supporting research and development, production of seed stock for aquaculture operators and stock enhancement/restocking initiatives.

DPIRD's aquaculture infrastructure includes research facilities such as the Fremantle Marine Fish Hatchery, Hillarys Shellfish Hatchery, the Pemberton Freshwater Research Centre, the Indian Ocean Marine Research Centre and Aquaculture parks in Albany and Broome.

DPIRD is committed to growing and supporting the aquaculture industry by enabling access to natural resources, including coastal waters suitable for large-scale production and wild stocks for use as seed stock and broodstock. DPIRD also provides investment-ready aquaculture development zones and Aquaculture Parks and identifies aquaculture opportunities while reducing unnecessary regulation. The agency continues to provide strong fish health capability, such as diagnostic services, advice and support.

1.2 Forest Products Commission

The Forest Products Commission (FPC) is responsible for the sustainable management and development of WA's forest products industry. The FPC manages pine and sandalwood plantations and assists with the management of native forest health on land owned or leased by the State. It builds and maintains a sustainable forest products industry that provides economic, social and environmental benefits for all Western Australians.

The FPC is guided by the Forest Management Plan 2014-2023, prepared by the Conservation and Parks Commission and the Department of Biodiversity, Conservation and Attractions. The plan is revised every 10 years. This plan protects all old-growth forest and balances the complex values of our forests, including biodiversity and healthy ecosystems, soil and water resources, and social, cultural and economic benefits.

The FPC is committed to assisting the forestry industry to support the employment of Western Australians working in timber-related industries. These industries include forest management, harvesting, primary processing and manufacturing sectors.

Changes to the *Forest Products Act 2000* provide new opportunities through carbon sequestration from new plantations established through the Government's $350 million investment in the WA plantation estate.

The forest products industry contributes significantly to the state's economy and supports employment in regional and remote areas.

2 Western Australia's economy - Key facts and figures

2.1 Western Australia in a glance

Gross State Product (2021-22)	$404.5 billion
Economic Growth Rate (2021-22)	+3.1%
Population (2022)	2.83 million
Population Growth (2022)	2.3%
Goods Imports (2022)	$46.8 billion
Goods Exports (2022)	$261.4 billion
Employment (2022)	1.51 million
Unemployment rate (2022-23)	3.5%
Consumer Price Index (2022-23)	6.2%
Average Weekly Earnings (2022)	$2,040
State goods exports as a % of total Australian exports (2022)	44%
Land area*	2.5 million km^2

Source: DJTSI (2023); *Geoscience Australia (2023)

2.2 Land and sea use / overview

- WA is the largest Australian state, covering the entire western third of the continent and spans 2,400 kilometres from north to south, with a land area of more than 2.5 million square kilometres and a coastline of 12,895 km.
- The state capital Perth is closer to Indonesia's capital, Jakarta, than it is to Australia's capital, Canberra.
- From the tropical north to the temperate areas in the south-west corner, the state experiences a range of climatic conditions. As distance from the coast increases, rainfall decreases, and temperature variations become greater.
- Agriculture is WA's second largest export industry, behind mining, oil and gas (combined).
- WA's soils and range of climates are suited to a variety of agricultural and forestry production, from broadacre cropping to irrigated pastures, horticulture, pastoral grazing and sandalwood.
- The vast land area creates opportunities for a diverse agricultural sector that provides the raw materials for a growing range of processed exports. These include wine, malt, rolled oats, noodles and fine leather.
- WA's production areas are free from major animal and plant pests and diseases common in many other parts of the world. Strict biosecurity requirements and regulations ensure this status is maintained for the benefit of local producers and consumers.
- A major east–west rail line carries freight and passengers between WA and other Australian states. An extensive rail network services agriculture, primarily transporting grain to ports, in the state's south-west.
- Perth Airport has regular services linking Perth to global destinations. The services are capable of freighting premium agrifood, fisheries and high-value forestry products (such as essential oils) to major destinations, including China, Hong Kong, Indonesia, Malaysia, Singapore and the Middle East.
- International containerised shipping can be accessed at Fremantle (south of Perth), the state's main port. The nine regional ports — Albany, Broome, Bunbury, Dampier, Esperance, Geraldton, Kwinana, Port Hedland and Wyndham — are linked to major agrifood, fibre and forestry producing areas.
- The ports used to load bulk grain are Geraldton, Kwinana, Bunbury, Albany and Esperance.
- WA's waters are home to a diverse range of marine life that contributes to the state's international reputation as a producer of premium quality seafood.

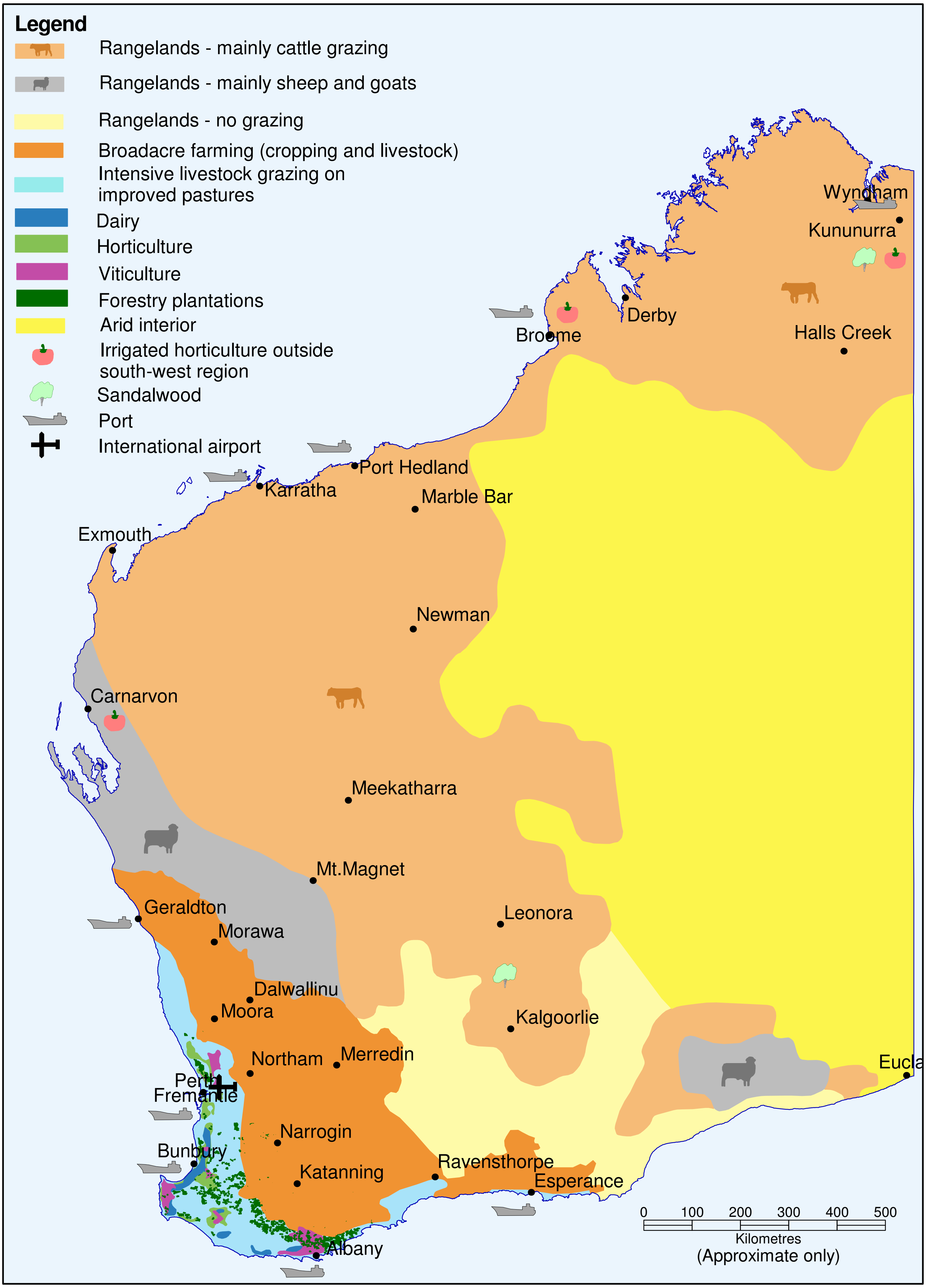


Figure 2.1: Land use map

2.3 Production and Exports Overview

WA's primary industries and, to a larger extent, Australian agriculture have enjoyed higher-than-average farm revenues (GVP) in 2021-22, and in some regions at least two years preceding it. This was due to record commodity prices and high levels of production brought on by favourable seasonal conditions – growing season rainfall. This has led to record levels of commodity production in many rural locations across the nation. This unusual combination of high prices and good yields improved the financial welfare of a significant number of farmers in WA in 2021-22.

The strong commodity prices experienced in 2021 was caused by adverse weather conditions in several major cropping regions that restricted global supplies. Furthermore, several nations were stockpiling storable food commodities in anticipation of possible shortages of staple food items. The COVID-19 pandemic also caused shortages in labour in sectors such as horticulture and dairy. The pandemic also presented challenges to the commodity haulage and transport sector in many regions of the world but seemed to favour Australian agriculture.

Primary Industries Production

- In 2021-22, the gross value of WA's agrifood, fibre, forestry and fisheries production was $16.3 billion, up from $10.2 billion in 2017-18.
- WA produces more grain than any other state in Australia. WA's total wheat production in 2021 (growing season) of 12.9 million tonnes equated to over 36% of Australia's total production (36.2 million tonnes).
- WA is also a significant producer of high-quality meat and livestock, cereals, canola, lupins, seafood, dairy, wool, viticulture, horticulture and honey products.
- While Western Rock Lobster dominates the fisheries sector, the state also produces crab, prawns (shrimps) and marron (native freshwater crayfish), abalone, scallops, finfish and pearl oysters.
- The forestry industry comprises hardwood plantations, softwood (pine) plantations and sandalwood.

Primary Industries Exports

- The WA agrifood, fibre and fisheries industries are highly export orientated, accounting for $12.2 billion in exports in 2021-22.
- International trade has increased from 2017-18 to 2021-22, driven by strong growth in wheat, barley and canola exports.
- In 2021-22, the top five products exported were wheat, canola, barley, wool and lamb.
- In 2021-22 mainland China, Japan and the Philippines were WA's major destination countries for export of agrifood, fibre and fisheries products, followed by Germany, Indonesia and South Korea.
- The most valuable fish species in WA – Western Rock Lobster – accounted for $218 million or 86% of fisheries exports in 2021-22.
- There is high overseas demand for live animals (cattle and sheep) from WA, driven mainly by South-East Asia and the Middle East.
- Around a quarter of the value of Australian live animal exports came from WA in 2021-22, with the state being the dominant exporter of live sheep.
- Much of WA's seafood products are used in high-class restaurants in China (including Hong Kong) and throughout other parts of Asia.

Key primary industries statistics

Indicator	2017-18	2018-19	2019-20	2020-21	2021-22
Gross value of agricultural production (GVAP-billion) *	$10.2	$12.3	$10.1	$11.4	$16.3
Agrifood export value (billion)**	$8.1	$9.1	$8.3	$8.2	$12.2
State agrifood exports as a % of Australian agrifood exports	15%	17%	16%	16%	18%
No. of agricultural businesses***	7,965	8,533	8,361	8,425	8,233
Employment in the sector****	177,664	183,994	144,510	177,835	180,652

Source: *ABS production data (2017-22); **ABS export data (2017-22);
***ABS Agricultural Commodity data (2017-22); ****ABS (2023a)

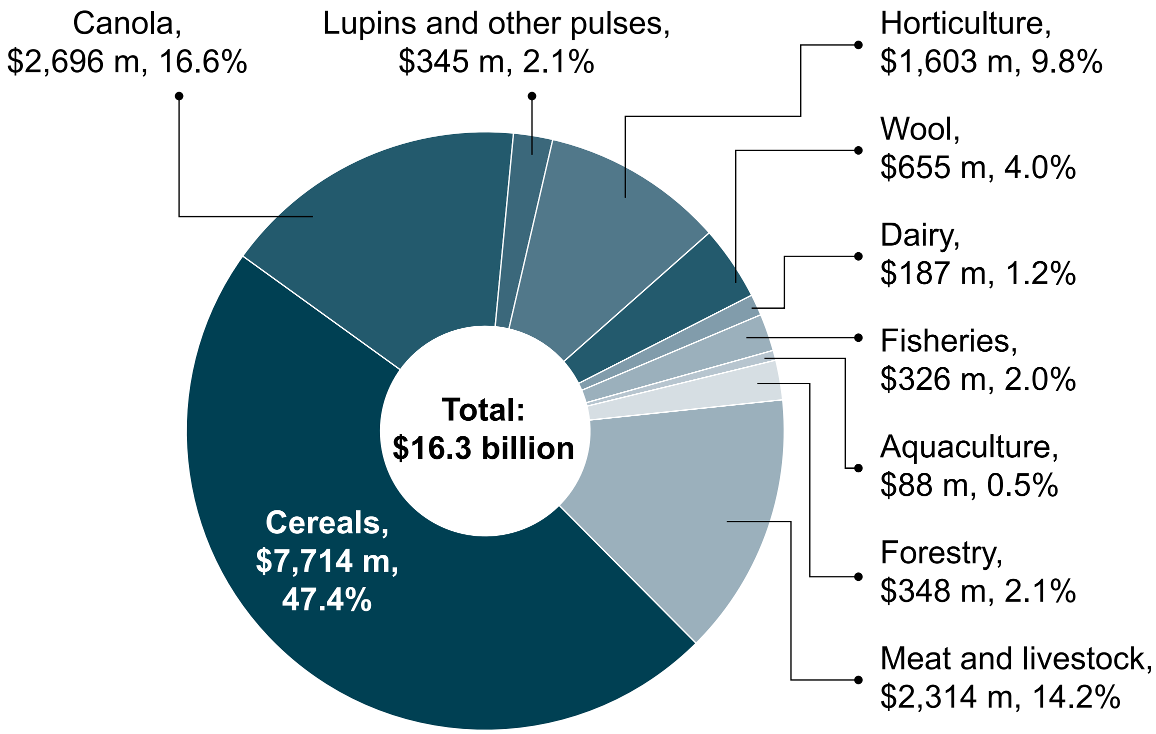
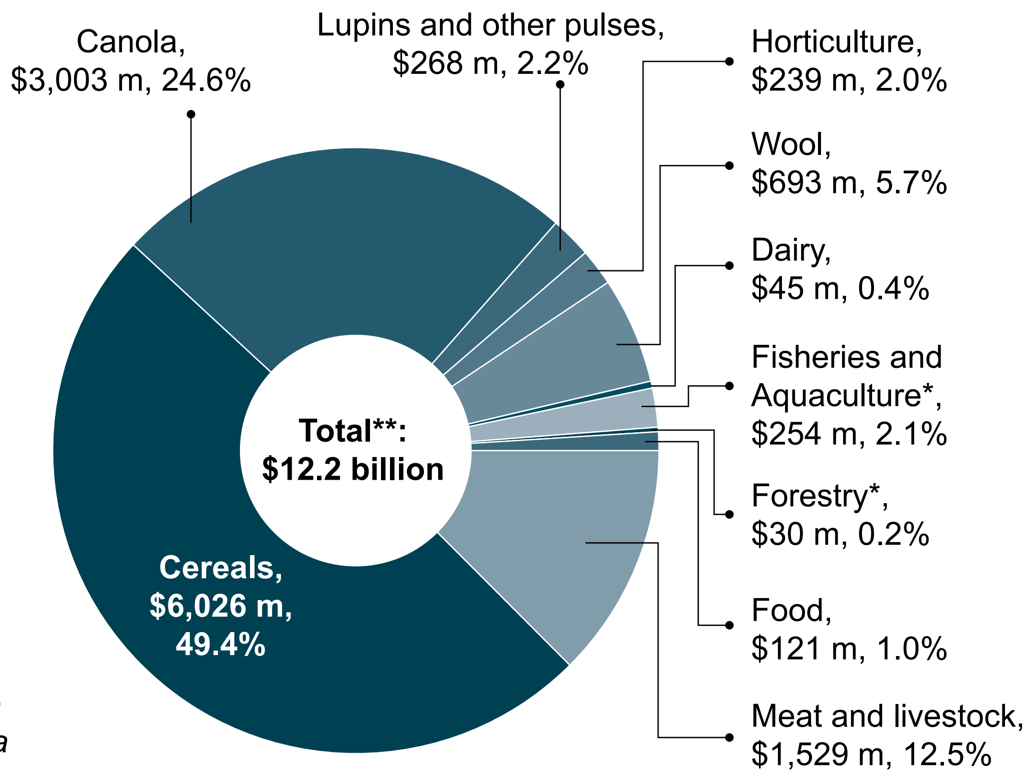


Figure 2.2: Agrifood, fibre, fisheries and forestry value of production 2021-22

Source: ABARES (2021-22); ABS (2021-22); Radhakrishnan, *et al* (2022)



**Excludes confidential data for forestry and fisheries*

***Including mixed confidential, apiculture and other oilseeds data*

Figure 2.3: Agrifood, fibre, fisheries and forestry value of exports 2021-22

Source: ABS export data (2021-22)

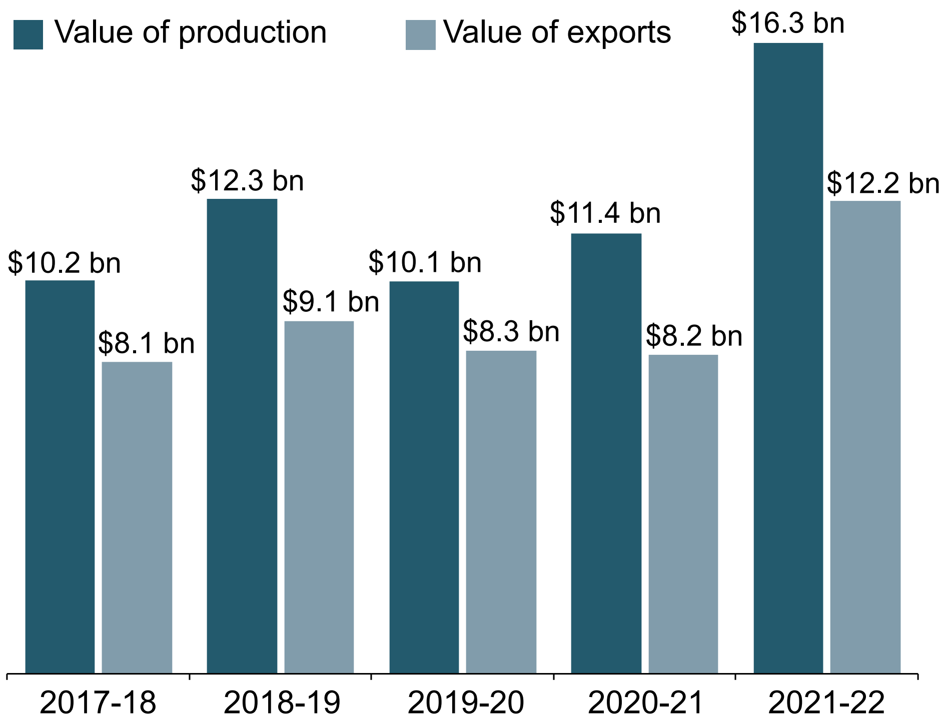


Figure 2.4: Agrifood, fibre, fisheries and forestry value of production and exports from 2017-18 to 2021-22

Source: ABARES (2023); ABS production and export data (2017-22); Radhakrishnan, *et al* (2022)

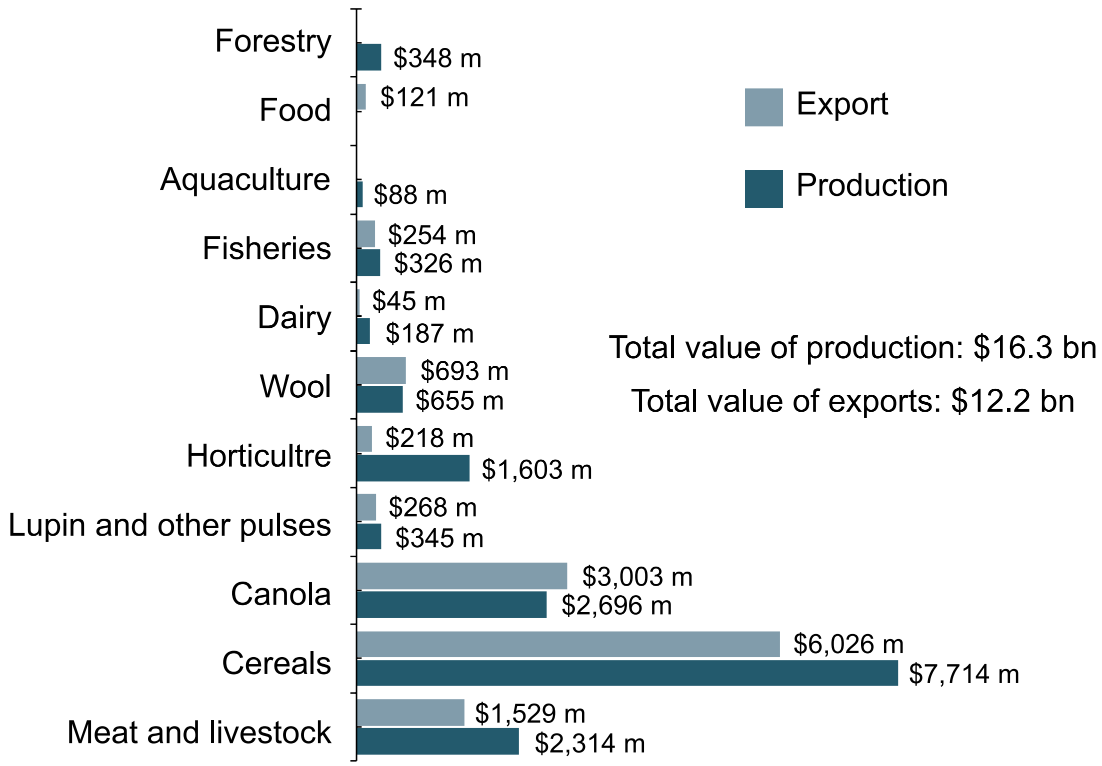


Figure 2.5: Agrifood, fibre, and fisheries value of production and export by industry 2021-22

Source: ABARES (2023); ABS production and export data (2021-22); Radhakrishnan, *et al* (2022)

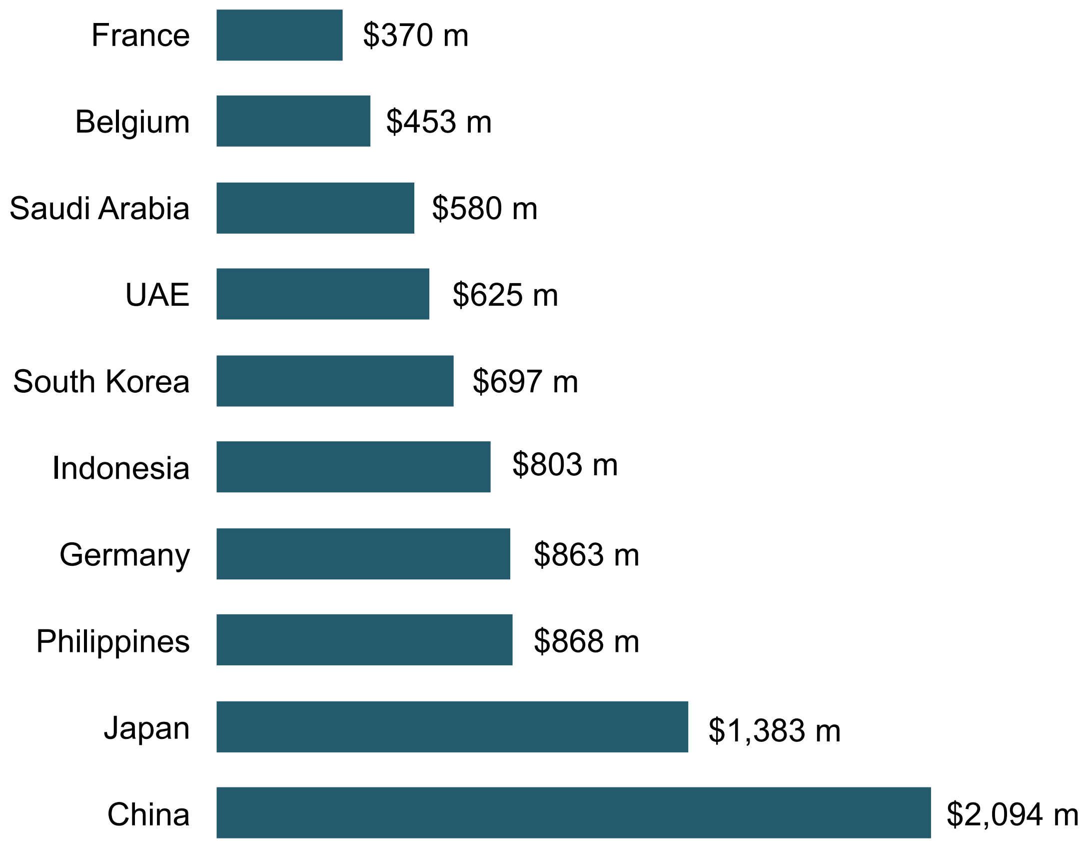


Figure 2.6: Agrifood, fibre, fisheries and forestry major export markets 2021-22
Source: ABS export data (2021-22)

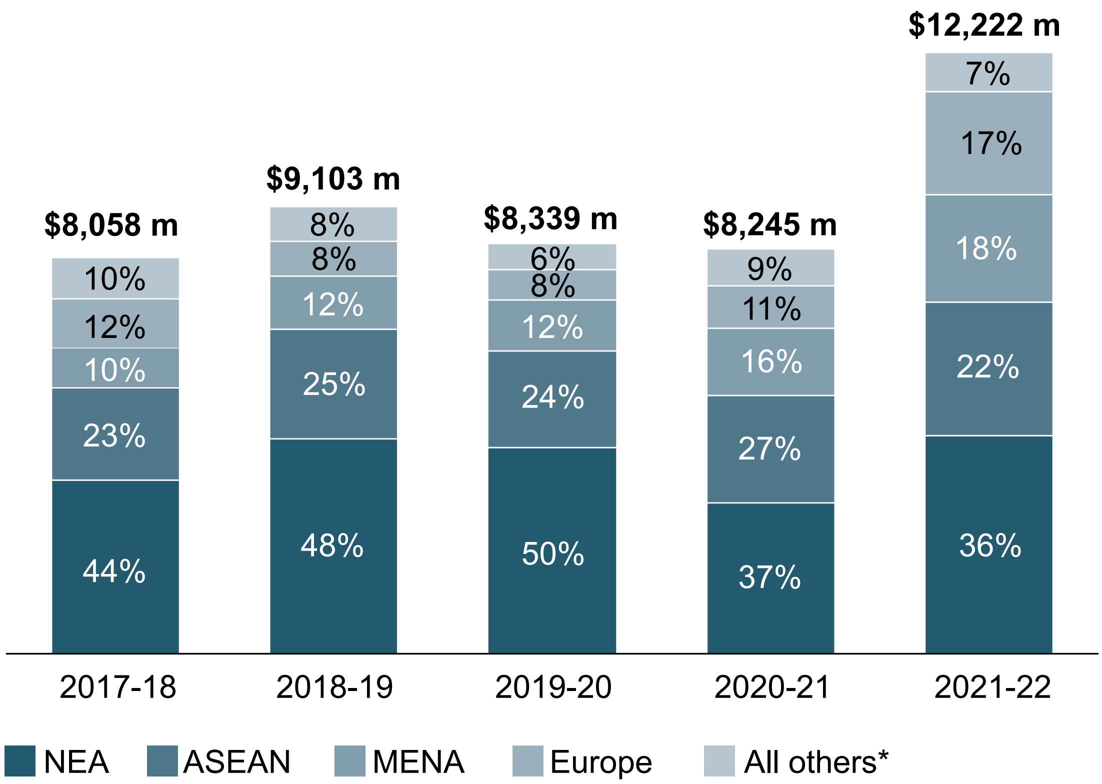


Figure 2.7: Agrifood, fibre, fisheries and forestry exports by global region[1]
Source: ABS export data (2017-22)

[1] Please refer to Key Terms at the back of the report for descriptions of the acronyms.

3 Cereals

- WA produces 30–40% of Australia's cereals in a rain-fed Mediterranean natural environment. The main cereals produced, in order of production volume are wheat, barley and oats. WA cereal exports accounted for approximately 46% of Australian cereal exports over the past 10 years.
- The WA cereal industry is a major contributor to the agricultural sector and the Australian economy with most cereal production exported.
- It is estimated that approximately 4,000, mainly family-owned and operated businesses, produce on average 15.7 million tonnes of cereals per annum (five-year average [2017 to 2021]). Farm sizes are mostly in the range of 2,000 to 15,000 hectare.
- Cereal production is highly mechanised and requires low agrichemical inputs, which makes production cost-efficient and competitive in export markets.
- Cereals have a wide range of end-use products, such as noodles, breads and baked goods, alcoholic and non-alcoholic beverages, health products and animal feed.
- The industry continues to focus on producing wheat, barley and oats mostly suitable for quality discerning food markets (e.g., wheat for Japanese white salted udon noodles).
- WA is a globally significant producer of malt and feed barley. New markets were developed for barley suitable for malting and brewing in Mexico, South America and Africa following the decision in May 2020 by China to impose an 80.5% anti-dumping and countervailing duty measures on Australian barley. In 2023, the Chinese market re-opened without those duties being applied. In the interim, the Middle East is also a major market for feed barley.
- WA has the largest barley malting facility in the southern hemisphere. There are two malting plants in Perth with a capacity of around 250,000 tonnes of malt (requiring 300,000 tonnes of barley).
- The state is the largest producer of milling oats in Australia, supporting four mills for domestic and export use for breakfast food and health bars.
- DPIRD has significant direct investment in grains research, development and extension capability and activities, research infrastructure, and policy development.
- It also applies biosecurity policies and operations to facilitate safe trade, tourism and commodity movement while reducing exposure of the industry to exotic biological risks.
- The value of cereal production in WA is dependent on prices and seasonal conditions.
- 2021 was an excellent growing season for cereals across the whole of WA. The record cereal production of 22.4 million tonnes was due to an increase in area sown and high yields supported by good subsoil moisture, an early planting opportunity, warm growing conditions and mild conditions during grain fill. The value of production for financial year 2021-22 increased by 59% compared to the previous financial year.

- In the 2021-22 financial year, the value of WA's total cereal exports was $6 billion. Of these, 5.5% were processed products and 3% was hay.
- WA wheat exports were valued at $3.9 billion in 2021-22, 43% higher than the previous year. Barley grain exports were $1.4 billion and oat grain exports were $159 million. The value of oat exports has increased solidly in recent years on the back of strong demand, particularly from China.
- Cereal hay exports were $208 million in 2021-22, notably to Japan, South Korea, Taiwan and Vietnam.
- The top markets for WA wheat in 2021-22 were China, the Philippines, Indonesia, South Korea, Japan and Yemen, accounting for 84% of all exports. These markets can change depending on seasonal wheat quality profiles and competition from suppliers such as the Black Sea and Argentina. Wheat markets are diverse and reflect the crop's quality/end-use suitability.
- The top markets for WA barley in 2021-22 were Saudi Arabia, Japan, Kuwait, Jordan, Vietnam and the Philippines with 85% of exports going to these markets.
- The top markets for WA oats in 2021-22 were China, Mexico, India, Japan, Malaysia and Taiwan with 84% of exports going to these markets.

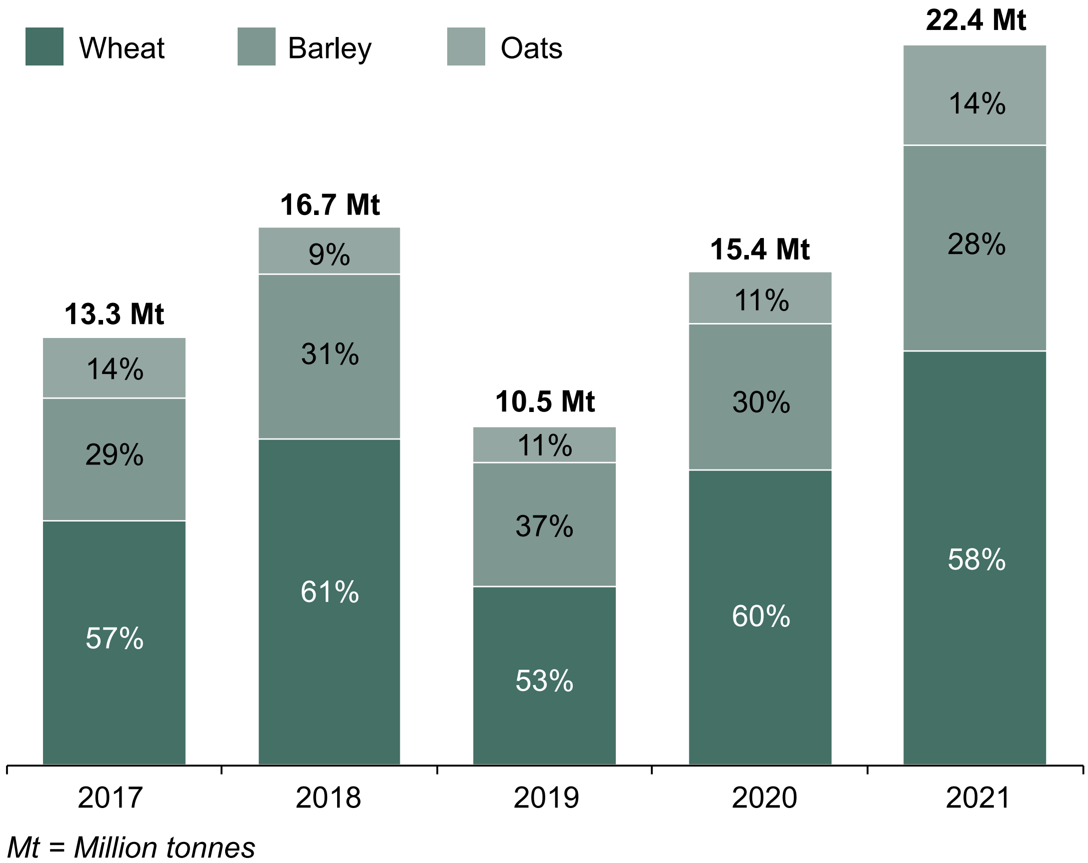
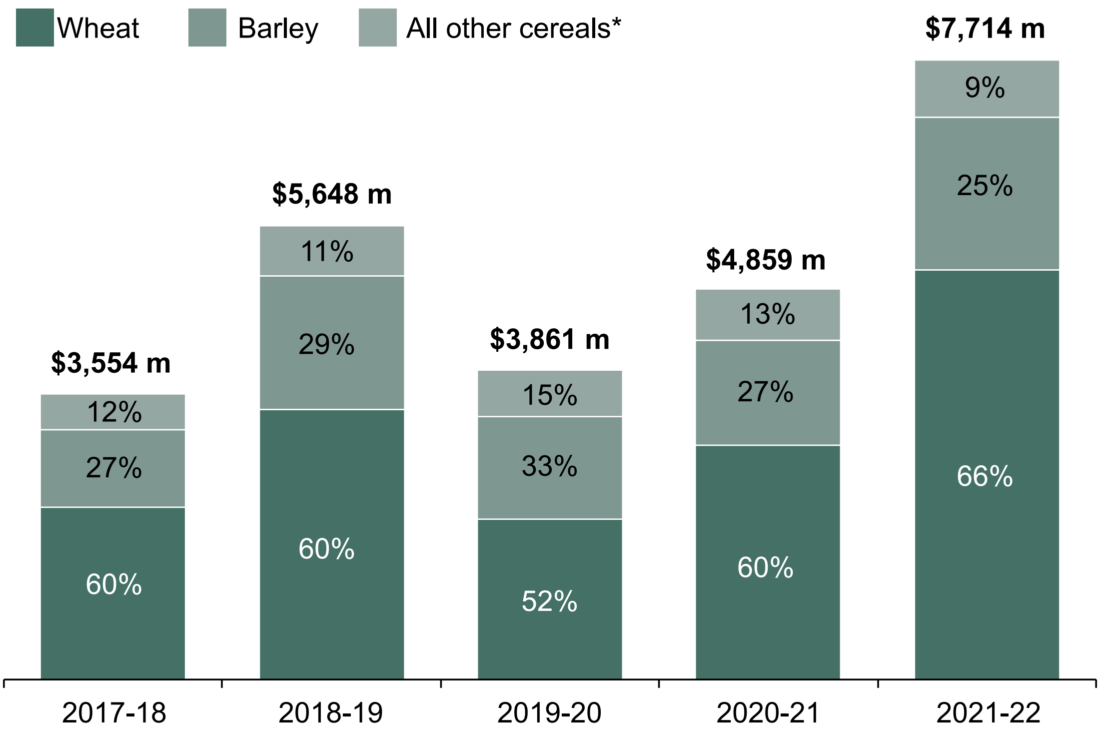
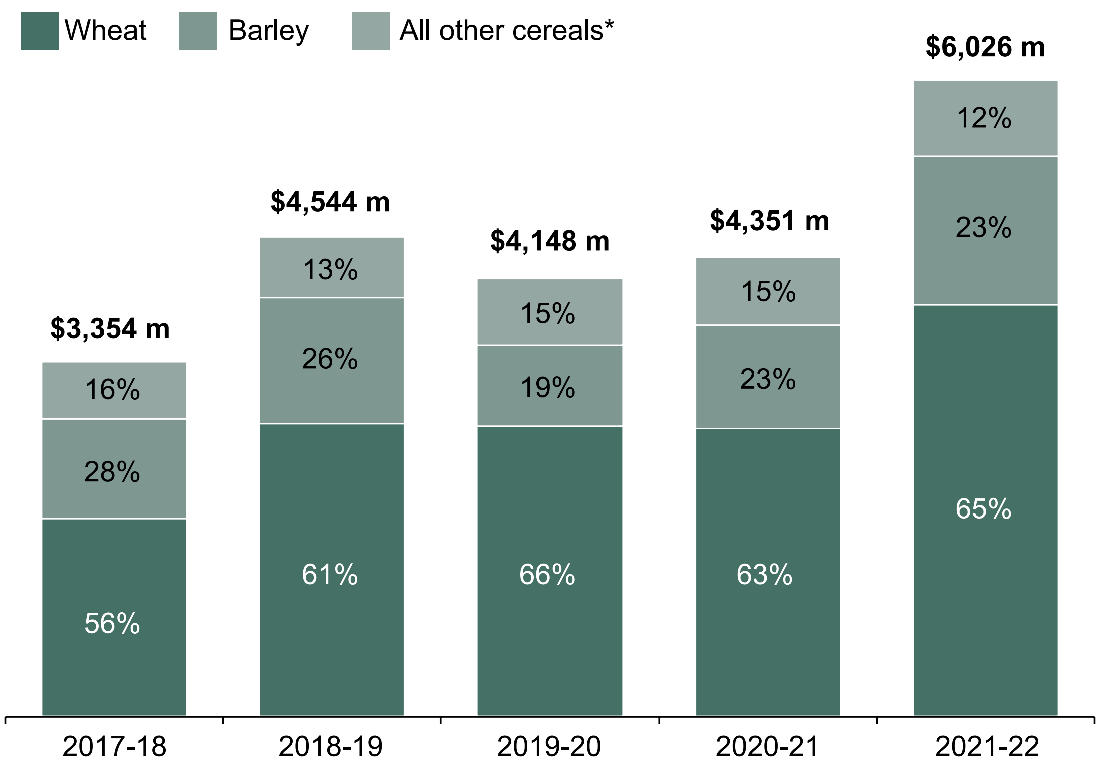


Figure 3.1: Cereals production 2017 to 2021 (Growing season)
Source: GIWA (2017-21)



*Oats, triticale, cereal hay and other cereals

Figure 3.2: Cereal value of production 2017-18 to 2021-22 (Financial Year)
Source: ABS production data (2017-22)



*Oats, cereal hay, malt and other cereal grains

Figure 3.3: Cereal value of exports 2017-18 to 2021-22
Source: ABS export data (2017-22)

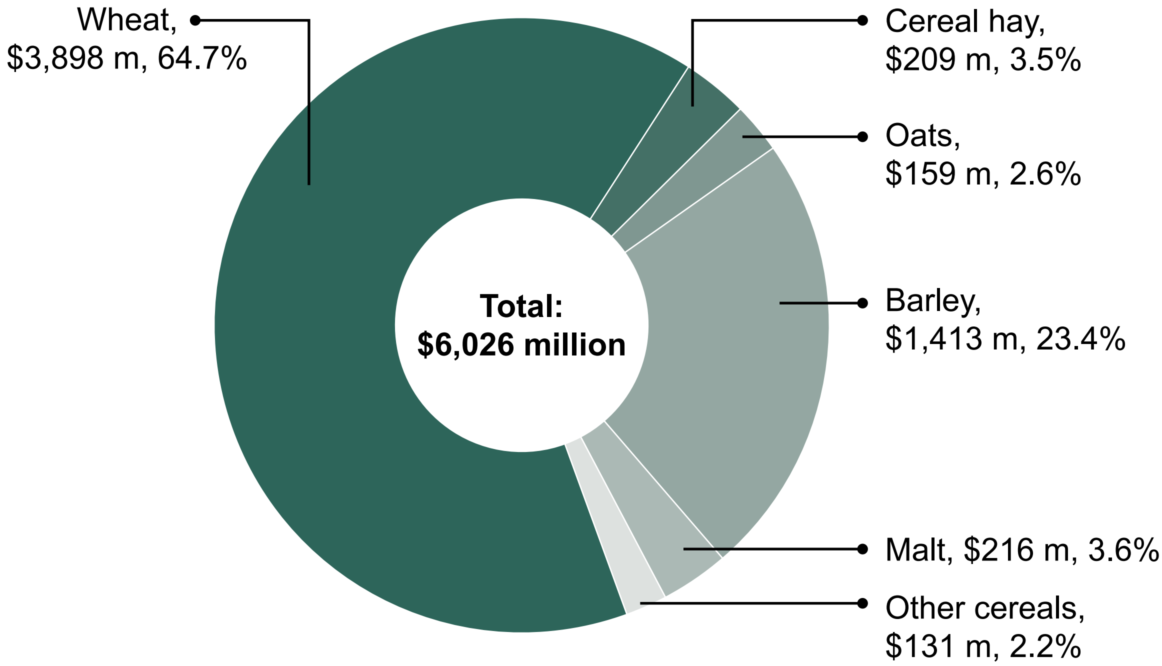


Figure 3.4: Cereals value of exports 2021-22

Source: ABS export data (2021-22)

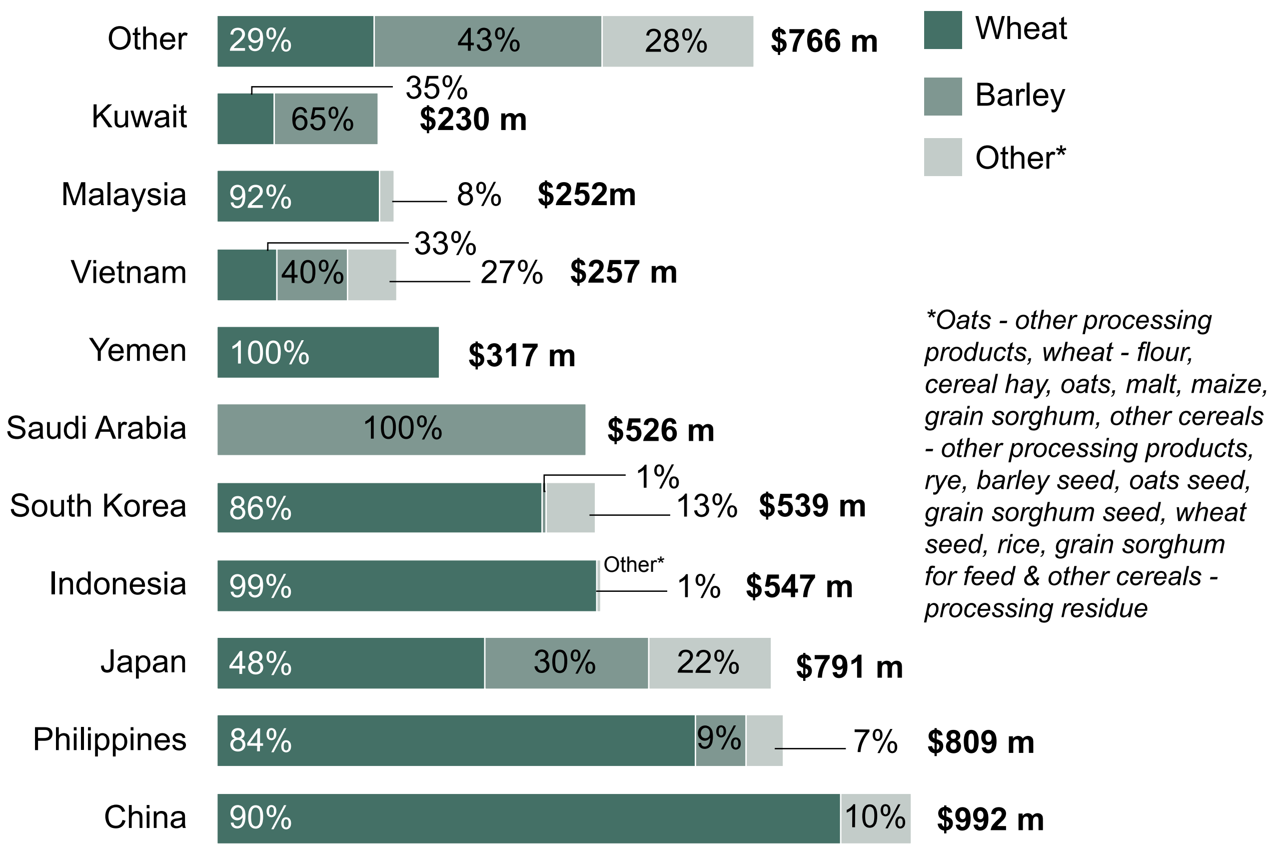


Figure 3.5: Cereals major export market 2021-22

Source: ABS export data (2021-22)

4 Lupins and Other Pulses

- Lupins and other pulse crops contribute valuable nitrogen to the soil in WA's agricultural areas. These crops, along with cereals and canola, play an important role as part of crop rotations in WA's farming systems.
- WA is the world's largest producer and exporter of Australian sweet white lupin. Due to its unique nutritional value and chemical composition, the sweet lupin is attracting attention as a healthy potential 'super food' for human food consumption.
- WA also grows and exports (for human consumption) smaller quantities of other pulses, including field peas, chickpeas, lentils, albus lupin, and faba bean. Vetch is also grown in small quantities for animal feed.
- The production of lupins and other pulses in 2021 was 0.9 million tonnes, up on the previous season's harvest of 0.7 million tonnes. Growth of lupins and other pulses has not increased like some of the other crops due to the high price of canola and marketing challenges.
- The value of lupin production for the 2021-22 financial year was $270 million, and pulse production was valued at $75 million.
- Between 2017-18 and 2021-22, the value of lupins and other pulses exports increased substantially from $146 million to $268 million.
- The top WA export markets for pulses excluding lupins in 2021-22 were China, Bangladesh, Egypt, the Philippines, Sri Lanka and the United Arab Emirates with 92% of exports going to these markets.
- The top WA export markets for lupins in 2021-22 were the Netherlands, South Korea, Vietnam, Belgium, Japan and the Philippines with 98% of exports going to these markets.

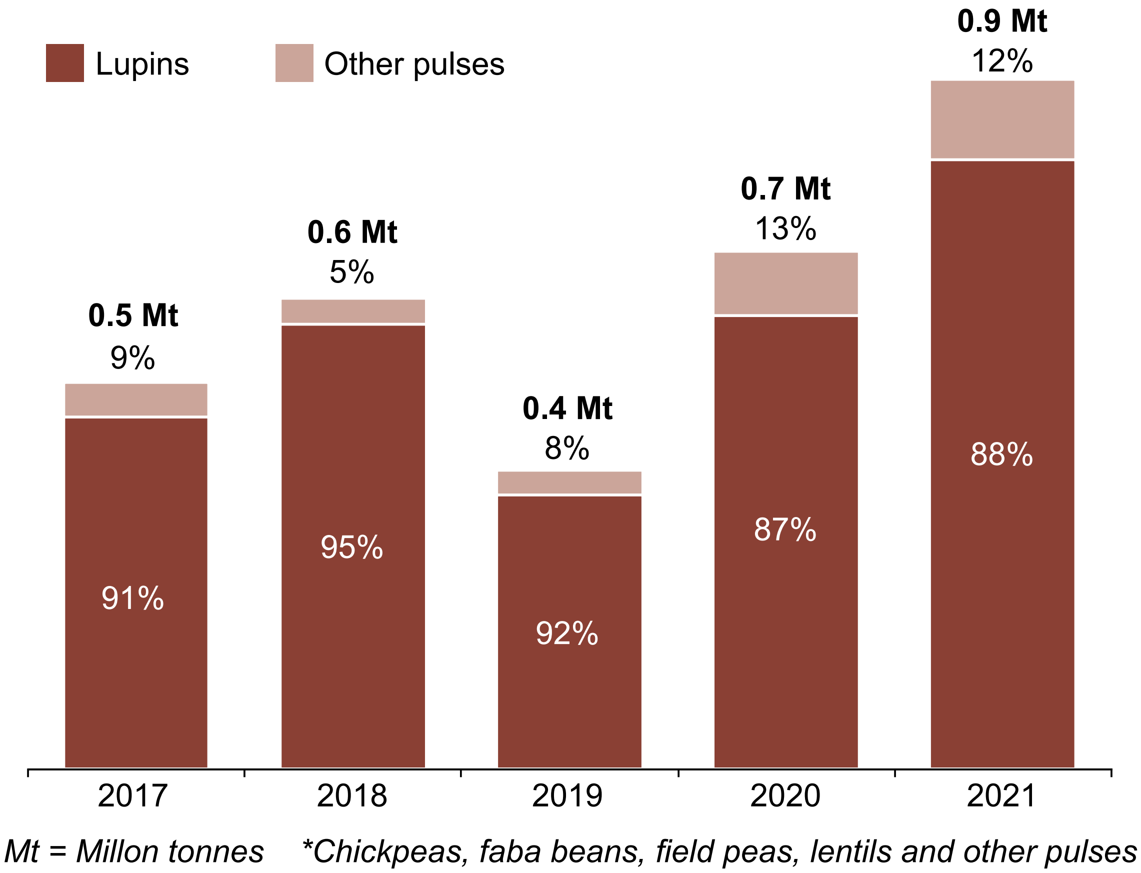


Figure 4.1: Lupins and other pulses production 2017-2021 (Growing season)

Source: GIWA (2017-21)

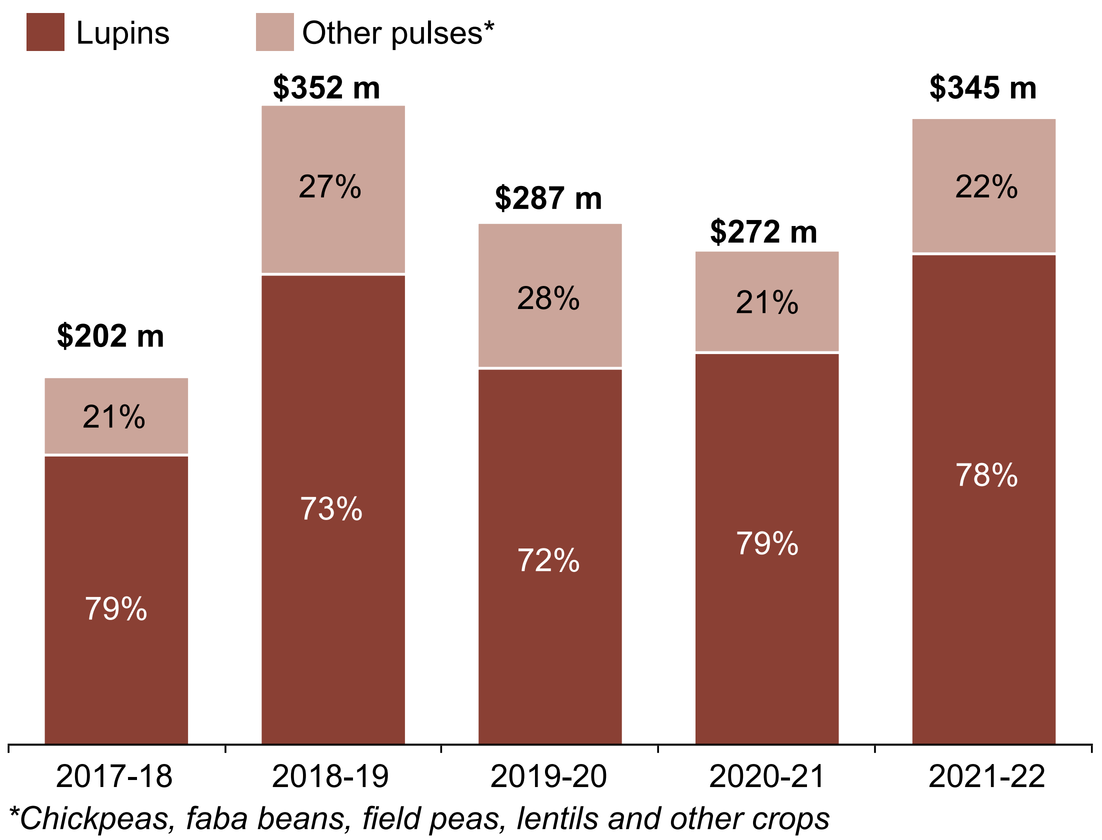
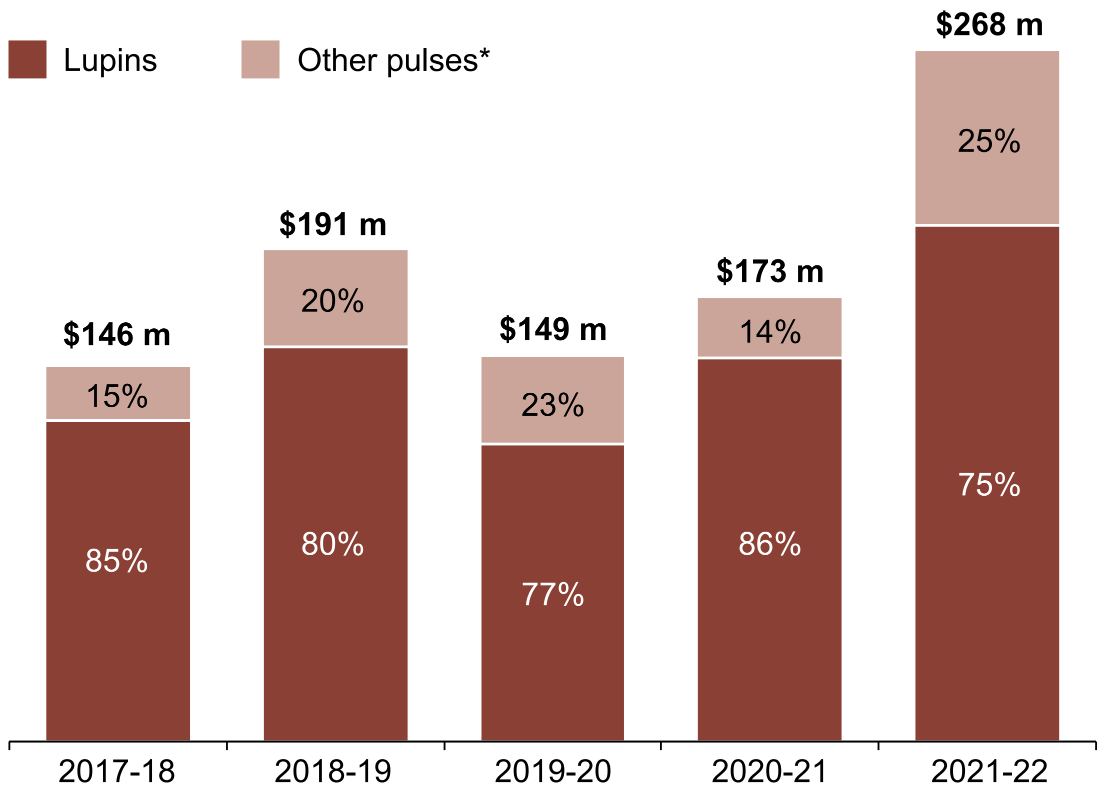


Figure 4.2: Lupins and other pulses value of production 2017-18 to 2021-22

Source: Estimated using ABARES (2023)



** Field peas, broad beans and horse beans, chick peas, lentils, vetch, field beans, pulses - flour and meal, Adzuki beans, pigeon peas, other beans, other pulses & kidney beans*

Figure 4.3: Lupins and other pulses value of exports 2017-18 to 2021-22
Source: ABS export data (2017-22)

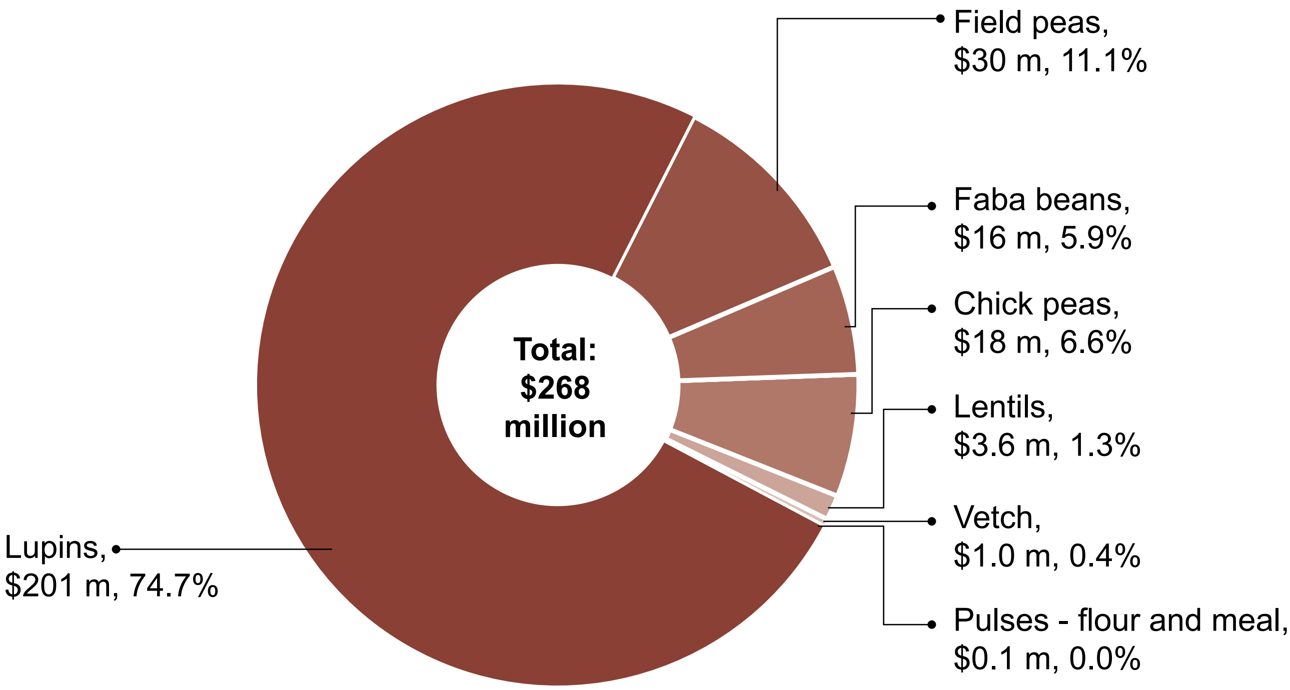


Figure 4.4: Lupins and other pulses value of exports 2021-22

Source: ABS export data (2021-22)

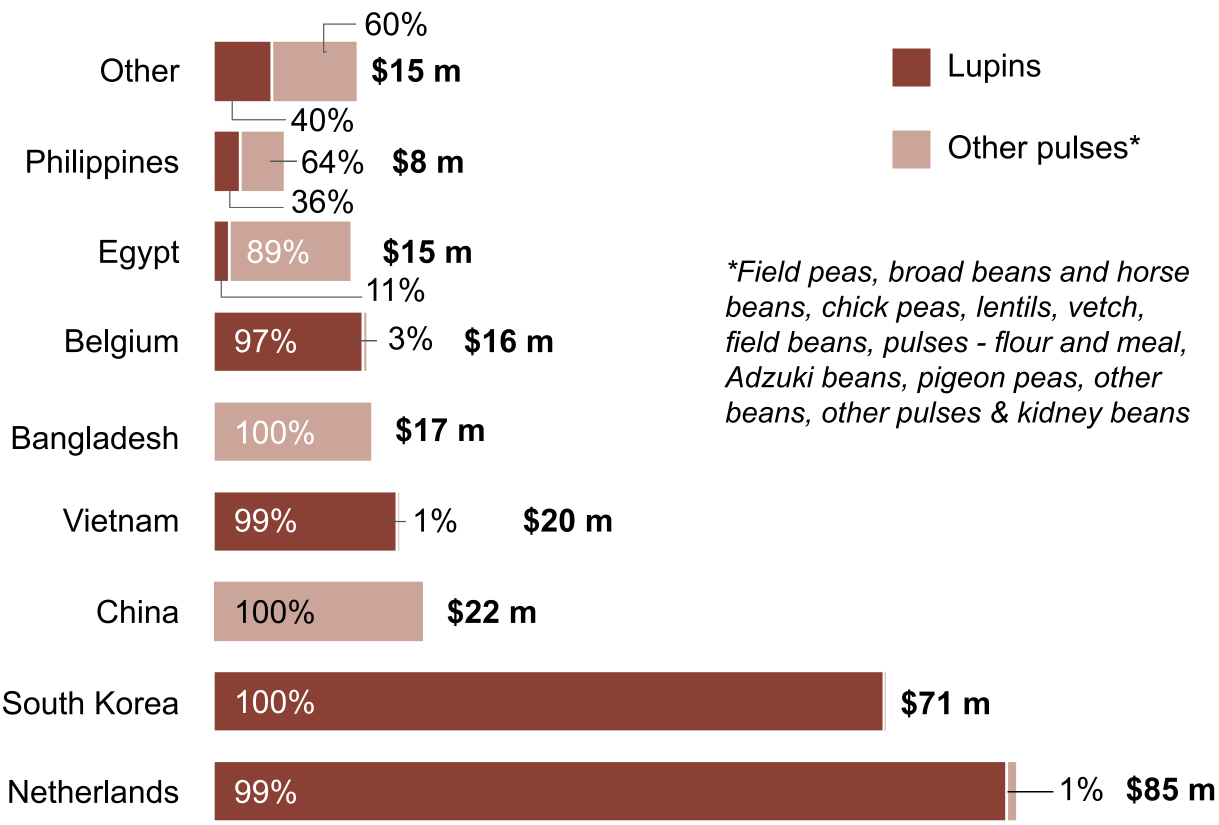


Figure 4.5: Lupins and other pulses major export markets 2021-22

Source: ABS export data (2021-22)

5 Canola

- WA is the major canola producing state in Australia, averaging just under half of Australia's canola production.
- Both conventional and genetically modified canola varieties are grown in WA, with strict segregation in the supply chain allowing the two production systems to coexist and meet the requirements of markets requiring non-genetically modified canola.
- There are two significant canola-crushing facilities in WA. However, these are small by world standards and crush less than 10% of the state's crop.
- Innovative plant breeding, research and market development are ensuring that WA maintains its position as Australia's biggest producer and exporter of canola.
- The production of canola in 2021 was 3.1 million tonnes, well up on the previous season's harvest of 1.6 million tonnes. Growth has been driven by increased canola production due to high export prices and rotational benefits from better grass weed control. With high world prices for canola the value of canola production for the 2021-22 financial year was $2.7 billion.
- Between 2017-18 and 2021-22, the value of canola exports increased substantially from $928 million to $3 billion.
- The top WA canola export markets in 2021-22 were Germany, Japan, the United Arab Emirates, Belgium, France and the Netherlands which accounted for 94% of the trade.

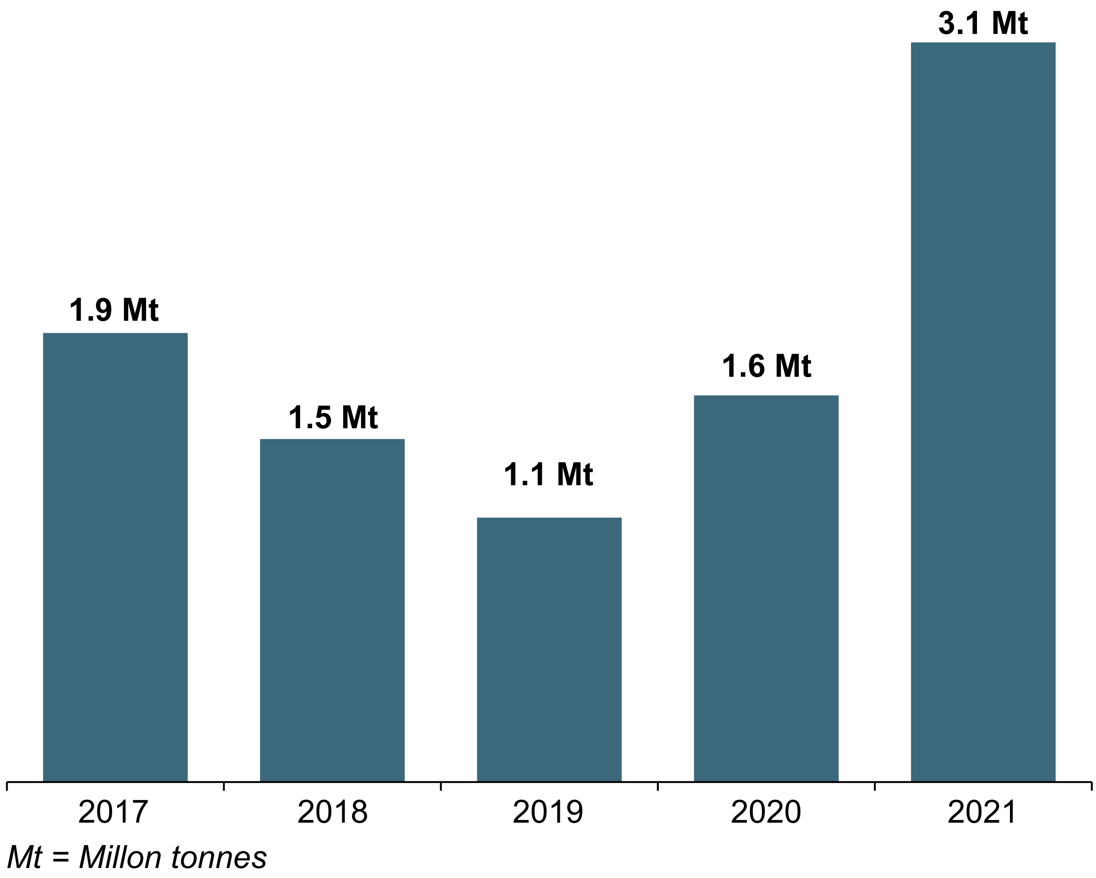


Figure 5.1: Canola production 2017 to 2021 (Growing season)
Source: GIWA (2017-21)

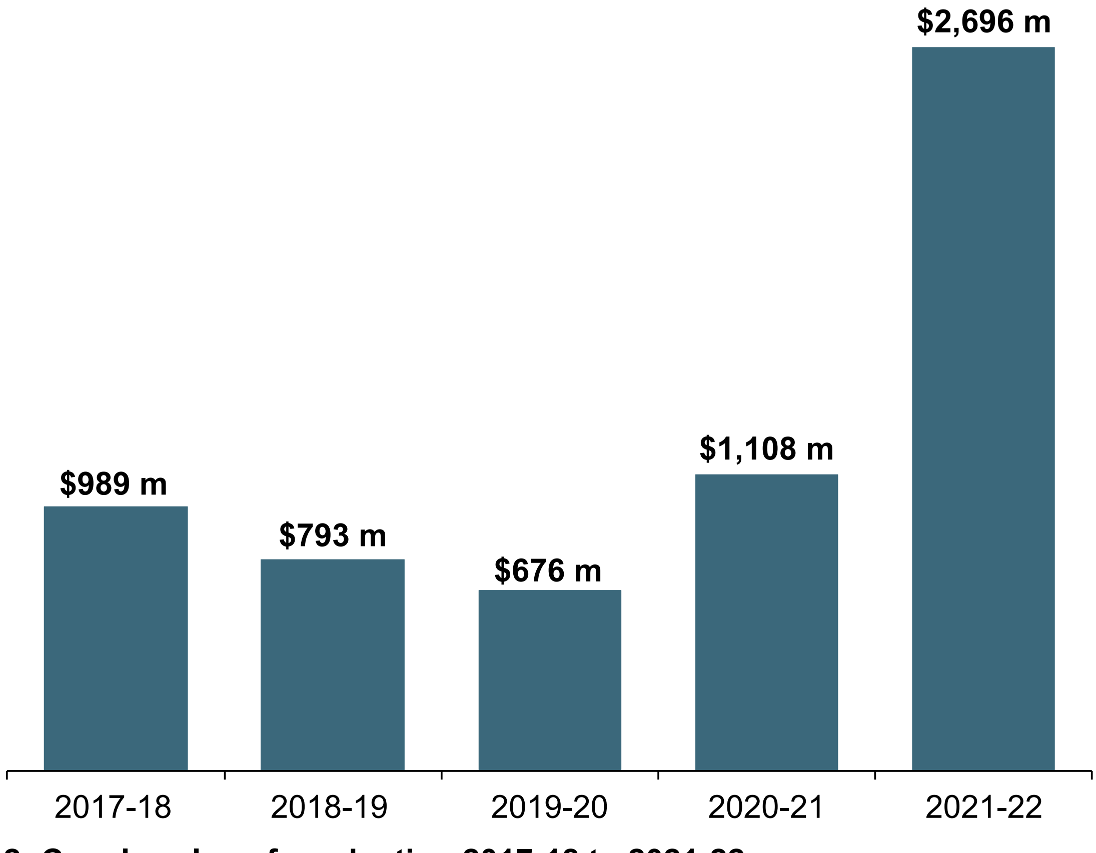


Figure 5.2: Canola value of production 2017-18 to 2021-22
Source: ABS production data (2017-22)

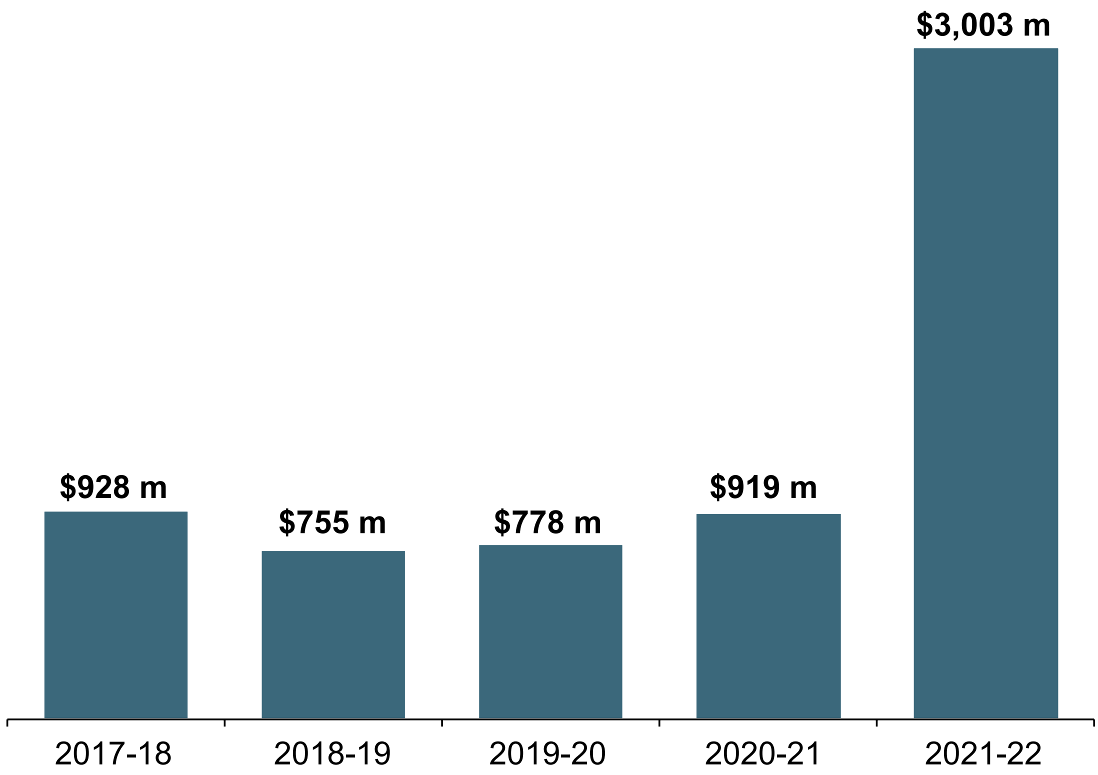


Figure 5.3: Canola value of exports 2017-18 to 2021-22
Source: ABS export data (2017-22)

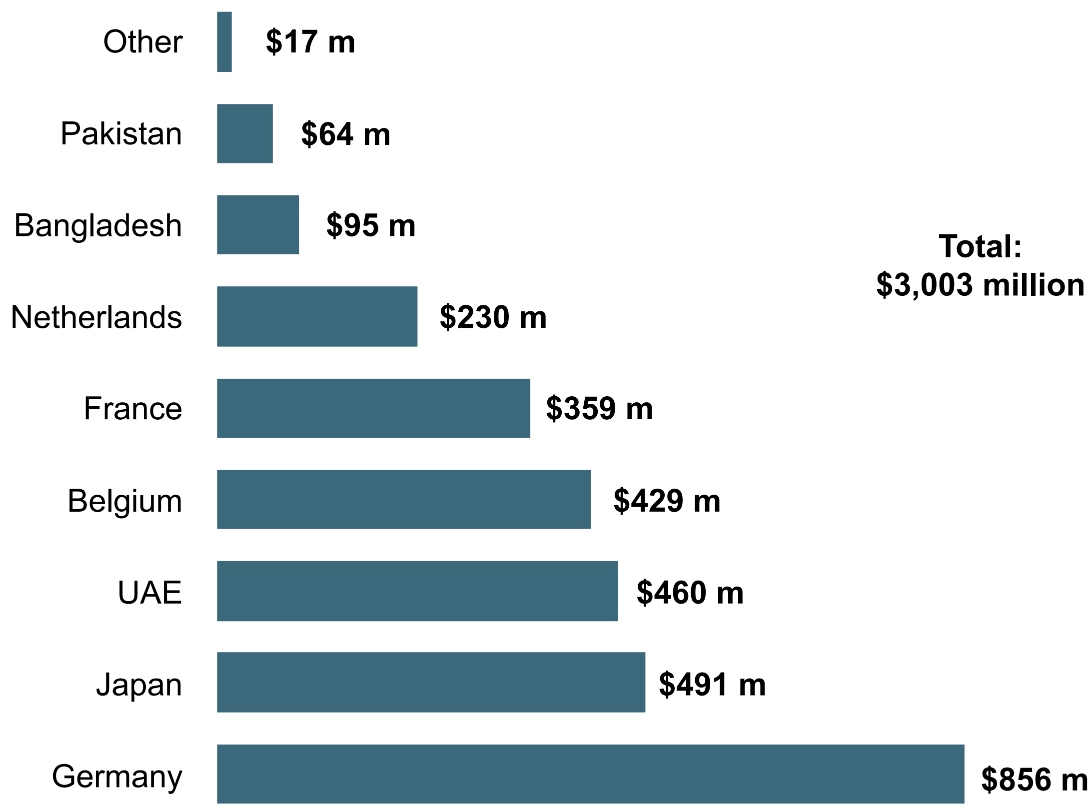


Figure 5.4: Canola major export markets 2021-22
Source: ABS export data (2021-22)

6 Meat and livestock

- WA's livestock sector is a diverse, well developed and important sector of the state economy.
- It is the 2nd largest agricultural sector behind the grains sector and was worth $2.3 billion in 2021-22.
- WA produces and exports a wide range of high-quality meat products (chilled and frozen), including beef, lamb, mutton, pork and goat, as well as the live export of animals for both slaughter and breeding purposes, specialising in sheep and cattle.
- WA has the supply chain infrastructure and procedures in place to service both the meat and live animal markets, with scope for further expansion.

Beef/cattle industry

- The state's beef herd comprised 1.9 million head in July 2022 (ABS, 2021-22b).
- The WA cattle herd is relatively stable, with about half located in northern production systems and the other half in southern production systems.
- Northern cattle systems are extensive operations run on large properties with big numbers of cattle. While there are more southern cattle properties, they are smaller in size compared with those in the north.
- 84% of WA beef cattle are contained within herds of more than 500 head, on only 21% of the state's cattle properties (ABS, 2021).
- The gross value of production for beef cattle disposals (slaughter and live export) has increased from $796 million in 2017-18 to $1.03 billion in 2021-22, an increase of 29%, largely due to stronger prices and the increased value of beef exports.
- Cattle can be sold via domestic slaughter, live export or interstate transfer.
- Of the cattle processed in WA in 2021-22, 55% were consumed on the domestic market, and 45% were exported to 26 international markets.
- There are 13 beef abattoirs in WA, six of which have international accreditations.
- The three largest beef processing facilities with multiple export market accreditations are located in the south-west of the state.
- Beef produced in WA has a reputation for high quality based on Meat Standards Australia's benchmarks.
- Of the cattle sold in 2021-22, 36% were exported live with approximately 70% exported from the northern ports and the remaining 30% from Fremantle.
- Between 2017-18 and 2021-22 the value of live cattle exports has risen 1% from $332 million to $335 million despite there being a 20% decline in the number of animals exported illustrating the strong growth in cattle prices over this time.

Sheep industry

- Most WA sheep are located in the southern agricultural zones of the state, with a small proportion (less than 2%) located in the southern rangelands.
- The WA sheep flock numbered 12.4 million head at the end of 2021-22 and produced high-quality meat and wool for international markets (ABS, 2021-22b).
- There are about 4,300 sheep farms in WA and approximately 78% have flocks of more than 500 sheep.
- Breeding ewes make up approximately 54% of the flock.
- The gross value of production for sheep disposals (slaughter and live export) was $692 million in 2021-22, a 14% increase year-on-year. This was partly due to strong prices and an increase in the value of lamb exports from WA.
- Of sheep disposed of in 2021-22, 83% were processed domestically, while 11% were exported live and 6% were transferred interstate.
- There are 16 abattoirs that process sheep in WA, nine of which are export accredited. Most (approximately 80%) of the sheep processed in WA were exported to international markets with the remaining 20% consumed locally.
- WA is the main supplier of Australia's live sheep exports and all sheep exported by sea depart from Fremantle.
- According to ABS export data, around 500,000 live sheep are exported annually from WA primarily destined for the Middle East.

Pigs

- The WA pork industry is recognised as a supplier of premium-quality pork reared under production systems that place a high priority on animal welfare.
- The industry is concentrated, with 12 producers accounting for more than 80% of the sow herd.
- Production systems include straw-based housing systems, fully/partially slatted intensive systems and free-range operations.
- WA has 42,000 sows and processes approximately 18,000 pigs per week with pork production worth $249 million in 2021-22 (DPIRD, 2023).
- A single key abattoir processes around 85% of the state's pig herd, supported by several smaller operations.
- There has been a rapid increase in free-range production to meet consumer demands, with WA providing products for a large supermarket chain on a national level.

Poultry

- The WA poultry industry comprises chicken meat and egg industries.
- The chicken meat (broiler) industry contributes about 80% of the state's earnings from poultry. There are 35 contract broiler farms located north and south of Perth.
- Two vertically integrated processors control 90% of the state's chicken meat market and, between them, process 44 million birds a year.
- Most production is consumed locally, with exports declining in recent years as a result of global pricing pressure.

- The WA egg industry sells primarily to the domestic market and has experienced moderate growth in recent years.
- WA egg production was 23.3 million dozen eggs valued at $67 million in 2021-22, a decrease of 2% from the previous year. Most eggs are purchased fresh rather than processed.
- 36% of the layer hens were caged and another 36% were free range. The remaining 28% were barn layers (ABS, 2021).
- Production will continue to move towards free-range and barn-laid systems, driven by demand from consumers and major retail supermarkets.

Meat and live animal exports

- The sheep and cattle industries dominate WA meat and live animal exports, accounting for almost 95% of total livestock exports.
- Of the total $1.5 billion of meat and live animal exports (excluding horses, dairy and apiary products) in 2021-22, 73% consisted of meat and offal exports while 27% came from live animal exports.
- The value of WA sheep meat (including edible offal) exports increased 44% between 2017-18 and 2021-22 from $434 million to $623 million and made up 41% of the total value of WA meat and live animal exports in 2021-22.
- The growth in sheep meat exports has been driven by higher prices and surging demand from export partners such as China who has increased in value as an export destination by 401% over that time.
- The major markets for WA lamb, mutton and edible offal in 2021-22 were mainland China, the United States of America, Malaysia, Saudi Arabia and Canada.
- The value of live sheep exports totalled $84 million in 2021-22.
- Most live sheep exports are destined for the Middle East. The export markets for WA live sheep in 2021-22 were Kuwait, the United Arab Emirates, Israel, Oman, Malaysia and Jordan.
- The value of WA beef exports (including edible offal) increased by 71% from $184 million in 2016-17 to $315 million in 2021-22 due to strong global demand.
- The top markets by value for beef exports in 2021-22 were China, Japan, Korea, Indonesia and Thailand.
- The value of live cattle exports (beef and dairy cattle) increased 11% from $302 million in 2020-21 to $335 million in 2021-22. Major markets were Indonesia, Vietnam, Israel, China and Malaysia.
- The value of poultry meat and offal exports decreased by 13% from $6.4 million in 2020-21 to $5.6 million in 2021-22.
- Pork exports (meat and edible offal) reached $38 million in 2021-22, down 19% compared to the previous year, with most exports destined for Singapore.

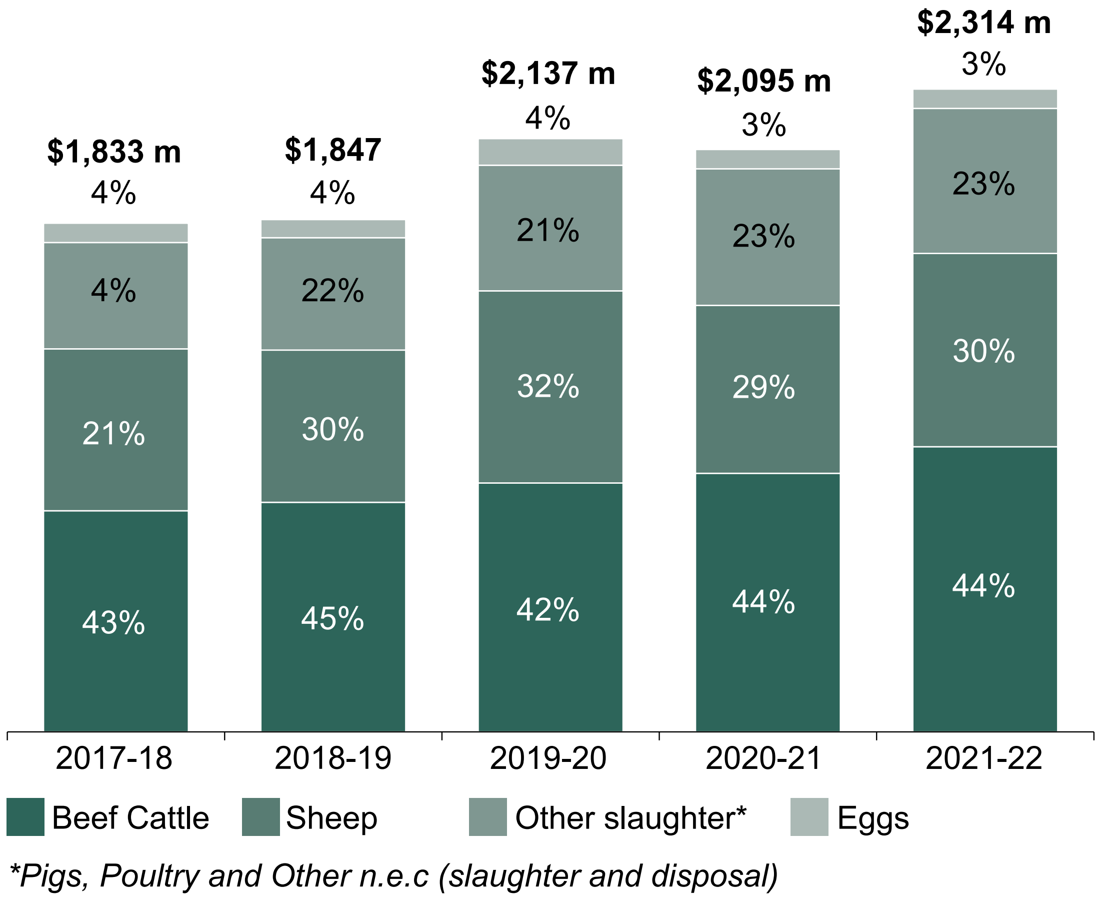


Figure 6.1 Meat and livestock value of production 2017-18 to 2021-22
Source: ABS production data (2017-22)

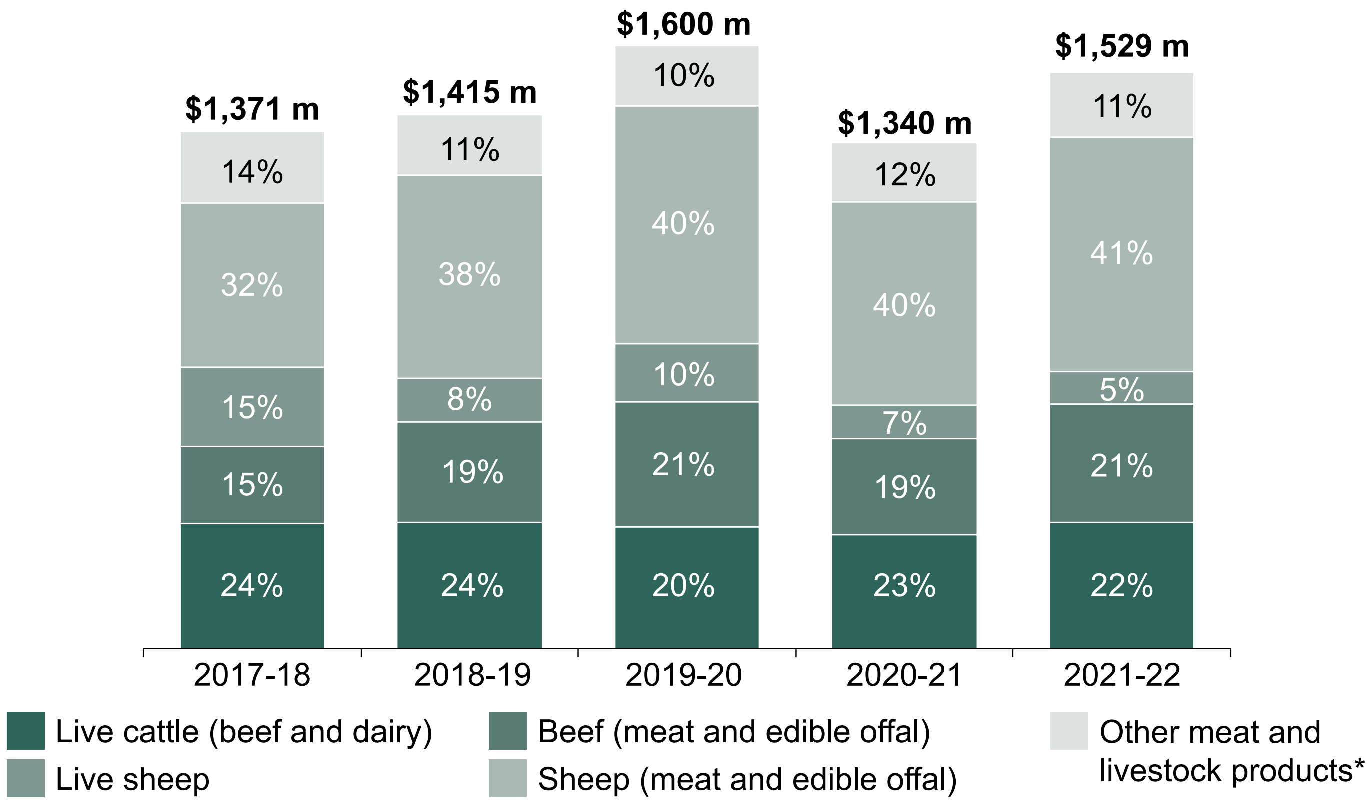


Figure 6.2: Meat and livestock value of exports 2017-2018 to 2021-22
Source: ABS export data (2017-22)

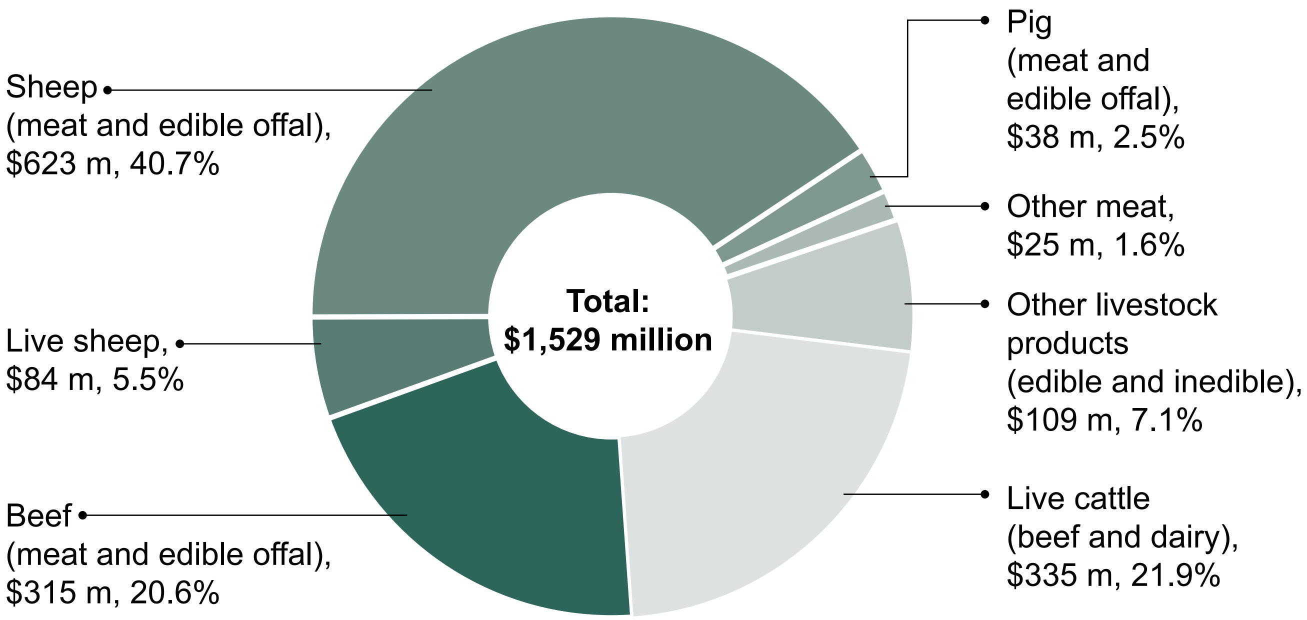


Figure 6.3: Meat and livestock value of exports 2021-22
Source: ABS export data (2021-22)

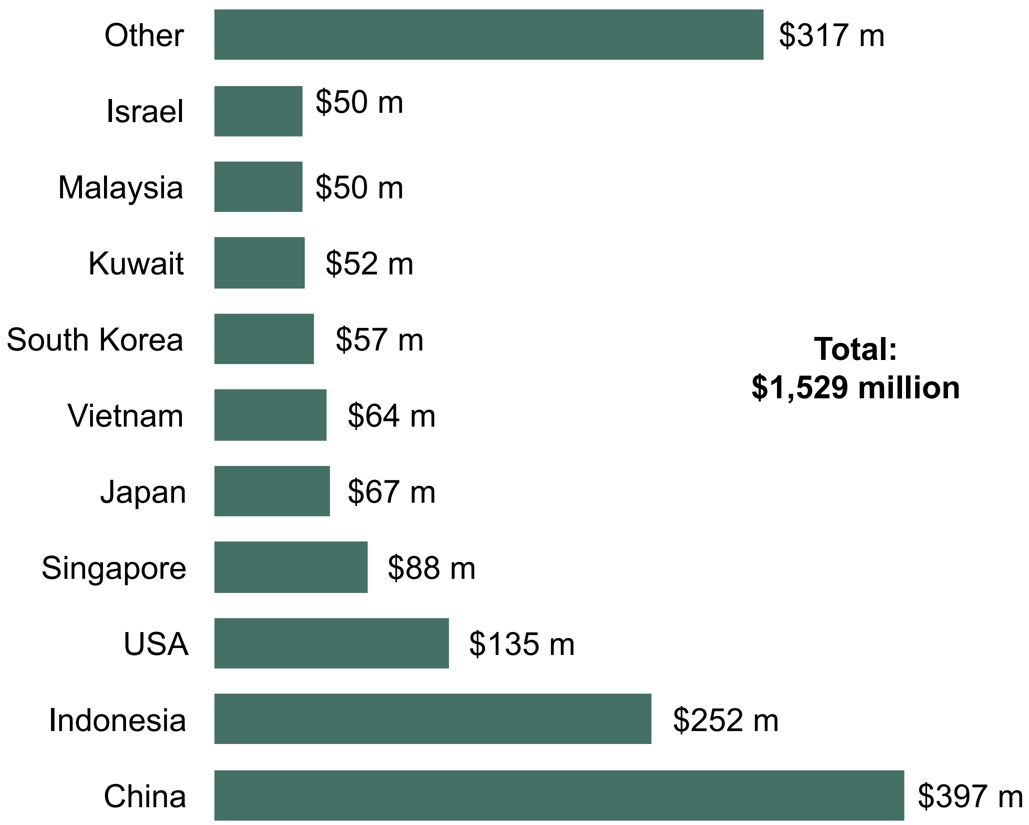


Figure 6.4: Meat and livestock major export market 2021-22
Source: ABS export data (2021-22)

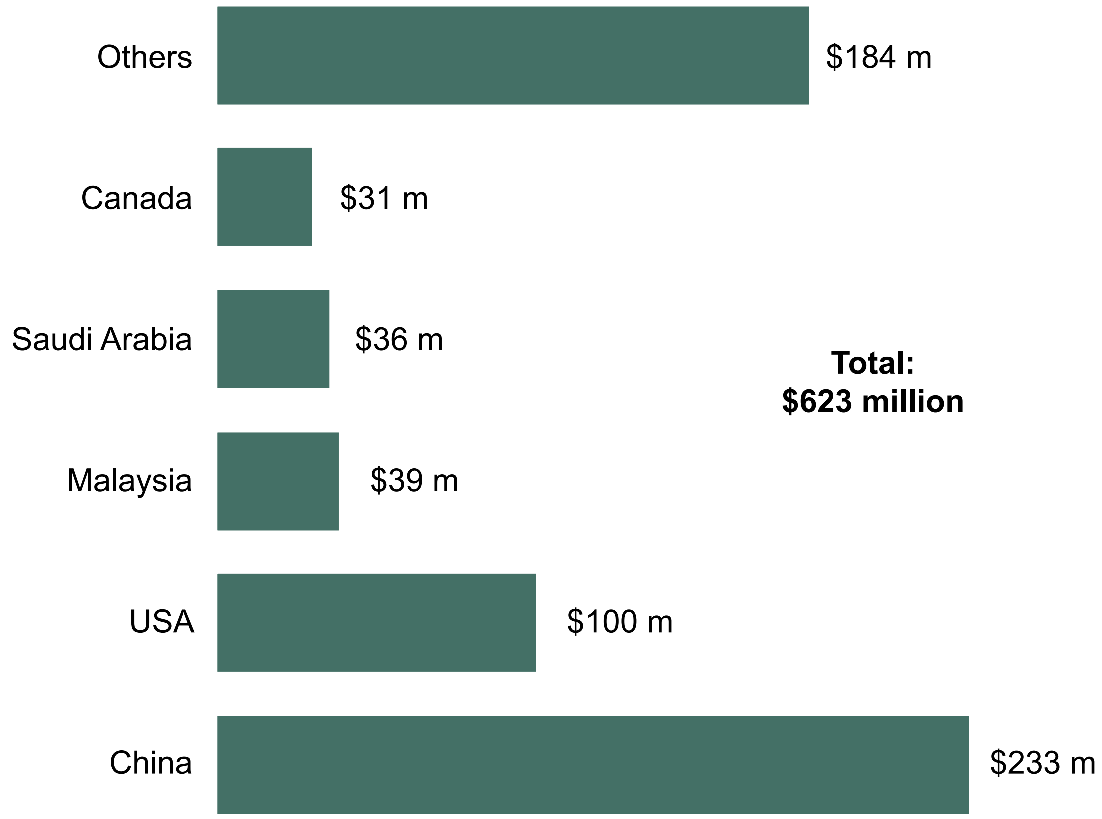


Figure 6.5: Sheep meat (including edible offal) export markets 2021-22
Source: ABS export data (2021-22)

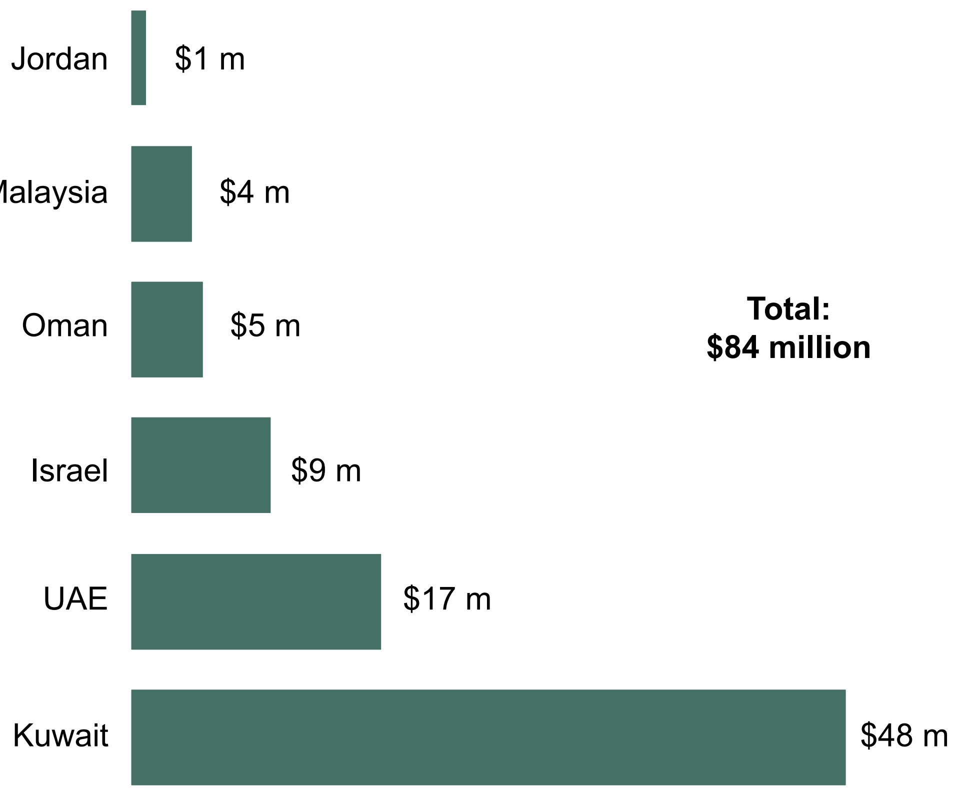


Figure 6.6: Live sheep major export markets 2021-22
Source: ABS export data (2021-22)

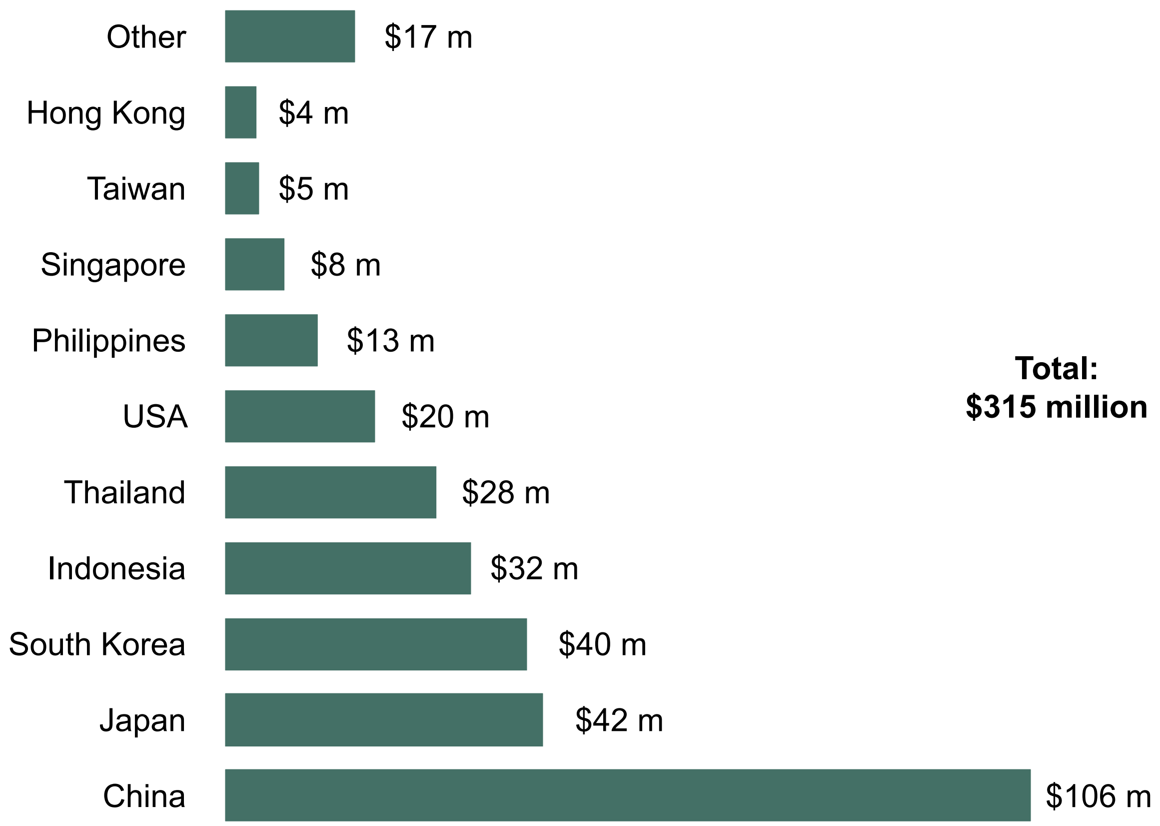


Figure 6.7: Beef meat major export markets 2021-22
Source: ABS export data (2021-22)

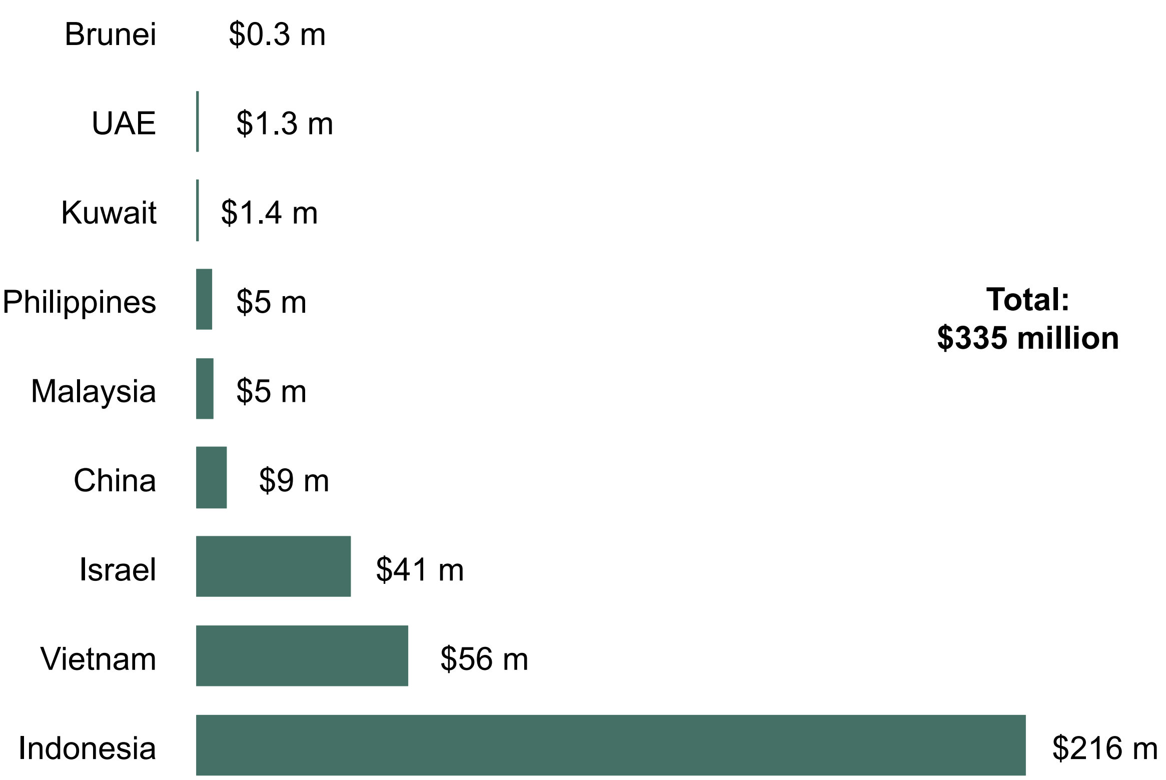


Figure 6.8: Live cattle major export markets 2021-22
Source: ABS export data (2021-22)

7 Wool

- There were 12.4 million sheep and lambs in WA as of July 2022, including approximately 7.6 million breeding ewes run by 4,300 sheep producers. Sheep are mostly co-located in the cropping regions across the south of the state, with some grazing in adjacent rangelands.
- The breeding ewe population is made up of 84% merino ewes, reflecting the importance of the wool enterprise to the state's sheep industry.
- In 2021-22, WA's average wool fibre diameter was 19.7 micron compared to Australia's average of 20.8 micron (AWTA, 2022).
- WA produced 61.2 million kilograms of greasy wool in 2021-22, about 19% of the Australian clip. This is an increase of 8% compared to 2020-21 (AWI, 2022).
- More than 95% of wool production in WA is merino wool measuring less than 24.5 micron. Super fine wool (under 19.5 micron) accounted for 52% of WA wool production in 2021-22.
- The value of wool production in WA totalled $655 million in 2021-22, a year-on-year increase of 15% from 2020-21.
- Wool is WA's largest export from the livestock sector. Exports in 2021-22 were valued at $693 million, an increase of 37% from 2020-21.
- The WA wool clip is exported or transported interstate for processing. WA's major wool markets in 2021-22 were mainland China (91%), India (5%) and the Czech Republic (2%)
- The world's largest consumers of woollen products are China, the United States of America and Europe.
- During the COVID-19 pandemic, wool exports declined dramatically. In China, domestic consumption of woollen products accounts for around half of their wool imports while much of the rest is exported to the European Union and the United States of America.
- In 2021-22, WA experienced a relatively strong recovery reaching a total of $693 million of wool exported, only 8% below the high of $752 million reached in 2017-18. WA remains internationally cost competitive in wool production, handling and delivery. The local sheep industry maintains world-class animal health and welfare standards.

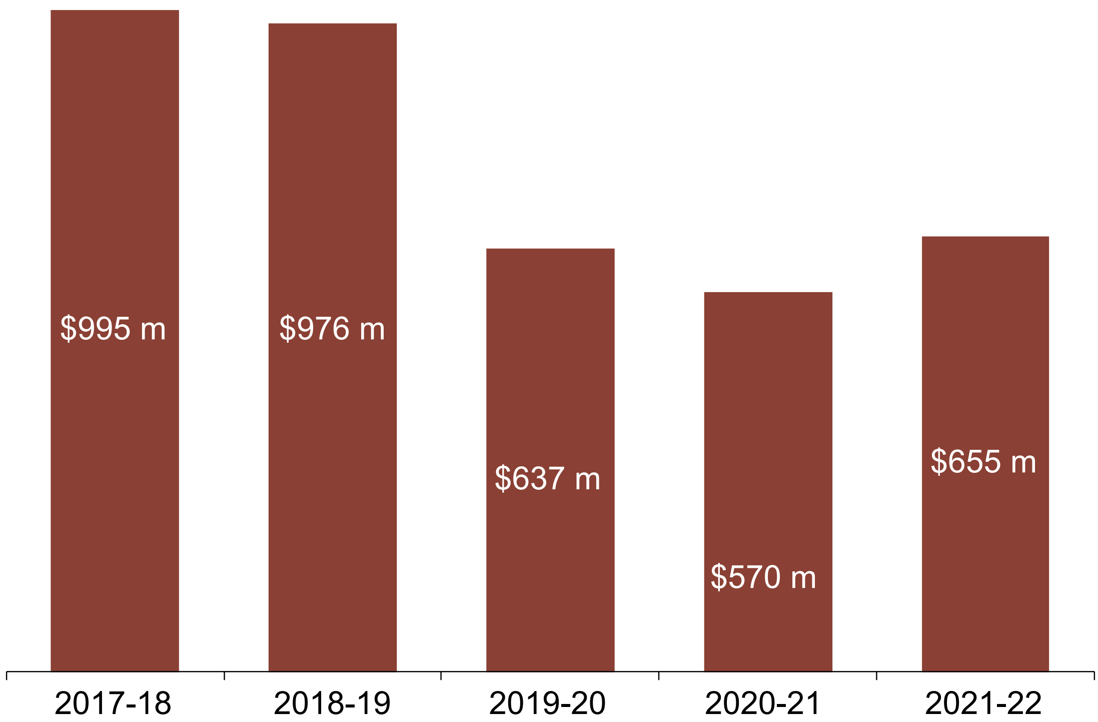


Figure 7.1: Wool value of production 2017-18 to 2021-22
Source: ABS production data (2017-22)

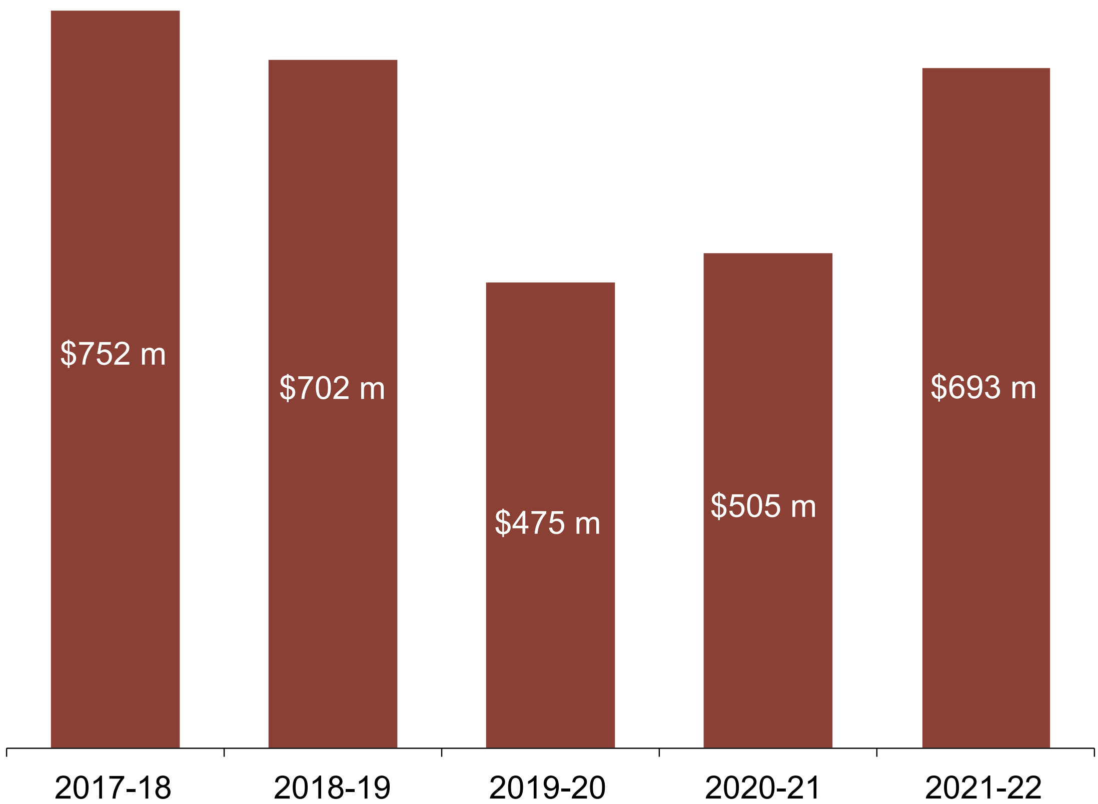


Figure 7.2: Wool value of exports 2017-18 to 2021-22
Source: ABS export data (2017-22)

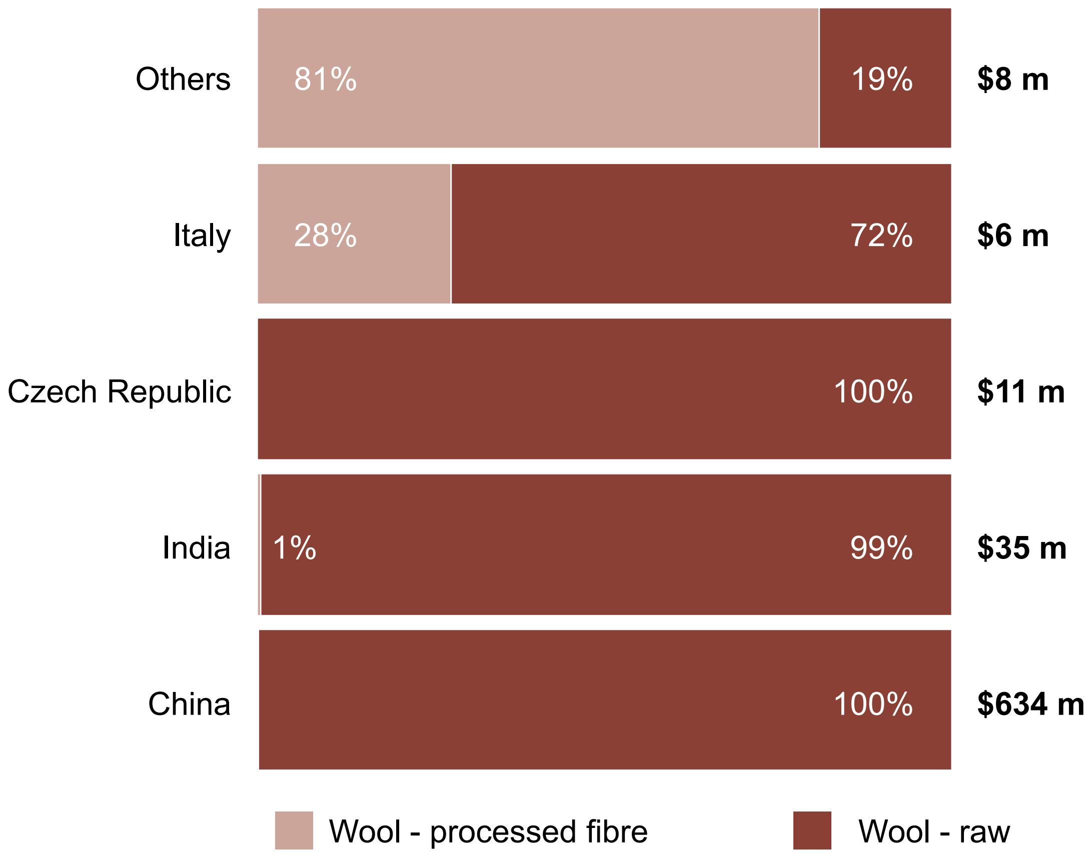


Figure 7.3: Wool major export markets 2021-2022
Source: ABS export data (2021-22)

8 Dairy

- The WA dairy industry is located predominantly in the south-west of the state around three main areas: Harvey, Margaret River and Denmark.
- The industry comprises 116 registered dairy farms and is one of the state’s longest and established agricultural industries.
- It comprises a rich history of intergenerational dairy farmers who have built WA’s excellent reputation for being premium quality fresh milk producers.
- The industry contributes over $187 million in 2021-22 to the state economy, a decrease of 3% compared to 2020-21.
- While WA’s production is predominantly fresh white drinking milk, the state also produces limited amounts of cheese, UHT/flavoured milk, ice cream and yoghurt.
- The state is self-reliant on the local production of fresh white milk but imports much of the balance of other dairy products consumed.
- Dairy processing is dominated by three large organisations that process more than 90% of the state’s milk.
- Milk production takes place all year round using free-range production systems, with supplementary feeding through the summer months.
- The seasonal nature of supply and variations of the cost of production throughout the year is reflected in the milk pricing structures between producers and buyers.
- WA has a total of 50,000 milking cows, a reduction of 3,000 from 2020-21 (Dairy Australia, 2023). In 2021-22, the average herd size being 471 milking cows per farm (Dairy Australia, 2022).
- There was 341 million litres fresh milk production (2021-22), being 4% of national volume, a reduction of 33 million litres since 2017-18. This is in line with milk production nationally being lower than the previous season (Dairy Australia, 2022).
- Of these 341 million litres, 92% comprised fresh drinking milk; 2% was utilised for domestic cheese manufacturing and 6% other fresh dairy.
- The value of dairy exports totalled $45 million, declining in this period by $10 million because of COVID-19 and supply chain disruptions.
- Unlike many countries, Australia has no legislative control over the price that milk processing companies pay farmers for their milk. Since deregulation in 2000-01, all prices within the industry are set by market forces in line with the dairy industry code of conduct.
- The indicative factory paid milk prices for WA in 2021-22 was 55.1 cents per litre, an increase of 5.2 cents since 2017-18. Farmgate prices have increased significantly over the last few years resulting in an increase in industry confidence (Dairy Australia, 2023).
- Dairy remains a prominent product for retailers and retail prices for dairy have increased at the fastest rate compared to other food groups.

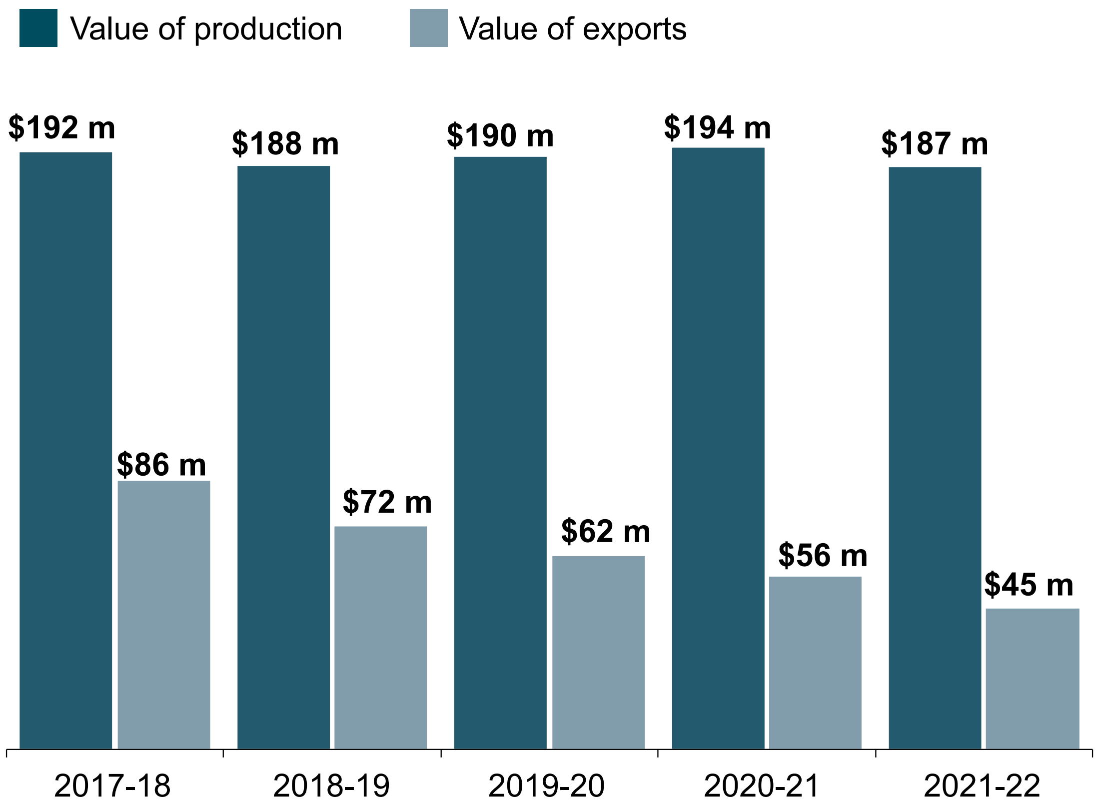


Figure 8.1: Dairy value of production and value of exports 2017-18 to 2021-22
Source: ABS production and export data (2017-22)

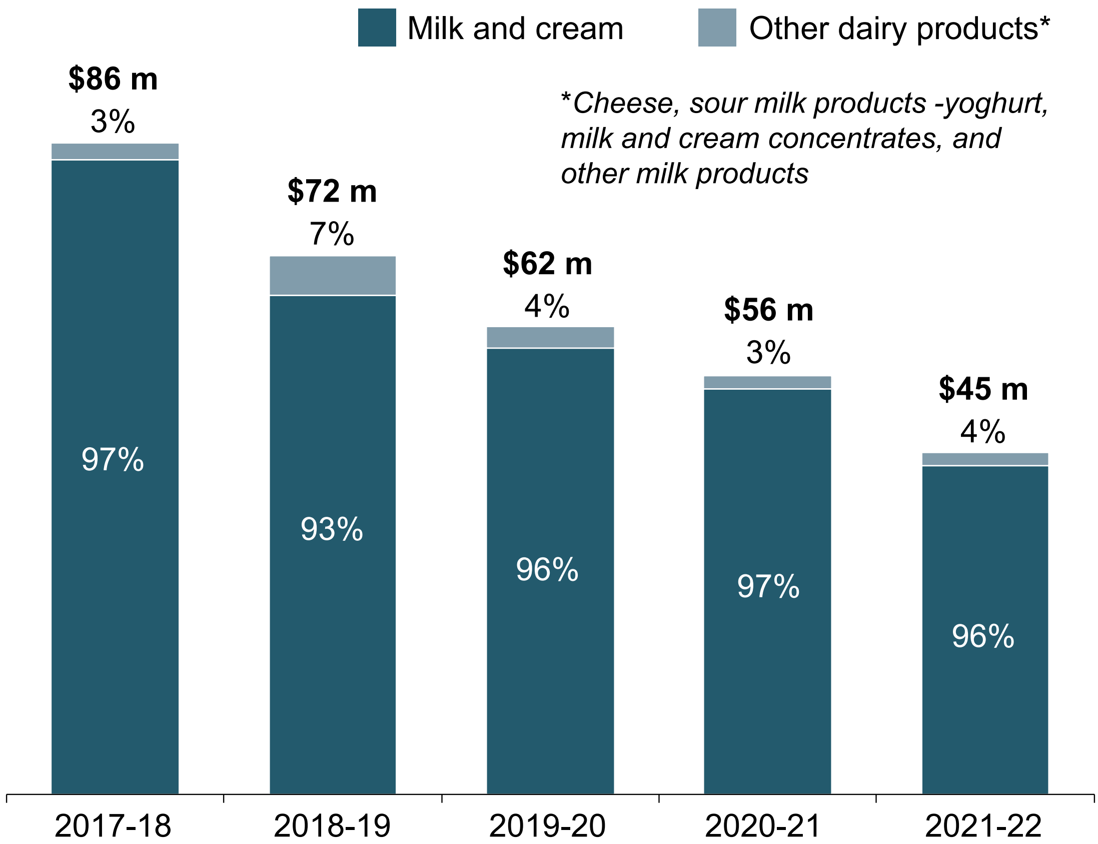


Figure 8.2: Dairy value of exports by products 2017-18 to 2021-22
Source: ABS export data (2017-22)

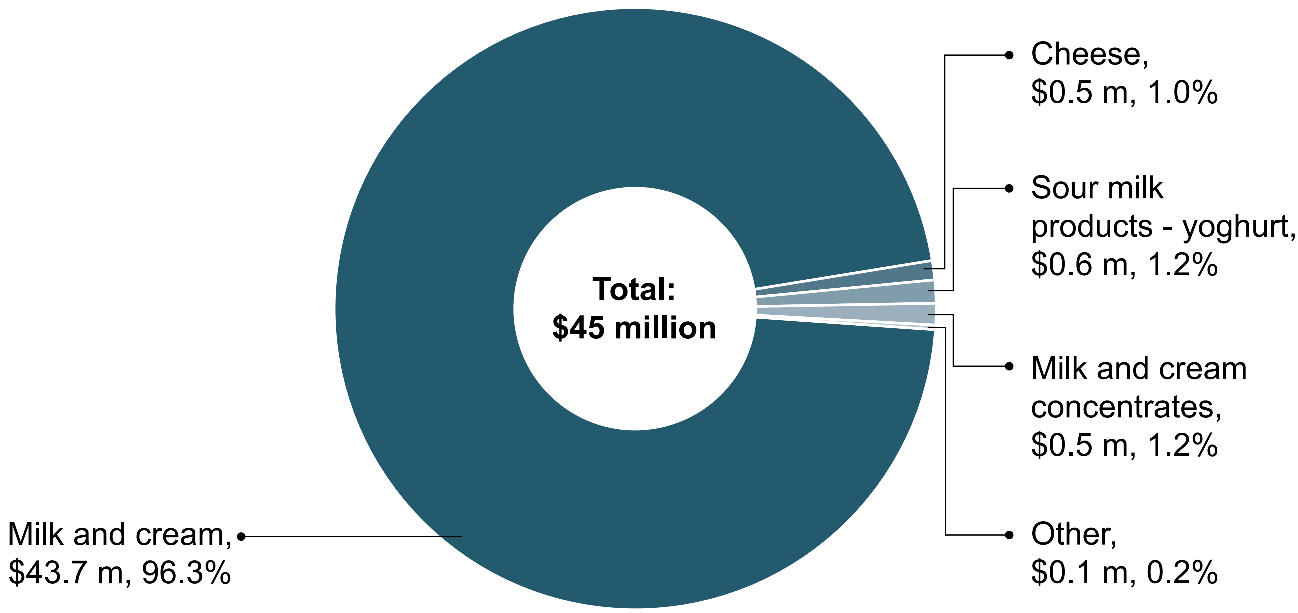


Figure 8.3: Diary value of exports by products 2021-22
Source: ABS export data (2021-22)

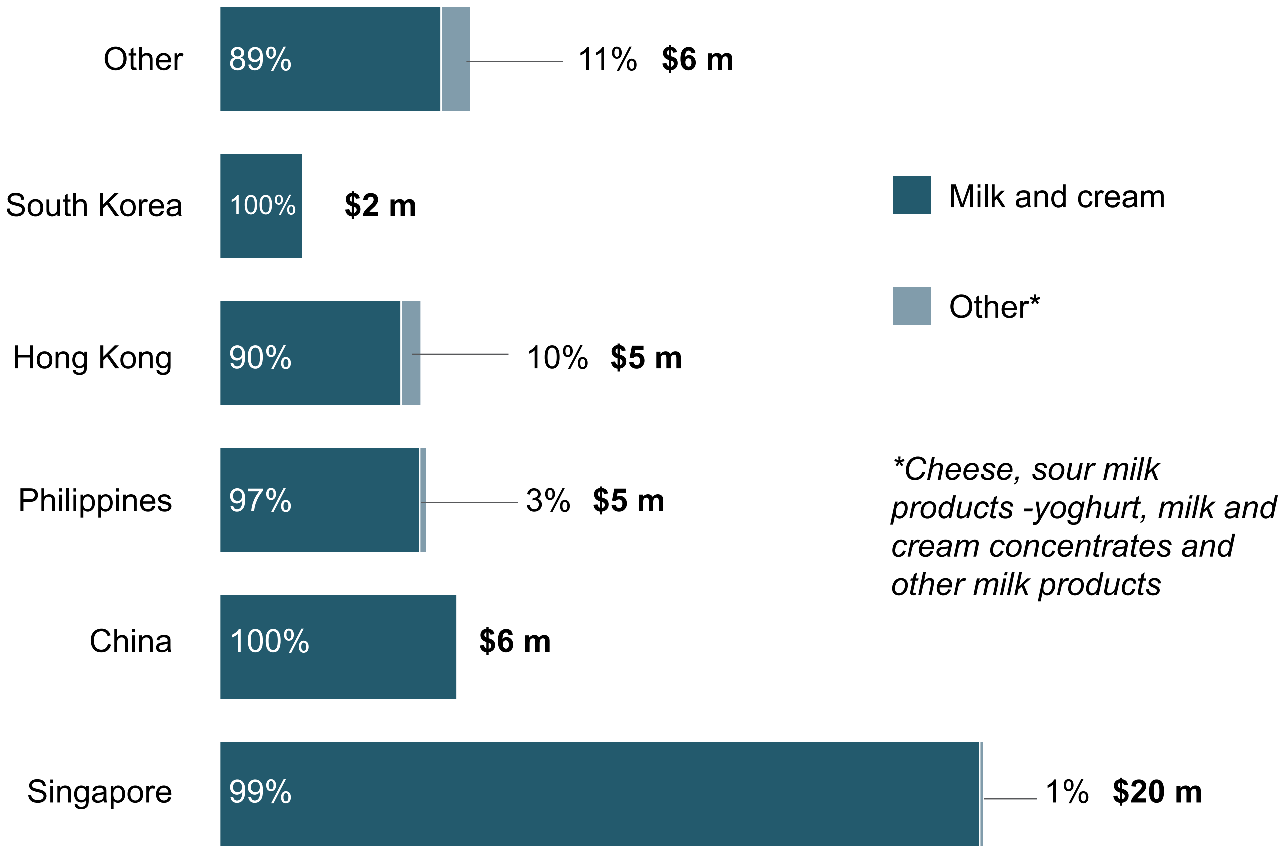


Figure 8.4: Dairy major export markets 2021-22
Source: ABS export data (2021-22)

9 Horticulture

Traditionally, statistics collected by the ABS were regularly used to measure the value of horticulture. However, the ABS data collected underestimates horticulture production, even during census years (ABS reports detailed data every five years) with the level of underestimation clear in export-oriented industries.

This report has used the data from ‘Situational analysis of horticulture in Western Australia’, a DPIRD publication (Radhakrishnan, *et al,* 2022). The Consumer Price Index (ABS, 2023b) for food and alcoholic beverages is used to adjust the gross values to 2021-22. Export data is updated with 2021-22 figures.

Production

- WA farmers grow premium horticultural produce and are adopting new production and post-harvest handling technologies to deliver high quality products to consumers in both domestic and overseas markets.
- Production occurs over a wide range of latitudes from the Great Southern to Kimberley regions near the Northern Territory border, meaning WA is capable of producing many summer vegetables throughout the year.
- Fruit produced in the Southwest of WA is counter-seasonal to the northern hemisphere providing export opportunities in premium markets.
- The gross value of horticulture is estimated to be $1.6 billion.
- Horticulture is an intensive production system. The average gross value of production per hectare for horticulture was approximately $35,564.
- Fruit (including wine grapes) and nuts, vegetables, and nursery industries occupied 45,077 hectares, with 1,560 businesses involved in production.
    - Fruit and nuts, including wine grapes, occupied 67% of the area and accounted for 64% of the total number of businesses.
    - Vegetables and annual crops occupied 33% of the area and accounted for 36% of the number of businesses.
- Irrigated agriculture presents a significant opportunity for growth for the WA agricultural sector. DPIRD is leading work to capitalise on this opportunity by focusing on growth and development in the north of the state, and security of land and water for future food production requirements.

Exports

- In 2021-22, $239 million worth of horticultural products were exported.
- From 2017-18 to 2021-22, exports of the main categories of horticulture showed a mixed trend. While there is growth in the exports of fruit and nuts (6%), vegetables (7%) and essential oils (19%); the exports of wine and nursery products decreased by 34% and 4% respectively. Compared to last year, horticultural industries had an overall export growth of 10%, where fruit and nuts export grew by 24%, wine grew by 5% vegetables by 3%, nursery products by 44% and essential oils by 19%.
- Both fruit and vegetable exports were concentrated, with the top five destinations accounting for more than 70% of exports.
- The top destinations for vegetables were the United Arab Emirates, Malaysia, Singapore, Saudi Arabia, and Thailand.
- The top destinations for fruit were Malaysia, Singapore, Thailand, Hong Kong and the United Arab Emirates.
- The export of wine is also concentrated with UK (31%) and the US (18%) accounting for almost half of all wine exports.

Vegetables

Production

- The estimated gross value of vegetables was $769 million. Carrots are the largest vegetable industry by value (17%) followed by ware potatoes (11%).
- In 2021-22, there were 395 businesses involved in vegetable production for human consumption.
- The Shire of Harvey (Myalup) was the largest vegetable producing area by value (20%), followed by the City of Wanneroo (18%).

Exports (2021-22)

- In 2021-22, WA exported $121 million worth of vegetables, which were 50% of the total horticultural exports.
- Between 2017-18 and 2021-22, the export value of vegetables increased from $113 million to $121 million (7% increase). The value of exports increased by 3% (from $117 million to $121 million) from last year alone.
- Carrots were the largest horticultural export industry in 2021-22, with an estimated export value of $85 million. WA carrots were exported to more than 20 countries, and WA exports comprises 92% of total Australian exports by value.
- The United Arab Emirates is the largest carrot market (31%), followed by Saudi Arabia with a combined share of 50% of the total export value.
- WA's mushrooms and truffles are well-established in premium markets. WA exported 68% of Australia's truffles and mushrooms, with most of the state's truffle production from Manjimup.
- In 2021-22, $6.5 million worth of truffles and mushrooms were exported compared with $5.2 million in 2020-21.
- Potatoes (Fresh and seed) were the second largest export category after carrots, with a combined export value of $12.9 million in 2021-22.

- The United Arab Emirates was the major destination for WA's vegetables (23%), followed by Malaysia (15%) and Singapore (14%).

Fruit (including wine grapes), wine and nuts

Production

- The estimated gross value of fruit (including wine grapes) was $685 million, and nuts were $24 million.
- Avocado is the largest fruit industry (32%) followed by wine grapes (12%). The Shire of Manjimup is the largest fruit production area by value with 29% of the gross value of fruit.
- There were 968 farm businesses producing fruit (including wine grapes) and nuts in an area of 30,202 hectares. Although WA produces only 5% of Australia's total wine volume, it represents 12% of the total wine value and 30% of the fine wines.
- WA's fine wines are produced in nine diverse Geographic Indication regions in the state's south-west.
- Each of the regions – from the hot climate Swan Valley in the north, through the temperate Mediterranean Margaret River to the cool climate Great Southern in the south – produces their own distinctive wine styles and varieties.

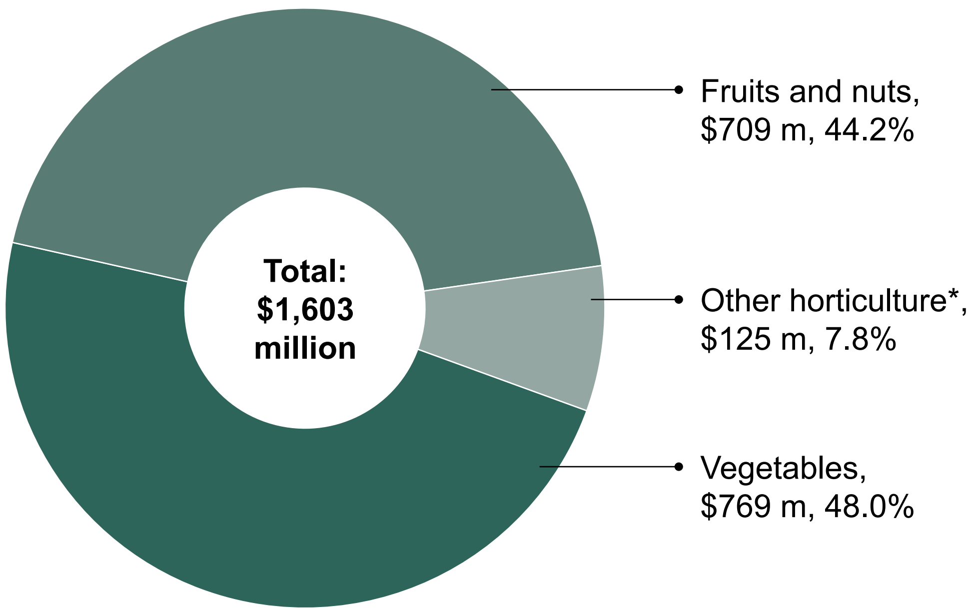
Exports (2021-22)

- In 2021-22, WA exported $45 million worth of fruit and nuts and $38 million worth of wine. The export value of fruit and nuts increased from $42 million to $45 million (6%) in 2017-18 and 2021-22. However, the export value of wine declined from $56 million to $38 million (34% decline) during the same period.
- Strawberries were the largest fresh fruit exports with an export value of $17 million and accounted for 39% of total fruit exports from WA and 75% of total strawberry exports from Australia. However, the exports of strawberries decreased from $25 million in 2017-18 to $17 million in 2021-22 (31% decrease). In 2021-22, Thailand was the largest market (40%) for WA strawberries.
- From 2017-18 to 2021-22 avocados and tables grapes were the fastest growing exports. Table grapes had an average annual growth rate of 285% from $1 million to $8 million, while avocados had an average annual growth rate of 122% from $2 million to $11 million.
- Increased domestic production, improved out turn of quality produce and access gained in new high value export markets contributed to this growth. Malaysia (39%), Singapore (32%) and Hong Kong (18%) together constitute 90% of the total avocado exports. Exports of table grapes are also concentrated with the top three destinations, Hong Kong (37%), China (27%) and Vietnam (25%) constituting 89% of the total export value.
- Malaysia was WA's major export destination for all fruits (19%), followed by Singapore (17%) and Thailand (16%).
- Export to China decreased from $21 million in 2019-20 to $0.87 million in 2021-22, a 96% decrease after the imposition of up to 212% tariff on Australian wine. Exports to the UK increased by 48% during the same period and investment to diversify and grow exports into new high value markets is underway to assist the WA wine industry.

Other horticulture

- This category includes nurseries, cut flower, turf and essential oils[2].
- The estimated value of nurseries, cut flower and turf was $125 million. There were 169 businesses growing nurseries, cut flowers and turf.
- In 2020-21, WA exported $5 million worth of nursery products and $32 million worth of essential oil.
- Nursery, flowers and turf exports were dominated by floriculture, with Japan taking 51% of flowers exported from WA.
- Almost one third of the essential oil export value comes from the United States of America (32%). India (26%) and France (11%) are the second and third destinations of essential oil.
- Essential oil exports grew by 19% year on year.

[2] Essential oil exports include the value of sandalwood oil.



**Nurseries, cut flowers, cultivated turf and essential oils (excluding sandalwood)*

Figure 9.1: Horticulture value of production 2021-22
Source: Radhakrishnan, *et al* (2022)

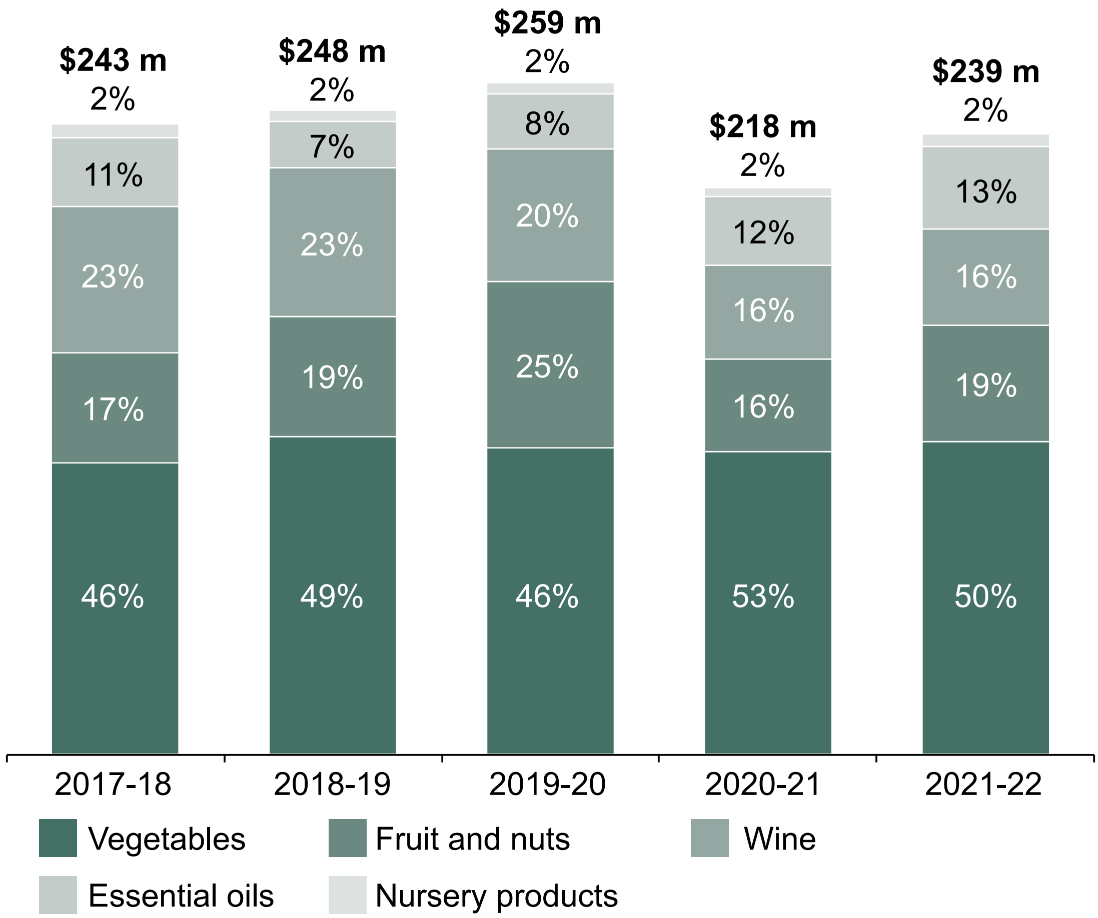


Figure 9.2: Horticulture value of exports 2017-18 to 2021-22
Source: ABS export data (2017-22)

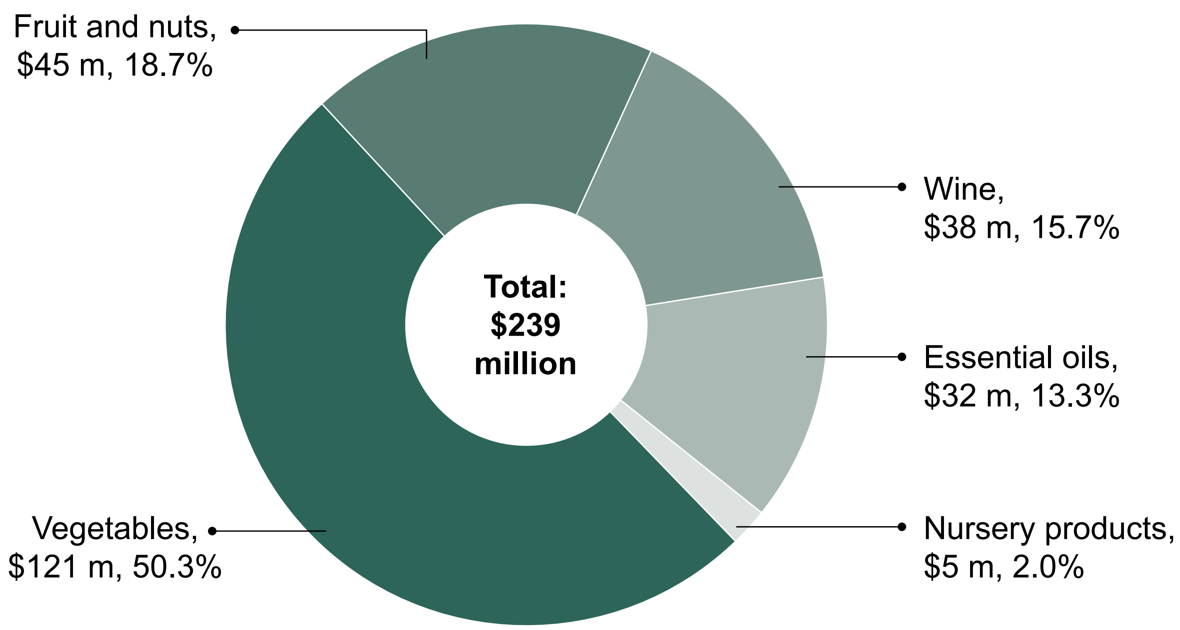


Figure 9.3: Horticulture value of exports by products 2021-22
Source: ABS export data (2021-22)

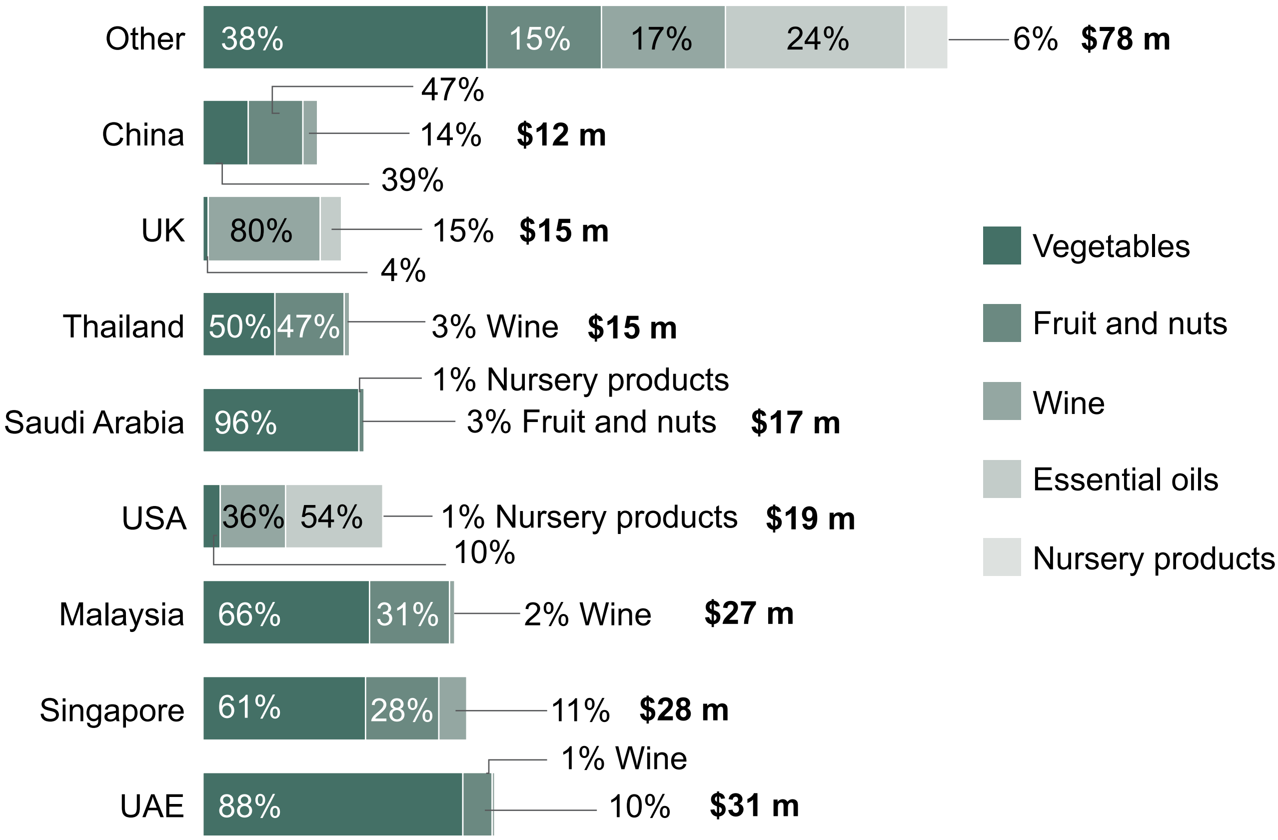


Figure 9.4: Horticulture major export markets 2021-22

Source: ABS export data (2021-22)

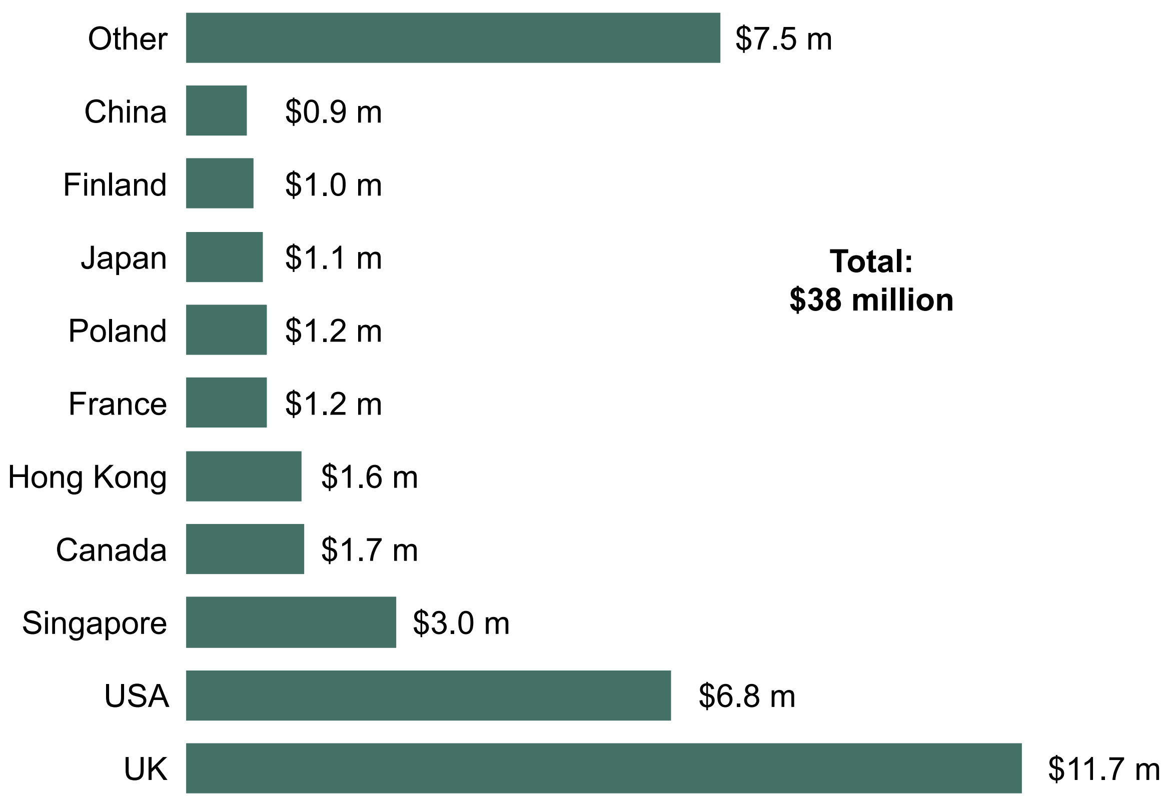


Figure 9.5: Wine major export markets 2021-22

Source: ABS export data (2021-22)

10 Apiculture

- Global demand for quality and nutritious honey, honey products and healthy disease-free bees is strong. The demand for specialist pharmaceutical honey products is also gaining momentum. Honeybees play an important role in the pollination of many horticultural and agricultural crops.
- WA honey is renowned for its superior quality as it is sourced from the state's pristine hardwood forests and coastal wildflowers. Local honeybees are free of many important pests and diseases found in eastern Australia. WA is also free of serious exotic bee mites.
- There are 4,800 registered beekeepers in WA and the total number of registered hives are estimated at 41,000, which represents 9% of Australia's total.
- The industry is dominated by a single company that controls 90% of the Australian honey market. The company is WA's main processor, collecting surplus honey from other producers in addition to its own hives.
- Honey, honeybees (including live bees) and second-hand hive equipment are banned from entering the state due to stringent biosecurity measures.
- In 2021-22, the WA apiculture industry exported $8.2 million of honey and live bees.
- Honey made up to 86% of all bee products exported, (predominantly to Japan), followed by 14% of live bees (mainly to Canada).
- The export of apiculture products increased by 5% from 2020-21.

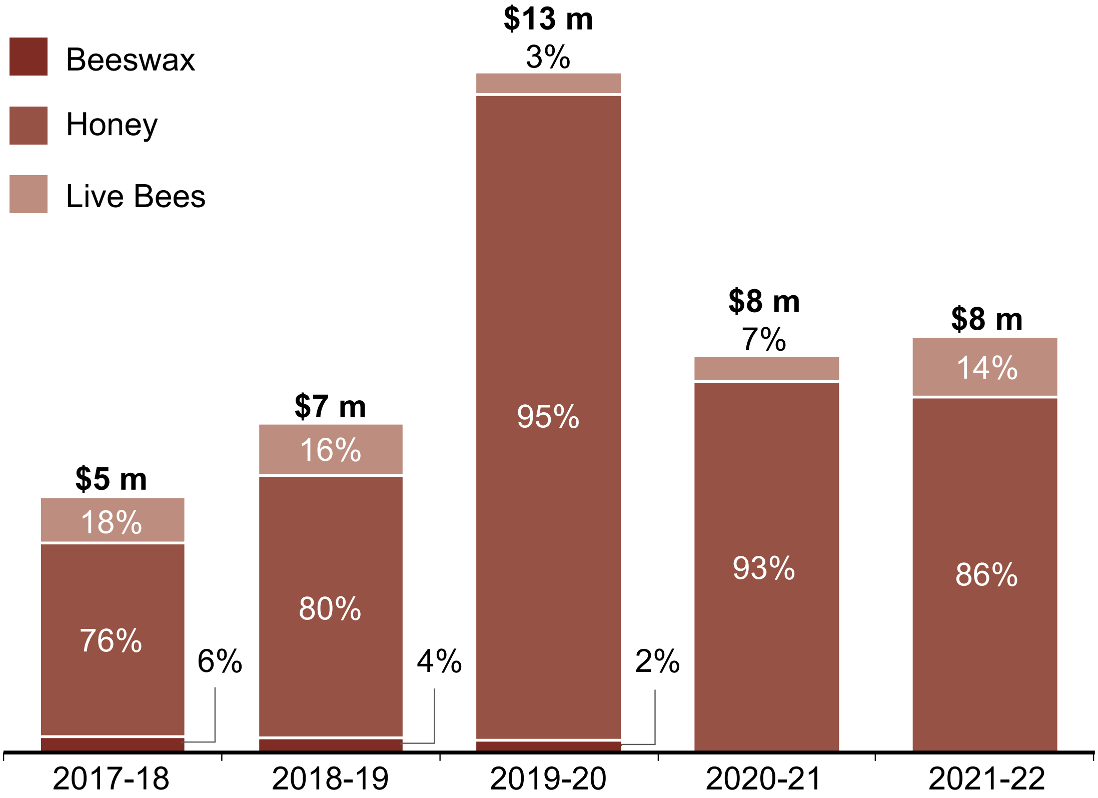


Figure 10.1: Apiculture value of exports 2017-18 to 2021-22
Source: ABS export data (2017-22)

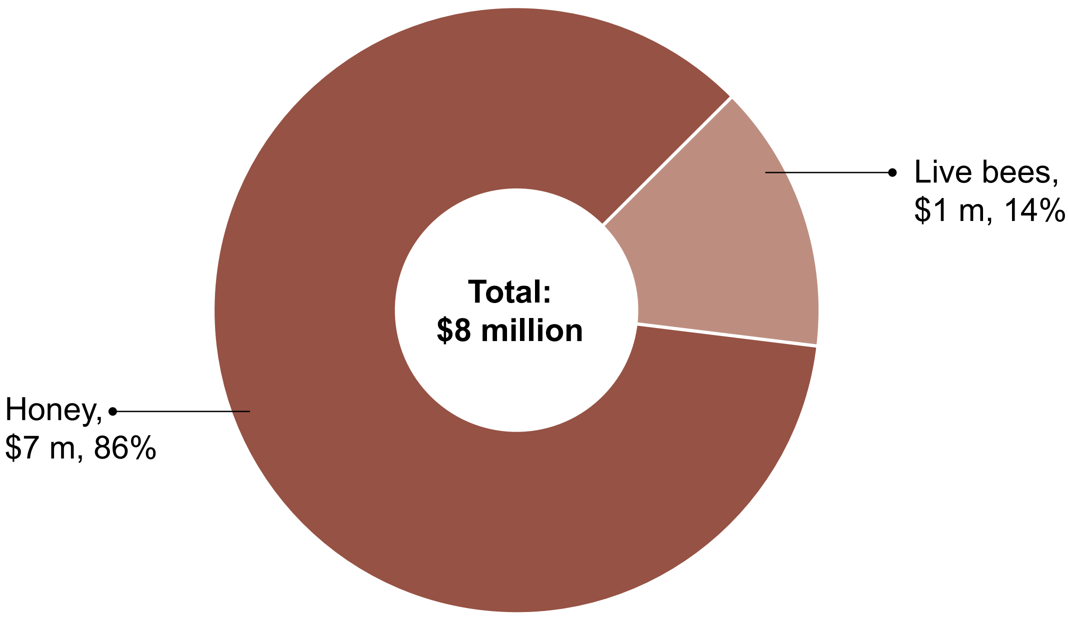


Figure 10.2: Apiculture value of exports 2021-22
Source: ABS export data (2021-22)

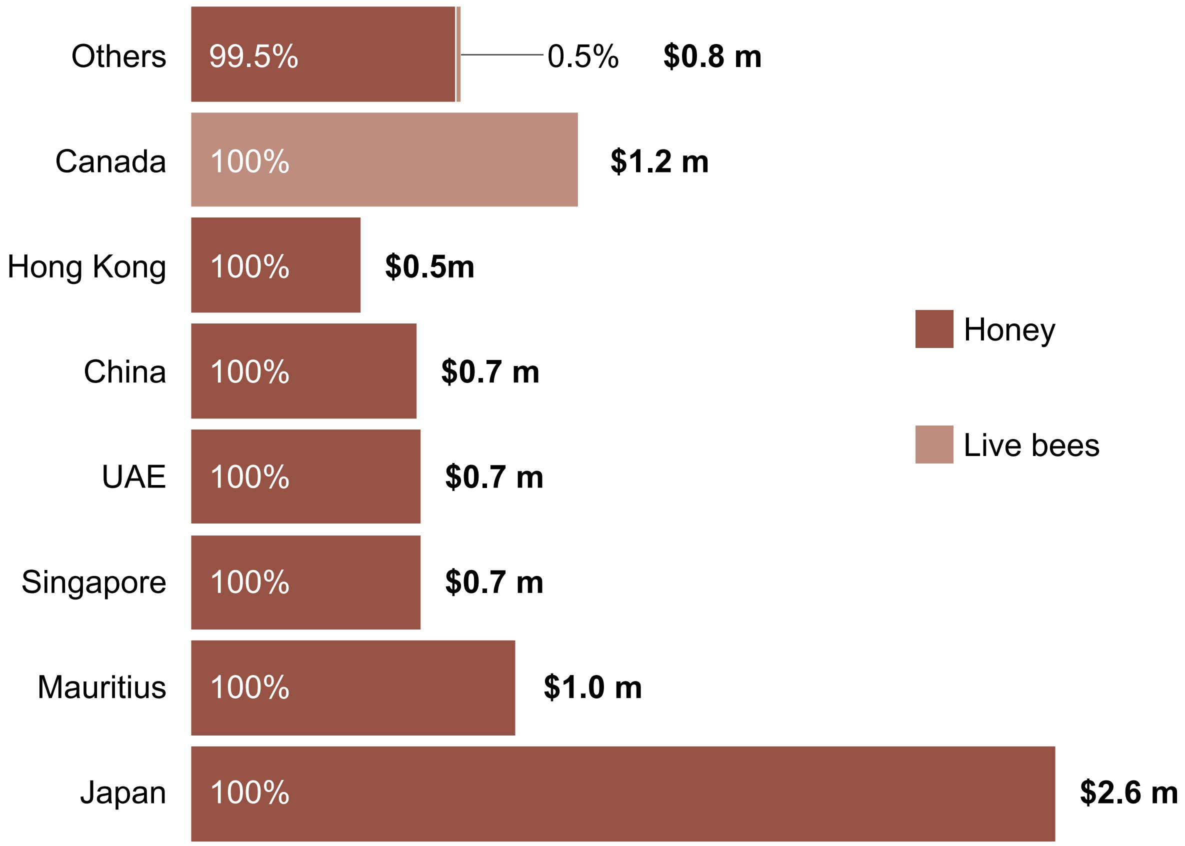


Figure 10.3: Apiculture major export markets 2021-22

Source: ABS export data (2021-22)

11 Fisheries

- WA has some of the finest and most sought after ecologically sustainable seafood in the world, ranging from rock lobster, crab, marine prawns (shrimp) and marron to abalone and scallops.
- WA also produces globally renowned South Sea pearls.
- Due to its high-quality and pristine waters, WA has an international reputation as a supplier of premium-quality seafood.
- WA has a diversity of marine life (the state encompasses Australia's only Global Biodiversity Hotspot) and provides opportunities for recreational, commercial and indigenous fishing, pearling, aquaculture and tourism.
- Two aquaculture development zones – one in the Kimberley and the other in the Mid-West, between Geraldton and the Abrolhos Islands have been created to provide 'investment-ready' platforms for aquaculture ventures. A third aquaculture development zone (the Albany Aquaculture Zone) on the south coast has been declared which is suitable for large-scale shellfish grow-out.
- The State Government has built a multi-species shellfish hatchery near Albany to provide juvenile seed stocks to support the shellfish sector.
- The economic contribution of recreational fishers to the WA economy is estimated at $1.1 billion (Source: National Social and Economic Survey of Recreational Fishers 2018-2021).
- Fisheries exports in 2021-22 were valued at more than $254 million, including $218 million from one of the most valuable fish species in Australia – western rock lobster.
- Western rock lobster exports declined from $243 million in 2020-21 to $218 million in 2021-22, representing a 10% decrease in value. Western rock lobster production declined markedly since the start of the Covid pandemic when the China market reduced and then stopped. Alternative markets have been found in the interim, however with lower price. Subsequently, production remains well below pre-Covid levels.
- Other key features of the WA fishing industry include:
  - a pearl production industry valued at $65 million in 2021-22;
  - a marine prawn industry valued at $32 million in 2021-22;
  - an aquaculture industry in the south of the state producing yields of freshwater fish, including WA's iconic marron; and
  - a growing marine aquaculture industry producing finfish, abalone, edible oysters and other high-quality products.
- WA's major export destinations for marine products in 2021-22 were Hong Kong, Taiwan, the United States of America, Vietnam and China.
- The top markets for crustacean exports in 2021-22 were Hong Kong, Taiwan and the United States of America.

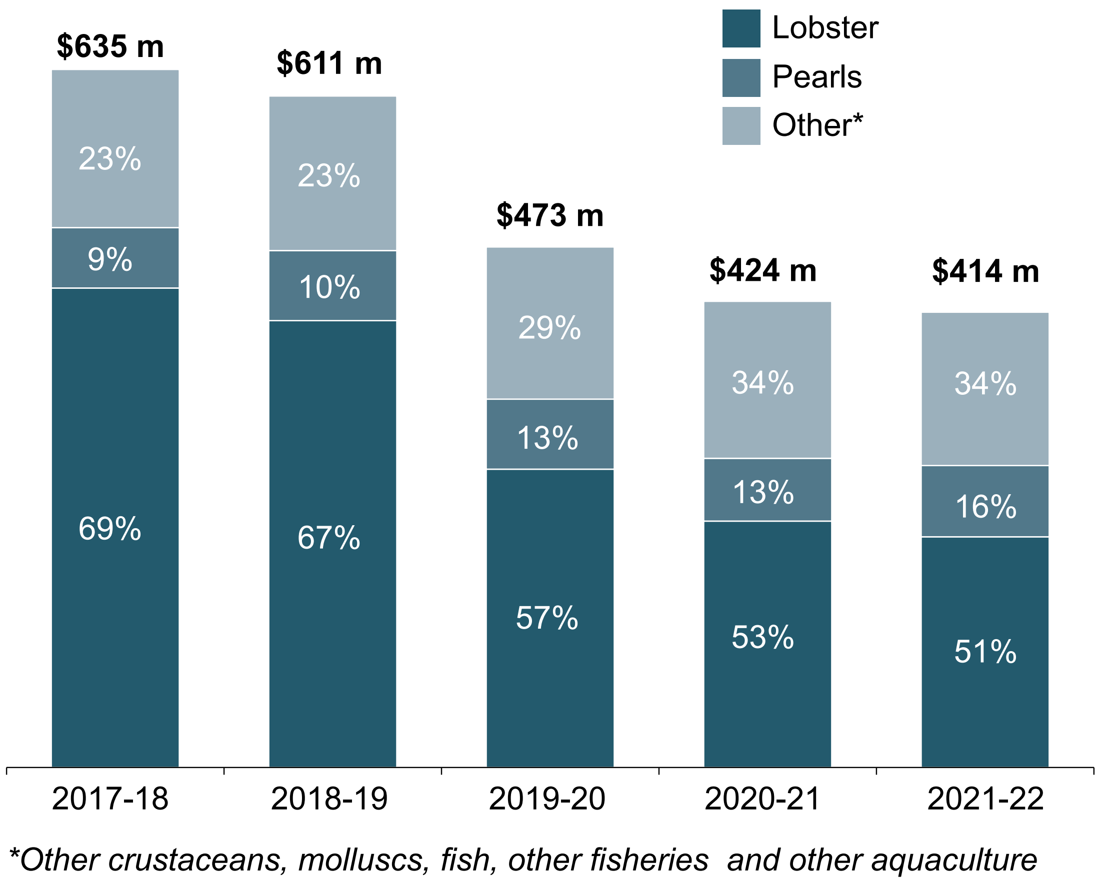


Figure 11.1: Fisheries and aquaculture value of production 2017-18 to 2021-22
Source: ABARES (2022a)

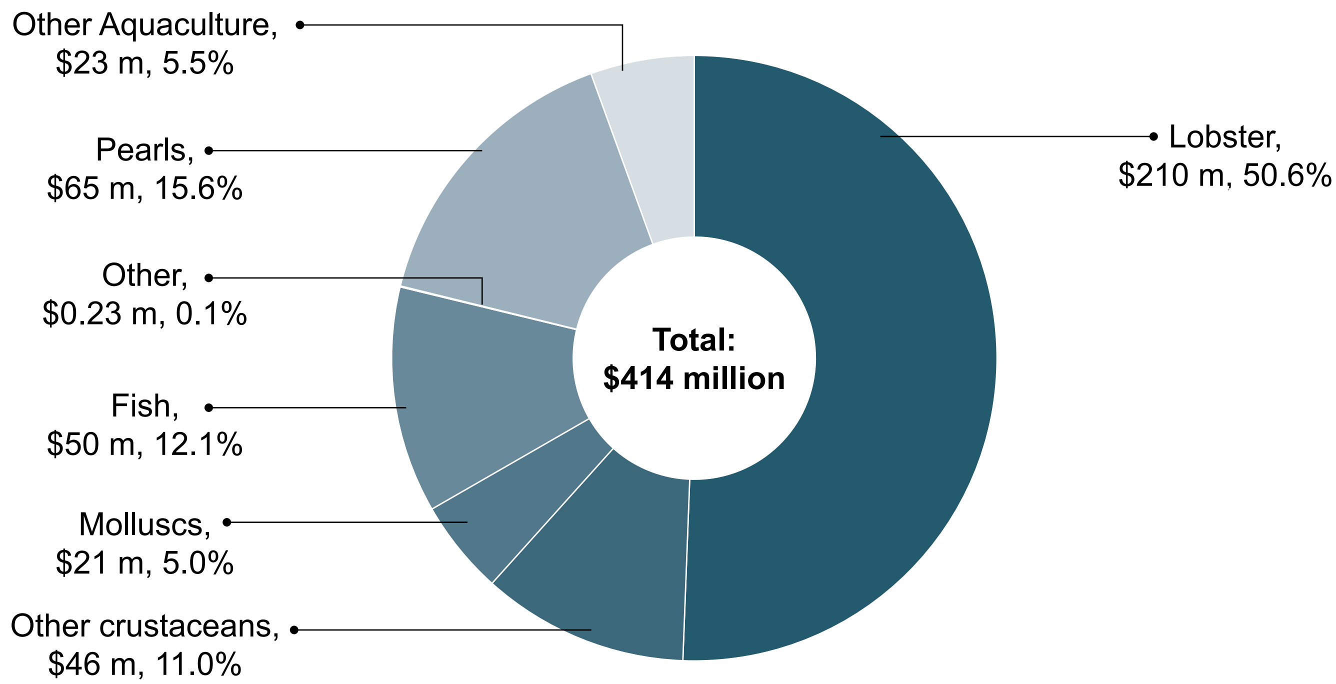
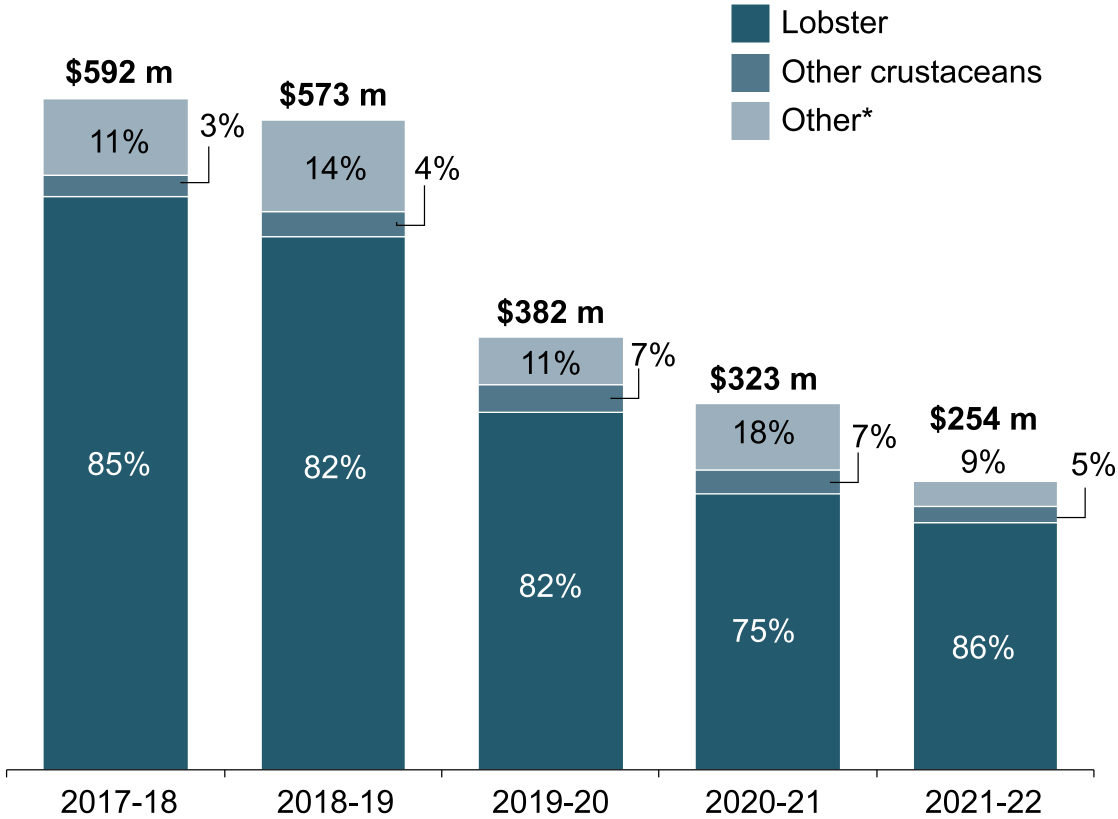


Figure 11.2: Fisheries and aquaculture value of production 2021-22
Source: ABARES (2022a)



**Pearls, molluscs, other fisheries products, fish meat and live fish*

Figure 11.3: Fisheries and aquaculture value of exports 2017-18 to 2021-22

Source: ABS export data (2017-22)

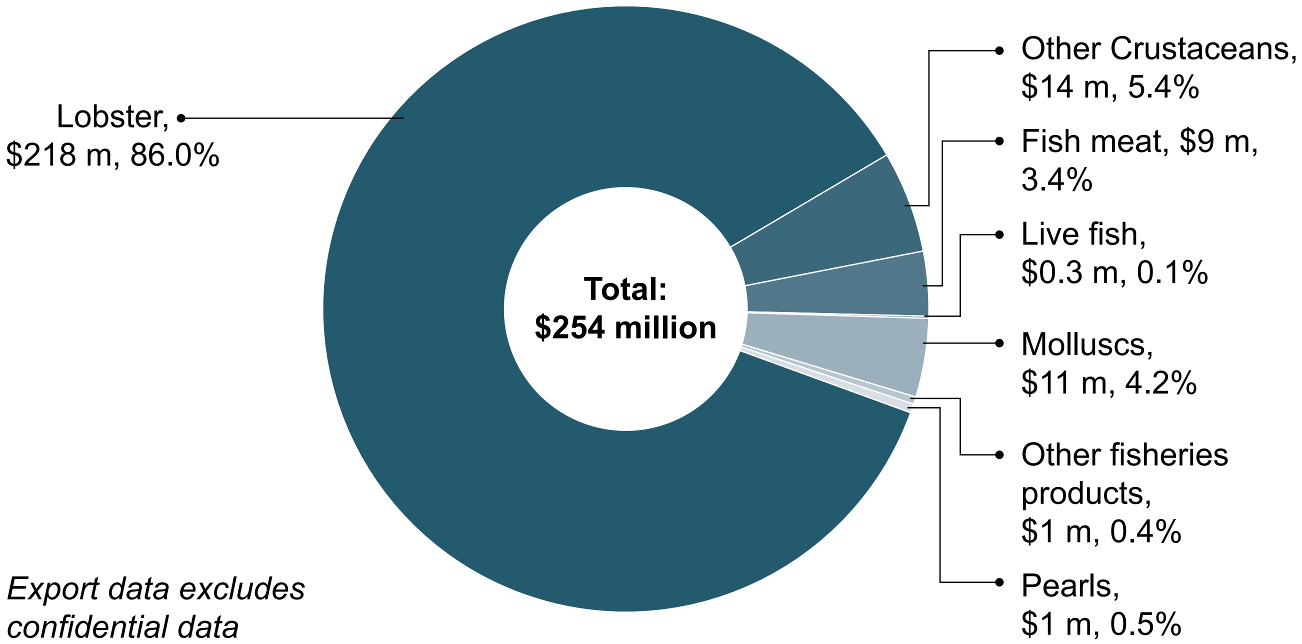
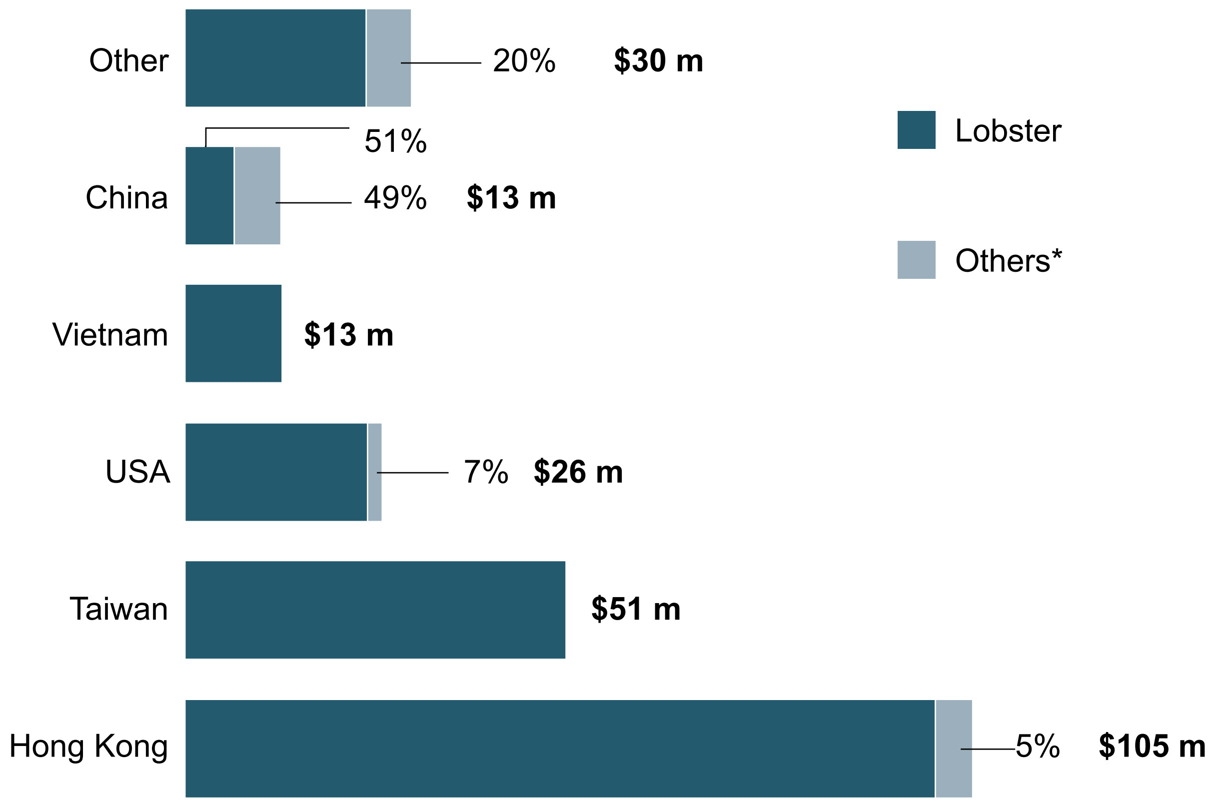


Figure 11.4: Fisheries and aquaculture value of exports 2021-22
Source: ABS export data (2021-22)



**Molluscs, fish meat, pearl, other fisheries products and live fish*

Figure 11.5: Fisheries and aquaculture major export markets 2021-22

Source: ABS export data (2021-22)

12 Agrifood Industries

- The agrifood industry involves an integrated value chain encompassing the farm (agriculture), processing (food manufacturing), and distributive (wholesale, retail and food services) sectors.
- The WA agrifood industry produces a final output of around $24 billion (2020-21)[3]. 28% of this value is attributed to agriculture, 26% to manufacturing, 11% to wholesale, 18% to retail and 18% to food services[4].
- The agrifood industries account for 5.2% of WA final demand consumption, contribute to 4.7% of total WA exports and 4.2% of gross value added.
- WA's agrifood economy indirectly contributes $11.2 billion through the purchase of inputs for production and gross value-added generated from the non-agrifood industries through their provision of goods and services.
- The food and beverage market can be broadly categorised into three segments: processing (which includes manufacturing), distribution (which includes retail and wholesale), and hospitality (which includes food services).
  - The manufacturing sector is where raw agrifood products are processed and makes up approximately 12% of the state's manufacturing sector total output value for 2021-22 with a turnover of $8.2 billion.
  - Agrifood wholesale and retail sector is the distributive sector within the agrifood industry and concerns the marketing and distribution of food products that were produced and transformed in the primary industries and agrifood manufacturing sectors.
  - Food service includes restaurants, cafes, pubs, and takeaway outlets and is the final part of the agrifood chain where products are transformed through preparations.
- WA's agricultural and food industries provide premium-quality food and beverage products to customers across the globe, and particularly to the Asian region.
- The agrifood manufacturing industries, which includes small-scale artisanal and start-up enterprises, comprised more than 1,700 registered food businesses at the end of 2021-22.
- WA exports around 60% of all agrifood products produced, with 85% being raw agrifood products and 15% processed for food industries.
- In 2021-22, processed agrifood and fisheries products worth $1.76 billion were exported.
- DPIRD is driving a value-chain approach, helping food businesses to capitalise on opportunities, especially around premium food and beverage products by better understanding markets, relationships and constraints within supply and value chains.

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[3] Value of total final agrifood output is computed through value chain modelling denominated in 2020-21 purchaser price.

[4] Tan and Xayavong (DPIRD, 2023) used input-output modelling to conduct an analysis of the WA Agrifood value chain.

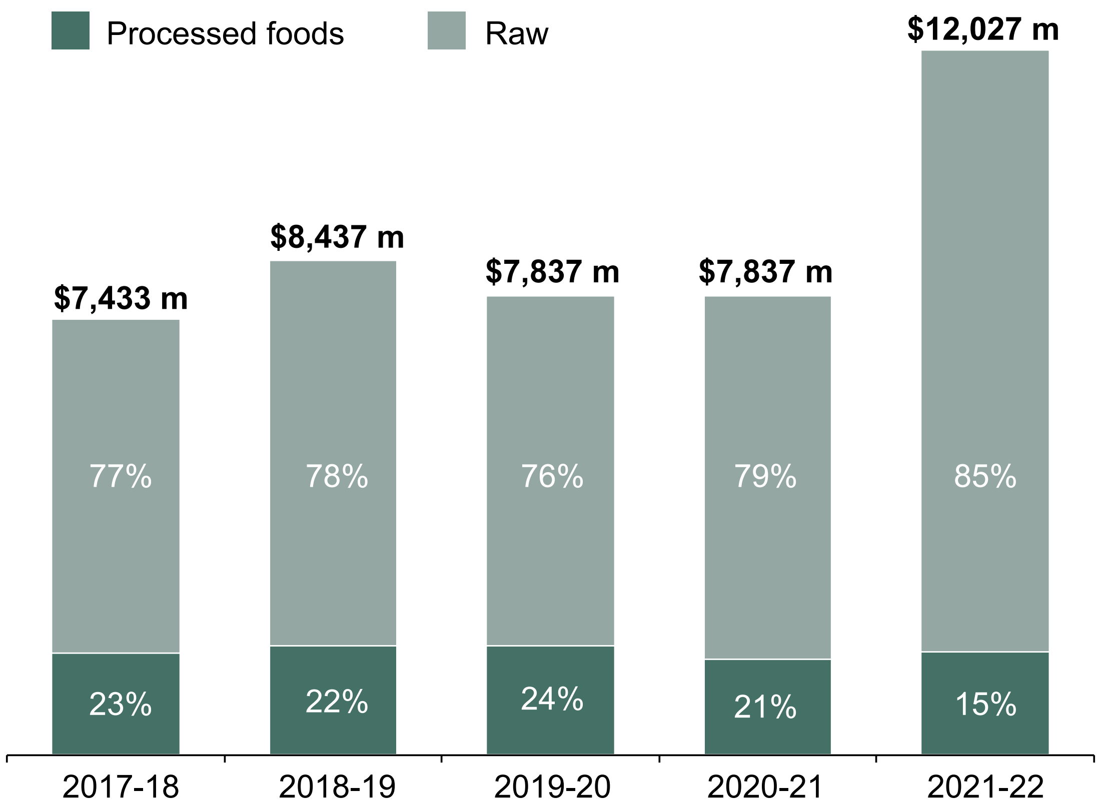

Figure 12:1: Raw and processed agrifood and fisheries value of exports from 2017-18 to 2021-22[5]

Source: ABS export data (2017-22)

[5] Excludes agrifood products not for consumption.

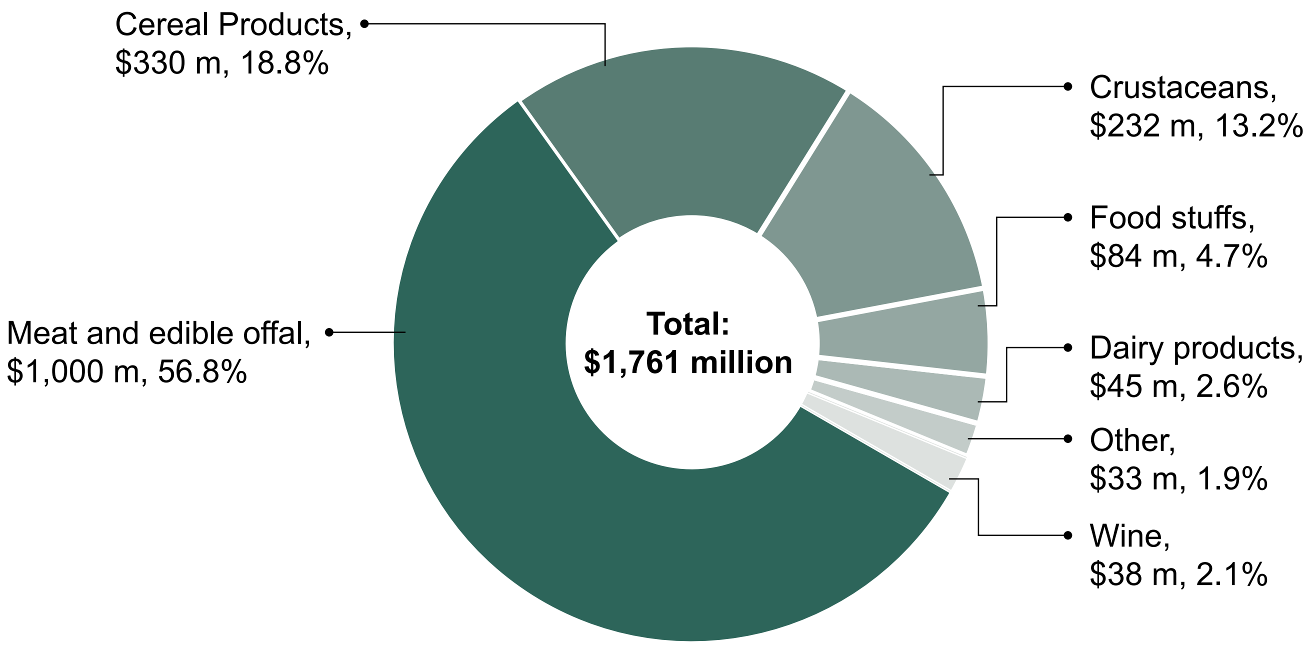

Figure 12.2: Processed agrifood and fisheries value of exports 2021-22
Source: ABS export data (2021-22)

13 Forestry

- WA's timber industry is sustainably managed and produces high-quality products for both domestic and export markets.
- The state's forestry sector is a significant employer, mostly in regional WA with jobs through the production chain from plantation establishment and native forest regeneration, through tending during growth through to harvest and secondary processing.
- There are three main timber industries in WA:
  - hardwood plantations industry – consists of blue gum plantations in the South-West and Great Southern regions.
  - sandalwood industry – currently, most production involves arid timber found in remote locations in the Goldfields and Rangelands. A sandalwood plantation industry is now emerging, including around Kununurra in the north of the state.
  - softwood (pine) plantations industry – ranges from Gingin (north of Perth) to Esperance (on the south coast).
- WA hardwood plantations are the largest segment of the forest industry by value. The industry, based on Tasmanian blue gum, Eucalyptus globulus, is used for high-grade writing and printing paper. Product is exported as woodchips from ports in Bunbury and Albany to markets in East Asia.
- Softwood timbers are mainly processed locally and used for domestic housing and construction. In 2021-22, the production of logs was valued at $67.6 million (FPC only).
- The State Government is investing $350 million over ten years to maintain and enhance WA's softwood estate. The FPC works with the private softwood industry in WA to ensure continued supply of softwood timber products.
- WA sandalwood is exported all over the world and is used in a range of high-quality products such as perfumes, pharmaceuticals, incense and wood carving. Current markets include Asia, India, the Middle East and Europe.

Key Terms

Term	Definition
Agricultural products or unprocessed agrifood products	Refers to crops, livestock and livestock products, horticultural, viticultural and any other products raised or produced on farms.
Agrifood sector	Refers to the integrated value chain encompassing the farm(agriculture), processing (food manufacturing), and distributive (wholesale, retail and food services) sectors.
Agrifood products	Refers to agricultural products, processed seafood, beyond farm-gate edible and non-edible manufactured products and value-added agricultural products.
Gross value of agricultural production	Refers to the value of agricultural products at their first point of sale. It includes the value of agricultural products that are exported in their raw form. It does not capture the value of seafood products or processed agricultural products.
Production value	Refers to the gross value of agricultural production.
Pasture products	Refers to swedes, mangolds (root vegetable), fodder roots, clover, sainfoin (hay crop), forage kale and similar forage products, in the form of pellets or not.
Pasture hay	Refers to hay made from pasture that may or may not be seeded.
Seafood	Refers to edible fish products for human consumption from both wild capture (from the oceans) and aquaculture (which can be marine aquaculture or freshwater aquaculture on land). Used interchangeably with fisheries products.

Notes

The categories and grouping of commodities are done as per the previous report for the relevant sections and new categories have been updated for the additional sections.

Grouping	Description
Agrifood, fibre, fisheries, and forestry	Meat and livestock, Cereals, Lupins and pulses, Oilseeds, Horticulture, Wool, Dairy, Fisheries, Aquaculture, Forestry and Agrifood
Global region	**All others** Other Asia, North America, CCA, SSA, South America, Oceania, Other and not specified
Cereals	**Oats, hay and other cereals** Oats, Triticale, Hay and other cereals
	Other cereals Oats – other processing products, wheat – flour, cereal hay, oats, malt, maize, grain sorghum, other cereals – other processing products, rye, barley seed, oats seed, grain sorghum seed, wheat seed, rice, grain sorghum for feed & other cereals – processing residue
Lupins and pulses	**Other pulses** Field peas, broad beans and horse beans, chickpeas, lentils, vetch, field beans, pulses – flour and meal, Adzuki beans, pigeon peas, other beans, other pulses & kidney beans

Grouping	Description
Meat and livestock	**Other slaughter** Pigs, Poultry, and other n.e.c (slaughter and disposal)
	Other meat and livestock products Pig meat & edible offal, other meat, livestock products edible and inedible (excluding wool and dairy products)
	Beef cattle Bovine edible offal, bovine lards, fats and tallow – edible, bovine meat, live beef cattle and live dairy cattle
	Sheep Lamb, mutton, sheep lards, fats and tallow-edible, sheep goats, equine edible offal and live sheep.
	Pigs Pig edible offal, pig lards, fats, and tallow – edible and pig meat
	Other meat Poultry meat and edible offal, goat, and other Ag animals
	Other livestock products Bovine and equine hides, bovine lards, fats and tallow – inedible, bovine meat products unfit for human consumption, bovine semen, eggs - for consumption, fur skins, live equines, live goats, live other Ag animals, other Ag animals hides and skins, other Ag animals lards, fats and tallow – inedible, other inedible animal products n.e.s, other meat products unfit for human consumption, pig lards, fats and tallow – inedible, pig skins, poultry - other inedible animal products n.e.s, poultry lards, fats and tallow – inedible, poultry meat products unfit for human consumption, sheep lards, fats and tallow – inedible, sheep meat products unfit for human consumption and sheep skins
Wool	**Wool** Processed fibre, raw, fabric, grease and lanolin
Dairy	**Other dairy products** Cheese, Sour milk products-yoghurt, Milk and cream concentrates and other milk products
	Dairy products Milk and cream, milk and cream concentrates, sour milk products – yogurt, cheese, ice-cream, sour milk product – buttermilk, butter and other dairy fats, milk derivatives and other milk products
Apiculture	**Bee** Bees wax, honey and live bees
Horticulture	**Other horticulture** Nurseries, cut flowers, cultivated turf and essential oils (excluding sandalwood)

Grouping	Description
Fisheries and aquaculture	**Others** Molluscs, Fish meat, Pearl, Other fisheries products and Live fish
	Crustaceans Lobster, Shrimps, Prawns
	Fish meat Fillets and other fish meat- frozen – fillets, Prepared or preserved fish meat (dried, salted, in brine, smoked, other), Whole fish – frozen, Fillets and other fish meat – frozen, other fish meat
	Live fish Ornamental fish
	Molluscs Octopus, abalone, cuttle fish and squid, oysters, scallops, mussels
	Other fisheries products Coral, sponges and shells (excl. pearl), seaweeds and algae, fish oil and fats
Agrifood	Processed-for food industries, Raw agrifood products

Acronyms

Acronyms	Description
$ bn	Billion dollars (AUD)
$ m	Million dollars (AUD)
ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences
ABS	Australian Bureau of Statistics
ASEAN	Association of Southeast Asian Nations
CCA	Caribbean and Central America
CPI	Consumer Price Index
DJTSI	Department of Jobs, Tourism, Science and Innovation Western Australia
DPIRD	Department of Primary Industries and Regional Development
EU	European Union
FPC	Forest Products Commission
GIWA	Grain Industry Association of Western Australia
GRDC	Grains Research and Development Corporation
GSP	Gross State Product
GVP	Gross value of production
GVAP	Gross value of agricultural production
km^2	Square kilometres
MENA	Middle East and North Africa
Mt	Million tonnes
N.E.C.	Not elsewhere classified
N.E.S.	Not elsewhere specified
NEA	Northeast Asia
SSA	Sub-Saharan Africa
UAE	United Arab Emirates
UHT	Ultra-high-temperature processing
UK	United Kingdom
USA	United States of America
WA	Western Australia
WAFIC	Western Australian Fishing Industry Council

Value of Primary Industries exports by commodity 2021-22

Commodity	AUS	WA	Proportion of WA to Aus
	$ million	**$ million**	
Wheat	$11,334	$3,898	34.4%
Barley	$2,895	$1,413	48.8%
Malt	$583	$216	37.1%
Oats	$174	$159	91.8%
Cereal hay	$500	$209	41.7%
Other cereals	$1,460	$131	9.0%
Cereal	**$16,946**	**$6,026**	**35.6%**
Lupins	$231	$201	86.9%
Field peas	$123	$30	24.2%
Faba beans	$360	$16	4.4%
Chickpeas	$476	$18	3.7%
Lentils	$961	$3.6	0.4%
Vetch	$4	$1.0	27.1%
Pulses - flour and meal	$8	$0.1	1.2%
Other pulses	$165	$0.0	0.0%
Lupins and other pulses	**$2,327**	**$268**	**11.5%**
Canola	**$5,645**	**$3,003**	**53.2%**
Beef (meat and edible offal)	$11,052	$315	2.9%
Live cattle	$1,188	$335	28.2%
Sheep (meat and edible offal)	$4,637	$623	13.4%
Live sheep	$85	$84	98.3%
Pig (meat and edible offal)	$149	$38	25.4%
Other meat	$627	$25	4.0%
Other livestock products (edible and inedible)	$2,130	$109	5.1%
Meat and livestock	**$19,870**	**$1,529**	**7.7%**
Wool	**$3,289**	**$693**	**21.1%**

Commodity	AUS	WA	Proportion of WA to Aus
	$ million	**$ million**	
Milk and Cream	$366	$44	11.9%
Cheese	$978	$0.5	0.0%
Sour milk products	$71	$0.6	0.8%
Milk and cream concentrates	$1,501	$0.5	0.0%
Other dairy products	$492	$0.1	0.0%
Dairy	**$3,407**	**$45**	**1.3%**
Fruits and Nuts	$2,294	$45	1.9%
Vegetable industry	$429	$121	28.1%
Essential oils	$109	$32	29.0%
Nursery products	$59	$5	8.3%
Wine	$2,197	$38	1.7%
Horticulture	**$5,088**	**$239**	**4.7%**
Beeswax	$3	-	0.0%
Honey	$64	$7	10.9%
Live bees	$2	$1.2	47.7%
Apiculture	**$70**	**$8**	**11.7%**
Lobster	$358	$218	61.0%
Other crustaceans	$43	$14	31.8%
Molluscs	$187	$11	5.7%
Fish meat	$629	$9	1.4%
Pearls	$21	$1.2	5.6%
Other fisheries products	$19	$1.0	5.2%
Live fish	$22	$0.3	1.3%
Fisheries	**$1,280**	**$254**	**19.8%**
Forestry	**$1,519**	**$30**	**1.9%**
Other processed foods	**$6,972**	**$121**	**1.7%**
***Other minor exports (for WA)**	**$1,400**	**$6**	**0.5%**
TOTAL	**$67,813**	**$12,222**	**18.0%**

* Other minor commodities including oilseed, oilseed products, forage and forage seeds which are insignificant exports from WA.

Source: ABS export data (2021-22)

Value of Primary Industries export markets 2021-22

Destinations	Australia	WA	Proportion of WA to AUS
	$ million	$ million	%
China	$13,650	$2,094	15%
Japan	$6,200	$1,383	22%
Philippines	$1,958	$868	44%
Germany	$1,642	$863	53%
Indonesia	$3,732	$803	22%
South Korea	$3,948	$697	18%
UAE	$1,578	$625	40%
Saudi Arabia	$1,531	$580	38%
Belgium	$1,129	$453	40%
France	$754	$370	49%
Vietnam	$3,395	$359	11%
Malaysia	$1,729	$337	20%
Netherlands	$955	$322	34%
Yemen	$455	$317	70%
Kuwait	$564	$285	51%
USA	$5,406	$188	3%
Singapore	$1,549	$187	12%
Hong Kong	$1,111	$138	12%
Bangladesh	$1,291	$137	11%
Jordan	$264	$132	50%
Taiwan	$1,172	$122	10%
Thailand	$1,427	$114	8%
Qatar	$270	$89	33%
India	$781	$86	11%
Mexico	$277	$85	31%
Pakistan	$361	$65	18%
Israel	$108	$50	46%
Myanmar	$149	$46	31%

Destinations	Australia	WA	Proportion of WA to AUS
	$ million	$ million	%
Brazil	$74	$44	59%
Canada	$655	$38	6%
Oman	$149	$36	24%
South Africa	$265	$34	13%
UK	$869	$33	4%
Sudan	$235	$28	12%
Kenya	$185	$28	15%
Poland	$51	$18	35%
Egypt	$572	$17	3%
Mauritius	$124	$16	13%
Peru	$63	$14	23%
New Zealand	$2,062	$13	1%
Cambodia	$46	$12	25%
Italy	$486	$11	2%
Sri Lanka	$223	$11	5%
Czechia	$82	$11	13%
Other	$4,286	$63	1%
Total	$67,813	$12,222	18%

Source: ABS export data (2021-22)

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Department of Primary Industries and Regional Development

+61 1300 374 731 | enquiries@dpird.wa.gov.au | dpird.wa.gov.au

ABN: 18 951 343 745

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