



Department of
Agriculture and Food



2012 WESTERN AUSTRALIA'S AGRIFOOD, FIBRE, FISHERIES AND FORESTRY INDUSTRIES



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west

FRESH WA
VEGETABLES





WESTERN AUSTRALIA'S
AGRIFOOD, FIBRE, FISHERIES AND
FORESTRY INDUSTRIES

2012

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foreword



Western Australia's agricultural sector is immersed in an era of opportunity, with growing world demand for high quality and safe food and fibre products.

Our State continues to build on its international reputation as a diverse and reliable supplier of food and agricultural produce.

The WA industry places a high value on its overseas markets, exporting about 80 per cent of its total agricultural production. Despite challenging global market conditions in 2010-11, WA agrifood and forestry exports remained strong, valued at A\$5.2 billion.

Looking to the future, we know that most of the growth in people and incomes will be offshore - with 60 per cent of the world's population living broadly within WA's time zone, we are well placed to capitalise on this opportunity.

In particular, WA is primed to meet growing demand for food from Asia and the Middle East and to further develop seasonal export opportunities into northern hemisphere markets.

The Government supports the State's agrifood industries to identify and develop new markets, while consolidating existing trade relationships. This includes investment, through the Department of Agriculture and Food, to drive research and development and to facilitate new market opportunities.

The State has an enviable biosecurity status, free from major animal and plant pests and diseases. Strict quarantine and biosecurity programs ensure this status is maintained for the benefit of local producers and consumers around the globe.

The State Government looks forward this year to driving innovation across the sector and working with industry to deliver even better outcomes for increasingly discerning customers, both locally and overseas.

Hon Terry Redman, MLA
Minister for Agriculture and Food; Forestry;
Corrective Services



High quality fisheries and pristine waters have given Western Australia an international reputation as a producer of premium quality seafood.

Covering one-third of the Australian continent and with 12,500 kilometres of coastline, Western Australia's immaculate blue waters are home to a fantastic diversity of marine life covering both temperate and tropical climate regions.

Commercial fishing, including pearling and aquaculture, contributes around A\$1 billion to the State's economy each year, providing direct employment for 5000 Western Australians with many more in associated service industries.

The State's waters are also a playground for more than 600,000 recreational fishers. This sector injects over A\$570 million in economic activities annually to the State's economy and supports an estimated 7000 jobs.

Most of Western Australia's seafood is exported, with the majority being sold to China/Hong Kong. Much of this produce is destined for some of the world's best restaurants.

Government and industry partnerships, along with management arrangements developed in consultation with all user groups, ensure that the State's fisheries will be in excellent health for future generations.

Hon Norman Moore MLC
Minister for Fisheries



Department of Agriculture and Food

The Department of Agriculture and Food is accelerating the development of Western Australia's A\$6 billion agrifood sector and ensuring the production of safe and quality food and fibre products for domestic and international markets.

The Department works with industries and businesses to support and develop all aspects of food production through innovative research and development, marketing, extension and regulation.

A Statewide network of nearly 1200 dedicated and highly skilled staff deliver a diverse range of services and products from up to 50 regional locations. These responsibilities cover more than 100 million hectares devoted to the State's agricultural and pastoral production.

The Department is maximising its contribution to the sector in four key areas:

- improving long term profitability of agriculture and food businesses
- building a sustainable sector and effectively managing our land and water assets, climate variability and biosecurity
- building industry capacity to adapt and grow, and
- improving markets and trade for WA products.

The Department is clearly focussed on economic development and enhancing the profitability of the sector along the entire supply chain.

Other widespread activities also generate considerable social, community and environmental benefits. It undertakes research and development in the areas of climate, land management, nature conservation, salinity, soil acidity and water management.

Through its commitment to biosecurity, the Department aims to minimise the impact of diseases, pests and weeds on the State's agricultural and pastoral industries. This enables WA products to meet the pest and disease freedom requirements of valued export markets.

The Department's responsibility for food brings together agriculture, food production, manufacturing and marketing under the one Government agency. Product innovation and consumer demand are key focus areas and supporting the development of value-added products is paramount to deliver real opportunities for the State's agrifood sector.

The Department is also involved in promoting WA products overseas, facilitating trade alliances, providing global business linkages and project management at an international level.

For further information visit www.agric.wa.gov.au



Department of Fisheries

The Department is responsible for the conservation, development and sharing of the Western Australia's fish and other aquatic resources for the benefit of current and future generations. The Department's work covers a range of areas including:

- sustainable management of fisheries, aquaculture and aquatic resources
- environmental management and protection, and
- developing industry and community partnerships.

The Department licenses and regulates commercial fisheries, which includes rock lobster, pearling, prawns, scallops, abalone and finfish, and is worth about A\$500 million annually, with a further estimated A\$450 million in related economic activity.

It manages a Statewide recreational fishery accessed by more than 600,000 people and generating in excess of A\$570 million in economic activities annually.

The Department's infrastructure includes a head office in Perth, a marine research facility at Hillarys, an operations centre at Fremantle and 21 other offices across the State.

The core responsibility of the Department is the management of fisheries and aquatic resources, including pearling and aquaculture in WA. This is done in collaboration with the local fisheries and fisheries-related sectors and relevant industry and community groups.

The Department carries out fisheries research, management, surveillance and enforcement and education along the State's 12,500 kilometre coastline. It also works with the national Government in waters adjacent to WA in Australia's Exclusive Economic Zone, which extends 200 nautical miles (370 kilometres) from the State's coast.

For further information visit www.fish.wa.gov.au



Forest Products Commission

The Forest Products Commission is a statutory authority established in 2000 to commercially harvest and manage Western Australia's renewable timber resources. The Commission also has a commitment to sustainable forest management by delivering economic, environmental and social benefits for the community.

The Commission has three business units: Arid Forests, Mature Plantations and South West Forests. Each segment has its own operating conditions, market demands and financial characteristics.

The Commission's operations include the:

- harvesting and selling forest products from State-owned native forests and plantations
- regeneration (replanting) of State-owned native forests and plantations, and
- supporting the long-term viability of the timber industry.

The Commission is actively involved in the marketing and promotion of WA's unique timbers. This includes the use of timbers like jarrah, marri and karri hardwoods for furniture and flooring, pine for construction and manufacturing and sandalwood for pharmaceutical products.

While WA is home to a diverse range of timbers from native forests and plantations, the Commission does not harvest in 'old growth' forests. The Commission's forest operations are independently audited and certified to comply with sustainable forest management practices through the Australian Forest Certification Scheme and the Environmental Management Systems international standard.

For further information visit www.fpc.wa.gov.au



Gross State Product (GSP):	A\$216.5 billion (2010-11)
GSP growth rate:	3.5%, highest for Aust (2010-11)
Population:	2.35 million (June 2011)
Imports:	A\$27.9 billion (2010-11)
Exports:	A\$112.4 billion (2010-11)
Land area:	2,532,400 km ²
Life expectancy at birth:	
Males	78 years
Females	83 years
Unemployment rate:	4.3% (Sep 2011)
Inflation rate:	3.6% (2010-11)
Average weekly earnings:	A\$1,385 (annual increase 5.3%, Aug 2011)
Western Australia's contribution to Australian exports:	42%



land and sea use - an overview



Western Australia is the largest Australian State. It occupies a third of Australia, spanning 2400 kilometres from north to south, with an area of more than 2.5 million square kilometres.

From its tropical north, to the temperate areas in its South-West corner, WA experiences a variety of climatic conditions. As the distance from the coast increases inland, the rainfall decreases and the temperature variations become more extreme.

WA's vast area provides soils and climates suited to a variety of agricultural production from open range grazing and broadacre cereal cropping to irrigated pastures and horticulture, including orchards and vineyards.

Grain, wool, meat and fish are the main products. Tropical and temperate horticultural and food products are also important.

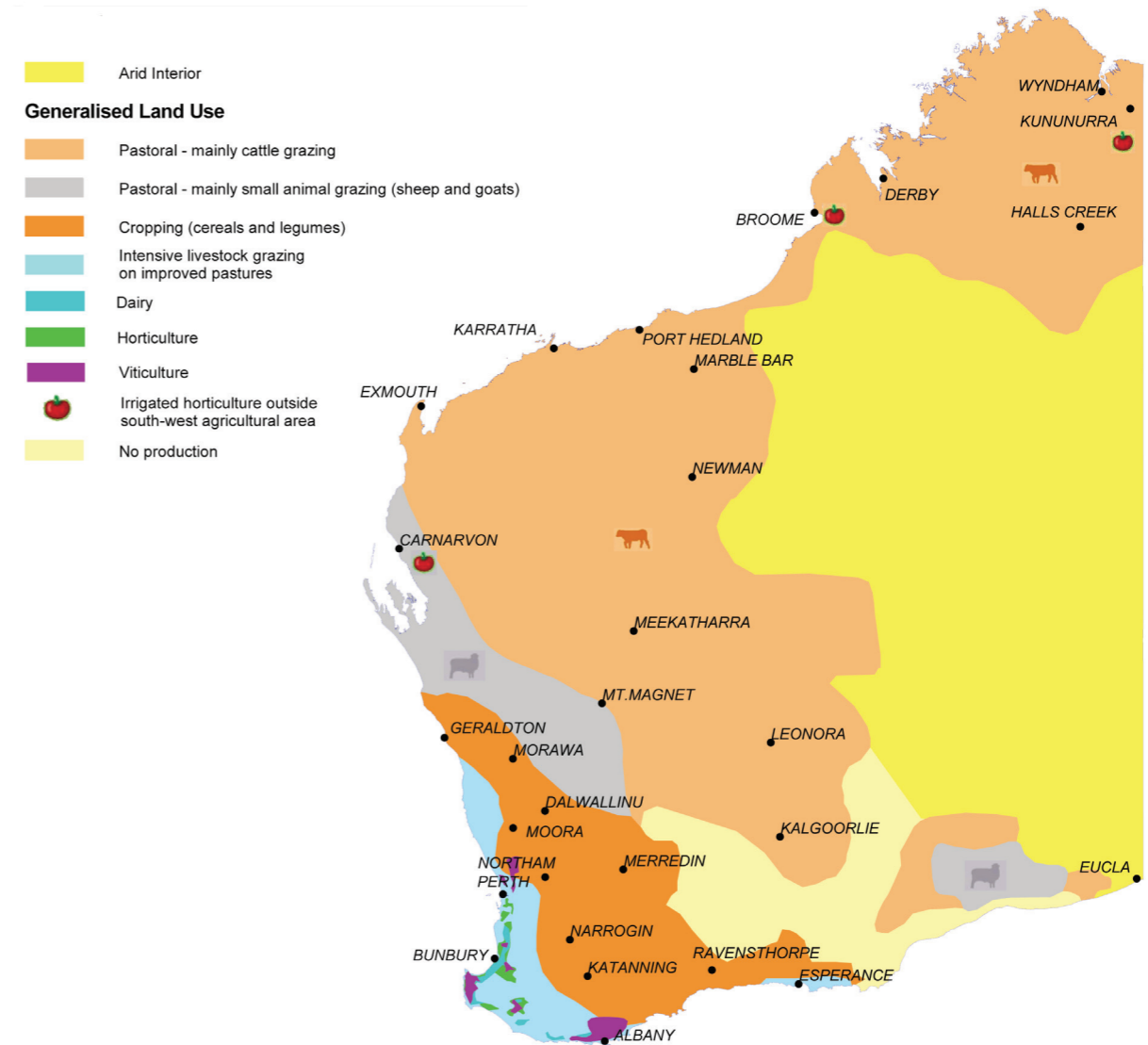
The diverse and efficient agriculture sector provides the raw material for a rapidly growing range of processed exports. These include wine, ice cream, barley malt, noodles and fine leather. Instead of being just a primary producer, WA is now increasing its range of value-added products and manufactured goods.

WA's fisheries are major world suppliers of lobsters, prawns and pearls. With a decline in fish stocks in other parts of the world, the steadily growing aquaculture industry is successfully providing high value products to specialist markets.

A major east-west rail line carries freight and passengers between WA and other Australian States. An extensive public rail network services agriculture and industry in the State's South-West. In the North-West, private rail lines carry ore from inland mines to coastal ports.

International containerised shipping can be accessed at Fremantle, the State's main port which handles 85 per cent by value of WA's seaborne imports and 25 per cent by value of WA's seaborne exports. The nine regional ports, Albany, Broome, Bunbury, Dampier, Esperance, Geraldton, Kwinana, Port Hedland and Wyndham are linked to major agricultural and mineral producing areas.

There are regular international air services linking Perth to Singapore, Malaysia, Indonesia, Thailand, Hong Kong, China and the Middle East.

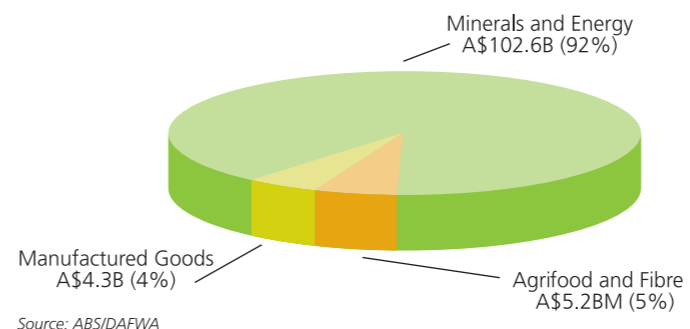




agrifood, fisheries and forestry production and exports - an overview

- Western Australia is an important producer and supplier of high-quality grains, wool, meat, live animals and fish in the international arena.
- The State exports up to 80 per cent of its agricultural production and has an international reputation for meeting the specific requirements of overseas customers.
- Local farmers are world leaders in sustainable agricultural production.
- WA is a world leader in dryland farming and now exports this technical expertise.
- The State is one of the most pest and disease-free agricultural production areas in the world. Strict quarantine requirements ensure this status is maintained for the benefit of local producers and consumers around the world.
- WA is well positioned to take advantage of growing world consumer demand for clean and safe quality food.
- The subtropical and tropical areas of Carnarvon and Kununurra are noted for the production of a wide range of fruits and other irrigated tropical crops.
- WA's southern hemisphere location means that the State is well placed to take advantage of seasonal export opportunities into northern hemisphere markets.
- Agrifood, forests and fisheries contributed 5 per cent to total exports.
- The majority of agricultural, fishery and forest production is exported, including 92 per cent of the grain crop, 73 per cent of livestock, 64 per cent of fisheries and 86 per cent of forest production.
- Over the four years from 2006-07 to 2010-11, the largest export region for WA agricultural, fishery and forest products has been North East Asia, comprising China, Japan, South Korea and Taiwan. Up to 2009-10, WA's second most important region for these products was the Association of South East Asian Nations (ASEAN) followed by the Middle East. In 2010-11, the Middle East became the second most important region due to an increase in vegetable exports to the United Arab Emirates.
- Since 2006-07 Asia has accounted for almost 70 per cent of WA agricultural, fishery and forest product exports.
- In 2010-11, the top export markets for WA agrifood products were Japan, China/Hong Kong, Indonesia and South Korea.
- WA has a unique freight advantage as it is very close to the Asian and Middle Eastern markets.

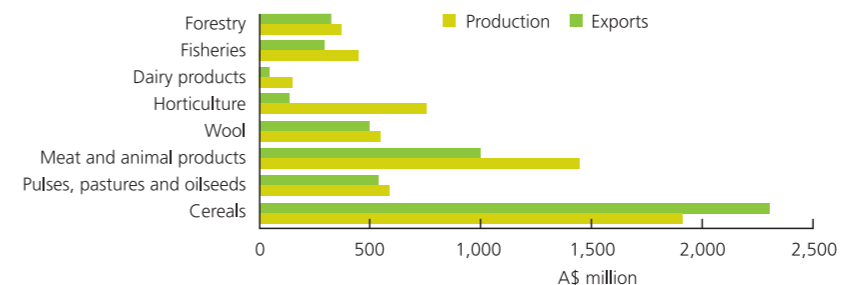
Western Australian exports by sector, 2010-11
Total: A\$112.1 billion



Source: ABS/DAFWA

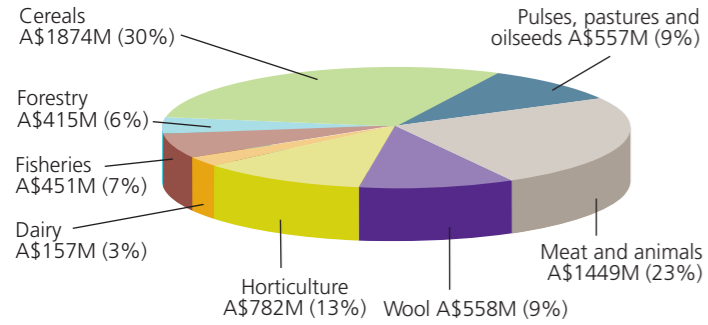


WA agriculture, fisheries and forestry production and exports, 2010-11
Total production: A\$6,263 million
Total exports: A\$5,182 million



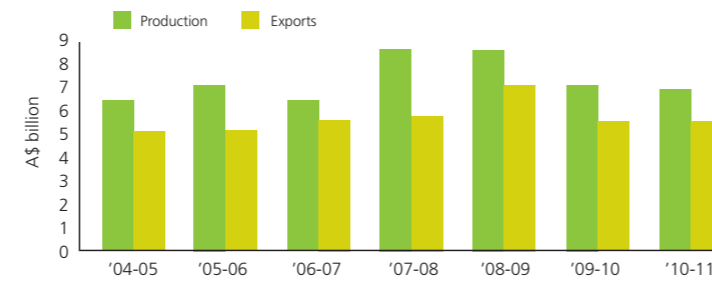
Source: ABS/DAFWA Cereal exports are higher than production due to carryover from previous years

WA agriculture, fisheries and forestry production, 2010-11
Total: A\$6,263 million



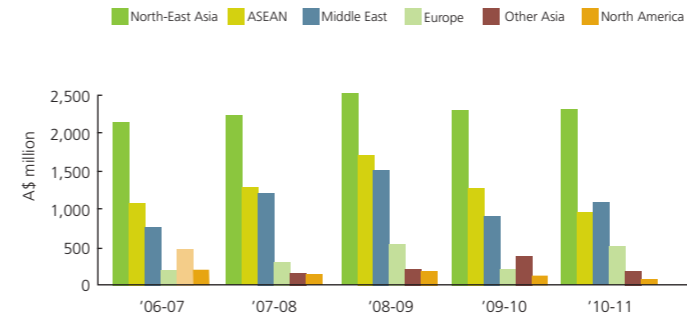
Source: ABS/DAFWA

WA agriculture, fisheries and forestry production and exports, 2004-05 to 2010-11 (A\$ billion)



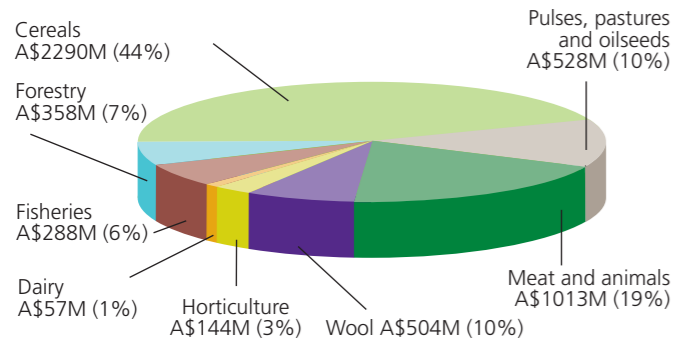
Source: ABS/DAFWA

WA agriculture, fisheries and forestry export markets by region, 2006-07 to 2010-11



Source: ABS/DAFWA

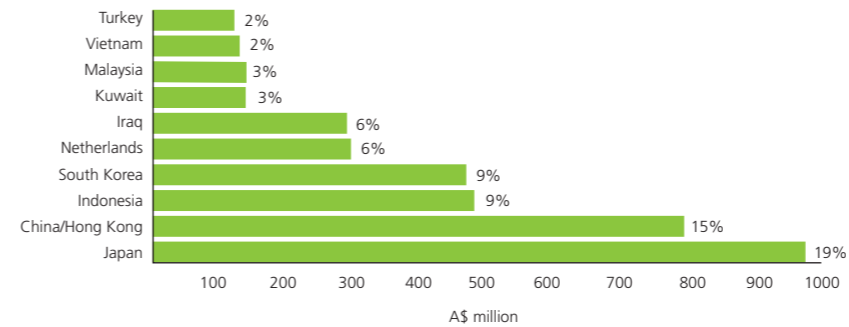
WA agriculture, fisheries and forestry exports, 2010-11
Total: A\$5,182 million



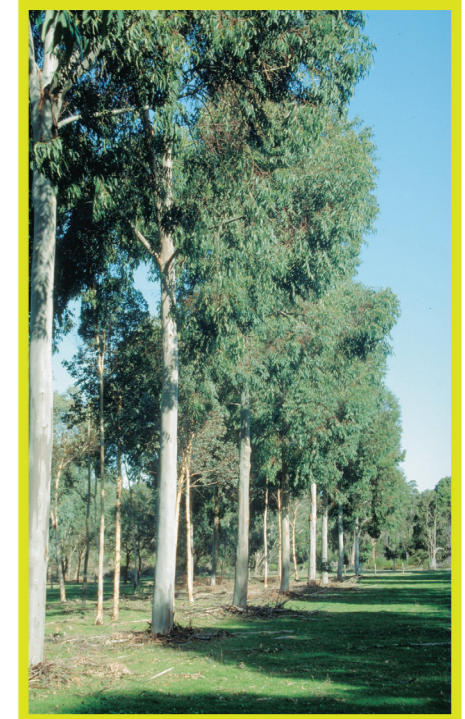
Source: ABS/DAFWA



Top ten markets for agriculture, fisheries and forestry exports, 2010-11 (A\$ million)



Source: ABS/DAFWA



- The cereal industry is the largest agricultural sector in Western Australia and wheat is the dominant crop.
- Approximately 5,000 farms, primarily family owned and operated businesses, produce on average 10 million tonnes of cereals per year. Farm sizes range from 1,000 to 15,000 hectares.
- The State produces around 50 per cent of Australia's cereals under a rain-fed agricultural system.
- It produces a range of cereals which are designed for specific end use products such as biscuits, noodles, breads, beverages and animal feed. Cereals include wheat, barley, triticale and oats.
- Production is highly mechanised and requires low pesticide inputs, which make it competitively cost efficient.
- The cereals industry in Western Australia continues to focus on producing high quality wheat, barley and oats suitable for developing quality discriminating markets.
- Western Australia has become the world's major supplier of wheat for Japanese white salted udon noodles.
- The State is a major producer of barley. It is the top supplier of malting barley to China and one of the major suppliers of feed barley to the Middle East.
- Western Australia has the largest barley malt house in the southern hemisphere and a new malt research centre at Edith Cowan University.
- It is proud of its high quality milling oats and is home to Australia's largest miller.
- Western Australia accounts for between 50 and 60 per cent of Australian wheat exports, and typically 40 - 50 per cent of Australian barley and oat exports.
- Wheat exports were worth A\$1,837 million in 2010-11.
- In 2010-11, barley exports were A\$186 million which is down from previous years. Oat exports were A\$10 million, which again is down from 2009-10 due to relatively poor seasonal conditions.
- The top five markets for wheat in 2010-11 were Indonesia, Japan, South Korea, Iran and Vietnam.
- The top five markets for barley in 2010-11 were China, Japan, Saudi Arabia, UAE and Oman.
- The top five markets for oats in 2010-11 were Japan, China, India, Taiwan and Philippines.
- In 2011 the Western Australian Government and the Australian Grains Research Development Corporation (GRDC) announced the establishment of the Australian Export Grain Innovation Centre (AEGIC).

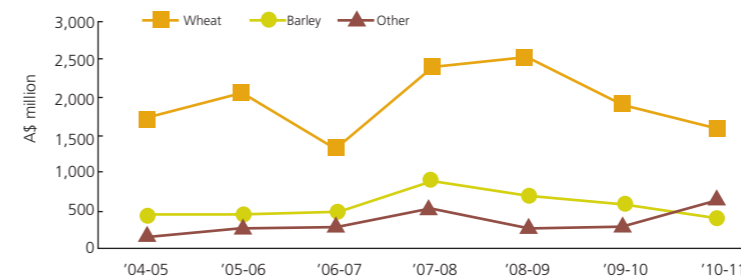
Australian Export Grain Innovation Centre (AEGIC)

AEGIC brings together world class research facilities, skills and knowledge that will help grain breeding programs and the Australian industry meets the quality attributes expected by our national and international customers.

AEGIC will comprise state-of-the-art grain quality assessment, processing and product development laboratories.

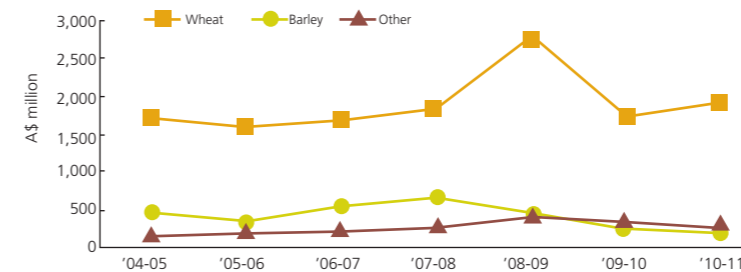
AEGIC will accommodate grain and food scientists, economists, business and market analysts with strong agribusiness networks and international linkages.

WA cereal production, 2004-05 to 2010-11 (A\$ million)



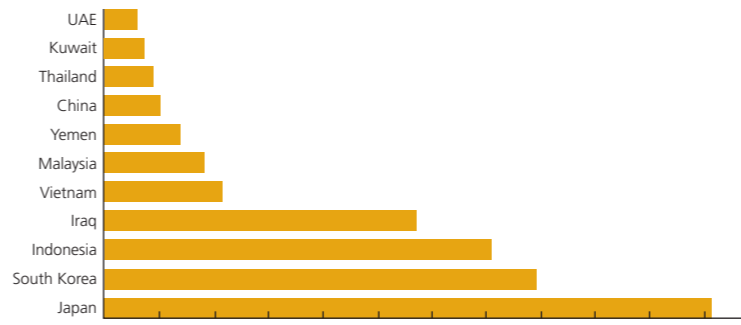
Source: ABS/DAFWA

WA cereal exports, 2004-05 to 2010-11 (A\$ million)



Source: ABS/DAFWA

Major WA cereal markets, 2010-11 (A\$ million)

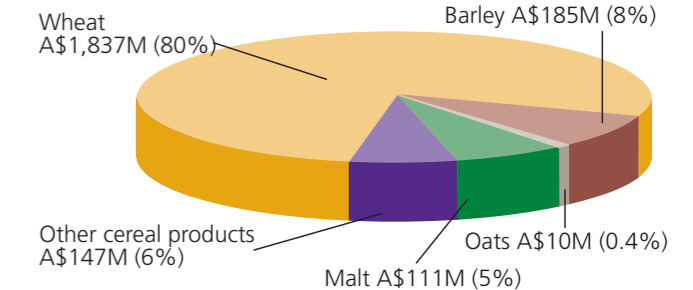


Source: ABS/DAFWA



WA cereal exports, 2004-05 to 2010-11 (A\$ million)

Total: A\$2,290M



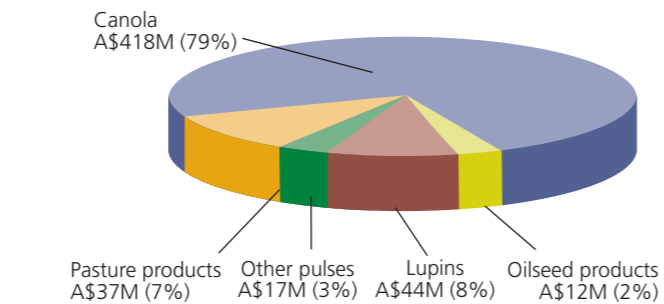
Source: ABS/DAFWA

pulses and oilseeds

- Western Australia is the world's largest producer and exporter of lupins in the world.
- The production of other pulses such as chickpeas, Albus lupins, field peas and faba beans is expanding and will form an important source of high quality seed for overseas markets.
- The State has become the major canola producer in Australia and produces between 40 and 60 per cent of total canola Australian production
- Canola in Western Australia is now recognised as the highest quality in Australia with the average oil content 2–3 per cent higher than other States.
- The introduction of lupins and other pulse crops has contributed valuable nitrogen additions to soil in Western Australia's agricultural areas and has created a significant export market for world protein feed.
- Plant breeding, research and market development are ensuring Western Australia maintains its position as Australia's biggest producer and exporter of pulses and canola.
- The Western Australian lupin has recently been approved for human consumption and is now available in speciality breads.
- In 2010, Genetically Modified canola was grown for the first time. In 2011 it represented 12 per cent of the total crop.
- Between 2004-05 and 2010-11, pulse and oilseed exports increased from A\$310 to A\$528 million.
- The top five Western Australian lupin export markets in 2010-11 were South Korea, Japan, Netherlands, Malaysia and Germany.
- The top five Western Australian export markets for other pulses in 2010-11 were India, Belgium, Philippines, Egypt and Taiwan.
- The top five Western Australian canola export markets in 2010-11 were Netherlands, Germany, Belgium, Japan and UAE.

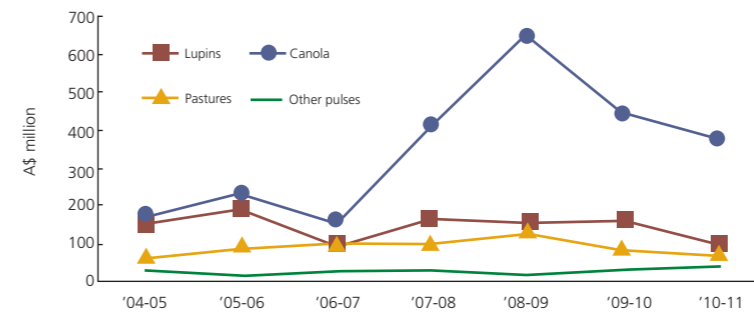


WA pulse, pasture and oilseed exports, 2010-11
Total: A\$528M



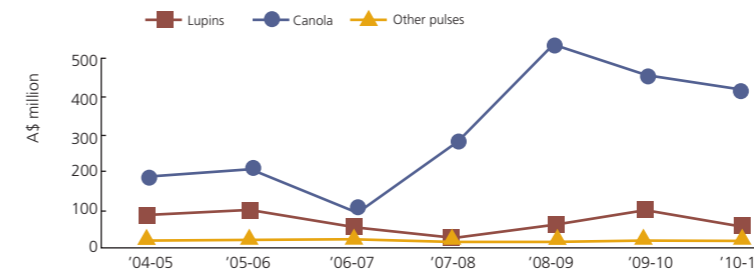
Source: ABS/DAFWA

WA pulse, pasture and oilseed production, 2004-05 to 2010-11 (A\$ million)



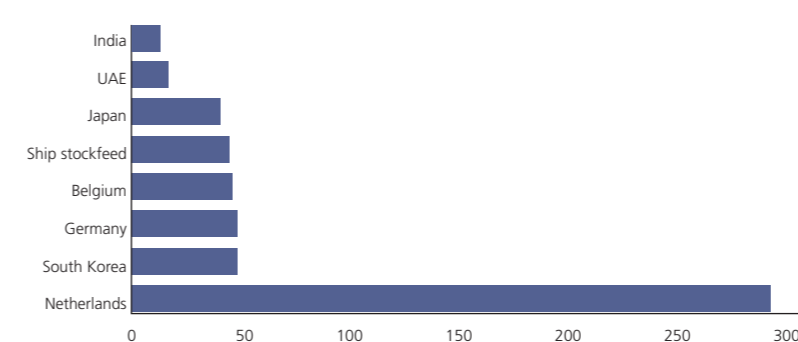
Source: ABS/DAFWA

WA pulse and canola exports, 2004-05 to 2010-11 (A\$ million)



Source: ABS/DAFWA

Major WA pulse and oilseed markets, 2010-11 (A\$ million)



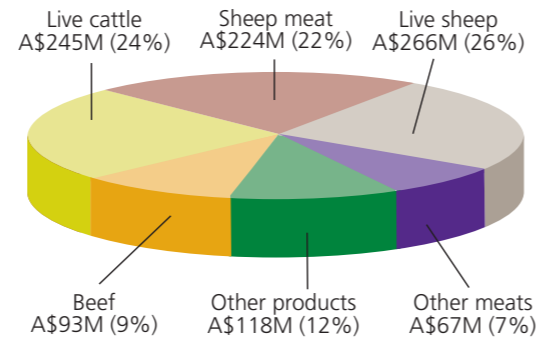
meat and live animals



- Western Australia produces and exports a wide range of meat products, both chilled and frozen, including beef, lamb, mutton, pork and goat meat.
- Western Australia has very high animal health status. Australia is free of diseases such as foot and mouth disease (FMD) and bovine spongiform encephalopathy (BSE) and provisionally free of enzootic bovine leucosis (EBL). Western Australia is also free of bovine Johne's disease (BJD).
- The sheep industry comprised about 14.4 million head at 30 June 2011, producing high quality meat and wool for world markets.
- The State's beef herd fell slightly over 2010-11 to be 2 million at 30 June 2011.
- Western Australia's pig industry produced 35,700 tonnes of meat in 2010-11 for both the domestic market and South East Asia.
- The poultry industry has 8.5 million birds and is mainly focused on the domestic market for both eggs and chicken meat.
- Australia contributes to the development of national animal welfare standards as part of the Australian Animal Welfare Strategy. It is expected that regulations to enforce land transport standards will be proclaimed in Western Australia in 2012. Regulations for the Western Australian pig industry were proclaimed in 2010. Western Australia also contributed to the development of the Australian Government's new supply chain assurance scheme being implemented for the live export of cattle, sheep and goats from Australia.
- The National Livestock Identification System (NLIS), underpinned by State and Australian legislation, provides a robust whole-of-life traceability system.

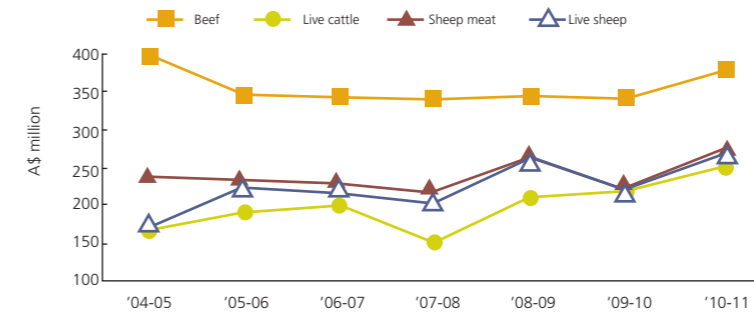
- Beef exports have fallen from A\$149 million in 2004-05 to A\$93 million in 2010-11. Over the same period, sheep meat exports have increased from A\$190 to A\$224 million.
- Exports of live cattle have fluctuated with exports valued at A\$174 million in 2004-05 and A\$245 million in 2010-11. The value of live sheep exports has increased from \$177 to \$266 million in the same period.
- The major export markets for live cattle in 2010-11 were Indonesia, Turkey, Israel, Saudi Arabia, Egypt, Pakistan and Jordan.
- The top five markets for beef exports in 2010-11 were Indonesia, Japan, South Korea, New Zealand and Singapore.
- The top five export markets for Western Australian live sheep in 2010-11 were Kuwait, Turkey, Bahrain, Qatar and Jordan.
- The major markets for Western Australian lamb and mutton in 2010-11 were USA, UAE, Saudi Arabia, China, United Kingdom and Jordan.

WA animal and meat product exports, 2010-11



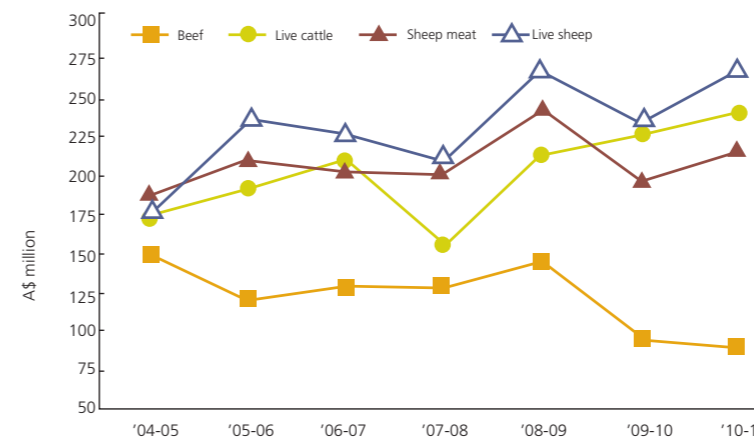
Source: ABS

WA animal and meat production, 2004-05 to 2010-11 (A\$ million)



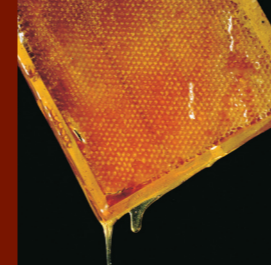
Source: ABS

WA animal and meat exports, 2004-05 to 2010-11 (A\$ million)

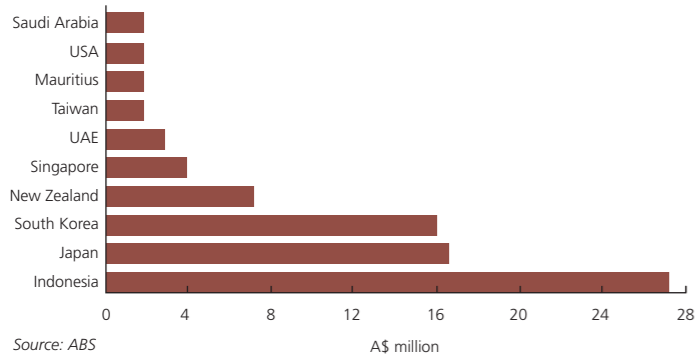


Source: ABS

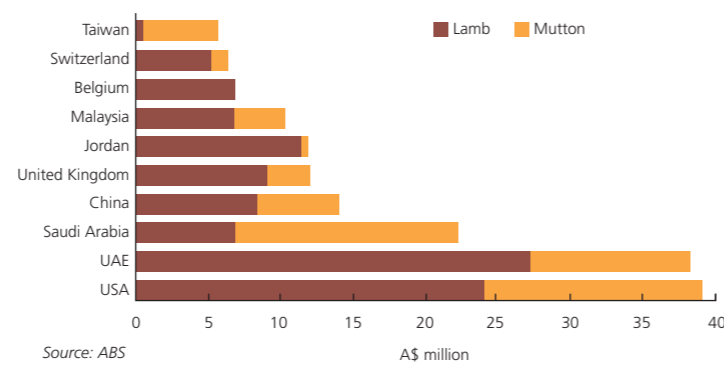




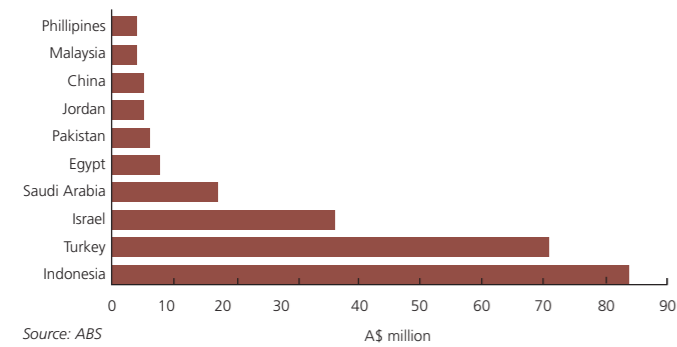
WA beef export markets, 2010-11 (A\$ million)



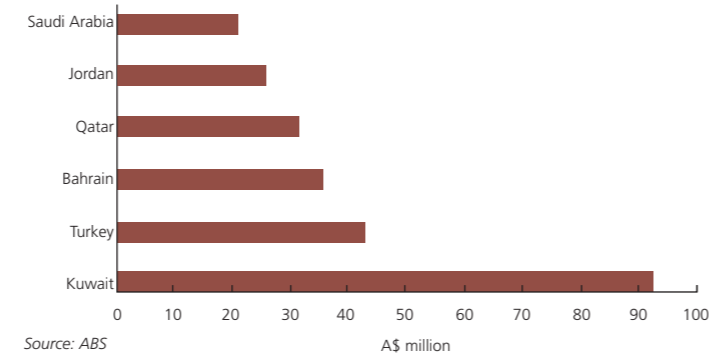
WA sheep meat markets, 2010-11 (A\$ million)



WA live cattle export markets, 2010-11 (A\$ million)



WA live sheep export markets, 2010-11 (A\$ million)



- The Western Australian apiculture industry is recognised for its high quality honey, and beeswax products.
- In an average year, the apiculture industry:
 - produces about 2,500 tonnes of honey with an estimated farm gate value of A\$9 million
 - exports about 30 per cent of the State's annual honey production
 - comprises approximately 900 beekeepers with around 27,500 beehives; The majority of the beekeepers are amateurs owning fewer than 10 beehives with some 80 commercial or semi commercial beekeepers who own more than 100 beehives.

- A national surveillance program is used at ports to monitor ships and cargo for exotic bees and also at Perth Airport. A State surveillance program is used for inspection and monitoring of apiaries. Early detection of potential threats of exotic bee pests or diseases allows Western Australia to maintain its productivity and quality assurance. The disease-free status provides an advantage for the export of hive products, package bees and queen bees around the world.

- The Western Australian beekeeping industry has access to the State's famous pristine forests and coastal wildflowers, which are essential for honey production and sustainability of the industry. These areas are free from chemical contamination, which ensures that Western Australian hive products are clean and safe for the consumer. Western Australia has some unique floral resources resulting in the ability to produce honeys that are not found elsewhere in the world.

- The apiculture industry in Western Australia is committed to quality assurance and ensuring that products are clean, safe and free from chemical contamination. This commitment offers the industry a distinct trade advantage in exporting honey, beeswax, bee pollen, package bees, nucleus beehives and queen bees.

- Several initiatives have been introduced to maintain quality standards and to ensure the State's bees remain free of diseases. A surveillance and monitoring system has been established with funding assistance from the bee industry – Beekeepers Producers' Committee.

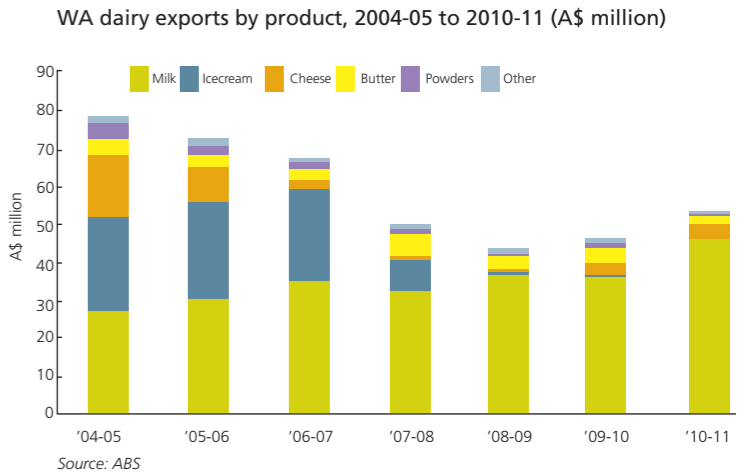
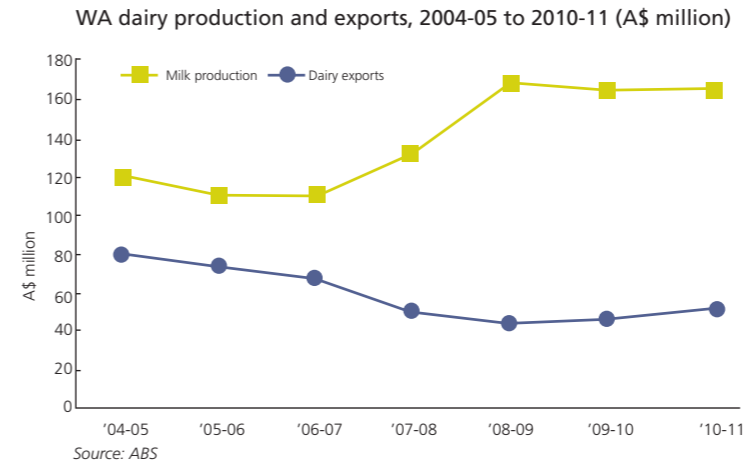




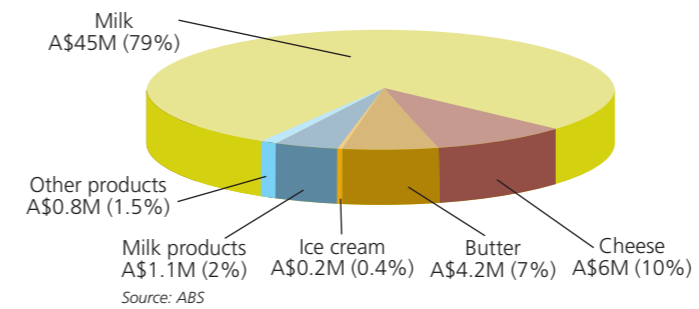
dairy

- Western Australia's dairy industry is an efficient producer of high quality milk and dairy products sold to the local, national and South East Asian markets.
- Milk production in Western Australia is centred in the pristine environment of the high rainfall south west region and has internationally competitive production costs. The Western Australian dairy industry has 170 dairy farmers with an average of more than 350 cows each which equates to a total of approximately 60,000 milking cows.
- Western Australian dairy farmers are recognised for their innovation and commitment to sustainable dairy practices. Western Australia has the highest percentage of large herds, greater than 800 cows, of any dairy region in Australia.
- The dairy industry in Western Australia produced 362 million litres of milk in the year ending June 2011, equal to 4 per cent of the Australian total of 9.1 billion litres.
- Western Australian processors are at the leading edge of technology in the transport of fresh and extended shelf-life milk products.
- Western Australia has state-of-the-art processing facilities owned by local and international companies.
- The State's fast and efficient transport links are a key to delivering high quality fresh products in the shortest possible time to its domestic and international customers.
- The short shipping time to Asia from Western Australia, compared to other Australian dairy regions, is a unique advantage enabling the marketing of chilled fresh milk into high value markets.
- Western Australian milk has been identified as some of the cleanest and highest quality in Australasia. Quality attributes include low bacterial counts, good flavour and colour.

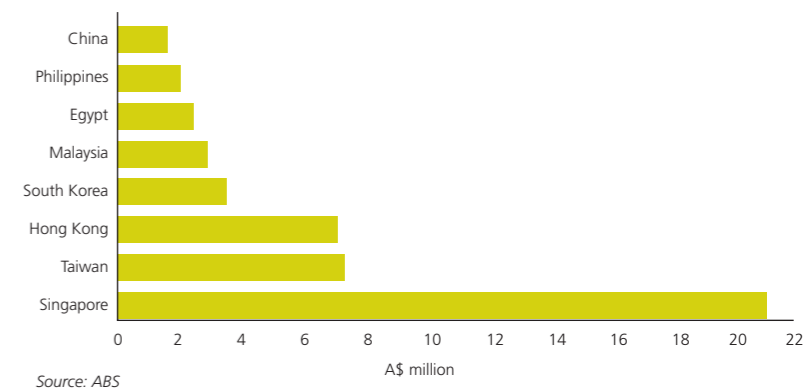
- Western Australia has very high herd health status. Australia is free of diseases such as foot and mouth disease (FMD) and bovine spongiform encephalopathy (BSE) and provisionally free of enzootic bovine leucosis (EBL). Western Australia is also free of bovine Johne's disease (BJD).
- Western Australia has good access to markets in Asia and the Middle East, which are large consumers of dairy products.
- Exports of fresh liquid milk account for 79 per cent of Western Australia's exported dairy products valued at A\$57 million in 2010-11.
- The major markets for Western Australia's dairy exports in 2010-11 were Singapore, Taiwan, Hong Kong, South Korea and Malaysia.



WA dairy exports, 2010-11 (A\$ million) Total: A\$57M



Major WA dairy markets, 2010-11 (A\$ million)



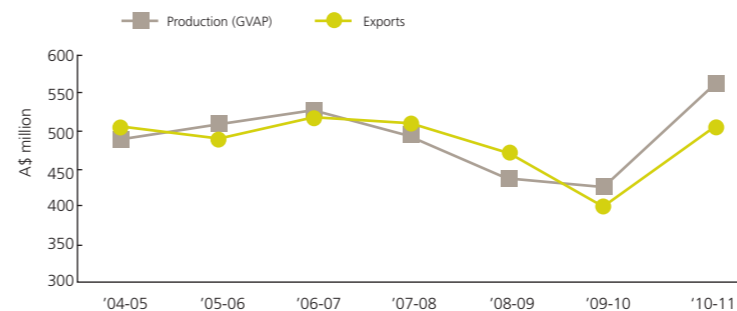


- Western Australia has 14.4 million sheep run by 6,100 wool growers on properties located in the agricultural region and adjacent rangelands.
- Wool production is often integrated with sheep meat production through a predominantly Merino-based flock.
- Western Australia's wool production has fallen from 120,000 tonnes in 2005-06 to 70,000 tonnes in 2010-11, mainly due to the reduction in sheep numbers.
- Western Australia produced 20 per cent of the total Australian wool clip in 2010-11 generating a gross value of production of around A\$560 million.
- More than 95 per cent of production in Western Australia is pure Merino wool measuring less than 24 micron (which is considered to be fine wool). Super fine wool (under 19.5 micron) accounted for 45 per cent of production.
- Around 70,000 tonnes of greasy wool is produced each year in Western Australia representing 14 per cent of the world's fine wool production.
- In 2010-11 Western Australia's average wool fibre diameter was 20.1 micron compared to Australia's average of 21.5 micron.
- The State's wool industry is geographically located close to the growing Indian and South East Asian textile industries.
- A strong lift in wool price has pushed the value of Western Australia's wool exports from A\$389 million in 2009-10 to around A\$493 million in 2010-11.

- A further A\$11 million of wool grease was exported in 2010-11.
- Western Australia's major wool markets in 2010-11 were China (84%), India (7%), and the Czech Republic (6%).

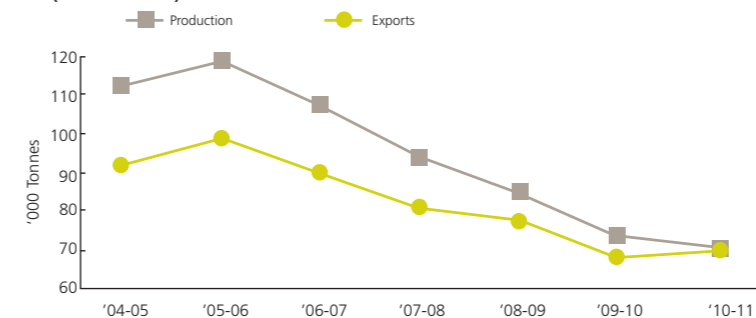


WA wool production and exports by value, 2004-05 to 2010-11 (A\$ million)



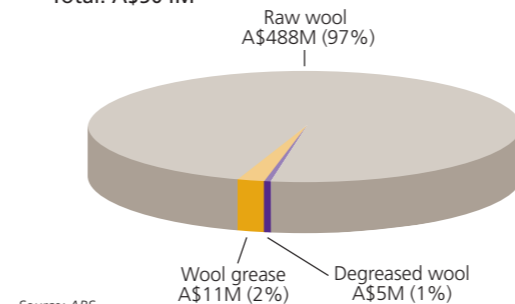
Source: ABS

WA wool production and exports by volume, 2004-05 to 2010-11 ('000 Tonnes)



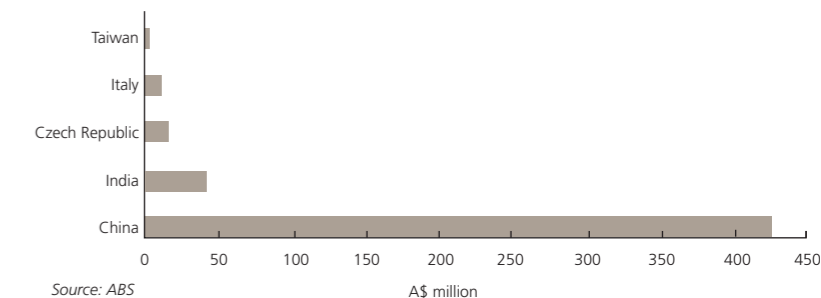
Source: ABS

WA wool product exports, 2010-11
Total: A\$504M



Source: ABS

Major WA wool markets, 2010-11 (A\$ million)



Source: ABS



horticulture

- Western Australia produces a diverse range of top quality horticultural products from delicious mangoes and other tropical crops from the Ord River Irrigation Area in the north, to crisp, crunchy vegetables on the coastal sands near Perth, and outstanding wines and delicious fruit from the South West. Besides local sales, much of this bounty is marketed interstate and exported world wide.
- The total value-added contribution to Western Australia's economy is estimated at A\$2 billion.
- Our horticultural export advantages include:
 - reputation for reliability of supply and safe, quality-assured products
 - counter-seasonal production to the northern hemisphere providing windows of opportunity in specific markets
 - strong export culture
 - short sea freight delivery times to many Asian and Middle East markets.
- Horticultural production was valued at A\$820 million in 2010-11 but Horticulture Australia Ltd estimates the value of production, on average, to be approximately 40 per cent higher than figures from the Australian Bureau of Statistics. This is supported by case studies of individual industries.

Vegetables

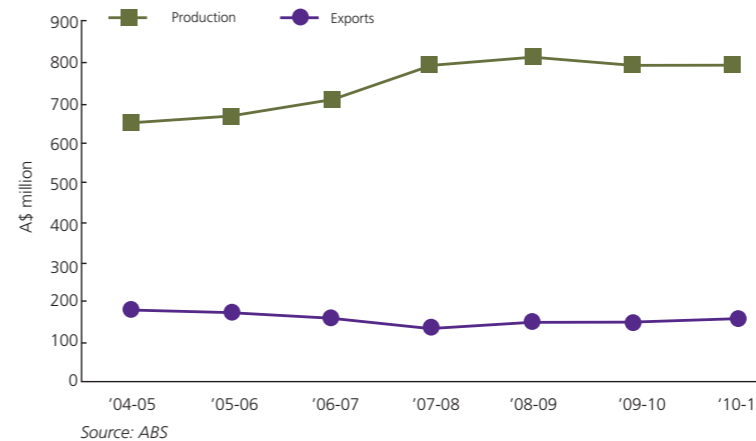
- Western Australia is the leading Australian State for vegetable exports, using advanced growing systems and a high degree of mechanisation.
- Carrots are the top export crop, and available through all months of the year. Exports have expanded steadily in the last five years with Western Australia providing 92 per cent of the Australian total by value. In calendar year 2010 the largest export destination was the United Arab Emirates which took 16,000 tonnes.
- Singapore was the second most important destination for carrots, purchasing more than 12,000 tonnes. Singapore is a sophisticated and discerning market where Western Australian carrots are preferred by many customers, despite the landed price being double that of Chinese carrots. Strategic alliances are being built with importers to provide year-round supplies from Western Australia.
- Seed potato exports are also expanding, particularly to Indian Ocean and South East Asian markets, helped by the reputation for high quality production in a 'clean, green' environment. This follows the State's verification of area freedom from potato cyst nematode in 2010, the first time this has been achieved anywhere in the world following infestation.
- Fresh tomatoes are another important crop, again available all year-round from different growing areas. Interstate sales alone are worth \$30 million.

Fruits, wine and flowers

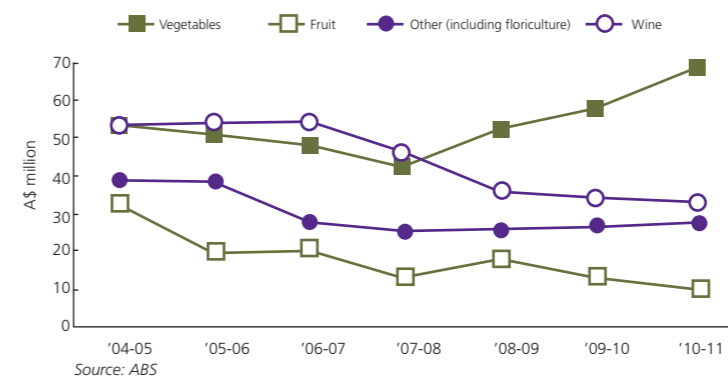
- Strawberries remain Western Australia's highest value fruit export, accounting for around 66 per cent of Australia's strawberry exports in 2010.
- Strong growth is occurring in the avocado, citrus and mango industries due to significant new plantings, leading to new export opportunities. Other emerging crops such as truffles, olives, Chinese jujubes and green tea are expected to expand the range of products available from Western Australia.
- Avocado production has increased from 3,238 tonnes in 2005-06 to 9,726 tonnes in 2010-11. A large proportion of the crop is sold interstate and the industry expects its total value to reach \$70 million in 2012, an expected high production year in this biennial bearing crop.

- Western Australia's wine industry is largely located from Perth southwards, and produces some outstanding wines, particularly table wines, that have achieved notable success at international shows. The industry is small compared with interstate plantings but focuses on premium quality for speciality market segments.
- Western Australia leads commercial production of native flower species, mostly from its own unique flora. This accounts for about half of Australia's cut flower exports.

WA horticulture production and exports, 2004-05 to 2010-11 (A\$ million)

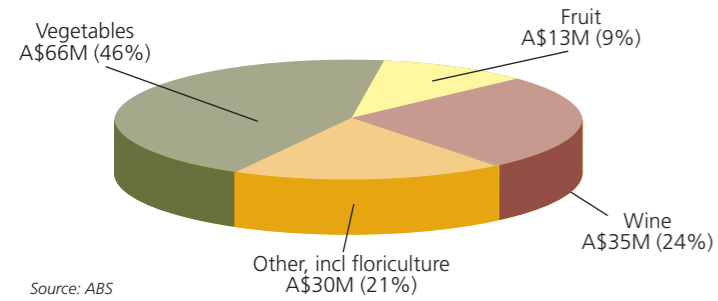


WA horticulture industries exports, 2004-05 to 2010-11 (A\$ million)

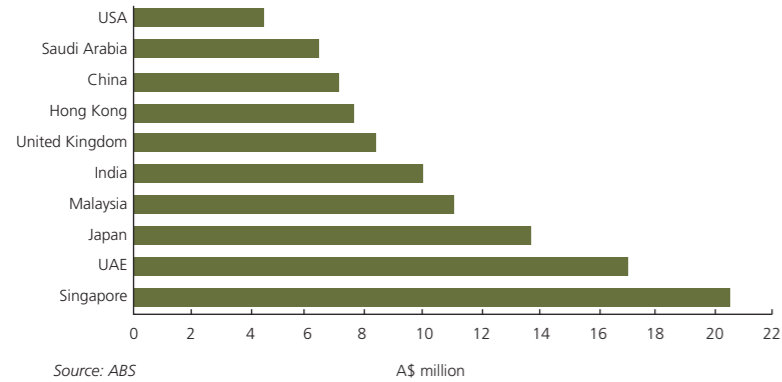


fruit - wa seasonality chart

WA horticulture industries exports, 2010-11
Total: A\$144 million



Major WA horticulture markets, 2010-11 (A\$ million)



Full Supply Limited Supply CS Cold Store CA Controlled Atmosphere

Fruit	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Apples - Granny Smith	CA					CS		CA		CA		
Apples - Pink Lady	CA					CS		CA		CA		CA
Apples - Royal Gala			CS					CS				
Apples - Sundowner	CA					CS		CA		CA		
Apricots												
Avocado												
Banana												
Cherries												
Grapefruit - Ruby Red												
Grapefruit - White												
Honeydew Melon												
Lemons												
Mandarins												
Mango												
Nashi			CS									
Nectarines												
Oranges - Navel												
Oranges - Valencia												
Peaches												
Pears - Bartlett					CS	CS						
Pears - Packham								CS		CS		
Plums												
Rockmelon												
Strawberries												
Table Grapes						CS						
Watermelon												

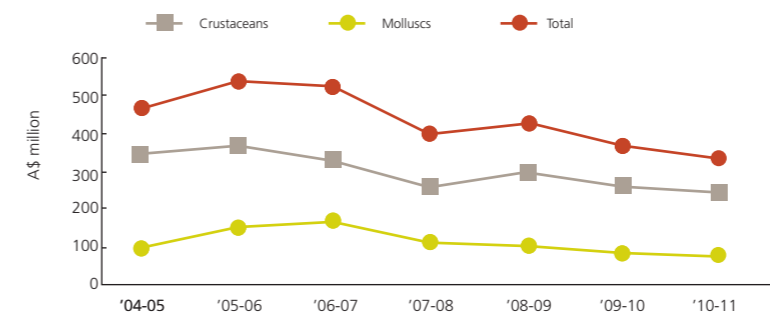


fisheries

- Western Australia has some of the finest and most sought after seafood in the world ranging from rock lobster, crab, prawns (shrimps), marron and yabbies to abalone and scallops.
- Western Australia also produces the globally renowned South Sea Pearls.
- High quality and unspoiled waters have given Western Australia an international reputation as a supplier of superb seafood.
- Western Australia has a fantastic diversity of marine life and provides opportunities for recreational and commercial fishing, pearling, aquaculture, charter boat opportunities and tourism.
- The Western Australian fishing industry comprises:
 - a rock lobster industry with an average annual commercial value in the order of A\$200 million
 - a pearl production industry valued at around A\$150 million per annum
 - a prawn (shrimp) industry valued at A\$15 million per annum
 - a scallop industry that varies in value from A\$5 to A\$20 million per annum
 - a fresh water aquaculture industry producing yields of marron, yabbies and finfish in the State's south
 - a small but growing marine aquaculture industry sector producing finfish and abalone, and exploring the production of valuable new species such as octopus
 - the farming of the marine algae species *Dunaliella salina*, north of Geraldton, from which beta-carotene, a naturally occurring food colouring, is extracted.
- Western Australia's major export destinations for marine products in 2010-11 were China (including Hong Kong), Japan, USA, Taiwan and Singapore.
- The top three markets for crustacean exports in 2010-11 were China (including Hong Kong), Japan and the USA.
- The top three export markets for Western Australian molluscs in 2010-11 were Hong Kong, Singapore and the USA.

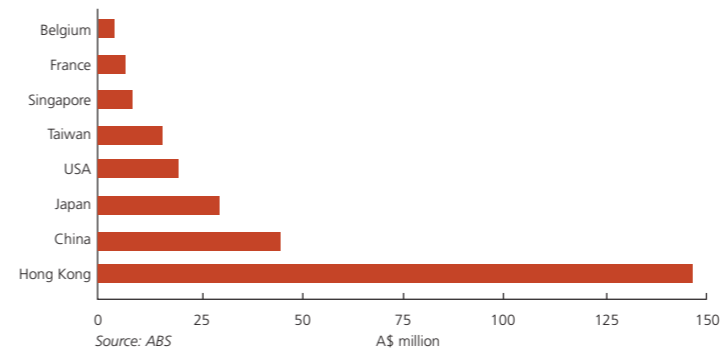


WA fisheries exports, 2004-05 to 2010-11 (A\$ million)



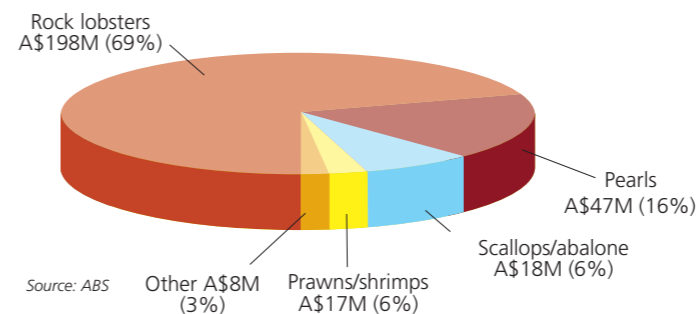
Source: ABS

Major WA fisheries markets, 2010-11 (A\$ million)



Source: ABS

WA fisheries exports, 2010-11 (Total: A\$288M)



Source: ABS





food

- Western Australia's internationally competitive agricultural and food industries provide premium quality food and beverage products to customers throughout the world.
- The food manufacturing industry represents a major proportion (14 per cent) of the value of the State's total manufacturing sector.
- Western Australia represents 7 per cent of the turnover of the Australian food processing industry.
- Western Australia's food industry comprises approximately 900 processing companies employing a labour force of about 19,500, with more than two-thirds of the companies clustered around the metropolitan and south-western regions.
- More than half of the medium and small scale food processing operations are regionally based.
- The responsibility of supporting the development of the food industry rests with the Department of Agriculture and Food. The department is driving a supply chain approach to assisting development.
- The Western Australian Government, in collaboration with various state and national agencies, universities and private businesses provides support to developing food industry enterprises. The Government offers advice and networks in research and development, investment attraction, export development and food integrity systems.
- The food processing industry has expanded to supply a number of high value niche export markets, especially for wine, condiments and dairy products.
- Western Australia is a well established food supplier to the Asian region.

- Total unprocessed and processed food and beverage exports for 2010-11 were valued at A\$3.96 billion; processed food exports comprised A\$955 million. The high proportion of unprocessed food exports remains a substantial opportunity to develop value-adding enterprises in Western Australia.
- One of the advantages of WA processed foods is the safety and quality of the State's production systems, where food sold must meet stringent quality and safety standards.



forestry



Sustainable management is the cornerstone of the Western Australian forestry industry and the guiding principle for economic, environmental and social benefits to the community.

The forestry industry in WA has received international acclaim for sustainability and environmental certification. Timber harvested from native forests is independently audited and certified under the Australian Forestry Standard and the Environmental Management System ISO1400.

Native timbers

WA's forest and woodlands are home to a variety of unique tree species, which produce stunning timbers. Jarrah is a premium world-class furniture timber. Its attractive grain and strength are the reason why manufacturers choose jarrah for the finest furniture creations.

Beautiful timbers, such as WA sheoak and marri, are also used to produce outstanding furniture, while exquisite timbers, such as beefwood, gimlet and western myall from arid areas, appeal to craftsmen for their array of colours and textures.

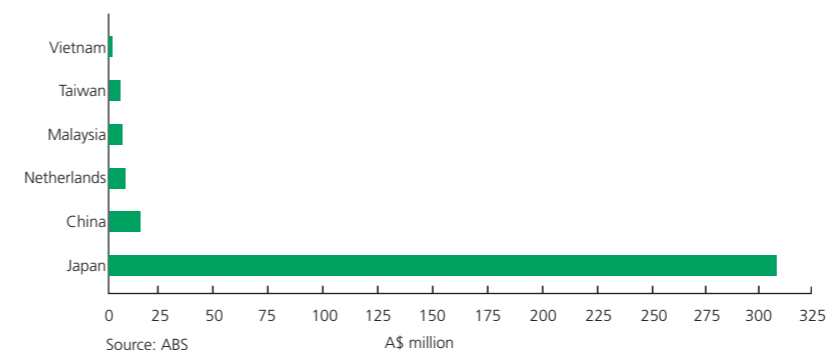
Sandalwood is a highly valued arid timber and although predominately harvested for its oil content, the timber is often used for intricate wood turnings and other craft items.

Plantation timbers

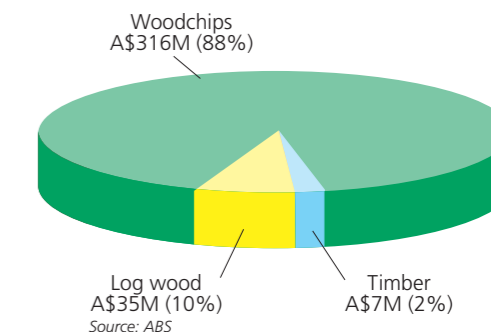
Timber is acknowledged as a renewable resource.

WA has approximately 425,000 hectares of plantation forest. Traditional plantation species are radiata pine (*Pinus radiata*), maritime pine (*Pinus pinaster*) and Tasmanian blue gum (*Eucalyptus globulus*). Pine is commonly used in structural applications as well as for fencing and furniture, while Tasmanian blue gum is chipped, exported and turned into pulp and paper. Species such as Sydney blue gum (*Eucalyptus saligna*), sugar gum (*Eucalyptus cladocalyx*) and sandalwood (*Santalum spicatum*) are also being cultivated for sawlogs. Many of these species have been integrated into farming systems in the wheatbelt on previously cleared land and are successfully serving the environment by reducing global warming, mitigating salinity, improving water quality and enhancing biodiversity.

Major WA forest product exports, 2010-11 (A\$ million)



WA forest exports, 2010-11
Total: A\$358M



Investment opportunities

The Agribusiness Development project at the Department of Agriculture and Food specialises in attracting investment in the food and fibre industries from national and international companies. Staff provide a range of services to assist businesses including:

- product and supplier sourcing
- detailed information on investment and trade opportunities
- arranging meetings and tours of industries
- assisting with pre-feasibility studies to assess new opportunities
- coordinating the approval process through Government
- supplying contacts such as project managers, joint venture partners, financiers etc
- advising on Government incentive schemes
- access to research and development, and
- information on lifestyle, community and social issues.

An example of a current project to facilitate investment attraction to WA's primary industries is the ongoing development of the 'Find Your Farm' website at <http://spatial.agric.wa.gov.au/findyourfarm/>. The website provides integrated property and regional level publicly available information for intending investors:

- Infrastructure and physical data including:
 - water drawdown points and details
 - roads
 - three phase power
 - temperature heat indices
 - topography.

- Socioeconomic data including:
 - property details
 - land values
 - community facilities and so much more.

The website's 'Further Planning and Investment' tab hosts overview investment information on the sheep, wheat, grains/hay, northern beef and dairy industries in the Department's 'Invest' series of documents.

This tab also provides links to:

- Agrifood Infonet at www.agric.wa.gov.au/agrifoodinfonet for business and market intelligence in the WA agrifood industry
- Landgate at www.landgate.wa.gov.au/corporate.nsf for detailed data on recent land sales.



AGWEST International

AGWEST International works in partnership with government agencies, international funding agencies and organisations in Africa, the Middle East and Asia to provide project management, specialist professional and technical services as well as capacity building and customised training packages as required.

The Department of Agriculture and Food's expertise is in rain-fed cropping systems, minimum tillage, climate adaptation, animal production, pasture development, plant and animal health, food security, biosecurity, natural resource management, land use planning, and participative rural community development.

AGWEST International draws upon this wealth of expertise from within the Department as well as from Western Australian universities, agribusinesses and other government agencies under collaborative arrangements. As such, AGWEST International is able to provide a comprehensive range of high-level expertise to international clients. AGWEST International is currently carrying out projects in Brunei, the Middle East, Morocco and Southern Africa.

Our recent projects

Africa (2011) – AGWEST International successfully hosted an AusAID funded Short Course Awards training program in livestock management for participants from Djibouti, Ethiopia, Egypt, Ghana, Lesotho, Rwanda and Uganda. Participants were exposed to genetics and breeding technology, animal nutrition, pasture development/management, fodder production, herd health including disease control and surveillance, and marketing.

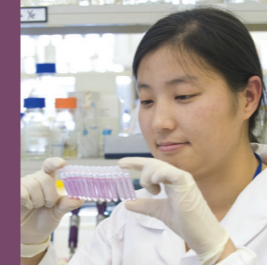
Afghanistan (2011) – AGWEST International delivered a study tour program in Australia for senior government officials from the Uruzgan Province. The study tour helped increase their understanding of effective approaches to water management in Australia.

Botswana (2011-2012) – AGWEST International has been assisting the Ministry of Agriculture, through the formation of a biosecurity taskforce and capacity building activities in increased integration of plant, animal and wildlife biosecurity and the development of a National Biosecurity Strategy for Botswana.

Brunei (2011 - 2013) – In partnership with Brunei's Ministry of Industry and Primary Resources, AGWEST International has been contracted to conduct a study of the nutritional status of animal and livestock feeds in Brunei Darussalam. AGWEST International is to survey and inventory the local stockfeed resources, develop a database of information on the resources and to improve the capacity of the feed analysis laboratory.

Morocco (2011-2014) – Following a signed Memorandum of Understanding with the National Ovine and Caprine Breeders Association of Morocco (ANOC), AGWEST International is assisting ANOC with the planning and implementation of an integrated project for the development of sheep in the Middle Atlas region and reviewing genetic improvement, nutrition, carcass composition, meat quality, and training.





Biosecurity

Biosecurity is the protection of the economy, environment and human health from the negative impacts of pests, weeds and diseases.

Western Australia's biosecurity systems are designed to maintain the State's market access for our animal and plant industries, to protect the environment and human health from biological threats and harmful chemical residues and to set appropriate animal welfare standards.

Western Australia is free from many market-sensitive animal and plant pests, diseases and weeds. Consequently Western Australian animal and plant industries have a competitive edge over those in countries where a major disease outbreak or pest incursion can result in the loss of billion-dollar global markets as well as loss of confidence in those countries' plant or animal products.

While the State's geographic isolation and few entry points makes the process of preventing entry of pests and diseases easier, this is not sufficient to maintain Western Australia's high biosecurity status.

Western Australia also employs a comprehensive suite of policies and operational measures to maintain and prove our freedom from market-sensitive pests and diseases.

Western Australia's market access and high biosecurity status are maintained by the following measures:

- prevention and exclusion
- auditable surveillance that proves freedom from particular pests and diseases
- rapid diagnosis and response systems
- effective traceability systems
- pest and disease management
- chemical use management
- appropriate animal welfare standards.

Encouraging risk management practices, particularly through the use of internationally recognised quality assurance systems, is a priority as continued market access for Western Australian agriculture relies on industry's ability to manage threats to production systems, sustainability, product safety and quality, and rural infrastructure.



The main application of biotechnology to agriculture in Western Australia is through the cultivation of genetically modified (GM) crops, specifically canola and cotton.

GM canola was trialled at selected commercial sites in 2009 and then allowed to be grown commercially from 2010, under exemption to a moratorium on the cultivation of GM crops.

The moratorium is intended to protect the State's export markets and good reputation from damage, due to the introduction of GM crops, before adequate segregation and identity preservation systems are in place.

In 2010 and 2011, the WA grains industry demonstrated by testing the non-GM canola grain, that it can effectively segregate non-GM canola from GM canola to meet customer specifications.

In 2011, 326 growers chose to plant 90,930 hectares of GM glyphosate-tolerant canola - about 12 per cent of the total canola planting. The main attraction has been better weed control, compared with conventional canola varieties and the lower requirement for herbicides.

An exemption also permits the commercial cultivation of approved GM cottons in the Ord River Irrigation Area (ORIA). More than 90 per cent of the cotton grown in Australia is of approved insect-resistant or herbicide-tolerant GM varieties. The Cotton Council of Australia has reported GM cotton requires 85 per cent less insecticide than non-GM cotton.

In 2011 eight growers planted 700 hectares of Roundup Ready Flex cotton. Yields were very good, but the lack of infrastructure on the ORIA meant that the crop had to be transported to Queensland for processing.

International prices are likely to determine future plantings.

In October 2011, a state-of-the-art GM crop research facility was opened in the WA wheatbelt by Agriculture and Food Minister Terry Redman. The integrated field

and laboratory complex at Merredin is known as the New Genes for New Environments project.

In 2011 the Merredin facility hosted a trial by the CSIRO to examine the characteristics and genetic potential of several lines of GM wheat and barley. A similar facility at Katanning will be ready for the 2012 growing season. The facilities will provide two contrasting environments with varying rainfall, length of season and soil types from which to evaluate breeding material. Both facilities are designed to conform to the strict national standards of the Office of the Gene Technology Regulator and will accelerate the access by WA growers to varieties that are adapted to climate or have benefits for consumers.



value of agrifood, fisheries and forest exports, 2010-11

Commodity	WA A\$M	Aust A\$M	WA to Aust %	Commodity	WA A\$M	Aust A\$M	WA to Aust %
Wheat	1,837	5,492	33	Field peas	14	89	16
Wool (greasy)	488	2,370	21	Potatoes	14	54	26
Canola	418	855	49	Offal (cattle)	12	409	3
Woodchips	312	766	41	Forage products	11	12	93
Sheep (live)	266	348	76	Wool grease	11	19	57
Cattle (live)	245	660	37	Animal fat (cattle)	11	104	10
Crayfish	198	378	52	Scallops	10	15	63
Barley	186	994	19	Oats	10	37	26
Lamb	135	1,064	13	Offal (sheep)	9	87	11
Malt	111	298	37	Meat (other)	9	89	10
Beef	93	4,543	2	Abalone	8	212	4
Mutton	89	457	20	Other	7	8	96
Cereal hay	86	217	40	Cereal straw	7	20	35
Lupins	50	74	68	Goat meat	7	124	5
Carrots	48	52	92	Canola oil	6	115	6
Pearls	47	241	20	Cheese	6	732	1
Milk (fresh)	39	76	51	Oats (prepared)	5	12	45
Skins sheep	37	444	8	Wool (degreased)	5	137	3
Logs	35	318	11	Cream	5	22	21
Wine	35	2,009	2	Flowers	4	7	65
Rolled oats	34	44	78	Cereals (other)	4	429	1
Skins cattle	26	580	4	Butter	4	159	3
Pig meat	24	119	20	Strawberries	4	5	80
Lucerne meal	23	33	68	Poultry meat	4	41	9
Meat products (pet food)	17	382	5	Crabs	4	13	26
Prawns	17	77	23	Food preparations	3	777	0
Animal fat (other)	15	240	6	Other	62	6,588	1
Essential oils	15	93	16	Total	5,182	33,541	15

Market	WA A\$M	Aust A\$M	WA to Aust %	Commodity	WA A\$M	Aust A\$M	WA to Aust %
Japan	974	4,925	20	Czech Republic	18	89	20
China/Hong Kong	789	6,111	13	Mozambique	17	49	34
Indonesia	480	2,272	21	Italy	17	387	4
South Korea	460	1,766	26	Egypt	16	409	4
Netherlands	309	685	45	New Zealand	16	1,344	1
Iraq	293	322	91	Russian Federation	15	489	3
Kuwait	138	347	40	Sudan	14	152	9
Malaysia	135	839	16	Pakistan	12	200	6
Vietnam	121	766	16	Mauritius	12	73	16
Turkey	117	187	62	South Africa	11	111	10
UAE	115	560	21	Switzerland	11	71	15
Singapore	107	834	13	France	8	94	9
Saudi Arabia	92	380	24	Sri Lanka	6	176	4
India	80	550	15	Colombia	6	8	84
Yemen	77	243	32	Christmas Island	6	8	71
USA	72	2,172	3	Brunei	5	21	23
Taiwan	69	780	9	Bosnia and Herzegovina	5	7	66
Thailand	64	865	7	Myanmar	5	70	7
Germany	60	279	21	Canada	4	341	1
Jordan	49	117	42	Ireland	4	45	8
Belgium	49	192	25	Papua New Guinea	3	253	1
Bahrain	44	128	34	Fiji	3	105	3
Israel	43	66	65	Jamaica	3	12	23
Qatar	42	97	43	Trinidad and Tobago	2	17	14
Philippines	40	512	8	Cambodia	2	19	11
Bangladesh	36	500	7	Ship & Aircraft Stores	38	62	61
Oman	28	102	27	Other	21	1,625	1
United Kingdom	22	708	3	Total	5,182	33,541	15%

western australian international trade & investment offices

need further information?

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