Snapshot and trends in the production and overseas trade of vegetables from Western Australia

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List of contributors

Chris Schelfhout, Bronwyn Walsh, Claire McClelland, Kristen Brodison, Andrew Taylor, Anne Bennett and Aileen Reid.
Contents

Executive summary ................................................................. 7
WA vegetable production and trends ................................. 11
Vegetable exports from Western Australia (2007–17) ........ 18
Vegetable imports into Western Australia (2007–17) ........ 38
Conclusions ........................................................................ 50
References ........................................................................... 51
Explanations

Terms explained

Exports and imports: Exports and imports refer to supply of goods and services to and from international destinations only. Any trade with Eastern states are not included due to lack of information.

Real value: Value of a product after accounting for inflation. This means that the value in 2007 and 2017 are comparable if it is in real value. This is important in trend analysis.

Nominal value: Value of a product before accounting for inflation

Real price: Price of a product after accounting for inflation

CAGR: Compound Annual Growth Rate

FOB price: Free On Board price which includes cost of delivering the item to the port.

Customs value: Value of items in the shipment based on which import duty is calculated

Year of calculations (latest available in each section)

Production: 2015–16
Production trends: 2011–12 to 2015–16
Exports: 2017
Export trends: 2007 to 2017
Imports: 2017
Import trends: 2007 to 2017

Latest available data is used for production and trade

Data sources

Production and production trends: Fresh Logic
(Production data purchased from Fresh Logic as ABS data had a few discrepancies)


1 All values given in the report are real values unless otherwise specified
Executive summary

WA’s total vegetable crop reached 328,857 tonnes in 2015–16, worth an estimated $490 million. This was a 33% increase in wholesale value from levels of 2011–12. Quantity increased by 24% during the same period. Production and export of vegetables have experienced strong growth in Western Australia in recent years, predominantly driven by continued expansion of the local carrot sector. There have also been solid gains in the quantity of beans, broccoli, celery and mushrooms produced, underpinning a positive outlook for the industry.

The state’s vegetable growers use sophisticated cropping systems in a range of environments and soil types, which stretch from the tropical north, near latitude 16°S, to the temperate south at 35°S.

Carrots were WA’s major vegetable crop by value and quantity, with production of about 120,000 tonnes, worth $118m in 2015–16. This represented 24% of the total state vegetable industry’s value. Production growth in the carrot sector was mainly due to strong export sales, worth almost $80m in 2015–16, to key overseas markets.

Sales of $56m made tomatoes the second largest vegetable crop by value with production of 30,320t in 2015–16. Potatoes were second by quantity (42,183t) and third by value ($41m). Beans have had the strongest production growth between 2011–12 and 2015–16 at 550%. Pumpkin production has seen the biggest contraction in that period, with quantities dropping by about 30%.

1 DPIRD Vegetables in Western Australia information hub: https://www.agric.wa.gov.au/vegetables/vegetables-western-australia?page=0%2C1
Export trends for WA’s vegetable industry have been highly favourable, with the value of this trade increasing 91% (after accounting for inflation) between 2007 to 2017, when it was estimated at $99m. This greatly exceeded a minor 0.2% gain in the value of imported vegetables in the same period — reaching about $10m in 2017. Onions had the strongest growth in export values from 2007 to 2017. The United Arab Emirates was the highest value export market for WA vegetables. In the 2007–17 period, WA vegetable exports to most Middle Eastern markets experienced higher than average growth. But exports to the major destinations of Singapore and Malaysia fell below average, despite the total value of exports to these destinations increasing in that time. WA’s share of the value of total Australian vegetable exports grew from 35% in 2016 to 41% in 2017.

Increased imports of the high-value vegetables, garlic and asparagus, to WA in recent years, have been outweighed by less onions, capsicum and peas being imported. Garlic had the highest share of vegetable import values at $3m in 2017, or 33% of the total value of all vegetables imported to WA by value, followed by asparagus. Mushrooms had the biggest growth in import value of 1693% between 2007 and 2017.

Major countries supplying vegetables to WA include China, with 34% market share of value, and Mexico at 27%. It is expected there will be continued growth in imports from these markets.

**In brief**

- Vegetable production increased by 24% in quantity and 33% by value between 2011–12 and 2015–16.
- Carrots led the growth in both production and exports.
- Export quantity increased by 72% and value by 91%, import quantity declined by 40% and value increased by 0.2%.
- Higher percentage growth in value compared to quantity; at production, exports and import front may be indicative of a shift towards premium product or higher demand for the product.
- Middle East destinations experienced a higher than average growth.
Snapshot and trends in the production and overseas trade of vegetables from Western Australia
Vegetable production in Western Australia and international trade — snapshot

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Production quantity: <strong>328 857t</strong></td>
<td>• Export value: <strong>$99m</strong></td>
<td>• Import value: <strong>$10m</strong></td>
</tr>
<tr>
<td>• Wholesale value: <strong>$490m</strong></td>
<td>• Highest share in export value: <em>Carrots</em> ($79m, 80%)</td>
<td>• Highest share in import value: <em>Garlic</em> ($3m, 33%)</td>
</tr>
<tr>
<td>• Highest share in wholesale value: <em>Carrots</em> ($118m, 24%)</td>
<td>• Growth in export value (2007–17): <strong>91%</strong></td>
<td>• Growth in import value (2007–17): <strong>0.2%</strong></td>
</tr>
<tr>
<td>• Growth in wholesale value (2011–12 to 2015–16): <strong>33%</strong></td>
<td>• Highest growth: <em>Onions</em> (<strong>5234%</strong>)</td>
<td>• Highest growth: <em>Mushrooms</em> (<strong>1693%</strong>)</td>
</tr>
<tr>
<td>• Highest growth: <em>Beans</em> (<strong>680%</strong>)</td>
<td>• Largest export destinations: UAE ($27m), Singapore ($16m), Malaysia ($13m)</td>
<td>• Trade surplus: <strong>$89m</strong></td>
</tr>
</tbody>
</table>
WA vegetable production and trends (2011-12 to 2015-16)

Key points

- WA produced 328,857 tonnes of vegetables in 2015–16
- This was up 24% from 2011–12 levels
- WA vegetable production was valued at $490m in 2015–16
- This was up 33% from 2011–12 levels
- Carrots were the highest value vegetable crop at $118m
- This was up 24% from 2011–12 levels
- Tomatoes were the second highest value vegetable crop at $56m
- Carrots were the largest single crop by quantity at about 120,000t
- Potatoes followed with about 42,200t
- Tomatoes were the third largest quantity crop at about 30,300t
- Beans have had the highest production and value increase of 553% and 680% respectively from 2011–12 to 2015–16
- Real price of beans also increased during this period, even after fivefold increase in production
- Most of the vegetables produced were consumed domestically or supplied to the eastern states except carrots
Vegetable production in Western Australia 2015–16
(Wholesale value in $m, production in tonnes and share in %)

WA produced $490m worth of vegetables. Carrots were the major vegetable produced with a share of 24% by value, followed by tomatoes (11%). Other major vegetables by value were potatoes, mushrooms and broccoli. Top five vegetables* form only 58% of the industry by value.

<table>
<thead>
<tr>
<th>Vegetable</th>
<th>Wholesale Value ($m)</th>
<th>Production (tonnes)</th>
<th>Share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrots</td>
<td>$117.82m</td>
<td>119,988</td>
<td>24.0%</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>$55.75m</td>
<td>30,320</td>
<td>11.4%</td>
</tr>
<tr>
<td>Broccoli</td>
<td>$32.86m</td>
<td>10,214</td>
<td>6.7%</td>
</tr>
<tr>
<td>Lettuce</td>
<td>$21.91m</td>
<td>19,678</td>
<td>4.5%</td>
</tr>
<tr>
<td>Potatoes</td>
<td>$41.37m</td>
<td>42,183</td>
<td>8.4%</td>
</tr>
<tr>
<td>Mushrooms</td>
<td>$38.51m</td>
<td>5764</td>
<td>7.9%</td>
</tr>
<tr>
<td>Capsicums</td>
<td>$14.62m</td>
<td>4683</td>
<td>3.0%</td>
</tr>
<tr>
<td>Onions</td>
<td>$14.46m</td>
<td>21,835</td>
<td>2.9%</td>
</tr>
<tr>
<td>Pumpkin</td>
<td>$14.22m</td>
<td>8,991</td>
<td>2.9%</td>
</tr>
<tr>
<td>Cauliflower</td>
<td>$12.08m</td>
<td>9,322</td>
<td>2.5%</td>
</tr>
<tr>
<td>Cabbage</td>
<td>$7.43m</td>
<td>10,263</td>
<td></td>
</tr>
<tr>
<td>Celery</td>
<td>$6.49m</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data source: Fresh Logic

*Truffles are excluded from this because of lack of information
Production trends in selected vegetables (2011–12 to 2015–16)

<table>
<thead>
<tr>
<th>Vegetable</th>
<th>% change in production</th>
<th>% change in real total value</th>
<th>% change in real price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beans</td>
<td>552.5%</td>
<td>681.7%</td>
<td>19.8%</td>
</tr>
<tr>
<td>Broccoli</td>
<td>119.9%</td>
<td>33.9%</td>
<td>26.8%</td>
</tr>
<tr>
<td>Cabbage</td>
<td>72.9%</td>
<td>26.8%</td>
<td>26.8%</td>
</tr>
<tr>
<td>Capsicums</td>
<td>23.1%</td>
<td>119.2%</td>
<td>26.8%</td>
</tr>
<tr>
<td>Carrots</td>
<td>27.6%</td>
<td>47.0%</td>
<td>26.8%</td>
</tr>
<tr>
<td>Cauliflower</td>
<td>80.6%</td>
<td>95.5%</td>
<td>26.8%</td>
</tr>
<tr>
<td>Celery</td>
<td>186.4%</td>
<td>119.6%</td>
<td>26.8%</td>
</tr>
<tr>
<td>Lettuce</td>
<td>106.0%</td>
<td>116.5%</td>
<td>26.8%</td>
</tr>
<tr>
<td>Mushrooms</td>
<td>124.5%</td>
<td>156.3%</td>
<td>26.8%</td>
</tr>
<tr>
<td>Pumpkin</td>
<td>-28.6%</td>
<td>16.6%</td>
<td>26.8%</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>33.4%</td>
<td>18.1%</td>
<td>26.8%</td>
</tr>
<tr>
<td>Ware potatoes</td>
<td>6.2%</td>
<td>8.4%</td>
<td>26.8%</td>
</tr>
</tbody>
</table>

Comments

- Real price of pumpkin has increased by 63% while quantity declined by 29%.
- Real prices have increased for most of the vegetables except capsicums, celery and tomatoes.
- Share of vegetables among the total fruit and vegetable production has declined by 5%.
Industry details on production

The value of WA’s vegetable industry increased 33% from 2011–12 to 2015–16.

Carrots and tomatoes were key drivers and make up the bulk of this value, worth an estimated $118m and $56m respectively in 2015–16. These sectors have a combined 35% share of the total value of the industry. Value of carrot production increased by 47% from 2011–12 to 2015–16, and now has a share of 24% of the value of total vegetables produced. Value of tomato production increased by 18% during the same period. Potatoes were the third biggest vegetable produced by value at $42m. Potatoes and mushrooms each account for about 8% of total vegetable production value in WA, followed by broccoli at 7%, lettuce at 5% and capsicums, onions and pumpkins each with 3%.

Quantity of vegetable production grew 24% during the same period, from an estimated 264 914 tonnes to 328 857t, worth $490 million. Carrots were consistently, and by far, the state’s biggest vegetable crop by quantity, followed by potatoes. Carrot production increased 28% in the five years to 2015–16 to reach 119 990t. This represented 36% of WA’s total vegetable production for that year. Production of potatoes peaked at 44 400t in 2014–15, before falling slightly to 42 180t in 2015–16. This made up 13% of total vegetable production in WA that year. Tomato production increased 33% between 2011–12 and 2015–16, when it reached 30 300t. Beans were the sector with the strongest production growth in WA in the five-year period.

Share of vegetables in the value of total fruits and vegetables in WA declined by 5% between 2011–12 and 2015–16. Most vegetables produced in WA were consumed in the local market, or sold into Australia’s eastern states. Exports were dominated by carrots.
WA carrot production and value

WA's carrot sector commanded a 36% share of total vegetable production and 24% of total industry value in 2015–16. Carrots have been the state's biggest vegetable crop for the past decade and 2015–16 production of 119,988t was worth $118m. Quantities grown have risen by almost 28% since 2011–12, when 94,000t was produced. Expansion of this sector has occurred on the back of strong export growth. Prices grew by 15% and total value by 47% during the same period. Increased real price may be indicative of an increase in quality or higher demand for the product.

WA tomato production and value

WA's tomato production fluctuated in the five years to 2015–16, reaching a peak of 30,320t that year. This was estimated to be worth about $56m, or 11% of total industry value, and was second only to carrots. Overall production of tomatoes grew 33% between 2011–12 and 2015–16. Average prices were $1.84/kg in 2015–16, which was an 11% contraction from levels five years earlier. Supply increase coupled with decline in price could be a sign of supply exceeding demand.

WA potato production and value

Potatoes were the third highest vegetable crop by value and second highest by tonnage. The state’s potato production increased incrementally between 2011–12 and 2015–16 to record an overall 6% rise. Production peaked at 44,402t in this period (in 2014–15), before falling slightly to 42,183t in 2015–16. This sector accounted for 13% of the of the state’s total vegetable crop in 2015–16 by tonnage. Prices for potatoes grew 2% in the five years to 2015–16, to an average of $0.98/kg, and production was worth an estimated $42m that year. This represented 8% of total WA vegetable industry value.
WA mushroom production and value

WA’s mushroom sector has enjoyed strong growth of about 125% in quantities produced and 156% in value of production in this time. But mushrooms remain a relatively small crop, by tonnage, with production of 5765t worth about $38m in 2015–16. This represented 8% of total industry value. Increased value coupled with increased production could be a sign of higher demand for the product.

WA broccoli production and value

Broccoli is WA’s fifth biggest vegetable crop by value. Production of broccoli have increased by 120% and prices by 34% in the decade to 2017 to realise a value growth of 195%. Broccoli shares 7% of the WA vegetable industry value and is 3% of total vegetable production by quantity. Like mushrooms, increased value coupled with increased production could be a sign of higher demand for the product.

WA lettuce production and value

Lettuce makes up about 5% of total WA vegetable industry value. In 2015–16, there was about 19 680t of lettuce produced in this state, which was just over double the levels of 2011–12 at 9550t. This sector was worth an estimated $22m in 2015–16, which was up 117% from five years earlier. Prices in that period increased 5% to average $1.11/kg in 2015–16.

WA pumpkin production and value

There was an almost 30% drop in production volumes of WA pumpkin between 2011–12 and 2015–16 to about 13 190t (from about 18 470t at the start of that period). This would have contributed to the 63% increase in prices to reach $1.08/kg in 2015–16. WA pumpkin production was estimated to be worth $14m in 2015–16, which was about 3% of total vegetable crop value that year in the state.

WA bean production and value

Beans were the sector to record the largest production expansion in WA from 2011–12 to 2015–16, when production was 652t. This was up 550% from 100t at the start of that period. The value of the state’s bean crop was a significant 680% higher in 2015–16 than in 2011–12 and can be partly attributed to an almost 20% increase in average prices in that period. Despite expansion, this sector remains very small in WA, representing 0.7% of production value and 0.2% of production volume.
Key points

- Vegetable exports were worth about $99 million in 2017
- This was up 91% from 2007
- The United Arab Emirates was the highest value market, worth $27m in 2017
- Carrots were the highest value export crop, worth $79m in 2017
- Onions had the strongest growth in export value from 2007–17 at 5234%
- Mushroom and truffle export values also increased significantly in 2007–17
- WA exported just over 104,251t of vegetables in 2017
- This was up 72% from 2007
- Celery had the biggest export volume growth of 193%

- Vegetable exports from WA exceeded the imports
- Higher growth in export value (91%) compared to export quantity (72%) could be an indication of a shift towards more premium product or higher demand for the product in the international market
Vegetable exports from Western Australia — 2017

Major vegetable exports from Western Australia

- Cauliflower and broccoli: $1.29m, 2.6%
- Carrots: $79.23m, 79.7%
- Fresh potatoes: $3.29m, 3.3%
- Celery: $2.60m, 2.6%
- Mushrooms and truffles: $4.47m, 4.5%
- Onions: $3.77m, 3.8%
- Seed potatoes: $1.96m, 2.0%
- Others: $2.83m, 2.8%
- Celery: $2.60m, 2.6%
- Mushrooms and truffles: $4.47m, 4.5%
- Onions: $3.77m, 3.8%
- Seed potatoes: $1.96m, 2.0%
- Others: $2.83m, 2.8%

Major vegetable export destinations

- United States of America: $1.55m, 1.6%
- UAE: $27.13m, 27.3%
- Thailand: $2.18m, 2.2%
- Taiwan: $1.49m, 1.5%
- Singapore: $15.63m, 15.7%
- Saudi Arabia: $12.67m, 12.7%
- Qatar: $7.75m, 7.8%
- Bahrain: $2.85m, 2.9%
- Japan: $1.98m, 2.0%
- Kuwait: $2.24m, 2.3%
- Malaysia: $13.44m, 13.5%
- Mauritius: $1.29m, 1.3%
- Oman: $1.40m, 1.4%
- Other: $4.77m, 4.8%
WA’s vegetable export quantities increased by 72% and values by 91% between 2007 and 2017, when global sales were estimated to be worth $99 million. During this decade, there was a five-year annual growth rate for vegetable exports of 10% and two-year annual growth rate of 16%, measured in Compound Annual Growth Rate (CAGR).

Carrots were WA’s biggest vegetable export crop by quantity and value. In 2017, just over 91,000 tonnes of this vegetable staple were sold globally worth $79 million. This represented 80% of WA’s total export value for vegetables and key destination markets were the United Arab Emirates and Saudi Arabia. The combined mushrooms and truffles sector, which predominantly sell into the United States of America and Japan, accounted for 5% of total export market value for the State in 2017. This was the second highest vegetable category export by value. Onions had a 4% share of WA vegetable export market value in 2017, with the bulk of sales going to Taiwan. This was followed by fresh potatoes and celery, each with 3% share of total export market value, and cauliflower and broccoli at 1%. The UAE was the state’s highest value vegetable export destination, worth 27% of total market share in value. This was followed by Singapore at 16% value share and Malaysia at 14%. Other major markets for WA’s vegetables include Saudi Arabia, Qatar, Hong Kong and Bahrain.

Some key trends in WA vegetable exports, across all sectors, from 2007 to 2017 included:

- An 11% increase in real prices
- Strong growth of 138% in the value of the UAE market
- Falling sale values in Bahrain and Mauritius
- Positive sale values in all other major markets
- Domination of one vegetable crop (carrots) by value in all destinations, except Taiwan, USA, Mauritius and Japan.

- The adjusted value of WA’s trade surplus (exports-imports) across the vegetable industry increased by 114% from $42m in 2007 to $90m in 2017.
- Overall export trends are positive, underpinned by higher than average growth in sales to most Middle Eastern destinations.
- Export destinations such as Singapore and Malaysia experienced a lower than average growth in exports from 2007 to 2017, despite total exports to these destinations increasing

Snapshot and trends in export value and historical trends in value, quantity, price and destinations are given on the following pages.
## Vegetable exports from Western Australia — 2017
(Value in $m, quantity in tonne and share in %)

### Carrots
- $79.23m
- 91,024t
- 79.7%

### Mushrooms and truffles
- $4.47m
- 6t
- 4.5%

### Fresh potatoes
- $3.29m
- 2,462t
- 3.3%

### Others
- $2.83m
- 9,356t
- 2.8%

### Onions
- $3.77m
- 55,244t
- 3.8%

### Celery
- $2.60m
- 2,082t
- 2.6%

### Seed potatoes
- $1.96m
- 1,698t
- 2.0%

### Share of different destinations in the value of carrot exports

<table>
<thead>
<tr>
<th>Country</th>
<th>Share in export value</th>
<th>FOB price</th>
</tr>
</thead>
<tbody>
<tr>
<td>UAE</td>
<td>32%</td>
<td>$0.86/kg</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>16%</td>
<td>$0.92/kg</td>
</tr>
<tr>
<td>Malaysia</td>
<td>14%</td>
<td>$0.84/kg</td>
</tr>
<tr>
<td>Singapore</td>
<td>13%</td>
<td>$0.89/kg</td>
</tr>
<tr>
<td>Qatar</td>
<td>10%</td>
<td>$0.86/kg</td>
</tr>
<tr>
<td>Bahrain</td>
<td>3%</td>
<td>$0.85/kg</td>
</tr>
<tr>
<td>Thailand</td>
<td>3%</td>
<td>$0.80/kg</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>3%</td>
<td>$0.85/kg</td>
</tr>
<tr>
<td>Kuwait</td>
<td>3%</td>
<td>$0.84/kg</td>
</tr>
<tr>
<td>Oman</td>
<td>2%</td>
<td>$0.80/kg</td>
</tr>
<tr>
<td>Others</td>
<td>1%</td>
<td></td>
</tr>
</tbody>
</table>

### Comments
- WA exported $99m worth of vegetables in 2017.
- Export grew by 91% from 2007 to 2017 in real value.
- Carrot export grew by 87%, high growth is seen in the exports of mushrooms and truffles (2628%) and onions (5234%).
- Celery export grew by 207%, and cauliflower and broccoli by 170%.
## Vegetable export destinations — 2017
(Value in $m and share in %)

<table>
<thead>
<tr>
<th>Country</th>
<th>Value ($m)</th>
<th>Share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Arab Emirates</td>
<td>$27.13m</td>
<td>27.3%</td>
</tr>
<tr>
<td>Malaysia</td>
<td>$13.44m</td>
<td>13.5%</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>$12.67m</td>
<td>12.7%</td>
</tr>
<tr>
<td>Qatar</td>
<td>$7.75m</td>
<td>7.8%</td>
</tr>
<tr>
<td>Singapore</td>
<td>$15.63m</td>
<td>15.7%</td>
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<td>Malaysia</td>
<td>$13.44m</td>
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<tr>
<td>Qatar</td>
<td>$7.75m</td>
<td>7.8%</td>
</tr>
<tr>
<td>Others</td>
<td>$4.77m</td>
<td>4.8%</td>
</tr>
<tr>
<td>Bahrain</td>
<td>$2.85m</td>
<td>2.9%</td>
</tr>
<tr>
<td>Japan</td>
<td>$1.98m</td>
<td>2.0%</td>
</tr>
<tr>
<td>USA</td>
<td>$1.55m</td>
<td>1.6%</td>
</tr>
<tr>
<td>Mauritius</td>
<td>$1.49m</td>
<td>1.5%</td>
</tr>
<tr>
<td>Taiwan</td>
<td>$1.40m</td>
<td>1.4%</td>
</tr>
</tbody>
</table>

### Vegetable Share in Export Value

<table>
<thead>
<tr>
<th>Country</th>
<th>Carrots</th>
<th>Celery</th>
<th>Fresh Potatoes</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrots</td>
<td>93%</td>
<td>9%</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>Onion</td>
<td>2%</td>
<td>9%</td>
<td>9%</td>
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<td>Celery</td>
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**Comments**

- Major markets have grown during the past decade, UAE has grown by 138%, Singapore 49%, Malaysia 43% and Saudi Arabia 275%.
- Slight decline is observed in the export to Bahrain (-9%).

**Vegetable Share in Export Value**

- Carrots: 67%
- Fresh potatoes: 9%
- Celery: 9%
- Cauliflower: 7%
- Other: 9%
Export of vegetables from Western Australia — real value trends (2007–17)

Real value trends in all WA vegetable exports

Real value trend by vegetable type exported from WA

Growth in %
- Carrots 87%
- Cauliflower and broccoli 170%
- Celery 207%
- Mushrooms and truffles 2628%
- Onions 5234%
- Other 44%
- Seed potatoes 32%
- Ware potatoes -30%
Export of vegetables from Western Australia — quantity trends (2007–17)

Trends in quantity of vegetable exports

Details on quantity of vegetable export

Growth in export quantity*

- Carrots: 77%
- Cauliflower and broccoli: 107%
- Celery: 193%
- Mushrooms and truffles: 43%
- Onions: NA
- Other: NA
- Seed potatoes: 34%
- Ware potatoes: -59%

*% growth is not given for those industries where exports in 2007 are almost zero

24 | Snapshot and trends in the production and overseas trade of vegetables from Western Australia
Export of vegetables from Western Australia — real price trend (2007–17)

Growth in %
- Carrots: 6%
- Cauliflower and broccoli: 30%
- Celery: 5%
- Onions: -57%
- Seed potatoes: -2%
- Ware potatoes: 72%

Price in $/kg
Export of vegetables from Western Australia — destination trends (2007–17)

Growth in %

- Bahrain: -9%
- Hong Kong: 218%
- Japan: 280%
- Kuwait: 67%
- Malaysia: 43%
- Mauritius: 12%
- Oman: 76%
- Others: -20%
- Qatar: 456%
- Saudi Arabia: 275%
- Singapore: 49%
- Taiwan: 19%
- Thailand: 147%
- UAE: 138%
- USA: N/A

Value in $m

Snapshot and trends in the production and overseas trade of vegetables from Western Australia.
Industry details on exports

WA has several robust vegetable export crops which are in demand all over the world. While Carrots dominate with high volumes and strong value, other crops have shown high growth and found willing markets. Details on major vegetable exports are given below.

**WA carrot exports**

Carrots are WA’s biggest exported vegetable crop, with sales of 91,025 tonnes in 2017 worth $79 million making this crop the most important export vegetable crop grown in WA. Carrot exports represented about 87% of the state’s total vegetable export quantities and 80% of export values and was well ahead of the next biggest export sector by value — truffles and mushrooms, worth $4.5m.

Global sales of carrots out of WA have been expanding significantly in the past decade, growing the quantity by 77% over the ten-year period from 2007–17. Carrots are WA’s most important export crop as this export growth has helped drive an overall increase of 72% of total vegetable exports from WA over the same period, and the value of carrot exports has grown by 87% in the past decade from just over $40m to $79m, partly due to steady price growth of about 6%.

The bulk of global carrot sales from WA are destined for the UAE, achieving an average price of $0.86/kg in 2017 and representing 32% of the value of all carrot exports out of the state. Other significant overseas markets for WA carrots in 2017 included: Saudi Arabia, which paid an average price of $0.92/kg and made up 16% of carrot export values; Malaysia, which paid $0.84/kg on average and made up 14% of the value of carrot exports; and Singapore, which paid $0.89/kg on average and made up 13% of carrot export values in 2017. WA carrot exports were also destined for Qatar, Bahrain, Thailand, Hong Kong, Kuwait and Oman.

While the outlook for carrot exports remains strong, WA is striving to grow exports of other vegetable products, reducing the reliance on local and interstate markets and reduce the risk of oversupply in the market. Success would also reduce the reliance on the dominance of the carrot industries’ performance as WA’s only major export vegetable and may facilitate expansion of the vegetable industry in WA.

**WA truffle and mushroom exports**

This category is the second highest vegetable export earner for WA, valued at $4.5m in 2017. This was worth almost 5% of the state’s total vegetable export value. The main export destination is the USA, but WA truffles and mushrooms are also exported to France, Japan, Hong Kong, UK, Spain, Singapore and Germany. This category showed the second biggest increase in real value of export at 2628% growth between 2007 and 2017, second only to onions.

**WA onion exports**

Onions are WA’s third biggest export crop by value, with 5525 tonnes of export sales in 2017 worth $4m. This made up 4% of the state’s total vegetable export values that year. WA onions are sold into Taiwan, which accounted for 35% of total export value in 2017, Japan and UAE at 18% of total value each, the United Kingdom, at 12%, and Hong Kong, with 8%.

WA onions may have good potential for growth, as similar to carrot production, are fully mechanised allowing producers to compete on global markets.
**WA ware potato exports**

Fresh potatoes are the fourth biggest vegetable export from WA by value, representing just above 3% at a value of $3.3m. Quantities of ware potato exports from WA fell almost 60% between 2007. This catastrophic drop in exports was partially offset by the price increase to contain the drop in total value of sales to 30% during that decade.

Major markets for WA fresh potatoes are Singapore, which was worth 44% of the value of total exports in 2017, and Malaysia and the UAE, which were worth 24% and 13% of total value respectively.

**WA celery exports**

Celery exports experienced the strongest growth in export sale quantities, of 193%, between 2007 and 2017. Exports of 2082 tonnes were made in 2017 and prices had increased by 5% on average, leading to an export market value of $2.6 million. This sector has an almost 3% share of the total value of vegetable exports from WA and its key markets are Singapore, which accounts for 51% of sale value, and Malaysia, which makes up the remainder.

**WA seed potato exports**

About 1700 tonnes of WA seed potatoes was exported in 2017, worth almost $2m. This represented 2% of WA’s total vegetable export values. Export volumes of seed potatoes were up 34% in the period 2007 to 2017 and, despite a 2% fall in average prices, the value of this sector increased 32%.

Major markets were Mauritius and Indonesia, with a respective 65% and 31% share of the value of seed potato exports that year.

**WA broccoli and cauliflower exports**

WA broccoli and cauliflower growers experienced a solid 107% increase in quantities exported in the decade to 2017. This was the second highest growing sector in the industry by tonnage. During the 10-year period, average prices increased by 30% and there was a subsequent 170% rise in export market values. Singapore is the biggest market for WA broccoli and cauliflower in value, with an 88% share, followed by Malaysia, with a 7% share.

Export trends in key destination markets are given on the following pages.
Comments

- Vegetable exports are growing fast, increasing from 35% to a share of 41% of the value of all vegetables exported from Australia. WA’s share increased from 35% in 2016 to 41% in 2017.
- Western Australian vegetable exports were dominated by carrots in 2007, which continued in 2017 (80% by value). However, the share of carrots in the value of WA vegetable export remains almost stagnant over this period, indicating that other vegetables had increased their share. Share of fresh potatoes declined from 9% to just 3% of the total value of vegetable exports. Share of mushrooms and truffles and onions increased from almost zero to 4%.
- UAE continued to be the largest destination for WA vegetables, with share that increased from 22% to 27%. Singapore and Malaysia’s share of exports declined even though there was no decline in value of those exports indicating that growth in exports to these two destinations seems to be less than the average growth. Singapore has a real value growth of 49% and Malaysia 43%, while the average growth is 91%. Higher average growth is mainly from the export growth in Middle Eastern countries.
WA vegetable exports to UAE — real value trends (2007–17)

Value ($m) of WA vegetable exports to UAE from 2007 to 2017

Comments

- Carrots make up the bulk of sales to WA’s biggest export vegetable (and fruit) market, the UAE. The average FOB price paid for carrots in this market in 2017 was $0.86/kg and total carrot sales were worth just over $25m. Between 2007 and 2017, there was a 138% increase in the value of vegetable exports to the UAE to reach $27m, representing 27% of the state’s total export market value. This included annual growth of 13% across a five-year period and 7% CAGR across the period 2015–17.
Comments

- Singapore is the second most valuable market for WA vegetables, worth $15.6m in 2017 and representing a 16% share of the state’s total export vegetable value. Value growth in this market between 2007 and 2017 was 49%, which lagged behind total average value growth for WA vegetable exports at 91%. The annual growth rate of 14% in the period 2015-17, was higher than the five-year annual average growth rate of 9% CAGR for this market. This was driven by higher sale values for a range of WA vegetable categories, including carrots, fresh potatoes, cauliflower, broccoli, onions, celery, pumpkin and lettuce.

- Carrots remain the highest value sector in this market, making up 67% of total sales value at $10.5m, followed by fresh potatoes at 9% worth $1.5m, celery at 8% worth $1.3m and cauliflower and broccoli with a combined 7% worth $1.1m.
Comments

- Carrots, celery and potatoes are the highest selling vegetables from WA to Malaysia, which was worth $13.4 million to the state’s industry in 2017. Similarly to Singapore, growth in the value of this market – at 43% – was less than half of the average rate of growth for all vegetable exports – at 91% – from WA between 2007 and 2017. Between 2015 and 2017, there was a 20% average annual growth rate, compared to a five-year growth rate of 9% CAGR. Carrots sales contributed 80% of total export value of sales to Malaysia in 2017 at about $11m, followed by celery at 9% worth $1.3m and fresh potatoes at 6% worth $0.8m. Sales of spinach, cauliflower, broccoli and onions into this market are growing.

- Carrots dominated vegetable exports from WA to Saudi Arabia and sales were worth $12.7m in 2017. Saudi Arabia had a two-year average annual growth rate of 24% between 2015 and 2017, which was higher than the rate of growth for the five-year period, at 13% CAGR. The total growth in value of vegetable exports to Saudi Arabia was significant, increasing 9.3m or 275% (between 2007 and 2017).
Snapshot and trends in the production and overseas trade of vegetables from Western Australia

Comments

- The value of exports to Qatar was worth $7.5m to WA's vegetable industry in 2017, or 8% of its total vegetable export value. Carrots dominate exports to Qatar, but is increasingly also importing WA onions, while fresh potatoes have experienced a decline in sales. Compound Annual Growth Rate is higher at 23% for the two years from 2015 to 2017, compared to 13% for the five-year period from 2012 to 2017.

- WA exported $3m worth of vegetables to Hong Kong in 2017, making up a 3% share of total vegetable export values from this state. Sales predominantly consisted of carrots, worth $2m, and mushrooms and truffles, worth a combined $0.5m. There is also increasing demand in this market for onions and fresh potatoes. CAGR for the past two- and five-year periods were 18 and 20% respectively.
WA vegetable exports to Bahrain, Kuwait and Thailand — real value trends (2007–17)

Comments

- Bahrain, Kuwait and Thailand remain relatively small for WA vegetable exports, but are worth a combined $7 million.
- Carrots are the main export to Bahrain, along with small amounts of onions and fresh potatoes. There were reductions in exports to Bahrain with negative annual growth of 1% and 5% respectively for a two and five-year period measured in CAGR.
- The value of the Kuwait market for WA vegetables grew 67% in the 10 years comprising mainly WA carrots and small amounts of onions. Exports to this market peaked in 2011 and annual growth rates in value have been positive at 9% and 1% respectively for a two and five-year period between 2015–17 and 2012–17 (measured in CAGR).
- The value of the Kuwait market for WA vegetables grew 67% in the 10 years comprising mainly WA carrots and small amounts of onions. Exports to this market peaked in 2011 and annual growth rates in value have been positive at 9% and 1% respectively for a two and five-year period between 2015–17 and 2012–17 (measured in CAGR).
- Carrots are now the only major vegetable exported to Thailand. Exports of fresh potatoes formed almost one fifth of the value of WA exports to Thailand in 2007 which ceased in 2009, while a similar story occurred in the export of seed potatoes which formed about 21% of the value of vegetable exports to Thailand in 2012, but ceased in 2015. Export of WA potatoes for consumption is prohibited in Thailand. Share of carrots increased from 71% to 96% of the now total value of vegetable exports.
Comments

- Key WA mushroom and truffle export destinations, Japan and the USA, are both recording positive annual growth in export values.
- In Japan, sales of mushrooms and truffles have grown the fastest of all vegetable categories. Along with onions, mushrooms and truffles have about a 34% share each, and carrots have 32% share of value in this destination. Between 2007 and 2017, Japan recorded a total 280% increase in the value of vegetable exports from WA.
- In the USA, mushrooms and truffles are the only vegetables imported from WA and annual growth in value has been 12% for the past two years (measured in CAGR).
Comments

• Taiwan is the biggest export market for WA onions, consuming 35% of total exports of this vegetable, worth $1.3m in 2017. This market also took $0.08m worth of WA carrots in 2017 and small amounts of mushrooms and truffles. Total growth in export value for WA vegetables to Taiwan was 19% between 2007 and 2017, including an annual growth rate of 217% for the past two years (measured in CAGR). Onions are the major vegetable exported to Taiwan. Carrots form 6% of the value and brassicas 4%. Carrots were the major vegetable exported in 2007, however exports ceased in 2009 and re-started in 2017 following the approval of a protocol to prove the absence of carrot burrowing nematode (*Radopholus similis*). Export of onions started in 2015 and grown fast.

• The value of WA vegetable exports to Mauritius grew moderately by 12% between 2007 and 2017, but had a negative annual growth rate of -2% and -5% for the past two and five year-periods respectively. Mauritius was the biggest market for WA seed potatoes, and sales of carrots started in 2014, but remain minor.
Vegetable imports* in to Western Australia (2007–17)

Key points

- WA imported 3500 tonnes of vegetables in 2017
- Vegetable imports to WA were worth $9.8m in 2017
- Import value grew 0.2% from 2007 to 2017
- Import quantity declined by 40% during the same period
- Garlic was the highest value imported vegetable in 2017 at $3.3m
- This was followed by asparagus at $2.6m
- Average vegetable import price in 2017 was $2.82/kg
- Shift in imports from low-value vegetables such as onions to high value vegetables such as garlic and asparagus
- Major countries of origin are China and Mexico
- WA has a trade surplus (exports minus imports) for vegetables of $90m
- There is a deficit (imports outweigh exports) for certain individual categories of imports such as garlic, asparagus and capsicum

* Import value figures are in customs value. Customs value is explained in page 6

WA's average export prices are lower than the average import prices for vegetable categories
- This indicates the export of low-value vegetables and import of high-value vegetables
- Onions are the only imported vegetable where we have a trade surplus
Vegetable imports to Western Australia (by value) — 2017

Major vegetables imported in to Western Australia

- Peas: $0.86m, 8.8%
- Capsicums: $0.49m, 5.0%
- Garlic: $3.27m, 33.4%
- Onions and shallots: $0.95m, 9.7%
- Mushrooms: $0.73m, 7.5%
- Asparagus: $2.63m, 26.8%
- Others: $0.86m, 8.8%

Major vegetable import sources

- China: $3.28m, 33.5%
- Mexico: $2.72m, 27.8%
- New Zealand: $0.47m, 4.8%
- Others: $2.11m, 21.5%
- Peru: $0.46m, 4.7%
- South Korea: $0.75m, 7.7%
- Others: $2.11m, 21.5%
Between 2007 and 2017, quantities of imported vegetables to WA fell sharply, by 40%. WA imported about 3500t of vegetables in 2017, compared to just under 6000t in 2007. Quantities of imported vegetables to WA fell sharply, by 40%, from 2007 to 2017. This was inverse to the situation in the state’s fruit industry, which recorded an 86% growth in import volumes during that decade.

Even though quantities of imports have fallen considerably, overall value has slightly increased. This is because of the shift of imports of low-value vegetables, such as onions, to high-value vegetables, such as asparagus and garlic. In 2007, onions made up 28% of the value of WA vegetable imports. By 2017, the share of onions dropped to less than 10%.

Garlic and asparagus were the largest imported categories by value with a combined share of about 60% in 2017. They are the major vegetable categories where imports to WA are increasing and this trend is expected to continue.

Total import value to the state was estimated at $9.8m in 2017. The value of total vegetable imports to WA peaked in 2010, but then fluctuated to record only a 0.2% overall growth from 2007 to 2017. Decrease in the import of onions, capsicum and peas were almost nullified by the import growth in garlic and asparagus. This created a trade surplus of almost $90m that year, as vegetable export sales were worth $99m on the back of a 91% rise in values from 2007 levels. Garlic was the most significant imported vegetable to WA, with about 1000t worth $3.2m arriving in 2017. This was an increase of 15% in quantity and 132% in value from 2007 levels. Most garlic imports come from China (71%) and Mexico (19%). The price of garlic increased by 101% in the past decade, which was highest growth among all vegetables. Garlic is imported throughout the year, even though there are seasonal variations. Chinese garlic imports serve a different segment of the market, hence the possibility of import replacement with locally grown WA product is uncertain as WA may not be price competitive in the production of garlic compared to China. Average import price of Chinese garlic ($2.70/kg) is much lower than that of Mexico ($5.59/kg).

Asparagus was the second biggest import category to WA by value. This vegetable experienced a value growth of 142% and quantity growth of 67% between 2007 and 2017. The real price of asparagus increased by 45% between 2007 and 2017. In 2017, about 500t of asparagus was imported to WA worth $2.6m. Most of this product (by value) came from Mexico (80%) and Peru (17%). Peru supplied at higher price than Mexico. Asparagus is imported almost throughout the year, with fewer imports from September to November.

Onions from China and the Netherlands were the third biggest vegetable import to WA by value, at just under 1000t arriving in 2017 worth $0.9m. This sector had the biggest fall in quantities, of 73%, between 2007 and 2017.

Peas were the fourth and capsicums were the fifth biggest vegetable imported by value. Main sources of pea import were China and Belgium, while capsicum was mainly imported from New Zealand. Capsicums had the biggest fall in import value at 77% decline between 2007 and 2017.
Mushroom imports are growing fast even though from a very low base. South Korea is the main supplier.

China and Mexico were the biggest countries of origin overall for vegetables entering the state, with a combined $6m worth of imports in 2017. These countries represented a respective 34% and 28% share of total vegetable import value for WA that year, driven by a respective 17% and 571% growth in value between 2007 and 2017. Other countries of significance that import vegetable produce to WA include: South Korea, with 8% of value market share worth $0.75m in 2017; New Zealand, with almost 5% of value market share worth $0.47m; Peru, with 4.7% of value market share worth $0.46m; and the Netherlands, with 4% of value market share.

China was the major import source of garlic, onions and peas; Mexico for asparagus, South Korea for mushrooms and New Zealand for capsicums.

Snapshot and trends in import value and historical trends in value, quantity, price and destinations are given on the following pages.
## Vegetable imports into Western Australia — 2017

(Value in $m, quantity in tonne and share in %)

### Garlic
- **Value**: $3.27m
- **Quantity**: 1011t
- **Share**: 33.4%

### Onions and shallots
- **Value**: $0.95m
- **Quantity**: 880t
- **Share**: 9.7%

### Other
- **Value**: $0.86m
- **Quantity**: 372t
- **Share**: 8.8%

### Asparagus
- **Value**: $2.63m
- **Quantity**: 430t
- **Share**: 26.8%

### Peas
- **Value**: $0.86m
- **Quantity**: 377t
- **Share**: 8.8%

### Mushrooms
- **Value**: $0.73m
- **Quantity**: 240t
- **Share**: 7.5%

### Country Share in import value

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<tr>
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<tr>
<td>China</td>
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Snapshot and trends in the production and overseas trade of **vegetables from Western Australia**

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<th>Share in import value</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>88% ($2910/t)</td>
</tr>
<tr>
<td>Taiwan</td>
<td>11% ($5550/t)</td>
</tr>
<tr>
<td>Throughout the year</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country</th>
<th>Share in import value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>96% 1st, 3rd, 4th quarter ($2990/t)</td>
</tr>
<tr>
<td>Vietnam</td>
<td>2% ($2910/t)</td>
</tr>
<tr>
<td>India</td>
<td>2% ($1870/t)</td>
</tr>
</tbody>
</table>
Sources of vegetable imports into Western Australia – 2017
(Value in $m and share in %)

<table>
<thead>
<tr>
<th>Country</th>
<th>Value</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>$3.28m</td>
<td>33.5%</td>
</tr>
<tr>
<td>Mexico</td>
<td>$2.72m</td>
<td>27.8%</td>
</tr>
<tr>
<td>South Korea</td>
<td>$0.75m</td>
<td>7.7%</td>
</tr>
<tr>
<td>New Zealand</td>
<td>$0.47m</td>
<td>4.8%</td>
</tr>
<tr>
<td>Peru</td>
<td>$0.46m</td>
<td>4.7%</td>
</tr>
</tbody>
</table>

### Share in Import Value

<table>
<thead>
<tr>
<th>Vegetable</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Garlic</td>
<td>71%</td>
</tr>
<tr>
<td>Onions and shallots</td>
<td>14%</td>
</tr>
<tr>
<td>Peas</td>
<td>13%</td>
</tr>
<tr>
<td>Other</td>
<td>2%</td>
</tr>
<tr>
<td>Mushrooms</td>
<td>86%</td>
</tr>
<tr>
<td>Garlic</td>
<td>14%</td>
</tr>
<tr>
<td>Capsicum</td>
<td>100%</td>
</tr>
<tr>
<td>Asparagus</td>
<td>100%</td>
</tr>
</tbody>
</table>
Import of vegetables into Western Australia — real value trends (2007–17)

Real value trends in the import of vegetables

Value in $m


Details on real value trends in the import of vegetables

Growth in %
- Asparagus 142%
- Capsicums -77%
- Garlic 132%
- Mushrooms 1693%
- Onions -65%
- Other 69%
- Peas -54%

Snapshot and trends in the production and overseas trade of vegetables from Western Australia
Import of vegetables into Western Australia — trends in quantity (2007–17)

Quantity trends in the import of vegetables

Details of quantity trends in the import of vegetables

Growth in %
- Asparagus 67%
- Capsicum -86%
- Garlic 15%
- Mushroom -73%
- Onions -73%
- Peas -42%
Import of vegetables into Western Australia — trends in real price (2007–17)

<table>
<thead>
<tr>
<th>Year</th>
<th>Asparagus</th>
<th>Capsicum</th>
<th>Garlic</th>
<th>Mushroom</th>
<th>Onions</th>
<th>Others</th>
<th>Peas</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>7.0</td>
<td>6.0</td>
<td>5.0</td>
<td>4.0</td>
<td>3.0</td>
<td>2.0</td>
<td>1.0</td>
</tr>
<tr>
<td>2007</td>
<td>6.0</td>
<td>5.0</td>
<td>4.0</td>
<td>3.0</td>
<td>2.0</td>
<td>1.0</td>
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</tr>
<tr>
<td>2008</td>
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<td>4.0</td>
<td>3.0</td>
<td>2.0</td>
<td>1.0</td>
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</tr>
<tr>
<td>2009</td>
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<td>3.0</td>
<td>2.0</td>
<td>1.0</td>
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<td>2010</td>
<td>3.0</td>
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<td>1.0</td>
<td>0.0</td>
<td>0.0</td>
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</tr>
<tr>
<td>2011</td>
<td>2.0</td>
<td>1.0</td>
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<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>2012</td>
<td>1.0</td>
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<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>2013</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>2014</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
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</tr>
<tr>
<td>2015</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
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<tr>
<td>2016</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
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</tr>
<tr>
<td>2017</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>2018</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Growth in %
- Asparagus: 45%
- Capsicum: -32%
- Garlic: 101%
- Mushroom: -54%
- Onions: 28%
- Others: 28%
- Peas: -21%
Import of vegetables in to Western Australia — trends in sources (2007–17)

Value ($m)

Growth in %
- China 17%
- Mexico 571%
- New Zealand -84%
- Others
- Peru 63%
- South Korea


0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5

0.2%
Industry details on imports

Details on vegetable import sources are given below.

**Vegetable imports in to WA from China**

China commands 34% of the value of WA vegetable imports, worth $3.28m in 2017, growing by 17% between 2007 and 2017.

WA imports Chinese garlic year-round, along with small amounts of onions and peas. The average imported Chinese garlic prices of $2.70/kg in 2017 were well below those of Mexico at $5.59/kg and may be difficult for WA producers to compete with.

**Vegetable imports to WA from Mexico**

Vegetables from Mexico have undergone the biggest jump in import sales to WA at 571% between 2007 and 2017, when these were estimated to be worth $2.72m. This represented a 27.8% share of the total value of WA vegetable imports. Growth in imports from Mexico to WA has primarily been driven by asparagus sales that make up 77% of that country’s value of vegetable sales to the state, followed by garlic at 23%.

Mexico supplies asparagus for lower prices than Peru and commands an 80% share of the WA import market for this category.
Vegetable imports to WA from South Korea
South Korea mainly sells mushrooms into WA and this accounts for 86% of the value of that country’s total exports to the state, estimated to be worth $0.75m in 2017. Garlic makes up the remainder. South Korea is WA’s biggest supplier of imported mushrooms.

Vegetable imports to WA from New Zealand
WA imported $0.47m worth of capsicum from New Zealand in 2017. This is the only imported vegetable from that country and sales have dropped by more than 80% since 2007.

Vegetable imports to WA from Peru
Peru only sells asparagus into WA and, in 2017, sales were worth $0.46m, representing a 4.7% share of the total value of imported vegetables to the state. Import value from Peru increased by 63% between 2007 and 2017.
Conclusions

WA produced 328,857 tonnes of vegetables valued at $490m in 2015–16. This was a 24% increase in quantity and 33% increase in wholesale value from the levels of 2011–12. Vegetable production and exports experienced a strong growth during the past few years. Overall growth in production and export was mainly from the growth in carrots from a very strong base. Production of other industries such as beans, broccoli, celery and mushrooms also grew from a low base.

Vegetable exports have increased by 91% in real value from 2007 to 2017, driven mainly by carrots. Onions had the strongest growth in export values during the same period. The trade balance in vegetables has increased by 114% from 2007 to 2017, and net trade (export minus import) has increased from $42m in 2007 to $90m in 2017. Export trends look generally positive. Share of WA in Australia’s vegetable exports by value has grown from 35% in 2016 to 41% in 2017. UAE was the major destination with a share of 27%, and export to UAE has grown by 138%.

Our exports were mainly to UAE and Singapore, while imports were mainly from China and Mexico. No concentration in export destinations, however there was concentration in product because carrots form almost 80% of the export. This can be a risk to vegetable industry. Carrot was the major vegetable exported to most of the destinations except to Taiwan, Japan, Mauritius and the US. Onions were the major vegetables to Taiwan, seed potatoes to Mauritius and mushrooms and truffles to Japan and the US.

Export of low value vegetables such as carrots and import of high value vegetables such as garlic and asparagus could be the major factor behind the higher average import price compared to export price. Real price increased for production, exports and imports during the past decade. This could be indicative of a general trend towards premium products or higher demand for the products.
References

1. Australian Bureau of Statistics
2. DPIRD 2014, Vegetables in Western Australia
3. Global Trade Atlas
4. Fresh Logic