

AUSTRALIAN HORTICULTURE REPORT

MARCH 2017

About the research

This report presents information about current national and international production, seasonal conditions, prices, demand and the financial performance of Australia's horticulture sector.

Significant effort has been taken to secure the most recent data available.

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About Ag Answers

Ag Answers is a specialist insights division of Rural Bank and Rural Finance. Recognising that good information is the key to making good business decisions, Ag Answers provides research and analysis into commodities, farmland values, farm business performance and topical agricultural issues to enable farmers to make informed decisions.

About Rural Bank and Rural Finance

Rural Bank has been a wholly-owned subsidiary of Bendigo and Adelaide Bank Limited since 2010 and is the only Australian-owned and operated dedicated agribusiness bank in the country. From 1 July 2014, Victorian agribusiness lender, Rural Finance joined Rural Bank as a division of Bendigo and Adelaide Bank Limited. As a specialist rural lender, Rural Finance has been fostering the sustainable economic growth of rural and regional Victoria for more than 70 years.

Together, Rural Bank and Rural Finance are supporting farmers and farming communities by providing them with specialist financial tools, industry insights and investment into the future of the Australian agribusiness sector.

The future for agriculture is bright

We provide exceptional financial services, knowledge and leadership for Australian farmers to grow.

SUMMARY

Australian horticulture producers experienced a positive 2016 due to increased yields and higher prices for some product categories. Export demand continued to improve, particularly for wine, citrus and nuts. Red wine exports to China grew rapidly in 2016.

Vegetable and fruit prices trended higher in 2016 on the back of increased domestic consumption and tight supply towards the end of the year. Globally, almond prices eased significantly in 2016 with Californian production coming back to normal after four years of drought.

Hired labour has been a much talked about topic for all horticulture businesses in 2016 – not so much the cost of hired labour, but the dwindling availability. The lack of seasonal workers is threatening farm profitability and, with no alternative to hand picking, this is the largest problem facing the industry.

In 2017 a major topic of conversation will be raising the working holiday visa age bracket from 18-30 to 18-35, which would aim to increase the availability of seasonal workers.

Growing conditions in most horticulture regions were favourable and resulted in larger crops without significant additional cost. The breakdown of El Nino in May was the turning point for improved seasonal conditions as a dry start to the year quickly changed to the second wettest winter on record, and this was followed by more rain in early spring. Conditions look set to revert back to being warmer and drier for the east of Australia and cooler for Western Australia in 2017.

Australian horticulture
production exceeded

5.7

million tonnes in 2014/15

EU wine production
declined

9.8

million tonnes in 2016

Australian winter
rainfall was

82%

higher than average in 2016

In 2016, the average price
for vegetables increased

12%

Fresh fruit consumption
increased

6%

in 2014/15

The value of nut exports
increased

27%

in 2015/16

PRODUCTION – AUSTRALIA

Australian horticulture
production exceeded

5.7

million tonnes in 2014/15

Australian nut production
increased by

19%

in 2014/15

Australian fruit production
exceeded

2.4

million tonnes in 2014/15

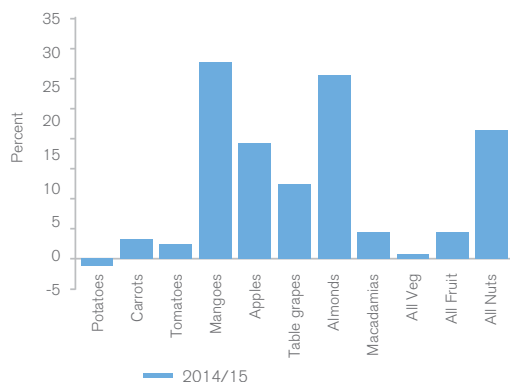
The latest horticulture production data from the Australian Bureau of Statistics relates to the 2014/15 financial year. Total production exceeded 5.7 million tonnes, which is an increase of 2% year-on-year. In dollar terms, this equates to more than \$10.5 billion or an increase of 8% year-on-year.

Vegetable production increased slightly in 2014/15, from 3.13 million to 3.15 million tonnes. The value of production increased 3% to \$3.53 billion. Indoor tomato production increased 8.7%, Asian vegetables 6%, while beans, broccoli, carrots and celery production increased 3%. Potato production decreased 2%. Yield performance data shows an increase of 12.2% for beans to 5.5 t/ha, 4.6% for carrots to 56.5 t/ha and 3% for indoor tomatoes to 25.7 kg/m². Potato yields were 1.8% lower at 39.3 t/ha.

Fruit production increased 4% in 2014/15 to 2.43 million tonnes. The value of production increased 11% to \$4.34 billion. Mango production increased 29%, berries 28%, avocado 18%, apples 17%, lemons/limes 14% and table grapes 11%. Production of oranges decreased by 3.6%. Mangoes yielded 36.7 kg/tree, a 4.8% increase, and apples 28 kg/tree up 3%, while oranges yielded 50.3 kg/tree, a reduction of 5%.

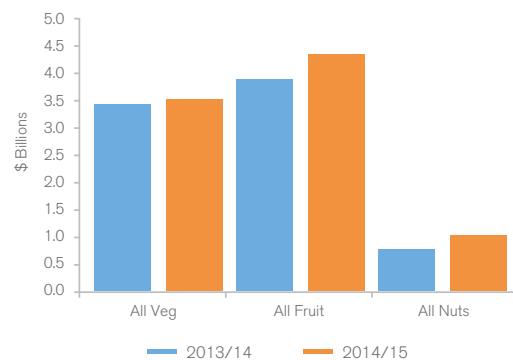
Nut production increased 19% in 2014/15 from 156,152 tonnes to 185,859. The value of production increased 35% from \$764.3 million to \$1.03 billion. Pistachio production increased 53%, hazelnuts 46%, almonds 27% and macadamias 4%. Almond trees yielded 10.4 kg/tree, an increase of 3%, macadamias yielded 7.5 kg/tree, an increase of 25%.

Australian horticulture production growth
was strong in many categories in 2014/15



Data: Horticulture Innovation Australia

The value of Australian horticulture
grew in all sectors in 2014/15



Data: Horticulture Innovation Australia

Outlook

Mangoes, oranges and grapes of all types have had a reduction in the number of non-fruit bearing young age trees and vines over the last three years. The prolonged decline of new tree and vine numbers signals a potential production decrease as the overall number of trees and vines gets smaller. Grapes are currently the exception as the total area of vines continues to grow. Apples and almonds have increased the number of young trees of non-fruit bearing age. This signals growth over the short to mid-term as these trees come into full production. Carrots, beans and tomatoes have all increased in the area of production. Capsicum and potato production may continue to decline as less area is being allocated to these crops.

PRODUCTION – WORLD

Californian carrot
production decreased

7.7%

in 2015

Orange production
continues to fall in Brazil,
down

16.7%

in 2015/16

EU wine production
declined

9.8

million tonnes in 2016

California produces most of the vegetables in the United States of America (US). Key crops include carrots and onions – both are exported to Europe and Asia. In 2015, the US produced 1.23 million tonnes of carrots, 0.99 million tonnes of that in California, which was a decrease of 7.7%. The US produces 3.4 million tonnes of onions, 1 million tonnes in California. In 2015, production decreased by 1%.

Italy, Spain and Poland produce more than half of the EU's vegetables. Tomatoes are a key crop for Italy and Spain, producing more than 6.4 million tonnes and 4.8 million tonnes annually. Year-on-year average growth over the last 5 years is 3.2% for Italy and 7.2% for Spain.

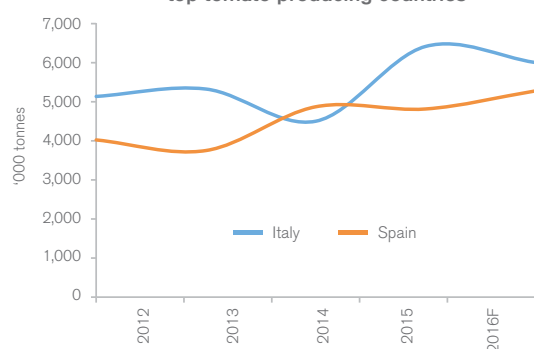
Brazil is the largest producer of oranges in the world, producing more than 14 million tonnes in 2015/16. Production has been in decline since 2013/14, decreasing

16.7% in 2015/16. In 2015/16 11.2 million tonnes of Brazil's oranges were used for juice production.

The European Union (EU) is the largest producer of wine in the world. France, Italy and Spain produce more than 80% of the EU's wine. Total production in 2014/15 exceeded 16.2 million litres which was 9.8% lower than 2013/14 due to frost damage. Vine growing area has declined in the EU due to profit margin and voluntary withdrawal schemes.

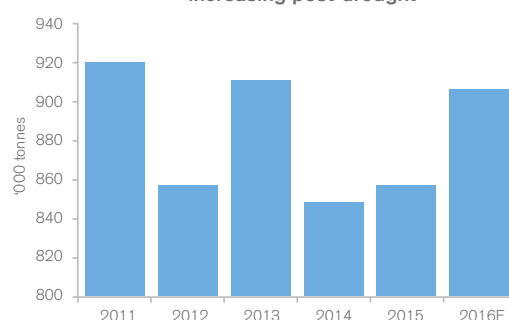
California produces more than 80% of the world's almonds, with Australia being the second largest producer. In recent times, drought has curbed production in California and allowed Australia to expand its industry. With the drought now subsiding, California is coming back into full production, which is expected to lower prices.

Italy and Spain are Europe's
top tomato producing countries



Data: Eurostat

Californian almond production is
increasing post-drought



Data: United States Department of Agriculture

Outlook

Almonds could stand to benefit as consumers turn to cheaper nuts as a result of drought, which is expected to reduce the cashew harvest by 11% this season. This is expected to push prices much higher as demand from the US and India soars. Vegetable production in Europe has been severely hampered by cold weather in 2016. As a result, EU imports from the US have increased to meet demand. Damage may only be short-term but the opportunity for the US to export into these markets could help future access and make way for more product. Wine making capacity in the EU appears to be constrained intentionally which could lead to higher priced wine out of this region. This is favourable news for Australia to continue growing exports to China where cheaper wines are being readily consumed.

SEASONAL CONDITIONS

Australian winter rainfall was

82%

higher than average in 2016

Rainfall in Australia in September 2016 was the

2nd

highest on record

The mean temperature for winter 2016 was

0.91

degrees above average

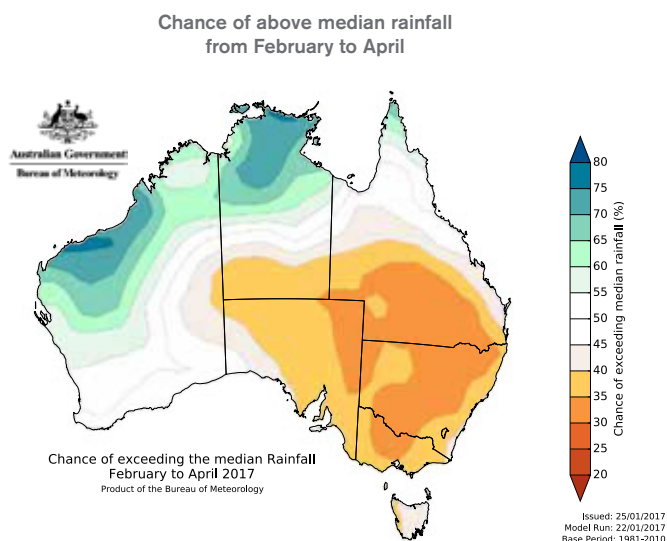
Recent conditions in Australia have been characterised by above average rainfall and warmer than average temperatures. These conditions are largely due to the breakdown of an El Nino which returned to a neutral state in May. A negative Indian Ocean Dipole has also persisted since May, enhancing these conditions.

Winter in 2016 was the second wettest on record for Australia with total winter rainfall over the season being 82% above average. Queensland experienced its second wettest winter, recording rainfall 172% above average. New South Wales and the Northern Territory also experienced very much above average rainfall. Most of Western Australia received above average rainfall except for the south west of the state which saw average to below average rain. The wet winter was

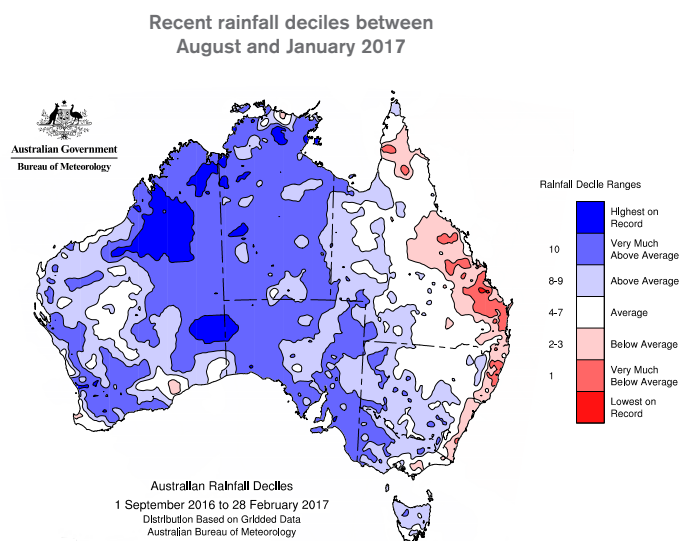
followed by a wet September for all states except Western Australia. It was this wet period that prevented sowing in some parts of Victoria and New South Wales.

Winter was also warmer than average for most parts of Australia. Warmer conditions were particularly evident in Queensland, New South Wales and the Northern Territory. The warmer conditions were driven by increased cloud cover and warmer sea surface temperatures. Spring and summer temperatures on the east coast were above to very much above average.

The Bureau of Meteorology's Normalised Difference Vegetation Index (NDVI) shows higher than normal spring pasture density and greenness especially in western and south eastern Queensland and most parts of New South Wales.



Source: Bureau of Meteorology (BoM)



Source: BoM

Outlook

Dry conditions are expected for most of eastern Australia during February to April. Western Australia has a 50-70% chance of exceeding median rainfall in the coming months. The temperature outlook suggests warmer conditions for the eastern states and average to cooler than average for Western Australia.

El Nino/La Nina climate models surveyed by the Bureau of Meteorology, indicate summer and autumn will remain neutral. These models are predicting a push towards El Nino in winter and spring of 2017, which could mean warmer and drier conditions in the southern hemisphere.

PRICES

In 2016, the average retail price for fruit increased

9%

In 2016, the average price for vegetables increased

12%

The December average export price for almonds fell

42%
compared to 2015

The Australian consumer price index for fruit and vegetables weighted across each capital city shows a positive trend in price growth since the early 1990's. Quarterly growth has averaged 0.8% and 0.5% for fruit and vegetables respectively since 1989. In 2016, average fruit prices increased 9% and vegetables 12%. Wet conditions during sowing months on the east coast of Australia reduced supply late in 2016 resulting in price increases.

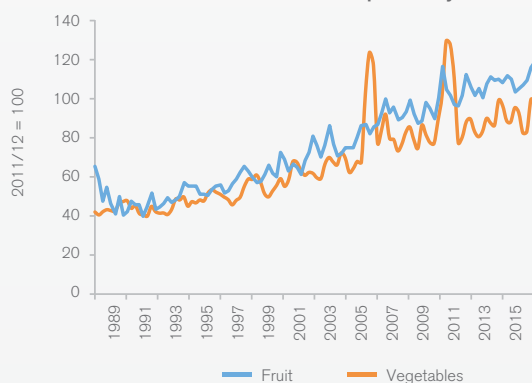
Vegetable prices generally remain flat due to stable supply and demand. However, in 2016 a very wet period between June and August prevented sowing in key potato growing regions. A shortage of potatoes in the second half of 2016 increased prices by 60% from January 2016 to December 2016.

Prices increased in 2016 for cherries, avocados, oranges and apples. Export influenced cherries from Tasmania doubling in price in 2016. WA avocado prices increased 16%, NSW oranges 24% and WA apples 10% when comparing December 2015 and 2016. Queensland bananas and mangoes decreased 33% and 39% respectively due to production growth.

The almond price decreased notably in 2016. SA almond prices went from \$12/kg export in December 2015 to \$7/kg in December 2016. At \$7/kg, the price is below the 20th percentile for the last two years. Both Queensland and NSW macadamias performed well in 2016, at \$24 and \$25/kg, which is above the 80th percentile for the last two years.

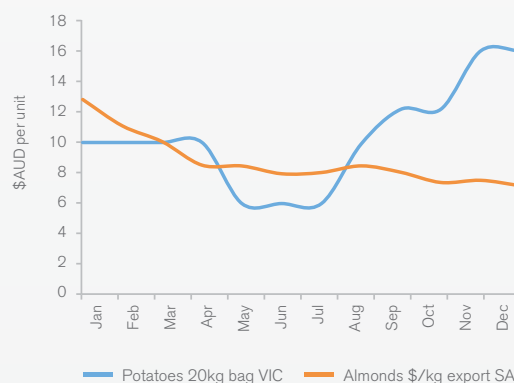
Refer to the back of this report for state-by-state price details.

Fruit and vegetables weighted average CPI for all cities in Australia moved positively in 2016



Data: Australian Bureau of Statistics

Market movers in 2016: Potatoes and almonds



Data: Ausmarket, Global Trade Information Services

Outlook

Potato prices will likely remain high in the coming months as volume gaps remain from the wet sowing period in 2016. Vegetables with growing export exposure such as asparagus, carrots, cauliflower, celery and broccoli are most likely to show positive growth in price during 2017 as the supply and demand balance shifts. Fruit supply is the hardest variable to predict therefore it is best to look at other fundamental indicators of price. Fruit consumption domestically is increasing and growing export demand in some categories all make for positive price signals for Australian fruit in 2017 and beyond. Californian almond production is getting back to normal, and as a result, almond prices are forecast to fall a further 10-15% in 2017.

DEMAND

Domestic fresh fruit consumption increased

6%

in 2014/15

The value of nut exports increased

27%

in 2015/16

The value of wine exports increased

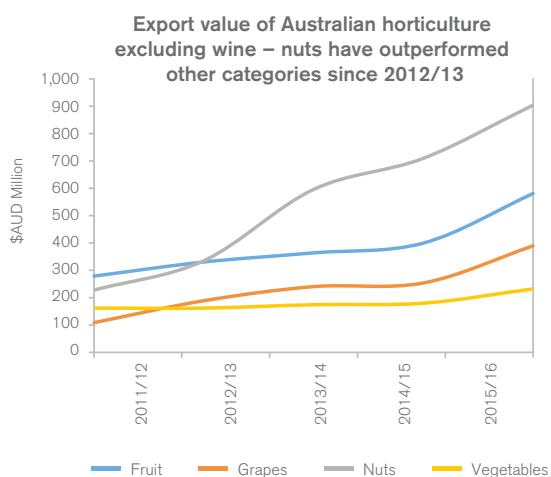
10%

in 2015/16

Consumption of all fresh horticulture products was up 4% in 2014/15 to 159.2 kg per capita. This follows a 1% increase in 2013/14. Fresh fruit consumption increased 6% to 69.1 kg per capita. Significant consumption growth occurred in rubus berries, up 29%, avocados 18%, apples 17%, oranges 13% and blueberries 7%. Fresh vegetable consumption plateaued in 2014/15 at 86.6 kg per capita – this follows a 3% increase in 2013/14. Consumption of tomatoes increased 5% in 2014/15 followed by fresh herbs, up 4% and green beans up 3%. Nut consumption rebounded in 2014/15 to 3.62 kg per capita following reduced domestic supply in 2013/14. Almonds are the most consumed nut in Australia with consumption growing 4% in 2014/15.

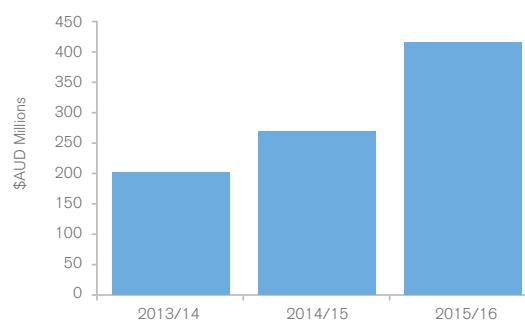
The total value of Australian horticulture exports was \$2.1 billion in 2015/16, 37% higher than 2014/15. Nuts were the

highest value segment at \$902 million, an increase of 27%. Fruit exports were \$580 million, up 46%, grapes excluding wine \$387 million, up 55%, and vegetables \$231 million, up 31%. As at December 2016, the value of fruit exports for the 2016/17 financial year were 6.1% higher for the July to December period. The increase in value comes largely from growth in exports of fresh oranges into mainland China. Vegetable exports for FY17 year-to-date are up 17.2% - this increase comes largely from growth in fresh cauliflower and broccoli exports into Singapore and asparagus into Hong Kong. The value of nut exports is down 22.4%, as almond production returns to normal in California. The value of wine exports increased 9.3% in 2015/16. FY17 year-to-date figures show an increase of 11.5%, due to a 46% growth in value of wine exports to China for the July and December 2016 period.



Data: Eurostat

Total value of Australian wine exports to China continue to grow, strongly exceeding \$400M in 2015/16



Data: Global Trade Information Services

Outlook

Domestic consumption of fruit is growing at or above the rate of production for a range of varieties. Avocados, blueberries, raspberries, oranges, lemons and limes are all imported to meet seasonal demand throughout the year. The seasonal nature of these fruits coupled with increased export volumes suggests demand is likely to outpace supply. Vegetable consumption domestically is stable, and demand growth looks flat. However asparagus, carrots, cauliflower, celery and broccoli have all performed well on the export market. Demand continues to rise for these vegetables from countries such as China, Singapore, Japan, Malaysia, Saudi Arabia and South Korea. For wine exports, rapid growth in red wine demand from China looks set to continue and further tariff reductions could aid growth.

FINANCIAL PERFORMANCE

Average income of Australian vegetable farms was

\$1.1

million in 2015/16

Hired labour represented

20%

of total variable costs to vegetable growers in 2015/16

Fruit imports increased

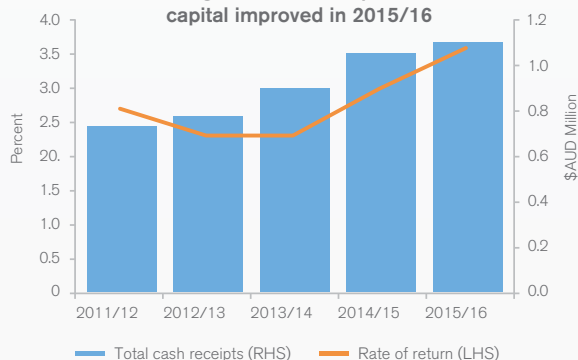
7%
in 2016

According to the ongoing economic survey of vegetable farms in Australia conducted by ABARES, income has increased significantly in the last three years. In 2015/16 total cash receipts averaged \$1.1 million, up 5.2% which follows an increase of 17.3% in 2014/15. The increases in income are put down to higher yields in most crops and price improvements in potatoes and tomatoes. Farm business profit benefited from increased income by 30.2% in 2015/16. Producers didn't have to spend much more to achieve higher yields given more favourable growing conditions. Return on farm capital excluding appreciation was 3.6% in 2015/16, up 0.6% compared to the previous year. Hired labour remains the most significant variable cost. Hired labour is a major cost to all horticulture. For vegetable growers the overall variable cost component has remained around 77-80% of total income.

Hired labour on average represents around 17-20% of total variable costs for vegetable growers.

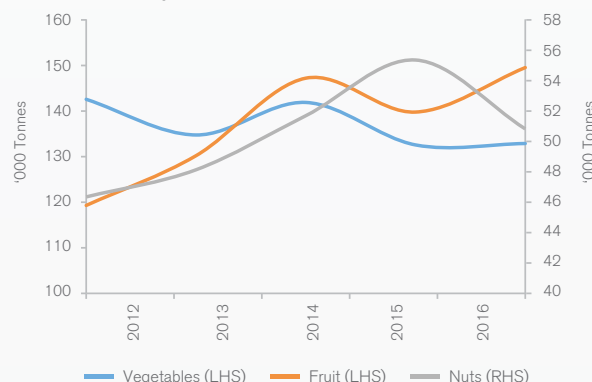
Imports can increase competition, particularly if the imported product is price competitive with locally produced equivalents. In 2016, the imported quantity of nuts decreased 8.2%, driven by decreased cashew imports. Average growth of nut imports since 2012 is 2.3%. Vegetable imports increased 0.2% in 2016. Since 2012, vegetable imports have averaged a decline of 1.8% - this is due to less frozen vegetables being imported from New Zealand, primarily peas. Fruit imports increased 7% in 2016. Since 2012, fruit imports have averaged 5.8% growth. This increase is a result of imports of frozen berries from Chile and NZ along with increased kiwi fruit imports from NZ and Italy.

Financial performance of Australian vegetable growers: national average for cash receipts and return on capital improved in 2015/16



Data: Australian Bureau of Agricultural and Resource Economics and Sciences

Australian horticulture imports excluding liquids – fruit imports reached 149,000 tonnes in 2016



Data: Global Trade Information Services

Outlook

Forecasts are predicting warmer and drier conditions over winter and spring which would likely result in lower yields and reduced income for horticulture producers. Reduced imports of frozen vegetables since 2012 are a sign consumers are continuing to purchase either fresh or frozen vegetables from Australia, and demand is likely to increase as a result. Fruit producers are benefitting from increased domestic consumption of fruit, however this looks to have pushed consumers to frozen products, particularly berries. This trend essentially opens the door for substitution of fresh local berries for cheaper foreign frozen berries. As evidenced in 2016, a lack of hired labour could continue and become the limiting factor to profitability in the short to mid-term as there is no alternative to hand picking.

PRICES – STATE DETAIL

	Current	February 2016	2 year average	80th percentile	20th percentile
Victoria					
Grapes 18L ctn	34	40	36	40	30
Oranges (citrus pack)	32	40	37	36	30
Pears 13kg ctn	32	30	31	35	28
Asparagus 5kg ctn	57	90	66	70	60
Carrots 15kg ctn	19	18	18	20	18
Broccoli 8 kg ctn*	16	–	17	–	–
Almonds \$/kg exp	7	13	9	12	8
New South Wales					
Oranges (citrus pack)	21	20	25	30	22
Grapes 18L ctn*	40	–	36	–	–
Potatoes 10kg bag	9	10	10	10	8
Macadamias \$/kg exp	24	22	18	21	16
South Australia					
Mandarins 1/2 cp	24	20	27	36	20
Oranges (citrus pack)	33	32	32	35	28
Onions 20kg bag	23	20	17	20	14
Potatoes 5kg bag	3	3	4	4	3
Almonds \$/kg exp	7	12	10	13	12
Queensland					
Avocado tray*	27	–	24	–	–
Bananas 13kg ctn	18	20	23	28	18
Mandarins 1/2 cp	15	18	23	24	16
Mangoes tray	25	30	27	31	21
Macadamias \$/kg exp	25	24	19	21	16
Tasmania					
Carrots 15kg ctn	22	18	19	20	18
Onions 20kg bag	14	12	12	14	10
Cherries \$/kg exp	24	12	18	20	15
Western Australia					
Apples 12kg ctn	34	31	33	36	31
Avocado 5kg ctn	43	38	45	48	39
Carrots 20kg ctn	18	18	18	19	18
Northern Territory					
Mangoes tray*	25	–	50	–	–
Watermelon \$/kg*	1	–	0.93	–	–
Australian dollar					
AUD/USD	0.77	0.71	0.88	1.02	0.75

Data: Ausmarket consultants, Market West, RBA

cp = citrus pack, ctn = carton, exp = export

*based on 7 months of data



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