

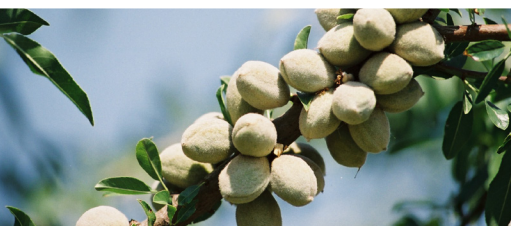
Year 10

Economics & Business



Agriculture in Education:
an educational resource for Year 10 Economics and Business

From Citrus to Almonds



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the Agriculture in Education Program Phase 2.*

AGRIFOOD
SKILLS AUSTRALIA



From Citrus to Almonds

Year 10 Economics and Business

The ways businesses respond to changing economic conditions and improve productivity through organisational management and workforce management	<u>ACHEK054</u>
Develop questions and hypotheses about an economic or business issue or event, and plan and conduct an investigation	<u>ACHES055</u>
Gather relevant and reliable data and information from a range of digital, online and print sources	<u>ACHES056</u>
Analyse data and information in different formats to explain cause-and-effect relationships, make predictions and illustrate alternative perspectives	<u>ACHES057</u>
Reflect on the intended and unintended consequences of economic and business decisions	<u>ACHES061</u>

Source: Australian Curriculum v8.1

<http://www.australiancurriculum.edu.au/humanities-and-social-sciences/economics-and-business/curriculum/7-10?layout=1-level10>

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Learning Outcomes

At the end of this unit of work, students will be able to:

- Explain the factors contributing to Australia's current success as a global almond producer and exporter;
- Describe and analyse reasons for Australia's rapid increase in almond production in recent years;
- Explain how a farming enterprise has responded to changing economic conditions and improved productivity;
- Identify the major capital outlays for a horticultural business;
- Analyse the intended and unintended effects of economic and business decisions and the potential consequences of alternative actions; and
- Make and justify predictions on the future of the Australian almond industry.

Description

This resource and accompanying video – *From Citrus to Almonds* (<https://youtu.be/NJlaLbIVfEM>), is designed to provide students with an insight into the operation and management of an almond farm on the banks of the Murray River within the highly productive Riverland area of north eastern South Australia. Students investigate the contribution of the Australian almond industry to the Australian economy and its sustained and phenomenal growth in plantings and sales (both domestic and global markets) over the past 10 years.

In the video, owner manager - Simon Vause, explains the family decision to switch from citrus to almonds and how this improved the productivity and certainty of the farming operation. He outlines planning and managerial strategies for responding to changing economic conditions and maximising his return on investment. Students analyse the intended and unintended effects of his decisions and possible consequences of alternative actions.

Activities are designed to assist students generate inquiry questions for the research task required for assessment. They undertake research into the production and supply of Australian almonds and assess the effects of consumer choice, marketing strategies and bilateral and multilateral trade arrangements on the future viability and growth prospects of the Australian almond industry over the next 5-10 years.

Student Activity 1: What do I know about almonds?

Student Activity 2: Decision making

Student Activity 3: Almonds a remarkable growth story

Extension: Free Trade Agreements

Assessment: The Australian Almond Industry

Background notes for teachers

The Australian Almond Industry

The almond industry today is undergoing rapid expansion and is Australia's fastest growing horticultural industry.

"Almonds are the main driver of growth in Australian horticultural exports. In 2014/15, almonds were Australia's most valuable horticultural export product with annual export sales of \$422 million, an increase of 14% on the previous year.... Over the past five years, export sales have increased 246%.

In 2015/16, export sales will reach \$600 million, largely due to the 2015 crop being 10,000 tonnes larger than that of 2014."

Location and Growing Requirements: Most of Australia's commercial almonds are grown within the Murray Valley west from Griffith NSW and across into the Northern Adelaide Plain of South Australia. While some are grown in the south west of WA, the three main growing regions are:

- The Sunraysia of Victoria (67%)
- The Riverland of SA (19%)
- The Riverina of NSW (13%)

Almonds thrive in the temperate climatic conditions that prevail in these areas - hot summers, cold winters and predominantly winter rain. Irrigation is required for almond growing in the Riverland to supplement rainfall, especially over the hot dry summers.

http://australianalmonds.com.au/enjoy/australian_almonds/where-are-australian-almonds-grown

Historical Overview: Almonds were first planted in Australia on Kangaroo Island in 1836 and due to the state's suitable Mediterranean climate, soon spread to private gardens in Adelaide and other towns across the central plains and southern districts of South Australia.

In 1882, the Nonpareil almond variety was imported from California. By the end of the 1800s, small commercial almond orchards had been established near Adelaide and across the central plains and southern districts and even to the northern plains of SA.

During the 1960s and 1970s, the SA industry gradually shifted to the irrigated lands of the River Murray. The reasons being:

- land was cheaper and more plentiful;
- the drier climate was more suitable for almonds (less disease problems);
- warmer and sunnier spring weather enabled more reliable setting of nuts;
- adequate water for irrigation from the River Murray system;
- larger holdings allowed greater economies of scale with almonds well suited to highly mechanised production; and
- the local market was grossly under supplied, with potential for production growth.

Of the almost 29,000ha planted to almonds in Australia in 2014-15, Nonpareil (50%) is still the major variety. Other major varieties are Carmel (31.6%) and Price (11.8%).

Production: Almonds generate around 10% of Australian horticulture's gross value of production. In the 2015 marketing year (March 2014- February 2015), the almond production forecast was 75,000 tonnes (kernel weight equivalent) - up from just 16,001 tonnes in 2006.²

¹ Almond Insights: 2014-15 Almond Board of Australia, http://australianalmonds.com.au/documents/Industry/Stats_Reports/Almond_Insights_2014-15_LR.pdf

² Almond Insights 2014-15 - Production: Almond Board of Australia, p 9

Demand for Australian almonds is growing on both local and export markets. Domestic sales increased by 55% during the five years to 2015. The Australian almond industry has come a long way since the planting boom of the mid 2000s. The record prices obtained during 2014/15, resulted from the drought in California and increasing global and local demand.

Industry profitability is prompting further orchard expansion. The ability to have large scale orchards with mechanised harvesting enables efficient production, but orchardists still need to manage the risk from pests, fungal diseases, poor cross pollination and rain during the summer harvest. This is done through precise irrigation and nutrition management.

Consumption: Unlike choosing an apple, most of us have little idea of the almond variety – we choose almonds according to how the kernels have been processed - salted/unsalted, roasted, raw, blanched, slivered, chocolate coated. Surprisingly, 12 different varieties are currently grown in Australia. Almonds are a recognised source of protein and vitamin E, dietary fibre and monosaturated fat. They can be processed into a range of products and are used in many readily available supermarket products. Almonds are renowned for their flavour, texture and healthy image. Gluten free almond meal is increasingly being used in baking instead of flour and almond milk sales in Australia now outstrip sales of soy milk.

In the twelve-month period to March 2015, 192 new products containing almonds were stocked by Australian supermarkets.

Almonds are used in food preparation world wide. In countries such as India, almonds are an integral component of religious and cultural events. Almonds are quality graded as - Fancy, Extra Supreme, Supreme, or Manufacturing.

Exports: The rapid expansion in production of almonds in Australia has led to supply now exceeding domestic consumption. Hence the ability to export is critical. The combined value of domestic and export sales from the 2015 crop (marketing year - March to February) is forecast to exceed \$800 million, despite 16% of Australia's existing orchards not yet in full production. Further planned expansion will lift production to over 100,000 tonnes and predictions are that the almond industry's value will exceed \$1 billion in the early 2020s.³

Australia has successfully managed to secure global markets for its almonds. Fifty countries currently buy Australian almonds. Our top five customers by value of export earnings are:

- India - 23.6%
- Spain - 14.2%
- USA - 11.3%
- United Arab Emirates - 9.28%
- Germany - 6.7%

Currently, 68% of Australian almonds exports processed and sent overseas as kernels. 32% are exported in the shell. India and Hong Kong are the standout exceptions with a marked preference for purchasing the almonds in shell.

Marketing: Under Australia's recently signed Free Trade Agreement with China (China-AFTA), all tariffs on horticultural products will be progressively eliminated. The 10 to 25 per cent tariff on macadamia nuts, almonds, walnuts, pistachios and all other nuts will be removed by 1 January 2019. Two further Free Trade Agreements (FTAs) have been signed with South Korea and Japan. Australia is promoting the brand name 'Australian Almonds' in these three markets and also to its other overseas customers.

Almonds are traded internationally in US dollars and the exchange rate between the Australian dollar and the US dollar impacts directly on the price achieved by Australian marketers and returns to growers. During 2014/15, the Australian dollar fell well below parity, increasing the return from overseas sales contracted in US dollars.

85% of almond growers in Australia sell their almonds to AlmondCo Australia where they are processed and packaged for sale locally and overseas. AlmondCo is one of Australia's most successful horticultural co-operatives.

³ Almond Insights 2014-15 - Production: Almond Board of Australia, p 13



Setting the Scene

Explain to students they will be investigating the Australian almond industry – an industry that has undergone rapid expansion recently and is now Australia's most important horticultural industry. Students are introduced to the business decisions taken by an almond grower in response to changing market conditions and gain an insight into how the industry has responded to the growing domestic and overseas demand for almonds.

Ask students to identify and list 3-4 things that come to mind when they think of almonds. Have they ever been aware of the type of almond they are eating? Share these thoughts.

Stimulate interest by generating discussion through questions such as:

- Do you eat almonds? If so, what type do you like?
- There are a number of different varieties – are you aware of any of these?
- What is the difference between the type of almond you eat and the variety?
- Are almonds good for you? Why?
- What are almonds – a vegetable, nut, fruit or something else?
- How are almonds grown?

This will involve them having an appreciation of how almonds are grown, processed and marketed.

Explain to students that, by the end of the unit, they will be required to prepare a researched report on the future viability and growth prospects of the Australian almond industry over the next 5-10 years. This will involve the growing, processing and marketing of almonds.

The accompanying video will also assist students generate their own inquiry questions for the assessment task. *From Citrus to Almonds* (<https://youtu.be/NJlaLbIVfEM>)

Ask students to suggest answers to the following questions. Record their responses in a visible place in the classroom. The questions can be asked again at the completion of the unit when it will be interesting to compare their responses once they have completed their research.

- How many different varieties of almonds are grown in Australia? Record the total suggested by the students.
- Suggest how many new products containing almonds recently came onto supermarket shelves in Australia in just one year. Record the range of responses.
- Does Australia produce more almonds for domestic consumption or for sale overseas? Record the number of scores for domestic versus export.

Distribute copies of Student Activity 1: What do I know about almonds?



Student Activity 1: What do I know about almonds?

Background

Almonds are one of Australia's current success stories. The almond industry is our fastest growing and most valuable horticultural industry with export sales worth close on \$600m.

Almonds are a relatively cheap crop to plant. They are a non-perishable product that can be mechanically harvested once a year and they return high gross margins. Further, they are an increasingly popular food item, both in Australia and overseas, in some of our biggest export markets. They have numerous health benefits and can be used in a large variety of products.

Location and Growing Requirements: Most of Australia's commercial almonds are grown within the Murray Valley west from Griffith NSW and across into the Northern Adelaide Plain of South Australia. While some are grown in the south west of WA, the three main growing regions are:

- The Sunraysia of Victoria (67%)
- The Riverland of SA (19%)
- The Riverina of NSW (13%)

Almonds thrive in the temperate climatic conditions of these areas - hot summers, cold winters and predominantly winter rain. Irrigation is required for almond growing in the Riverland and Riverina. This supplements rainfall, especially over the hot dry summers.

http://australianalmonds.com.au/enjoy/australian_almonds/where-are-australian-almonds-grown

Historical Overview: Almonds were first planted in Australia on Kangaroo Island in 1836. Due to the state's suitable Mediterranean climate, they soon spread into private gardens in Adelaide and towns across the central plains and southern districts of South Australia.

In 1882, the almond variety - Nonpareil, was imported from California. By the end of the 1800s, small commercial almond orchards had been established near Adelaide and across these nearby districts, with some also established across the northern plains of SA. During the 1960s and 1970s, the South Australian almond industry gradually shifted to the irrigated lands of the River Murray. The reasons being:

- land was cheaper and more plentiful;
- the drier climate was more suitable for almonds (less disease problems);
- warmer and sunnier spring weather suits the setting of nuts;
- adequate water for irrigation from the River Murray system;
- larger holdings allowed greater economies of scale, with almonds well suited to highly mechanised production; and
- the local market was grossly under supplied, with potential for production growth.

"The value of Australia's almond exports has grown rapidly over the past five years, increasing by 312 per cent between 2010-11 and 2014-15. In 2014-15 it reached \$522 million, contributing more than 70 per cent of the value of Australian tree nut exports." ⁴

This coincided with close on 7,000 trees planted in 2006 and 2007 reaching maturity.

Of the almost 29,000ha planted to almonds in Australia in 2014-15, Nonpareil (50%) is still the major variety. Other major varieties are Carmel (31.6%) and Price (11.8%).

⁴ Department of Agriculture and Water Resources - Agricultural Commodities vol.6 no.2 June quarter 2016
http://data.daff.gov.au/data/warehouse/agcomd9abcc004/agcomd9abcc20160621_5B9fz/AgCommodities201606_v1.1.0.pdf



Student Activity 1: What do I know about almonds? (cont)

Initial investigation

The following websites provide a rich and current source of information on Australia's almond industry. They will assist you increase your knowledge of the industry and the context in which almonds are grown, processed and marketed, as you commence your research.

Take notes as appropriate, using each of these links:

Almond Board of Australia - Amazing Almonds <http://amazingalmonds.com.au/about/>

1. The life cycle of the almond involves five stages. What are these? Why are different varieties grown in the one orchard and why do almond growers often have apiarists position their hives within the orchard? Note this for potential biosecurity risks.
2. Familiarise yourself with the location of Australia's almond growing areas and what you already know about the required growing conditions. At this stage, try to find the other major almond producing countries.
3. Were you tempted to search further on this website? If so, note some of nutritional benefits of almonds. Keep this in mind when you research further on the growing domestic and global demand for almonds.

Almond Board of Australia - Growing Almonds <http://growing.australianalmonds.com.au/>

4. What is the Australian Almond Board? What is its purpose and where does it draw its membership from?
5. If you were an almond grower, what benefits could you get from membership?
6. Bookmark the "In a Nutshell" newsletter. This will be a useful resource further into your research. Note Australia's three largest export markets.

Horticulture Innovation Australia <http://horticulture.com.au/grower-focus/almond/>

7. What is its role? How does it raise money for industry research and development?
8. What is the Australian Almond industry's current gross value of production (GVP)?
9. Find an estimate of predicted expansion over the next three years.

Some further aspects to investigate are suggested below. The list is not exhaustive.

- The major global almond producers.
- Australia's ranking as a global producer of almonds.
- The industry's rate of growth in recent years. How sustainable is this?
- The current comparative value of domestic and export sales.
- Predictions of future growth over the next 5-10 years and an estimate of the likely value of the almond industry to the Australian economy by then.

Teacher Preparation: Activity 2 - Decision making

In Activity 2, students watch the accompanying video in which they meet Simon Vause the owner manager of a 20 hectare almond orchard. The orchard is located on the banks of the Murray River not far from Renmark in the South Australian Riverland.

1. Explain to students that the video highlights Simon's considered business decision to cease growing citrus and switch to 100% almonds.
2. Simon also explains his relationship with the Almond grower co-operative - AlmondCo.
3. Distribute copies of Activity 2: Decision making - Information sheet (two pages)
4. Distribute copies of Activity 2: Decision making - Parts 1 and 2
5. Show the video - *From Citrus to Almonds* (<https://youtu.be/NJlaLbIVfEM>).

(The information sheet for students in Activity 2 contains additional background to the video. The video can be viewed before or after reading the supporting information.)

Having already advised students that the activities in this unit are designed to assist students with their researched report, it is up to the discretion of teachers to decide when to provide students with a copy of the assessment task and also an appropriate time span (5- 10 years) for their predictions.

Research topic:

Prepare a researched report on the future viability and growth prospects of the Australian almond industry over the next 5-10 years.

To complete the activities unit, students will also need copies of the following:

Student Activity 3: Almonds - a remarkable growth story 1 and 2

Student Extension Activity: Free Trade Agreements

Assessment: The Australian Almond Industry



Student Activity 2 - Decision making

Information sheet

This activity provides an insight into the Australian almond industry through the perspective of the owner manager of an almond orchard, in the South Australian Riverland.

In the accompanying video, *From Citrus to Almonds* (<https://youtu.be/NJlaLbIVfEM>)

Simon Vause, explains some of the many decisions his family has taken and the lessons learnt, over recent years, to operate a profitable and sustainable horticultural operation.

The information below contains some additional background to that in the video. Decide as a class whether to view the video before or after reading the supporting information.

Background: Big River Products farm business decisions:

When the 20 hectare property was purchased in 1995, it was a run-down orange, lemon and apricot orchard. The fruit trees were in a poor condition, but the farm had good sheds, plus a large fruit packing shed complete with a cool room and an apricot packing machine.

The initial intention was to breed and raise ostriches among the fruit trees, taking advantage of the booming ostrich industry at the time. However, the fledgling Australian ostrich industry collapsed soon afterwards, due to oversupply and a dramatic slump in prices.

Almonds, Apricots and Citrus (1997 to 2007)

The 20 hectare ostrich farm had to be converted into a profitable fruit growing business.

- Decisions were made concerning which trees to keep and which to replace.
- The existing apricot trees were good varieties and were supported by everything needed to grow, pack and market the fruit on site, under the farm's own label.
- Two areas of young navel orange trees could be improved and made productive, plus there was a strong citrus export market to the USA, taking advantage of a low \$A and the Southern Hemisphere harvesting season the opposite to that in North America.

The remaining poor quality trees were removed and options considered for replacing them.

- apples and apricots required much labour to set up, prune and harvest.
- grapes were relatively easy to look after, well suited to the climate and prices were good. However, grapes faced a possible risk of oversupply, as they were being planted at an alarming rate throughout many regions in Australia.
- With the lessons of the ostrich industry collapse, there had to be another choice.

Almonds were the choice. They suited the local climate, trees required little pruning and could be mechanically harvested. This would greatly reduce labour requirements.

In 1997, the first 3.6 hectares of almonds were planted. Three varieties, Nonpareil (50%) and pollinators - Carmel (25%) and Peerless (25%), were planted in alternating rows, using the industry standard 6.7 metre row width and 5.5 metre tree spacing - 271 trees per hectare.

Another 3.6 hectares were planted in 2005 and a long term supply agreement was signed with the almond grower co- operative - AlmondCo.



Student Activity 2 - Decision making

Information sheet (cont)

The Drought (2006 to 2010)

- The Murray River water that flowed past the property had not previously been an issue, as the orchard had sufficient pumping rights to water the trees across the entire property.
- The 2005-6 drought in Queensland and New South Wales dramatically reduced the amount of water entering the Murray Darling Basin and water licences throughout the Basin were reduced below 100% of allocation for the first time.
- Water allocation to the orchard was reduced to 67% and then to 15% by mid 2007. At the same time the cost of leasing water rose dramatically, reaching \$1200 per megalitre by November 2007.

Oranges to Almonds (2009 to 2011)

When the water allocation dropped to a low of 5%, drastic action was required. With just over two hectares of oranges remaining, the choices for Big River Products were to:

- borrow more money;
- lease in water; or
- stop watering various patches of trees.

From the start, Big River Products had consigned citrus packaging and marketing to a nearby citrus packing business. This good business relationship resulted in improved orchard management practices. Yield, quality and the gross margin increased. On the flip side, production costs - labour, fertiliser, diesel, herbicides, packing, transport, water and electricity, kept rising.

A deteriorating marketing environment for citrus:

For many years, first grade citrus was packed and much of it exported to the US and Japan. There was a strong juice market for less than perfect fruit, but around 2007, cheap imported juice started flooding the Australian market and citrus juice sales dried up. The Australian dollar started to rise, reducing gross return for exports. Fruit quality requirements rose, and orchardists found their 2nd and 3rd quality fruit being rejected. Further, wages for fruit pickers were increasing.

Making the switch:

While issues with the citrus were increasing, the previously planted almond trees were growing and yields per hectare were increasing. With almonds being sold globally in \$US, the drop in the Australian currency at the time was helping returns.

Consequently, at the end of 2009, the decision was made replant the oranges with almonds.

- Almonds had a brighter future with a better gross margin.
- Short term water savings could be made, as newly planted almond trees, required 75% less water than mature trees.
- The replacement almond trees were ordered, with a significant cost saving owing to the drought.
- Big River Products invested in upgrading and automating the on-farm irrigation and linked fertiliser system, in order to deliver greater efficiencies and future water savings.

These decisions paid off during the tough 2009-2010 Irrigation year. In September 2010, record high rainfall was recorded throughout the Murray Darling Basin. Water allocations were increased. The decision to order the trees during the drought was a sound one and two hectares of almonds were planted in 2011, with water allocation back to 100%.



Student Activity 2: Decision making

Part 1

Watch the video that accompanies this resource – *From Citrus to Almonds*
(<https://youtu.be/NJlaLbIVfEM>)

1. *Big River Products is a 20 hectare almond orchard on the banks of the Murray River, in the Riverland region of South Australia – 15km from the Victorian border. Owner manager - Simon Vause, explains why the decision was made to switch from a mixed orchard, producing mainly citrus, to a 100% almond growing enterprise. He outlines the planning and managerial strategies that have enabled him to respond to changing economic conditions to maximise his return on investment and increase the sustainability of the operation.*
2. As a class, share your initial reactions to the video.
 - The appearance of the land and its suitability for a highly mechanised operation.
 - What is the timeframe from almond planting to initial harvest? How does this affect business decisions? How are labour requirements handled?
 - The collapse of the citrus juice market in Australia was a major contributing factor to Simon's decision. What other factors might have contributed to this collapse?
 - Share your view as to whether you could have made the decision to switch to 100% almonds. Rank the contributing factors in order of importance.
 - In your view, was this a sound business decision? Why? What else do you think Simon might have done in preparation for operating a 100% almond orchard?
 - Read the excerpt below from a researched report. How does it support your understanding of Simon's investment choices?

Factors influencing investment:

"Over the past two decades,..... the pressures for productivity improvements in the face of water scarcity and uncertainty about future water availability created a difficult operating environment for Murray-Darling Basin irrigators. A farmer's motivation to invest is primarily influenced by factors which affect the net returns available from alternative options. In making investment choices, a farmer would most likely invest in those activities which offer the greatest capacity to contribute to improvements in farm profitability."

Overview of recent changes in irrigated agriculture in the Murray-Darling Basin 2006/07 – 2008/09
http://hwc.gov.au/_data/assets/pdf_file/0005/18599/64-ABARES-report.pdf



Student Activity 2: Decision making

Part 2

Work through the following questions, keeping in mind that other growers in Australia have made similar decisions and many more may be planning to do so. If necessary, watch the video again.

1. Deciding “whether a product can sell” is a fundamental business decision. Simon described his decision to change out of citrus as a “bold decision”. What advice does he offer about decision making in a horticulture business enterprise such as his?
2. Simon’s orchard will soon be 100% almonds. What are the associated risks and how is he mitigating them?
3. Identify the orchard’s major overheads. What evidence did you detect of these overheads being managed sustainably?
4. What is AlmondCo? What are the benefits and obligations of membership to growers such as Simon?
5. Make sure you understand how a grower co-operative functions. A quick online search will reveal a number of other Australian agricultural commodity grower co-operatives.

Water shortages and water prices played a significant role in Simon’s business decisions. The following three page summary of a research report is a useful reference at this stage. (Access the PDF download.)

Rural Industries Research and Development Corporation (RIRDC): Research Summary – Contemporary trend and drivers of irrigation in the Southern Murray Darling Basin
<https://rirdc.infoservices.com.au/items/16-014>



Student Activity 3: Almonds - a remarkable growth story Part 1

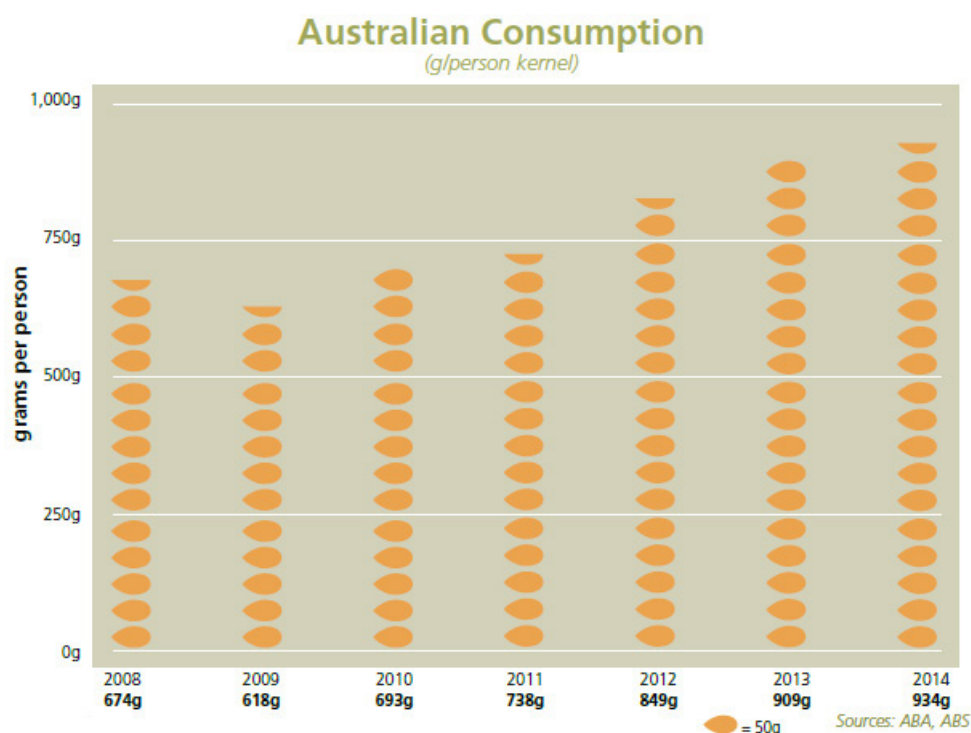
The current growth in Australian horticultural exports can largely be attributed to almonds. In 2014-15, almonds were Australia's most valuable horticultural export commodity. In the previous five years, domestic sales increased by 55% and exports increased by 246%. In 10 years, production increased from slightly over 16,000 tonnes to an estimated 75,000 tonnes.

The chart below, provides an insight into this rapid growth. At this stage, you may be aware of the reasons for this increase, but the chart provides further evidence to back up your discussion of this in your assessment task. Note that the Australian almond marketing year is from March to February, as the annual harvest takes place in February.

Overall, world production of almonds is increasing. While domestic consumption of almonds has risen, this is relatively modest in relation to Australia's rapid increase in production.

Draw some conclusions from the chart below to answer the following:

- What are the implications of the statement above for the industry?
- Does Australia produce enough almonds to meet domestic market demand?
- Consider this in view of Simon's comments about the role of the almond grower co-operative – AlmondCo. What does he see as a key role for AlmondCo?
- Analyse the information in the chart below and draw your own conclusions. You may find this useful to include as supporting evidence in your researched report.



Almond Insights 2014-15, Almond Board of Australia © Almond Board of Australia. All rights reserved, used with permission.

<http://australianalmonds.com.au/documents/Industry/Stats Reports/Almond Insights 2014-15 LR.pdf>



Student Activity 3: Almonds - a remarkable growth story Part 2

Further investigation: Analysis of statistical data, provides a basis for predictions you might make in your report and evidence to support them. The following questions are suggested as a guide for your research. They are not a conclusive list. Before undertaking further research, ask your teacher for a copy of the assessment task and plan your approach.

Access the latest industry report on the Australian almond industry – Almond Insights, produced by the peak representative almond industry body - the Almond Board of Australia. It contains useful statistics and charts. Other resources should also be used. Acknowledge this source and others you use here, for inclusion in your assessment report.

Almond Insights 2014-15: Almond Board of Australia © Almond Board of Australia
<http://australianalmonds.com.au/documents/Industry/Stats Reports/Almond Insights 2014-15 LR.pdf>

1. What information would you need to make an informed estimate of production over the next 5-10 years? Where might the key overseas growth markets be?
2. Note the five major export destinations for Australian Almonds. In your view, where might the greatest % increase in demand come from over the next 10 years? What risks might be associated with some of these markets?
3. Suggest new export destinations with potential for further targeted marketing.
4. What is meant by kernel weight equivalent. Why is it used?
5. Almonds are traded internationally in US dollars. How does the exchange rate impact on the value of Australia's overseas almond sales? Use examples.
6. Why is almond production expected to continue to grow in coming years, irrespective of an increase or slowdown in new plantings?
7. Comment on the influence of health and nutritional trends on the future growth prospects of almond consumption.
8. Research the role of grower cooperatives such as AlmondCo and industry organisations such as the Almond Board of Australia. Make an informed judgement of their success in promoting and marketing the brand "Australian Almonds."
9. Find evidence to support why Australia's almond exports are increasingly becoming a critical factor in the future sustainability of the Australian almond industry.
10. Suggest some new products that could increase the global demand for almonds.

Almond Insights: 2014-15 – some suggested charts:

- Almond Production – Past and Present (Kernels)
- Exports by Type and Region
- World Export Destinations



Student Extension Activity: Free Trade Agreements

A number of physical, economic and social aspects impact on the almond industry - both in Australia and in overseas markets.

You have already looked at statistics illustrating the rapid growth of Australian almond exports, which increased, over the past five years, from less than 25 per cent of the value of Australian tree nut exports, to over 70 per cent. This increase coincided with strong global price increases, largely caused by drought in the dominant Californian almond industry. In 2014–15 Australia exported around 43 000 tonnes of almond kernels. In 2014–15 India was the largest market for Australian almonds, taking 33 per cent of exports by value.

Other factors have also been at play. In recent years, the Australian Government has negotiated and established Free Trade Agreements, with some of our key overseas customers.

The following website will assist you with your investigation.

Department of Foreign Affairs and Trade – China Australia Free Trade Agreement – Fact Sheet Agriculture and Processed Food

<http://dfat.gov.au/trade/agreements/chafta/fact-sheets/Pages/fact-sheet-agriculture-and-processed-food.aspx>

- Australia currently has 10 Free Trade Agreements (FTAs). Find out which countries, or groups of countries, Australia has these with.
- What is a free trade agreement?
- Why are FTAs set up?
- Does Australia have an FTA with any of our five largest customers for almonds? What impact might this have on the future growth of the Australian almond industry?
- Identify some factors within FTAs, that can impact negatively on businesses. How might membership of a grower co-operative assist individual growers in such instances?
- One of the most recent FTAs to be negotiated was with China - our largest export destination for agriculture, forestry and fisheries. While our exports to China are growing rapidly, China applies some of its highest tariffs on horticultural products.
- Refer to the website below to find out what will happen to these tariffs under the China Australia Free Trade Agreement - ChAFTA.



Assessment - Australian Almond Industry

Prepare a researched report on the future viability and growth prospects of the Australian almond industry over the next 5-10 years.

You will be assisted by the investigations you have already undertaken and the suggested reference sources. An online search for research reports/future forecasts from industry associations and other research agencies within the agriculture sector, will provide you with ideas on how to plan and present your report.

Your report will be assessed against the following criteria:

- A demonstrated understanding of key aspects of the Australian almond industry.
- A clear explanation of the physical, environmental and technological factors that contribute towards Australia's success as a safe and reliable almond producer.
- An analysis of factors that influence the choices made by domestic and overseas customers, taking into account both the health and cultural influences that are attributing to the growth in demand for almonds.
- Inclusion of a case study perspective, from Big River Products to support your predictions.
- Analysis of the role of irrigation and associated water efficiency measures.
- Inclusion of statistics and charts to support your observations and predictions.
- Provision of an appropriate title and an overview summary of your predictions.
- Correct citing of references and quotations.

Suggested length: A maximum of 1000 words.



web

Online Teacher Support Resources

1. Almond Board of Australia
<http://www.australianalmonds.com.au/>
2. Almond Board of Australia - Amazing Almonds
<http://amazingalmonds.com.au/about/>
3. Almond Board of Australia – Australian Almonds Insights
http://australianalmonds.com.au/industry/resources_stats_reports
4. AlmondCo
<http://www.almondco.com.au/>
5. AlmondCo - Product range
<http://www.almondco.com.au/shop/blanched/01>
6. Australian Bureau of Agricultural and Resource Economics and Sciences
http://www.agriculture.gov.au/abares/publications/display?url=http://143.188.17.20/anrd//DAFFService/display.php?fid=pb_agcomd9abcc20151208_11a.xml
7. Department of Foreign Affairs and Trade – China Australia Free Trade Agreement – fact Sheet Agriculture and Processed Food
<http://dfat.gov.au/trade/agreements/chafta/fact-sheets/Pages/fact-sheet-agriculture-and-processed-food.aspx>
8. Horticulture Innovation Australia
<http://horticulture.com.au/grower-focus/almond/>
9. Nut Producers Australia
<http://nutproducers.com.au/almond-products/>
10. Rural Industries Research and Development Corporation (RIRDC) Research Summary – Contemporary trend and drivers of irrigation in the Southern Murray Darling Basin
<https://rirdc.infoservices.com.au/items/16-014>

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