Australia's Tree Nut Industry

Growing For Success

2014

For further information contact:

Australian Nut Industry Council
ABN 66 007 041 732
75 Casuarina Drive
Elanora Queensland 4221

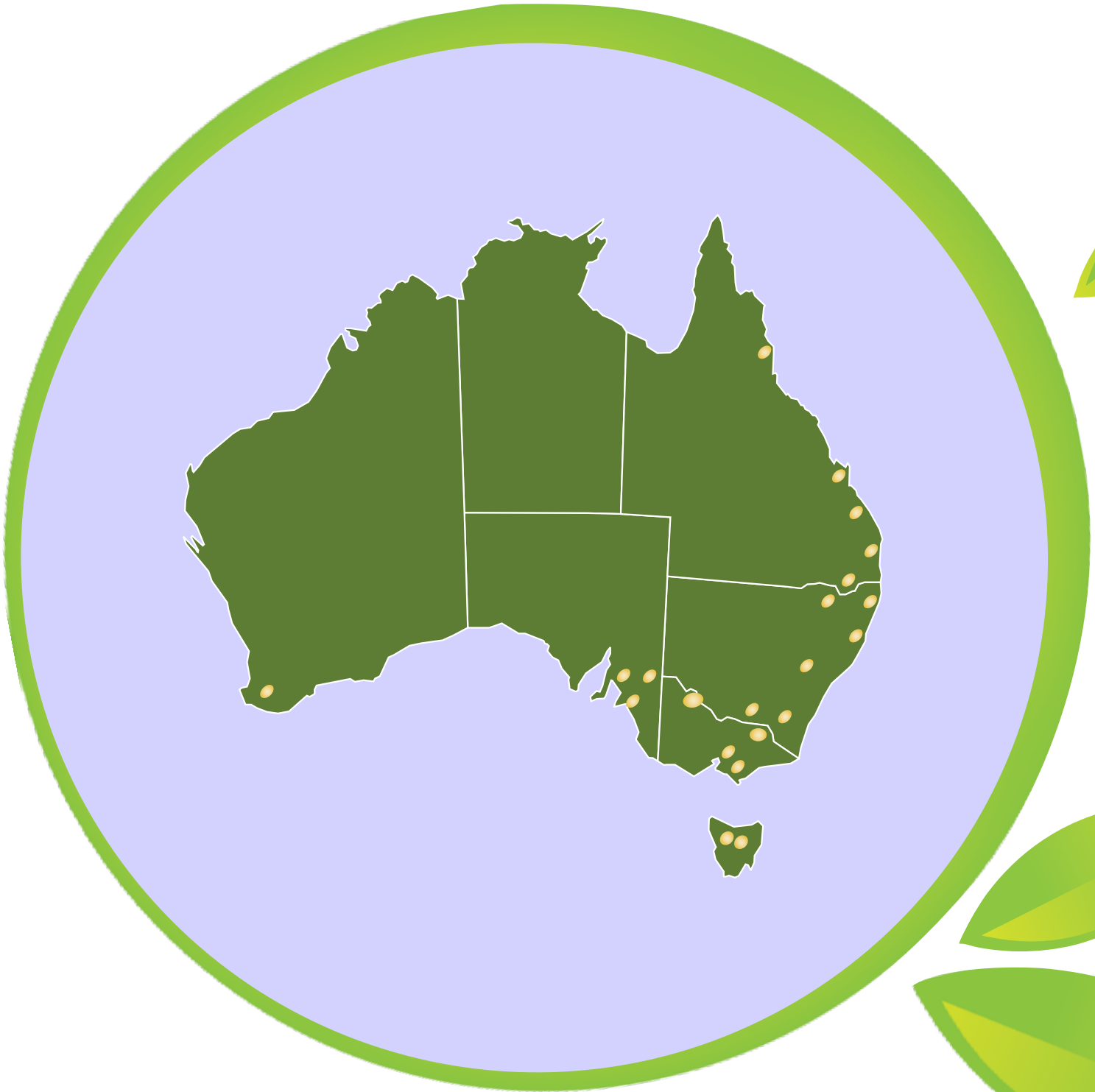
P + 61 409 707 806
E exec@nutindustry.org.au
W www.nutindustry.org.au

Acknowledgements

The Australian Nut Industry Council would like to thank the Australian nut industry bodies for their assistance with the publication of this booklet including supply of images, photos and information.

This project has been funded by HAL using voluntary contributions from the Australian Nut Industry Council and matched funds from the Australian Government.

Contents



Australian Nuts *Naturally*

Australia, the biggest island in the world (and the smallest continent), is a dynamic first world economy, well-known for its agricultural and mineral wealth; it is also an increasingly important producer of tree nuts for the global marketplace. Macadamias, almonds, walnuts, chestnuts, pecans, pistachios and hazelnuts are all grown here.

Tree nut production on a truly commercial scale in Australia dates back only to the 1980s, but since that time the industry has invested heavily in expanding output volume whilst maintaining a keen focus on quality. Today, buyers from Asia, Europe, the USA and elsewhere recognise Australia as the source of premium quality nuts, especially in the northern hemisphere off-season.

The Australian Tree Nut Industry

This vast continent is characterised by a wide array of soil and climatic types (ranging from tropical through to cool temperate) such that almost any nut species can and does succeed in some part of *Terra Australis*.

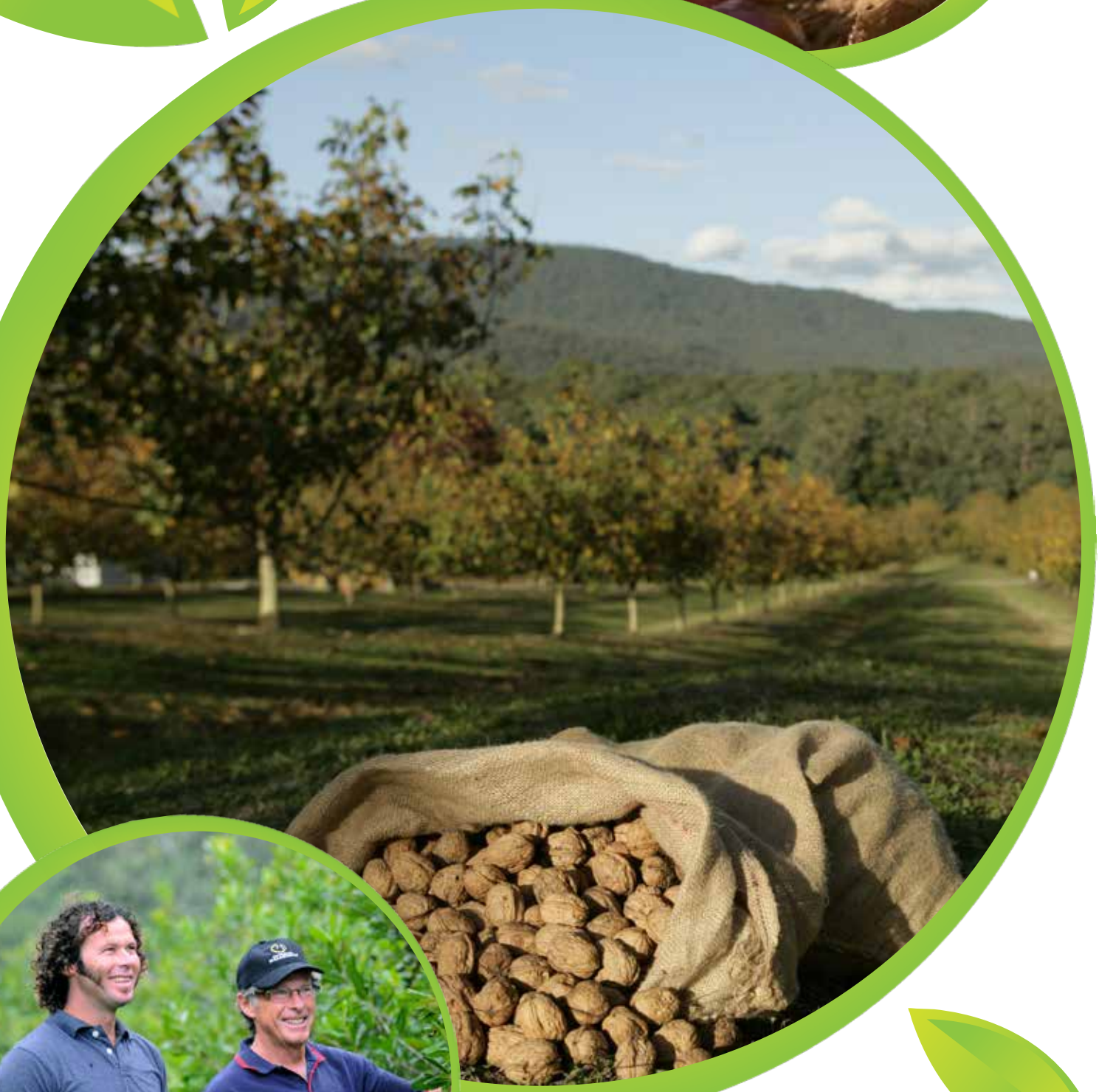
A modern and cutting edge industry does not appear overnight nor without considerable effort, and the Australian tree nut industry has relentlessly pursued world's best practices and technologies as well as importing or cultivating varieties suitable to local conditions. Today, Australia is home to an enviable pool of knowledge as well as a culture of innovation upon which to develop a future-facing industry whose exceptional product is already much in demand around the globe.

Tree nut production in Australia is dominated in scale by almonds and macadamias, with the former representing more than 50% of the total area planted and the tonnage produced. The macadamia, Australia's iconic native species, accounts for approximately 34% of area planted and 30% of tonnage produced.

Buoyant markets and sound business models continue to drive investment in new plantings such that the Australian crop is forecast to increase by as much as 44% by 2025, substantially on the basis of trees already in the ground.

The hazelnut industry is an example of a historically small sector which is poised to leap into the commercial mainstream with 5,000% growth predicted over the next decade. Walnuts - already on a growth trajectory - and pistachios will more than double in output, whilst chestnuts and almonds are expecting increases of more than 30%. Overall, the farm-gate value of Australian tree nuts is forecast to increase by 82% by 2025.

Tree nuts are already Australia's largest horticultural export sector, with current foreign earnings of more than AU$600M per annum. Thanks to a powerful and persistent worldwide dietary trend and a strong set of local production values that emphasise food safety and eating quality, as well as excellent social and environmental stewardship credentials, the Australian tree nut industry is likely to surpass AU$1B in export sales before 2025.



Expected Australian Tree Nut Production and Value

Area planted, hectares	2014	2020	2025
Almonds	28,633	33,693	38,693
Macadamias	18,666	19,998	21,108
Walnuts	2,980	4,640	4,890
Hazelnuts	172	2,258	3,617
Pecans	1,600	2,200	2,700
Chestnuts	1,360	1,600	1,800
Pistachios	950	1,510	1,710
Total hectares	**54,361**	**65,899**	**74,518**

Production, tonnes	2014	2020	2025
Almonds, kernel	80,682	93,978	108,804
Macadamias, in-shell	40,600	47,627	50,986
Walnuts, in-shell	11,040	15,979	23,000
Hazelnuts, kernel	129	3,001	6,779
Pecans, in-shell	3,200	3,800	4,500
Chestnuts, in-shell	2,300	2,900	3,200
Pistachios, in-shell	1,180	3,000	3,500
Total Production, tonnes	**139,131**	**170,285**	**200,769**

Source: Australian Nut Industry Council 2014

Current and Forecast Value (AU$ million)

Value (farm-gate), AU$ million	2014	2020	2025
Almonds	565	786	1,054
Macadamias	122	143	153
Walnuts	44	64	99
Hazelnuts	1	17	41
Pecans	14	19	26
Chestnuts	12	15	16
Pistachios	9	25	30
Total value, AU$ million	**767**	**1,069**	**1,419**

Total Export Value (FOB), AU$ million	2014	2020	2025
Almonds	450	605	793
Macadamias	141	165	177
Walnuts	50	72	110
Hazelnuts	-	6	29
Pecans	11	16	22
Chestnuts	4	5	4
Pistachios	-	-	-
Total Export Value AU$ million	**656**	**869**	**1,135**

Source: Australian Nut Industry Council 2014

Why Australian Tree Nuts?

Australia's agricultural industries are among the most sophisticated, highly mechanised and environmentally aware in the world. If there is one thing its farmers know how to do, it's how to grow high quality produce for export.

The Australian nut growing industry developed in this competitive, globally-focussed environment.

Fresh Nuts - All Year Round

Australia is serious about growing quality nuts and increasing production into the future. A driver of this is its ability to provide supply in the northern hemisphere off-season. The benefit for the international nut trade and consumers is that they now have access to a ready supply of the freshest nuts all year round.

As a result, important markets can be developed or expanded without fear of a lack of supply. This is how the pre-Christmas period has developed to become a lucrative market for Australian fresh pecans in China. It's also why consumers in major markets around the world can now buy fresh walnuts, almonds, pecans and hazelnuts all year round.

Top Quality from Top Growers

Australian farmers have a reputation for being among the most efficient and advanced in the world. Because of our relatively small population, we have always looked to overseas markets to sell much of our agricultural production.

As a result, Australian farmers are well aware of the needs of export markets and the importance of supplying reliable lines of high quality product. This is what has driven nut production in Australia and our highly skilled growers have concentrated on refining their ability to supply premium product to buyers around the world. The almond industry is an example of this commitment.

"Much of our effort goes into producing high yields but this is done bearing in mind the need for both a quality in-shell and kernel product. The almond industry research program has invested in projects to ensure that crop quality can be maintained from year to year in the face of different weather conditions," said Neale Bennett, Grower and Chair of the Almond Board of Australia.

Australian almond growers are especially proficient at managing the application of water and nutrients on Murray Valley soils, consistently achieving relatively high yields compared with other producing countries. The quality of Australian almonds is highly regarded in world markets.

Our growers have developed horticultural skills that have put them at the forefront of the world for nut yields per hectare and quality, something that is recognised by growers around the world.

CEO of the Australian Macadamia Society, Jolyon Burnett, explains that Australian macadamias are grown using the very latest innovations and practices in production.

"The Australian industry spends around $2 million in research and development each year and leads the world in nutrition, biological controls, harvesting and post-harvest handling. We are constantly improving the understanding and practice of growing high quality macadamias," he said.

Australian macadamia growers, who have the advantage of working with the native gene pool, are the leaders in farm-based research and have placed heavy emphasis on integrated pest management to maximise recovery of sound kernel.

Australian walnut growers are producing some the best quality walnuts in the world from relatively cool growing areas, and in time to supply northern hemisphere markets for the critical Christmas trade, a shipping schedule that often challenges northern hemisphere competitors.

Pecan growers from traditional growing countries such as the US regularly visit Australia to learn Australian techniques. The Australian macadamia industry provides research and development information to the rest of the world.

Australian chestnuts are highly regarded in markets such as Japan for their flavour and quality appeal; Australian macadamias have developed a reputation in Asia for premium taste and quality, and demand from buyers for Australian almonds and pecans is high because of their reputation for excellent taste and quality

From paddock to processing, the Australian industry has excelled at producing a range of nut crops. Underpinning this success are a number of factors including the variety of climatic and agronomic zones, excellent infrastructure and processing systems, investment in research and development, and skilled growers and advisors.

Clean and Green

Consumers today are much more demanding than in the past when it comes to the environmental credentials of the food they eat.

Australia is an island nation surrounded by oceans that act as natural barriers to some of the most troublesome and costly pests and diseases that affect nut crops in other countries. This is a powerful marketing point of difference. It also means that Australia has a great clean and green story to tell because much of its production is pesticide-free or requires minimal use of pesticide.

Australia's tree nut orchards use few, if any, pesticides, promoting the image of Australia as a clean and safe producer of foods

Buyers, processors and consumers can be assured that Australian chestnuts are free from insect pests such as gall wasp and chestnut weevil; our pecans are not affected by aphids or by scab disease; no insecticides are used in inland growing areas where most of Australia's pecans are produced; walnuts and hazelnuts do not have to battle with many of the pests and diseases that affect growing areas in other parts of the world so pesticide use here is minimal.

The macadamia industry has invested heavily in research into pest and disease control and many growers apply integrated pesticide management techniques in their orchards as a way of maximising the use of beneficial controls such as insects, thus limiting pest and disease damage and minimising pesticide use. Some orchards are totally organic.

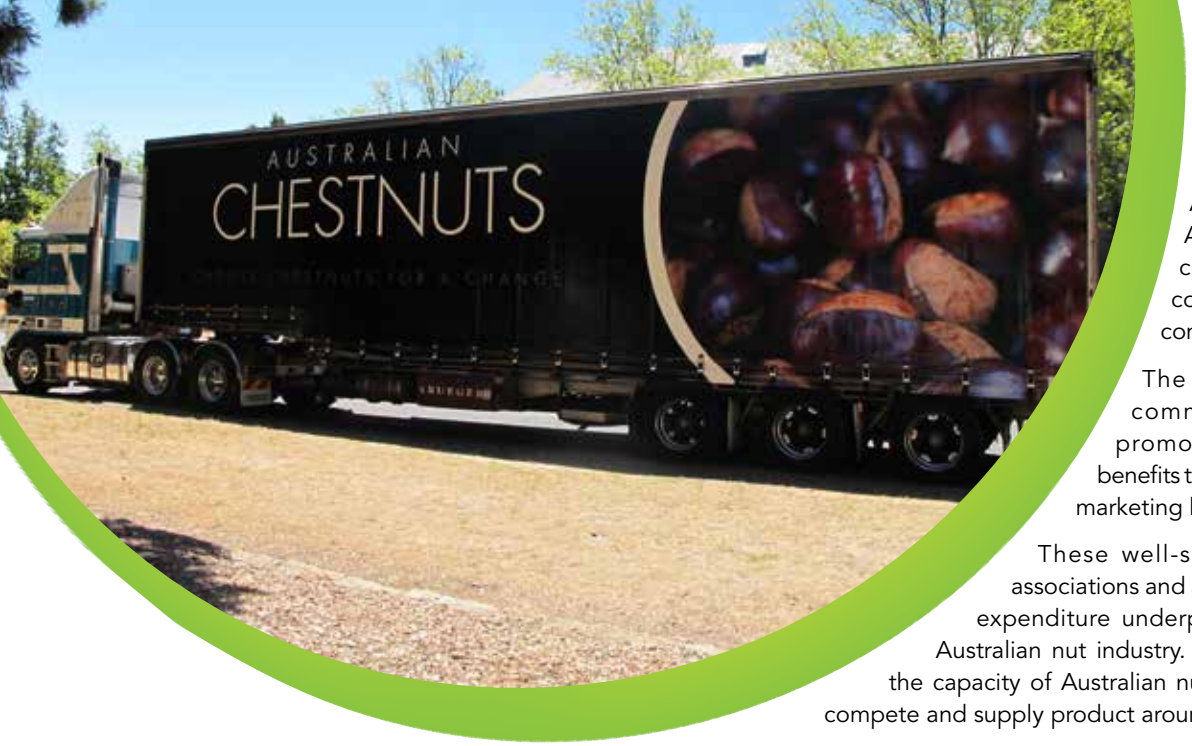
As proof of this industry commitment to clean production Australian macadamias have undergone 15 years of government residue testing with an unequalled record of 100% compliance with some of the strictest residue limits in the world. As well, the Australian almond industry has never had a detection exceed domestic or export market maximum residue limits, and the other nut industries have a similar long history of testing and compliance.

Carol Kunert, president of the Australian Walnut Industry Association, explains that Australia's isolation and strict customs regulations mean that it is free of many of the pests and diseases affecting walnut production in other parts of the world.

"Low pollution levels in Australian air and water support the clean, green nature of the walnut industry, and our clear blue skies provide plenty of sunshine for photosynthesising sweet, creamy walnut kernels," she said.

Walnut growers are aware of their product's reputation for quality on the international market and place high importance on maintaining this status.

"They aim to manage their orchards using sustainable farming practices as much as possible, and chemical use is low and strictly regulated. Many orchards use no insecticides and some are run on semi-organic lines while others have organic accreditation," added Carol.



As well as building a healthier Australia, Nuts for Life has contributed to a 5% annual compound growth rate in the consumption of nuts in Australia.

The Australian nut industry is committed to supporting and promoting nuts and their health benefits through targeted and innovative marketing both in Australia and overseas.

These well-supported, united industry associations and a high research and marketing expenditure underpin the core strength of the Australian nut industry. They also have helped build the capacity of Australian nut growers and processors to compete and supply product around the world.

As a result of this commitment, there has been a threefold increase in almond exports in just five years. In 2013 almonds became the first Australian horticultural industry to have export sales in excess of $300 million, and the domestic consumption of almonds grew by 55% over the same period. The industry's market development program invests over $2 million annually both in Australia and overseas.

The macadamia industry invests around $2 million in marketing and market research to help it understand customers' requirements and what drives their purchases.

"Australian macadamia marketers can assist customers expand their markets, which ultimately adds value to everyone in the Australian macadamia supply chain," said Jolyon Burnett.

Doing Business with Professionals

Exporting agricultural and horticultural produce has been a focus of Australian farmers since the early 1800s, which means we have highly developed marketing, transport and processing infrastructure in place.

Matthew Durack from Stahmann Farms, which grows 75% of Australia's pecans, says "This takes the hard work out of dealing with Australian producers."

"Because of our long history as exporters and because of our sophisticated infrastructure, we are very professional exporters and easy to do busy with," he said.

Industry Cohesion

Each of Australia's tree nut industries has a strong, well-organised industry association which supports its growers in providing technical advice and funding research and marketing. All have a focus on ensuring customer satisfaction and delivering exceptional value for money by expanding horticultural skills and the market both domestically and overseas.

The seven tree nut industries come together under the Australian Nut Industry Council (ANIC). Through ANIC the nut industries work together to promote the benefits of Australian-grown nuts.

One example is the Nuts for Life campaign. This campaign, which began in 2003, brings together not only Australian tree nut growers but Australian and New Zealand processers, packers and importers of nuts. In all there are 29 members of Nuts for Life all working together to voluntarily fund a program focussed on providing information about the nutrition and health benefits of tree nuts to health professionals and consumers. The nutrition team at Nuts for Life, headed by Lisa Yates, ensures the credibility of the information it provides by making sure that it is based on sound science.

"Nuts for Life is an extraordinary program where 29 competitors in one industry have set aside their differences and voluntarily come together to fund this education program. All that has been achieved is due to their ongoing commitment and support," explained Lisa.

Each of Australia's tree nut industries has a strong, well-organised industry association which supports its growers

Processing Standards Ahead of the Pack

Processors of Australian nuts adhere to the highest quality standards to ensure that the great taste and quality of nuts harvested is preserved during processing.

This is in part driven by domestic considerations. Australian consumers are among the world's most demanding in terms of food quality and safety and this has led to very high standards for the supply of fresh nuts. These high domestic standards are also applied to product sold internationally.

Most processors of nuts have accreditation under ISO9001 standard food safety programs such as HACCP and SQF.

HACCP is an internationally recognised way of identifying and managing risk related to food safety. Businesses with HACCP accreditation have demonstrated that they adhere to procedures and manufacturing processes designed to ensure high standards of food safety.

The SQF (Safe, Quality Food) program is one of the world's leading food safety and quality management systems, designed to meet the needs of retailers and suppliers worldwide. It provides independent certification that a product, process or service complies with international food safety regulations.

The sophistication and capital investment of Australian processors, together with food safety regulation second to none, means that the Australian nut industry can deliver safe, quality product according to specification with unsurpassed reliability.

Almonds

Production areas

Almonds are grown along the Murray Valley in South Australia, Victoria and New South Wales. This encompasses four major growing regions - Adelaide and the Riverland (South Australia), Sunraysia (Victoria), and the Riverina (New South Wales).

Ownership structures are diverse with orchards owned by family enterprises, business ventures and investment company projects.

Current production

- Area under production in 2013 was about 29,000 ha.
- Production in 2013 was about 78,600 t of kernel.

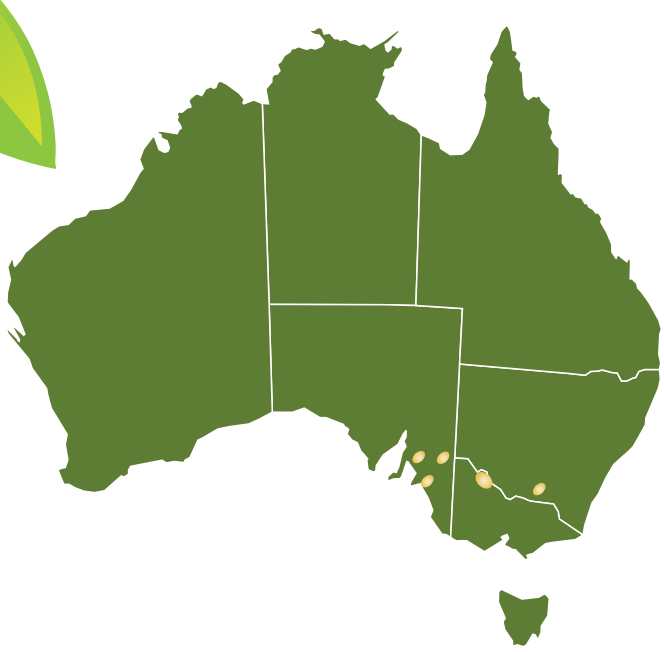
Industry potential

By 2015 the area under almond production is expected to be about 32,000 ha and estimated total kernel production, 85,000 t.

Almonds have become an attractive crop for investors because the industry is highly mechanised, suited to large-scale orchards and has proven to be profitable and stable.

Trees begin producing almonds after three years and reach full cropping after seven to eight years.

Australia is the second largest producer of almonds in the world



Consumer demand for almonds continues to increase strongly, both domestically and globally. In the past five years Australian consumption has risen by more than 50% while global demand has doubled in the past decade. This trend is expected to continue as living standards in developing countries rise, the range of new products using almonds expands rapidly and consumers turn to healthy snacks.

Australia was the second largest producer in the world behind California in 2013, and almonds are Australia's most valuable horticultural export product with sales in 2013 exceeding $300 million. The 2014 crop should generate sales of in excess $700 million with exports accounting for nearly 75% of production.

Markets: present and future

Current domestic consumption of almond kernel is 21,000 t per year.

Australian almonds supply nearly all domestic consumption, and most of the growth in production is being directed to overseas markets.

Some almonds are imported into Australia but this is mainly for use in baking and confectionery, where small kernel size is preferred.

While markets in the USA and Europe are growing strongly, most recent expansion has been in India, China and the Middle East.

Increased consumer awareness of the health benefits of nuts is increasing global demand for almonds. As a result of this increase in demand, and combined with new market development, further industry growth is expected but this may be limited by available supply.

Marketing and promotion programs funded by industry support increasing domestic per capita consumption and targeted overseas market development.

Competitive advantages

- Australian almonds are harvested in the northern hemisphere off-season and are new season's product close to the date of many religious festivals that celebrate with nuts.
- Australian orchards are comparatively high yielding and have a good mix of varieties.
- Australian product is highly regarded in terms of quality and crackout rates (in-shell to kernel ratio).
- Export demand for quality Australian almonds is growing rapidly.
- Australia is close to the expanding Asian market and marketers are willing to address niche market requirements.

Chestnuts

Production areas

About 75% of the national chestnut crop is produced in north-east Victoria. Other growing areas are east of Melbourne, in central Victoria; around Orange, on the Southern Tablelands, the Blue Mountains and Batlow in New South Wales; in the Adelaide Hills in South Australia; in Tasmania; and in south-west Western Australia.

Many chestnut orchards are small family-owned orchards, but there are several large-scale commercial plantings, and the average size of new orchards is increasing.

Current production

- Area under production is about 1,000 ha.
- Production is about 1,500 t a year of fresh chestnuts.

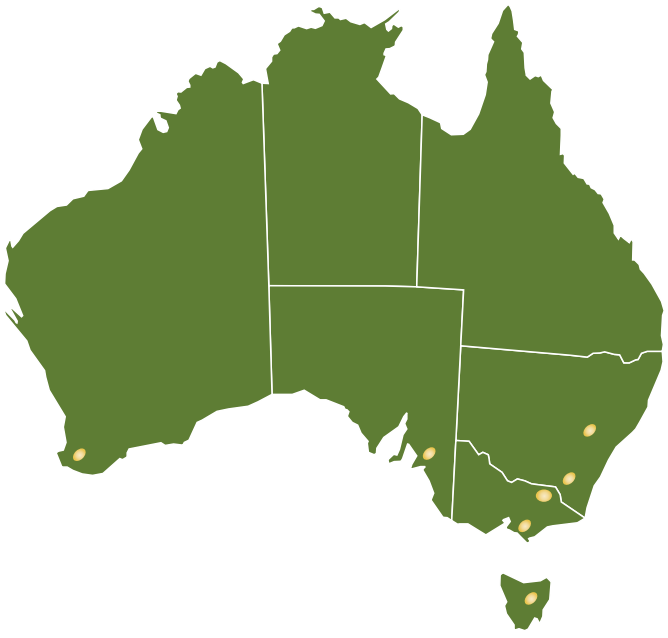
Industry potential

Chestnut production is expected to increase to 2,000 t by 2020 as young orchards come into production.

New varieties and improved orchard management techniques have reduced time to bearing and resulted in increased nut yield, nut size and ease of peeling.

Most chestnuts are handpicked except in many large orchards, which are fully mechanised as a result of new harvesting machinery being developed.

Growers are planting and re-working older trees to newer and more consumer-friendly varieties.



Newly developed processed chestnut products all have the potential to expand the overall market

Markets: present and future

Chestnuts are highly valued in Europe, the USA, Japan, China and Korea.

Most growers sell the bulk of their crop through the fresh wholesale markets in each state.

Current chestnut consumption in Australia is estimated at 1,000t, which is satisfied by domestic production. Small quantities of fresh and frozen peeled chestnuts are exported to Japan and Singapore.

The Australian industry is developing new processed products such as frozen peeled whole chestnuts, chestnut meal, flour and puree. These value-added products are now being successfully marketed locally and overseas and have the potential to expand the overall market for chestnuts.

The chestnut industry is seeking new export markets for fresh and frozen peeled chestnuts to sustain increased production.

Nut size is important in the fresh chestnut market and new pruning techniques have enhanced this quality.

Competitive advantages

- Australian chestnuts are fresh in the northern hemisphere off-season.
- Australia will soon again be free from chestnut blight, the fungal disease that has devastated orchards and native forests overseas. The eradication of chestnut blight is nearly complete with nine of the eleven orchards affected being cleared of the disease after extensive industry surveys.
- With the exception of New Zealand, importing fresh chestnuts into Australia is prohibited.
- Australia is free from insect pests such as the chestnut gall wasp and chestnut weevil.
- Australia's pest-free status means chestnuts are produced without insecticides.
- Australian chestnuts are highly regarded in Japan for good flavour and quality appeal.
- The Australian chestnut industry is consumer focused and the latest tree varieties being selected are based on ease of peeling and superior flavour. Overseas, yield is generally given a higher priority than eating quality in varietal selection.

Hazelnuts

Production areas

Hazelnuts are grown in South-Eastern Australia, where climatic conditions are temperate. The main production regions are the Central Tablelands of New South Wales near Orange, and north-east Victoria near Myrtleford. They are also grown in central and Eastern Victoria and increasingly in Tasmania. Hazelnuts take seven years to come into commercial production.

Many hazelnut operations are small orchards of up to 6,000 trees, although this is slowly changing with average size of new orchards increasing, and more productive varieties being planted. Most orchards are family operated enterprises.

Current production

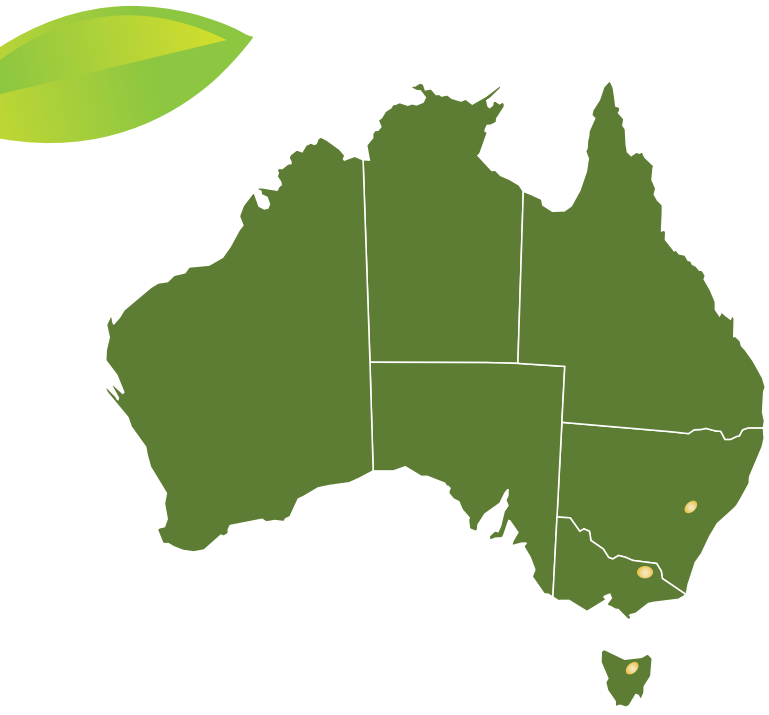
- Area under production is about 130 ha, including young orchards yet to come into commercial bearing.
- Production is about 70 t, expected to increase as new orchards come into production.

Industry potential

By 2015 the area under hazelnut production is expected to be about 200 ha.

It is estimated production could total 150 t in-shell. This is due to an expansion in production and planting of productive varieties identified by the University of Sydney for the Hazelnut Growers of Australia Inc.

Interest in growing hazelnuts is increasing, with a key driver being the opportunity to offer fresh Australian hazelnuts to the domestic consumer.



Markets: present and future

Current domestic consumption of in-shell hazelnuts is relatively small at about 80 t a year. Domestic consumption of hazelnut kernel is currently around 2,000 t, equivalent to 4,500 t in-shell.

Australian hazelnuts in-shell are sold at farmers' markets and fruit shops. There are several small scale cracking facilities producing hazelnut kernel sold to local markets, specialist confectioners and bakers. Some producers value add to their kernels by making confectionery and health food products.

A northern hemisphere confectionery manufacturer is currently making a major on-farm investment in Australia, confirmation that the opportunities for Australian hazelnuts are significant and that confidence in the Australian industry is well placed.

Locally grown kernel receives a price premium and is sought after by caterers and confectioners because of the fresh taste compared to imported kernel.

Australia imports 2,000 t of hazelnut product annually, mainly as kernel, primarily from major European producers, particularly Turkey.

Locally grown hazelnuts receive a price premium and are sought after by the market for their superior flavour

The relatively low cost of imported hazelnut kernel and the fact that kernel is largely an ingredient used in baking and confectionery where price is generally of greater priority than quality, means that Australian product is not expected to replace imported product for this end use. However, the premium quality end of the market such as value-added snack foods, specialist bakery items and confectionery such as chocolate-coated hazelnuts and nougat, is being increasingly supplied by Australian-produced hazelnuts.

With demand for hazelnuts increasing globally and awareness growing of the health benefits of including nuts in the daily diet, consumption will continue to increase.

There is potential for exporting hazelnut in-shell to Asian markets where foodstuffs produced under high safety standards are preferred.

Competitive advantages

- Australia has the potential to produce fresh hazelnuts and kernels throughout the year and is able to offer fresh supply in the northern hemisphere off season.
- Australia is free from eastern filbert blight, a serious disease affecting the industry in the USA.
- Because of the absence of serious pests and diseases in Australia, hazelnuts are produced here with little pesticide use.
- Australian production is well supported by research, leading to improved, more efficient and sustainable production systems.

Macadamias

Production areas

Macadamias are grown along the eastern seaboard of New South Wales and Queensland, from Nambucca Heads in the south through to Mackay in the north. About half of the Australian crop is produced in the NSW Northern Rivers district.

Ownership structures are diverse and comprise a combination of family-owned orchards, business ventures and investment company projects.

Current production

- Area under macadamias is almost 18,666 ha.
- Production for 2014 is estimated at 11,400 t kernel.

Industry potential

The macadamia industry is still growing. The fastest growin region is Bundaberg, QLD, where larger farms are being planted and where production is expected to increase by 40% by 2020.

New plantings haave seen almost 400,000 trees established in the last five years. There are currently around 6 million macadamia trees under cultivation; about a third of these are yet to reach full production.

The industry is actively looking at new growing regions around Mackay and Emerald in Queensland, where there have been plantings recently.

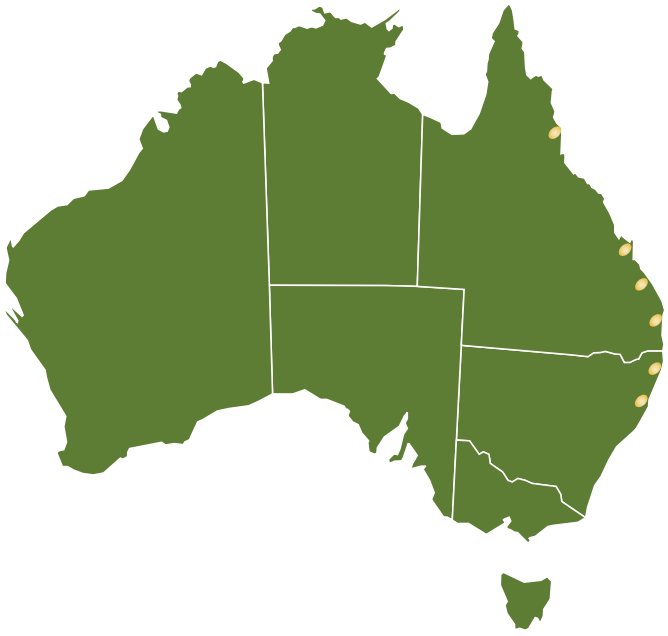
By 2020 about 20,000 ha will be planted with kernel production greater than 16,000 t. Export value will exceed $165 million.

Consumer demand exceeds supply. Consumption is increasing as a result of increased interest in healthy foods and an increase in awareness of health benefits of eating tree nuts.

The biggest growth in demand is coming from Asia, where consumers are adopting western foods and consumption patterns (snacking, eating on the go etc.). They are also moving from traditional snacks to new product forms including salted, roasted and flavoured nuts.

Macadamias currently represent around 1% of the world trade in tree nuts. As awareness and production increases the Australian Macadamia Society predicts significant growth in the industry.

The industry has a strong representative body, the Australian Macadamia Society, which is driving further development.



Markets: present and future

Macadamias are sold mainly as kernel, which is processed for snack food lines and as an ingredient in confectionery, cereals, ice-cream and bakery products.

The domestic market consumes about 35% of total production, 90% of which is sold as kernel.

7,000 t of kernel was exported in 2013, and around 5,000 t of in-shell. This represented about 70% of total industry production and had value of $105 million.

In 2013 kernel exports were spread relatively evenly between the USA, Japan, Europe and other Asian markets

Asian markets are showing the greatest growth driven by increasing trade interest and consumer awareness. In the last few years market development campaigns have supported the product in Taiwan and Korea.

Consumption of macadamias in their shell is increasing in China and this market is expected to grow significantly over the next five years.

The promotion of health benefits is a support driver of demand and, combined with new market penetration, is expected to underpin further industry growth.

Competitive advantages

- Macadamias are the only Australian native food plant to be widely traded internationally.
- Australian farms and processors have high product standards, with a demonstrated capacity to produce superior kernel.
- Through the Australian Government's National Residue Survey the Australian macadamia industry can demonstrate 15 years of 100% compliance with all relevant standards.
- There is strong financial commitment to domestic and export market development and farm research funded by a compulsory grower levy on production. The industry spends about $2 million annually each on research and development and marketing.
- Australia holds the only natural germplasm resources for macadamias, and has spent over $4 million over the last ten years on a comprehensive breeding program. Early indications are that yield increases of 30% are possible from new varieties.

Pecans

Locally grown product receives a price premium and is sought after by the market for their superior flavour

Production areas

Production in New South Wales extends from the Hunter Valley and Nelsons Bay on the Central Coast to the Mid North Coast near Kempsey and the North Coast near Lismore.

Pecans are also grown in Queensland at Munduberra, Gympie, Bundaberg, the Atherton Tablelands and Beaudesert, and there are small plantings in South Australia and Western Australia.

Stahmann Farms' orchard at Moree in New South Wales accounts for about 75% of Australian production.

Current production

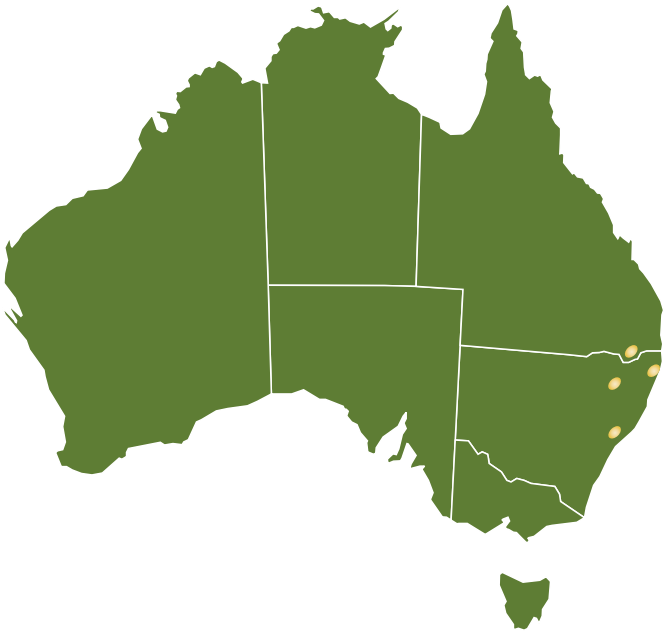
- Area under pecans is 1,350 ha.
- Production is about 3,000 t in-shell (1,800 t kernel).

Industry potential

Interest in new developments has increased over the last two years as a result of strong demand in China for in-shell. The long lead time from planting to production limits potential for explosive growth, but steady investment from existing and new entrants is continuing.

A recently funded Horticulture Australia Limited (HAL) project on reducing the time to break even in pecans is already demonstrating opportunities to improve early orchard development techniques.

Stahmann Farms, which has led the way in developing the Australian industry, has achieved some of the highest pecan yields in the world through advanced pruning techniques. It continues to innovate and lead the industry as it converts a large portion of its orchard from flood to drip irrigation.



Stahmann Farms' processing plant in Toowoomba, Queensland, provides processing and marketing facilities for the broader industry, and has enough capacity to handle the entire Australian crop.

Projects to better understand the domestic market and increasing per capita consumption are being undertaken. Strong export demand in the USA, China and Asia have ensured favourable pricing for some years.

Global production remains concentrated in USA, with close to 90% of all traded pecan nuts originating from there and Mexico. South Africa continues to expand production and small but significant crops are also found in Central and South America.

Markets: present and future

The bulk of Australian product is sold as kernel for domestic consumption, with distribution split between retail and manufacturing channels.

Australian kernel exports find their way to all corners of the globe. The recent Chinese demand for in-shell pecans has created a substantial new market in Asia. Since 2010, China now accounts for more than 20% of global consumption, driving prices to all-time highs but triggering market volatility.

Pecans constitute less than 5% of world tree nut trade and their consumption is still mainly concentrated in the USA, where they are a native nut. Demand in Asia, Europe and the Middle East is growing although the intense interest from China has severely limited availability in recent years.

Competitive advantages

- Pecans have many health benefits, among which is their exceptionally high level of antioxidants (one of the highest of all natural food products).
- Australian pecans are harvested in the northern hemisphere off-season meaning that fresh Australian product can be shipped to major markets in the pre-Christmas season and in good time for Chinese New Year.
- The Australian pecan industry has remained free from scab disease which blights much of the production in the USA. Innovative production techniques mean that the bulk of the Australian crop is grown without the use of chemical pesticides.
- Australia's clean green image and robust food safety regimes and internationally recognised QA systems, support strong interest by a health conscious middle class throughout the world and, increasingly, in our Asian region.

Pistachios

Production areas

The major production areas are along the Murray River Valley between Swan Hill in Victoria and Waikerie in South Australia. Further plantings are in central west Victoria and Pinnaroo, South Australia. There are also small plantings in Western Australia.

A central commercial processing facility is at Robinvale in Victoria.

The pistachio industry includes a mix of medium-sized business ventures and smaller family-owned operations. The bulk of the crop is produced on medium-sized orchards.

Current production

- Area under production is 900 ha (2013 data).
- Production averages 1,200 t in-shell per year (based on a two-year average).

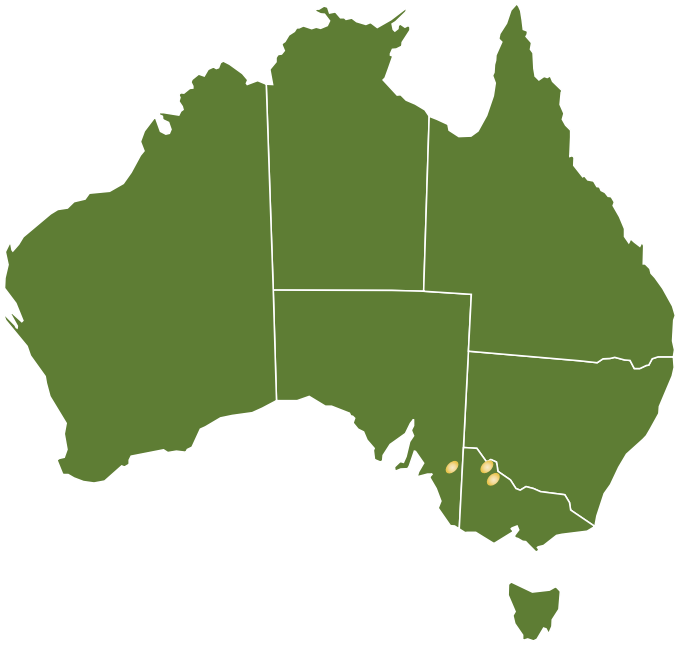
Industry potential

By 2016, the area under pistachio production is expected to increase to 1,200 ha. It is estimated that by 2020 pistachio production could average 3,000 t a year ($25 million).

Pistachios are an attractive crop because of their hardiness in drought conditions, tolerance of poor soil and water, long tree life and resistance to common orchard pests and diseases.

Improved orchard management and quality processing techniques have established a profitable and sustainable industry.

An established commercial processing and marketing facility allows growers to concentrate on pistachio production and provides a mechanism for maintaining product quality.



Pistachio production is fully mechanised, requiring minimal labour and ensuring international competitiveness.

Processing facilities have the capacity to efficiently process increased tonnage.

Markets: present and future

There is significant potential for increasing production in Australia to meet domestic demand. Australian consumption of pistachios is 3,500 t a year and has been increasing at 9% a year (compound) since 2000 (2013 data). About 60% of demand is currently imported.

The demand for pistachios is increasing globally, and in Australia, because of increased awareness of the health benefits of including 30 to 50 grams of nuts in the daily diet.

Pistachios are mainly consumed as a snack food, a market sector that is growing in western countries. Consumption of snack foods is also increasing in developing countries as disposable incomes increase. There is also now a rapidly increasing market for kernels in the baking and food services sectors.

Competitive advantages

- Australian pistachios are harvested fresh during the northern hemisphere off-season.
- Pistachio crops in Australia are less troubled by pests than they are overseas. Lower chemical use reduces the cost of production and Australia can exploit the clean, green image of its agriculture.
- Pistachio farming is capital intensive, ensuring that Australia can compete with lower wage cost producers such as California and Iran, the two major suppliers of pistachios.

Pistachio production in Australia is fully mechanised, requiring minimal labour and ensuring international competitiveness

Walnuts

Production areas

The major walnut production areas in Australia are on the east coast of Tasmania; in the Goulburn Valley near Shepparton and the Murray Irrigation Area near Kerang and Swan Hill in Victoria; and in the Riverina near Griffith in New South Wales.

Small scale orchards are scattered in the Ovens Valley, Gippsland and central regions of Victoria, the Southern Highlands and Central Tablelands of New South Wales, the Adelaide Hills and Riverland regions of South Australia, and in south-west Western Australia.

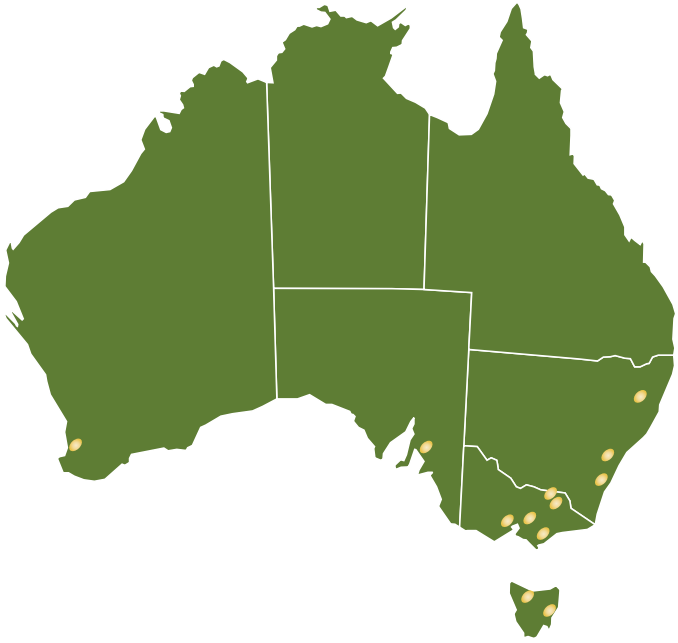
The Australian industry is a mix of small, older orchards and new, extensive orchards. Most orchards are family operations but these do not represent the majority of area under cultivation.

Current production

- In 2010, about 2,980 ha was under cultivation. This is expected to rise to more than 3,000 ha by 2016.
- Webster Limited is the largest walnut grower, owning and managing more than 2,200 ha of orchards. When mature, these orchards are expected to produce over 11,000 t in-shell.
- Australian production in 2013 increased to about 6,840 t, the result of optimal growing conditions. Production is expected to continue to increase over the next five years as new orchards planted come into bearing. Expansion will then slow as result of larger quantum funding options disappearing.

Industry potential

Orchards established in the last five years have provided a firm base on which to build the industry. Factors encouraging investment include mechanical harvesting, that walnuts are relatively free from pests and diseases, continuing strong global



For six months of the year Australia can supply the freshest walnuts in the world

demand and increasing awareness of the health benefits is also important. Wind pollination also ensures that fruit set is more reliable than bee pollination and is not dependent on specific temperatures.

New varieties and improved propagation, orchard management and irrigation techniques have reduced time to bearing and increased nut yield.

Australia is in a favourable position as there is limited scope for walnut production across the southern hemisphere, due to a lack of suitable climatic conditions, water, soil types and topography and capital raising ability.

Markets: present and future

Current domestic consumption of in-shell walnuts has risen from 600 t to 800 t a year. Domestic consumption of kernel currently averages about 9,110 t of in-shell, sold through major retail chains and into bakery and confectionery industries. Locally produced walnuts now supply total domestic demand for in-shell walnuts.

Despite a premium price, Australian in-shell walnuts are sought by local markets because of superior flavour and freshness for supply as snack food, and decoration on bakery items and confectionery.

Several cracking facilities are currently operating, with capacity for increased production. A state-of-the-art cracking facility was commissioned at Leeton in New South Wales in March 2014.

The relatively low cost of imported walnut kernel (and its use as a food ingredient) where price is of greater priority than quality, means that Australian product is not expected to replace imports for this use in the near future.

Global growth in demand for walnuts has been maintained since 2011. World consumption has been increasing at a steady rate of about 4% per year. With greater awareness of the health benefits this rate is expected to be maintained.

In 2011 about 70% of Australia's walnut production was exported as in-shell walnuts. This percentage is expected to increase in the short term until production grows to provide enough critical mass for a large-scale cracking plant to supply the Australian walnut kernel markets.

Competitive advantages

- Australia has the opportunity to become a reliable exporter of counter-season walnuts to the northern hemisphere. The southern hemisphere produces just 3% of traded walnuts annually and for six months of the year Australia can supply the freshest walnuts in the world.
- Australia is free from many walnut pests and diseases affecting other countries so chemical use is low in Australian walnut production.

Almond Board of Australia Inc

www.australianalmonds.com.au

Australian Macadamia Society

www.australian-macadamias.org/trade

Australian Pecan Growers Association Inc

www.pecangrowers.org.au

Chestnuts Australia Inc

www.chestnutsaustralia.com.au

Hazelnut Growers of Australia Inc

www.hazelnuts.org.au

Pistachio Growers' Association Inc

www.pgai.com.au

Australian Walnut Industry Association

www.walnut.net.au

Australian Nut Industry Council
ABN 66 007 041 732
75 Casuarina Drive
Elanora Queensland 4221

P + 61 4 09 707 806
E exec@nutindustry.org.au
W www.nutindustry.org.au

ANIC
australian nut industry council