

Horticulture Innovation Australia

Final Report

Export market scoping study for the Lychee industry

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Trade and Investment Queensland

Project Number: LY13003

LY13003

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ISBN 0 7341 3558 0

Published and distributed by:
Horticulture Innovation Australia Limited
Level 8, 1 Chifley Square
Sydney NSW 2000
Tel: (02) 8295 2300
Fax: (02) 8295 2399

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Acknowledgements

I wish to acknowledge the project team from Trade & Investment Queensland for assistance with research and analysis and the production and editing of this report, assistance with media articles, and developing of promotional material for the market visit; the lychee producers, marketers and exporters who contributed to the market research and selection; and Horticulture Innovation Australia for assisting with a lychee promotion in Malaysia. I particularly acknowledge:

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Martin Walker	Martin Walker Marketing
Elisa King	Marketing Services Manager, Horticulture Innovation Australia
Bob MacDonald, Aleisha Domrow, Samantha McGee and Renee Dickens	Communications, Trade & Investment Queensland

Also the project team thanks the levy payers, and ALGA Industry Advisory Committee and Jane Wightman from HIAL for providing funding and support for this project, and Living Lychee magazine for providing several reports of the research findings to industry.

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Summary

The Australian Lychee Growers Association (ALGA) has commissioned Trade & Investment Queensland (TIQ) to undertake desktop and primary research into the non-quarantine markets for lychees. The ALGA believe there are opportunities to increase exports to these markets and that the main impediment is a lack of understanding of new market opportunities and of the supply chain once the fruit leaves Australia.

Most world production is counter seasonal to Australia. The main competition for Australian lychees in the southern hemisphere is from South Africa, Madagascar and Mauritius, with emerging supply from some South American countries.

Desktop research has been conducted on the lychee markets for Canada, France, Hong Kong, Indonesia, Malaysia, Middle East, Singapore and the United Kingdom. Lychee-producing countries were also investigated, to understand trade flows, seasonal competition and ethnic demand for lychees. Interviews were conducted with producers, marketing groups and exporters, as well as telephone interviews with Canadian buyers.

As a result, Indonesia and Malaysia were selected for a market visit, which Judy Noller of TIQ and Martin Walker, on behalf of United Lychee Marketing Association, undertook in August 2014.

Buyers in Singapore, Malaysia and Indonesia were interviewed by Judy Noller, and Adriano Brescia of TIQ interviewed buyers in Singapore during the 2013/14 lychee season.

The research confirms potential to grow the Indonesian and Malaysian markets through retail chains and their importers who are keen to target high and middle income markets with high-quality fruits such as Australian lychees.

There is also potential to expand the Canadian market through wider distribution to reach Chinese communities in cities across the country, other ethnic segments, and consumers in the mass market interested in new fruits.

Although Chinese communities represent the strongest demand in all four countries, there are further opportunities to grow sales in this and other market segments, and to build more efficient supply chains to improve supply and reduce the market price of Australian lychee.

Buyers recommended using store tastings and point of sale information to create awareness by potential new consumers and to encourage preliminary sales. Indonesian and Malaysian retailers prefer to sell prepacks. Importer/distributors also saw opportunity for one and two kilogram cartons to grow consumption in existing Asian market segments.

The opportunities and challenges in expanding exports to these markets are outlined in this report.

Key challenges include:

- Problems with short shelf life of Australian lychee, resulting in waste and discounting, attributed to lengthy distribution channels to the point of export, and the difficulty of selling whole containers of lychee into wholesale markets with limited cool chains and undeveloped retail markets
- Comparatively high landed prices compared with other supplying countries, which confine Australian lychee to higher income market segments and the Chinese New Year festive season.

Key opportunities include:

- Ready access to markets in Indonesia, Malaysia and Singapore where there are large populations familiar with lychee and similar fruits
- Rising consumer incomes and demand for variety, quality, freshness and new fruits in these markets
- Growing consumer concern about chemical residues
- A shift in South-East Asian countries from traditional wet markets to large supermarket chains, department store and gourmet food stores with cool chains in place and demand for imported fruits with quality assurance
- Shorter more efficient supply chains, which can minimise price mark-ups and produce handling, for more competitive pricing
- Retailers and importers collaborating with suppliers on retail promotions to grow new market segments
- Ample air freight services to markets with potential for growth in Canada, Indonesia, Malaysia and Singapore
- Little competition in South-East Asian lychee markets in Australia's season.

Keywords

Industry opinion – interviews with exporters, marketing groups and producers

Market interviews – interviews with buyers in export markets

Southern hemisphere season – November to March

Northern hemisphere season – May to September

Litchi – French for lychee

Lici, litsi – Indonesian for lychee

IDR – Indonesian rupiah

RM – Malaysian ringgit

SIN\$ – Singaporean dollar

Acronyms

ABS – Australian Bureau of Statistics

ALGA – Australian Lychee Growers Association

CIF – costs, insurance and freight

EU – European Union

FOB – free on board

TIQ – Trade & Investment Queensland

Measurements

Kg – Kilogram

Tonnes (t)

Pounds (lbs)

Although most countries now officially measure in metric (2240 lbs to the tonne), the United States uses non-metric (2000 lbs to the tonne), and Hong Kong uses tonnes, tons and a local measurement. This report relies on the term quoted in the literature, although it is assumed that "ton" refers to the metric "tonne" in countries that officially use the metric weight system.

Trade quantities below 10 tonnes or tons are reported to one decimal point where possible.

An air freight container (LD3) holds 266 x 5 kg cartons of fresh lychees or 612 x 2 kg cartons (Walker M, pers. comm, 2014).

Introduction

Background

The ALGA commissioned TIQ to undertake desktop and primary research into the non-quarantine markets for lychees. ALGA believe there are opportunities to increase exports to these markets and that the main impediment is a lack of understanding of new market opportunities and of the supply chain once the fruit leaves Australia.

The industry reports that lychee exports are between 10 and 15 per cent of annual production. In the late 1990s up to 30 to 35 per cent of production was exported. The industry has set the target of 50 per cent of production exported by 2017.

Most world production is counter seasonal to Australia. The main competition for Australian lychee in the southern hemisphere is from South Africa, Madagascar and Mauritius, with emerging supply from some South American countries.

Desktop research has been conducted on these markets:

- Canada
- France
- Hong Kong
- Indonesia
- Malaysia
- Middle East
- Singapore
- United Kingdom.

Due to the lack of published data and information an assessment of countries with lychee industries and their importing markets was included to guide the selection process for short-listing two export markets. Consultation with the lychee industry and exporters found strongest interest in Canada, Indonesia, Malaysia and Singapore as having potential for growth, and a preference for regional markets, while Hong Kong and Singapore were regarded as fully exploited for Australian lychees. Malaysia and Indonesia were shortlisted for market visits in August 2014. The supply chain for lychees was mapped from Australia through to the consumer in both of these markets, and buyers were also interviewed in Canada and Singapore. The opportunities and challenges in expanding exports to these markets are outlined in this report.

Methodology

The research objective of this project was to undertake desktop and in-market research on non-quarantine markets for lychees in order to assess the potential to increase exports to these markets and obtain a better understanding of the supply chain. This was achieved through the following process:

1. Collect the trade statistics for current export markets for Australian lychees. Determine growing import markets and annual average import price trends.
2. Undertake a desktop study to identify key market segments, demand trends and the main supply chains in these import markets.

3. Interview leading exporters, growers and marketing groups to canvas their views on the potential of these markets and factors affecting exports from Australia in recent years.
4. Prioritise the export markets in consultation with industry and select the two markets which offer the greatest potential for growth in Australian exports.
5. Undertake a study visit to these markets and identify key opportunities and impediments to expanding exports to them. If feasible, invite industry representatives (at own cost) to participate in the market visit.
6. Prepare report and deliver findings and recommendations at an industry forum.

Export markets were identified through interviews with industry and exporters because export statistics for Australian lychees are not specified in Australian Bureau of Statistics (ABS) export data.

Businesses interviewed about current and prospective markets for lychees are detailed at Table 1.

Table 1: Industry and exporter consultation

Industry	Marketing groups and exporters
D Foley, President, ALGA	A S Barr
A McKillop	Alfred E Chave
G Ravenello	Costas
O Quintieri	CS International
C Van Rooyen	Favco
R Waterman	Holmans
K Paxton	Martin Walker Marketing for United Lychee Marketing Group
I Philpott	Nature's Fruit
J & T Gauci	Sunfresh
K & J Pool	The Avolution
N & P Karen	
R & L Bronson	
P Hockings, Executive Officer, Bundaberg Fruit and Vegetable Growers Association	
Steritech, irradiation facility	

This process identified key current markets taking Australian lychees, demand trends affecting exports, and an industry preference for countries that could be readily visited from Australia.

While market access was checked initially with Biosecurity Australia, there were some changes over the course of the project. By early 2015, Malaysia required a phytosanitary certificate for lychees, Indonesia had allowed irradiation for fruit fly, and Hong Kong had introduced maximum residue level testing. Canada, Singapore, the Middle East and the European Union remain quarantine free.

A desktop study was then carried out on the markets of interest, using existing market reports and the analysis of lychee import data from the Trademap database. However, Trademap data was found to have some limitations. Statistics for some countries changed between access dates, and was sometimes clearly inaccurate and unusable. Lychee import data for any market rarely matched exports from the supplying country. Lychees have their own harmonised code for some import markets and exporting countries but are more often aggregated in various groups of minor fruits. The statistics however are still useful for several reasons:

- imports are consistent for some markets where lychee is an important fruit
- countries with new and growing markets can be identified
- seasonal competition can be identified
- annual average import prices allow landed costs of Australian fruit to be compared with other supplying countries.

The research data indicated that Canada, Indonesia and Malaysia had the strongest prospects for growth. Each has a large population, a significant Chinese population buying imported lychees, other ethnic segments interested in lychees, markets that can afford Australian product, and distribution channels capable of delivering quality fruit.

Phone interviews with Canadian buyers identified only mild interest in the project, with some suggestions for value adding to improve competitiveness against large volumes of low-priced fruit shipped from South Africa. Face to face interviews with Singapore buyers conducted by a TIQ officer during a market visit indicated interest in growing the market share of Australian lychees. Buyers in Malaysia and Indonesia were the most interested in the project, and in August 2014 Judy Noller from Trade & Investment Queensland and Martin Walker representing United Lychee Marketing Associated undertook a market visit to Jakarta, Indonesia, and Kuala Lumpur, Malaysia. Additional meetings were also held with buyers in Singapore and at Fruit Logistica in Hong Kong.

Table 2 lists all companies interviewed, as well as Indonesian buyers who received a project briefing, during a meeting of the Exporter-Importer of Fresh Fruit and Vegetable Indonesia Association in Jakarta.

Table 2: Market interviews

Canada	Indonesia
Loblaw	Hero Group
Thrifty Foods	Grand Lucky
Sobeys	Importers association members
Oppenheimers	• CV Cherry Fruit
Metro	• PT Laris Manis Utama
Van-Whole Produce	• Gbs
Malaysia	• Pt Yuda Mustika
D'Fresh	• Pt Sinatra Harapan Bersatu
Euro-Atlantic SD Bhd	• Pt Mulia Raya Agrijaya
Great Harvest	• Pt Corona Prayitna
Khaishen Trading	• Pd Harapan Berjaya
Singapore	• Indofresh
Freshmart	• CV Cherry Fruit
Benelux	
Pancom Produce	
Dole Asia	
Hupco	
Singapore Fruit Exchange	

Findings

Overview of world lychee supply

Lychees are native to and first cultivated in the region between southern China, northern Vietnam and Myanmar. They are now produced in many countries with subtropical conditions. Lychees have a long tradition in a number of Asian countries such as China, Taiwan and Thailand, which produce mostly for local consumption, or export some fruit to a growing number of countries, and import out of season to meet year-round demand. Their exports indicate more than 30 countries that have been importing lychees since 2009 (Trademap, 2014).

Estimates of world lychee production range from more than 1.8 million tonnes a year (Diczbalis, 2011) to around 2.55 million tonnes a year ("Mozambique will export lychees in 2014", 2014), and indicate a growing industry worldwide. More than 95 per cent is produced in the Asia-Pacific region, mostly for local consumption, with the largest industries in China, India, Taiwan, Thailand, Vietnam, Bangladesh and Nepal and minor production in the Philippines and Bali, Indonesia (Menzel, 1995).

The Indian Ocean region supplies 4 per cent of the world's lychees at around 125,000 tonnes a year, led by Madagascar with 100,000 tonnes a year, followed by Réunion (12,000 tonnes), South Africa (8600 tonnes) and Mauritius (4500 tonnes) and an emerging Mozambique industry ("Mozambique will export lychees in 2014", 2014). These former European colonies have developed industries mainly to supply the European Union (EU) counter seasonally to dominant northern hemisphere suppliers (Morton, 1987).

The rest is produced mostly in Australia, Israel, Mexico, the United States, and recently some South American countries.

Around 100,000 tonnes of lychees are traded internationally each year, mostly within Asia (Menzel, 2005), but increasingly as an exotic fruit to small emerging western markets. South Africa (28 per cent of world supply), Thailand (25 per cent) and China (20 per cent) lead exports.

Table 3 is a compilation of information on production seasons indicated by the literature search.

Table 3: Seasonal supply of lychees in major producing countries

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Australia												
Brazil												
China												
India												
Israel												
Madagascar												
Mauritius												
Mexico												
New Caledonia												
Réunion												
South Africa												
Taiwan												
Thailand												
United States (Florida)												
Vietnam												
Harvest												
Export (where known)												

The following country profiles provide an overview of the world's major lychee producing industries, exports, and seasonal competition for the Australian industry.

Australia

Lychee is grown from Cooktown in North Queensland to Coffs Harbour in New South Wales, with 99 per cent of fruit produced in Queensland in 2012/13. Annual commercial production ranged from 1800 to 3200 tonnes since the 2009/10 season (Table 4).

Table 4: Australian lychees harvest, 2009/10 – 2012/13

Harvest season	Harvest (tonnes)
2009/10	3000
2010/11	2200
2011/12	3200
2012/13	1800

Source: ALGA, 2015

Lychee yields are highly dependent on seasonal conditions and can vary considerably, and maximum farm yields range from 20 tonnes per hectare down to five tonnes per hectare. The harvest season, from mid-October until mid-March, is the longest in any lychee producing country due to the range of climatic zones and early, mid and late season cultivars.

The industry's peak national body is the ALGA, with more than 250 members Australia-wide. As a peak body it works with government, industry, non-government organisations and consumers to advance the interests of the Australian lychee industry under its strategic plan to ensure the sustainable growth of the industry (ALGA, 2014).

The bulk of production is consumed in the domestic market. Approximately 10 to 15 per cent of the annual lychee crop is exported, mainly to Canada, France, Hong Kong, New Zealand (irradiated), the Pacific Islands, Singapore, United Arab Emirates and the United Kingdom (industry consultation, 2013-4). The ABS does not specify lychee in its export statistics but includes it in the category of HS 0810900045¹. Imports from Australia are reported by some countries in a lychee category, or in other categories that group relevant minor fruits together (Table 5).

Table 5: Imports of fresh lychees from Australia 2009–13, by volume

Importing country	Tonnes					
	2008	2009	2010	2011	2012	2013
Hong Kong	124	79	84	109	124	N/A
Singapore	19	13	15	12	15	13

Source: Trademap, 2014

The main constraints to accessing other markets is the presence of Queensland fruit fly, *Bactrocera tryoni* (Q fly), and requirement for disinfestation treatments that affect the fruit quality (ALGA website, 2014; industry consultation, 2013-14).

The main varieties available for export are Kwai May Pink (the leading cultivar), Fay Zee Sui,

¹ HS 0810900045 (Fresh tamarinds, cashew apples, jackfruit, lychees, sapodillo plums, passion fruit, carambola, pitahaya and other edible fruit (excl. nuts, bananas, dates, figs, pineapples, avocados, guavas, mangoes, mangosteens, papaws "papayas", citrus fruit, grapes, melons, apples, pears, quinces, apricots, cherries, peaches, plums, sloes, strawberries, raspberries, mulberries, blackberries, loganberries, cranberries, fruits of the genus *Vaccinium*, kiwifruit and durians)

Kaimana,
Salathiel, Souey Tung, Tai So, Wai Chee and Bengal (Appendix A).

The fruit is usually packed in poly bags in two or five kilogram cartons, and sometimes one kilogram gift boxes for Chinese New Year. Packaging, continuous cool chains and air freight are used to maintain optimum freshness in taste and appearance by preventing dehydration, and the industry is continually researching improvements to packaging and storage.

Australian lychees are exported through marketing groups and individual exporters. Queensland lychees are usually road-freighted to Brisbane then travel by passenger air services to overseas markets. Lychees compete with other high value produce for air freight capacity to domestic and export markets.

Africa region

The main competition in Australia's season comes from Madagascar, Mauritius, Mozambique, Réunion and South Africa. However, their industries mostly target Europe where importers have positioned lychees to meet the end of year demand for exotic fruits, with 80 per cent of lychees imported over this period.

Most African lychees are treated with sulphur dioxide and shipped in refrigerated containers, although some are sent fresh by air freight (Menzel, 2005).

Madagascar

Madagascar is the region's leading producer, with around 33,000 growers harvesting mostly Mauritius between mid-November and January (*Madagascar Lychee Export*, 2013). Annual production appears to have doubled from 50,000 tonnes in 1995 (Menzel, 1995) to 100,000 tonnes in 2014 ("Mozambique will export lychees in 2014", 2014).

Export fruit production and packaging techniques meet EU requirements for sulphur residue on lychees (*Madagascar expects good lychee season*, 2014). EU support to the industry has included access to varieties, agronomic training, support to meet EU quality assurance requirements such as GlobalGap, development of supply chains with major European importers, and market promotion (*Making Trade work for development*, 2008).

Around a third of fruit is exported, with 17,000 tonnes predicted for 2014/15. The main markets are in EU countries, with 90 per cent exported to France and Germany. Madagascar is said to hold 70 per cent of the EU's strong lychee market for Christmas and end of year festivities. Exports to Europe have reached 22,000 tonnes in past years but resulted in over-supply, fallen prices and unsold fruit. As a result the industry now caps volumes to its traditional markets, mainly Europe, at 17,500 tonnes a year and is seeking new markets such as Russia and Middle Eastern countries for other fruit ("Madagascar expects good lychee season", 2014; *Madagascar Lychee Export*, 2013; "Limited amount of lychees for export," 2013). However, only a minor proportion of these exports are captured in export statistics for Madagascar, including to France but not Germany (Table 6).

Table 6: Exports from Madagascar of fresh lychees (HS:08109010), 2009–13, by volume and value

Exports to	Tonnes					Value A\$	Annual average A\$/kg
	2009	2010	2011	2012	2013	2013	2013
Belgium	0	0	0	0	0.4		
Denmark	0	1.7	0	0	0		
France	21	26	35	346	64	255,820	0.74
Mayotte (near Madagascar)	23	0	42	62	29	18,340	0.30
Netherlands	0	0	8.1	1	0	2,900	2.90
Total	43	28	86	408	93	277,050	0.68

Source: Trademap, 2014

Mauritius

Lychee production is around 4500 tonnes a year ("Mozambique will export lychees in 2014", 2014), mainly Tai So which is harvested in February and March (Menzel, 1995). Exports were reported to 12 countries between 2010 and 2013, totalling 140 – 397 tonnes a year (Table 7), although this appears to represent only a small proportion of actual exports.

Table 7: Exports from Mauritius of fresh lychees (HS:08109030), 2009–13, by volume and value

Exports to	Tonnes					Annual average A\$/kg
	2009	2010	2011	2012	2013	2013
Belgium	0	3	0	7	1	7.23
Canada	0	4	2	5	3	4.30
France	0	195	104	299	225	6.09
Germany	0	0	0	1	0	n/a
India	0	0	0	1	1	5.07
Italy	0	59	13	18	29	4.00
Netherlands	0	2	9	13	12	7.10
Spain	0	0	0	0	1	5.16
Switzerland	0	5	9	34	31	5.14
United Arab Emirates	0	4	0	18	27	4.08
United Kingdom	0	8	2	1	1	6.40
Total	0	280	140	397	331	5.67

Source: Trademap, 2014

Note: It is assumed that lychee fell under a different classification in 2009

Mozambique

Mozambique has an emerging export industry supported by South African investment, with a harvest season two weeks ahead of South Africa ("Mozambique will export lychees in 2014", 2014).

Réunion

Annual production has reached around 12,000 tonnes ("Mozambique will export lychees in 2014", 2014) compared with 5000 tonnes in 1995. At that time the main variety was Mauritius and ten per cent were being exported to France (Menzel, 1995).

South Africa

South Africa has a well-established lychee industry harvesting from November to February. Annual production was 6204 tonnes in 2011 (Moogala, 2012) and is expected to be 8600 tonnes for 2014 ("Mozambique will export lychees in 2014", 2014).

The main commercial varieties are H L H Mauritius (similar to Tai So) and McLean's Red which represent 70 per cent of plantings. The rest is made up of numerous cultivars including high quality Chinese types such as Wai Chee (Moogala, 2012).

Exports appear to have been stable in recent years, with 3902 tonnes (63 per cent of total production) in 2010/11. Of this harvest, 3649 tonnes went to Europe, 179 tonnes to Asia, one tonne to the Americas, and the rest was consumed within Africa (Table 8).

South African fruit has lost market share in Belgium, France, Germany, Italy, Malaysia, Mozambique, Netherlands, Singapore, Spain, Switzerland, the United Kingdom and the United States of America. However, it has gained sales in Saudi Arabia, the United Arab Emirates, and some African countries (Moogala, 2012).

Table 8: Exports of South African lychees, 2010/11, by volume

Exports to	Tonnes
Belgium	96
France	760
Germany	142
Italy	99
Netherlands	1766
United Kingdom	697
Asia	179
Americas	1

Source: Moogala, 2012

Mauritian lychee exports clash with Madagascan fruit in European markets. Air freight is used to Europe in late November and early December, then sea freight from late December under treatment with sulphur dioxide to prolong skin colour, to countries that include Canada, Hong Kong and Malaysia (Trade and industry consultation, 2014).

Bangladesh

Lychees are an important and preferred fruit in Bangladesh. A growing industry produces around 12,800 tonnes of lychees a year in May and June to meet strong domestic demand. The fruit is also imported from India in the off-season (Abu Baker Siddiqui, undated; Table 10).

China

China has the world's largest lychee industry, harvesting around 200,000 tonnes a year in May and June of mostly Brewster, Haak Yip, Kwai Mai, No Mai Chee, Souey Tung, Sum Yee Hong, Tai So and

Wai Chee. Kwai Mai, No Mai Chee and Fay Zee Sui are highly regarded cultivars in China (Menzel, 1995, 2005).

Most production is consumed by a strong domestic market, to which Australia has access for fruit with a cold treatment for fruit fly. China also leads the world's lychee exports, and supplied between 8027 and 10,946 tonnes a year to 23 countries from 2009–13 (Table 9).

Table 9: Exports from China of fresh lychees (HS:08109010), 2009–13, by volume

Exports to	Tonnes				
	2009	2010	2011	2012	2013
Australia	1725	1839	2950	1739	2909
Belgium	1790	2013	1636	3171	2720
Canada	3235	3322	3149	2497	2141
France	372	460	770	563	766
Germany	235	431	1099	835	510
Hong Kong	15	111	175	142	268
India	215	349	294	408	256
Indonesia	152	151	25	85	151
Italy	124	133	132	105	95
Japan	95	287	261	227	91
Macao	11	132	12	13	60
Malaysia	16	31	33	0	42
Mongolia	1.1	0	283	13	40
Netherlands	8.8	3.4	4.3	3.2	5.3
Philippines	0	0	0	0	5
Russian Federation	13	1.5	7.7	2.8	2.9
Singapore	0	0	0	0	2
Spain	0	38	108	7	1
Thailand	0	0	5	2	1
United Arab Emirates	18	0	0	0	0
United Kingdom	0	0.4	0	0	0
United States of America	0	0	0.1	0	0
Total	8,027	9,300	10,946	9811	10,065

Source: Trademap, 2014

Export fruit is generally packed in baskets topped with ice to cool the fruit and prevent dehydration as it melts (industry consultation, 2014).

India

India has the world's second largest lychee industry, with estimates of annual production ranging from 90,000 – 430,000 tonnes in 2005, and a May–June harvest. Varieties are mostly derived from Chinese cultivars (Menzel, 1995, 2005; Litchi, undated). Most fruit is consumed by a strong domestic market, with only minor and intermittent exports reported, mainly to neighbouring Bangladesh and Nepal (Table 10). Australia does not have quarantine access to India (Mpelasoka, 2014).

Table 10: Exports from India of fresh lychees (HS:08109010), 2009–13, by value

Exports to	Tonnes				
	2009	2010	2011	2012	2013
Austria	0	0	0	0.1	0

Bangladesh	412	1104	267	691	0
Bhutan	0	0	0	0	20
Maldives	0	0	0.9	0	0
Nepal	98	78	52	117	34
United Arab Emirates	40	1.4	0	0.1	0.5
United Kingdom	0	0	0	0.1	2.2
Total	545	1184	320	808	57

Source: Trademap, 2014

Israel

There is a small industry harvesting about 500 tonnes a year of mostly Mauritius and Floridian. Almost all were exported to Europe in 1995 (Menzel, 1995).

Mexico

Lychees are Mexico's leading exotic fruit (*Fruits in Mexico*, 2014), with around 4000 tonnes harvested annually in May and June. The industry has been reducing its use of sulphur to extend skin colour (Ghosh, 2001; Jih E, 2011).

New Caledonia

There is a small industry with a similar harvest season to Australia. Exports have declined in recent years due to relatively high prices and problems with production, and appear to have concentrated on French Polynesia since 2011 (Table 11).

Table 11: Exports from New Caledonia of fresh lychees (HS:08109010), 2008–13, by volume and value

Exports to	Kilograms						Annual average \$/kg FOB
	2008	2009	2010	2011	2012	2013	2013
French Polynesia	321	653	0	126	495	0	5.86
New Zealand	0	893	0	0	0	0	
Thailand	126	0	0	0	0	0	
Ship stores and bunkers	0	1560	0	0	0	0	
Wallis and Futuna Islands	0	207	0	0	0	0	
Total	447	3313	0	126	495	0	5.86

Source: Trademap, 2014

Pakistan

A growing industry produced around 9550 tonnes of lychees in 2011, based on the varieties Panjore, Rose Scented, Bhadvari, Seedless No. 1, Seedless No. 2, Dehra Dune and Kalkattia (Shah, 2011).

South America

There are emerging industries in Brazil and Peru (Ghosh, 2001; Trademap, 2014). The emerging Brazilian industry started with Bengal for a December harvest, and has introduced many of the varieties grown in Australia for a harvest season predicted to be from September to March. By 2008 annual production reached 2500 tonnes with 75 per cent immature plantings. Apart from very small

exports to Europe the fruit was being consumed domestically. (*The Brazilian lychee industry - present and future*, 2008).

Taiwan

A large industry produces around 131,000 tonnes of lychees a year (Menzel, 1995). Harvest is in June and July, from more than 20 commercial cultivars including Haak Yip and Sah Ken (Menzel, 1995). Production is dominated by the cultivars Midnight Leaves (80 per cent) and Silk Brocade Purse (10 per cent). Unsold fruit is canned or dried (*Litchi, Agri-food*, 2014).

Lychees were exported to 11 countries between 2009 and 2013, while reported volumes declined to 897 tonnes in 2013. Average export prices to Brunei Darussalam, Hong Kong and Japan were similar to those from Australia in 2013 (Table 12).

Table 12: Taiwan's exports of fresh lychees (HS 08109010107), 2009–13, by volume

Exports to	Tonnes					Annual average A\$/kg FOB
	2009	2010	2011	2012	2013	2013
Brunei Darussalam	0	0	0	0	0.3	6.90
Canada	500	116	180	108	135	1.89
China	0	0	6.8	1.7	0.2	0.30
Hong Kong	0.9	0.3	0.4	1.3	0.3	7.19
Indonesia	0	0	0.3	0	0	
Japan	131	133	137	126	135	7.47
Macao, China	0	0	0	0.2	0	
Malaysia	0.2	0	11	0.6	6.8	3.62
Philippines	0	158	118	0	0	
Singapore	0.1	25	42	74.8	156	2.99
United States of America	708	674	581	304	462	2.00
Total	1340	1106	1078	615	897	3.00

Source: Trademap, 2014

Australia currently has market access to Taiwan but no quarantine protocol exists, although negotiations are continuing (Mpelasoka, 2014).

Thailand

Lychees are a traditional fruit, with varieties including Tai So, Wai Chee, Baidum and more recently Hong Huai, Kim Cheng and O Hia which all have large sweet fruit, and a harvest from mid-March to mid-June. In 2005 production was 75,274 tonnes, of which 24,672 tonnes were exported (Chomchalow et al, 2008; Menzel, 1995, 2005).

Thailand ranks among the world's leading lychee exporting countries, supplying 33 countries between 2009 and 2013 with reported total volumes ranging from 16,413 tonnes in 2009 to 3461 tonnes in 2013 (Table 13).

Table 13: Exports from Thailand of fresh lychees (HS:08109020000), 2010-14 by volume

Exports to	Tonnes
------------	--------

	2010	2011	2012	2013	2014
Australia	80	0	18	0	34
Bahrain	0	0.9	3.0	0.3	5.0
Cambodia	5.4	38.0	0	0	0.2
Canada	39.9	0	0	1.1	0.9
China	2557	1308	6276	2525	5588
Denmark	0	0.2	0.4	0	0
France	5.5	0	0	0.4	1.5
Germany	0.1	0	0	0.2	0.4
Hong Kong, China	1944	1454	2116	177	114
India	0	0	0	9.3	0
Indonesia	463	368	1146	20	115
Italy	4.5	0	0	0	0
Republic of Korea	0	0	1.6	1.8	20
Kuwait	0	0.2	0.8	0.2	1.2
Lao People's Democratic Republic	0	63	0	0	4.6
Lebanon	0	0	0	0	0.2
Malaysia	358	209	573	270	1088
Myanmar	38.6	9.5	4.9	7.9	2.2
Netherlands	65	0	68	15	59
New Zealand	8	0	3.0	0	16
Norway	0	0.5	0.8	0	0
Philippines	372	40	433	171	152
Qatar	0	0.3	0.4	1.1	3.0
Russian Federation	0	0	2	1	3.1
Saudi Arabia	16	1.0	18	16	2.2
Singapore	121	20	247	0	218
South Africa	0	0	0	0.3	0
Switzerland	0	0.2	0.2	0.7	0.2
Thailand	0	0	0	0	0
United Arab Emirates	127	75	116	94	184
United Kingdom	53	9.3	51.5	28.3	9.4
United States of America	18	0	17	0	1.5
Viet Nam	220	152	546	120	515
World	6,496	3,750	11,642	3,461	8,138

Source: Trademap, 2014

Large volumes of canned lychees are also exported, including around 6000 tonnes a year to Malaysia and the United States.

Fresh fruit is transported by road to Malaysia and Singapore, and by air to Hong Kong and Europe.

Trade from Australia is currently terminated, and will require a Thai audit of irradiation facilities to resume (Mpelasoka, 2014).

United States

There is a small domestic industry of around 500 tonnes a year, mainly in Hawaii, where 104 tonnes were harvested in 2008, and Florida and California, where minor production is constrained by high production costs. Tai So, Kaimana and Brewster are key varieties, and harvest is in June and July (Menzel, 1995; Hawaii Tropical Specialty Fruits, 2009).

Vietnam

Lychees are a long established fruit crop in Vietnam, with around 50,000 tonnes harvested annually, a third of which is exported, while the rest is used locally for fresh eating, drying, canning and juicing. China is the leading export market, followed by Europe, the United Arab Emirates and regional countries, while demand is growing from Japan (*Vietnam's lychee export – supply and potential*, 2014; Table 14).

Table 14: Exports of lychee from Vietnam, 2010–14, by value (US\$'000)

Exports to	2010	2011	2012	2013	2014k
Canada	142	0	0	0	0
China	1024	324	3843	14,620	18,565
France	111	20	98	3	0
Laos	0	47	12	3	3
Singapore	0	0	9	17	26
South Korea	36	18	20	100	320
The Netherlands	79	66	176	0	0
United Arab Emirates	83	83	120	145	173
United Kingdom	0	47	69	0	55

Source: The Viet Nam General Department of Customs in Vietnam Trade Promotion Agency, 2014

Overview of markets for imported lychee

Australian lychees are exported to countries with a Chinese population or large Chinese community, usually as a traditional Chinese fruit for gifts and celebrations at Chinese New Year, and for general consumption.

The ideal lychee in most of these markets is influenced by varieties imported from China mid-year, with high skin colour, sweet firm flesh, good flavour, and small seeds, preferably tiny chicken-tongue seeds, and maximum ratio of flesh to seed. Consumers in Europe, the Pacific region and North America are less variety conscious.

The Food and Agriculture Organization of the United Nations has developed CODEX standards for exports of fresh lychees. Mature fruit should have a predominantly red skin, with only a small area of green allowed; fruit diameter exceeding 20 or 25 mm for second class or standard fruit and 33 mm for extra class fruit; total soluble solids content above 18 per cent; and sulphur residue in the flesh of not more than 10 mg per kg (*Codex Standard for Lychees*, 1995, amended 2011). Concerns about sulphur residues from fumigated fruit especially in Europe are prompting this technology to be phased out and alternative technologies developed (Sivakumar et al, 2007).

The following country markets have been identified through industry and market interviews, a literature search, imports recorded in the Trademap database, and verification of market access with the Australian Department of Agriculture. Buyers were interviewed face to face in Indonesia,

Malaysia and Singapore, and by phone in Canada and the Middle East. The markets are profiled alphabetically, not in any order of priority.

Brunei Darussalem

Brunei has a population of 406,000 with 67 per cent Malay, 15 per cent Chinese, and a significant expatriate worker community from around south and South-East Asia (*Brunei Darussalam country brief*, 2014).

A small lychee market is indicated by imports of between 10 and 14 tonnes a year from 2009–13. Landed prices from Taiwan and Thailand of A\$7.32 and A\$5.13 per kg respectively indicate use of air freight (Table 15).

Table 15: Imports to Brunei Darussalem of fresh lychees (HS:081090110), 2009–13, by volume

From	Tonnes					Value A\$	Annual average A\$/kg
	2009	2010	2011	2012	2013	2013	2013
Australia	0	0	0	0.1	0	0	0
China	3.8	2.4	6.2	4.4	1.4	5000	3.57
Hong Kong	0	0	0	0.2	0	0	0
Taiwan	0	0	0	0	0.4	3000	7.32
Thailand	7.2	9.2	8.1	9.0	7.6	39,000	5.13
Total	11	12	14	14	10	50,000	4.76

Source: Trademap, 2014

Reported imports from Australia have fallen since 638 kg arrived in 2006 while Thailand has passed China to become the leading supplier, and re-exports from Malaysia and Hong Kong have ceased (Table 16). No other supply is reported in Australia's season, indicating lychees have since been grouped with other fruits in trade data or Australian exports have ceased.

Table 16: Imports to Brunei Darussalem of fresh lychees (HS:081090110), 2004–6 by volume

From	Kilograms		
	2004	2005	2006
Australia	94	412	638
China	9217	5704	21,108
Hong Kong	0	240	0
Malaysia	1,859	820	0
Thailand	15,212	15,740	14,122
Total	26,464	23,706	35,909

Source: Trademap, 2014

Canada

Market

While Trademap does not report lychee imports to Canada, there appears to be a substantial lychee market, with 2141 tonnes of exports to Canada identified (Table 15) and additional unreported imports from Australia and South Africa. A retail chain observed market consumption of around 400 – 500 tonnes of lychee in 2014.

Importers and retailers said that the major lychee markets are east Asian (Chinese and Filipinos) and Indian. Canada's population of 35 million includes 4.5 per cent of Chinese background and 1.2 per cent who speak Cantonese (these probably overlap) and another 3 per cent who practice Hindu or Sikh religions (*The World Factbook*, 2014). The Chinese market often requires top quality foods especially for Chinese New Year (market interviews, 2014).

According to buyers, most Australian lychees are sold in Vancouver where estimates of between 23 and 35 percent of its 1.5 million population are of Chinese descent. A national retail chain is also seeking lychees for its Toronto and Montreal stores for this market. Demand for lychees and other fruits is strongest at Chinese New Year, for gift giving and consumption, when product appearance and eating quality are priorities. Lychees are a priority fruit for one large chain for Chinese New Year. However, another retailer commented that although most lychees are eaten at this time, Chinese Canadians do not expect lychees at that time of year and therefore have no real tradition for it early in the year (market interviews 2014).

Lychees are increasingly being eaten by non-Chinese consumers as a consequence of its marketing programs for South African and Chinese lychees according to a national retail. Another chain also sees potential to develop the Caucasian market.

Meanwhile, shoppers are buying more fruit and higher value, speciality and gourmet foods (Arbulu, 2013).

Supply

There is no known commercial lychee industry in Canada, so all fruit is imported. Most lychees are from China and South Africa, with some from Mexico (market interviews, 2014). Trade data also identifies imports from Mauritius, Taiwan and Thailand (Table 15). Canada is a significant market for Australian fruit (industry consultation, 2013–14) but imports are not identified in trade data. Reported exports to Canada from China, Mauritius, Taiwan and Thailand ranged from 2141 to 3332 tonnes a year from 2009–14 (Table 17).

Table 17: Export to Canada of fresh lychees (HS:081090020), 2008–12

From	Volume (tonnes)					Value A\$	Annual average \$/kg FOB
	2009	2010	2011	2012	2013	2012	2012
China	3235	3322	3149	2497	2141	1,705,760	0.96
Mauritius	0	4.1	1.8	5.4	3.0	20,270	4.30
Taiwan	500	116	180	108	135	244,230	2.27
Thailand	447	220	152	546	120	n/a	
Total known	3235	3322	3149	2497	2141		

Source: Trademap, 2014

Lychees are imported from December through to February in Australia's supply window. A large retailer estimated that around 500 tonnes of lychee were imported in that period in the 2013/14 season. One chain imports mainly from Australia in December and January, and lower priced South African lychees in February. Another sees few opportunities for Australian lychees because of higher prices. A third observed that air-freighted Australian fruit could not compete on price with shipped fruit, leaving no obvious opportunity for Australian fruit, but was still interested in buying Australian lychees direct from the grower.

One chain sold 400 kilograms of Australian lychees in January and February 2014, down on previous years, and no South African fruit.

Product

According to a specialist exotic fruits importer, Australian lychees have been well received by the market for both variety and quality.

There were varying points of view regarding the quality of South African lychees. A retailer who ran a South African lychee promotional program in December 2013 for fruit arriving by both sea and sometimes air has not had quality problems. Another has had considerable problems with South African lychees due to fruit aging during long sea voyages to Canada and also immature fruit being picked up to three weeks prematurely to arrive in time for Chinese New Year.

Consumers consider skin colour important, preferring as red as possible, and Asian shoppers are concerned with freshness. However, Chinese shoppers generally prefer to buy low-priced Chinese lychees despite poor appearance as they consider the flesh acceptable.

Chinese consumers prefer lychees on the stem, which are supplied from China, and it was suggested that Australian suppliers do likewise for Chinese New Year.

Canadian shoppers are concerned with quality (appearance, flavour and freshness), nutrition, food safety and natural according to a 2010 survey by Agriculture and Agri-Food Canada. A retailer said that Australia is accepted in Canada as a source of safe foods. However, according to another retailer, most Asian consumers are not concerned with country of origin for lychees.

A retailer was of the opinion that Australian producers need to differentiate their lychees through high quality presentation and gift packaging for Chinese New Year that will appeal to retailers and shoppers, such as is used in traditional Chinese countries like Hong Kong. This will add value to the fruit, but needs to be based on a thorough understanding of what shoppers want.

Pricing

A retail chain sells Australian lychees from CAD\$6.00 – \$20.00/kg, which it says is twice the price of air freighted South African lychees, and four times the sea freighted price. Another chain, which sells loose lychee at CAD\$2.20/kg for loose fruit, can still make a profit at CAD\$2.00/kg. It pays around CAD\$3.00 – 4.00/kg for Chinese lychees on the stem, which retail at a premium. South African lychees land at around CAD\$3.00/kg and retail for CAD\$4.00 – \$6.00/kg.

There is only a niche market for air freighted fruit due to price resistance by shoppers. Consumers will pay a 100 per cent price premium at Chinese New Year when fruit is in strong demand. Outside this period Australian lychees become a premium priced fruit in a price-sensitive market with plenty of other low priced lychees available for much of the season (market interviews, 2014).

Distribution

Importers of lychee usually handle a number of Asian fruits.

Telephone interviews were carried out with Vancouver-based importers Oppenheimers and Van-Whole Produce.

Oppenheimers is said to be Canada's leading importer of other exotic fruits and imported Australian lychees directly and indirectly some years ago, but stated there was only a spot market at Chinese New Year so it ceased regular imports as price was a major barrier to growing sales. It now buys lychees only to meet orders and otherwise leaves it to importers who specialise in Asian produce and supply independent stores.

Van-Whole Produce said it trades a lot of lychees, including Australian fruit, and is interested in sourcing more supply.

Lychees from Australia are mostly sent to Vancouver, and some fruit has gone to Toronto (industry consultation, 2013–14). Retailers said that Chinese lychees arrive by ship and South African lychees by both air and sea, and one chain reported buying one sea freight container plus air freighted fruit from South Africa in 2014. A retailer said that South African lychees targeted at the Chinese New Year market are usually shipped to Montreal then travel by rail across Canada to Vancouver which takes at least seven days in winter temperatures and longer when rail tracks are blocked, so the fruit can be in storage and transport for three weeks before sold at retail.

A retailer recommended supplying a wholesaler who can line up premium retail outlets (market interviews, 2014).

Retailers buy through importers and direct from growers (market interviews, 2014). Table 18 includes a number of major retailers.

Table 18: Food retailers in Canada

Retailer	Description
Canada Safeway	A subsidiary of the US owned company Safeway.
Federated Co-ops, Alberta	
Loblaw	Canada's largest supermarket chain with more than 1050 grocery stores including superstores, conventional supermarkets, discount units, convenience and club stores (Loblaw, 2014)
Metro	A retail chain based in Ontario and Quebec.
Metro Inc.	Around 560 food outlets; target the growing ethnic market.
Overwaitea Food Group	124 stores in Western Canada offering a wide range of Asian foods.
Sobeys	A major retail chain with more than 1500 stores across Canada
T & T Supermarkets	22 stores, mainly in British Columbia and Ontario, targeting the growing Asian market with specialty Asian foods.
Thrifty Foods	A small supermarket chain with 26 stores, and a subsidiary of Sobeys who own or franchise more than 1300 stores in all 10 provinces under a range of banners including Thrifty Foods (Thrifty Foods, 2014)

Source: Lamb, K, pers. Comm. 2013; market interviews 2014

Loblaws and Thrifty were interviewed by telephone. Loblaws and Thrifty sell lychees from South Africa and China, and Loblaws handle some Australian fruit. Both are interested in sourcing more Australian fruit.

All major national retail chains have distribution centres across Canada for their own retail operations. They also supply franchised stores, independent grocers and wholesalers. Some independent grocers belong to voluntary buying groups (Arbulu, 2013).

Promotion

As Australian lychee has the highest landed costs in the Canadian market shoppers will need to be convinced it provides higher value than other lychees. Growers will need to provide tasting fruit, and explain to the consumer how their fruit differs from competing product (market interviews 2014). Options include retail promotions with fruit tastings to enable comparison with aged and sulphur treated fruit, and supplying point of sale brochures to explain the production systems used to deliver safe healthy product.

A retailer stressed the importance of promoting Australian lychees ahead of Chinese New Year to secure orders.

Market access

Australian exports to Canada are required to have a permit and be inspected on arrival (Harman, 2014).

There is no import tariff (Trademap, 2014).

Europe

The EU has the world's largest import markets for lychees, with fruit often traded between countries, according to various reports. One estimate is that 35,000 tonnes of lychees are imported a year (Beira Corridor, undated). There are significant opportunities for exotic fruits in European markets as

demand grows (*Food and Beverage Market Report*, France, 2012–13).

Mid-year imports are mainly from China, India, Israel, Taiwan and Thailand. Lychees were also being supplied from Spain and being trialled in other European countries in 1999 (Ghosh, 2001; *Guidelines for Exporters of Fruit and Vegetables to the European Market*, 2001). Most lychees arrive between November and March, supplied by former European colonies – Madagascar, Mauritius, South Africa and Reunion, and small quantities from Australia. Around 30,000 tonnes are said to arrive in December and January, mostly into France and Germany, due to importers having successfully positioned southern hemisphere lychees to meet strong demand for exotic fruits for end of year festivities (*Making trade work for development*, 2008). The leading supplier Madagascar starts the season in November, followed by Mozambique, then South Africa in December (Ghosh undated; *France: Lychees back on the shelf*, 2013). In recent years Madagascar has capped its exports to the EU at 17,500 tonnes a year, after saturating the market one season with 24,000 tonnes of lychees ("Limited amount of lychees for export", 2013).

Lychee imports to the EU are grouped with tamarinds, cashew apples, jackfruit, sapodillo, passionfruit and dragonfruit (pitaya) in Trademap. It is assumed most fruit in this category are lychees if coming from countries where it is a major export. Therefore this data is provided in the individual country profiles, together with specific lychee exports from supplying countries where available.

European markets require quality fruit (industry consultation, 2013-14). Most southern African fruit is treated with sulphur dioxide to enable sea freight. However, Madagascar and South Africa start their seasons with air freight for the premium Christmas market then sea freight from the second or third week of December to arrive after Christmas. South Africa uses air freight for 20 per cent of its lychee supply to Europe ("Madagascar expects good lychee season", 2014).

The import tariff for EU countries is 7.04 per cent (Trademap, 2014).

Belgium

Trade data indicates a large market for exotic fruits year round (Table 19).

Table 19: Exports to Belgium of fresh lychees (HS 081090020) and imports to Belgium of fresh lychees, tamarinds, cashew apples, jackfruit, sapodillo, passionfruit and dragonfruit (HS: 08109020), by volume

From	Lychee exports to Belgium					Exotic fruit imports to Belgium				
	Tonnes					Tonnes				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Southern hemisphere										
Colombia	–	–	–	–	–	56	24	16	22	71
Ecuador	–	–	–	–	–	0	3	0	7	13
Madagascar	0	0	0	0.4	7.7	251	383	11,113	9856	9434
Mauritius	0	3	0	7	1	14	4	0	5	3
South Africa	–	–	–	–	–	5	26	23	25	25
Northern hemisphere										
China	1790	2013	1636	3171	2720	19	0	0	0	0
Israel	–	–	–	–	–	192	195	107	200	178
Malaysia	–	–	–	–	–	11	52	88	56	132
Mexico	–	–	–	–	–	13	0	0	0	29
Thailand	0	0	0	0	0	20	0	0	0	0
Via other European country										
France	–	–	–	–	–	549	435	546	493	315
Germany	–	–	–	–	–	24	89	19	49	123
Netherlands	–	–	–	–	–	437	553	593	510	465
Spain	–	–	–	–	–	189	270	296	368	264
United Kingdom	–	–	–	–	–	36	36	21	27	22
Total	–	–	–	–	–	1997	2451	13,138	12,083	11,481

Source: Trademap 2014

It is assumed the exotic fruits from Madagascar are mostly lychees. According to its website a Belgian importer imports lychees from Madagascar from November to February, South Africa in December, and Thailand from March to July (Star Fruit Company, 2014).

France

France appears to be Europe's largest lychee market, although reported volumes vary, for example:

- More than half of the 35,000 tonnes of lychees imported to Europe each year are consumed in France (Beira Corridor presentation, undated).
- France and Germany import 10,000 – 12,000 tonnes of lychees a year from Madagascar and South Africa, and small quantities from Australia and Israel (Ghosh, 2001; industry interviews, 2013).
- Trademap reports much smaller volumes than these reports suggest (Table 20)
- Reported lychee exports from China, Madagascar, Mauritius and Thailand ranged from 691 – 3832 tonnes a year between 2009 and 2013, and lychees are assumed to represent much of the exotic fruit imports (Table 20).

The lychee market is considered to be mainly Asian (industry consultation, 2013–14). Although ethnic population statistics are not formally reported, France's population of 66 million is deemed to include around a million people of Asian origin, including 380,000 Vietnamese (*Demographics of*

France – Wikipedia, 2014).

Trade data indicates most lychees are supplied from China, Madagascar and Mauritius with small quantities from Thailand (Table 20). There is a small stable market for Australian lychees, mainly for Chinese consumers at Chinese New Year, in competition with South African fruit (industry consultation, 2013–14).

Table 20: Exports to France of fresh lychees (HS 081090020) and imports of fresh lychees, tamarinds, cashew apples, jackfruit, sapodillo, passionfruit and dragonfruit (HS:08109020), 2009–13, by volume

From	Lychee exports to France					Exotic fruit imports to France				
	Tonnes					Tonnes				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Southern hemisphere										
Australia						0	6	4	4	2
Madagascar	21	20	26	35	346	5581	1935	2472	600	327
Mauritius	9	195	104	299	225	120	153	72	258	178
Mozambique	0	0	0	0	0	0	0	0	0	2
South Africa	–	–	–	–	–	434	511	707	629	821
Northern hemisphere										
China	372	460	770	563	776	14	12	25	7	7
Israel	–	–	–	–	–	108	146	155	84	120
Malaysia	–	–	–	–	–	186	216	251	281	253
Mexico	–	–	–	–	–	11	16	1	7	37
Thailand	19	16	1	18	16	445	403	381	307	333
Vietnam	–	–	–	–	–	70	126	175	216	326
Imported via other European country										
Belgium	–	–	–	–	–	0	1073	2422	6117	8280
Denmark	–	–	–	–	–	0	43	35	29	20
Germany	–	–	–	–	–	0	103	108	256	193
Italy	–	–	–	–	–	0	1301	8	16	12
Netherlands	–	–	–	–	–	0	2986	3226	1109	1214
Spain	–	–	–	–	–	0	430	691	2945	1753
United Kingdom	–	–	–	–	–	0	107	34	134	22
Total	421	692	901	915	1,363	6,969	9,454	10,729	12,861	13,876

Source: Trademap, 2014

A French importer's website states that it imports lychees from China, Florida, Israel, Madagascar, Mauritius, Réunion, South Africa, Spain and Thailand for redistribution around Europe. The main variety is Mauritius, followed by Tai So, Vai-Coc, No Mai Chee, Kwai Mai and MacLean (Univeg Katope France, 2014). South Africa has been losing market share in France to Madagascar, Mauritius and Réunion in recent years (Moogala, 2012).

Chinese consumers prefer red-skinned varieties such as Salathiel, as similar to China's No Mai Chee (industry consultation, 2013–14).

French consumers are health conscious and are becoming more demanding in terms of quality standards and traceability of products (*Food and Beverage Market Report*, France, 2012–13).

By November the price is usually down to €2/kg. In 2013 early fruit retailed at 10 to €15/kg to “impatient customers”, dropping to €8 to €10 /kg as supplies grew (*France: Lychees back on the shelf*, 2013). Shoppers pay a price premium for lychees at the start of season in November and at Christmas (Menzel, 1995).

Germany

Germany has a large market for imported lychees, and reportedly shared with France some 10 – 12,000 tonnes of the lychees exported annually from Madagascar and South Africa (Ghosh, 2001).

Trade data shows only lychee exports from China and Thailand, totalling between 525 and 1099 tonnes a year from 2009–13. Imports of the exotic fruits category that includes lychees show only small quantities of fruit from South Africa and none since 2009 from Madagascar (Table 21).

Table 21: Exports to Germany of fresh lychees (HS 081090020) and imports of fresh lychees, tamarinds, cashew apples, jackfruit, sapodillo, passionfruit and dragonfruit (HS:08109020), by volume

From	Lychee exports to Germany					Exotic fruit imports to Germany				
	Tonnes					Tonnes				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Southern hemisphere										
Madagascar	0	0	0	0	0	98	0	0	0	0
South Africa	–	–	–	–	–	67	181	119	68	116
Northern hemisphere										
China	235	431	1099	835	510	19	37	0	0	24
Israel	–	–	–	–	–	0	4	17	1	0
Malaysia	–	–	–	–	–	160	201	202	203	130
Thailand	490	65	0	68	15	162	139	105	115	101
Vietnam	–	–	–	–	–	227	205	224	508	1539
Via other European country										
Austria	–	–	–	–	–	1	9	33	38	24
Belgium	–	–	–	–	–	96	340	96	657	664
Denmark	–	–	–	–	–	132	74	77	106	73
France	–	–	–	–	–	2004	1500	1151	2516	2353
Italy	–	–	–	–	–	272	155	93	330	110
Netherlands	–	–	–	–	–	3653	3955	3773	4604	4813
Spain	–	–	–	–	–	361	379	1617	3550	1499
United Kingdom	–	–	–	–	–	35	142	47	16	6
Total	725	496	1099	903	525	7287	7321	7554	12,712	11,452

Source: Trademap, 2014

United Kingdom

There is a substantial lychee market, which was expected to take 17 per cent of South Africa's exports in 2014 (*National Agricultural Marketing Report*, 2013).

Lychees are mostly sourced from Madagascar, Mauritius and South Africa, at the end of the year and China, Israel and Thailand mid-year (Ghosh, 2001). Only very small quantities are reported by Trademap (Table 22).

Table 22: Exports to United Kingdom of fresh lychees (HS 081090020) and imports of fresh lychees, tamarinds, cashew apples, jackfruit, sapodillo, passionfruit and pitaya (dragonfruit), (HS: 08109020) 2009–13, by volume

From	Lychee exports to United Kingdom					Exotic fruit imports by United Kingdom				
	Tonnes					Tonnes				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Southern hemisphere										
Australia	–	–	–	–	–	4	3	0	0	0
Madagascar	0	0	0	0	0	342	39	118	61	0
Mauritius	0	8	2	1	1	1	0	1	4	8
South Africa	–	–	–	–	–	309	427	406	529	501
Northern hemisphere										
China	0	0.4	0	0	0	141	111	45	104	172
India	–	–	–	–	–	127	11	10	36	82
Israel	–	–	–	–	–	77	59	151	207	110
Mexico	–	–	–	–	–	1	0	20	35	52
Thailand	50.7	80	0	17.8	0	586	418	266	356	293
Vietnam						208	324	317	83	139
Via other European country										
Belgium	–	–	–	–	–	41	47	10	41	11
Denmark	–	–	–	–	–	2	5	4	7	8
France	–	–	–	–	–	104	143	173	94	115
Germany	–	–	–	–	–	12	42	35	95	222
Italy	–	–	–	–	–	131	54	5	136	6
Netherlands	–	–	–	–	–	216	406	1385	904	580
Spain	–	–	–	–	–	8	19	32	71	70
Total	50.7	88.4	2	18.8	1	2310	2108	2978	2763	2369

Source: Trademap, 2014

South African fruit is used for pre-Christmas sales ("Fresh lychee back on the shelf", 2013). Australian lychees have been supplied for some years, although volumes dropped when demand fell away during the global financial crisis (industry consultation, 2013-4).

There appears to be potential to grow the lychee market by targeting new sectors as an Asian fruit. For example, the population of 63 million includes around 1.8 million of Indian origin (CIA database, 2014).

The market is more concerned with quality than price. Most lychees from southern Africa are treated with sulphur dioxide (industry consultation, 2013-14). However, air freight is used for Madagascar and South Africa for the premium pre-Christmas market (Menzel, 2005).

The Mysupermarket website, which promotes a number of retail chains, was advertising 200g punnets of Mexican lychees for £7.50/kg at UK Sainsbury's, and 400g punnets at Asda and 300g punnets at Tesco for £5.00/kg in February 2015. The Asda and Tesco labels did not mention country of origin (*Mysupermarket.co.uk*, 2015).

Other European countries

Export trade data for major exporting countries indicates further lychee import markets in Denmark, Italy, Netherlands, Spain and Switzerland (Table 23).

Table 23: Exports of fresh lychees to Denmark, Italy, Netherlands, Spain and Switzerland, 2009–13, by volume

Importing country	Exported from	Tonnes				
		2009	2010	2011	2012	2013
Denmark	Madagascar	1.7	0	0	0	0
Italy	Mauritius	0	59	13	18	29
	Thailand	0	0	0	0	1
	China	124	133	132	105	95
Netherlands	China	9	3	4	3	5
	Madagascar	0	0	0	8.1	1
	Mauritius	0	2	9	13	12
	Thailand	490	65	0	68	15
Spain	China	0	38	108	7	1
	Mauritius	0	0	0	0	1
Switzerland	Thailand	0	0	157	158	700
	Mauritius	0	5	9	34	31

Source: Trademap, 2014

Hong Kong

The main market is Chinese, who represent 93 per cent of Hong Kong's population of seven million (CIA, 2014). There is good demand for Australian lychees at Chinese New Year (industry consultation, 2013–14).

All lychees are imported, with reports of between 242 and 17,106 tonnes a year from 2008–12 (Trademap, 2013). Imports from Australia fluctuated between 84 and 125 tonnes a year over that period, with South Africa providing the main competition (Table 24).

Table 24: Imports of fresh lychee (HS:08109010) to Hong Kong and Macau by volume and value

From	Volumes (tonnes)						Value A\$	Average annual value A\$
Imports to Hong Kong from	2009	2010	2011	2012	2013	2014	2014	2014
Australia	79	84	109	125	119	110	774,000	7.04
China	421	351	567	36	85	292	470,000	1.61
Madagascar	0	0	0	0	115	0	0	
South Africa	102	24	26	52	26	25	32,300	1.29
Taiwan	0	0	4.0	40	12	0.2	1700	8.50
Thailand	16,503	5308	3176	4933	488	149	72,000	0.48
United States	0	0	0	2.9	0	0	0	
Total	17,106	5767	3882	5204	77	557	135,000	0.24

Source: Trademap, 2014

Most imported fruit appears to be re-exported to China (Table 25). While inconsistencies between import and export data do not allow calculation of domestic consumption, the data shows Hong Kong to be a major regional trading hub for lychees, including to Malaysia and Indonesia.

Table 25: Exports of fresh lychees (HS:08109010) from Hong Kong, 2008–12, by volume

Exports to	Tonnes					
	2009	2010	2011	2012	2013	2014
China	16,722	6515	3485	6515	1066	358
Canada	3.5	6.4	24	6.4	2.0	6.0
France	1	0	0	3.6	0.6	0.6
Macao, China	0.4	0	0.5	0.3	0.06	0.2
Malaysia	0	19	0	0	0	5.4
Netherlands	6	0	0	0	0	2.0
Philippines	20	0	44	0	0	0
Thailand	4.7	0	139	0	73	0
Indonesia	0	19	25	0	0	0
Taiwan	0	0	0	0	17	0
Singapore	0.1	0	0	0	0	29
Total	16,757	6560	3718	6525	1159	412

Source: Trademap, 2014

Product

Kwai Mai Pink is well-accepted. South Africa mostly sends large-seed varieties (industry consultation, 2013–14).

Consumers are increasingly health-conscious, eating more fruit and vegetables and wanting fresh, and more nutritional value, and there is growing demand for healthy foods and concern about chemical residues. Shoppers are concerned with quality, tending to buy food daily to ensure freshness (Retail Foods Hong Kong, 2013). There are opportunities to increase demand for Australian lychees and value add by promoting food safety and including Australian country of origin

labelling and point of sale literature.

Pricing

The average landed cost of Australian fruit was A\$5.77/kg in 2012, compared with A\$0.99/kg for South African fruit (Trademap, 2014).

Shoppers are price-sensitive but will pay for quality (industry consultation, 2013–14). They are concerned with value for money and respond to discounts, so retailers often discount food and ask for promotional discounts (Retail Foods Hong Kong, 2013).

There is no import tariff (Trademap, 2014) or VAT.

Distribution

Australian lychees can be landed in Hong Kong within 48 hours of picking (industry consultation, 2013–14).

Lychees are often sold in wet markets and small shops. New government owned fresh produce markets are more modern and cleaner than previously, with air-conditioning. However, the supermarket and department store sector is growing, and taking market share from traditional outlets with fresh products, competitive pricing, a comfortable shopping environment and one-stop shopping. Table 26 lists some key retailers.

Table 26: Major food retailers in Hong Kong

Retailer	Details
CitySuper	Locally owned, with four stores and the locally owned store Oliver's The Delicatessen targets mostly middle class and expatriates
CRVanguard	Chinese owned, with 86 shops and 11 superstores, selling mostly Chinese product
DCH Food Market	Locally owned business, with more than 80 DCH Food Mart and Food Mart Deluxes. Usually located near wet markets and selling mostly meat and seafood.
Jusco Stores (HK)	Japanese owned company, with 15 supermarkets, nine within department stores
PARKnSHOP	Leading chain with more than 260 stores
Sogo	Japanese chain, with two department stores with supermarkets, and a middle-income customer base that will pay for quality. Frequent promotions.
Uny	Japanese owned department store with supermarket, targeting middle-income shoppers seeking quality. Frequent promotions.
Wellcome	Leading chain with more than 260 stores

Source: Retail Foods Hong Kong, 2013

Wellcome and PARKnSHOP operate some 80 per cent of supermarkets across Hong Kong.

Distribution channels, cold chain and the customs clearance process for food products are generally efficient and dependable. Most transshipments to Macau are purchased, consolidated, and shipped via Hong Kong. (*Retail Foods Hong Kong*, 2013).

Promotion

Thailand's tropical fruits are very popular in Hong Kong, and its Hong Kong Trade commission

aggressively sponsors trade promotion activities (*Retail Foods Hong Kong*, 2013). This indicates opportunities to build on existing awareness of lychee with point of sale information highlighting freshness as well as food safety.

Market access

Hong Kong has no quarantine restrictions, but has now introduced its first pesticide residue regulations (Centre for Food Safety, 2014).

Indonesia

Fresh lychees are said to be new to the Indonesian market, which is based on imported fruit. Reported imports ranged between 64 and 1240 tonnes a year from 2009–12 (Table 27).

Demand is growing as consumers move from canned lychees from China and Thailand to fresh. Fresh lychees are usually eaten as an appetiser or after a meal (market interviews, 2014). Iced lychee tea has also become popular recently (Monica, 2014).

Retail chains see the lychee market as mostly Chinese, as a traditional Chinese fruit. The Chinese market is regarded as having above average purchasing capacity, and Indonesia's three million Chinese represent 1.2 per cent of its population of 253 million, according to the World Factbook 2014. There is potential to grow this market by supplying lychees at Chinese New Year when businesses and individuals exchange gifts such as fruits. Importers supply fruit for the ten day lead-in, with peak purchasing five days before, when people buy whatever fruit is available and will purchase ten units at a time. Popular fruits include mandarins, apples and pears. Only mandarins from China are available at that time, and they are sweet, low priced and attract no duty. Cherries are regarded as the most exclusive fruit for Chinese New Year if the season coincides. Retailers believe lychees would be acceptable for gift-giving but have not had supply of quality lychees to trial at this time.

Retailers also see high income earners as a potential growth market for lychees. There is an increasingly affluent middle class, which includes Australian and other expatriates seeking new foods and quality products, and shopping in supermarkets, with strong demand for imported fruits at Christmas. Some retailers are using imported exotic and temperate fruits to attract this market, and at the time of the visit were promoting high priced grapes and stone fruit from Australia and the United States by country of origin, using signage such as "air-flown from USA" which they considered signify very fresh and expensive. There are also emerging segments seeking niche foods with potential for small quantities of lychees.

Retailers believe the middle income market will need to be developed to sell volumes.

There is potential to promote lychees to consumers of similar fruits such as rambutan, longan and carambola which are widely sold in supermarkets and wet markets. Imports of the category that includes tropical fruits (mostly longans, jackfruit and dragonfruit) ranged from 64,685 – 136,043 tonnes from 2009–13, indicating strong and counter seasonal demand (Table 27).

Table 27: Imports to Indonesia of aren, cashew apples, currants, dragon fruit, durian, gooseberries, jackfruit, langsung, longans, lychees, passionfruit, rambutan, salacca, sapodilla, starfruit and tamarinds (HS: 081090 Fruits, fresh not elsewhere specified), 2009–13, by volume

From	Tonnes				
	2009	2010	2011	2012	2013
Australia	11	9	2	0	0
Malaysia	1,338	604	521	450	330
South Africa	0	1	11	0	1
Thailand	99,416	53,195	95,528	119,789	56,508
Vietnam	4,774	10,217	13,779	13,591	10,774
Total	106,057	64,685	111,209	136,043	68,063
Total import value A\$ '000	152,898	78,218	120,866	147,452	80,972

Source: Trademap, 2014

There is only minor production of lychees, concentrated in Bali, so large retailers rely on imported fruit (market interviews, 2014). Trademap reports fresh lychee imports since 2010, which were almost entirely from China and Thailand (although lychees may have been included in a group category previously), and redirection of some lychees through Singapore and Hong Kong. The only southern hemisphere imports recorded were small quantities from Chile in 2010 and South Africa in 2011 (Table 28).

Table 28: Imports to Indonesia of fresh lychees (HS: 0810902000), 2009–13, by volume and value

Exports to Indonesia from	Tonnes					Total value (US\$D FOB)	Annual average USD/kg FOB
	2009	2010	2011	2012	2013	2013	2013
Chile	0	5.0	0	0	0	0	
China	0	344	232	154	44	45,000	1.03
Singapore	0	10	0	0	0	0	
South Africa	0	1.0	0.8	0	0	0	
South Korea	0	0	9.4	0	0	0	
Taiwan	0	0	0.5	0	0	0	
Thailand	0	537	346	1,087	20	16,000	0.80
Total	0	899	589	1241	64	61,000	0.96

Source: Trademap, 2014

Note: The lack of data for 2009 is assumed to be due to a change in classification for lychees

These imports differ from the exports reported by supplying countries (Table 29), but confirm a substantial market.

Table 29: Exports of fresh lychees to Indonesia (HS: 0810902000), 2008–12, by volume

From	Tonnes				
	2009	2010	2011	2012	2013
China	17	95	287	261	227
Hong Kong	19	25	0	0	0
Singapore	48	35	36	45	41
Taiwan	0	0	0.3	0	0
Thailand	152	153	25	85	151
Total	236	308	348	391	419

Source: Trademap, 2014

Any other imports are assumed to be included in the category of “fruit nes (not elsewhere specified)”.

Imports have been concentrated in May and June, with small quantities of southern hemisphere fruit from November to January (Table 30).

Table 30: Monthly imports to Indonesia of fresh lychees (HS: 0810902000), 2011–13, by volume

Year	Tonnes												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
2013	0	0	0	0	20	34	10	0	0	0	0	0	64
2012	25	0	0	59	534	603	20	0	0	0	0	0	1241
2011	0	0	0	0	176	217	186	1	0	0	8	1	580
2010	0	0	0	0	525	226	148	0	0	0	0	0	899
2009	0	0	1	34	716	1458	109	19	0	0	0	0	2337

Source: Statistics Indonesia (unpublished data)

Note: Data was only available until October 2013

Thai fruit arrives from May to July, followed by Taiwan and China (Wardhana, pers. comm. 2014).

Buyers reported shortages of lychees, and inconsistent supply of fruit generally. One retail chain could only buy Chinese lychees for two weeks in 2013, and at the end of its shelf life. Reliable supply would enable development of the higher income and Chinese New Year markets.

Product

Specific varieties do not appear to be an issue, except that Chinese consumers require red skin colour, and consider larger lychees taste better (market interviews, 2014). Chinese and Thai lychees observed in supermarkets and wet markets have not been promoted by variety (Wardhana, pers. comm., 2014).

Buyers are dissatisfied with lychee quality, and an importer commented that a premium priced fruit needs to arrive in premium condition. Importers and retailers said that Australian lychee quality has been variable, and fruit has been arriving in consolidated loads with little shelf life left. Also, Chinese fruit has had black watery skin within a day of arrival, so discarded, resulting in a lot of waste. Appearance and taste will be critical for lychee acceptance, along with price (market interviews, 2014).

One retail chain inspects all fruit on arrival at its distribution centre and will accept no more than 5 per cent damage or shrinkage.

Another chain keeps imported fruits in the chilled section of its warehouse, which is not humidity controlled.

Buyers said that consumers are becoming concerned about chemical residues in fruit from China, following media publicity, although they consider lychees a lower risk because of their thick skin.

A retail chain reported that it preferred to buy a whole container to avoid double handling of the fruit.

Retailers usually repack lychees in small trays such as 250 – 300g, with cling wrap to prevent shoppers handling the fruit, but would prefer punnets with plastic overwrap. A 2kg box of cherries was said to suit a family and is an option for lychees.

Special gift packaging is used to position other high value fruits for the high-spending Chinese New Year market, and retailers would like lychees in 1 or 2 kg gift boxes as used for other fruits such as longans, mangoes and cherries.

Some Chinese lychees have arrived in one kilogram baskets, probably bamboo, covered with cling wrap, and some on the stem.

Pricing

Average import prices have been very low across the year, ranging from US\$1.07 to \$2.19/kg in Australia's season (Table 31).

Table 31: Imports to Indonesia of fresh lychees (HS: 0810902000), 2011–13 (US\$/kg)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2009	–	–	–	0.53	1.03	0.80	0.79	0.79	0.82	–	–	–
2010	–	–	–	–	–	0.80	0.82	0.80		–	–	1.07
2011	–	–	–	–	–	0.79	0.83	1.11	1.15	–	–	2.19
2012	–	1.17	–	–	0.79	0.90	0.80	0.81	–	–	–	–
2013	–	–	–	–	–	0.80	1.04	0.96	–	–	–	–

Source: Statistics Indonesia (unpublished data), 2013

Note: data was only available until October 2013

Mid-year lychees from China and Thailand landed at around US\$0.80 – 1.00/kg on average in 2013 (Table 31). Retail prices in 2010 were around A\$2.30 – 2.80/kg (IDR 25,000 – 30,000) for Thai lychees and around A\$1.40/kg (IDR 15,000) for Chinese fruit (Wardhana, pers. comm., 2014).

This market is highly price-sensitive, although some supermarkets sell a lot of premium quality fruit to shoppers not concerned with price provided the fruit has quality and taste (retailer) and retail prices have been rising strongly for other imported fruits (Wardhana, pers. comm., 2014). The high price of Australian lychees is the main constraint to market development, despite no competition in its season.

Fruit incurs a 5 per cent tariff, 5 per cent import tax, and 10 per cent GST (Trademap, 2014; Wardhana, pers. comm., 2014; Harol, 2014).

Distribution

Indonesia has a number of major fruit importers and distributors, and ten attended a meeting of the Exporter-Importer of Fresh Fruit and Vegetable Indonesia Association which featured a presentation on Australian lychees by Sun Lychee marketer Martin Walker (Table 32).

Table 32: Major importer/distributors of fresh produce in Indonesia

Company	Target sector
Mulia Raya *	High-end supermarkets, hotels, and restaurants
Central Lucky	High-end supermarkets and fruit shops
Jaya Segar Berkat Mandiri	Hotels and restaurants
Linggaroran Cold Storage	Mainly fruit shops
Pluit Cold Storage	Ranch Market, hotels and restaurants
CV Cherry Fruit *	
Gbs *	
Indofresh *	
PD Harapan Berjaya *	
PT Corona Prayitn *	
PT Laris Manis Utama *	
PT Mulia Raya Agrijaya *	
PT Sinatra Harapan Bersatu *	
PT Yuda Mustika*	

Source: Wardhana, pers. comm., 2014

* attended lychee briefing

Imported fruits and vegetables are retailed by modern fruit shops and a few high-end supermarket chains. Chinese and Thai lychees have also been observed in wholesale markets, wet markets, fruit vendors, modern fruit shops and supermarkets (Wardahna, pers. comm., 2013).

Indonesia has several retail chains with potential for lychees, and also specialty stores (Table 33).

Table 33: Major Indonesian food retailers

Retailer	Details
All Fresh	Modern fruit store
Carrefour	International chain, with 64 outlets in Indonesia
Grand Lucky	A major supermarket group with 150 stores across Indonesia.
Hero	Major chain of supermarkets, and a subsidiary of the Hong Kong based Dairy Farm Group which operates several retail divisions across Asia including Cold Storage, Giant and Wellcome.
Jakarta Fruit Market	Modern fruit store
Kem Chicks	A small gourmet supermarket with imported and local produce
Matahari Hypermart	Second largest retailer, with 48 stores
Ranch 99 Market	Retail chain, with 11 outlets including Ranch Market and Farmers Market, targeting higher income Indonesian and expatriate markets
Rezeki Fruit Shop	Modern fruit store
The Food Hall Indonesia	High-end supermarket chain with imported and local quality produce across 17 outlets, including Food Hall and Daily Food Hall
Total Buah Segar	Modern fruit store

Source: Wardahna, pers. comm., 2013; market interviews, 2014

Interviews were carried out with Hero Group and Grand Lucky.

Hero operates three divisions:

- Hero has 35 stores, 25 per cent of which are located in malls, and targets the less price-sensitive premium market using imported fruits including Australian grapes and mandarins to differentiate from other outlets.
- Grand Extra supplies a mixed market, with 15 – 20 stores

- Grand Express caters to low end price-sensitive shoppers.

Grand Lucky specialises in high-end products with imported fruits representing 70 per cent of all fruit in its leading store, in a CBD shopping centre, and half the fruit sold in its middle and low end stores.

Both Hero Group and Grand Lucky import through affiliated businesses and also supply each other and other retailers. They use imported and niche foods to differentiate from other retailers, and one commented on the range of unusual fruits available from Australia. Both operate central warehouses.

Promotion

Thailand promotes its products heavily in Indonesia, which would raise consumer awareness for lychees. While shoppers are familiar with lychees, providing sampling fruit would allow favourable comparison with Chinese fruit that has been shipped. Promoting Australian origin will provide a strong advantage so fruit should be clearly labelled.

Social media is popular in Indonesia, and there is a strong Masterchef following (Durban, 2014), indicating further avenues for promotion of Australian lychees.

Market access

The Indonesian Ministry for Agriculture requires Australian lychees to have a phytosanitary certificate and to have been treated for fruit fly with cold treatment, fumigation, vapour heat treatment or irradiation.



Fig. 1: Fruit section at Grand Lucky supermarket, Jakarta



Fig. 2: Imported fruits at Grand Lucky supermarket, Jakarta



Fig. 3: At Grand Lucky Supermarket, Jakarta



Fig. 4: Australian lychee, Jakarta supermarket, 2015

Malaysia

Market

There is a small emerging lychee market based on imported fruit, and wholesalers observed growing volumes in the marketplace in 2013. According to one retail chain they sold 200 cartons (size not specified) of Australian and Chinese lychees in 2013 across all its stores and another sold these quantities weekly across four stores.

The market is mainly Chinese and Malays. Canned lychees are widely eaten, but consumers are shifting to fresh.

The Australian lychees market is mostly Chinese, who represent 23 per cent of Malaysia's population of 30 million (*The World Factbook*, 2014). They consume lychees as a traditional fruit, and are used to low prices for Asian lychees mid-year.

There is room to grow this market with varieties that have preferred attributes. Retailers are also keen to grow the Chinese New Year market with Australian lychees. While lychee consumption peaks at that time lychees are not usually used for gifts. Before Chinese New Year many Chinese buy gifts for businesses and friends, in large quantities, such as 50 cartons of fruit at a time. They want prestigious fruits, and colour and variety are important. The most popular gift fruits are mandarins, with fruit from China selling in large volumes, followed by apples. Mandarins are used for both gifts and for prayers, then eaten. Large fruits such as melons and pomelos are used as prayer fruit and to symbolise good luck. Retailers cater for an 8 - 10 week lead time with two buying periods. Australian cherries are popular when Chinese New Year is early enough to be in their season, but can be difficult to source, and other luxury fruits are often not available. Buyers see lychees as a suitable gift fruit, with a strong seasonal advantage for Chinese New Year, but have experienced supply shortages (market interviews, 2014).

The second largest market is Malays, who represent half the population (*The World Factbook*, 2014), and there is potential to grow this segment. Fruit is traditionally eaten after meals, and some restaurants serve fruit after meals. Canned lychees are also widely consumed. There is also a growing trend to eat fruit half an hour before the meal, promoted through social media as improving digestion. Australian lychee sold well in a promotion in January 2015, which was outside the Chinese New Year period (market interviews, 2014). Retailers offer a wide range of similar fruits such as longans, langsat and rambutans, indicating likely adoption of lychees by the wider market. A retail chain said that lychees are well known by local consumers of all ethnic backgrounds. However, two

vendors selling rambutans, longans and other tropical fruits at a popular outdoor eating precinct in Kuala Lumpur said that a somewhat similar fruit (Rambutan laici) was a lychee, indicating lychees are not so widely known.

Other potential growth markets are Indians, who make up 6.7 per cent of the population, and expatriates with 8 per cent (*The World Factbook*, 2014). A retail chain plans to offer Australian lychees as a red skinned fruit as part of its Christmas theme over the two months prior.

Retailers are using higher value fruits to target growing upper and middle income shoppers. There is growing demand for nutritious and healthy foods across the market (market interviews, 2014; Lee, pers. comm., 2014).

Growing new markets will require attracting and educating new consumers on lychees, as well as offering continuous tastings and reasonable pricing (market interviews, 2014).

Supply

Although lychees are a traditional fruit in Malaysia, with some fruit grown locally (Menzel, 2005), importers were not aware of any local commercial supply. It was not possible to calculate total imports as Trademap has not reported imports of lychees since 2007. Matrade (the Malaysia External Trade Development Corporation) could only provide import values from Thailand since 2009, which indicate annual fluctuations in supply and a significant rise in 2014 (Table 34). Trademap indicates exports from China, Hong Kong, Singapore, Taiwan and Thailand to Malaysia but volumes and values were clearly inaccurate so have not been reported.

Table 34: Imports to Malaysia from Thailand of fresh lychees (HS 081090200), by value, 2009–13

Imports from Thailand	Value (US\$)					
	2009	2010	2011	2012	2013	2014
	369,995	95,375	59,763	186,665	89,512	1,297,888

Source: Matrade 2014 (unpublished data)

Importers said that mostly lychees are from China and Thailand, with small quantities from Australia said to be new to the market, while trials from southern African countries have not met retailers' quality requirements. Buyers said there had been no lychees arriving in December, and Australian fruit is not offered at Chinese New Year due to lack of supply, so growing the market will require consistent supply of quality fruit all season. Austrade recommend providing a periodic crop forecast and price (Lee 2014).

Product

A buyer said that Chinese consumers want large sweet lychees with small seeds and red skin, such as No Mai Chee which is imported from China; Salathiel, even when priced at RM60/kg; and a very large lychee from Thailand with good colour but watery taste. Kwai Mai Pink is also accepted despite its pink skin. He said Wai Chee is not popular because of its dull skin colour, large seed and poor taste; similarly Fay Zee Sui's seed is considered too large and skin is not red enough and goes dull.

Other market segments are aware of when lychees are from Australia but do not know specific varieties so are more likely to try a wider range.

Buyers want quality and generally premium grade although one retail chain preferred second class fruit for its more price-sensitive customer base. Eye appeal is considered critical.

Importers and retailers said they had not encountered any significant quality issues with Australian lychees, except for shelf life. Several buyers complained about the short shelf life of Australian lychee consignments, chiefly that fruit had been arriving with less than a week's shelf life so could not be sold. A retail chain said Australian lychees in punnets have only lasted two to three days in the stores, while selling the fruit loose means having to discard unsold fruit once its appearance deteriorates. Another chain discards fruit at the best buy date provided by the importer. An importer/distributor said that shoppers will not buy lychees once the skin has turned brown. Suggestions of contributing factors to the shortened shelf life included long supply chains for fruit before export from Australia, slow sales due to limited demand from emerging markets, little redistribution between wholesalers, transport of lychee in mixed containers, and small volumes being difficult for the trade to manage. The result is fruit having to be discarded, increased high prices, low margins, and buyers seeing Australian lychees as a risky product.

Australian lychees have been arriving in 5kg cartons. One importer supplying high-end retailers such as speciality stores struggles to sell these to smaller stores, although some will buy 2-2.5kg boxes.

Retail chains want to sell lychees in prepacks to avoid damage, as they are considered very delicate and needing a lot of handling, and only sell loose fruit during a promotion. A punnet was recommended for Australian lychees after an initial sampling program. One chain sold 400kg of punnets of Australian lychees across the 2013–14 season. They do a small amount of prepacking but prefer to buy prepacks. Importers typically repack cartons to punnets for retail customers, like other fruits such as cherries, which go into 250g and 500g punnets and also into the grower's own branded plastic bags. One importer uses its own punnets with stickers for different fruits and promotions. The general recommendation was that lychees should be supplied in cartons and repacked in Malaysia by the importer, retailer or third party packers, for the lower local wage costs and to enable quality checks on arrival.

Retailers recommended using labelling on prepacks to attract shopper attention to any positive features. Labels should include a description of the internal fruit, how it should taste, and its eating convenience as well as country of origin.

For Chinese New Year there was strong interest in a 1kg Chinese New Year gift box or pack as used for cherries. This smaller size would allow the shopper to put more gifts in a hamper compared to a carton. It was expected that some Chinese shoppers would buy a lot of these boxes. It was recommended that packaging be in colours other than black which Chinese find depressing at Chinese New Year. Brown would be acceptable.

While Chinese lychee quality has been improving, there is growing consumer resistance to Chinese fruit due to concern about chemical residues. In 2013 consumers bought Taiwanese fruit (which is shipped after sulphur dioxide treatment) ahead of Chinese product. A large importer of lychees was surprised to learn that Australian lychees are not treated with sulphur dioxide to maintain skin colour, indicating this factor should be promoted. Distributors and retailers have begun implementing HACCP based quality assurance, which is considered a strong selling point, and an importer interviewed has SCS sustainability certification (SCS Global Services, 2014). It was recommended that labels promote food safety benefits such as grown in a clean environment, quality assurance program, non-use of chemicals such as sulphur dioxide, non GMO, country of origin, and any certifications, as all of these signify better quality. Inviting buyers to visit the farm will reinforce these production benefits.

Imports of Australian fruits have been growing, and promoting Australian country of origin is recommended for its positive image.

Pricing

Price is constraining market growth for Australian lychees. Buyers said that Malaysia is a lower middle class market and generally price-sensitive, with consumers wanting premium quality but not willing to pay premium prices. Shoppers are used to buying low-priced lychees from China and Thailand, and Malays prefer Thai fruit over Chinese which they consider too expensive. The most price-conscious will wait until June for Thai lychees rather than pay four times as much for Australian lychees. In 2013 a retail chain sold lychees at RM10 to 12 for 500g punnets, and RM20/kg.

Australian lychees do sell but at high prices while shoppers have a good choice of fruits. A wholesaler said that Australian lychee landed at more than A\$50.00 for 5kg (A\$10.00/kg) in the 2013–14 season so he had to ask RM60/kg wholesale.

Lychees incur a 6.5 per cent import tariff (Trademap 2014), and VAT of 10 per cent.

Distribution

Australian fruit mostly arrives at Kuala Lumpur International Airport where Malaysian Airlines and Air Asia were said to have good cold storage facilities, and importers can collect until midnight. An Australian exporter said Malaysia is often serviced through Singapore, and trade data indicates that lychees are being transhipped through there and Hong Kong. Chinese fruit arrives by ship to Malaysia then road freight, and Thai lychees direct by road freight.

These importers, wholesalers and distributors were willing to be interviewed (Table 35).

Table 35: Importers of fresh produce in Malaysia

Company	Details
D'Fresh Sdn Bhd	Major importer/distributor, supplies major retail chains and other food sectors
Euro-Atlantic Sdn Bhd	Importer and distributor of specialty fruits and vegetables
Great Harvest Fruits Sdn Bhd	Importer and wholesaler. Handle a lot of lychee, usually buying from Australian exporters
Khaishen Trading Sdn Bhd	Major fresh fruits and vegetables importer and exporter, supply hypermarkets, supermarkets, wholesalers and retailers

Source: Market interviews, 2014

All interviewees are large importers and wholesalers who source much of their fruit and vegetables from Australia and other western countries. Australian mangoes, avocados and strawberries are important lines. They import Australian lychees from exporters in 5kg cartons and in consolidated loads via wholesale markets. These companies have modern distribution centres and cool chain management practices, and are moving to quality assurance. Importers interviewed assess fruit quality on arrival at their warehouses, and may use data loggers to monitor early consignments.

These importer/wholesalers supply retail chains, fruit stores and traditional wet markets. Some have stands at the Kuala Lumpur wholesale market. They are often traders for trusted customers supplying high-end markets, and some run retail promotional campaigns for new product lines. One company that targets high-end retailers promotes prepacks in retail style display refrigerators. Importers supply a number of chains, but chains say they use a limited number of wholesalers. For their retail chain customers the importers will organise the repacking of high value fruits such as lychees into prepacks.

A wholesaler who buys from Australian brokers for retail chains said a whole container of lychees is difficult to sell quickly because distributors generally do not trade between themselves. It was also said that most wholesalers do not have a cool chain and those at the wholesale market often leave

lychees out of the cold room during the day.

Much of the problems with reduced shelf life of lychees appears to be from long supply chains and fruit being consolidated in Australian wholesale markets. Importers would prefer to source more directly to improve shelf life. Growing the market share will require wider distribution and better cool chain management. A retail chain recommended providing a quality manual for store staff.

Most lychees are retailed in traditional wet markets, mostly to Chinese shoppers and some Malays. Retailers typically display small quantities of lychees at a time, and store the rest in their cold stores (market interviews, 2014).

Research concentrated on the supermarket sector because of the need for a well-managed cool chain to lychee skin colour and flesh quality. Western-style supermarkets dominate retailing, but only sell small quantities of lychees and it was said that no supermarket can handle larger volumes. An importer commented they have low staff numbers and are price conscious. Premium grade lychees and other fruits are sold in high-end supermarkets.

Malaysia has a number of retail chains and gourmet food stores (Table 36).

Table 36: Major Malaysian food retailers

Retailer	Details
Aeon Malaysia	A large Japanese-owned retail chain with stores across Indonesia (Aeon Malaysia, 2014).
City Grocer Supermarkets	A small chain selling premium products
Hock Choon Supermarket, Kuala Lumpur	
Isetan	Japanese-owned group of department stores selling high-end foods, including Australian avocados and grapes.
Isetan KLCC	Japanese retail store beneath the landmark Petronas Twin Towers in Kuala Lumpur (Isetan, 2014)
Jaya Grocer	A small chain of gourmet stores selling high value imported and local produce
KL Sogo Department Store	Chain of department stores (Sogo Kuala Lumpur 2014)
Pick n Pay	a small chain selling higher value foods including Australian fruits (Pick n Pay 2014)
Sams Groceria	Five upmarket outlets, and promotes international foods, with a range of imported fruits such as cherries, raspberries and kiwi fruit (Sams Groceria, 2014)
Tesco Malaysia	A division of British owned international retail chain Tesco (Tesco 2014).
The BIG group	Owens Ben's General Food Store and Ben's Independent Grocer (Ben's, 2014)
The Giant group	Malaysia's largest retailer, with a mostly Malaysian customer base and 20 per cent niche markets.
Urban Fresh Marketplace	An upmarket supermarket promoting premium imported fruits in Kuala Lumpur (Urban Fresh, 2014)
Village Grocer, Mont Kiara, Kuala Lumpur	

Source: Market interviews, 2014

The Giant Group and Tesco were willing to be interviewed.

The Giant Group has three retail divisions in Malaysia. Its Jasons and Marcato stores are upmarket and target higher income shoppers in niche markets where variety, eating quality, convenience and food safety can be promoted to differentiate. Giant operates the remaining 80 per cent of stores, focussing on medium to low end consumers. The Giant Group is part of the Dairy Farm group which includes Cold Storage in Singapore, Hero Group in Indonesia and Wellcome in Hong Kong, and is moving to central purchasing based in Hong Kong.

Tesco targets high income buyers through supermarkets, hypermarkets and online stores. It is introducing fresh produce to its wholesaler division which supplies small stores. It uses its customer data base to run highly targeted promotional programs.

The Giant Group and Tesco both use importers to manage their logistics, and buy Australian lychees through them. One sources Chinese product at the wholesale markets. Tesco has its own dedicated fresh distribution centre, including a 1°C cool room, and a 24 hour turnaround policy. Giant are building a distribution centre in order to purchase larger lines direct, while continuing to source niche products through distributors.

Both Tesco and Giant would display lychee punnets in their chilled section, according to their existing displays. They would sell lychees loose during a promotion.

Promotion

The trade saw the need to both position Australian lychees as a higher quality and higher value product in existing markets and develop new markets, and it recommended that promotion be used to expand the current Chinese and Malay markets and target new market segments.

Store tastings by specialist demonstrators were recommended to encourage current lychee buyers to compare the taste of Australian lychees with Asian fruit that has been treated with sulphur dioxide and consider newer varieties from Australia on their attributes, as well as entice consumers of canned lychees to shift to fresh. Retail promotion of Chinese New Year gift boxes would encourage shoppers to consider Australian lychees as a gift option. Labelling and consumer brochures highlighting food safety measures and country of origin can be used to target consumers concerned with chemical residues in Chinese fruit. Boosting the perceived value of the fruit through these measures may draw shoppers' attention away from price alone.

As fresh lychees are relatively new to Malaysia, promotion is needed to target new consumer markets. Buyers said a promotion should bring lychees to the attention of shoppers who are not familiar with them or have not tasted them, explain what to expect from eating a lychee, and provide store tastings. Consumer brochures with nutritional content, benefits and usage ideas provide further reasons to buy lychees. The official language is Bahasa Malaysia, and English is widely used (*The World Factbook*, 2014). It was recommended that consumer brochures and recipe cards be in English and Bahasa, and include a description of what to expect when eating a lychee, usage ideas, nutritional benefits (including vitamin C and fibre content) and country of origin.

Display materials such as bunting, banners and wobblers among the fruit will attract shoppers to a promotion. Loose fruit encourages shoppers to buy small quantities for trial of this relatively high-priced product without having to buy a whole prepack. Decals are popular on delivery vehicles in Malaysia, and some importer/wholesalers include these in integrated promotions, and will organise printing if provided with a design. One said that two decals would cost around A\$2000.

Product tastings and demonstrations are frequently run in upmarket supermarkets in higher end areas for other products, but no one was aware of any lychee promotions. Retailers and importers were very interested in running store promotions at the start of the season, end of season, and throughout Chinese New Year. These would at a minimum provide consumer tastings and point of

sale material at stores used by the target markets.

One retailer discussed hiring demonstrators for weekend tastings in two to three stores at a time in selected supermarkets and hypermarkets, store by store. These demonstrations would require sampling product and funding of the demonstrators' fees. Most expect industry to provide this, although one wholesaler might also fund store tastings if provided with sampling fruit. Consumer brochures or recipe cards provided by the exporting organisation would be with the fruit and handed out by demonstrators, and one store would display an A4 information sheet beside the lychees. Consumer information needs to be in a format suited to the individual retailer's layout. Two importers offered to organise local printing if provided with designs.

Importer/wholesaler Euro-Atlantic has been handling Australian lychees for many years. They have run promotional programs with their retail clients for other high value fruits such as berries, stone fruit and Australian avocados, resulting in continued strong growth in sales. They often partner with a marketing company on integrated product promotions with their customers, who include eight retail chains as well as restaurants and caterers.

Following the market visit Euro-Atlantic organised a promotion with eight retailers over the month of January 2015, ahead of peak production in Australia.

They recommended starting small, and the initial promotion focussed on encouraging consumers to taste lychee and compare with mid-season fruit that has been arrived by road or sea. The promotion's objectives were:

- to create awareness and introduce premium lychee into Malaysia market
- to educate consumers on lychee nutritional benefits
- to educate customers on handling and storage method
- to educate customers on the various types of serving methods.

The promotion was intended to be for one month from the fourth week of December to build demand for peak season fruit, but eventually ran from 10 January to 1 February due to the late start of Australia's 2014-5 season. This was outside Chinese New Year, which was 19 February.

ALGA provided the industry's consumer brochures, funded the cost of printing the banners in Malaysia, covered the wages of the store demonstrators and the cost of the 160kg of tasting fruit. It also provided information kits including lychee handling guides in Bahasa Malaysia for the participating retailers. Euro-Atlantic used ALGA's existing designs to organise some printing locally. They found the ALGA point of sale material to be suitable for this market, without the need for translation for shoppers.

United Lychee Marketing Association co-ordinated Sun Lychee fruit for tasting and sale, which Euro-Atlantic had packed into 500g punnets under Euro-Atlantic labels that it had printed for the promotion.

Euro-Atlantic hired demonstrators to provide tastings and hand out the consumer brochure to shoppers during weekend sessions in 13 stores in Kuala Lumpur and also sold the Sun Lychee fruit in another nine stores (Table 37). The promotions were featured on their Facebook page (Appendix F).

Table 37: Malaysian food retailers participating in Euro-Atlantic lychee promotion, 2015

Retailer	Stores
Store demonstrations and sales	
AEON	AEON Bandar Utama, AEON Mid Valley, AEON Taman Maluri, AEON Tebrau City
City Grocer	
Cold Storage	Cold Storage KLCC, Cold Storage Mid Valley, Giant City Mall
Isetan KLCC	
Jason's Food Hall	
KL Sogo Department Store	
Mercato	Mercato Hartamas, Mercato Pavilion
Sales only	
AEON	AEON Bukit Indah, Johor; AEON Ipoh, Perak; AEON Maxvalu Desa Park City, Kuala Lumpur; AEON Maxvalue Gamuda Walk, Kuala Lumpur
Cold Storage	Cold Storage Bandar Uatama, Selangor; Cold Storage Great Eastern, Kuala Lumpur
Hock Choon Supermarket	Kuala Lumpur
Jaya Grocer	Klia 2, Kuala Lumpur International Airport
Village Grocer	Mont Kiara, Kuala Lumpur

Source: Euro-Atlantic Sdn Bhd, 2015

NB: KLCC is the shopping centre under the Petronas Towers.

Shopper feedback from the store tastings described the lychees as juicy and sweet with a tinge of sourness. The fruits arrived in good condition, but browned in two to three days when displayed in retailer's chilled displays. Once the skin started to brown in the store, shoppers saw the fruit as no longer fresh and would not buy. Only at this point did the stores use discounting to clear stocks.

The 500g punnets were priced from RM20.90 – 22.90 (A\$7.31 – 8.10) during the promotion. Demonstrators said that shoppers frequently compared the price with fruit of China and Thailand origin, which typically retails at around RM15/kg, although they acknowledged the taste and quality were much better.

Market access

Malaysia does not require disinfestation for lychees (Mpelasoka, 2014). However, a phytosanitary certificate is now required.

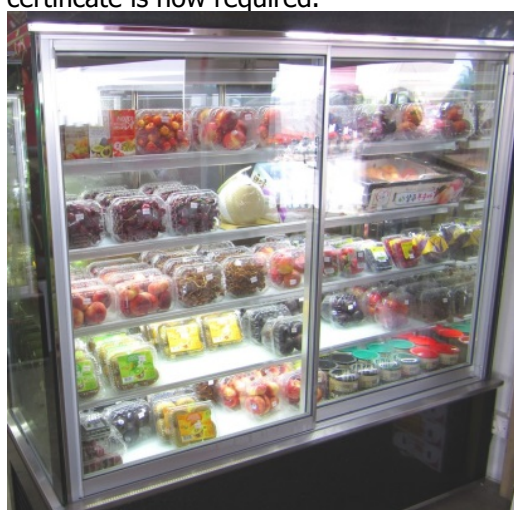


Fig. 5: Importer's display case at wholesale market, Kuala Lumpur



Fig. 6: Importer's coolroom, Kuala Lumpur



Fig. 7: Australian lychee promotion, Isetan department store, Kuala Lumpur

Fig. 8: Australian lychee promotion, Cold Storage supermarket, Kuala Lumpur



Fig. 9: Australian lychees in Euro-Atlantic punnet for retail promotion



Fig. 10: At Euro-Atlantic office, Kuala Lumpur

Middle East

The largest lychee market is in the United Arab Emirates, with small markets in Bahrain, Jordan, Kuwait, Lebanon, Qatar, Saudi Arabia and Yemen, all relying on imported fruit (industry consultation; Ghosh, 2001; Table 38).

The main market for lychees is the thousands of expatriate Asian workers from South and East Asia who know of lychees and buy them in supermarkets in Abu Dhabi, Dubai, Oman, Qatar and the United Arab Emirates.

Abu Dhabi and Dubai have large expatriate communities, including Dubai's numerous Indian and Pakistani residents who are familiar with lychees. In 2014 more than 80 per cent of the United Arab Emirates' 5.6 million people were expatriates. In 1983 half were from South Asia while another 8 per cent included Westerners and East Asians (2014). These labourers and other mid to low wage workers often live in labour camps and work in the growing food service sectors and numerous five star hotels that support growing tourism and business (*The United Arab Emirates Consumer behaviour, attitudes and perceptions towards food products*, 2010).

Exporters said the Asian worker markets are too price-sensitive for Australian lychees. The United Arab Emirates' lychee market has matured, and demand has been shifting from first grade to lower quality fruit. Small quantities of Australian lychees are supplied in mixed loads for early season opportunities but compete with low priced fruit from Mauritius and Madagascar (industry consultation, 2013-14).

Qatar, with a population of two million including 18 per cent Indians, took very small quantities from Thailand mid-year from 2009–13 as well as likely imports via Dubai. Saudi Arabia has the largest population, at 27 million, and around 18 tonnes of lychee imports from Thailand most years. Kuwait, with 2.6 million people, of whom 38 per cent are Asian, had very small lychee imports from Thailand in the same period (Table 38).

Table 38: Exports to Middle East countries of fresh lychees (HS 081090020), 2009–13, by volume

Importing country	From	Tonnes				
		2009	2010	2011	2012	2013
Bahrain	Thailand	0.6	0	0.9	2.5	270
Kuwait	Thailand	0	0	0.2	0.8	1
Qatar	Thailand	0	0	0.3	0.4	0
Saudi Arabia	Thailand	19	16	1	18	0
United Arab Emirates	Mauritius	0	3.6	0.4	18	27
	China	16	31	33	0	0
	Thailand	167	127	75	115	0

Source: Trademap, 2014

Annual average landed prices ranged from A\$1.70–7.40 FOB (all from Thailand) in 2012, with Mauritius lychees at A\$3.66 (Table 38, industry consultation, 2013-14).

Dubai mainly provides a logistics hub into other minor markets in Muscat, Oman and Qatar, although development of those markets is constrained by insufficient air freight capacity (industry consultation, 2013).

There are no import tariffs (Trademap, 2014).

Singapore

Market

There is a stable lychee market of around 1500 tonnes a year of imported fruit, with a landed value of A\$28 million in 2013 (Table 40). More lychees are likely to be included in the category of HS:081090 for fresh fruits not elsewhere specified (Table 39).

The main market is Chinese residents, who represent 74 per cent of Singapore's 5.4 million population and buy lychees as a traditional fruit for consumption. Australian lychees are targeted at this market.

Large and growing hotel, restaurant and catering sectors provide for more than 15 million tourist arrivals a year (Singapore brief, 2014), represent further potential markets for lychees.

Demand for Australian lychees peak at Chinese New Year when shoppers are less price-conscious. However, lychees and other exotic fruits are not popular for gifts at that time. Chinese Singaporeans typically give mandarins in gift packs to family and friends to symbolise gold, wealth and for luck, so stores are busy handling these, rather than lychees which are very delicate and need a lot of

handling. Cherries and strawberries are also in strong demand, and when Chinese New Year occurs in January there is plenty of supply. The market for Australian fruit could be expanded by promoting it as a gift fruit using gift packs (market interviews, 2014).

Outside this season Chinese shoppers are seeking varieties similar to what is supplied from China mid-year, such as Australian Salathiel which has limited supply.

Other markets with potential for Australian lychees of other cultivars include Malays, who represent 13 per cent of the population, and around 500,000 ethnic Indians (market interviews, 2014). Strong demand for similar Asian fruits to lychees is indicated by annual imports of around 26,000 tonnes of mostly lychees, langats, longans, rambutans, cempadek and nangka (Table 39).

Table 39: Imports to Singapore of currants, dragon fruit, gooseberries, longans, lychees, Mata Kucing, rambutan, salacca, sapodilla, tamarinds (HS:081090 Fruits, fresh nes), tonnes

Imports	2009	2010	2011	2012	2013
Total import volume (tonnes)	28,568	24,408	26,123	24,687	26,558
Total import value (A\$'000)	28,174	25,419	29,468	25,143	28,652
From Australia (tonnes)	149	117	66	54	43
From Australia (A\$'000)	829	709	467	357	344

Source: Trademap, 2014

Singapore is Asia's second most affluent country, with growing average annual individual incomes and demand for quality and variety (*Export guide annual - Singapore*, 2014). It has a large non-resident population of around 1.6 million that includes an estimated 150,000 Westerners. The expatriate community are not seen as major lychee consumers. Singapore offers similar growth opportunities to the Australian market, with modern supermarkets, demand for prepacks, and avenues to use promotion to expand the market (industry consultation, 2013–14; market interviews 2014).

Supply

The market relies on imported lychees, mostly from China, Taiwan and Thailand mid-year. Australia's market share has been stable at around 14 tonnes a year, with no competing supply reported (Table 40).

Table 40: Imports to Singapore of fresh lychees (HS:08109020), 2009–13, by volume and value

Exports to Singapore from	Tonnes					Imported value (A\$'000)	Average A\$/kg CIF
	2009	2010	2011	2012	2013	2013	2013
Australia	13	15	12	15	13	152	11.68
China	745	1,182	1,484	955	1,279	2,885	2.26
Malaysia	30	0	0	0	0	0	
Netherlands	0	0	0	0	0	1	
Taiwan	0	25	43	74	156	474	3.04
Thailand	802	152	126	381	73	150	2.05
United States of America	0	0	97	0	0	0	
Vietnam	0	0	0	13	8	29	3.62

Total	1,591	1,374	1,763	1,438	1,529	3,691	2.41
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Source: Trademap, 2014

Re-exports of lychees to regional markets ranged from 72 to 99 tonnes a year from 2009–13 (Table 41).

Table 41: Exports from Singapore of fresh lychees (HS:08109020), 2009–13

Exports to	Tonnes				
	2009	2010	2011	2012	2013
Malaysia	21	47	61	25	52
Indonesia	48	35	36	45	41
Brunei Darussalam	3	1	2	3	1
Total	72	83	99	74	94

Source: Trademap 2014

Product

The Chinese market has strong variety preferences. Consumers expect large sweet fruit with a small seed, preferably chicken tongue, and red skin. Sought-after varieties have attributes as close as possible to No Mai Chai which is imported in large volumes from China, and has large size berries with a tiny seed, giving a better ratio of flesh to seed than other varieties despite similar overall size, as well as sweetness, good texture and usually deep red skin colour. Australian Salathiel is similar, and consumers will pay a premium for it, so most importers will only take this variety from Australia. However, Salathiel appears to have shorter shelf life than other varieties, with its ruby red skin colour darkening quickly (market interviews, 2014). It is also a comparatively difficult and unreliable lychee to produce in Australia so production remains small, and is mostly supplied into Singapore. This makes it a difficult market to supply and grow for Australian suppliers. A large importer complained about supply shortages in the 2012–13 season (industry consultation, 2013–14).

Some buyers will also accept Fay Zee Sui. However, an importer said that Chinese do not like this variety because its skin is not red enough and goes dull, and it has a large seed. As an early variety Fay Zee Sui attracts good prices in the Australian market, making it difficult to source fruit for export (industry consultation, 2013–14).

Kwai Mai Pink is less popular, and while one exporter has had demand for Kwai Mai Pink, others find it hard to sell (industry consultation, 2013–14). There is demand for Tai So (despite its larger seed). South African lychees are mostly Kwai Mai Pink and Tai So (market interviews 2014).

While an importer said the market was willing to accept all varieties, mentioning Salathiel, Kwai Mai Pink, Sahkeng and Fay Zee Sui, to ensure consistent supply across the Australian season, Australian exporters find a general lack of acceptance of a range of varieties (industry consultation, 2013–14).

There appears to be opportunity to target the Chinese New Year gift market with lychees as a prestigious traditional fruit by providing samples of other varieties with the preferred attributes and promoting 1kg and 2kg gift packs, given the lack of competition at this time.

The expatriate market does not appear to be conscious of differences between varieties (market interviews, 2014).

Singapore is a demanding market where quality and shelf life are expected and eye appeal is critical to consumers so lychees need to be packaged to maintain skin colour. Retailers expect consistent quality and will return any consignment with a problem to the wholesaler. A large importer reported

problems with inconsistent fruit quality across supplying Australian growers.

There is good cool chain management with importers having their own distribution centres. A large retail chain was observed with Australian lychee punnets displayed in its refrigerated cabinet, which is usually at about 0 – 2°C, with other packaged fruit and vegetables in the 2013–14 season. An importer said that problems with fruit losses in Australian lychees have resulted in high retail prices.

Chinese lychees arrive by the container load at its peak season, usually packed with ice to maintain freshness and to prevent rapid skin discolouration. South African fruit has poor quality, with small fruit and greening problems (market interviews, 2014).

There is market concern about chemicals, and Australian growers have had requests for lychees without sulphur dioxide treatment (industry consultation, 2013–14).

Australian products and quality are acknowledged, and labelling with Australia as country of origin gives a positive image. It is important to promote Australian origin rather than individual states to avoid confusion (Isaac, 2014).

A large importer said that a quality manual would be useful for the trade (market interviews, 2014).

Packaging

Lychees usually arrive in mixed containers. Australian lychees are mostly delivered in AV and PMC loads.

The fruit comes in 5kg from Australia, and two or 2.5kg cartons from China. A 2kg box is a considered a good size for this market and holds skin colour well, but the higher cost makes it viable only for premium retail outlets (industry consultation, 2013–4). For Chinese New Year, cherries and some Australian lychees are sold in 1kg gift boxes.

Most Australian lychees are retailed in punnets of 500g and 1kg, with importers organising some local repacking from 5kg cartons. While importers would prefer to supply loose fruit, the customer base is said to prefer prepacks, and supermarkets ask wholesalers for punnets or bags so that customers do not queue at the checkout for staff to weigh produce. The result is a confusing array of imported packaged fruits (market interviews, 2014).

Pricing

The annual average landed price of Australian lychees was A\$11.70/kg in 2013, which was five times that from other countries (Table 40). According to an importer, a 5kg carton of Australian Salathiel landed at S\$30–\$40 (S\$6–8/kg) FOB in 2013–14. In comparison, another importer pays around S\$7.00 for a 2kg box of large, small-seeded lychees arriving by sea freight from China and S\$7 – 8 for 2.5kg.

The local importer wholesale margin is around 25 – 35 per cent (Isaac, pers. comm., 2014). One importer has been asking S\$24/kg wholesale for Australian lychees that landed at S\$10 – 15/kg CIF. Another sells a 5kg carton at around S\$100 a carton, or S\$20/kg, direct to retailers.

Retailer mark-ups vary with the individual business and its costs such as rent (Isaac, pers. comm., 2014). One large chain usually marks up most produce by 50 – 60 per cent and more (Brescia, pers. comm., 2014). GST is an additional 7 per cent. Cold Storage was selling 500g punnets at \$23SGD (\$46/kg) in 2013–4, and consumers will pay A\$50/kg for Salathiel.

It was said that Australian lychee prices are too high for the market and a constraint to growing

sales volumes (market interviews, 2014). There is plenty of fruit in China's season, and if counter seasonal fruit such as from Australia is triple the price many consumers will wait for Chinese fruit to arrive (market interviews, 2014; industry consultation 2013–14).

There are no import tariffs or excise taxes on foods.

The Singapore fruit market is generally viewed as highly competitive, price-driven and increasingly price-sensitive.

Distribution

Singapore is on the crossroads of major air and sea routes within the Asia-Pacific region and serves as a hub and major transshipment centre for much of the South-East Asian region and the Indian subcontinent. Re-exports comprise between 45 – 50 percent of total exports (USDA, Singapore, 2014).

All exporters interviewed were sending lychees to Singapore, in either consolidated or full air freight containers.

Six large importers who specialise in fruits were interviewed (Table 42). All have their own distribution centres and cool rooms.

Table 42: Major fresh produce importer/distributors in Singapore

Importer	Description
Benelux	Supply mostly retailers, some wholesalers, some food service, and has a stand at the Singapore wholesale market.
Dole Asia	The Asian operation of Dole International, a large international fresh produce wholesaler, with a stand at the Singapore wholesale market. It is expanding its range of lychee and other fruits in south-east Asia.
Freshmart	Supply wholesalers and retailers, being the main supplier to both Cold Storage and Fairprice retail chains.
Hupco	Supply retailers, traditional markets and food service
Pancom Produce	Operate from the wholesale market, buying lychee through an Australian consolidator
Singapore Fruit Importers and Exporters Exchange	Importer/distributor

Source: Brescia, pers. Comm., 2014

A large importer/wholesaler buys lychees from Australia, China, Taiwan and Thailand but not from South Africa fruit because of insufficient quality.

Another bought between one and three air freight containers a week of Salathiel from Queensland in the 2013-14 season. They handle varying volumes across the season, and more for events such as retailer promotions.

Smaller distributors at the wholesale markets usually receive lychees each week in consolidated loads of fruit and vegetables by air freight in AV or PMC containers, typically 500-600 cartons of lychees a week each. Larger importer/wholesalers believed these businesses dominate the lychee trade as retailers are reluctant to stock large volumes of such a high value product.

Shoppers for fresh fruit are shifting from wet markets to supermarkets. Several retailers lead the retail sector (Table 43).

Table 43: Major retailers in Singapore

Company	Description
Cold Storage/Giant	60 stores including four Jasons the Grocers gourmet outlets and Singapore's leading food outlet Paragon Marketplace in Orchard Road. Use high value products such as imported fruits to target high and middle income markets including expatriates
Isetan	Japanese chain, target high-end shoppers
Meidi-Ya	Japanese chain, target high-end
Mustafa's	Target high-end
Prime Supermarket	Target low-end
Sheng Siong	Buy a lot of product from Australia, target low end
The Fairprice group of supermarkets and convenience stores (formerly NTUC-Fairprice)	Focuses on middle and lower income markets

Source: USDA, Singapore, 2014; Brescia, pers. comm., 2014

Australian lychees are sold through specialty stores and supermarkets. Only small displays of prepackaged Australian lychees were observed across a number of supermarkets during a market visit in the 2013-14 season, and only in mid to high-end stores (Brescia, pers. comm., 2014).

Promotion

Growing Australian lychee's share of the Chinese market will require promoting varieties other than Salathiel. A major lychee importer/wholesaler recommended providing consumer information explaining varieties and their attributes for display at the point of sale. They also advised a retail promotion across the range of varieties using sampling supported with point of sale material for greatest impact. They offered to organise such a promotion, with funding from the lychee industry, using weekend tastings across two to five stores (depending on the funding available) and ideally rolled out store by store. They could hire a store demonstrator at SGD\$100 a day plus the cost of sample fruit.

A similar promotion of Australian mangoes in Cold Storage stores in Singapore in the 2013/14 season by the industry, TIQ and Austrade used:

- a consumer booklet with recipes
- a varietal chart for staff use (A4 in landscape format to fit into existing store fittings)
- a mango produce manager's guide (A4 in landscape format)
- a media ad organised by the retailer
- store sampling.

All point of sale material was in English.
(Warfield et al, 2014).

English is widely used although Singapore has four official languages reflecting the population of Mandarin Chinese, English, Malay and Tamil (DFAT, Singapore, 2014).



Fig. 10: Australian lychees in Singapore supermarket, 2014



Fig. 11: Australian lychee punnets in Singapore supermarket, 2014

Outputs

The following articles were produced during the project:

Appendix B – "Market visit to Malaysia", Living Lychee, Issue 64, July 2014

Appendix C – "Malaysia – promising new market for lychee", Living Lychee, Issue 65, October 2014

Appendix D – "Lychee promotion hits Malaysia", Asiafruit Online, 17 December 2014

Appendix E – "Malaysia & Indonesia seek Aussie lychees", Living Lychee, Issue 66, March 2015

Conclusions

Markets

The leading export markets for Australian lychees are Canada, France, Hong Kong, New Zealand (for irradiated fruit) and Singapore, with minor exports to the Middle East and French Polynesia, and emerging markets in Malaysia and Indonesia (for irradiated fruit).

Demand for Australian lychees is being driven by:

- Demand by Chinese consumers for fresh quality lychees for Chinese New Year
- A shortage of other suitable celebration fruits in years when Chinese New Year is late
- Traditional lychee consumers, mainly Asian, wanting to eat lychees all year
- Consumers having rising incomes, capacity to pay, and quality expectations in South-East Asian countries
- A shift in South-East Asia from traditional wet markets to modern supermarket chains, department stores and specialty food stores wanting to target higher income shoppers with new and novel fruits, imported traditional foods, and high quality
- Retailers seeking to expand their range of Australian fruits
- Growing consumer concern about chemical residues in fruits from some lychee-supplying countries

Most of the world's lychee production is consumed by strong domestic markets and only a few countries grow for export. Emigrants from Asia's leading lychee producing countries often provide markets in countries importing Australian lychees.

Buyers generally perceive lychees as a Chinese fruit and Chinese consumers as the main market. Demand and sales for Australian lychees are strongest in countries where it has been positioned as a prestigious fruit for Chinese New Year gift-giving. During this time price sensitivity is less particularly in Canadian and Singaporean markets. Retailers in Indonesia and Malaysia are keen to offer air-freighted Australian lychees to their large Chinese communities for Chinese New Year, when fruits are popular gifts, but have had difficulty accessing supply due to strong domestic demand in Australia.

There is further demand from Chinese markets after Chinese New Year, in higher income segments not willing to wait for low-priced Chinese fruit to arrive.

Buyers in Canada, Indonesia, Malaysia and Singapore also reported markets of ethnic Asians originating from India, Pakistan, Bangladesh, the Philippines and Vietnam, wanting to buy lychees year-round as a traditional fruit, and having potential for expansion.

Demand for variety, new food experiences and healthy foods, combined with lower preference for specific varieties from non-Chinese shoppers, indicates potential to grow high and mid income markets in Canada, Indonesia and Malaysia.

Chinese consumers tend to have strong variety preferences based on preferred attributes of red skin, small seeds, and high flesh to seed ratio, as well as good taste and texture. Australian Salathiel is often preferred due its similarity to China's major export variety, but supply is limited. However, most Chinese consumers accept varieties with other attributes, lychees are not retailed by cultivar, and other market segments are not variety-conscious.

Outside Chinese New Year Australian lychees compete in some northern hemisphere markets with large quantities of fruit exported from November to February from Madagascar, Mauritius, Réunion and South Africa, mostly treated with sulphur dioxide to maintain skin colour and prevent

dehydration and allow sea freight and low prices. However, consumer concern about chemical residues is driving efforts to reduce its usage. South African fruit has not established a competitive position in Indonesia or Malaysia due to quality problems.

Most lychees are exported from May to July from Asian countries, mostly China, Thailand and Taiwan. Chinese fruit dominates export markets, with low prices due to use of sea freight and cooling by ice, and is popular with shoppers not concerned with fruit appearance.

Australian lychees are in strongest demand where premium quality is required and price-sensitivity is low, mainly for Chinese New Year gift-giving and for retail stores targeting higher income shoppers seeking traditional and new fruits and quality and food safety. Retail chains may use lower grade fruit to offer lower prices to more price-conscious shoppers.

Australian lychees are widely regarded as fresh, safe and high quality. However, retailers in Indonesia and Malaysia, with cool chains in place, complained of reduced shelf life of some Australian lychees, and the impact on returns from having to discard unsaleable fruit. One importer assumed that Australian lychees are treated with sulphur dioxide, and recommended promoting its non-use.

Lychees are sold loose or in cartons in traditional wet markets, and Chinese fruit is arriving on the panicle in Canada and Singapore. South-East Asian supermarkets prefer to use punnets or trays to prevent shoppers handling fruit. Importers prefer to receive 5kg boxes for repacking into pre-packs in-market and selling loose, so that they can check quality on arrival. However, consumers are unlikely to buy cartons larger than 2kg, and high quality 1kg boxes sell best at Chinese New Year. The plastic prepacks slow dehydration and browning for lychees but affect visibility and inhibit sampling by new consumers. Attractive gift boxes are widely recommended for adding value and increasing unit sales in all markets at Chinese New Year.

Price is considered the chief barrier to market growth for Australian lychees. Regular shoppers are familiar with low prices for lychees from China, Thailand and southern African countries which arrive in large volumes at around A\$2.00 – \$3.00/kg, and price-sensitive shoppers defer purchase until low priced fruit arrives. Consequently, Australian lychee is usually exported in peak season and after Chinese New Year, when domestic prices are lowest.

There is good and regular air freight access for Queensland fruit to Canada, Hong Kong, Europe, the Middle East, Canada, and South-East Asia.

Australian lychees are exported by several marketing groups and numerous exporters to importers sourcing a range of fresh Australian produce directly for a few large retail clients; specialist importers of Asian fruits supplying a range of wholesalers and retailers; and increasingly retail chains seeking to import direct. Some importers and retailers have wholesale operations. All the buyers interviewed have distribution centres and cool chains in place. There is demand from large supermarket chain outlets, department store supermarkets and gourmet food stores in locations where they can use imported luxury fruits to attract higher income earners willing to pay for new foods, variety and freshness.

Higher-end supermarkets and gourmet food stores in Malaysia, Singapore and Indonesia often use attractive displays and prominent display and signage for luxury fruits including grapes and stone fruit such as "air-freighted from USA" to position stores to target higher income shoppers with interesting new products and variety. This provides better visibility for high priced fruits than on benches amongst numerous fruits in prepacks. Retailers propose to position Australian lychees in this category.

Malaysian, Singapore and Canadian retailers all recommended using integrated retail promotions ahead of peak supply to attract shoppers in targeted new markets, with point of sale

information, signage and demonstrators giving out sampling fruit to attract shoppers to the fruit, and encourage tasting and initial purchase for the household to trial. Tastings were recommended to allow current lychee buyers to compare Australian lychees with sulfur-treated fruit and trial lesser known varieties, and to attract new shoppers from the mass market. Such promotions were credited with growth markets for Chinese and South African lychees in Canada, and other higher value imported fruits in Malaysia and Singapore.

Recommendations

The research indicates a number of activities to position Australian lychees as a high value and competitive fruit in new and existing markets:

To grow current markets:

- target with varieties with preferred attributes
- offer a range of cultivars across the season, with tastings and product information
- offer large packs such as 1kg or 2kg cartons to increase sales and keep prices down
- offer 1kg gift packs for Chinese New Year to position as a suitable gift fruit
- promote lychee as a suitable celebration fruit for Chinese New Year (Indonesia and Malaysia) when supply permits
- label with messages on food safety, non-use of sulphur dioxide and country of origin
- promote new usage ideas to increase consumption
- expand distribution beyond the Vancouver region to major eastern cities with large Chinese communities (Canada).

To grow new markets:

- offer two grades so that retailers can target consumers with different levels of price sensitivity
- label prepacks with nutritional benefits, food safety measures, and country of origin
- target new buyers through trade shows, trade magazines and market visits
- target shoppers through store promotions, consumer shows, take home information, and advertising through media and social media to build interest, consumption and word of mouth
- organise and participate in retail promotions to target new markets with quality information brochures (translated if necessary) and signage, and store demonstrators giving fruit tastings provided by the industry, to
 - encourage shoppers to taste and compare with other lychees on freshness and non-use of sulphur dioxide
 - describe how a fresh lychee should taste, when tastings are not provided
 - handle and store so as to maintain shelf life
- provide crop forecasts to enable buyers to plan consumer promotions when supply can be assured.

To reduce prices, costs and product losses:

- co-ordinate supply with buyer orders to ensure maximum shelf life at retail, maintain fruit quality and avoid wastage and discounting
- consider packing punnets and trays where labour costs are lowest
- nurture relationships with buyers and educate supply chains to handle fresh lychees through
 - market visits to understand logistics and handling and address risks to quality
 - information kits for all levels of distribution on product and handling
 - training sessions in-market to build an understanding of product quality and cool chain requirements
 - invitations to buyers to visit farms and packsheds
 - supply forecasts so that distributors and retailers can plan sales activities

- inviting market feedback on quality, pricing and requirements for information.

References

- Abu Baker Siddiqui, SBM, undated. *Lychee production in Bangladesh*, Food and Agriculture Organisation of the United Nations, viewed 5 June 2014, <<http://www.fao.org/docrep/005/ac684e/ac684e06.htm>>
- Aeon Malaysia, 2014, Aeon Co (M) Bhd, viewed 10 November 2014, <<http://www.aeonretail.com.my/>>
- ALGA, 2014: Australian Lychee Growers Association website, 2014, viewed 27 January 2014, <<http://www.australianlychee.com.au/>>
- Arbulu, M, 2013, *Canada Retail Food Sector Report*, GAIN report No. CA13001, USDA Foreign Agricultural Service, viewed 12 March 2014, <<http://www.google.com.au/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CB0QFjAA&url=http%3A%2F%2Fimexmanagement.com%2Fcontent%2Fshows%2Fresources%2Fpdf%2F210.pdf&ei=jcKLVNqtD8TvmAWJv4E4&usg=AFQjCNEXLrefofIxjVckDpeDya-N7TrZfA&bvm=bv.81828268,d.dGY>>
- Beira Corridor, undated, presentation to conference, viewed 5 June 2014, <<http://www.beiracorridor.com/lib/docs/anexos/Annex%20Q.pdf>>
- Ben's, 2014, The BIG Group, Kuala Lumpur, Malaysia, viewed 12 June 2012, <<http://thebiggroup.co/BIG/>>
- Blue Produce 2014, Blue Produce, Houston, Texas, United States, viewed 12 June 2012, <<http://www.blueproduce.com/>>
- Brescia, A, Trade & Investment Queensland, 2014 – pers. comm.
- Brunei Darussalam country brief*, 2014, Austrade, viewed 12 June 2012, <<http://www.dfat.gov.au/geo/brunei-darussalam/Pages/brunei-darussalam-country-brief.aspx>>
- Carrefour, Indonesia, 2014, Carrefour, Jakarta, viewed 10 June 2014, <<http://www.carrefour.co.id/>>
- Chomchalow, N, Somsri, S & Songkhla, PN, 2008, *Marketing and Export of Major Tropical Fruits from Thailand*, abstract, Assumption University, Thailand, viewed 17 March 2014, <http://www.journal.au.edu/au techno/2008/jan08/journal113_article01.pdf>
- Codex Standard for Lychee, 1995, amended 2011*, Codex Alimentarius, viewed 5 June 2014, <http://www.google.com.au/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=1&ved=0CB8QFjAA&url=http%3A%2F%2Fwww.codexalimentarius.org%2Finput%2Fdownload%2Fstandards%2F320%2FCXS_196e.pdf&ei=oYPhVLjLpML38QWSrIHADw&usg=AFQjCNGo0epZc0ArMF3aH6TWI86rbmRhZ A&bvm=bv.85970519,d.dGc>
- Dharini Sivakumar, PD, Korsten, L & Zeeman, K, 2007, *Postharvest Management on Quality Retention of Litchi during Storage*, Department of Microbiology and Plant Pathology, University of Pretoria, Pretoria, South Africa, viewed 3 November 2014, <http://www.google.com.au/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=3&ved=0CCQQFjAC&url=http%3A%2F%2Fwww.researchgate.net%2Fprofile%2FDharini_Sivakumar2%2Fpublication%2F228670459_Postharvest_Management_on_Quality_Retention_of_Litchi_during_Storage%2Flinks%2F00b4952052adeb316e000000.pdf&ei=aX_hVLqKodHW8gXGvIL4Dw&usg=AFQjCNFRitBrOYi8ywOEmFRIhIfew3isIg&bvm=bv.85970519,d.dGc> viewed 30/3/2014
- Diczbalis, Y, 2011, *Farm and Forestry Production and Market Profile for lychee*, Specialty Crops for Pacific Island Agroforestry, viewed 5 February 2014, <http://www.agroforestry.net/scps/Lychee_specialty_crop.pdf>
- Durban, Dr M, Austrade, Indonesia, 17 August 2014 – pers. comm.

Export guide annual – Singapore 2014, GAIN report No. SN4008, USDA Foreign Agricultural Service, viewed 27 February 2014,
<http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Exporter%20Guide_Singapore_Singapore_11-10-2014.pdf>

Food and Beverage Market Report, France, 2012-3, Austrade, viewed 6 May 2014,
<<http://www.austrade.gov.au/Export/Export-Markets/Countries/Germany/France/Doing-business/Doing-business#.VOWfWU0fqpp>>

Foodmart, Indonesia, 2014, viewed 6 November 2014,
<<http://translate.google.com.au/translate?hl=en&sl=id&u=http://www.foodmart.co.id/about-foodmart.aspx&prev=search>>

"France: Lychees back on the shelf" 2013, *Fresh Plaza*, 18 November, viewed 6 May 2014,
<<http://www.freshplaza.com/article/115170/France-Lychees-back-on-the-shelf>>

Fruits in Mexico, 2014, abstract, Euromonitor International, 1 May, viewed 24 April 2014,
<http://www.alacrastore.com/storecontent/Euromonitor-Fruits_in_Mexico-2109-2526>

Ghosh, SP, 2001: *World Trade in Lychee: past, present and future*, ISHS Acta Horticulturae 558: abstract for International Symposium on Lychee and Longan, viewed 11 December 2013,
<http://www.actahort.org/books/558/558_1.htm>

Guidelines for Exporters of Fruit and Vegetables to the European Market, 2001, Commonwealth Secretariat, London, viewed 10 April 2014,
<https://books.google.com.au/books?id=6VCYU0B6aHMC&pg=PA94&lpg=PA94&dq=Europe+litchi+Israel&source=bl&ots=wubAuQDgDG&sig=ZkIEZTOIR-Y-4WzTvA__Skkpmls&hl=en&sa=X&ei=yY3hVPWuLdXe8AW88YHwDg&ved=0CCUQ6AEwAQ#v=onepage&q=Europe%20litchi%20Israel&f=false>

Harman, L, Department of Agriculture, Canberra, 27 November 2014 – pers. comm.

Harol, A, TIQ, Jakarta, 2014, Indonesia – pers. comm.

Hawaii Tropical Specialty Fruits, 2009, Department of Agriculture, State of Hawaii, United States, viewed 27 March 2014,
<http://www.nass.usda.gov/Statistics_by_State/Hawaii/Publications/Fruits_and_Nuts/tropfrt.pdf>

Hero, 2014, Hero Supermarkets, South Tangerang, Indonesia, viewed 14 July 2014,
<http://translate.google.com.au/translate?hl=en&sl=id&tl=en&u=http%3A%2F%2Fherosupermarket.co.id%2F>

Isaac, R, 2014, Austrade, Singapore 26 August 2014 – pers. comm.

Isetan, 2014, Isetan of Japan Sdn. Bhd 2009, viewed 10 November 2014,
<<http://www.isetankl.com.my/index2.htm>>

Jih, E, 2011, "The first commercial run of sulphur free lychee treatment in Mexico", *Agri-tech Biotech Co., Ltd*, Taiwan, Fresh fruit industry in China online, viewed 28 April 2014
<<https://postharvestchina.wordpress.com/2011/12/21/an-integrated-postharvest-decay-control-treatment-as-a-part-of-lychee-quality-preservation>>

Lee, P, Austrade, Malaysia, 22 August 2014 – pers. comm.

"Limited amount of lychees for export," 2013, *Economic Development Board of Madagascar*, 23 September, viewed 13 March 2014, <<http://www.edbm.gov.mg/News-and-events/News/Limited-amount-of-lychees-for-export>>

Litchi, 2014, Agri-food, Council of Agriculture, Executive Yuan R.O.C. Taiwan, viewed 22 February 2014, <http://eng.coa.gov.tw/content_view.php?catid=9449&hot_new=8847>

Litchi, undated, report for National Horticulture Board of India, viewed 17 April 2014,
<<http://nhb.gov.in/Horticulture%20Crops%5CLitchi%5CLitchi1.htm>>

Loblaw, 2014, Loblaw, Canada, viewed 14 November 2014, <<http://www.loblaw.ca/English/About-Us/company-overview/default.aspx>>

"Madagascar Lychee Export, Madagascar", 2013, *CDC Group*, 23 July, viewed 17 April 2014, <<http://www.cdcgroup.com/The-difference-we-make/Case-Studies/Madagascar-Lychee-Export-Madagascar/ede>>

"Mozambique will export lychees in 2014", *Market Insider*, 22 January 2014, viewed 17 April 2014, <<http://www.intracen.org/Mozambique-will-export-lychees-in-2014/#sthash.hvHApK7W.dpuf>>

Making Trade work for development, 2008, Aid for Trade – a selection of case studies from around the world, European Commission, 2008, viewed 18 April 2014, <http://trade.ec.europa.eu/doclib/docs/2006/january/tradoc_118805.pdf>

Matahari Supermarket, Tangerang, viewed 17 July 2014, <<http://www.matahari.co.id/>>

Matrade, 2015: Malaysia External Trade Development Organisation, unpublished data, 2015

Menzel, C, 1995, *Lychee, its origin, distribution and production around the world*, The Archives of the Rare Fruit Council of Australia, viewed 3 November 2014, <<http://rfcarchives.org.au/Next/Fruits/Litchi/WorldLychees3-95.htm>>

Menzel, C, 2005, *The lychee crop in Asia and the Pacific*, for FAO Corporate Repository, viewed 10 February 2014, <<http://www.fao.org/docrep/005/ac681e/ac681e03.htm#TopOfPage>>

Monica, S, Austrade, Indonesia, 17 August 2014 – pers. comm.

Moogala, M, 2012, *A profile of the South African litchi market value chain*, Department Agriculture Forestry & Fisheries, Republic of South Africa, viewed 18 April 2014, <<http://www.nda.agric.za/docs/AMCP/Litchi2012.pdf>>

Mpelasoka, Dr M, 2013, Australian Department of Agriculture – pers. comm.

MySupermarket online 2015, My Supermarket Limited, United Kingdom, viewed 6 February 2014, <http://www.mysupermarket.co.uk/#/sainsburys-price-comparison/fruit/sainsburys_lychees_200g.html>

Pesticide residues in food legislation, 2014, Hong Kong Centre for Food Safety, viewed 18 December 2014, <http://www.cfs.gov.hk/english/whatsnew/whatsnew_fstr/whatsnew_fstr_21_Pesticide.html>

Pick n Pay Malaysia website, 2014, Pick n Pay, Sabah, Malaysia, viewed 14 July 2014, <<http://picknpay.com.my/>>

Ranch Market, Indonesia, 23 June 2014, <<http://www.ranchmarket.co.id/en>>

Retail Foods Hong Kong, 2013, GAIN report HK1318, USDA Foreign Agricultural Service, viewed 17 April 2014, <http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Retail%20Foods_Hong%20Kong_Hong%20Kong_5-1-2013.pdf>

Sam's Groceria 2013, Sam's Groceria, Malaysia, viewed 14 July 2014, <<http://www.smsgroceria.com/>>

SCS Global Services, 2014, SCS Global Services, California, United States, viewed 6 November 2014, <<http://www.scsglobalservices.com/>>

Shah, S, 2011, "Lychee export potential remains unexploited", in *The News International*, 1 July, viewed 16 May 2014, <<http://www.thenews.com.pk/Todays-News-3-55255-Lychee-export-potential-remains-unexploited>>

Singapore brief, 2014, Australian Department of Foreign Affairs and Trade, viewed 14 July 2014, <http://www.dfat.gov.au/geo/singapore/singapore_country_brief.html>

Sogo Kuala Lumpur, KL Sogo 2013 – 2015, viewed 10 November 2014, <<https://www.klsogo.com.my/>>

Star Fruit Company, 2014, Star Fruit Company, Brussels, Belgium, viewed 17 April 2014, <http://www.star-fruit.eu/en/fruits_et_legumes/lychee_or_litchi.html>

Statistics Indonesia, 2014, unpublished data

Tesco, 2014, Tesco, Kuala Lumpur, Malaysia, viewed 17 July 2014, <<http://www.tesco.com.my/>>

The Brazilian lychee industry - present and future, 2008, in ISHS Acta Horticulturae 863: III International Symposium on Longan, Lychee, and other Fruit Trees in Sapindaceae Family, Fujian, China, viewed 3 December 2014, , <http://www.actahort.org/members/showpdf?booknr=863_5>

The Food Hall, Indonesia, Jakarta, 14 July 2014, <<http://foodhall.co.id/>>

The Regulation of Minister of Agriculture Number 37, 2012: *The Regulation of Minister of Agriculture Number 37/Kpts/HK.060/1/2006 on Technical Conditions and Plant Quarantine Measures for Importation of Fresh Fruit and/or Fruit Vegetable Into The Territory of The Republic of Indonesia*, Ministry of Agriculture, 2012, viewed 27 November 2014, <<http://www.agriculture.gov.au/SiteCollectionDocuments/biosecurity/export/plants-plant-products/ian/12/2012-51-attach2-30-2012.pdf>>

The United Arab Emirates Consumer: Behaviour, Attitudes and Perceptions Toward Food Products 2010, Agriculture and Agri-Food Canada, viewed 10 November 2014, <<http://www5.agr.gc.ca/resoulrce/prod/Internet-Internet/MISB-DGSIM/ATS-SEA/PDF/5661-eng.pdf>>

The United Arab Emirates Consumer: behaviour, attitudes and perceptions towards food products, 2010, Market Analysis Report, Agriculture and Agri-Food Canada– 2013, viewed 17 April 2014, <<http://www5.agr.gc.ca/resources/prod/Internet-Internet/MISB-DGSIM/ATS-SEA/PDF/5661-eng.pdf>>

The World Factbook, 2014, Central Intelligence Agency, United States, viewed 26 March 2014, <<https://www.cia.gov/library/publications/the-world-factbook/geos/my.html>>

Thrifty Foods, 2014, Thrifty Foods, Canada, viewed 11 February 2014, <<http://www.thriftyfoods.com/EN/minor/about/company-overview/history.html>>

Trademap 2014: *Trademap database*, International Trade Centre, Geneva, Switzerland, viewed 2013-4

Univeg Katope France, 2014, Univeg Katope, Rungis Cedex, France, viewed 16 May 2014, <<http://www.katope.fr>>

Urban Fresh Marketplace 2014, Shah Alam, Selangor, Malaysia, 17 July 2014, <<http://www.urbanfresh.com.my/>>

Vietnam's lychee export - supply and potential, 2014, Vietnam Trade Promotion Agency, viewed 27 March 2014, <http://www.vietrade.gov.vn/en/index.php?option=com_content&view=article&id=2169:2014-vietnams-lychee-export-potentials-and-forecast-part-2&catid=270:vietnam-industry-news&Itemid=363>

Vu, MH & Nguyen, VD, 2005, *Lychee production in Viet Nam*, for Lychee production in the Asia-Pacific region, in FAO Corporate Repository, viewed 27 March 2014 <<http://www.fao.org/docrep/005/ac684e/ac684e0d.htm>>

Wardhana, M, Trade & Investment Queensland, 2014 – pers. comm.

Warfield, B, Roberts, R, Brescia, A & Campbell, 2014, *Best Australian mango retailer competition*, report prepared by Trade & Investment Queensland for Queensland Government.

Wikipedia, France: *Demographics of France* - Wikipedia, the free encyclopedia. 2015, viewed 17 February 2014, <http://en.wikipedia.org/wiki/Demographics_of_France>

Interviews – lychee industry

Sanai, J, A.S. Barr, exporter, Brisbane – pers. comm, 2014
Walker, M, exporter, Brisbane - pers. comm, 2014
Groves, D, lychee producer – pers. comm, 2013
Cork, D, Avofresh, Brisbane – pers. comm, 2013.
Ravenello, G - pers. comm, 2013
Waterman, R - pers. comm, 2013
Quinteri, O, - pers. comm, 2013
Gauci, J and T – pers. comm, 2013
Karen, N - pers. comm., 2013
Hockings, P, executive officer, Bundaberg fruit and vegetable grower - pers. comm., 2013
Van Rooyen, C - pers. comm, 2013
Foley, D, President, Australia lychee growers Association – pers. comm. 2014
Murphy, C, Nature's Fruit - pers. comm., 2013
Gadsden, J, Nature's Fruit – pers. comm., 2013
Pools, J and K – pers. comm., 2013
Bronson, R & L – pers. comm., 2014
Paxton, K – pers. comm., 2013
Scott, M, Steritech – pers. comm., 2013
Call, S, Mr, CS International – pers. comm., 2013
Prosser, J, Ms, Sunfresh – pers. comm., 2014
Deveney, C, Favco – pers. comm., 2014
McKillop, A – pers. comm., 2014
Joseph, L, Alfred E Chave – pers. comm., 2014
Philpott, I – pers. comm., 2014
Bobby, P, Holmans – pers. comm., 2014

Market interviews

Djafar, A, Buyer fresh, PT Lucky Strategis, Jakarta, Indonesia – pers. comm, 2014
Ahmad, A, Australian produce manager, Euro-Atlantic Sdn Bhd, Kuala Lumpur, Malaysia - pers. comm., 2014
Bayu, G, CM Fruit import, Hero Group, Jakarta, Indonesia – pers. comm., 2014
Bayu, G, CM Fruit import, Hero Group - pers. comm., 2014
Chang, D, marketing manager, Khaishen Trading Sdn Bhd, Selangor, Malaysia - pers. comm., 2014
Christi, N, General Manager, Produce & Fresh DC, Dairy Farm GCH Retail (Giant) & GCH Retail (Cold Storage), Kuala Lumpur, Malaysia - pers. comm., 2014
Tan, C, operations manager, Benelux Flowers and Food Pte Ltd, Singapore - pers. comm., 2014
Djafar, A, buyer fresh, Grand Lucky, Jakarta, Indonesia – pers. comm., 2014
Durban, Dr M, trade and investment commissioner, Austrade, Jakarta, Indonesia – pers. comm., 2014
Isaac, R, business development manager – food, agribusiness, consumer goods, Austrade, Singapore – pers. comm., 2014
Koh, K, general manager, Freshmart Singapore Pte Ltd, Singapore – pers. comm., 2014
Koh, P, managing director, Freshmart Singapore Pte Ltd, Singapore – pers. comm., 2014
Kumar, K, assistant category manager, Dairy Farm GCH Retail (Giant) & GCH Retail (Cold Storage), Kuala Lumpur, Malaysia – pers. comm., 2014
Kumar, V, business manager, Freshmart Singapore Pte Ltd, Singapore – pers. comm., 2014
Kwang, SC, Pancom Produce Pte Ltd, Singapore – pers. comm., 2014
Kwang, G, Pancom Produce Pte Ltd, Singapore – pers. comm., 2014
Lamb, K, Post Manager & Honorary Consul, Australian Consulate & Trade Commission, Vancouver, Canada - pers. comm, 2014
Lee, P, business development manager – food and agribusiness, Austrade, Malaysia, Kuala Lumpur – pers. comm., 2014
Loo, Ms Ebby, director, Euro-Atlantic Sdn Bhd, Kuala Lumpur, Malaysia – pers. comm., 2014

MacLeod, I, senior business development specialist, Dole Asia Holdings, Singapore – pers. comm., 2014

Monica, S, business development manager, food and agribusiness, Austrade, Jakarta, Indonesia – pers. comm., 2014

Ng, H, Great Harvest, Kuala Lumpur, Malaysia – pers. comm., 2014

Ong, A, Marketing Manager, Benelux Flowers and Food Pte Ltd, Singapore – pers. comm., 2014

Ong, L, Director, Benelux Flowers and Food Pte Ltd, Singapore – pers. comm., 2014

Oppenheimers, Canada – pers. comm., 2014

Lam, Q, Fresh Direct, Vancouver, Canada – pers. comm., 2014

Sakti, E, PT Lucky Cold Storage, Jakarta Indonesia – pers. comm., 2014

Salim, H, ASEAN Trade Commissioner, Trade and Investment Queensland – pers. comm., 2014

Shellikeri, SM, category manager, produce procurement, Loblaw's, Canada (responsible for lychee and tropical fruit) – pers. comm., 2014

Shing, Y, Pancom Produce Pte Ltd, Singapore – pers. comm., 2014

Tang, G, Pancom Produce Pte Ltd, Singapore – pers. comm., 2014

Tay, A, Benelux, Singapore – pers. comm., 2014

Tay, A, operations director, D'Fresh, Kuala Lumpur, Malaysia – pers. comm., 2014

Tay, D, managing director, D'Fresh, Kuala Lumpur, Malaysia – pers. comm., 2014

Teo, A, senior business development specialist, Dole Asia Holdings, Singapore – pers. comm., 2014

Thrifty Foods, Canada – pers. comm., 2014

Tung, A, Category Manager, Commercial Food – fresh, Tesco Stores (Malaysia) Bandar Menjalara, Malaysia - pers. comm., 2014

Wahyudi, H, Fresh Food Senior marketing manager, Hero Group, Jakarta Indonesia – pers. comm., 2014

Wahyufi, H, Fresh Food Senior, Hero Group, Jakarta, Indonesia – pers. comm., 2014

Appendices

Appendix A – “Lychee varieties for export”, provided to importers

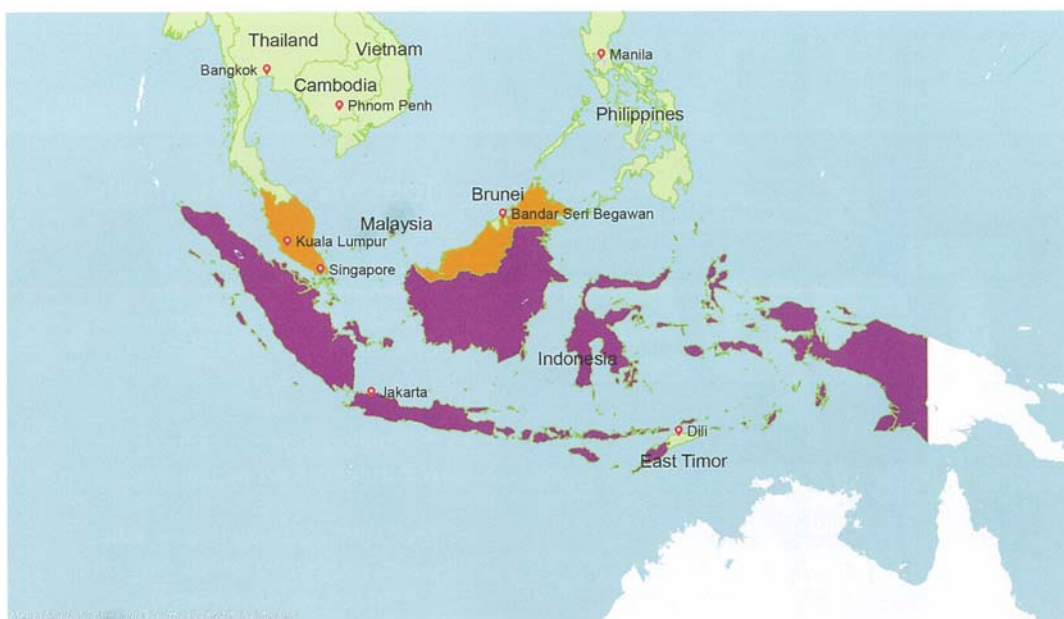
Main lychee varieties grown in Australia

Variety	Fruit characteristics	Harvest season
 Bengal	Large size (23-27g) Skin has bright red colour and rough texture Large seed Soft juicy sweet flesh	Mid-November to mid-January
 Fay Zee Siu	Large size (26-32g) Skin has rough texture with dull red colour on a green background Seed mostly very small Firm sweet fragrant flesh Also known as Yook Ho Pow, Fei Zi Xiao, Yu Her Pau and Fei Tsu Hsiao.	Late October to mid-January
 Kaimana	Large size (28-30g) Smooth dark red skin Mostly very small seed Sweet crisp juicy flesh	Late November to late December
 Kwai Mai Pink	Medium size (20-22g) Skin is rough with variegated colour (pink, yellow, some green) Small to medium seed Firm crisp sweet juicy aromatic flesh	Mid-November to early February. The leading variety
 Sah Keng	Large size (26-28g) Red skin colour Mainly very small seed Sweet crisp juicy flesh	Mid-November to mid-January
 Salathiel	Small size (16-20g) Red skin with roughish texture Very small seed Firm crisp juicy sweet flesh	December to March
 Souey Tung	Medium size (22—24g) Smooth dark red skin Small to medium sized seed Soft juicy sweet flesh Also known as Yuan Zhi, Kwang Tung and Yuan Chee.	October – November
 Tai So	Medium-large size (22-26g) Red skin Large seed Crisp flesh with sweet acid taste Also known as Mauritius, Da Zao, Hong Huey and Bos 4.	Late October to mid-January
 Wai Chee	Small size (17-20g) Smooth dull red skin Mostly large seed Soft juicy sweet flesh Also known as Huai Zhi, Kim Cheng, Wai Chi and Kwai Li	Late February to late March

Appendix B – “Market visit to Malaysia”, Living Lychee, Issue 64, July 2014

Market visit to

Trade & Investment Queensland (TIQ) is assisting the Australian Lychee Growers Association (ALGA), supported by Horticulture Australia, with a project to find new lychee markets without quarantine barriers, and assess the potential for Australian lychee in two countries.



- **JOIN AND** interact with TOP LYCHEE GROWERS in Australia
- **JOIN AND** stay abreast of ISSUES that affect you and your industry
- **JOIN AND** have a say where your LEVY \$'s ARE SPENT
- **JOIN AND** receive *LIVING LYCHEE* even if you are not a levy payer
- **JOIN AND** benefit from the latest research results to IMPROVE PRODUCTIVITY

ALGA

*Download an application form: australianlychee.com.au ->Our industry ->join OR e-mail: algao@australianlychee.com.au

Indonesia & Malaysia



Judy Noller

TIQ Trade and Investment Officers Judy Noller at Cairns and Bronwyn Warfield at Toowoomba specialise in horticulture market research and development.

Scoping study

The project, 'Export market scoping study for the lychee industry' has used an extensive literature search and interviews with lychee producers, marketers, exporters and overseas importers to assess the growth potential for Australian lychee in Canada, Hong Kong, France, Indonesia, Malaysia, Middle East, Singapore and the United Kingdom.

The study found that while Australian lychee continues to go to all these countries, some markets are maturing with stable imports and growing competition from southern Africa and recently South America.

"We need this information to raise awareness with exporters and realise the great potential of Australian lychee as an export commodity," ALGA president Derek Foley said.

The market visit will focus on higher value markets, including consumer and retailer requirements for varieties, packaging and promotion, logistics and cool chain management, opportunities for promotion and value adding, market access and other key criteria for market development.

For more information contact:
Judy Noller, Trade and Investment Officer
Trade & Investment Queensland
phone 07 4037 3232 mobile 0407 697 056
e-mail judy.noller@tiq.qld.gov.au

Final selection

As Indonesia and Malaysia demonstrate the most potential for development, they have been selected for the market visit.

While lychee is native to both countries:

- neither has developed commercial industries
- both have large Chinese communities that celebrate Chinese New Year with gifts of fruit
- both have growing imports of lychee mainly from China and Thailand
- both have distribution channels capable of delivering premium grade lychee to appropriate markets.

Malaysia in particular has a number of importers seeking tropical exotic fruits including lychee for higher income local consumers and expatriates.

Industry delegation

TIQ's Judy Noller will lead an industry delegation to Jakarta and Kuala Lumpur in August 2014 to assess potential supply chains through interviews with importers, distributors, retailers and food service.

The programs are being organised by TIQ's new ASEAN office in Jakarta.

Malaysia—promising new market for lychee



Judy Noller

Judy Noller of Trade & Investment Queensland (TIQ) and Martin Walker for Sun Lychee, found major importers and retail chains in Kuala Lumpur keen to discuss growing the market for Australian lychee, and identified several favourable demand trends.

Their findings followed a market visit in August as part of the industry project, *Export market scoping for the lychee industry*.

According to Judy, there is a growing market for lychees. Imports of lychee from SE Asia in 2013 reached 4025t. However, while lychee is native to Malaysia, it is not grown commercially or traditionally eaten.

The trade targets the large Chinese market with imported lychee, but it is not traditionally given or eaten at Chinese New Year, despite shortages of other popular fruits at that time.

There is a large market for local and imported tropical fruits, particularly for longans and rambutans, and buyers see opportunities to grow the Malaysian market for lychees.

Retail chains

Modern retail chains of supermarkets and hypermarkets are a growing sector, with cool chain management, early adoption of quality assurance programs, ability to target higher income consumers, strong imports of Australian fruit and vegetables, and overall demand for quality fruit.

Small volumes of Australian lychee have been well received. Cartons are repacked into punnets for retail chains, and sold loose at markets.

However, freshness and wastage have driven up costs for imported Australian lychee. Buyers were concerned with the short shelf life of fruit arriving in mixed consignments, and the challenge of selling whole containers quickly.

Integrated store promotions

Importer/wholesalers and retailers would like to run integrated store promotions this coming season.

Point of sale material such as posters, banners and recipe cards would be used to attract consumer attention. Fruit tastings could persuade new markets to try lychee, and encourage existing consumers to try the Australian product and buy it instead of the competing imported lychee that usually has been treated with sulfur dioxide.

Promotion for Australian avocado and other high value fruits in Malaysia were reported to have resulted in strong market growth in recent years.


Judy Noller, Trade and Investment Officer, Trade & Investment Queensland
phone 07 4037 3232 mobile 0407 697 056 e-mail judy.noller@tiq.qld.gov.au




Aida Ahmag, Australian produce manager, Euro-Atlantic; Judy Noller, Trade and Investment Queensland; Martin Walker, Sun Lychee; and Ebby Loo, Director, Euro-Atlantic

Appendix D – “Lychee promotion hits Malaysia”, Asiafruit Online, 17 December 2014


ASIAFRUIT









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Lychee promotion hits Malaysia

Australian industry hopes to build demand in the Malaysian market through month-long marketing push

Consumer awareness of Australian lychees is expected to grow in Malaysia this summer, with the tropical fruit set to be the feature of a promotion launching later this month.

The programme will be delivered by Malaysia importer and wholesaler Euro-Atlantic, who will run in-store tastings across eight retailers in Kuala Lumpur, including major supermarket chains Cold Storage and Aeon.


Euro-Atlantic has helped develop the promotion alongside the Australian Lychee Growers Association (ALGA), Martin Walker of the Sun Lychee marketing group and the participating retailers. Horticulture Innovation Australia and Trade & Investment Queensland (TIQ) have also lent their support to the programme.

TIQ's trade and investment officer, Judy Noller, hoped the tastings would expose consumers to lychees that have been immediately packed and airfreighted under tight cool chain management, ensuring maximum freshness at the point of sale.

While Malaysia is a developed lychee market, most of the fruit is imported mid-year from nearby countries such as China, Thailand and Taiwan by either road or sea.

"While Australian lychees have been going to Malaysia for some time in the form of spot sales, this will be the first fully co-ordinated programme initiated by the ALGA and its partners Horticulture Innovation Australia and TIQ," explained ALGA president Derek Foley. "It links together an Australian exporter with a Malaysian importer, to not only sell Australian Lychee into Malaysia but to promote and grow sales into this emerging market."

While an unusually cool Queensland winter has delayed the start of harvest, the promotion is expected to start in the last week of this month and run over January. Australian lychee production is centred around the coast and hinterland of Queensland and northern New South Wales, with exports traditionally running between December and February. The wide range of varieties grown in Australia gives local exporters the world's longest trade window.



Euro-Atlantic's Aida Ahmad, TIQ's Judy Noller, Sun Lychee's Martin Walker and Euro-Atlantic's Ebby Loo help launch the promotion

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Aida Ahmag, Australian produce manager, Euro-Atlantic; Judy Noller, Trade and Investment Queensland; Martin Walker, Sun Lychee; and Ebby Loo, Director, Euro-Atlantic

Appendix F – Euro-Atlantic Facebook page for Australian lychee promotion in Malaysia, January 2015

Euro-Atlantic | Facebook

Page 1 of 1

APPS

Location Map

PHOTOS

Come and join us for Australian Lychee sampling activities at

- Jason's Food Hall
- AEON Mid Valley
- AEON Taman Maluri
- Mercato Hartamas
- Sogo
- Urban Fresh
- City Grocer, Sabah
- Giant City Mall, Sabah

Date: 24th Jan – 25th Jan 2015
Time: 11.00am – 7.00pm

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Euro-Atlantic
50 mins · Edited ·

Visit us for premium Taiwan Ponkan sampling activities. Don't miss the fruit tasting from 31st Jan to 1st Feb 2015 at selected retail stores.

Come and join us for Australian Lychee sampling activities at

- Jason's Food Hall
- AEON Mid Valley
- AEON Taman Maluri
- Mercato Hartamas
- Sogo
- Urban Fresh
- City Grocer, Sabah
- Giant City Mall, Sabah

Date: 24th Jan – 25th Jan 2015
Time: 11.00am – 7.00pm

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Come and join us for Australian Lychee sampling activities at

- Intermark
- Jaya Grocer Bukit Jelutong
- Jaya Grocer Empire Subang
- Jaya Grocer Mutiara Tropicana
- Isetan KLCC
- Village Grocer Giza Mall
- Village Grocer Mont Kiara

31st Jan – 1st Feb 2015
Time: 11.00am – 7.00pm

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