



Evaluation of the potential to expand horticultural industries in Northern Australia

CRCNA Project International Field Study Report – Hong Kong

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CRCNA Project International Field Study Report – Hong Kong Chapter

Contents

| | |
|--|-----------|
| Background and purpose of the international information gathering visit | 1 |
| Desktop research leading to the international visit | 1 |
| The Hong Kong field study | 1 |
| Companies visited | 1 |
| General insights | 2 |
| 1. Market insights for imported fruit | 2 |
| 1.1 Import regulation | 2 |
| 1.2 Hong Kong mango, avocado and lychees markets | 2 |
| 1.2.1 Mango markets | 2 |
| 1.2.2 Avocado markets | 3 |
| 1.2.3 Lychees markets | 4 |
| 1.3 Market positioning for Australian mangoes, avocados and lychees | 5 |
| 1.4 Market preference | 7 |
| 1.4.1 Preference for Australian mangoes | 7 |
| 1.4.2 Preference for Australian avocados | 8 |
| 1.4.3 Preference for Australian lychees | 8 |
| 1.5 Challenges in sales of Australian mangoes, avocados and lychees | 8 |
| 2. Supply chain strategic orientation | 9 |
| 2.1 Overseas farm acquisition | 9 |
| 2.2 Sourcing strategies | 9 |
| 2.3 Modes of transport | 10 |
| 2.4 Fruit storage and sales | 11 |
| 2.5 Sales channel preference | 13 |
| 3. Supply chain operations | 13 |
| 3.1 Mode of procurement | 13 |
| 3.2 Import and procurement challenges | 14 |
| 3.3 Entry channels for Australian mangoes, avocados and lychees | 14 |
| 3.4 Distribution channels | 15 |
| 3.5 Sales region | 15 |
| 4. Channel positioning | 15 |
| 4.1 Supply chain structure | 15 |
| 4.2 Retailing channels | 16 |
| 5. Benchmarking analysis | 17 |
| 5.1 Supply seasonality | 17 |
| 5.1.1 Mango supply seasonality | 17 |
| 5.1.2 Avocado supply seasonality | 18 |
| 5.1.1 Seasonal supply of lychees | 19 |
| 5.2 Supply chain performance | 20 |
| 5.2.1 Strategic performance | 20 |
| 5.2.2 Operational performance | 20 |
| 5.3 Sales price | 20 |



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| | |
|--|-----------|
| 5.3.1 Mango sales price..... | 20 |
| 5.3.2 Avocado sales price..... | 22 |
| 5.3.3 Lychees sales price | 23 |
| 6. Reference models for Australian exporters..... | 23 |
| 7. Development strategies for Northern Australia’s fruit industry | 24 |
| 8. Summary | 25 |
| References | 27 |

Background and purpose of the international information-gathering visit

Hong Kong has a relatively liberal import policy for fresh fruit and vegetables, with no restrictions or controls on the consumption of imported fresh fruit in Hong Kong (Fresh Plaza, 2018b). Because of the ease of market access, many countries target Hong Kong as one of their preferred export destinations for fresh fruit. As such, new varieties and suppliers are always present in the market (Lai, 2018). Since Hong Kong is a dynamic market and an effective re-export platform for fresh fruit, it has become an important market for Australian fruit, being the second largest export market for Australian fresh fruit by value in 2017/18 (AHIA, 2018).

The CRCNA project focuses on three horticultural industries in Northern Australia. Mangoes and avocados are two established industries, while lychees are a newer industry with sufficient success to begin to have a foothold in new markets. Mangoes and avocados can potentially light the way for innovative products emanating from the lychees industry. Given that Hong Kong is an unregulated and tariff-free market with excellent direct air connections with Australia (HIA, 2018), it has become an important and mature market for Australian mangoes, avocados and lychees. According to the Australian Horticulture Statistics Handbook 2017/18, Hong Kong is the Top 1 and Top 3 export destination respectively for Australian mangoes and avocados by volume, with 2418 tonnes of mangoes and 206 tonnes of avocados sold to Hong Kong in 2017/18. Despite the non-availability of official trade data, Hong Kong has also been identified as one of the best prospect markets for Australian lychees (HIA, 2018).

The Hong Kong field study has three purposes:

- (i) Examine market insights on mangoes, avocados and lychees imported into Hong Kong, which could provide valuable insights on supplying innovative products valued by customers;
- (ii) Investigate supply chain strategies and operational models that are implemented by Hong Kong importers, which could direct Australian suppliers to better serve their customers;
- (iii) Identify the channel and sales regions for Australian mangoes, avocados and lychees in Hong Kong, thus indicating further expansions in premium channels.

Desktop research leading to the international visit

Hong Kong's local agricultural production is minimal due to land constraints so that Hong Kong has a dependence on imports for 95% of its food requirements (Li et al., 2017). Hong Kong's population consume a variety of fruit from around the world, with per capita consumption of fresh fruit and vegetables amongst the highest in the world (ATC, 2006). Euromonitor reported a growth of the Hong Kong fruit market size from 631.7 thousand tonnes in 2013 to 735.3 in 2017, and the volume is forecasted to grow beyond 800 thousand tonnes in 2020 (Lai, 2018). In addition to being a dynamic market, Hong Kong is also a trading hub where buyers make purchasing decisions for a vast range of consumer-oriented products that are trans-shipped to China and other parts of Asia (Li, 2018).

Hong Kong's imports of mangoes (HS080450), avocados (080440) and lychees (HS081090) have seen dynamic changes over recent years. Avocado imports have climbed from 2597 tonnes in 2013 to 21018 tonnes in 2017. In contrast, Hong Kong's mango imports have decreased over the same time, with a reduction of 63% from 95394 tonnes to 35493 tonnes. Despite no recent data on lychees, Hong Kong's lychee imports dropped from 2010 to 2014, decreasing by 23% from 280799 to 214889 tonnes, though this data is dated. Interestingly, Hong Kong's imports of Australian mangoes have increased by 60% over the same period, up from 2294 tonnes to 3525 tonnes (Trade Maps, 2018). Imports of Australian avocados into Hong Kong has also increased, up from 30 tonnes to 235 Tonnes (Trade Maps, 2019). Hong Kong is also an important market for Australian lychees given that Australian fresh lychees make up 43.18% of Hong Kong's total supply by value in 2017 (Note: Hong Kong data for HS 08109010 – Lychees, Fresh). Given these dynamic market trends, it is important to investigate market insights, which could help to identify the market potential for Australian mangoes, avocados and lychees.

Hong Kong consumers are turning their attention to non-traditional fruits as their interest in unfamiliar products grows (Euromonitor, 2014). This demand creates market segments for Australia which has positioned itself as a premium fruit supplier in Hong Kong (Lai, 2018). With the increasing import of Australian mangoes, avocados and lychees into Hong Kong, Australia needs to stay competitive by differentiating its fruit from its competitors and expand market share by offering innovative products and superior quality. It is therefore essential to investigate supply chain operations, sales channels and sales regions, which could provide insights on how to better cater to high-end markets with innovative products. Since new varieties and suppliers are always present in the market, benchmarking supply chain performance, including the strategic and operational performance of other global suppliers of mangoes, avocados and lychees into Hong Kong will enable those growers in Northern Australia to better position themselves in the market and learn from other successful cases.

The Hong Kong field study

Companies visited

The companies interviewed during the field study in Hong Kong, include importers/wholesalers and importers/retailers. Table 1 shows the companies interviewed by business name and organisational type. Whether the companies interviewed deal with and/or import Australian fruit (mangoes) was also determined. All the companies interviewed (except for Good View) deal with and/or import Australian mangoes and lychees.

Table 1 Companies interviewed in Hong Kong

| No. | Companies Interviewed | Organisational type | Deal with Australian Mango/avocado/lychee | Import Australian mango/avocado/lychee |
|-----|-----------------------|-------------------------|---|--|
| 1 | City super | Importer and retailer | Yes/Yes/Yes | Yes/Yes/Yes |
| 2 | TSHK* | Importer and wholesaler | Yes/No/Yes | Yes/No/Yes |
| 3 | Good View | Importer and wholesaler | Yes/No/No | Yes/No/No |
| 4 | Yata | Importer and retailer | Yes/Yes/Yes | No/No/No |
| 5 | Parknshop | Importer and retailer | Yes/Yes/Yes | Yes/Yes/Yes |

Note: * fictitious name is used as the interviewee did not want to disclose his business name.

Yau Mai Tei wholesale market, the largest wholesale market in Hong Kong (Lee, 2009) and several retailers, including general merchandise stores, high-end supermarkets and convenience stores were observed onsite as shown in Table 2.

Table 2 Retailers observed onsite in Hong Kong

| Retailers observed onsite | | |
|---------------------------|--|----------------------|
| General merchandise store | High-end supermarket | Convenience store |
| Wellcome; Parknshop | City Super; Yata; Fusion; Taste; Marks & Spencer | Veggie & Fruit store |

Wellcome and Parknshop are the two largest supermarket chains in Hong Kong (Li, 2018), while City Super, Fusion, Taste, Yata and Marks & Spencer are high-end supermarkets. City Super, which is positioned as a mega lifestyle specialty store sells primarily fresh produce and groceries (Export connect, 2018). Fusion and Taste are operated by A.S. Watson Group (source: parknshop.com). Yata supermarket is a Japanese-style supermarket operated by Yata Ltd, which is constantly bringing appealing new food products from Japan to the Hong Kong market (Japan times, 2018). Marks and Spencer (Asia Pacific) is a wholly-owned subsidiary of Marks and Spencer PLC UK, which import all their products from the UK into Hong Kong and stock a range of packaged fresh vegetables and fresh or frozen meat and fish (Sauers, 2019).

To supplement the primary observational data, the secondary data sources include, but are not restricted to trade maps which provide trade statistics and market access information for export development, fresh plaza, online news, published reports and academic journals.

General insights

The field study in Hong Kong was conducted from 30 April to 3 May 2019. Importers, wholesalers and retailers were interviewed to investigate market insights for mangoes, avocados and lychees imported into Hong Kong and their supply chain strategies and operation models in importing and selling mangoes, avocados and lychees. Supply chain performance, including the strategic and operational performance of other successful global suppliers of mangoes, avocados and lychees were also examined with the data gathered from the companies interviewed and secondary data sources for benchmarking analysis.

1. Market insights for imported fruit

1.1 Import regulation

Despite no regulation on fruit imports, all food intended for sale in Hong Kong must be fit for human consumption as defined under the legal framework for food safety control and the Hong Kong government's Centre of Food Safety conducts a food surveillance program to control and prevent food hazards (FEHD, 2018). With zero tariffs on fruit, efficient customs procedures and transparent food regulations (Lai, 2018), many supplying countries target Hong Kong as their destination of fresh fruit exports.

1.2 Hong Kong mango, avocado and lychees markets

1.2.1 Mango markets

Hong Kong imports mangoes (HS080450) from over 40 countries and regions across the globe. Thailand, the Philippines, Malaysia, Australia, Taiwan and Indonesia are the top 6 supplying countries and regions by average volume in 2013-2017 (Trade Maps, 2018), accounting for 98.57% of the five-year average global import combined. Thailand and the Philippines are the two largest mango suppliers to Hong Kong, making up 53.54% and 25.88% respectively. This is followed by Malaysia and Australia with 7.30% and 5.10% respectively. Taiwan and Indonesia are the fifth and sixth largest mango suppliers respectively, with a market share of 4.08% and 2.66%.

Hong Kong's mango market has significantly shrunk in volume over recent years, with imports decreasing from 95,400 tonnes in 2013 to 32,400 tonnes in 2017 (Trade Maps, 2018). Figure 1 shows the changes in Hong Kong's mango import from the top 6 supplying countries from 2013 to 2017. The decrease in mango import has been seen in the major supplying countries (Australia excluded), of which Malaysia, Indonesia and Thailand have seen significant decreases in 2013-2017, with their volumes dropping by 96%, 89% and 76% respectively. Despite the shrinking market volume for mangoes in Hong Kong, there is a strong demand for Australian mangoes, with imports increasing by 60% over the same time, up from 2,300 tonnes to 3,500 tonnes.

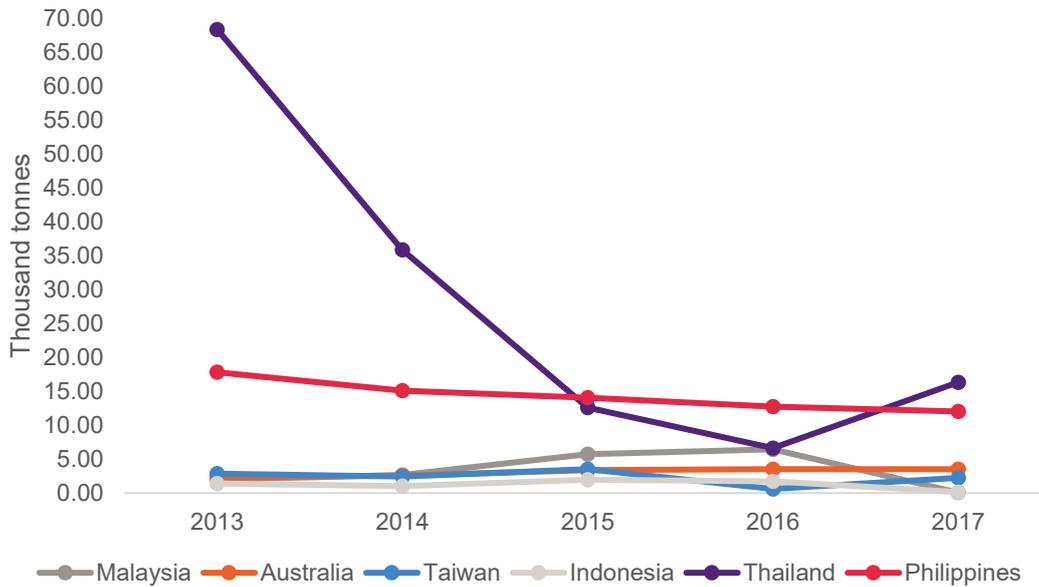


Figure 1 Changes in Hong Kong's mango import from the top 6 supplying countries in 2013-14

Source: Trade Maps; Mangoes (HS080450)

1.2.2 Avocado markets

Hong Kong imports avocados (HS080440) from over 30 countries and regions across the globe. Chile, Mexico, Peru, USA, Kenya and South Africa are the top 6 supplying countries and regions by average volume in 2013-2017 (Trade Maps), accounting for 97.24% of the five-year average global import combined. Chile, Mexico and Peru are the three leading mango suppliers to Hong Kong, making up 47.32%, 25.12% and 11.78% respectively. This is followed by the USA with 8.63%. While Kenya and South Africa are ranked as the fifth and sixth largest mango suppliers, their market shares stand just above 2.00%.

Hong Kong's avocado market has seen rapid growth over recent years, with imports climbing from 2.66 tonnes in 2013 to 21.02 tonnes in 2017. Figure 2 shows the changes in Hong Kong's avocado imports from the top 6 supplying countries from 2013-2017. An increase in avocado import into Hong Kong has seen for all the top 6 supplying countries. Imports from Mexico have seen significant growth since 2014 but plateaued between 2015 and 2017. The most growth is seen with imports from Peru since 2015 when the import rockets up to peak at 12.91 tonnes in 2017, accounting for over 60% of Hong Kong's total imports. While imports from the other four top suppliers fluctuate from 2013 to 2017, their volumes all increased over 2013.

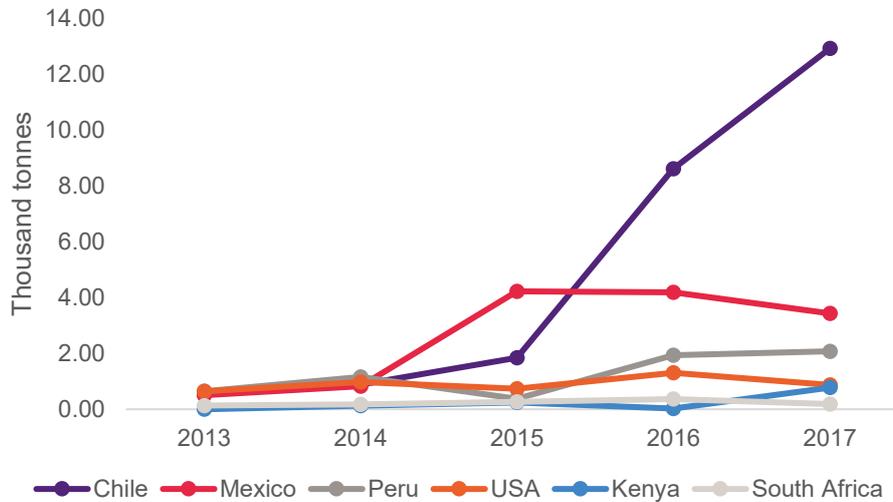


Figure 2 Changes in Hong Kong's avocado import from the top 6 supplying countries in 2013-17

Source: Trade Maps; Avocado (HS080440)

1.2.3 Lychees markets

Hong Kong imports lychees (HS08109010 – Lychees, fresh) from a few countries and regions across the globe. Thailand, China, Australia and South Africa are the top 6 supplying countries and regions by average volume in 2010-2014 (Trade Maps), making up 98.93% of the five-year average global import combined. In 2012-2014, Thailand is the largest lychees supplier to Hong Kong, which dominates Hong Kong's 5-year average market share at 86.43%. China is the second largest, at 8.18%. This is followed by Australia and South Africa at 3.37% and 0.94% respectively. There are also imports from Madagascar, Taiwan and the USA, but with relatively lower market share.

Hong Kong's lychee imports have decreased greatly from 2010 to 2014, with the import down by 143.56%, from 5767.12 tonnes to 577.32 tonnes. Figure 3 shows the changes in Hong Kong's lychee imports from the top 4 supplying countries in 2010-2014. Though Thailand is still the dominant lychee supplier for Hong Kong, Hong Kong's imports from Thailand have decreased from 2010 to 2013, down from 5307.65 tonnes to 147.90 tonnes. However, Hong Kong's import from Australia has increased in the same period, albeit with a slight reduction between 2013 and 2014. This indicates the market potential for Australian lychees.

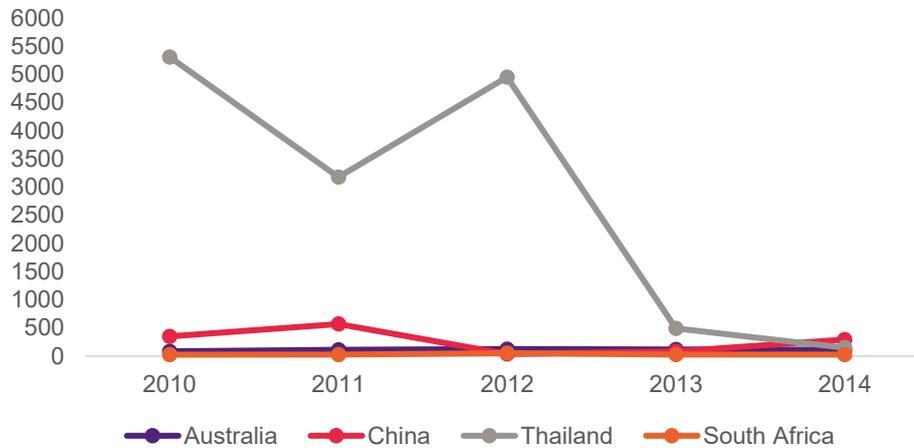


Figure 3 Changes in Hong Kong's Lychee imports from the top 6 supplying countries in 2010-14

Source: Trade Maps; lychees (HS081090)

1.3 Market positioning for Australian mangoes, avocados and lychees

Hong Kong's top 20 mango suppliers' average volume and Cost, Insurance and Freight (CIF) Hong Kong prices in 2013-2017 are compared in Figure 4. Australian mangoes are more expensive compared to all major supplying countries (Japan, Cambodia and Brazil excluded). The five-year CIF Hong Kong price of Australian mangoes is US\$3.5/kg, ranking the fourth after Japan's mangoes (which are a very high value at US\$26.4/kg), Cambodian mangoes (US\$5.19/kg) and Brazil's mangoes (US\$3.73/kg). Although Australian mangoes are expensive, Australia is the fourth largest mango supplier in Hong Kong. Compared with other major suppliers with the CIF Hong Kong price over US\$3.0/kg, Australia is the only supplier with a relatively large volume at 3,000 tonnes.

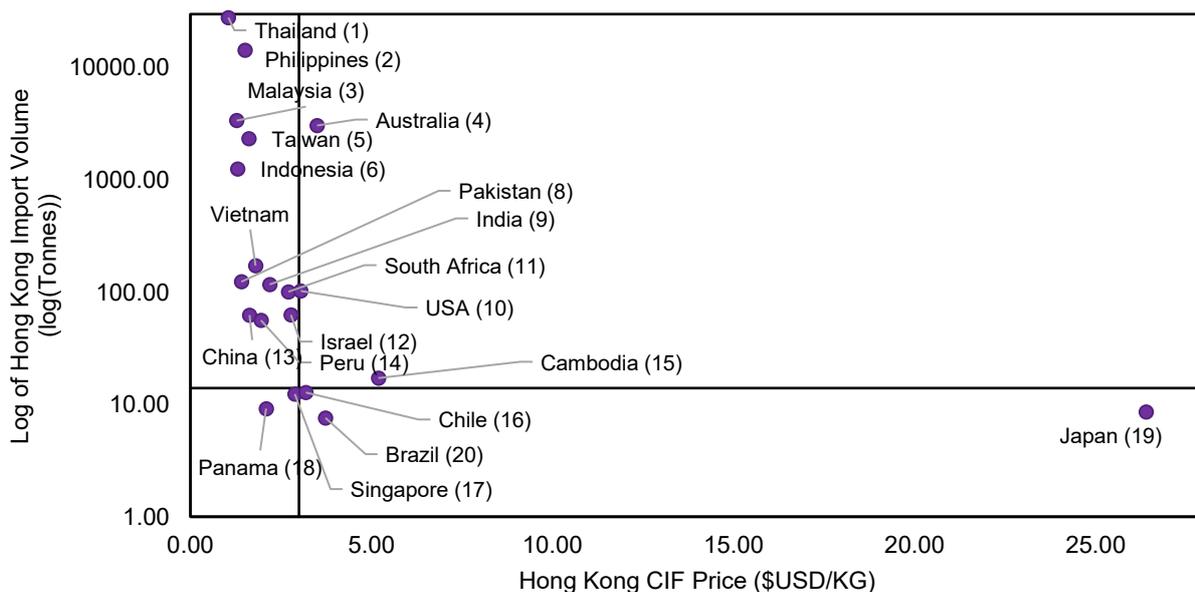


Figure 4 Hong Kong's top 20 mango suppliers' average volume and CIF Hong Kong price in 2013-17

Source: Trade Maps; Mangoes (HS080450); Supplier ranking by the average volume in parentheses

Hong Kong's top 15 avocado suppliers' average volume and CIF Hong Kong prices in 2013-2017 are compared in Figure 5. Australian avocados are more expensive compared with avocados from all major supplying countries (the United Kingdom and New Zealand excluded). The five-year CIF Hong Kong price of Australian avocado is US\$5.45/kg, ranking the third after United Kingdom's (US\$7.93/kg) and New Zealand's (US\$6.41 /kg). Though Australian avocados are not cheap, Australia is the seventh largest avocado supplier to Hong Kong. Compared with other major suppliers with the CIF Hong Kong price over US\$4/kg, Australia is the largest supplier in terms of the five-year average volume after the USA.

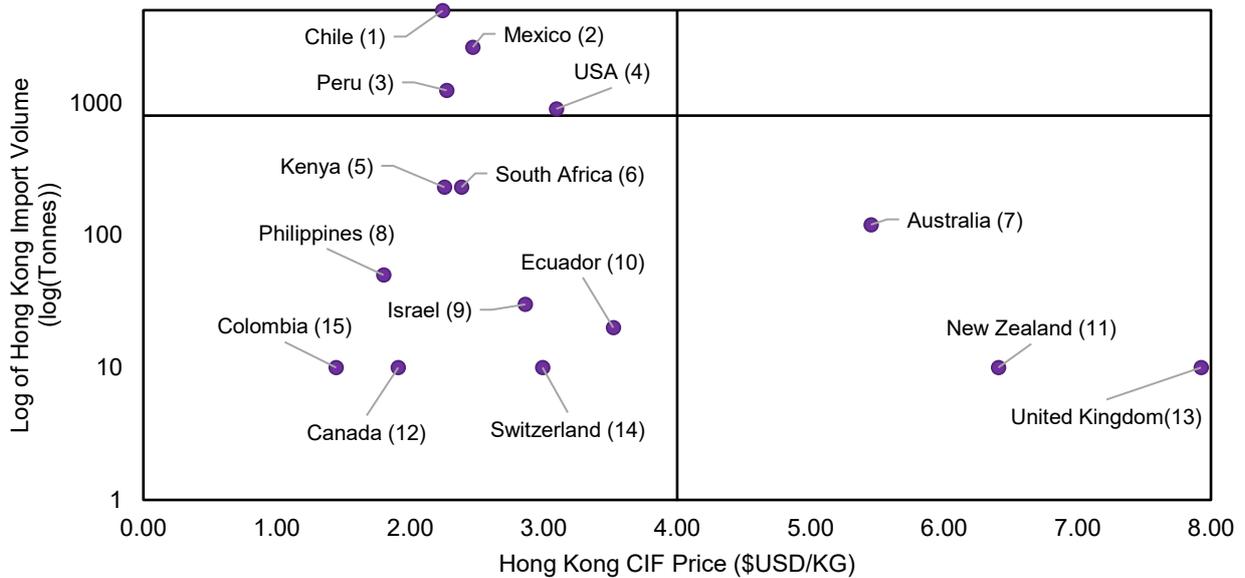


Figure 5 Hong Kong's top 15 avocado suppliers' average volume and CIF Hong Kong price in 2013-17
Source: Trade Maps; Avocado (HS080440); Supplier ranking by the average volume in parentheses.

Hong Kong's top 10 Lychee suppliers' average volume and CIF Hong Kong prices in 2010-2014 are compared in Figure 5. Australian lychees are the most expensive, with the five-year average CIF Hong Kong price at US\$3.19/kg. The next two suppliers with the closest price to Australia are Peru and the USA, with Hong Kong CIF prices at US\$2.93/kg and US\$2.60/kg respectively. Although Australian lychees are quite expensive, Australia is still ranked as the fifth largest lychee supplier to Hong Kong.

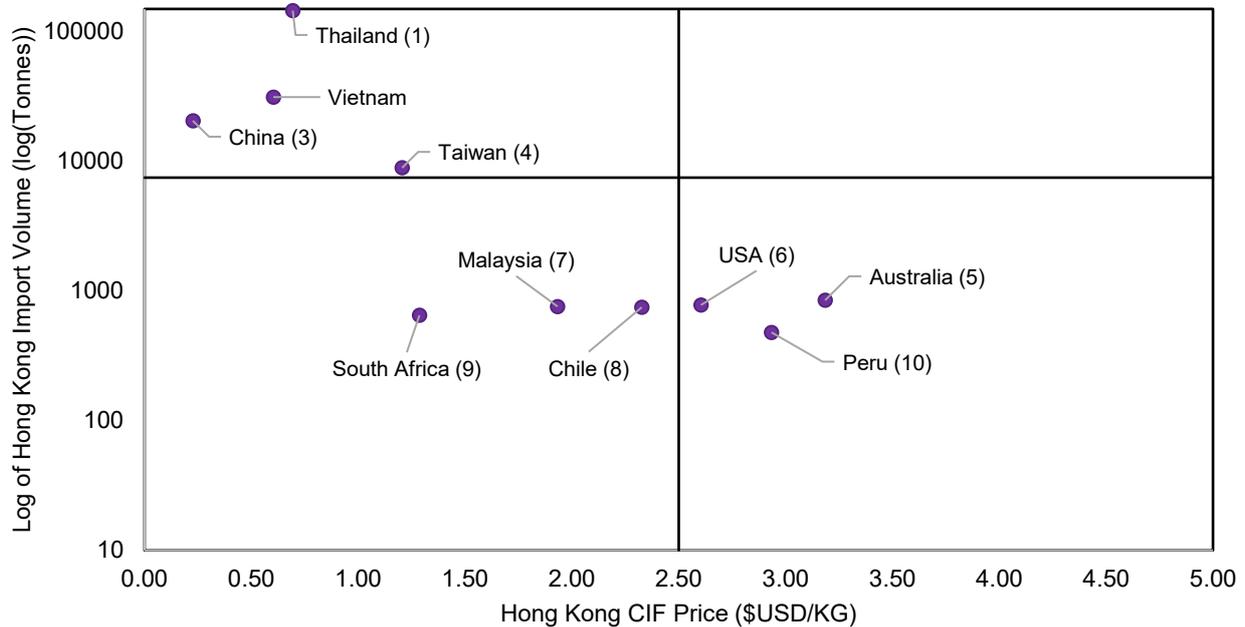


Figure 6 Hong Kong's top 10 lychee suppliers' average volume and CIF Hong Kong price in 2010-14
Source: Trade Maps; lychees (HS081090); Supplier ranking by the average volume in parentheses.

Australia is a supplier which has more expensive mangoes, avocados and lychees compared with most major suppliers; however, there is a relatively strong demand given Australia is among the top 7 suppliers for mangoes, avocados and lychees. Since Australia cannot compete on price, Australia has positioned itself as a premium fruit supplier in Hong Kong (Lai, 2018). Australia thus needs to target premium market channels through quality and taste and offer innovative products and superior quality, thereby achieving competitiveness and maintaining or even expanding market share. This analysis sets up the platform for the second part of this project which looks at emerging innovative horticultural products out of Northern Australia and the markets that can be potentially targeted in Asia's major markets, including city markets in China.

1.4 Market preference

1.4.1 Preference for Australian mangoes

Hong Kong is mainly a market for R2E2 and Calypso, although some other varieties are available, such as Kent and Keitt. R2E2 is the most popular variety in the Hong Kong market due to its large size and blush colour. In terms of fruit size, Hong Kong prefers large fruit. The interviewees indicated that R2E2 in size 7-9 is very popular in Hong Kong. One wholesaler pointed out "we sometimes source size 10 but this does not sell well." When it comes to the Calypso mango, they mainly source size counts 16-18.

Demand for Calypso has increased in recent years, mainly driven by its appealing shape and colour for gift-giving; however, their obvious disadvantages are that they are smaller fruit with less flavour compared with R2E2 while being more expensive than R2E2. There is limited demand for other varieties when there is not

enough R2E2 in the market. A wholesaler pointed out “we mainly buy R2E2 from Australia, but we buy some Keitt and the volume we buy depends on the Chinese New Year and how many R2E2 are in the market”.

Class 1 fruit is mostly imported into Hong Kong from Australia, although Class 2 fruit is sometimes imported. No matter what class of fruit is imported, Hong Kong always has a higher requirement for fruit appearance. Interviewees indicated that they need a high blush ratio without any blemishes.

1.4.2 Preference for Australian avocados

Hong Kong mainly imports premium avocados from Australia, which are recognised as having better quality compared with other supplying countries. One high-end retailer pointed out “Australian avocados are better than that of Mexico and USA in terms of eating quality”. As a result, Australian avocados are often targeted at high-end channels in Hong Kong. To distinguish Australian avocados from those from Mexico, the USA and other supplying countries, Hong Kong wholesalers and high-end retailers prefer large size fruit, though small and medium-sized fruit are available in grocery chain stores, such as Wellcome and Parknshop. Given that Hass is a globally accepted variety, it is also the most popular variety of Australian avocados in Hong Kong where the size counts 14-18 per 5.5 kg tray are commonly found in wholesale markets, high-end supermarkets and community convenience stores.

1.4.3 Preference for Australian lychees

Hong Kong market prefers lychees with a small seed and red colour as noted by four companies interviewed who handle Australian lychees. Hong Kong importers mainly buy Class 1 fruit in 5 kg trays from Australia. Kwai May Pink and Tai So are the two major varieties imported into Hong Kong. “Sun Lychees” which is marketed by the United Lychee Marketing Association is the most preferred brand in the Hong Kong market.

1.5 Challenges in sales of Australian mangoes, avocados and lychees

Hong Kong is a relatively small market with a wide selection of fruit from across the world. If too many fruit flood into the market, the wholesale price could be decreased significantly. With many supplying countries targeting Hong Kong, the market faces saturation. Due to fierce competition, quality is regarded as the most important factor in sales. Two wholesalers interviewed pointed out “It is going to be hard to sell in Hong Kong if you do not have quality fruit.”

Hong Kong wholesalers run the risk of losing money in wholesaling Australian mangoes. One wholesaler said that the CIF Hong Kong price for a 7 kg tray of Australian R2E2 arranges from \$22 to \$45, while the wholesale price ranges from \$25 to \$ 56 (exchange rate for Australian Dollar and Hong Kong Dollar is set at 5.4, hereafter).

The biggest challenge for selling Australian lychees is their short shelf life. One wholesaler indicated that they need to sell out Australian lychees the next day, otherwise the fruit could turn brown, which makes it difficult to sell at a good price.

2. Supply chain strategic orientation

2.1 Overseas farm acquisition

All the Hong Kong companies interviewed do not have overseas farms and do not currently display interest in acquiring an overseas farm and vertically integrating. They indicated that they would rather focus on their existing fruit wholesaling and/or retailing businesses, instead of buying and operating an overseas orchard. Potential challenges in running a farm with an overseas partner as pointed out by the interviewees include whether you trust your partners to handle all the farming or whether you have the expertise to run the farm once your partners leave the business. One interviewee pointed out “We have heard lots of accidents where the Chinese investors got ripped off in the overseas farm acquisition not only in Australia, everywhere in the world”. These failures demotivate their intention for upstream supply chain integration.

All the five interviewees however intended to maintain long-time time partnerships with their suppliers. However, they mentioned that it is not easy to find an ideal partner who shares the same supply chain strategy. Among the five interviewees, only one wholesaler has already built a strong partnership with one of their mango suppliers in the Philippines, who provides all the supply chain details, supply chain visibility and provenance, including the date of picking and packing to his Hong Kong wholesaler. This includes sending his Philippines employees to assist with proper ripening in Hong Kong. While this affects supply costs, it indicates a strong long-term collaborative strategy that can support a premium if the cost is borne by the consumer rather than the supplier.

2.2 Sourcing strategies

No matter which kind of sourcing strategies, both Hong Kong wholesalers and retailers have strict requirements on fruit quality when sourcing mangoes, avocados and lychees. None of the companies interviewed buy second-grade fruit. For purposes of supply chain visibility, including quality assurance from the origin, they prefer to work with exporters who have farms or have strong relationships with growers. This will be an important consideration in the way Australia’s growers seek to build their supply chains.

Hong Kong’s first-tier wholesalers are also importers and even act as import agents for some retailing stores. They source fruit from across the globe to supply different market segments. Two wholesalers interviewed confirmed this and indicated that they need to trust their suppliers to assist with quality control and assurance since it is very challenging to monitor fruit quality when working with several suppliers in different supplying countries. To simplify their sourcing operations, they tend to work with a small number of large-

scale suppliers who have sizable supply capacity. However, they have to work with several suppliers in some cases where suppliers have limited capacity. For example, one wholesaler pointed out “We work with 6-7 agents in Australia for mangoes and only 1 agent for lychees”. The two wholesalers also indicated that they often set a supply program with their suppliers for the whole season to show their sustainable procurement capability, which can help them build a long-term relationship with their suppliers. In terms of import packaging, they often take the boxes widely used by suppliers. However, it should be noted that Hong Kong wholesalers who distribute Australian mangoes into China often ask their Australian suppliers to use generic boxes without any branding information.

As Hong Kong retailers generally source fruit from different suppliers, it enables them to compare prices and make the cheapest selection based on product quality. This can also assist them to source mangoes and avocados for year-round supply. However, their procurement of lychees only occurs in a short period through the year due to short supply windows, pointing to opportunities for some Australian producers.

Retailers tend to buy from overseas exporters for cost savings; however, their procurement volume is often smaller compared with wholesalers, which makes it uneconomical for them to directly import mangoes and avocados. As a result, in addition to direct import in some cases, they choose to either work with importers or buy from the wholesale market. Three retailers pointed out “We have a portion of direct import, but we also either work with first-tier wholesalers who act as our import agents or procure from the wholesale markets where we can compare quality and price to make favourable procurements”. Furthermore, all the retailers indicated a difference in their procurement of mangoes and avocados, which is avocados require ripening service, while mangoes are naturally ripened during sales. Given the ripening needs for avocados, Hong Kong retailers generally request their avocado suppliers, including overseas suppliers or local wholesalers to assist with ripening. One retailer particularly pointed out “our avocados are mainly sourced from importers who can provide us ripening services”. In addition, high-end retailers indicated that they want to procure new varieties or differentiated products to distinguish from their competitors. For example, City Super sources Heixiang mangoes from Taiwan, which is rare to see in Hong Kong as well as organic avocado from American suppliers.

2.3 Modes of transport

Both air freight and sea freight are accepted by Hong Kong importers for shipping mangoes and avocados, while air freighted lychees are most preferred by interviewed companies due to short shelf life. Mangoes from geographically proximate Asian countries, such as Taiwan, Thailand and the Philippines are mostly shipped to Hong Kong by sea; however, air freight is most preferred if shipping from a supplying country far from Hong Kong. One importer and wholesaler pointed out “Our mangoes from Australia are shipped by air and sea, but mostly by air. We handled four containers of mangoes by sea last season. Although sea freight is much cheaper compared with air freight, it is very risky for shipping mangoes by sea because a lot can happen during the long transit and you cannot guarantee the quality upon arrival”.

2.4 Fruit storage and sales

Most Hong Kong importers and wholesalers do not have cold storage warehouses due to high rents in Hong Kong. One importer and wholesaler pointed out “It is just simply unaffordable for us as it would cost us billions of dollars to have a proper warehouse”. For the wholesalers who do not have a cold storage warehouse, they just leave the container to refrigerate their fruit. This practice is typical for most Hong Kong importers. However, some importers and wholesalers, such as Good Views, have built storage facilities and even a ripening facility to ensure all fruit is conditioned to meet client requirements and remain fresh, thereby enabling them to differentiate from their competitors (Fructidor, 2017). In contrast, most big retailers, including the three retailers interviewed have central distribution centres which are equipped with cold storage facilities. Their fruit which is directly imported or procured via import agents or from the wholesale markets is transported to their distribution centres for cold storage.

The Yau Ma Tei wholesale fruit market is the dominant sales platform for mangoes, avocados and lychees as indicated by one wholesaler. The Yau Ma Tei wholesale fruit market has two functions: wholesaling and retailing, with wholesaling in the morning and evening and retailing during the day. Figure 7 shows a snapshot of mangos, avocados and lychees displayed for retailing in the Yau Ma Tei market. While the loose pack is the common form of sales, fruit packed in a whole box and/or gift box is sold as well (Figure 8). As mentioned by our interviewed wholesalers, mangoes, avocados and lychees are not major fruit compared with grapes and oranges and only account for a small percentage of their business. Because of this, wholesalers normally do not launch any specific sales strategy for mangoes, avocados and lychees. However, they do attempt to expand their markets beyond Hong Kong given the small size of the Hong Kong market. The two wholesalers interviewed sell fruit not only in Hong Kong, but in other close proximate countries and regions, including mainland China and Macau.



Figure 7 Mangoes, avocados and lychees displayed for retailing in the Yau Ma Tei Market



Figure 8 Packed fruit for retailing in the Yau Ma Tei Market

Due to the constraint of market size, high-end supermarkets tend to target high-value customers and do not have as many stores as Wellcome and Parknshop who often sell with a lower price for a large volume. For example, City Super has four stores only in Hong Kong. Fusion and Taste which are two high-end supermarkets operated by Parknshop also have a small number of stores in Hong Kong. Furthermore, most retailers have integrated online sales into their business, but online sales of mangoes, avocados and lychees just make up a small portion of their sales, as indicated by the three retailers interviewed.

In terms of the dominant method of sales, general merchandise stores (Welcome and Parknshop) and convenience stores often sell mangoes, avocados and lychees in bulk loose, while some avocados are pre-packed in net bags. In contrast, high-end supermarkets often sell fruit pre-packed or customised packed, although loose can be seen in some stores. Figure 9 shows the mangoes displayed for sale in three high-end supermarkets. The two on the left show pre-packed mangoes in City Super (Left 1) and Fusion (Left 2), while the two on the right show fresh-cut mangoes (Right 1) and mango Mochi (Right 2) in Yata Supermarket. In addition, retailers promote and sell mangoes, avocado and lychees in either their private brands or suppliers' brands. When promoting fruit with suppliers' brands, they often ask their suppliers for in-market support, including point of purchase display, free samples, catalogue and souvenir and backdrop.



Figure 9 Mangoes displayed for sales in three high-end supermarkets

2.5 Sales channel preference

The two importers and wholesalers interviewed did not express any particular preference for any channel and stated that each channel is quite important for their business. The channel position is based on fruit characteristics and demand. One wholesaler who mainly deals with mangoes from the Philippines (Carabao variety) said that 70% of their mangoes are sold to foodservice customers as a lot of Hong Kong dessert shops love Philippines' mangoes. On the other hand, the other wholesaler who mainly deals with Australian mangoes said that their key customers are retailers in Hong Kong and China.

3. Supply chain operations

3.1 Mode of procurement

Hong Kong importers and wholesalers, who have large procurement quantity and intend to procure good quality fruit, generally procure mangoes, avocados and lychees from Australian exporters/consolidators who work with local growers and partners. They often provide their key suppliers with a supply program in the early season. In terms of the trade mode, they often have different transactional modes. The mode of trade is dependent on negotiations and business relationships. One wholesaler pointed out "We generally have three procurement modes with our Australian suppliers. Some of the transactions have a minimum guaranteed price (MGP), some are consignment, and a few are fixed price. The wholesaler also added that "some growers may want upfront payment, we can pay a part, but not in full payment before we receive the fruit."

Hong Kong retailers procure Australian mangoes, avocados and lychees either from Australian suppliers (exporters), local importers/wholesalers or both. One high-end retailer and one traditional retailer

(supermarket) indicated that they source Australian mangoes from 3-4 Australian suppliers who are based at the Sydney Market. In addition to direct sourcing, they also procure Australian mangoes from several local importers/wholesalers. Their procurements from Australian exporters and local importers are mainly transactionally-based given that they look for a good bargain.

3.2 Import and procurement challenges

There are some challenges in the import and/or procurement of Australian mangoes, avocados and lychees, as stated by the interviewed companies:

- 1) Wholesalers indicated that Chinese cash buyers are a big challenge to their trade relationship with Australian suppliers as they come to Australian farms cashed up to secure supply from our suppliers or our suppliers' partners. Because of the involvement of Chinese cash buyers, they also face the risk of increased procurement costs.
- 2) Sea freight is very risky for shipping mangoes over long distances because a lot can happen during the long transit and quality cannot be guaranteed upon arrival.
- 3) High-end retailers mentioned that Australian exporters often have a minimum order quantity (MOQ), which is a problem in case of direct imports by retailers who usually have a smaller order quantity compared with wholesalers.
- 4) High-end supermarkets tend to find new varieties to differentiate themselves from their competitors; however, they often cannot find the information on the availability of new varieties in their supplying countries and which suppliers they can procure new varieties from.
- 5) Australian lychees have a very short shelf life. One wholesaler particularly pointed out "Australian lychees turn brown very quickly, we generally have to sell Australian lychees the next day upon arrival.

3.3 Entry channels for Australian mangoes, avocados and lychees

Fruit into Hong Kong is organised almost entirely through two wholesale markets: the Western Wholesale Food Market and the Yau Ma Tei wholesale fruit market (Martin and Chan, 2014). The Yau Ma Tei wholesale fruit market used to centralise the distribution of all imported fruit, and today still handle a significant portion (Lai, 2018). The market handles more than 70% of total fruit products in the Hong Kong market (Lee, 2009) and continues to command the lion's share of Hong Kong's fruit wholesale business (Martin and Chan, 2014).

According to an importer and wholesaler, Australian mangoes, avocados and lychees are mainly transported from the port of arrival to the Yau Ma Tei wholesale fruit market. A small portion of fruit goes directly to some retailers' distribution centres upon arrival in the cases of direct import by retailers. Most importers, including wholesalers and retailers, use a third-party transport company to assist with fruit pick-up and distribution; however, some importers have a fleet transport team. One wholesaler indicated that they have a team of 12 people in their fleet transport.

3.4 Distribution channels

Hong Kong importers, including wholesalers/agents and retailers, bring fruit to a wholesale market, dominantly the Yau Ma Tei market, for distribution or re-export (Lai, 2018). In the Hong Kong market, Australian mangoes, avocados and lychees that are imported by importers and wholesalers are mainly distributed to retailers and fruit hampers as well as secondary wholesalers who are also involved in retailing businesses in the Yau Ma Tei wholesale market. One wholesaler indicated that they sell Australian mangoes and lychees to supermarkets, including Wellcome and also fruit retailers in China, such as Pagoda.

3.5 Sales region

Hong Kong is a dynamic market and an effective re-export platform of fresh fruit (Lai, 2018). A portion of mangoes, avocados and lychees imported into Hong Kong is re-exported to other countries and regions. Table 3 shows Hong Kong's re-export of mango, avocado and lychees in thousand Australian Dollars in 2018. The value for Hong Kong's re-export of mangoes, avocados and lychees represented in thousand Australian Dollars is 5676, 50306 and 173 respectively in 2018. China is the dominant destination for mangoes, avocados and lychees re-exported from Hong Kong, with the import portion standing at 80.43%, 98.09% and 55.49% respectively. In addition to China, Macau and Vietnam are also big markets for mangoes re-exported from Hong Kong and Thailand is a big market for lychees re-exported from Hong Kong. Though the number is not available for Australian mangoes, avocados and lychees, our interviews confirmed that Australian mangoes and lychees are re-exported to China, Macau and other countries. The wholesaler interviewed who deal with a notable volume of Australian mangoes said that they also sell in Guangzhou and Shanghai.

Table 3 Hong Kong's re-export of mango, avocado and lychees in 2018

| | Re-export in 1000 AUD | Re-export percentage | | | | |
|---------|-----------------------|----------------------|----------|--------|---------|--------|
| | | China | Thailand | Macau | Vietnam | Others |
| Mango | 5676 | 80.43% | | 11.58% | 7.38% | 0.62% |
| Avocado | 50306 | 98.09% | | 1.91% | | |
| Lychees | 173 | 55.49% | 29.48% | | | 15.03% |

Source: Trade Maps;

Note: Mangoes, fresh or dried (08045020); fresh or dried avocados (080440); Lychees fresh (08109010).

4. Channel positioning

4.1 Supply chain structure

Given the limited size of Hong Kong in terms of both population and geography, importers may also play the role of wholesaler/distributor, while retailers may also import products directly from suppliers, bypassing the need for intermediaries (Austrade, 2019). Figure 10 shows the mapped distribution channels for mangoes, avocados and lychees in Hong Kong and re-export from Hong Kong importers. Though retailers directly

source from overseas suppliers, Hong Kong importers still play an important role in fruit distribution and often act as a wholesaler and a distributor, who distribute fruit to supermarkets, food service outlets, second-tier wholesalers and fruit hampers. Though retailers choose to buy fruit direct from Australian suppliers, they still purchase part of their products from Hong Kong importers to minimise risks (Lai, 2018). As opposed to the supply chain structure for mangoes and avocados, direct import of avocados by retailers makes up a small portion given retailers need ripening services. As a result, avocados are mainly moved from exporters to retailers via Hong Kong local importers and wholesalers who can provide ripening services.

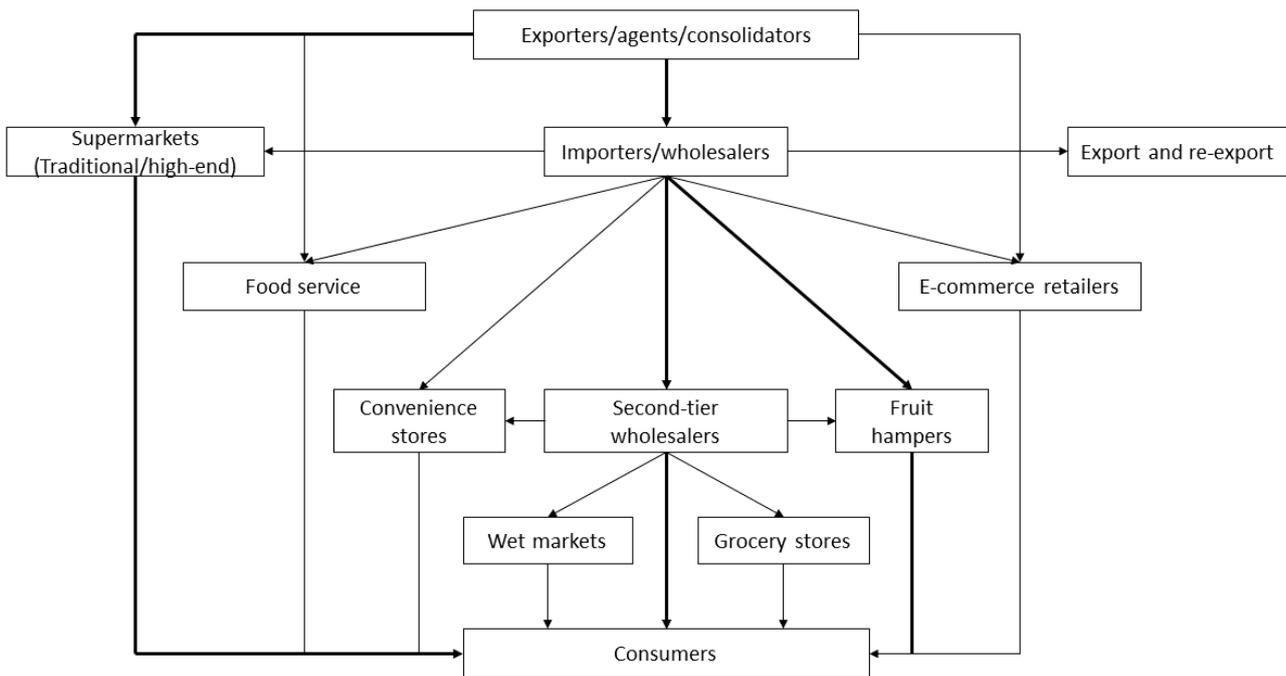


Figure 10 Supply chain structure for mangoes, avocados and lychees in Hong Kong

4.2 Retailing channels

The major retailing channels for Australian mangoes, avocados and lychees include traditional supermarkets, high-end supermarkets, fruit hampers and online sales.

Traditional supermarkets, including Wellcome and Parknshop, also have a presence in mainland China. Wellcome and Parknshop are two major grocery chains, which dominate the supermarket category with nearly 70% market share combined (Li, 2017). Wellcome has more than 280 retailing outlets in Hong Kong, while Parknshop has over 270 outlets with different names and store formats (Li, 2017). Though these big grocery chains have established their direct channels for sourcing mangoes, avocados and lychees, they still purchase part of their products from Hong Kong importers to minimise risks (Lai, 2018). These big grocery chains generally have their own distribution centres equipped with cold storage facilities, from where fruit is distributed to their chain stores across Hong Kong.

High-end supermarkets target middle and high-end consumers with quality consumable products, including packaged food, fresh food, cosmetics and imported products. City Super, Fusion, Taste and Marks &

Spencer are examples of the emerging high-end supermarket in Hong Kong. Fusion and Taste are premium and upscale outlets expanded by Parknshop as consumers continue to seek high-quality, imported gourmet products (Li, 2017). Compared with traditional supermarkets, their shopping environment is much cleaner and display more attractive. Some high-end supermarkets, such as Yata, have established their own online platforms in addition to operating brick-and-mortar stores. As premium supermarkets cater for a small group of high-value customers, they often have a small number of stores, for example, City Super has 4 stores only in Hong Kong, while Yata has 7 stores in Hong Kong. In addition, most high-end supermarkets have their distribution centre and often pre-pack fruit at their own plants.

Fruit hamper stores are premium channels for fruit. Hampers are packed with an array of seasonal imported fruit, which is an ideal gift for any business event and house warming party. Giving fruit baskets in Hong Kong is more popular during holidays, like Lunar New Year or Christmas (Flower delivery review, 2018). People order fruit hampers from Hong Kong florists and gift shops to give as gifts to relatives, colleagues, clients and neighbours (Flower delivery review, 2018).

E-commerce in Hong Kong is not as developed as in China due to the mature local direct and retail sales channel (Leung, 2018). HKTV Mall is the largest online shopping platform in Hong Kong. Beyond this, there is a limited number of other online platforms, such as thefreshsupplycompany.com, jousun.com, honestbee.com, and frutodor.com (Sassyhongkong, 2018). Besides, most major supermarkets like Wellcome and ParknShop have established online grocery shopping platforms (Li, 2017). Moreover, some high-end supermarkets, such as Yata have developed their online sales platform. They often integrate their online and offline sales and adopt the same pricing strategy in offline and online sales. Although online sales of fresh fruit have not yet well developed in Hong Kong, it is expected the number of online food stores will continue to rise as both big and small operators look at e-retail as a way to expand their market presence and reduce their exposure to the high commercial real estate prices in Hong Kong (AAFC, 2016). There is a trend that more consumers are pre-ordering seasonal fruit online such as Taiwanese mangoes and many would use home delivery services provided by online shops (Lai, 2018). Due to small procurement volume, pure online retailers mainly source fruit from local wholesalers, or it is supplied by their parent companies. For example, Frutodor is a wholly-owned subsidiary of P&C International Trading Limited (Sassyhongkong, 2018).

5. Benchmarking analysis

5.1 Supply seasonality

5.1.1 Mango supply seasonality

Hong Kong imports mangoes (HS080450) year-round. Though import volume calculated with 2016-17 average peaks at 4054.88 tonnes, its monthly import volume fluctuates around 2500 tonnes. Figure 10 shows Hong Kong's monthly change in average mango imports in 2016-2017 and supply seasonality by country and region.

China, the Philippines, Taiwan, Thailand and Indonesia are the five suppliers who supply mangoes year-around to Hong Kong markets. Brazil supply mangoes almost year-round (December excluded), although it is a small player in the Hong Kong market. Malaysia is also a relatively big supplier, supplying for 10 months, with June and July excluded. In comparison with other suppliers, Australia has a relatively longer supply window at 8 months. Though Australia's supply commences from August and ends in April, the peak season for Australian mangoes in Hong Kong is from November to January, when Australia has a market share of over 30%. In contrast, South Africa, Peru and Kenya have shorter supply windows as they only supply for a couple of months; however, they have overlapped supply windows with Australia.

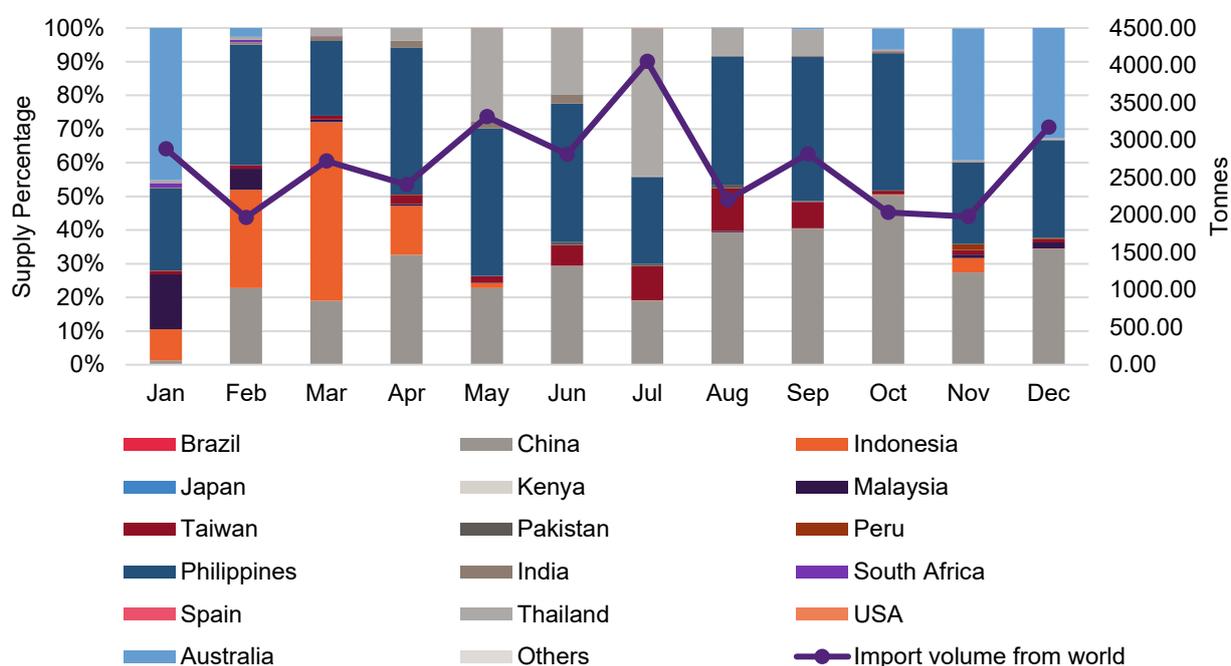


Figure 11 Hong Kong's mango import seasonality by country (2016-17 average)
Source: Trade Maps; Mangoes (HS080450)

5.1.2 Avocado supply seasonality

Hong Kong also imports avocados (HS080440) year-round, with import volume increasing to peak at 745 tonnes in June before decreasing to 332 tonnes in December. Figure 11 shows Hong Kong's monthly change in average avocado imports in 2016-2017 and supply seasonality by country and region.

Australian avocados face competition from Mexican avocados throughout the year as Mexico and Australia are the only two suppliers who supply avocado year-around to Hong Kong markets. In contrast to Mexico, Australia is a relatively small player in the Hong Kong avocado market, with the highest monthly market share at 9.68% in September. Kenya is a country that supplies Hong Kong for 11 months of the year, with January excluded, and peak supply occurring between March and July. Netherlands can also supply avocados for 11 months (September excluded); however, it is a small player in Hong Kong. The emergence of the Netherlands points to the impact of protected cropping. This will be a major consideration in emerging

global competition. For instance, Colombia is now one of the world's largest producers of cut flowers thanks to significant investment in protected cropping. Critically though much of this is under plastic. A cheap alternative to glass, but it is very difficult to regulate temperature, humidity and CO₂. Besides, Chile and the USA are relatively large suppliers who have much longer supply windows, at 8 and 7 months respectively. While Chile does not supply mid-year, the USA's supply mainly occurs between March and July. In contrast, Peru and South Africa have concentrated supply windows between April and August. Other suppliers, including New Zealand, Colombia and Ecuador are quite smaller players, with occasional supply throughout the year.

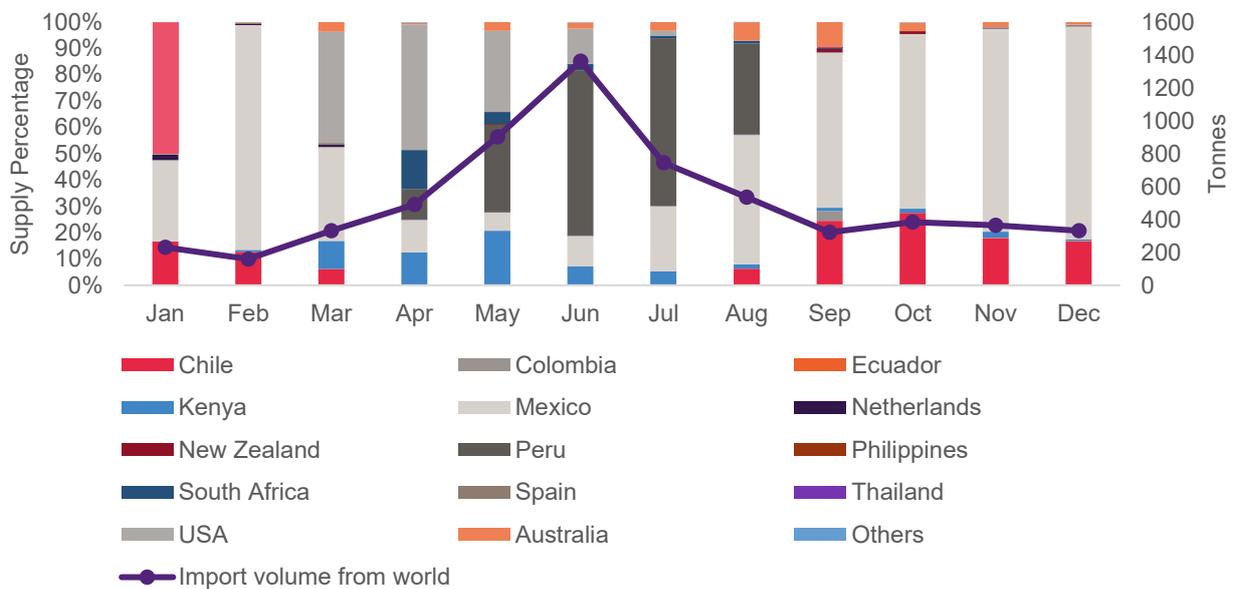


Figure 12 Hong Kong's avocado import seasonality by country (2016-17 average)
 Source: Trade Maps; Avocado (HS080440)

5.1.1 Seasonal supply of lychees

The data for Hong Kong's import seasonality of lychees by country is unavailable. If a broader category of lychees (HS 081090) is considered, the data shows that Australia can supply lychees year-round in Hong Kong, which contradicts with Australia's supply window. Because of this, the data collected from the field study in Hong Kong and published information were combined for seasonality analysis.

The interviewed retailers indicated that lychees available in the Hong Kong market are from Thailand, Taiwan, China and South Africa. Thailand's supply window lasts from March to June, while China and Taiwan's supply windows sit between May and July and between June and July respectively. So, Australia is counter-seasonal to the three largest lychee suppliers in Hong Kong. As a result, Australia has a supply advantage in the Hong Kong market during Chinese New Year when the Northern Hemisphere is "off-season" (Houser, 2018). However, Australia may face competition with South Africa and other southern hemisphere countries, such as Madagascar and Réunion, due to overlaid supply windows (Noller, 2015).

5.2 Supply chain performance

5.2.1 Strategic performance

Although some Hong Kong importers have established supply chain partnership with their overseas suppliers, for example, one of the interviewees has built a partnership with one of their Philippines mango suppliers and even directly invested in their overseas business partners. Gyaldar Limited invested in the Myanmar avocado industry (Fresh Plaza, 2018b). However, no such kind of partnership between Hong Kong importers and Australian exporters or direct investment from Hong Kong importers has been identified based on the information gathered from the field study and secondary source.

5.2.2 Operational performance

The comparison of supply chain lead time from origin to destination is shown in Table 4. The obvious advantage for Australia's fruit export to Hong Kong is the shorter transport time by air compared with the USA, South Africa and South American countries. However, Australia's advantage in transit time to Hong Kong by sea has not been obvious in recent years given the optimisation of shipping from South America to Hong Kong.

Table 4 Comparison of supply chain lead time from origin to Hong Kong

| Departing country | Port of departure | Mode of transport | Shipping time | Logistics cost (Australian Dollars) | | |
|-------------------|-------------------|-------------------|---------------|---|--------------|-----------|
| | | | | Loading rates (inspection costs included) | Freight cost | |
| | | | | | AKE | PMC |
| Australia | Brisbane | Sea | 22 days | | | |
| | Brisbane | Air | 1 day | | 1210-1285 | 2960-3200 |
| Mexico | | Sea | 21 days | | | |
| | | Air | 3-4 days | | | |
| Chile | Valparaíso | Sea | 22 days | | | |
| | | Air | 3-4 days | | | |
| USA | | Sea | | | | |
| | | Air | 2-4 days | | | |
| Philippines | Manila | Sea | 3-4 days | | | |
| South Africa | | Sea | 25 days | | | |
| Kenya | | Sea | 22-28 days | | | |

Source: Interviews and secondary data.

Because of cheaper freight costs by sea compared by air, one wholesaler mentioned that the return to the growers is very good when shipping mangoes from Australia to Hong Kong. But it is very risky to ship mangoes by sea because a lot can happen during transit and you cannot guarantee the quality. An importer pointed out that almost 99% of Hong Kong importers do not want to ship mangoes by water.

5.3 Sales price

5.3.1 Mango sales price

Australian mangoes (R2E2) are thought to be good in quality as indicated by interviewees. Meanwhile, they indicated that mangoes from Taiwan, Thailand, Japan and India are also good. Figure 13 shows the origin of production, variety and retailing price of some mangoes sold on 4 May 2019 in the Yau Ma Tei wholesale

market. Though many mangoes are not given an indicated origin of production, mangoes from Japan, Taiwan, Philippines, Australia, Thailand and Cambodia and Columbia were spotted in the market. The most expensive mango is the Miyazaki mango from Japan, which is sold at \$33.33 (exchange rate for the Australian Dollar and Hong Kong Dollar is set at 5.4; hereafter). There are also Miyazaki mangoes from Columbia, which is sold at \$15.82 – cheaper than the Japanese Miyazaki mango, but more expensive than other mangoes. Australian R2E2 is sold at \$12.93 per piece or \$15.82 per three prices, which makes it the third most expensive mango. Taiwan’s Irwin mangoes are cheaper than Australian R2E2, sold at \$12.96-14.81 per two pieces, with a higher price for selective mangoes. In contrast, mangoes from Thailand, the Philippines and Cambodia are much cheaper and often sold at \$9.26 per 4 pieces. Nam Dok Mai and Crown are the two major varieties from Thailand, while Carabao is the main variety from the Philippines. In addition, organic mangoes were spotted in the market, but without indicating the origin of production and variety.



Figure 13 A snapshot of mango sold in the Yau Ma Tei wholesale market

Grocery chain stores, including Wellcome and Parkship and high-end supermarkets, sell mangoes either by piece or by weight (Pound). Generally, mangoes in high-end supermarkets are more expensive than in

grocery chain stores. Meanwhile, the price in grocery stores is higher than that in the Yau Ma Tei market. For example, Thailand's Nam Dok Mai is sold at \$8.33 per piece in City Super and Taiwan Irwin mango is sold at \$13.5 per piece, while the large green mangoes from Vietnam are sold at \$4.43 per piece in Parknshop. Though grocery chain stores and high-end supermarkets mainly have mangoes from the same supplying countries and with the same variety, they tend to differentiate their competitors through the country of origin and variety and a rare variety is often very expensive. For example, Indian mangoes and Taiwan Heixiang Mango is only spotted in City super, where Taiwan Heixiang Mango is sold at \$20.7 per piece.

5.3.2 Avocado sales price

Australian avocados are thought to be the best by interviewees in terms of the percentage of dry matter and appearance compared with avocados from other major supplying countries. Figure 14 shows the origin of production, variety and retailing price of avocados from Australia, Chile and Philippines sold on 4 May 2019 in the Yau Ma Tei wholesale market. Australian avocados are sold at \$9.26 for 2 pieces of large fruit and four pieces of medium fruit. Chile avocados in medium size are sold at the same price as Australia's medium fruit. In contrast, Philippines avocados are much cheaper, sold at \$7.41 per 5-6 pieces.



Figure 14 A snapshot of avocado sold in the Yau Ma Tei wholesale market

Though the origin of production of avocados is not given in some grocery chain stores and high-end supermarkets, avocados from the USA, Mexico and Spain were spotted. Australian large avocados are common to see in grocery stores and high-end supermarkets, where they are sold by pieces, while avocados from Mexico and Chile are sold either by pieces or in pre-packed net bags. A net bag of re-packed avocados with 5 pieces are often sold at \$6.09 in Parknshop and their premium outlets, including Taste and Fusion. There is a big gap in the sales price between Australian large avocados and Mexican medium-sized avocados within a store. For example, Australian large avocados (labelled as XL Avocado (Australia) are sold at around \$6.65 per piece in Taste, while Mexican avocados are sold at \$4.37 per 3 pieces. Also, organic avocados from the USA and Spain were spotted in City Super and Fusion respectively. In city super,

a piece of organic avocado from USA was spotted at \$5.93, a little bit cheaper than the Australian large avocado (\$6.48), while a piece of Mexican avocado was sold at \$3.7.

5.3.3 Lychees sales price

Australian lychees were not available during the field study in Hong Kong. However, some lychees from China were spotted in the Yau Ma Tei wholesale market (Figure 14). Chinese lychees are often sold in bunches with leaves as shown in Figure 14. The retail price for the variety of 'Bai Tang Ying' ranges from \$5.56 to \$7.04 per pound. In contrast, Australian lychees are mainly sold in re-packed punnets weighing 500g in grocery chain stores and high-end supermarkets.



Figure 15 A snapshot of lychees sold in the Yau Ma Tei wholesale market

6. Reference models for Australian exporters

Good Views is now one of the largest fresh fruit distributors in Hong Kong and Macau, servicing customers including airline catering, food services, 5-star hotels, bakeries and major supermarket chain stores (source: <http://goodviewfruits.com/>). It is one of the largest importers in Hong Kong for Philippine mangoes, which can be supplied year-round. Philippine mangoes, particularly Carabao variety, are well-liked by foodservice outlets, with 70% of their sales going to food services. Since food services prefer mangoes that are ready to use, they established the latest technology ripening facility for mangoes that can also be used for banana, avocado and kiwi (fructidor.com, 2017).

As indicated by the interviewee from Good Views, they had difficulty in fruit quality control of Carabao mango in the early stage of ripening. Though refrigerated containers are used to ship mangoes from the Philippines into Hong Kong and the journey takes just 3-4 days, they were seeing up to 50% of fruit wasted during the ripening process in summer. To reduce ripening waste, they worked to understand supply chain details, including harvest date and pack date from their upstream suppliers and established

a partnership with a large Philippines supplier for better supply chain coordination. Under their supply chain partnership, the Philippines supplier not only provides more accurate information for the fruit shipped, but also sends their technician to assist with the ripening process. The interviewee pointed out that “Our supplier informs us exactly when each box of fruit in the shipment is harvested and packed and how the weather is when harvesting. This kind of information helps us understand which boxes of fruit should be ripened first and also avoid mixing fruit harvested in different weather conditions and packed on different dates”. The interviewee also added “their technician comes over to Hong Kong and stays with us to guide us how to ripen fruit. Through collaborative efforts with our suppliers, we have significantly reduced our ripening wastage to 3-5%. Our foodservice customers are satisfied with our fruit quality, which is a great achievement for our business and also a good model for our business”.

The case of Good Views’ success indicates that the support of upstream suppliers is a key factor for the success of downstream firms in handling fresh fruit. Also, supply chain transparency and visibility along the chain through production, harvest and post-harvest can help downstream firms make the right decision on how to properly handle the fruit. In addition, collaborative efforts between suppliers and buyers, rather than the traditional transactional trade can reduce fruit waste and create more value to customers and margins for the businesses, thereby driving consistent demand for the fruit and improving supply chain performance.

7. Development strategies for Northern Australia’s fruit industry

- 1) A united export strategy/platform to coordinate several fruit growers for exporting mangoes, avocado and lychees could be implemented, which would help small growers work for a consistent brand and deliver their fruit in one shipment. The United Lychee Marketing Association (ULMA) and Sun Fresh are good reference modes for Northern Australia’s mango industry. ULMA has partnered with Martin Walker Marketing to market “Sun Lychee”, which is well recognised in Hong Kong. Sun Fresh is a grower collaborative marketing company for Australian avocados, which coordinates several avocado growers to export avocado under a consistent brand.
- 2) Hong Kong importers and retailers are open to new varieties. Thus, new varieties can be tested in the Hong Kong market as it is an unregulated market and also a re-export platform. However, given that several importers have increased their exports to Hong Kong, from where the fruit is distributed through mainland China, it may pose a challenge for direct imports into China.
- 3) Collaboratively working with Hong Kong importers and improving transparency of supply chain details in production and harvest, can assist Australian suppliers to differentiate from their competitors.

8. Summary

Hong Kong is a well-developed export destination for Australian mangoes and lychees. Though Australian avocados have not yet had a strong market presence compared with Australian mangoes and lychees, their import into Hong Kong has increased over recent years. Australian mangoes, avocados and lychees are often sold through the premium channels given that they are recognised as premium fruit in Hong Kong.

Australian mangoes and lychees do not face much competition in the Hong Kong market given their counter-seasonal production. On the other hand, Australian avocados have to compete with major supplying countries that have cost advantages. Given the potential competition with other supplying countries, Hong Kong wholesalers and retailers often procure and sell large-sized Australian avocados, rather than small or medium sizes that are prevalent from major supplying countries, such as Chile, Mexico, Peru and the USA. This can help to achieve a higher sales price by distinguishing Australian avocados from others.

Since there is no import regulation in Hong Kong, local wholesalers and retailers can directly import mangoes, avocados and lychees from overseas suppliers. Wholesalers generally import mangoes, avocados and lychees directly and play the role of distributor when they supply local supermarkets (retailers) and food services. Though retailers may bypass wholesalers to import directly to save costs, they often work with wholesalers who act as their import agents or buy from local wholesalers given the challenges in direct sourcing, including their small procurement volumes and minimum order quantity required by overseas exporters. As opposed to direct import of mangoes and lychees, retailers intend to procure avocados from local importers who can provide ripening service. In cases when they source directly from overseas suppliers, they prefer to work with these suppliers who can ripen avocados for their needs.

E-commerce has emerged in Hong Kong, but not yet as rapidly developed as in China due to the mature local direct and retail sales channel (Leung, 2018). However, most major supermarkets like Wellcome and ParknShop have established online grocery shopping platforms. This is also a trend that more consumers are pre-ordering seasonal fruit online such as Taiwanese mangoes and many would use home delivery services provided by online shops (Lai, 2018).

Supply chain governance between Hong Kong importers and Australian exporters are mainly in the form of spot market-based transactional relationship. Though some importers set a supply program with their Australian exporter and intend to build a long-term supply relationship, no supply chain partnership between Hong Kong importers and Australian exporters or direct investment from Hong Kong importers has been witnessed based on the information gathered from the field study and secondary source.

Australia has a shorter shipping time compared with other supplying countries outside of Asia region when exporting fruit to Hong Kong. However, Australia's advantage in transit time to Hong Kong by sea has not obvious in recent years given the optimisation of shipping routine from South America to Hong Kong. While

sea freight is widely used for shipping avocados from major supplying countries to Hong Kong, air freight is mainly used for shipping mangoes and lychees, particularly for long-distant journey. As indicated by interviewees, sea freight is not preferred for shipping mangoes as quality cannot be guaranteed upon arrival.

The case study of Good Views' partnership with one of their mango suppliers in the Philippines indicates collaborative efforts between suppliers and buyers, rather than the traditional transactional trade can reduce fruit waste and create more value to customers, thereby driving consistent demand for the fruit and improving supply chain performance. Australian exporters (suppliers) need to differentiate their competitors by improving supply chain transparency.

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