Japanese Market Overview for Australian Strawberries

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Executive Summary

Japan is the second largest economy in the world. It is Australia’s major trading partner and is Victoria’s largest food and beverage export market.

While the country has encountered slow growth and deflation over the past four years, its’ population of 127 million enjoy relatively high disposable incomes compared to most other developed countries. More than half of the food consumed in Japan is imported from all around the world. In general, consumers prefer products of high quality and consider their domestic fresh produce as a benchmark for other suppliers to meet.

The domestic production of strawberries in Japan is around 205,000 tonnes annually. Japanese production is mainly from November to May (winter and spring) under greenhouse or poly-tunnels. The summer season is unsuitable for strawberry production in most areas of Japan. While most fresh strawberries are sold through the retail sector, approximately one third are consumed in the food service sector. Cake manufacturers in particular are seeking a constant supply of fresh strawberries of a particular specification throughout the year.

This report provides information on the market opportunity in Japan. Two other areas being addressed in cooperation with the Victorian Strawberry Growers Association include
(I) the potential to gain market access (market access is a country to country agreement and is required before mainland Australia can export to Japan) and
(II) further analysis of the economic feasibility of developing a new export industry.

Currently imported fresh strawberries to Japan account for around 5,000 tonnes annually and the major supplier is the USA with most imported strawberries being used in the food service sector. Tasmania is the only Australian state which has been exporting strawberries to Japan for the past three years and provides a model for industry development for other states. They are currently growing Japanese strawberry cultivars that meet the specifications demanded by customers in the food service sector. In 2002 Tasmanian strawberries achieved a price premium in Japan over strawberries from the USA, Korea, China and New Zealand.

Therefore in researching the market potential, the authors believe there is a window of opportunity to supply the market in the June to November period with at least another 5,000 tonnes when supply is limited and prices are higher. Competition in the ‘off season’ when Japanese grown strawberries are not available will come from the USA and New Zealand. Industry development on this scale would add around $100 million to the Victorian economy on an annual basis. Although this level of production would take more than five years to build, a first year export target could be expected to match Tasmanian exports in 2002.

The major barrier to Mainland Australia’s ability to export strawberries to Japan is a quarantine restriction due to the presence of Mediterranean fruit fly. Tasmania has achieved area freedom classification with Japan’s quarantine authorities and can export strawberries. In 2000, Australia forwarded a submission to Japanese authorities seeking market access for fruit grown in three major horticultural cropping areas including Sunraysia,
the MIA and the Riverland. The outcome from this submission has not officially been announced.

In Australia, the first step to achieving market access is by completing a full proposal for endorsement by the Horticultural Market Access Committee (HMAC).
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Introduction

The Agribusiness Group of the Department of Primary Industries, Victoria (DPI) has been aware of and investigating the market opportunities for strawberry exports to Japan since 1998.

This report aims to outline the dimensions of the Japanese strawberry market and define some of the product requirements. The report is based on available reports and market statistics along with commissioned market research and market visits by the authors.

Due to the presence of Mediterranean fruit fly on mainland Australia, market access is restricted for strawberry exports to Japan. Tasmania is the only state that currently meets Japan’s quarantine requirements and is therefore the only state in Australia exporting fresh strawberries to Japan. DPI and the Victorian Strawberry Growers Association (VSGA) are addressing and working towards overcoming the quarantine restriction.

Acknowledgments

The authors wish to thank Jonathon Jenkin, Industry Development Officer, Victorian Strawberry Industry Development Committee for providing data on the Victorian strawberry industry. Staff from Austrade Japan are thanked for the timely provision of market statistics on the strawberry industry in Japan.
Japan – A Market Overview

The Japanese economy is the second largest in the world, representing approximately 15 per cent of the world’s Gross Domestic Product (GDP). It has a relatively stable population now estimated at 126.9 million.

In recent years the Japanese economy has barely grown with real GDP growth rates of less than one per cent from 2001 to 2003 (DFAT 2003). Prices for goods and services are under pressure to decrease due to continued deflation in the economy since 1999.

Japan currently imports more than half its food requirements. Australia is Japan’s third largest source of food products behind the USA and China. In 2001 Australia’s food exports to Japan were worth approximately $4.5 billion (figure 1).

Japan remained the largest market for Victorian food and fibre exports in 2002 (table 1) although exports declined by $81 million (8.2%) in 2002 to $919 million, the first time they have fallen below $1 billion since 1999.

Victorian dairy exports make up 37 per cent of Victorian food and fibre exports to Japan whilst horticulture exports are valued at $90 million. The main horticultural exports are asparagus, oranges and fruit and vegetable juices.
<table>
<thead>
<tr>
<th>Industry</th>
<th>1993 $ million</th>
<th>-</th>
<th>2000 $ million</th>
<th>2001 $ million</th>
<th>2002 $ million</th>
<th>$ change 01-02</th>
<th>% change 01-02</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dairy</td>
<td>156</td>
<td>-</td>
<td>403</td>
<td>401</td>
<td>340</td>
<td>-62</td>
<td>-15.3%</td>
</tr>
<tr>
<td>Cross industry</td>
<td>44</td>
<td>-</td>
<td>122</td>
<td>125</td>
<td>141</td>
<td>16</td>
<td>12.9%</td>
</tr>
<tr>
<td>Meat</td>
<td>224</td>
<td>-</td>
<td>153</td>
<td>166</td>
<td>125</td>
<td>-41</td>
<td>-24.4%</td>
</tr>
<tr>
<td>Grains</td>
<td>59</td>
<td>-</td>
<td>110</td>
<td>86</td>
<td>96</td>
<td>10</td>
<td>11.2%</td>
</tr>
<tr>
<td>Horticulture</td>
<td>44</td>
<td>-</td>
<td>85</td>
<td>87</td>
<td>90</td>
<td>2</td>
<td>2.4%</td>
</tr>
<tr>
<td>Wool</td>
<td>159</td>
<td>-</td>
<td>50</td>
<td>64</td>
<td>66</td>
<td>2</td>
<td>3.0%</td>
</tr>
<tr>
<td>Seafood</td>
<td>52</td>
<td>-</td>
<td>52</td>
<td>47</td>
<td>37</td>
<td>-11</td>
<td>-22.5%</td>
</tr>
<tr>
<td>SRI</td>
<td>4</td>
<td>-</td>
<td>20</td>
<td>19</td>
<td>20</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td>Wine</td>
<td>1</td>
<td>-</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>-3.3%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>743</strong></td>
<td>-</td>
<td><strong>1,000</strong></td>
<td><strong>1,001</strong></td>
<td><strong>919</strong></td>
<td><strong>-82</strong></td>
<td><strong>-8.2%</strong></td>
</tr>
</tbody>
</table>

Table 1: Victorian food and fibre exports to Japan $A million (ABS 2003)

The Japanese market continues to offer niche opportunities for Australian food and beverage products. The distribution systems in Japan are changing as companies try and reduce costs and find new ways of being more competitive. This is providing opportunities for Australian suppliers to develop new strategies for exporting to Japan.

**The Japanese Food Market**

The Japanese food market is one of the largest in the world with the food manufacturing sector comparable to the value of food industries in the USA and EU (RIRDC, 2003). Food manufacturing is the countries third largest sector behind electronics and car manufacturing. Processed food accounts for two-thirds of Japan's final food consumption.

The Japanese also have relatively high incomes and the means therefore to choose food products of high value and quality. Traditional foods such as seafood, rice, noodles, soy products and fresh fruit and vegetables remain prominent, however the Japanese food market is increasingly being influenced by 'Western' style foods.

Products such as pasta, pizza, value-added dairy (eg cheese), fresh and processed red meat and pork products, wine and coffee are in greater demand. A significant trend towards prepared ‘consumer ready’ food products and meals is evident in all major food retail outlets in Japan.

**Food Retailing in Japan**

Supermarkets retail the main volume of food products in Japan. While there are a few prominent national retailers their market share is much less than comparable companies in Australia, the USA or Europe. Foreign companies such as Tesco, Costco, Carrefour and Walmart are entering the Japanese retail sector. Despite this small retailers such as consumer cooperatives and regional supermarket chains still hold 61% of market share in food retailing (Austrade, 2002).
Japanese consumers are keen followers of fresh foods and their seasonal availability. Domestic fresh produce is often promoted from the prefecture (state) it is grown in. The farmer that grew the product and the variety of product is often promoted at the retail level (photo 1). It is usual practice for retailers to price imported fresh produce lower than the same domestic product.

*Photo 1: Farmers are often included in point of sale material.*

Department stores like Meida Ya retail a significant range of fresh, processed and ready-to-eat foods. Exceptional packaging, product display and customer services are key features of such department stores, with prices higher than traditional supermarkets.

Convenience stores have enjoyed increased popularity in recent years, providing a select range of fresh, processed and ready-to-eat products. These convenience stores are much more prevalent and far more accessible, but prices are higher than supermarket outlets.

In all forms of Japanese food retailing, shelf space is very expensive, as is the cost of branding and promotion. This expense in combination with short product life cycles makes entry into the retail food sector difficult.

**The Importance of Food Safety in Japan**

Japanese consumers, as a whole, are increasingly conscious of their health and the safety of the food they consume. Japan has been awash with food safety alerts including BSE contamination of beef, mis-labelling of a range of meat products and chemical residue alerts in fresh produce.

Food manufacturers and retailers demand high food safety credentials from suppliers. Traceability is now a major requirement along the distribution
channel. Quality Assurance programs such as HACCP, ISO and JAS (the Japanese organic certification system) are very important to the function of the food sector.

Suppliers to Japan that have excellent food safety procedures may have a competitive advantage in the Japanese market.

**The Regional Market Segments of Japan**

According to Japanese market specialists, such as Austrade Japan - Japan should be considered as a diversity of regional food markets (figure 2). This diversity of regional markets means that suppliers need to be aware they may have their own requirements and demands.

Outside of the large metropolises of Tokyo and Osaka, which are often the focus for export development, are roughly another 75 million Japanese consumers. These regions are economic entities in their own right with local variations demanded of food products. For example, the Kyushu region is comparable in size to the Australian market.

*Figure 2: Japan’s regional markets*

**A Better Way to Go - Food Service**

Annual sales in the Japanese food service sector is approximately US$250 billion (Laffan, 2001) and this is expected to rise. In Japan, there are significant opportunities focussed on the food service sector, rather than retail.

In response, food service companies are seeking greater scale with consolidation under way. These companies are building up a stable of brands. They are also reducing operating and material costs, including sub-contracting supply of inputs, building closer relations with overseas suppliers and establishing “offshore kitchens” to offer competitive prices.
The Japanese Strawberry Market

Most of the fresh strawberries consumed in Japan are domestically grown. Strawberry production in Japan has remained fairly constant from around 190,000 to 200,000 tons per annum in the 1980s (Oda 1989) to around 205,000 tons per annum in 2002. Production comes from an area of 7,400 hectares (table 2).

The domestic fresh strawberry season starts in December and runs through until May (their winter and spring). With no long-term storage options for fresh strawberries the market is reliant on a continual supply. The volume of imported fresh strawberries is around 5,000 tonnes per annum, representing less than three per cent of domestic production (table 2).

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
<th>2002¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area Harvested (hectares)</td>
<td>7460</td>
<td>7440</td>
<td>7400</td>
</tr>
<tr>
<td>Total Production (tonnes)</td>
<td>205300</td>
<td>208600</td>
<td>205000</td>
</tr>
<tr>
<td>Imports, Fresh (tonnes)</td>
<td>5656</td>
<td>4765</td>
<td>5000</td>
</tr>
<tr>
<td>Total Supply (tonnes)</td>
<td>210956</td>
<td>213365</td>
<td>210000</td>
</tr>
<tr>
<td>Exports, Fresh (tonnes)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Domestic Fresh Market (tonnes)</td>
<td>208356</td>
<td>210765</td>
<td>207500</td>
</tr>
<tr>
<td>For Processing (tonnes)</td>
<td>2600</td>
<td>2600</td>
<td>2500</td>
</tr>
<tr>
<td>Total Utilisation (tonnes)</td>
<td>210956</td>
<td>213365</td>
<td>210000</td>
</tr>
</tbody>
</table>

Table 2: Japanese production and consumption of fresh strawberries 2000 to 2002 (USDA, 2002)

Production of strawberries in Japan occurs mainly under-plastic-culture (photo 2). This production method accounted for 73 per cent of the production area in the 1980s (Oda, 1989). The growing system was developed in the 1960s, and it was hoped that a year round production season would be possible. Using the plastic roof culture and newly released varieties, summer strawberry production was attempted in the highlands of Honshu, Shikoku, and Hokkaido, where it is cooler in summer.

Photo 2: Japanese strawberry production, ready to be enclosed under plastic
Developments throughout the 1990s led to raised bed strawberry production, where plants are grown hydroponically off the ground (photo 3). Strawberry cultivars such as Asukaruby are grown in this system with high yields and good fruit quality, but with limited shelf life. Using this system approximately 5 tonnes of strawberries are grown per 1000m² (50 tonnes per hectare). This system of production is still limited in Japan, as an example only 3.5 hectares uses raised bed production from 108 hectares grown in the Nara prefecture.

![Photo 3: Japanese strawberry production using raised beds](image)

Although different production systems have been developed within the Japanese strawberry industry, year round production is not possible. The summer and autumn period, particularly June through to November, is a time when Japanese produced strawberries are unavailable in the market.

**Japanese Confectionary Industry**

Around one third of strawberries are consumed in Japan through food service sales (figure 3).

![Figure 3: Quantity (tonnes) of fresh strawberries utilised for food service and retail sectors in Japan (Tokyo Central Wholesale Market, 1999)](chart)
Traditionally, most fresh strawberry imports (approximately 70%) are consumed by Japan’s confectionery industry as cake decorations.

Until recently, the Japanese confectionery industry sold strawberry shortcakes only when fresh domestic strawberries were available. However with the supply of imported strawberries, shortcakes are now available year round (USDA, 2002).

Approximately 80 per cent of the strawberries imported from the USA are used by the Japanese confectionery industry, and 100 per cent of strawberries currently imported from Australia (Tasmania) are used in the confectionary industry.

Specifications for strawberries grown for the Japanese confectionary industry are very strict. The average weight of strawberries for this industry is between 20 to 30 grams. The sugar level at harvest is approximately 12° brix with very low acid levels. However, cake manufacturers generally require two classes of strawberries: some for the top of cakes and some for the middle. Prices for each type will differ with premium prices paid for those strawberries destined for the top of the cake (photo 4).

*Photo 4: Japanese strawberry shortcake*

**Consumption and preferences**

Per capita consumption of strawberries in Japan is approximately 1.64kg compared to Australia where per capita consumption is less than 1.25kg. The Japanese consume fresh strawberries over a much shorter season (November – May), due to domestic production limitations whereas Australian consumers have a consistent twelve-month supply.

The Japanese tend to consume a large proportion of strawberries when eating out or as a component of cakes and other fresh bakery products. There is a large variation in the prices paid for fresh strawberries grown in Japan. The variation appears to be based on presentation, taste characteristics of the strawberry cultivar, and production issues including the system used and the region it was grown in. Japanese farmers grow
strawberry cultivars that have been bred in national or prefectural based breeding programs. A unique trait of most Japanese strawberries is their strong “strawberry aroma”. The aroma that comes from some cultivars is similar to smelling a good perfume. The high sugar and low acid levels together with aroma attributes of some Japanese strawberry cultivars provides a very pleasurable eating experience.
Australian and Victorian Strawberry Industry Overview

Australia’s strawberry production has grown from 13,421 tonnes in 1998 to 15,565 tonnes in 2001 (ABS, 2003). In the same period Victorian production has increased by seven per cent to 5,858 tonnes (figure 4).

![Figure 4: Strawberry production (tonnes) from each Australian state from 1998 to 2001 (ABS, 2003)](image)

In 2001, the Australian industry had a gross value of $95.2 million with 1,228 hectares under strawberry cultivation (table 3).

<table>
<thead>
<tr>
<th>State</th>
<th>Production (tonnes)</th>
<th>Area cultivated (hectares)</th>
<th>Gross Value ($A million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSW</td>
<td>188</td>
<td>41</td>
<td>1.2</td>
</tr>
<tr>
<td>Victoria</td>
<td>5868</td>
<td>486</td>
<td>35.3</td>
</tr>
<tr>
<td>Queensland</td>
<td>5275</td>
<td>449</td>
<td>31.7</td>
</tr>
<tr>
<td>South A.</td>
<td>1600</td>
<td>98</td>
<td>13.3</td>
</tr>
<tr>
<td>Western A.</td>
<td>2390</td>
<td>122</td>
<td>12.4</td>
</tr>
<tr>
<td>Tasmania</td>
<td>243</td>
<td>32</td>
<td>1.4</td>
</tr>
<tr>
<td>Australia</td>
<td>15565</td>
<td>1228</td>
<td>95.2</td>
</tr>
</tbody>
</table>

Table 3. State production, area cultivated and gross value of strawberries in 2001 (ABS, 2003)

However, the Victorian industry estimates Victorian production to be much more than the ABS figures present. The Victorian Strawberry Growers Association estimate there were 120 strawberry growers in Victoria in 2001/02 that planted an estimated 12 million runners. This produced 12,000 tonnes of strawberries with a farm-gate value of almost $53 million, whereas ABS data indicates Victoria produced 5,868 tonnes with a gross value of $A 35.3 million.
Victoria is capable of producing strawberries for eight months of the year from October through to May (table 4). This supply period is being encroached from all other strawberry producing states in Australia, and more recently from Queensland at the end of the season and Western Australia at the start of the season (table 4). Market prices tend to move in the opposite direction to supply quantities. Figure five shows the relationship for Sydney market prices in 2000.

<table>
<thead>
<tr>
<th>State</th>
<th>J</th>
<th>F</th>
<th>M</th>
<th>A</th>
<th>M</th>
<th>J</th>
<th>J</th>
<th>A</th>
<th>S</th>
<th>O</th>
<th>N</th>
<th>D</th>
<th>% of Total Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30%</td>
</tr>
<tr>
<td>QLD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30%</td>
</tr>
<tr>
<td>WA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>22%</td>
</tr>
<tr>
<td>SA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12%</td>
</tr>
<tr>
<td>Tas</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3%</td>
</tr>
<tr>
<td>NSW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3%</td>
</tr>
</tbody>
</table>

*Table 4: Australian strawberry supply season by State (Jenkin, 2002)*

*Figure 5: Sydney Strawberry Market Quantity and Prices 2000 (VSIDC, 2001)*
Australian Fresh Strawberry Exports

Australian fresh strawberry exports have increased from 840 tonnes in 1999 to 2,284 tonnes in 2002 (figure 6). The growth in exports during this period has been driven from Western Australia. During this time period Victorian exports have remained fairly constant at around 17 tonnes (figure 7).

In 2002 Victoria contributed less than one per cent of total Australian fresh strawberry exports. In the period 1999 to 2002 Tasmanian strawberry exports increased from zero to over 100 tonnes, to now being Australia’s second major strawberry exporting state.

Figure 6: Fresh strawberry exports from Australia in kilograms (Tradedata, 2003)

Figure 7: Fresh strawberry exports from NSW, Queensland, South Australia, Tasmania and Victoria in kilograms (Tradedata, 2003)
Japanese Strawberry Import Market

Lack of supply throughout the Japanese summer and early autumn months has opened trade opportunities for countries that can supply suitable strawberries during this period.

Fresh strawberry imports were 4,765 tonnes in 2001 (table 5), representing around three per cent of consumption. The major countries exporting to Japan are the USA, South Korea and New Zealand.

<table>
<thead>
<tr>
<th>Country</th>
<th>Fresh Strawberry Imports (tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2000</td>
</tr>
<tr>
<td>USA</td>
<td>4036</td>
</tr>
<tr>
<td>South Korea</td>
<td>1381</td>
</tr>
<tr>
<td>New Zealand</td>
<td>216</td>
</tr>
<tr>
<td>Australia</td>
<td>23</td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5656</strong></td>
</tr>
</tbody>
</table>

*Table 5: Quantity of fresh strawberry imports to Japan 2000 and 2001 (USDA, 2002)*

The USA has promoted the “Summer Strawberry” in some of Tokyo’s major supermarkets. These promotions have included the use of sample tastings. Japanese consumers have commented that USA strawberries had a little more acidity compared to Japanese strawberries, but they had a natural flavour with firm flesh with the overall taste better than expected. Some supermarkets sold more than four hundred 280-gram clamshell containers per day during the promotions (USDA 2002).

**Price Structures**

As of April 1 2000, the Japanese import duty for fresh strawberries dropped to six per cent. The reduction was scheduled under the World Trade Organisation’s Uruguay Round Agreement (USDA, 2002).

The average Japanese wholesale price for fresh strawberries has consistently been around 1,000 to 1,100 yen since 1995, except for 1997 (table 6). The quantities delivered to the wholesale market have ranged from 173,600 ton in 1998 to 202,500 in 2000 and 2001.

<table>
<thead>
<tr>
<th></th>
<th>Production tonnes ('000)</th>
<th>Wholesale Quantity tonnes ('000)</th>
<th>Average Wholesale price (yen/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>201.4</td>
<td>187.8</td>
<td>1,075</td>
</tr>
<tr>
<td>1996</td>
<td>208.1</td>
<td>203</td>
<td>1,053</td>
</tr>
<tr>
<td>1997</td>
<td>200</td>
<td>188.7</td>
<td>490</td>
</tr>
<tr>
<td>1998</td>
<td>181</td>
<td>173.6</td>
<td>1,106</td>
</tr>
<tr>
<td>1999</td>
<td>203.1</td>
<td>190.1</td>
<td>1,092</td>
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<tr>
<td>2000</td>
<td>205.3</td>
<td>202.5</td>
<td>1,084</td>
</tr>
<tr>
<td>2001</td>
<td>208.6</td>
<td>202.5</td>
<td>1,020</td>
</tr>
</tbody>
</table>

*Table 6: Japanese strawberry production, wholesale sales and average prices 1995 to 2001 (Ministry of Agriculture Forestry and Fisheries)*
Price fluctuations occur at the wholesale market in response to supply fluctuations throughout the year (figure 8). In 2001 and 2002 the Japanese wholesale price for fresh strawberries for the period May to October varied between 684 to 2441 yen/kg (approximately $A 9 to $A 33, assuming 75 yen to one Australian dollar). The price increase during the period June to November indicates a lack of supply in the wholesale market.

The key countries exporting strawberries to Japan are South Korea, China, USA, Australia and New Zealand. None of the countries exporting to Japan has year round supply, although the USA has the capability to export for 10 months of the year (table 7).

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Table 7: Monthly Japanese import prices in yen per kilogram (CIF) from key export countries 2002 (Ministry of Finance, Japan 2003)

Only USA and Australia are supplying the May to November period. New Zealand, the closest competitor, is supplying the market in November and December, indicating they supply field grown strawberries, not greenhouse grown Japanese cultivars. Korea and China have a similar supply season to Japan.

Australian (Tasmanian) strawberries received the highest import price in 2002 for fresh strawberries at 1,935 yen/kg (approximately $A27/kg)
followed by South Korea 1,494 yen/kg, USA 1,129 yen/kg, NZ 1,053 yen/kg, and China 587 yen/kg (table 7). Tasmanian farmers are supplying the highly regarded Japanese varieties to the market, and buyers will pay a premium for the right quality (Per. Comm Austrade).

**Placing the Product in the Market**

Commercial pressures are forcing changes in Japan’s food distribution system - including the consolidation of wholesalers, retailers and distributors. Wholesalers provide a wide range of functions to both manufacturers and retailers and these functions will be rationalised and consolidated as compression of the supply chain continues to occur.

Depending on the nature of partnerships in the supply chain, these changes may bring better returns to strawberry suppliers.

Food service is the preferred market sector to target in Japan’s off-season (June to November period) due to the constant demand for fresh strawberries that meet specifications for quality and shelf life. At present these requirements are not adequately being met. Japanese cake manufacturers discard approximately ten per cent of imported strawberries (USDA 2000). Strawberries from the USA are arriving every three days in Japan, which is unacceptable to cake manufacturers as the strawberries are unusable by the third day. The preference would be for fruit to be shipped to Tokyo (or direct to other regional ports), picked up and be utilised two hours later. The manufacturers would also like fruit to have a shelf life of approximately five days.

The retail sector has fewer prospects in the off-season because consumers seek other fresh seasonal fruits and are not as willing to pay high prices. Returns to suppliers may also be lower in this distribution channel due to the multi-level nature of distribution required for retail merchandising (Austrade pers. comm).

Strawberries from the USA are normally packed in California in retail size clamshell containers and shipped in 4.5-kilogram cases. A visit to retail outlets in October 2002 in the south western city of Kitakyushu by the authors found there was very limited supply and USA strawberries were for sale at 680 yen for a 280 gram container (approximately $A32/kg, assuming A$1 = 75 yen).

Cake manufacturers have commented that Japanese strawberries have yellow seeds that look good when used as cake decorations. In comparison, USA strawberries come with black seeds and some Japanese consumers think that this looks dirty.
Airfreight

Airfreight from major Australian cities, such as Melbourne is a common form of moving fresh, perishable horticultural products. There are a number of industries that are reliant on airfreight from Australia, many where Japan is the target destination, such as the asparagus industry.

There are daily air services to Japan, direct from Melbourne or via Sydney and also flights that land throughout regional Japan, such as Fukuoka. These services would allow Australian strawberries to be harvested and placed in the Japanese market the following day. The movement of product, once landed in Japan would be reliant on the distribution system within the region.

Packaging

Japanese strawberries are packaged so there are two layers in a clear plastic case (photo 5). They come in consistent shapes, which makes it easy to use in the food service sector, especially in cake decoration.

Photo 5: Japanese grown strawberries packed for distribution

Due to the highly perishable variety of strawberry grown in Tasmania, and the distances required to travel, packaging is a key aspect of freighting strawberries from Tasmania to Japan (photo 6). According to cake manufacturers in Japan this packaging is excessive and is difficult to handle.
Photo 6: Tasmanian grown strawberries ready for the Japanese market

The USA is starting to penetrate the Japanese strawberry market using relatively simple packaging that is mainly used in the food service sector (photo 7). The USA also supplies strawberries to the Japanese retail sector in 280-gram retail ready clamshells, which are proving to be effective.

Photo 7: USA grown strawberries arrived successfully in Japan

Japanese strawberry growers are starting to use new tray packaging system made from polystyrene to supply the food service sector (photo 8). Only one layer of strawberries fits in the box, then it is covered with a bubble sheet.

Photo 8: New packaging technology being used in Japan
Tasmania is the only area of Australia currently with quarantine approval to export strawberries to Japan. Substantial investments have been made in Tasmania to develop the hydroponic greenhouses and Japanese varieties to meet the strict customer requirements in Japan. Commercial export consignments began in 2000. Tasmanian strawberries received the highest price for imported strawberries to Japan in 2002.

The key obstacle to developing strawberry exports to Japan from mainland Australia is the market access (quarantine) issue.

Opportunities

In 1998 a Japanese importer and distributor of strawberries recommended to the Victorian Government that 2,000 tons could be a feasible production target over five years for development of a Victorian based strawberry export industry to Japan.

More recently, Austrade Japan has identified a potential market opportunity for 5,000 tonnes if Japanese varieties are grown. Industry development on this scale would add around $100 million to the Victorian economy on an annual basis. Although this level of production would take more than five years to build, a first year export target could be expected to match Tasmanian exports in 2002.

The opportunity in the Japanese market is to supply fresh strawberries when locally produced strawberries are unavailable. Competition during the ‘off-season’ will largely come from the USA and New Zealand both of whom already export fresh strawberries to Japan. It would be difficult, if not impossible, for fresh Australian strawberries to compete with Japanese grown strawberries and so the window for Australian fruit to enter the market is June through to November.

According to the Japanese industry, Californian strawberries come in all different sizes, shapes, with dirt, mould, and all types of damage, creating a bad image in the market.

For Australian strawberries to successfully compete in the Japanese market they must continually be able to meet product specifications.

Barriers

Mainland Australian is unable to export strawberries to Japan because of the presence of Mediterranean fruit fly. Tasmania has achieved area freedom classification with Japan, and can therefore, export strawberries to Japan.

In 2000, Australia forwarded a submission to Japanese authorities seeking market access for fruit grown in three major horticultural cropping areas
including Sunraysia, the MIA and the Riverland. The outcome from this submission has not officially been announced.

Even with a positive outcome from this submission, it may not fully assist the development of a protected export focussed strawberry production industry. The key reasons are that the Victorian strawberry industry is located primarily around Metropolitan Melbourne and potential Japanese customers and investors have stated their desire for production to be located close to an International Airport.

**Pest Free Place of Production**

DPI together with the VSGA are investigating approaches to market access that may be more suitable for the development of strawberry exports to Japan. The Food and Agriculture Organisation (FAO) have developed an international standard for phytosanitary measures titled the “Requirements for the establishment of pest free places of production and pest free production sites” (FAO, 1999). This standard describes the requirements for the establishment and the use of pest free places of production and pest free production sites as risk management options for meeting phytosanitary requirements for the importation of plants, plant products and other regulated articles.

This standard uses the concept of ‘pest freedom’ to allow exporting countries to provide assurance to importing countries that plants, plant products and other regulated articles are free from pest or pests and meet the phytosanitary requirements of the importing country when imported from a pest free place of production. In circumstances where a defined portion of a place of production is managed as a separate unit and can be maintained pest free, it may be regarded as a pest free production site. The use of the pest free place of production or pest free production site is dependent on the:

- use of criteria concerning the biology of the pest;
- characteristics of the place of production;
- operational capabilities of the producer; and
- requirements and responsibilities of the National Plant Protection Organisation (NPPO).

Where necessary, a pest free place of production or a pest free production site also includes the establishment and maintenance of an appropriate buffer zone.

Administrative activities required to support a pest free place of production or a pest free production site involve documentation of the system and the maintenance of adequate records concerning the measures taken. Review and audit procedures undertaken by the NPPO are essential to support assurance of pest freedom and for system appraisal. Bilateral agreements or arrangements may also be needed.

In Australia, the first step to achieving market access is by completing a full proposal for endorsement by the Horticultural Market Access Committee (HMAC) chaired by Horticulture Australia Limited (HAL).
Challenges

The key challenges for the Australian strawberry industry to benefit from the market opportunities in the Japanese strawberry industry are market access and industry development.

Market access is being pursued through the Horticultural Industry Market Access Committee (HMAC) and Biosecurity Australia. Endorsement from HMAC is the first step of the process and a revised proposal developed by the VSGA and DPI will be decided in 2003.

HMAC endorsement is required before negotiations can occur between our Federal Government and Japanese authorities. Negotiations are often prolonged and depend on the nature of technical issues to be addressed.

Victoria has a good basis on which to build a new greenhouse strawberry production industry:
- The technical and management skills base in the strawberry industry appear to be superior to other states (based on production/area)
- The Victorian strawberry breeding program has the capacity to generate suitable material for the Japanese market (based on feedback from interactions with Japanese importers)
- The Victorian strawberry runner scheme has the capacity to deliver high health planting material and plug production systems for strawberry runners are now available.
- The overall investment in an expanding horticulture and vegetable production greenhouse industry means there is current expertise to call on for industry development.

References