



AUSTRALIAN AGRIBUSINESS GROUP
**MARKET OVERVIEW –
 THE AUSTRALIAN MANGO INDUSTRY**

Independent Assessment – December 2006

Industry Snapshot

- Mangoes are, by volume, the second most popular tropical fruit in the world; bananas are the most popular.
- The Kensington Pride variety accounts for 90% of the mango trees grown commercially in Australia; new varieties, such as the Calypso, are now starting to reach the market in low volumes.
- Australia's major growing areas are Queensland and the Northern Territory, accounting for 70% and 20% of production respectively.
- The Australian mango industry is relatively insignificant on a global scale; however domestic mango production has increased over the last decade to 37,000 tonnes during 2003/04 and is forecast to continue rising.
- Global production of mangoes has increased over the last ten years by 28% from 22.5 million tonnes in 1995 to 28.2 million tonnes in 2005.
- The Australian mango industry sees developing both the domestic and international markets as being vital to improving profitability and allowing further growth and is actively implementing a strategic plan to reach these goals.

1 Introduction

The mango originated in North Eastern India and Burma, where it was one of the first fruits to be cultivated by man. Today, mangoes (*Mangifera indica*) are the second largest tropical fruit crop in the world, second only to bananas by total volume grown. The fruit also has cultural and religious significance in several countries, including India where designs of the fruit are found in Buddhist and Hindu temples ¹.

Mangoes are a delicious fruit that can be used in a variety of ways, which is exemplified by the increase in global demand for mangoes in recent years. The majority of mangoes are consumed fresh or used for dishes such as pickles, chutney's and salads. Mangoes can also be processed into dehydrated fruit, canned fruit, juices, jams, jellies and pulps; which can be incorporated into yoghurts and iced confectionery.

There are many varieties of mangoes grown throughout the world. In India alone there are approximately 1,000 varieties cultivated. Currently around 90% of the trees grown commercially in Australia are Kensington Pride with the other established varieties including Irwin, Nam Dok Mai, R2E2, Glenn, Kent, Tommy Atkins and Palmer. A new variety of mango, Calypso, is also starting to be produced and is reaching the market, albeit in small volumes at this stage. In Australia a grafted mango tree will take approximately three years to bear fruit and will achieve peak production at six to eight years of age. Seedling trees take a year longer to come into production ².

On the world scale, the Australian mango industry is relatively insignificant. However, production has increased over the past decade and it is forecast that domestic production will double within 10 years ³, making it one of the major domestic horticultural crops. Due to the growth of the industry and need for structure, the Australian Mango Industry Association introduced an industry levy in July 2003. Applied to all fresh mango sales, the levy is used to develop promotional campaigns, for research and development, setting up industry infrastructure and developing further export markets.

2 Regions of Mango Growing in Australia

Mangoes grow best in climates which have low rainfall and low relative humidity at flowering, fruit setting and harvesting and that are warm to hot during fruiting. However, mangoes will tolerate a wide range of climates from warm temperate to tropical ⁴.

With these climate requirements, mangoes are grown predominately in northern Australia. Queensland is the major producing state, accounting for 70%, of domestic production, by volume. The Northern Territory is also a dominant mango producer accounting for 20% of production. The remaining production areas are in Western Australia and northern New South Wales (Figure 1) ³.

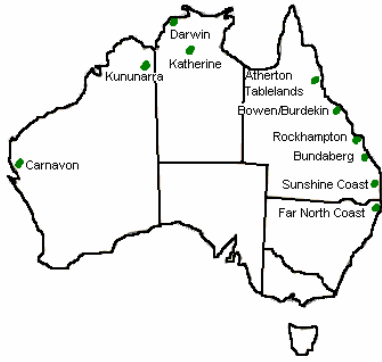


Figure 1 - Map of mango distribution in Australia³

The growing season in Australia stretches from mid spring to autumn, with peak production occurring during December and January. The first fruit to reach the markets in late September and October is from the northern growing areas such as Darwin, Kununurra and Katherine, whilst the last fruit on the market is sourced from around Carnarvon in Western Australia.

The total area of mango plantations in Australia during 2003 was 14,000 ha, with 2.5 million trees planted. No updated figures have been released since; however it is believed that there has been a significant increase in area since then due to increased plantings across Australia, many by Managed Investment Schemes.

3 International and Domestic Trade

During 2004 Australia produced approximately 37,000 tonnes of mangoes representing 0.1% of world production. The major world producer is India, accounting for 38% of world production. Other major world producers include China (13%), Thailand (6%) and Mexico (6%) (Figure 2)⁵.

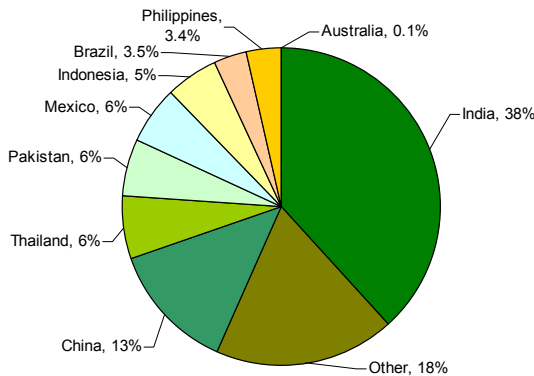


Figure 2 - The major mango producing countries, 2005⁵

Worldwide production increased 28% between 1994 and 2004, with 2004 production at 27.2 million tonnes (Figure 3)⁵. This has largely been because of expanding mango markets in Europe and North America.

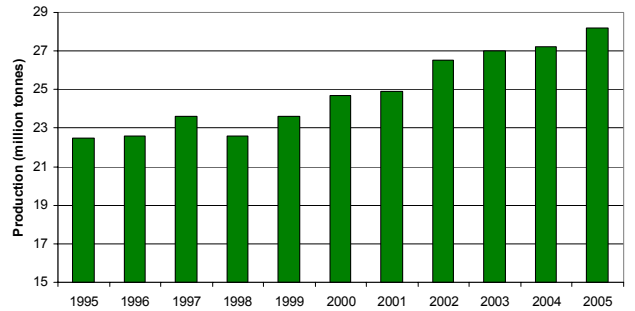


Figure 3 - World production of mangoes, 1995 – 2005⁵

The world trade of mangoes is limited with the vast majority of mangoes consumed domestically. The total fruit exported in 2004 represented only 4.3% of world production. The largest exporter of mangoes is Mexico, which accounted for 21% of world exports during 2004. The three other major exporters include India (14%), Thailand (10%) and Brazil (10%) (Figure 4)⁵.

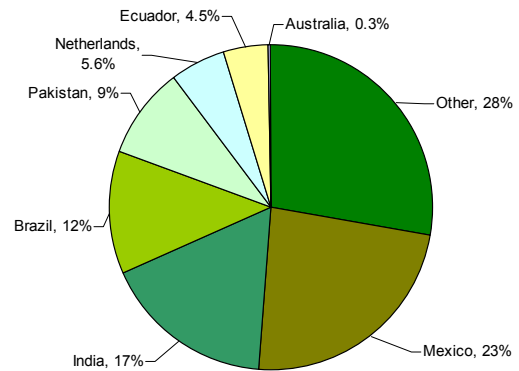


Figure 4 - Major mango exporting countries, 2005⁵

The major importer of mangoes is the USA, accounting for 34% of the total mangoes imported during 2004. The Netherlands is the next major importer with 9% of imports during 2004⁵, however as one of Europe's major ports, approximately two-thirds of these mangoes were re-exported to neighbouring countries⁶. Other major importers are Saudi Arabia (7%), United Arab Emirates (7%), Malaysia (5%), and several EU countries such as the UK, Germany and France⁵.

Australia relies predominately on domestic production to meet domestic demand. During 2004 only 2,430 tonnes were exported and 3,850 tonnes were imported⁵, making Australia a net importer of mangoes in 2004.

Australian mango production levels have remained relatively stable since 1999/00, with production between 37,000 tonnes and 41,000 tonnes⁷. Over the past decade domestic production has increased, but annual production levels have been variable (Figure 5). This is due to the predominance of Kensington Pride and its tendency to bear fruit biennially⁸. It is forecast that production will continue to increase from current levels in the future³.

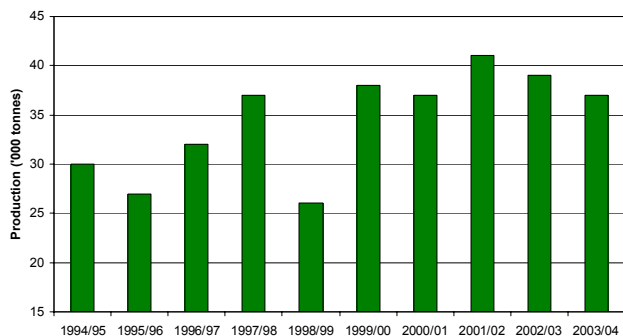


Figure 5 - Australian production of mangoes 1994/95 – 2003/04⁷

With Australian production looking to outstrip domestic demand in the near future, gaining and maintaining market access to export markets is crucial to the future viability of the mango industry. Current export markets include Hong Kong, United Arab Emirates, Singapore, New Zealand and the UK/EU. However, to date Australian exports have been erratic and contracting⁹.

The Australian mango industry has recently released a mango export development plan. This aims to improve the industry's ability to increase export volumes to selected markets. The report focuses on market development and supply chain research for existing export markets, as well as obtaining market access to China and Korea, where tough phytosanitary requirements remain prohibitive. Potentially important markets such as the USA and Taiwan are also included in the development plan. Biosecurity Australia is currently negotiating with both countries about market access for Australian mangoes⁹.

The cost and availability of air freight also creates major restrictions on Australian mango exports. The development of controlled atmosphere technologies for sea freight may allow sea freight to soon become a viable adjunct to airfreight.

4 Price and Yield

Major influences on the domestic price for Australian Mangoes include seasonal conditions, quality of fruit, variety, market location, and time of year.

The price of mangoes varies markedly between the domestic markets, with the main influencing factors the distance from production areas and level of market competition.

The time of year within the season also strongly influences prices. Prices at the beginning and end of seasons are high. During the 2005/2006 season prices fluctuated from approximately \$55/tray in September to around \$15/tray during the peak production months of December and January. Prices then rose again to around \$30/tray in March, towards the end of the season¹⁰.

With such extreme fluctuations in price, it is important that the industry develops successful promotional campaigns and finds alternative markets to increase demand and help stabilise prices during peak production.

The average yield of mangoes produced in Australia during 2005 was 4.65 tonnes/ha. In contrast, India and China achieved average yields of 6.75 tonnes/ha and 8.47 tonnes/ha respectively during 2005⁵.

5 Future Outlook

The Australian Mango Industry association has recognised three major objectives that are critical to the success of the industry⁸. These include:

1. To increase consumption of mangoes on the domestic market.
2. Market diversification by finding and developing new markets, including export and processing.
3. To improve plantation profitability, by improving marketable yield and reducing plantation costs.

To increase domestic consumption the industry is aiming to increase household penetration through increasing the frequency of purchases. One of the strategies they are employing in an attempt to achieve this is selling by weight, rather than per mango, to increase the per purchase quantity. However, the implementation of this has been limited to date.

This strategy also involves ensuring that consumer satisfaction is more consistently delivered and addresses marketing issues such as product differentiation, market segmentation and the establishment of strong brands⁸.

The growth of export markets is also critical to the future success of the Australian mango industry. Worldwide demand for mangoes is presently rising as consumers in target markets become progressively more aware of the tropical fruit⁶. This increase demand will likely be met with increased production, leading to heavier competition for mango exporters.

To ensure export growth Australian producers have to ensure that greater attention is paid to the appearance, quality and price of their mangoes. Promotional campaigns to educate the global market about Australia's dominant variety, Kensington Pride are also essential, as it is not a well recognised variety in the global market. Maintaining Australia's "clean image" and good reputation is also critical in securing and maintaining strong export markets.

Despite the reputation that Australia's mango industry is highly innovative and researched based, mango productivity per hectare is low and variable. Australian yields are 26% to 46% lower than the top three producing countries (India, China and Thailand)⁵. With the high variance in fruit quality that is produced, market diversification needs to occur domestically to create outlets for sub-market quality fruit. This would allow larger quantities of fruit to be sold, increasing profitability⁸. New technologies that result in more reliable and efficient production are also necessary to help combat this problem.



The industry is also seeking to increase profitability through improving plantation management, category management during peak season and cold chain management⁸. The Australian National Mango Breeding Project is also developing improved mango cultivars for the domestic and export markets with superior fruit quality and production characteristics that are suited to the various mango growing regions in Australia¹¹.

6 Bibliography

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