Australian Government

Rural Industries Research and Development Corporation

Towards an Australian Date Industry

— An overview of the Australian domestic and international date industries —

RIRDC Publication No. 10/174


Australian Government

Rural Industries Research and Development Corporation

Towards an Australian Date Industry

An overview of the Australian domestic and international date industries

by Dave Reilly, Anita Reilly and Ian Lewis

September 2010

RIRDC Publication No. 10/174
RIRDC Project No. PRJ-005489

ISBN 978-1-74254-141-9
ISSN 1440-6845

Towards an Australian Date Industry - An overview of the Australian domestic and international date industries
Publication No. 10/174
Project No. PRJ-005489

Researcher Contact Details

Dave & Anita Reilly
Gurra Downs Date Company Pty Ltd
PO Box 1029
Loxton SA 5333
Phone: 08 85838314
Fax: 08 85838105
Email: reilly@gurradowns.com.au
Web: www.gurradowns.com.au

Ian Lewis
Lewis Agri-Food Chain Solutions
Phone: 0401122040
Email: ianlewis@internode.on.net

In submitting this report, the researcher has agreed to RIRDC publishing this material in its edited form.

RIRDC Contact Details

Rural Industries Research and Development Corporation
Level 2, 15 National Circuit
BARTON ACT 2600

PO Box 4776
KINGSTON ACT 2604

Phone: 02 6271 4100
Fax: 02 6271 4199
Email: rirdc@rirdc.gov.au.
Web: http://www.rirdc.gov.au

Electronically published by RIRDC in September 2010
Print-on-demand by Union Offset Printing, Canberra at www.rirdc.gov.au
or phone 1300 634 313

Foreword

Given the size and scale of international date trade, it is perhaps surprising that Australia, with its ample supply of hot, dry inland regions, is yet to establish a thriving date industry.

Formal trials of date palms commencing in the 1890s and the ad-hoc distribution of date seeds by cameleers that commenced earlier, have led to well-established populations of date palms which can still be seen alongside isolated springs and waterholes on outback transportation routes across Australia.

Despite the long heritage of successful date palm establishment in Australia, our annual consumption of 5,000 to 7,000 tonnes of dates is satisfied almost exclusively by imports. At the same time, the quality of trial shipments of Australian dates has captured the imagination of consumers in the most exclusive markets of the Middle East. These are strong signals for the potential of a lucrative Australian date industry.

Australia's mainstream food production systems are being challenged by changes to our climate and water availability. The date palm, which can thrive in harsh environments, may offer an economic option for farmers in industries being affected by changing climate and water availability. Most importantly, date palms produce a high volume of highly nutritious and valuable whole-food which can contribute to Australia's food security.

The worldwide date industry has existed for centuries and is quite intricate. While this report is not an exhaustive coverage of all of the issues involved, it provides a very useful overview of the industry and explores some of the opportunities and challenges facing the potential development of a date industry in Australia.

This project has been compiled by David and Anita Reilly of Gurra Downs Date Company Pty Ltd (Riverland, South Australia), who are date industry participants/specialists and Primary Industries Research South Australia (PIRSA) consultant Ian Lewis who co-authored this report and contributed much of the industry statistics.

This report is an addition to RIRDC's diverse range of over 2000 research publications and it forms part of our New Plant Products R&D program, which aims to facilitate the development of new industries based on plants or plant products that have commercial potential for Australia.

Most of RIRDC's publications are available for viewing, free downloading or purchasing online at www.rirdc.gov.au. Purchases can also be made by phoning 1300 634 313.

Craig Burns
Managing Director
Rural Industries Research and Development Corporation

Acknowledgements

The authors acknowledge the following:

The Department of Primary Industries and Resources SA, Agriculture, Food and Wine, for dedicating an officer to undertake global market intelligence research and competitor analysis in relation to dates for input to this report.

The Riverland Futures Taskforce, an initiative of the Government of South Australia - in particular Peter Ackland, Director of the Riverland Futures Taskforce who successfully negotiated with contributing parties to make this report possible.

The Department of Agriculture, Forestry and Fisheries (DAFF) for providing assistance through the In-Market Scholarship Program 2006 which enabled the Reilly's to study international date markets and provide valuable input for this report.

The Department of Trade and Economics, South Australian government, who through their Market Access Program (MAP) allowed the Reilly's to present Australian grown date fruit to an international expo in Abu Dhabi and Dubai to evaluate potential export markets.

The Rural Industries Research and Development Corporation for their on-going assistance and support of Gurra Downs and the Australian date industry.

Contents

Executive Summary

What the report is about

This report provides an overview of the Australian and international date industries. It explores market size and opportunity and identifies the challenges that will need to be overcome on the way to developing a viable Australian date industry.

Who the report is targeted at

This report is targeted at potential participants in the development of a date industry in Australia. This includes policy-makers, research funding agencies, research organisations, scientists, industry organisations and innovative growers looking for a resilient crop for diversification.

Background

Dates are one of the world's oldest-cultivated fruits. They are widespread throughout North Africa and the Middle East, and come in a variety of fruit styles that appeal to a wide range of tastes and that are highly prized as a whole-food and food ingredient. They are a well-packaged combination of nutrition, fibre and energy.

Global date production is almost exclusively a northern hemisphere industry centred on North Africa and the Arab States. Egypt, Saudi Arabia, Iran, UAE, Pakistan and Algeria are the largest producers. Much of this production is for local consumption, however Iran, Pakistan, Tunisia, Saudi Arabia, UAE, Iraq and Algeria are the major export producing countries by volume. The USA and Israel are smaller producers but achieve the highest export unit value.

There is a range of date fruit styles/ types – khalaal or fresh dates (50% moisture, firm and crunchy), rutab or ripe dates (30-35% moisture, high sugar) and tamar or cured dates (10-15% moisture, very high sugar, very long shelf life – for further varietal details, see the next section). However, not all of these types are readily available in Australia.

Each year, Australia imports 5,000 to 7,000 tonnes of dates. Given date palms have been successfully growing across a range of sites in Australia for over 100 years, there would appear to be significant potential for establishing an economically significant date industry in Australia. Among the challenges inhibiting industry growth is the lack of modern information relating to industry statistics, such as trade volumes, values, market segments, buying/selling patterns and import practices.

Aims/objectives

This report aims to fill in some of these knowledge gaps relating to industry statistics and present background information that may assist in attracting further participation in, and expansion of, the Australian date industry.

Methods used

David and Anita Reilly of Gurra Downs Date Company Pty Ltd (Riverland, South Australia), who are date industry participants/specialists, played a major role in researching and writing the report. Much of the information contained herein is shared from their international in-market scholarship and study tours as well as their experiences in establishing a date palm nursery, plantations, marketing strategies and R&D programs.

Primary Industries Research South Australia (PIRSA) consultant Ian Lewis co-authored this report and contributed much of the industry statistics such as researching the major date producing countries, major importer/exporter volumes, values and market trends contained herein.

Results/key findings

The date palm has been growing successfully in Australia for over 120 years.

There is a significant domestic market for dates in Australia which is based around imported fruit as the Australian date industry is still in its infancy in terms of production. Australia imports 5,000 to 7,000 tonnes of dates per annum, with around three quarters of these imports coming from Iran.

A critical issue is the import price (CIF) per kg. Iranian dates are low value ($1.12 per kg in 2007/08), whilst dates from the USA, Mexico, Israel, Lebanon and South Africa are high value ($4 to $8 per kg).

Strict Australian quarantine fruit entry regulations have a strong bearing on the style of date fruit which enters Australia. Countries listed by AQIS as having Khapra Beetle are not permitted to import khalaal or fresh dates into Australia. However, the United States, Mexico and South Africa do not have Khapra Beetle.

Trial shipments and tastings at international trade displays have shown that Australian dates of a high quality should be able to command significantly high prices, especially in Middle-Eastern markets.

India is currently the world's largest single country importer of dates but the value per unit is low. However, there is likely to be some high end demand for quality fruit.

Implications for relevant stakeholders

Some of the most important implications of the report relate to domestic market opportunities for an Australian date palm industry:

- increasing consumer demand augurs well for Australian date producers, however, to be price competitive with the imported product, the Australian grower will need to specialise in high value table dates
- there is a shortage of quality table dates for the Australian consumer
- the Australian market is likely to be enhanced by further diversification of varieties and fruit types
- there are also promising opportunities for organic dates that will sell at premium prices
- date producers also have the opportunity to sell offshoots to new growers seeking to increase their palm stocks
- there are also *export opportunities to take advantage of Australia's counter-seasonal supply advantage* as 98% of world production of dates occurs in the northern hemisphere.

Recommendations

Further study of export opportunities will need to be undertaken as domestic plantings increase in order to provide confidence for further investment and industry expansion. Currently, the Australian date industry only comprises about 50 hectares of plantings involving about 3-4 industry participants.

To advance the Australian Date Industry it will be necessary to maintain regular and constant supply of quality product to the retail market. To achieve this there is a ***need to build critical mass in the industry and widen the geographic production base to minimise production risk due to climate factors***.

Launching the date industry in Australia will be a major challenge and many obstacles will need to be overcome. ***Government, policy makers and industry need to foster strong leadership, vision and perseverance in the pioneering industry participants*** to advance the industry beyond the fledgling stages toward a sophisticated and commercial industry. A whole-of-chain approach to industry development needs to be adopted.

Some industry challenges will need to be overcome. In this regard, ***areas that are a priority for research and industry development include:***

- variety selection for climatic/economic suitability
- training and other measures to ensure the availability of suitably skilled labour force
- the development of modern plantation management techniques to ensure labour requirements can be kept to a minimum to assist competitiveness against international producers
- the establishment of hygienic and technologically advanced fruit processing, packing and storage systems and facilities
- the encouragement of industry investment and participation from growers, merchants, researchers and government agencies
- further development of science and support of production systems – and sufficient R&D funding to achieve it (a strategic approach is also required to ensure the Australian production system can overcome any perceived threats and adopt world-leading technologies)
- understanding and development of markets
    - there is a need to create a demand for Australian grown dates in the local market
    - gain product recognition/demand in export markets
    - develop a marketing structure
    - achieve a high level of product sophistication
    - establish national fruit grading and quality standards.

1. The date palm

Dates are one of the world's oldest cultivated fruits, thought to have been domesticated in Mesopotamia (now Iraq) more than 5000 years ago. The date palm (*Phoenix dactylifera*) has long been an integral part of desert culture. This versatile tree provides food, building material, shade, fuel and an income source. In the desert environment people's very existence depended upon the date palm – thus earning the reputation as the "Tree of Life". To this day many cultures still celebrate the heritage of this tree.

In modern times the date palm is cultivated in over 40 countries with approximately 800,000 hectares under production, annually producing some 7 million metric tonne of fruit. Date palms are widespread in North Africa, the near and Middle East and southern Asia. During the last century date production has been introduced into some new world locations including the USA, South Africa and Australia.

In general, the geographic distribution of commercial date production is limited to areas which can be described as semi-arid or arid and where there is an abundant water supply. The best date growing districts are characterised by having long hot dry summers with minimal summer rainfall.

The date palm is something more than a fruit tree – it is considered a "Blessed Tree" having pre-eminent religious significance. It is frequently cited in the Quran and was consecrated by the Prophet Mohammed. During the Muslim holy month of Ramadan dates are eaten to break the daily fasting. This is but one of several annual events celebrated by various religions and cultures which leads to a high period of date sales and consumption on world markets.

Dave Reilly inspecting fruit yield at harvest time on selected varieties, UAE

Mature modern date plantation, UAE. Planting space 8.5m

2. Understanding date palm fruit

Introduction

The first thing to understand about date fruit is that there are thousands of varieties. In fact every date seed that germinates represents a new variety, but it is worth pointing out that not every seedling grows to produce good quality or even edible fruit. It is down to perhaps only a few dozen named varieties going beyond good neighbourhood selections, that stimulate demand and are traded on international markets in the classification of luxury or ‘table dates’.

The majority of world production of dates, particularly within developing parts of the old world traditional growing areas tend to be of mostly the seedling or local neighbourhood selections. A very high percentage of the annual harvest is consumed within the country of origin but some is exported. Lower value dates can be classified as “cooking or manufacturing dates”. Whilst these dates are lower in fruit quality and dollar value it is worth noting that this classification represents in volume approximately 85% of Australia’s importation of dates. Within this sector, dates are usually sold pitted and used in cooking, condiments and confectionery.

Similarly to the judging of fine wines, there is usually only a subtle difference separating the elite quality product from other nominations. When grading dates for quality standards, fruit characteristics can be assessed on some of the following criteria: flavour, size, colour, presentation, tannins, fibre content, sugar content, type of sugar, moisture content, digestibility, skin thinness, skin separation, perfume, ratio of flesh to seed etc.

It is also important to identify that due to advances in micro-propagation of the date palm during the past two decades, tissue cultured elite commercial varieties have been introduced to many date growing districts, and for the first time, industry participants have access to plant material that had previously been unobtainable. It is now anticipated that overall quality of world production will gradually increase in coming decades.

Date palms do naturally produce offshoots/suckers which are genetically identical to the tree they are cut from, however multiplication through this method alone is limiting by time and number.

Offshoots ready for removal

Fruit styles/types

To understand the different fruit styles and market segments one first needs some knowledge of the life cycle of the fruit from pollination of the flower through to the end product and the stages of fruit maturation in-between. A sound understanding of the various stages of fruit maturity/ripening cannot be overstated for any potential industry participant, as decisions relating to the assessment of market opportunities and even variety selection, depend on this knowledge base.

The business model, plantation management and post harvest processing and distribution of product can vary wildly depending on the style and variety of dates being produced. This may vary from producing perishable 'khalaal' dates which need to be refrigerated and handled like fresh seafood, through to 'tamar' dates which are famous for their durability and long shelf life. The illustration below best identifies date classifications/styles.

Date palm in flower

***Kimri** dates – green and still developing, inedible*

Khalaal *or fresh dates – approximately 50% moisture content, firm and crunchy. Only a select few varieties are good to eat at this stage*

Rutab *or ripe dates – approximately 30-35% moisture content, high sugar content*

Tamar *or cured dates – approximately 10-15% moisture content, very high sugar content, very long product shelf-life*

- **Khalaal** or fresh dates

This is the stage at which fruit attains maximum size and weight. Fruit is crisp and crunchy with around 50% moisture content. Khalaal fruit is very attractive and depending on variety may be bright yellow, orange, striking red or even a dull purple.

Not all dates are edible at this stage due to objectionable tannins and astringency however a few varieties are sweet enough and therefore grown specifically for this khalaal/fresh date market. This fruit is very popular when in season and eaten in large quantities.

Although the khalaal fruit is sweet it has not reached its maximum sugar or ideal moisture content to become self-preserving. It is a perishable product requiring refrigeration, specialised handling and packaging, and needs effective marketing and distribution to ensure fruit reaches the consumer in the shortest time possible. Under appropriate chilling fruit has a shelf-life of approximately 1-3 weeks but is best in the first week.

Khalaal dates – also called fresh dates, are generally unknown by the Australian consumer. This is because strict quarantine rules inhibit importation and there is very little Australian grown product available. The most famous of the khalaal date varieties is ‘Barhee’ which produces a bright yellow fruit about the size and shape of a slightly oval ping pong ball. The whole bunch of yellow dates are cut down at harvest time and may be sold as individual dates or sold on the strand with perhaps 10-20 dates per strand.

The major set-back with khalaal production is the short harvest period and production peak which may saturate local markets. Transportation at a defined temperature can also make product difficult and expensive to distribute.

A bunch of dates beginning to ripen from khalaal to rutab

- **Rutab** or ripe dates

When left on the tree, khalaal dates will further ripen to the stage known as rutab (ripe). They change colour, soften, reduce in size, weight and moisture content (30-35%) but increase in sugar content. Although there is a splendid colour range between varieties at the khalaal stage, the majority of rutab dates ripen to be similar in colour – brown, amber or mahogany, although some varieties maybe a dull red or even black.

Rutab dates are the largest category by volume, traded in the international market place and the one which is most likely to be recognised by the Australian consumer.

Fruit texture may be firm but succulent or soft, moist and delicate. Fruit texture will often determine the best design with packaging and presentation to the market. This may vary from loose firmer dates on a platter to blocks of cryovac-treated soft dates which when vacuum sealed produce and steep in their natural molasses-like date syrup.

Rutab or ripe dates can have a long shelf-life particularly if processed and stored with long preservation in mind, but are still best eaten when freshly harvested. Refrigeration helps extend the shelf-life with rutab dates generally stored and eaten at between 15-20 degrees Celsius.

- **Tamar** or cured dates

Tamar dates are those dates allowed to further ripen or dry. Moisture content reduces to only 10-15% and sugar levels are very high. This product has a very long storage life. Tamar dates are also referred to as ‘bread dates’ (bread of the desert) as they have long been the main nutritional food source for desert dwellers.

Prior to World War One, tamar dates due to their non-spoilage properties, were traded in larger volumes than other fruit styles. In the modern era of refrigeration and fast transportation the softer rutab style dates have become more popular.

There still remains demand for tamar dates and they add interest to the product range. Selected varieties are better suited for tamar production – the main production requirement being a suitable climatic location typified by a long, hot, dry summer.

Nutritional Value of Dates

Dates have many excellent attributes for one's health and well-being. They are a particularly sweet and satisfying food thanks to their natural sugar and fibre content. The fibre moderates the speed at which energy from the sugars is released, so that dates make a good energizing food for snacks and for eating both before and after exercise. The fibre content also gives dates laxative properties, while the natural sugars have a soothing influence by helping to raise levels of the calming serotonin in the brain.

Dates contain beta-carotene, vitamins B6 and B3 (niacin), which helps maintain healthy skin and the nervous and digestive systems. The niacin makes dates good for those suffering from depression. The iron in dates means they are useful for anyone suffering fatigue or anaemia. Dates also contain potassium which helps regulate blood pressure, and magnesium – vital for bones, muscles and the heart. They are the only fruit which contain phosphorus. Dates are extremely nutritious. They contain more natural sugar than any other fruit and deliver a substantial amount of dietary fibre and potassium, as well as providing many vitamins and mineral salts.

Table1: Nutritional information

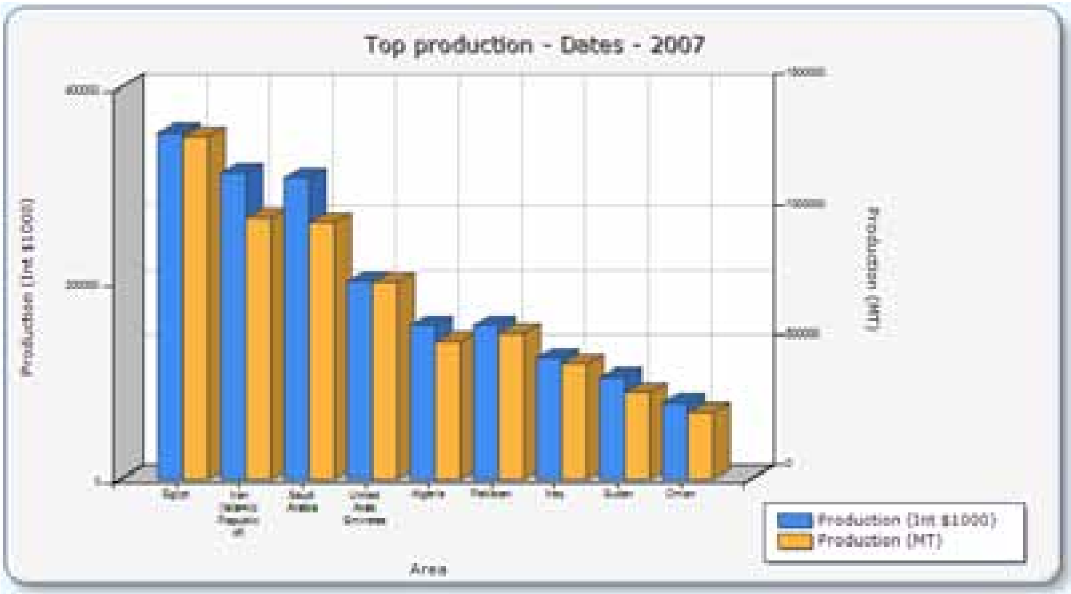
Average Nutrition Value per 100g
ENERGY CALORIES…........349 GLUCOSE……………………..48.5g FRUCTOSE…………………...35.5g CARBOHYDRATES………….87.4g PROTEIN……………………….2.37g FAT……………………………….0.43g POTASSIUM……………….667 mg CALCIUM……………………..52 mg MAGNESIUM……………....50 mg PHOSPHORUS………………60 mg SODIUM……………………….12 mg IRON…………………………..1.2 mg VITAMINS…….A, B1, B2, B3 and C

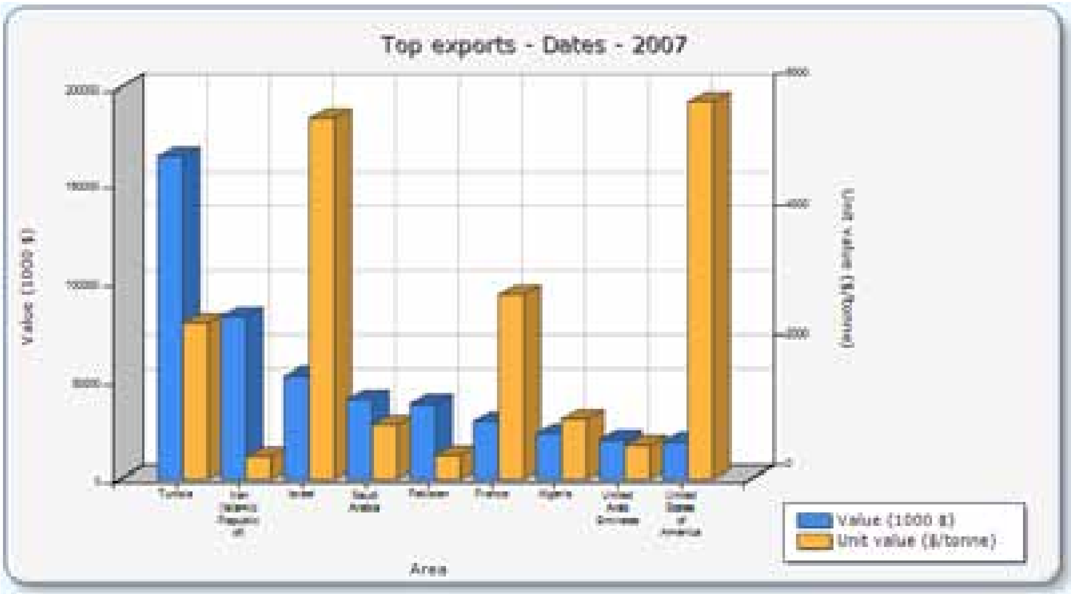
Nutritional values vary depending on the variety of date therefore this table is a guide of averages only.

Source: www.gurradowns.com.au

3. International date palm fruit industry

Global date production is almost exclusively a northern hemisphere industry centred on North Africa and the Arab States. Egypt, Saudi Arabia, Iran, UAE, Pakistan and Algeria are the largest producers. Much of this production is for local consumption, however Iran, Pakistan, Tunisia, Saudi Arabia, UAE, Iraq and Algeria are the major export producing countries by volume. The USA and Israel are smaller producers but achieve the highest export unit value.





Source: FAOSTAT

Table 2: Major Date Producers and Exporters, 2007

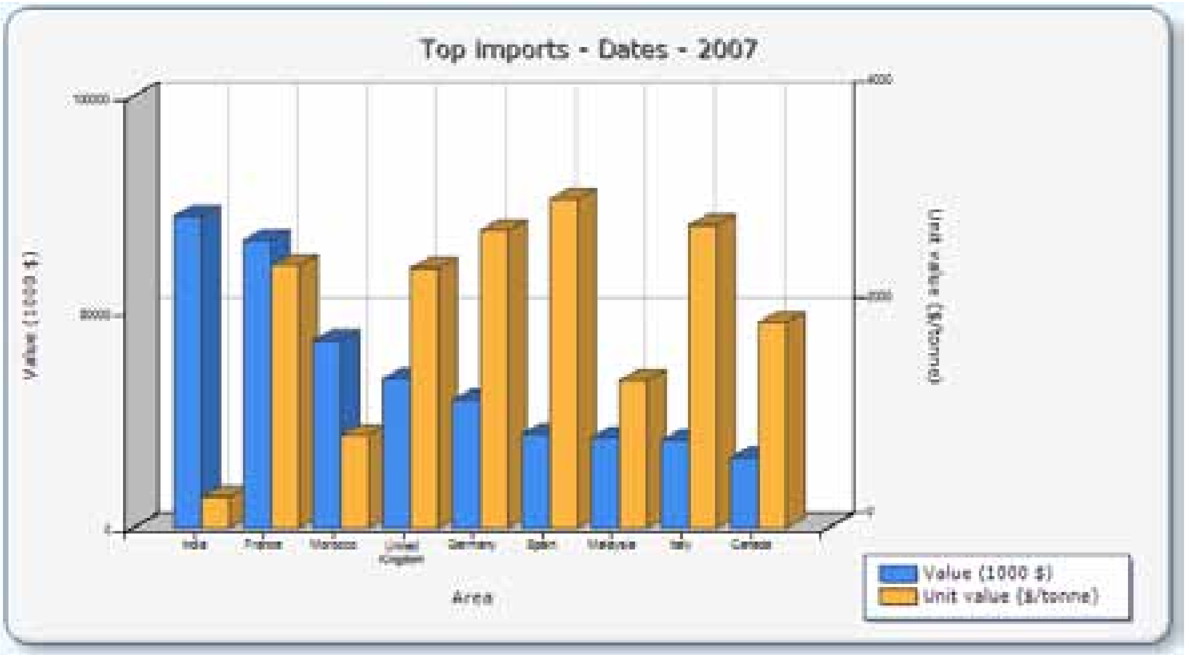
Country	**Production (MT)**	**Export (MT)**	**Export as % Production**	**Export Unit Value (US$/tonne)**
Egypt	1,313,696	4,704	0.35%	641
Iran	1,000,000	242,092	24.2%	341
Saudi Arabia	982,546	48,762	4.96%	831
UAE	755,000	38,691	5.12%	517
Pakistan	557,524	104,090	18.67%	368
Algeria	526,921	25,039	4.75%	924
Iraq	440,000	37,063	8.42%	257
Sudan	332,000	NA	NA	NA
Oman	255,871	9,368	3.66%	607
Libya	175,000	NA	NA	NA
China	130,000	NA	NA	NA
Tunisia	124,000	68,856	55.5%	2,393
Morocco	74,300	NA	NA	NA
Yemen	53,596	NA	NA	NA
Mauritania	22,000	NA	NA	NA
Qatar	21,564	NA	NA	NA
Chad	18,300	NA	NA	NA
Israel	17,377	9,513	54.7%	5,528
USA	14,787	3,259	22.0%	5,788
Bahrain	13,293	NA	NA	NA

Source: FAOSTAT NA = Not Available

Exports are particularly aimed at the European Union which represented 45.6% by value of world trade in dates in 2007. France is the largest EU importer and also a significant re-exporter. The highest paying markets (in terms of value per unit) are Switzerland and EU countries.

India is the world’s largest single importer of dates by volume and value. However, the import value per unit is low.

Nearest Australia, Malaysia and Indonesia are importing significant quantities of dates of medium unit value.



Source: FAOSTAT

Table 3: Major Date Importers, 2007

Country	Tonnes	Value US$ '000	US$/tonne
India	253,341	72,359	286
France	27,439	66,741	2,432
Morocco	50,473	43,524	862
UK	14,357	34,564	2,407
Germany	10,790	29,768	2,759
Spain	7,152	21,803	3,049
Malaysia	15,346	20,974	1,367
Italy	7,230	20,299	2,808
Canada	8,605	16,406	1,907
UAE	12,266	14,654	1,195
Russia	22,375	13,628	609
Indonesia	15,549	12,055	775
USA	8,646	11,308	1,308
Australia	6,657	10,401	1,562
Netherlands	3,787	10,254	2,708
Switzerland	2,022	9,957	4,924
Belgium	3,029	9,699	3,202
Austria	2,440	7,940	3,254
Jordan	8,534	7,242	849
Turkey	13,092	6,874	525

Source: FAOSTAT

4. The domestic Australian date market

The market for date fruit in Australia is essentially based around imported fruit as the Australian date industry is still in its infancy in terms of production.

Overview of domestic markets

Australian imports of dates have shown significant growth from 4,961 tonnes in 2003/04 to 7,222 tonnes in 2006/07 but fell back to 5,049 tonnes in 2007/08. It is not clear whether this decline in 2007/08 is due to a supply problem or a demand issue.

Table 4: Australian Imports of Dates

Year	**Tonnes**	**Value AU$**
2003/04	4,961	7,762,947
2004/05	5,448	8,990,779
2005/06	5,140	9,378,588
2006/07	7,222	12,601,718
2007/08	5,049	9,516,541

Source: ABS

Table 5: Australian Imports of Dates by Country of Origin

Country	**2006/07**			**2007/08**		
	kg	**Value $**	**$/kg**	**Kg**	**Value $**	**$/kg**
Iran	6,032,335	6,696,176	1.11	3,785,107	4,261,773	1.12
USA	371,847	2,689,066	7.23	428,847	2,562,651	5.97
UAE	131,879	235,586	1.78	189,560	351,606	1.85
China	241,629	451,113	1.86	157,094	286,362	1.82
Israel	87,402	727,490	8.32	60,448	455,629	7.53
Tunisia	73,080	436,860	5.97	85,947	262,970	3.05
Lebanon	22,739	128,275	5.64	18,600	149,244	8.02
Saudi Arabia	36,729	107,902	2.93	44,608	167,893	3.76
Turkey	13,000	28,933	2.22	95,513	213,665	2.23
South Africa	9,000	91,593	10.17	20,000	164,804	8.24
Mexico	124,078	896,658	7.22	114,797	468,657	4.08
Total	7,221,648	12,603,542		5,048939,	9,514,439	

Source: ABS

Most Australian imports of dates come from Iran (74% of supply in 2007/08) with the remainder mostly from the USA, UAE, Mexico, Israel, Tunisia and Turkey. Dates from China (Chinese dates) are from a different species to those from Iran or the USA.

A critical issue is the import price (CIF) per kg. Iranian dates are low value ($1.12/kg in 2007/08) whilst dates from the USA, Mexico, Israel, Lebanon and South Africa are high value (USA $5.97/kg in 2007/08, Mexico $4.08/kg, Israel $7.53/kg and Lebanon $8.02/kg).

High value dates tend to be table dates for retail sale whilst lower value dates are dried product for use as an ingredient in food processing. Over the last decade, high value dates represent about 10-15% of total volume of imported dates with the balance being cooking/manufacturing dates. A quick scan of supermarkets and specialist greengrocers in Adelaide highlighted the following date fruit products and retail prices:

- Woolworths, Rundle Mall, Adelaide (late July 2009)
    - 'Fresh' (rutab) Californian Medjool dates (Golden Palm brand) were selling from $15.98 (6/8/09) - $21.98 (29/7/09)/kg – in a 5kg loose pack. The labelling on the pack referred to the dates as 'fresh' even though they were 'rutab' or ripe dates. Given the import prices for Californian dates ($6-$12.92/kg depending on size and grading), this represents healthy margins in the value chain.
    - 'Fresh' unbranded USA organic (rutab) dates in a clear clam shell pack (like those used for fresh strawberries) - $6.98/150g ($46.53/kg).
    - Great Lakes brand pitted dates (Deglet Noor) from Tunisia - $4.98/250g pack ($19.92/kg). This is a snack pack produced in Sydney.
- The North Adelaide Fruit Market (March 2010)
    - 5kg pack of loose 'fresh' (rutab) dates from Bard Valley Medjool Date Growers Association sourced from Mexico. These were retailing at $19/kg. The shop also pre-packed these dates in 250g plastic clam shells for a price of $4.99/250g. North Adelaide Fruit Market claimed that most of their date sales were in pre-packs.

The seasonality of high quality US date imports is analysed.

Table 6: Monthly imports of US dates (fresh & dried) by Australia as % of annual value

Year	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
2006/07	0%	2.27%	0.45%	25.11%	12.21%	7.19%	1.58%	10.84%	9.87%	11.56%	12.96%	5.90%
2007/08	5.94%	2.80%	2.10%	15.73%	13.16%	24.56%	0%	7.91%	11.91%	4.19%	7.20%	4.45%
2008/09	13.6%	0%	8.90%	25.49%	0%	11.55%	7.12%	0%	7.33%	0.17%	25.18%	0.54%

Source: derived from ABS data

This highlights variability in monthly supply from year to year other than October which is the month of highest level of imports.

The Fresh Produce Group in Sydney is a major Australian importer of Medjool dates from USA and Mexico. Their website claims year-round availability.

Import Requirements and Implications

Strict Australian quarantine fruit entry regulations have a strong bearing on the style of date fruit which enters Australia. Countries that are listed by AQIS to have Khapra Beetle are not permitted to import khalaal or fresh dates into Australia. The geographic distribution of Khapra Beetle is widespread amongst major date growing countries and includes Algeria, Bahrain, Chad, Egypt, Iran, Iraq, Israel, Jordon, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Pakistan, Qatar, Saudi Arabia, Sierra Leone, Sudan, Syria, Tunisia, United Arab Emirates and Yemen. However, significantly, the United States, Mexico and South Africa are not listed as Khapra Beetle countries.

Imports of dates from Khapra Beetle countries are restricted to dates with a moisture content of 30% or less. These are classified by AQIS for import purposes as 'Dried dates' but include the fruit styles of rutab (30% moisture) and tamar (10% moisture).

Dried dates from Khapra Beetle countries are fumigated with methyl bromide as part of Australian entry conditions. For this reason imported khalaal or fresh dates with 50% moisture content are virtually unsighted in the Australian domestic market place. The greater majority of Australian consumers are unfamiliar with this product.

Anecdotal information about small quantities of imported khalaal fruit from USA/South Africa in one particular year was given by a trader. However imported khalaal or fresh dates remain absent from Australian supermarkets and fruit and vegetable retailers.

Both rutab and tamar fruit styles are imported - as both high quality table dates and low value cooking or manufacturing dates. Unfortunately no distinctions between these classifications are noted on available ABS import statistics but prices per kilo maybe a good proxy for distinguishing these different types.

Domestic Market Opportunities for an Australian Date Palm Industry

- There is increasing consumption of date fruit and processed date products in Australia, based around imported product. This highlights increasing consumer demand and augers well for Australian date producers. To be price competitive with the imported product, the Australian grower will need to specialise in high value table dates varieties. Low quality manufacturing grade dates will find it difficult to compete with cheaper North African and Arab product.

- There is a deficiency in product availability of quality table dates for the Australian consumer. Product other than low grade/low value cooking dates is difficult to obtain even from large supermarket chains. Whilst table dates are available year round from large city fruit and vegetable markets, the convenience of pre-packed table dates throughout Australian supermarket venues is lacking. However, supermarkets are pre-packing organic dates because they are higher priced. This pre-packing takes place in-store.

  Consumption of date fruit per capita in Australia is extremely low by comparison to world figures. It is anticipated that year round availability of Australian grown quality table dates to the

Australian householder represents an expanding opportunity to increase consumption beyond current levels by developing and supporting a well functioning supply chain.

Bard Valley Medjool Dates from USA displayed for sale at North Adelaide Fruit Market, March 2010 – 5kg pack of loose dates (retailing $19/kg) and 250g pre-packs prepared in the shop (retail price $4.99/250g)

- Variety diversification opportunity. When assessing availability of quality table dates in the Australian domestic market, one quickly realises the choice in variety selection is limited. Outside of Islamic neighbourhoods it is rare to find any table date variety other than Medjool which is usually imported from the USA (USA grows approx 0.21% of world date production), Mexico or Israel.

  There is an amazing range of different table date varieties which are internationally traded. Each variety has its own unique flavour, colour, texture and shape. Opportunity exists for the Australian date producer to present product into the domestic market that adds interest and diversity – that will appeal to a new generation of food gourmets and experimental consumers.

- Khalaal or fresh dates are largely unknown to Australian consumers and whilst it is anticipated that this product will be popular amongst ex-pats from date growing countries, a carefully and well planned marketing strategy will be required to introduce this product to the general population without creating over-supply issues.

- Every date producing enterprise can also expect a reasonable percentage of second and third grade fruit. Value adding processes should be explored to utilise this fruit, maximise profitability and avoid contamination in the market place with discounted inferior fruit grades.

- Producers should consider when appropriate, the possibilities offered by organically grown dates. Strict quarantine conditions have managed thus far to prevent the entry of major exotic pests and diseases of date palms. There are likely to be some challenges from indigenous pest populations however Australian growers have a competitive advantage with a reduced pest and disease presence.

- Production of dates under organic principles should be encouraged. The organic market is growing rapidly in many developed countries. As more and more consumers turn to organic foods, retailers will look for a complete range of organic products, including dates. Already, the USA/Mexico is supplying organic dates to Australia.

- Apart from fruit production there are opportunities for date palms (offshoots of known varieties) to be sold to other date growers entering the industry or for use in landscaping. This already occurs in California and Arizona.

Dave Reilly inspecting date products and shelf space allocation in a large Dubai supermarket.

5. The export date market

Overview of overseas markets

More than 98% of world production of dates occurs in the northern hemisphere and on average more than 90% of this production is consumed within the country of origin. From an export viewpoint the Australian producer has an advantage in that the Australian harvest period is counter-seasonal to the peak harvest period of the northern hemisphere.

Only South Africa and Namibia will be able to supply product at a similar time to Australia. In recent years South Africa and Namibia have entered the marketplace and although their production areas are still relatively small (approx 500ha and growing) they will have quality product available at the same time and will likely be Australia's biggest competition in the supply of counter-seasonal export dates.

Fresh Namibian dates showcased at the Fourth International Date Palm Conference, Abu Dhabi, March 2010.

The cost of production for Australian grown dates is expected to be considerably higher than most competing internationally grown product which has access to a low-cost workforce, lower business input costs, cheaper fuel and less transport distance to deliver product to market. For these reasons only the finest product should be considered for export and it will be necessary to target an affluent customer base that will be willing to pay a premium for the highest quality, freshest dates**.**

One product line which may provide our greatest point of difference is supplying khalaal or fresh dates (semi-ripe) which are perishable but very popular in northern hemisphere markets when in season (approx August-October). The Australian grown khalaal dates are harvested February –April. Usually the price per kilo in northern hemisphere markets for khalaal dates is less (perhaps half) that of rutab (ripe) dates. This is possibly because of the huge peak supply period which occurs annually when the date harvest commences, and the short product life for khalaal/fresh dates. Perhaps if a smaller volume of khalaal dates are supplied out of season, the demand for this product may keep price per kilogram high.

Middle East Markets

In February 2006 as part of an Australian government sponsored marketing investigation, Dave and Anita Reilly exported one pallet of fresh/khalaal yellow dates (variety Barhee) for exhibition purposes at the Third International Date Palm Conference in Abu Dhabi and for the South Australian government's display at the Gulf Food Expo in Dubai.

Dave and Anita attended the Abu Dhabi conference which was held over 3 days and attracted 400 delegates from approximately 40 countries. These Barhee dates were sampled by many conference goers including VIPs from several of the Arab Gulf countries. All were amazed that these khalaal dates were available fresh in February.

Some may describe the United Arab Emirates as the trade gateway to the Middle East with about 75% of total imports re-exported to Middle East markets. The UAE has in recent decades developed into an exciting tourist destination with many attractions including luxury shopping malls, top-class accommodation and restaurant venues to cater for the hundreds of thousands of visitors to the region each year. There are Australian government offices based in the UAE which provide a valuable support role in facilitating trade.

Australian grown dates ('khalaal' fresh Barhee dates) being sampled by country heads of state and industry leaders and at the Third International Date Palm Conference, Abu Dhabi, February 2006.

There were some encouraging reports back from the Barhee dates which were sent to the Dubai Gulf Food Expo. As this expo was at the same time as the Abu Dhabi conference Dave and Anita were unable to attend. The staff from the Department of Trade and Economic development, SA Government displayed the product on our behalf. The following article describes how the dates were received.

Debutante Dates To Die For - Displayed on a white platter in an arrangement to promote the varying stages of ripeness, the beautiful Barhee dates from Australia made their dynamic debut at Gulf Food 2006.

The chilled display cabinet of the Government of South Australia stand had already attracted visitors to ogle at the fresh produce that included a massive marron and unshucked oysters. However it was when the fresh dates were plated for sampling and positioned in the cabinet, that the excitement began. The dates became a crowd stopper accompanied to the delighted exclaims of "Fresh dates!"

Being the off season in the Middle East for this highly prized food product, the show goers could not believe their eyes that these were fresh dates of the variety with which they are familiar. As they savoured the dates, they shared interesting facts on size and colour changes through the growing season and the importance of fresh dates in a traditional Middle Eastern lifestyle. The dates were praised for their sensory value and ranked as a premium grade by the show goers. Everyone wanted to buy. As well as local emirates, there were buyers from all gulf countries such as Saudi Arabia, Syria, Kuwait, Qatar and Iran. Asking about their price expectations on this standard of product, replies ranged between AUD50 to AUD70 a box in the off-season.

One very excited Emirati gentleman begged to buy a box. He was a dentist who also ran a food trading business and is a definite contact for Australian suppliers. About 75% of total UAE imports are re-exported to GCC and Middle East markets and represents 35 million and 100 million consumers respectively. The GCC food packaged market is over USD13 billion and growing at 10% compound annual growth rate.*

We also discovered the secret to survival in the desert! And for a completely balanced diet, a glass of camel milk and seven dates a day will keep you healthy on your journey to the next oasis.

(Source: Global Insight Trade Statistics, Standard and Poor's Industry survey - Kindly contributed by Nicholas Alister-Jones/Ceejay Haymen from the Government of South Australia Commercial Representative Office in Dubai)

European Union

The European Union (EU) market pays comparatively much higher $/kg than the world average. There is strong product recognition for high quality dates and due to the price consumers are prepared to pay, this market deserves further investigation.

Due to Europe’s close proximity to the major Arab and African date producing countries this market is currently very well supplied. A study of the European Market undertaken in 2003 by the Food and Agricultural Organization (FAO) identified an oversupply of ‘common dates’ in the EU market resulting in low prices. These lower prices even affected Deglet Noor, a major variety. Consumer trends reported a shift towards higher quality products.

Supply of dates into the EU market is very competitive. Since the FAO report there has been major expansion and modernization of international date plantations. It was recently reported that Namibia (southern hemisphere producer) was supplying fresh khalaal dates into London at the same time as the Australian harvest period.

Given the expensive transport costs and logistics challenge in landing premium grade, perishable, fresh (khalaal) dates or fully ripe dates (rutab) into Europe, careful market analysis needs to be undertaken to determine if the advantages of supplying counter-seasonal fruit into the competitive EU marketplace outweigh the extra transport expense and risks associated with damage to product during transportation.

India

India is the world’s largest importer of dates, importing 253,341 tonne in 2007 (Table 3). However, the value per unit is low (US$286/tonne in 2007 compared with, for example, France with US$2,432/tonne). However, there is likely to be some high end demand for quality fruit. With a large population and strong agricultural trade links in almonds, pulses, grains etc already in existence with Australia, the potential size of this market in itself should encourage further expansion of the Australian production area.

South East Asia

Our largest neighbours Indonesia and Malaysia present as interesting prospective markets for the emerging Australian date industry. Indonesia has a population of 243 million of which 86% are Muslim.

Malaysia has a population of 29 million with over half being Muslim. In 2007, Malaysia imported 15,346 tonne of dates with a value of US$1,367/tonne (Table 3).

With such large populations and the peak in date consumption occurring during the Muslim holy month of Ramadan, these countries consume large quantities of dates. Due to their unsuitable climatic conditions for domestic date production these countries import their entire date requirements.

Unlike other marketplace opportunities in the Middle East, Europe and India, the South East Asian marketplace is closer to the Australian continent. This gives the Australian date industry an advantage over competitors in terms of transport costs and delivery timeframes. It also allows for better customer service and product quality assurances.

There are many more potential export market destinations that could be explored however there are very low levels of date production currently in Australia. Given the fact that we still import almost all of our date product requirements and are still a long way from satisfying even our own domestic needs, a full and comprehensive evaluation and analysis of export opportunities is premature.

It is important to have an understanding of the size and possibilities for international trade, and to demonstrate the real interest in counter-seasonal Australian grown dates. We hope this publication services that need.

We do recommend that a full and comprehensive study of export market opportunities be undertaken but in synchronization with further industry development and expansion. Perhaps a trigger-point to activate such as report could be when a milestone of 250ha of date plantation is established.

A full and comprehensive study/report could detail information such as the latest import volumes and values for all countries; transport costs and time delays in freighting product to and from various Australian export destinations; import tariffs and taxes imposed on product by various countries; production cost and breakeven analysis; plantation management and mechanization options; competitor analysis etc.

6. Industry development considerations

Currently, the Australian Date Industry could be described as being in the embryonic stage with approximately 50 hectares (0.005% of world production area) of date plantation of known varieties at fruit bearing age.

Regularity of fruit supply into the market place from this source is limited by production volumes and risk posed to production from climatic variability which may result in seasonal fruit damage or spoilage.

To advance the Australian Date Industry it will be necessary to maintain regular and constant supply of quality product to the retail market. To achieve this there is a need to increase critical mass of produce and widen the geographic production base to minimise production risk to the national date harvest.

Launching the date industry in Australia will be a major challenge and many obstacles will need to be overcome. Strong leadership, vision and perseverance will be needed by the pioneering industry participants to advance the industry beyond the fledgling stages toward a sophisticated and commercial industry. A whole-of-chain approach to industry development needs to be adopted.

Some industry challenges that will need to be overcome include:

- Variety selection for climatic/economic suitability. Date palms have evolved over a wide geographical area. It is important from a production stand-point to continue to access new genetics and trial them in different districts to determine best varieties for climatic and economic suitability for Australian conditions.
- Availability of suitably skilled labour force. The date palm is a difficult tree crop to work. It has thorns and work is often carried out several metres off the ground. There are several tasks including offshoot removal, pollination and fruit thinning that require specialised skills. It will be necessary to recruit and/or train a work force to perform these duties.
- Develop modern plantation management techniques which will ensure cost of labour can be kept to a minimum to assist competitiveness against international producers.
- Marketing
    - there is a need to create a demand for Australian grown dates in domestic markets
    - gain product recognition/demand in export markets
    - develop a marketing structure
    - achieve a high level of product sophistication
    - establish national fruit grading and quality standards
- Establish hygienic and technologically advanced fruit processing, packing and storage facilities.

- Further develop science and support of production systems. This requires a research and development budget. A strategic approach is also required to ensure the Australian production system can overcome any perceived threats and adopt world-leading technologies.

- Encourage industry investment and participation from growers, merchants, researchers and government agencies.

Lessons can be learned from the successful commercial development of other Australian food industries that have developed from being almost totally dependent on imports. 15-20 years ago, consumption in Australia of both almonds and olive oil was almost entirely based on imports.

In the case of almonds, imports from California, USA, dominated the Australian market. California is the world’s largest almond producer with 80% of production. Australia has experienced massive investment in new plantings based on the transfer of best practice production (including cultivar selection) and processing systems from California and the use of similar approaches in their marketing. Australian almond production now meets virtually all of Australian consumer demand and exports have grown rapidly.

In recent years Gurra Downs Date Company Pty Ltd with assistance from RIRDC has imported new date palm genetics into Australia. After an extensive nursery process these date palm genetics have been planted at field trial sites in the Riverland and other sites throughout Australia.

Information relating to best cultivar selection will not be known for some time. After 5 years some varieties have commenced fruit production, however much information still needs to be gathered in relation to varietal suitability for local conditions. It is recommended that full scale commercial production proceed cautiously until the evaluation of field trial research is more conclusive.

7. Conclusion and recommendations

The date palm (*Phoenix dactylifera*) is one of the world's oldest cultivated fruits, thought to have been domesticated in Mesopotamia (now Iraq) more than 5000 years ago. Date palms are widespread in North Africa, the near & Middle East and southern Asia. During the last century, production has been introduced into some new world locations including the USA, South Africa and Australia. The best date growing locations are characterised by having long, hot dry summers with minimal summer rainfall. Today the date palm is cultivated in over 40 countries with approximately 800,000 ha under production, annually producing some 7 million tonne of fruit.

There is a range of date fruit styles/ types – *khalaal* or fresh dates (50% moisture, firm and crunchy), *rutab* or ripe dates (30-35% moisture, high sugar) and *tamar* or cured dates (10-15% moisture, very high sugar, very long shelf life). However, not all of these types are readily available in Australia.

Dates have excellent health and well-being attributes. They are a particularly sweet and satisfying food thanks to their natural sugar and fiber content. The fiber moderates the speed at which energy from the sugars is released, so that dates make a good energizing food for snacks and for eating both before and after exercise. The fiber content also gives dates laxative properties, while the natural sugars have a soothing influence by helping to raise levels of the calming serotonin in the brain. Dates contain beta-carotene, vitamins B6 and B3 (niacin), which helps maintain healthy skin and the nervous and digestive systems.

Global date production is almost exclusively a northern hemisphere industry centred on North Africa and the Arab States. Egypt, Saudi Arabia, Iran, UAE, Pakistan and Algeria are the largest producers. Much of this production is for local consumption, however Iran, Pakistan, Tunisia, Saudi Arabia, UAE, Iraq and Algeria are the major export producing countries by volume. The USA and Israel are smaller producers but achieve the highest export unit value.

The market for date fruit in Australia is essentially based around imported fruit as the Australian date industry is still in its infancy in terms of production. *Australian imports of dates have shown significant growth from 4,961 tonne in 2003/04 to 7,222 tonne in 2006/07* but fell back to 5,049 tonne in 2007/08. It is not clear whether this decline in 2007/08 is due to a supply problem or a demand issue. Most Australian imports of dates come from Iran (74% of supply in 2007/08) with the remainder mostly from the USA, UAE, Mexico, Israel and Tunisia.

A critical issue is the import price (CIF) per kg. Iranian dates are low value ($1.12/kg in 2007/08) whilst dates from the USA, Mexico, Israel, Lebanon and South Africa are high value (USA $5.97/kg in 2007/08, Mexico $4.08/kg, Israel $7.53/kg and Lebanon $8.02/kg).

High value dates tend to be table dates for retail sale whilst lower value dates are dried product for use as an ingredient in food processing. Over the trading period of the last decade, high value dates represent approximately 10-15% of total volume of imported dates to Australia with the balance being cooking/manufacturing dates.

Strict Australian quarantine fruit entry regulations have a strong bearing on the style of date fruit which enters Australia. Countries listed by AQIS as having Khapra Beetle are not permitted to import khalaal or fresh dates into Australia. The geographic distribution of Khapra Beetle is widespread amongst most major date growing countries. However, significantly, the United States, Mexico and South Africa do not have Khapra Beetle.

Imports from Khapra Beetle countries are restricted to dates with a moisture content of 30% or less. These are classified by AQIS for import purposes as ‘Dried dates’ but include the fruit styles of rutab (30% moisture) and tamar (10% moisture). Dried dates from Khapra Beetle countries are fumigated with methyl bromide as part of Australian entry conditions. Imported khalaal or fresh dates with 50% moisture content are virtually unsighted in Australia and hence consumers are unfamiliar with this product.

Both rutab and tamar fruit styles are imported - as both high quality table dates and low value cooking or manufacturing dates. Unfortunately no distinctions between these classifications are made on available ABS import statistics but prices per kilo maybe a good proxy for distinguishing these different types.

In terms of *domestic market opportunities for an Australian date palm industry* there is:

- Increasing consumption of date fruit and processed date products in Australia, based around imported product. This highlights increasing consumer demand and augers well for Australian date producers. To be price competitive with the imported product the Australian grower will need to specialise in high value table dates.
- A deficiency in product availability of quality table dates for the Australian consumer.
- An opportunity for diversification varieties and fruit types. When assessing availability of quality table dates in the Australian domestic market, the choice in variety selection is limited, being dominated by Medjool. Further, khalaal or fresh dates are largely unknown to Australian consumers.
- Increasing opportunities for organic dates that will sell at premium prices. Already, the USA/Mexico are supplying organic product to Australia.
- Opportunities for date palms (offshoots of known varieties) to be sold to other date growers entering the industry or for use in landscaping. This already occurs in California and Arizona.

There are also *export opportunities to take advantage of Australia’s counter-seasonal supply advantage* as 98% of world production of dates occurs in the northern hemisphere. Only South Africa and Namibia will be able to supply product at a similar time to Australia. Australia will need to focus on high priced markets in the Middle East and European Union along with nearby markets (particularly Malaysia and Indonesia with large Muslim populations where the holy month of Ramadan involves consumption of large quantities of dates). India is a market with potential for Australia as it is currently the world’s largest single country importer of dates but the value per unit is low. However, there is likely to be some high end demand for quality fruit.

Further study of export opportunities will need to be undertaken as domestic plantings increase in order to provide confidence for further investment and industry expansion. Currently, the Australian date industry only comprises about 50 hectares of plantings involving about 3-4 industry participants.

To advance the Australian Date Industry it will be necessary to maintain regular and constant supply of quality product to the retail market. To achieve this there is a need to build critical mass in the industry and widen the geographic production base to minimise production risk due to climate factors.

Launching the date industry in Australia will be a major challenge and many obstacles will need to be overcome. Strong leadership, vision and perseverance will be needed by the pioneering industry participants to advance the industry beyond the fledgling stages toward a sophisticated and commercial industry. A whole-of-chain approach to industry development needs to be adopted.

Some industry challenges that will need to be overcome include:

- Variety selection for climatic/economic suitability.
- Availability of suitably skilled labour force.
- Develop modern plantation management techniques which will ensure cost of labour can be kept to a minimum to assist competitiveness against international producers.
- Marketing
    - there is a need to create a demand for Australian grown dates in the local market
    - gain product recognition/demand in export markets
    - develop a marketing structure
    - achieve a high level of product sophistication
    - establish national fruit grading and quality standards
- Establish hygienic and technologically advanced fruit processing, packing and storage facilities.
- Further develop science and support of production systems. This requires a research and development budget. A strategic approach is also required to ensure the Australian production system can overcome any perceived threats and adopt world-leading technologies.
- Encourage industry investment and participation from growers, merchants, researchers and government agencies.

Lessons can be learned from the successful commercial development of other Australian food industries, like almonds, that have developed from being almost totally dependent on imports. Australian almond production now meets virtually all of Australian consumer demand and exports have grown rapidly.

Bibliography

Agrexco web page. Accessed 21 September 2009, from http://www.agrexco.co.il/en/home.asp

Al Foah web page. Accessed 21 September 2009, from http://www.ghc.ae/alfoah.htm

Australian Bureau of Statistics, Canberra. Date import statistics purchased from ABS.

Bard Valley Medjool Date Growers Association web page. Accessed 21 September 2009 from http://www.bardmedjool.com/

Bernstein, Z. (1996). Presentation of the Israeli date palm plantation. Regional Agricultural Research Centre, Zemach, Jordon Valley, Israel. CIHEAM – Options Mediterraneennes. Accessed 21 September 2009, from http://ressources.ciheam.org/om/pdf/a28/96605880.pdf

Cann, Brian. (1994). *Date Production in Central Australia – An Economic Evaluation'* Northern Territory Dept. Primary Industries. Technical Bulletin 216.

Emirates Center for Strategic Studies and Research (2004). *The Date Palm – From Traditional Resource to Green Wealth.* ISBN 13: 9789948005506

FAO Statistics web page. Accessed 1 September 2010, from http://faostat.fao.org/site/342/default.aspx

Fresh Produce Group web page. Accessed 21 September 2009, from http://www.freshproducegroup.com/Imports/item/1271.aspx

Government of the United Arab Emirates (2004). United Nations Development Programme – Date Palm Research and Development Programme: Phase 2. Accessed 21 September 2010, from http://www.undp.org.ae/undpuae/projectdocs/Date%20Palm%20Project%20(ARE-10-0036960)%20Doc.pdf

Government of the United Arab Emirates (2009). Government commences initiative to market attractive varieties of date. Accessed 21 September 2010, from http://www.uaeinteract.com/docs/Government_commences_initiative_to_market_attractive_varieties_of_date/36915.htm

Hadiklaim - Israel Date Growers Cooperative web site. Accessed 11 August 2009, from http://www.hadiklaim.com/

Hodel, D. & Johnson, D. (2007). *DATES Imported and American Varieties of Dates in the United States.* University of California Agriculture and Natural Resources Publication 3498

ICARDA (2004). Regional Workshop on Date Palm Development in the Arabian Peninsula. Accessed 30 April 2010 from http://www.icarda.org/docrep/APRP/datepalm/index.htm

ISHS (2006). *Proceedings of the Third International Date Palm Conference. International Society for Horticultural Science.* ISHS Acta Horticulturae 736

Kader, A. & Hussein, A.(2009). *Harvesting and Postharvest Handling of Dates. Project on the Development of Sustainable Date Palm Production systems in the GCC countries of the Arabian Peninsula.* ICARDA (International Center for Agricultural Research in the Dry

Areas), Aleppo, Syria.

Karsten Farms web site. Accessed 12 August 2010, from http://www.karsten.co.za/framework/index.php

Liu, P. (2003). The Marketing Potential of Date Palm Fruits in the European Market. FAO Commodity and Trade Policy Research Working Paper No. 6. FAO, Rome. Accessed 26 July 2009 from ftp://ftp.fao.org/docrep/fao/006/j1851e/j1851e00.pdf

McCubbin, Michelle. (2007). *The South African Date Palm Industry – Strengths and Weaknesses.* Paper presented at 3rd International Date Palm Conference, United Arab Emirates, and 19-20 February 2006. ISHS Acta Horticulturae 736.

McEllister, Frank.V.(1991). *Date Production in Central Australia – An Agronomic and Economic Evaluation'* Northern Territory Dept. Primary Industries. Technical Bulletin 162

Potts, D. (2002). *Feast of Dates.* Trident Press

Regional Workshop on Date Palm Development in the Arabian Peninsula. Accessed 21 September 2010 from www.icarda.org/News/2004News/10June04_A.htm

RIRDC (2009). *Critical Success Factors for New Rural Industries.* Rural Industries Research and Development Corporation, Canberra. Publication # 09/002. ISBN 1741518016

RIRDC (2009). *Turning a Good Idea into a Profitable Venture*. Rural Industries Research and Development Corporation, Canberra. Publication # 09/003. ISBN 1741518024

UAE: Al Foah plans concept stores for dates. Accessed on 21 Septemvber 2010 from http//www.freshplaza.com/news_detail.asp?id=5512

United States. ANR Publication # 3498, Univ. Calif. Agric. Nat. Resources, Oakland, CA,

Wright, G. (2007). *An Overview of the Changing Date Industry in the United States*. Paper presented at 3rd International Date Palm Conference, United Arab Emirates, and 19-20 February 2006. ISHS Acta Horticulturae 736.

Zaid. A. (2002). *Date Palm Cultivation* – FAO Plant Production and Protection Paper 156 Rev.1. FAO, Rome. ISBN 92-5-104863-0

About the authors

Dave and Anita Reilly, Gurra Downs Date Company Pty Ltd

- Have established a tissue culture date palm nursery located in the Riverland of South Australia.
- Developed a field evaluation/repository trial site for ongoing research into selection of best climatically suited date palm varieties.
- Established and own a date palm plantation.
- Created a farm demonstration site for date production where information is shared with the wider Australian community.
- Supplied an Australia-wide network of farmers with elite date varieties. Information and experiences are shared amongst this network on the cultivation of new date varieties in new districts.
- Partnerships with Australian Government agencies and Research and Development agencies to establish and promote a commercial Australian Date Industry.
- Winners of the 2010 Khalifa International Date Palm Award for Best New Development.

Dave & Anita receiving the Khalifa International Date Palm Award from Sheikh Nahayan Mabarak Al Nahayan in Abu Dhabi, March 2010.

- Dave & Anita have both achieved a Diploma in Production Horticulture. They were winners of the 2007/08 SA Landcare Awards and finalists in the 2005 Banksia Environmental Awards.

Dave & Anita have travelled extensively throughout inland Australia assessing suitable date growing regions and working with a network of other growers. They hold a long-term interest in regional infrastructure, environmental and natural resource management.

Anita and Dave Reilly with fruiting palms in early January 2010 at the Gurra Downs field trial site, Riverland South Australia.

This field trial site is currently evaluating 20 female varieties.

Gurra Downs Date Company has distributed date palms to various locations throughout Australia.

 ***Ian Lewis, Lewis Agri-Food Chain Solutions, Adelaide***

- A *market analyst and market development professional in the horticulture and agri-food industries* with over 25 years experience in the public and private sectors. Ian has a track record of achievement and proven performance in both Australian and international markets in identifying and developing horticulture and agri-food opportunities. He utilises this expertise in supporting companies, industry bodies and government agencies in their analysis and development of markets.
- Ian was *Program Manager, Market Development, Food South Australia,* Adelaide, from September 2002 to October 2007. He was responsible for the planning and implementation of the market development program of the State Food Plan, a whole of government initiative, working in partnership with industry to accelerate the development of the South Australian food industry.
- From October 2007 to January 2009, Ian was *Senior Consultant, Food Chain Innovations, Rural Solutions SA*, Adelaide. Key achievements included planning and implementation of a national value chain project for Pink Lady Australia to improve the competitiveness of Australian Pink Lady apple exports to the UK. As well a major review was undertaken on the global market drivers and opportunities for the South Australian seafood industry. Also, an investment prospectus was prepared for protected cropping on the Adelaide Plains.
- Ian was *Food Value Chain and Agribusiness Specialist, Agriculture, Food & Wine Division, Primary Industries and Resources SA*, Adelaide, from February 2009 to September 2009. Key achievements included an in-depth dairy market analysis study (Markets, products and opportunities for the South Australian dairy industry), preparation of a feral camel industry development strategy for northern South Australia and evaluation of potential locations for a feral camel abattoir in northern South Australia.
- *Principal Consultant*, *Lewis Agri-Food Chain Solutions*, Adelaide, from October 2009 to present. Lewis Agri-food Chain Solutions aims to assist companies, industry organisations and government bodies in dealing with future agri-food challenges and opportunities in the domestic and international market place.

Towards an Australian Date Industry

— An overview of the Australian domestic and international date industries —

by Dave Reilly, Anita Reilly and Ian Lewis

Publication No. 10/174

Each year, Australia imports 5,000 to 7,000 tonnes of dates. Given date palms have been successfully growing across a range of sites in Australia for over 100 years, there would appear to be significant potential for establishing an economically significant date industry in Australia.

This report provides an overview of the Australian and international date industries. It explores market size and opportunity and identifies the challenges that will need to be overcome on the way to developing a viable Australian date industry.

The report is targeted at potential participants in the development of a date industry in Australia. This includes policy-makers, research funding agencies, research organisations, scientists, industry organisations and, innovative growers looking for a resilient crop for diversification.

RIRDC is a partnership between government and industry to invest in R&D for more productive and sustainable rural industries. We invest in new and emerging rural industries, a suite of established rural industries and national rural issues.

Most of the information we produce can be downloaded for free or purchased from our website <www.rirdc.gov.au>.

RIRDC books can also be purchased by phoning 1300 634 313 for a local call fee.

Most RIRDC publications can be viewed and purchased at our website:

www.rirdc.gov.au

Contact RIRDC:
Level 2
15 National Circuit
Barton ACT 2600

PO Box 4776
Kingston ACT 2604

Ph: 02 6271 4100
Fax: 02 6271 4199
Email: rirdc@rirdc.gov.au
web: www.rirdc.gov.au
Bookshop: 1300 634 313

RIRDC Innovation for rural Australia