

A preliminary discussion report for the

**Carnarvon Growers Association
Incorporated**

**A project to analyse supply chain issues for
Carnarvon horticultural produce**

June 2009

Executive Summary pages 1-6

Agknowledge®
51 Mottram Rd
Carmel WA 6076
Ph: 08 9291 8111 Fx: 08 9291 8101
Email: cookes@iinet.net.au

Promoting Carnarvon produce in existing markets, and linking with the Regional Brand.

Stage One – Preliminary Desktop Review Report

Information gathering from the industry

A **desktop review** to deliver a detailed examination of the WA horticulture industry as pertaining to the Gascoyne: description, situation analysis, price and cost analyses, supply and demand forces including seasonality. Work already completed will be brought to focus specifically for the project.

EXECUTIVE SUMMARY AND RECOMMENDATIONS

Global market opportunities – an overview

- World horticultural trade will experience sustained growth until 2020.
- There is growing demand for year-round supply of fresh produce to developed Northern Hemisphere markets that Australian producers could fill in the counter-season.
- China and other Asian developing markets are also seeking year-round supplies of horticultural produce.
- Australia will soon benefit from a Free Trade Agreement signed with the Association of South East Asian Nations (ASEAN) that will significantly reduce or eliminate tariffs for about 95 per cent of goods that are traded.
- Other priority export markets based on volume, competitive pricing and traditional business for fresh produce include New Zealand, the US and the EU.
- Australia needs to be ahead of its major competitors - New Zealand, South Africa, Chile and Argentina - to supply these markets.
- Economic and/or population growth in developing markets will drive market growth for fresh produce
- Australian horticulture cannot compete on high volume, low cost products. But it is well positioned as a high quality, premium producer of many product lines.
- Australian grown F&V will need to be positioned on such non-price attributes, including quality, food safety, innovation, origin and environmental and social responsibility, to build a recognised and reliable brand identity in export markets.

Domestic market opportunities – an overview

- The Australian market is expected to expand by around 3 million people by 2020
- Domestic demand drives the Australian horticulture supply chain, as about 88 per cent of total F&V production is consumed locally.
- Rising imports of F&V and slower exports have made Australia a net importer of horticultural produce.
- Wellbeing trends will result in per capita consumption of fresh produce increasing
- Consumers are demanding more value-added products that appeal to health/wellbeing, convenience/practicality and experience/taste).
- Increasing specialization into niche products is likely to result from any restructuring in the industry.

Carnarvon horticultural industry – an overview

- Horticulture is biggest agriculture industry in the Gascoyne.
- 1030ha of land is under horticultural production in the region
- There are about 150 growers on properties ranging from 5-60ha.
- Gross value of horticulture production in 2008 was \$72.8 million, down 20 per cent on the previous year – largely due to a reduction in tomato production.
- Gross volume of horticulture production in 2008 was 34,493 tonnes, slightly down on 2007 levels but an increase on 2006 production.
- Bananas are the highest value fruit crop and tomatoes and capsicum the highest value vegetable crops.
- A recent study (GVAP) has found the top 11 lines suitable for production in Carnarvon based on marketing, financial and agronomic merit are - bananas, tomatoes, capsicum, grapes, oranges, cucumbers, melons, avocado, mandarin, watermelon and pumpkin.

Recommendations

The GVAP report has made some sound recommendations into further identifying the potential for future crop development in Carnarvon. These were:

- Further investigation into the top lines identified for the Carnarvon region.
- A systemised approach to the collection of data on WA F&V production, region grown and place of sale.
- Further investigations into meaningfully reporting & analysing consumer trends. Consumption changes according to seasons, better marketing strategies improve market edges etc.

THE SUPPLY CHAIN

This is a summary of recommendations made in the report to further develop the theme of this study - to ensure a sustainable competitive advantage for horticultural producers in the Gascoyne/Carnarvon region.

1. The Supply Chain - Production

To some extent, producers can control the four marketing variables in the supply chain - price, product, place and promotion – to potentially increase demand/returns for their produce.

Price Recommendations:

- Identify products grown in lower volumes with high potential for price influence – niche, specific benefits, targeted at high-income earners.
- More alignment of producers to increase product consistency and volume.

Product Recommendation:

- Carnarvon horticultural industry assess crops and markets with potential for value-adding or value-adding to lower quality 'second' grade produce through post-harvest handling, processing, packaging or marketing. Objectives could include:
 - enhancing quality, shelf life and safety of perishable tropical horticultural products.
 - developing generic technology for new and improved processing, manufacturing and marketing methods aimed at the products of tropical horticulture.
 - defining the principles for regionalisation of horticultural production, processing and marketing among horticultural communities to expand markets, extend time of availability of perishable products and improve supply, quality and quality control. (Kirwan report).
 - Investigate opportunities for pulping a wide variety of produce through a central pulping facility or more frozen produce lines, including consideration of cold freight issues.
 - It is possible a full research project is needed to further investigate this area of product development. This may necessitate the Gascoyne Development Commission finding partners, such as researchers, food technologists, marketers to undertake such work.

Place recommendation:

- Investigate other outlets for place of sale, including food service, airlines, restaurants (could be included in scope of previously mentioned research project into product development).

Promotion recommendations:

- Consider ways to improve quality and consistency, including managing volumes supplied to market – as this is the KEY to any successful promotion and marketing.
- Further investigation of direct promotional opportunities with independents, local fruiterers or service sector such as restaurants, cafes etc.
- Consider creating stronger relationships with wholesalers and exporters who amass small lines of variable quality product and try to develop longer lines of consistent quality for on-sale to supermarkets, fruiterers, the food services sector and in some cases for export. Some of these agents are evolving into 'category managers' who may be able to establish the scale to innovate and develop markets.
- Investigate processor relationships, but look where the regional identity can be easily maintained through processing as this is their scope for high value adding. The wine industry is an excellent example. Otherwise they face strong import competition.
- Investigate opportunities where working tightly as a group will be possible, as this will be most effective.

2. The Supply Chain - Consumers

Three major trends in consumer preferences are now influencing the demand for F&V by Australian consumers:

- **Convenience** – ready to eat products such as sliced fruit, fresh cut and washed salads, ripe and ready to eat avocados.
- **Experience** – enjoyment of products with superior taste or appearance.
- **Wellbeing** – healthy products and products that give consumers satisfaction in being; home grown, meeting diet requirements, organic or produced in a socially responsible manner etc. (Rabobank)

Increased consumer spending on F&V is largely expected to be driven by better range and availability of produce and an increased focus on health and nutrition in food.

Time-poor consumers are driving the need for more convenient products and shopping locations and their expectations continue to rise, wanting high quality alternative health and snack food options.

Recommendations

- ➔ Consider these trends at a local level.
- ➔ Discuss potential for health/nutrition/convenience products to be developed and marketed from the region.

3. The Supply Chain - Wholesalers and Agents

Market City is the Perth central market and \$350-450 million worth of fresh produce is traded through its central trading area annually.

The market has about 600 customers, including major supermarkets, independent supermarkets and food service, catering and producer suppliers.

There are 23 primary wholesalers and 30 secondary wholesalers, providers, distributors and food processing facilities.

Recommendations

- ➔ Carnarvon Growers Association apply to Perth Marketing Authority after July 2009 for information on volumes, prices and areas of origin for F&V being traded through the central markets to identify supply gaps and benchmark where their produce 'sits' in the market in general.
- ➔ This could be beneficial for further analysis of the 11 potential suitable lines identified in the GVAP report – enabling collection of data about where competitors are and what times of the year they are supplying to the WA market.
- ➔ Does the Carnarvon Horticultural industry want to be involved in driving changes to central marketing systems. Discuss the way forward.

Key messages from the wholesaler interviewed for this report

- ✓ High volume supply of consistent quality product is necessary for a direct relationship with a wholesale agent
- ✓ Grower co-operatives can work if they are cohesive and quick to make decisions
- ✓ Individual suppliers of big volumes are preferable to deal with
- ✓ Quality assurance is essential
- ✓ Regional brand seen as a positive step as a result of retailers increasingly aiming to source and promote locally-grown fresh produce
- ✓ Potential is there for more citrus supplies from Carnarvon

4. The Supply Chain - Retailers/supermarkets

The two retail giants in Australia – Coles and Woolworths – dominate the national supermarket supply chain and typically source about 50 per cent of their fresh F&V requirements directly from growers and the remainder from wholesalers.

If they are direct suppliers, growers are typically able to negotiate on a weekly, seasonal or year-to-year basis the volume of product with certain specifications – such as size, shape, colour and weight – they will supply.

Recommendations

- As more fresh produce volumes are being bought direct by supermarkets and retailers, discuss the increasing pressures on producers to enhance their product and varietal differentiation, information and supply management systems and how this could be achieved.

Key messages from the retailer interviewed for this report

- ✓ There is potential for Carnarvon producers to participate in a growing supermarket trend to buy more produce grown locally in WA.
- ✓ Percentage of direct supply relationships is increasing.
- ✓ Preference is to deal with small groups of producers.
- ✓ Sweeter Banana Company-type relationship for products that can be differentiated viewed as ideal.
- ✓ Efficient supply and consistent quality essential – Carnarvon industry needs to improve in this area.
- ✓ Development of a regional brand viewed as very positive – as long as there was consistent quality of supply.

5. The Supply Chain - Transport/storage/packaging

It appears all transport systems need to be further developed to assist with any major future expansion of the horticultural precinct in Carnarvon to improve profitability.

Recommendations

- Ensure Carnarvon Shire is aware that export freight is a high priority when it considers any upgrade of Carnarvon airport.
- Back this up with further research into markets, volumes and times of year to identify peak periods and potential freight volumes.
- Alternatively, there could be Investigations into the use of Learmonth airport as an export freight base.
- Further investigate other transport operators being attracted to the region.
- Discuss any problems/issues with efficiencies or quality that need identifying and addressing that could be looked at in supply chain workshop sessions/talking with individuals?

6. The Supply Chain - Exporters and Importers of fresh and processed produce

It appears Carnarvon-produced table grapes and mangoes are the only fresh produce to be exported from the region and it appears these are marketed through agents in Perth, not sold direct into the export market.

Recommendation

- Consider what, if any, products could meet niche, counter-season or volume export market requirements and assess potential for development using programs such as Tradestart.

REGIONAL BRANDING OPPORTUNITIES

Regional branding is a concept that has been around for some time.

One of the aims of regional branding is to establish a regional, national and –sometimes – international reputation for products that possess or offer a unique flavour or characteristic.

This report has identified a wholesaler and a major retailer who are supportive of the Carnarvon Horticultural sector developing a regional brand to exploit the area's unique characteristics.

Both stress the need for consistency of quality and supply to be the basis of such a move.

The Sweeter Banana Company is a major branding success story for this region and other grower groups may want to learn from its experiences.

Recommendations

- Discuss the product 'candidate' products for a regional brand.
- Determine from interviews and workshops the local support for developing a regional brand and who would lead this process.
- Maybe further investigation into past work is warranted?

TOURISM OPPORTUNITIES

The connection between food and health, food and culture and food and tourism is becoming more understood and regional centres are developing initiatives that provide benefits for their local and visiting populations.

The Gascoyne Development Commission is preparing a proposal for a food trail using local produce to tie-in with tourism and hospitality in the Gascoyne region.

Recommendations

- Discuss involvement by horticulture producers in GDC's proposed food trail.
- Investigate other opportunities for food and tourism and food and culture.

NORTH WEST SUPPLY OPPORTUNITIES

There could be potential marketing opportunities for Carnarvon producers distributing and selling fresh produce to communities and mining operations in the north west.

Recommendations

- Investigate partnerships with independent retail operators or mining companies to increase fresh F&V supplies to the entire north west region.
- Further investigate potential volumes of supply and transport methods.
- Consider production issues such as potential for consistency supplying the necessary volumes of product needed at a good quality.
- Investigate whether this may necessitate a market floor system, or could be carried out through direct sales/web-based systems with customers.

Risks – Limitations To Future Expansion Of The Carnarvon Horticultural Industry

Water and land

These are the biggest limiting factors to growth in the local horticultural sector.

The Gascoyne Foodbowl Initiative is investigating the issues surrounding expansion of the Carnarvon horticulture precinct.

It is currently awaiting Cabinet Approval to be submitted for funding consideration under the Royalties for Regions Program.

Issues arising from this initiative include:

- The initiative needs to work across government, including Departments of Environment, Water and Planning and Infrastructure as well as the Gascoyne Development Commissions.
- Public debate has been somewhat divided regarding the potential impact of further development on the Carnarvon horticultural industry.
- Some growers have expressed concern that additional development will result in competition that may adversely affect the price of Carnarvon produce on the Perth market.
- There was originally a concern that the extraction of additional water (from a northern bore field) may impact on the existing groundwater extraction area that provides town and horticultural scheme water to Carnarvon. This concern was a primary focus of the exploratory and modelling work, resulting in advice that extraction from the northern resource would **not** affect the existing groundwater extraction area.
- Other growers are keen to embrace the opportunity for expansion and development of their businesses.

There is another local group assessing potential for horticultural expansion on pastoral properties in the Gascoyne.

Areas of land available for possible expansion have been identified at Meedo and Brickhouse stations, but any development would be dependent on water quality and availability.

There is some resistance from some growers whether these areas should be developed.

There is a perception that expansion of horticulture industry will over-supply already flooded markets and result in falling returns for existing growers.

And there is a view that a big area of the horticultural precinct in Carnarvon (almost half) is underutilised and should be used before more land is opened up.

Weather

Particular risks for horticulture include potential for heat stressed and sunburnt plants, diseases that remain active for longer periods, higher insect infestations and a shift in growing regions as temperature ranges move.

Industry is investing in R&D to provide a wider range of varieties suited to the expected conditions of higher temperatures and less water availability.

R&D

Is there a need to re-address priorities for Government and private investment in R&D going forward?

Labour and input costs

What can be done to reduce these costs and overcome shortfalls in availability?

Promoting Carnarvon produce in existing markets & linking with a regional brand

Background

The Carnarvon Growers Association (CGA), with funding and support from the Gascoyne Development Commission (GDC) is driving this project to determine how to develop a sustainable competitive advantage for the horticultural growers of the Gascoyne and CGA members.

CGA has 170 members producing about 99 per cent of the total fruit and vegetables grown on the Carnarvon plantation precinct.

The ultimate aim is to find ways to increase returns for produce grown and marketed from Carnarvon by undertaking a thorough assessment of production and the supply chain.

The CGA Management Committee aims to develop strategies that will:

- Identify Carnarvon produce and its systematic promotion as preferable to produce from elsewhere.
- Boost consumer recognition of and willingness to pay a premium for Carnarvon produce because of its superior quality.

This Desktop Review has been designed to provide a detailed analysis of the Gascoyne horticulture industry and will be the base for continued work into supply chain issues and modelling.

Overview and outlook for horticulture

Export and domestic markets for fresh horticultural products present promising opportunities for all fresh produce suppliers.

Globally, it is expected that world horticultural trade will experience sustained growth until 2020, driven by increasing populations and incomes, especially in developing economies, and a growing demand for year-round supply of fresh produce to Northern Hemisphere markets.

Domestically, the Australian market is expected to expand by around 3 million people in the same time period.

It is expected that international and domestic per capita consumption of fresh produce will increase as preferences shift towards horticultural products and away from alternative foods (e.g. bakery products, snacks, etc.), driven by wellbeing trends.

In emerging markets economic and/or population growth (in particular urban population) are expected to drive market volume growth. While in mature markets, value growth is expected as consumers demand more value-added products (food appealing to health/wellbeing, convenience/practicality and experience/taste).

Understanding these trends and supplying accordingly is an imperative for all Australian F&V suppliers, including those in the Gascoyne, who aim to succeed in such a competitive environment.

(sources: GVAP report and Rabobank Global Focus – Australian horticulture Spring 2008)

Global demand and supply overview

Global demand for fruit and vegetables is driven by developed markets in the US and EU and the growing populations and incomes in developing countries in Asia.

In the past decade global vegetable production grew at 4.2 per cent compound annual growth rate (CAGR) and global fruit production grew at 2 per cent CAGR.

Asia is the world's biggest F&V producer at 55 per cent – with China the biggest producer at 32 per cent - followed by the Americas at 15 per cent, Africa at 15 per cent, the EU at 14 per cent and Oceania at 1 per cent.

Australia accounts for 0.5 per cent of global F&V production.

Ecuador, Spain, the US, South Africa and Costa Rica are the major fruit exporters.

Spain, the Netherlands, Mexico, China and the US are the major vegetable exporters.

(Rabobank)

Australian demand and supply overview

The total area under horticultural production in Australia is about 250,000 hectares and there are about 17,200 horticultural enterprises.

Recent figures show the national horticultural sector is the second largest agricultural industry in Australia, employing about 81,500 people growing fruits, vegetables and nuts for the domestic and export markets.

A further 9,300 are employed in fruit and vegetable processing (excluding wine manufacturing). A survey of recruitment agencies estimated there are also 175,000 seasonal positions available each year.

Annual and perennial horticultural crops hold approximately equal shares by value-of-production.

Potatoes are Australia's main vegetable crop in terms of area sown, value and volume of production and consumption, followed by tomatoes, carrots, lettuce, onions, cauliflower, capsicum, chillies, cabbage and broccoli.

Fruits produced in the highest volumes are citrus, pipfruit, bananas, melons, stonefruit, pineapples, table and dried grapes, mangoes, olives and nuts. (Rabobank)

Domestic demand drives the Australian horticulture supply chain, as about 88 per cent of total F&V production is consumed locally. (Rabobank)

And Australian consumers are well supplied with locally grown fresh produce.

However, according to the Rabobank Global Focus – Australian Horticulture report and the GVAP report, domestic F&V producers are losing market share as imports have been progressively rising in the last five years.

The GVAP report found horticulture imports (fresh and processed) have risen faster than exports, resulting in Australia becoming a net-importer of horticulture produce.

Rabobank estimated Australia's exports of F&V (including nuts) in 2007-08 were worth \$721 million Free On Board.

Imports in 2007-08 were worth \$648 million in 207-08.

Australian F&V exports increased only 3 per cent between 2004 and 2008, while imports increased by 38 per cent in the same period, driven mainly by increased imports of fruit and nuts.

The slow down in exports since the peak year of 2001-02 (when sales reached \$966.2 million) has been due to drought, a high Australian dollar, an increase in horticulture production in other countries and changes by importing countries to quarantine market access (GVAP).

In 2007, New Zealand was Australia's biggest export destination, taking 14 per cent of total exports, followed by Japan at 12 per cent, the EU at 11 per cent, Hong Kong at 10 per cent and the US at 9 per cent. (Rabobank)

Opportunities for export

Increasing demand from developed markets in the Northern Hemisphere - and increasingly from China and other Asian developing markets - for a year-round supply of fresh produce provides Southern Hemisphere producers with growing opportunities to supply F&V in counter-season.

There is demand for high quality, packaged fresh products to North and South East Asia and new growth markets in China and India, especially for citrus and apples.

Australia has a proximity advantage to these Asian export markets with their growing populations and incomes and will soon benefit from a Free Trade Agreement signed with the Association of South East Asian Nations (ASEAN) that will significantly reduce or eliminate tariffs for about 95 per cent of goods that are traded.

Other priority export markets based on volume, competitive pricing and traditional business for fresh produce include New Zealand, the US and the EU. (Rabobank)

Australia must compete for these opportunities with other Southern Hemisphere producers which have a strong export focus, including New Zealand, South Africa, Chile and Argentina.

The domestic horticulture sector cannot compete on high volume, low cost products.

But it is well positioned as a high quality, premium producer of produce such as navel oranges, pink lady apples, white flesh nectarines and certain varieties of table grapes, onions and asparagus.

The Australian horticulture industry must position itself as a niche player in certain sectors, specialising in products it can produce with differential, non-price, attributes such as quality, food safety, innovation, origin or environmental/social responsibility, and at a premium price.

(source: GVAP report and Rabobank Global Focus – Australian horticulture Spring 2008)

Australian's historical success in export markets

The below points describe Australia's performance on the global trade market and was summarised from a Future Focus report, *The horticulture plan* which was a project funded by Horticulture Australia Limited (HAL)

- Australia is not a large and successful exporter of either fresh or processed horticultural products. It exports about 10 per cent of output and imports about 17 per cent, making it a net importer.
- In volume terms, the value of Australia's horticultural exports has been largely stagnant or in decline over the past 12 years. By contrast imports have grown.
- Australia's export performance (except in wine) has been poor relative to that of other southern hemisphere competitors. This may have been compounded by an appreciating Australian dollar, trade barriers against Australian produce and lack of specialisation relative to competitors.
- Recent trends suggest that the prospect of higher world prices is poor. Competition from low-cost suppliers overseas is likely to strengthen.

Market feasibility for Carnarvon Produce project

- Increases in export prices can be achieved at the margin by improving access into export markets and by product differentiation or through improvements in quality.
- Further reductions in Australian trade barriers on imports are likely through lower tariffs and easing of quarantine requirements.^[2]

Other southern hemisphere producers are strongly export focused and, although Australia successfully produces 160 different horticulture crops across a wide range of climatic zones, its export performance is poor compared to some other key southern hemisphere producers, such as New Zealand, South Africa, Chile, Brazil and Argentina (see table below).

Major southern hemisphere exports – 2004-05

	Australia	Chile	South Africa	New Zealand
	Tonnes	Tonnes	Tonnes	Tonnes
Apple and pears	22 413	787 213	445 210	322 718
Citrus	139 187	79 149	1 758 007	2 049
Table grapes	58 379	800 814	237 488	247
Summer fruit	16 022	233 978	50 133	1 988
Vegetables	102 282	118 054	64 879	254 328
Nuts	21 424	13 254	6 301	
All other produce	23 643	416 221	76 790	310 644
Total	383 350	2 448 683	2 638 808	891 974

Source: HAL (2006).

New Zealand is a horticulture success story. Including domestic sales, the sector is worth NZ\$4.8 billion. Horticultural crop area has increased by 40 per cent over 10 years. Exports have grown from NZ\$200 million to NZ\$2.3 billion, with exports to 114 countries. New Zealand is cost-efficient relative to Europe and North America, but not against Latin America, Eastern Europe and Asia. It promotes product and marketing innovation as a source of competitive advantage, and seeks production efficiencies wherever possible.^[3]

Imports

Many Australian horticultural sectors have been protected from global market forces due to sanitary, phytosanitary and disease restrictions that excluded some countries' F&V products from the market.

This situation is likely to attract ongoing scrutiny from trading partners and World Trade Organisation (WTO) rules.

Biosecurity Australia has received several submissions regarding imports to Australia: apples from New Zealand (currently under dispute with the Dispute Settlement Body of the WTO), China and the US; bananas from the Philippines; stone fruit from the US; and table grapes from Chile.

Australia's restrictive import protocols are being challenged by global fresh produce suppliers. In addition macro-economic factors, such as the exchange rate, have further decreased Australian competitiveness over the past 3-5 years as the stronger Australian dollar reduced export returns and made the import market easier.

The recent significant depreciation of the Australian dollar will assist to increase the relative competitiveness of Australian F&V suppliers in the domestic and the international markets. Although the same situation applies for most of the Southern Hemisphere's exporters (e.g. Chile, Brazil and New Zealand).^[4]

(GVAP report)

Australian production statistics

Statistics collated by the Department of Agriculture, Fishing and Forestry (DAFF) in 2006-07 found that Australian horticulture had a gross value of production (GVP) of \$9.2 billion, ranking behind the meat industry but larger than the drought impacted grain industry. This compared with a GVP for horticulture in 2005-06 of \$8.3 billion.

It is estimated a further \$900 million worth of fresh F&V is processed, generating a factory gate value of about \$5 billion worth of processed F&V. (Rabobank)

The major product groups had the following GVP in 2006-07:

- | | |
|--|---|
| <ul style="list-style-type: none"> ▪ fruit and nuts \$4.6 billion ▪ vegetables \$3.1 billion ▪ grapes \$1.1 billion. ▪ bananas \$860 million ▪ apples and pears \$590 million ▪ potatoes \$514 million | <ul style="list-style-type: none"> ▪ citrus \$513 million ▪ stone fruit \$415 million ▪ tomatoes \$296 million ▪ lettuces \$283 million ▪ mushrooms \$260 million ▪ strawberries \$201 million. |
|--|---|

Western Australian production statistics

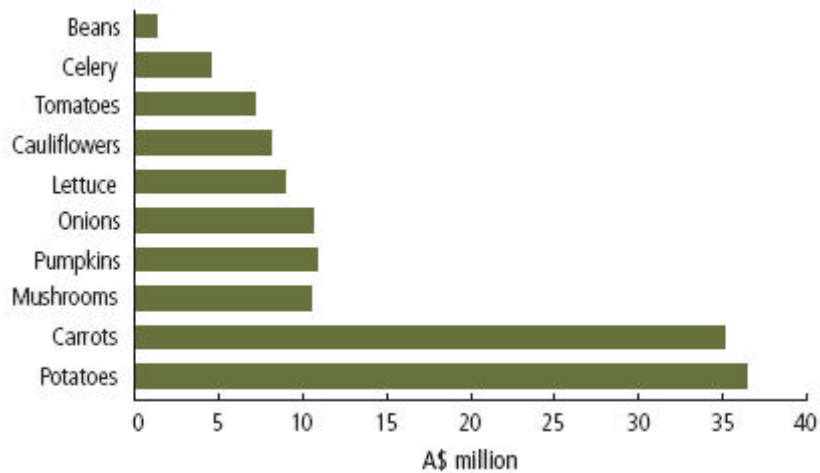
In summary, the Western Australian horticulture industry:

- includes fruit, vegetables, wine floriculture and sugar;
- had a gross value of production in 2005/06 of \$612 million,
- has international exports now worth \$162 million, including sugar, and increasing exports to markets in eastern Australia; and
- has major markets including Singapore, Malaysia, the United Arab Emirates, Japan and Hong Kong, with expanding markets in Thailand, and the USA. (GVAP)

Vegetables

WA’s vegetable industry is the largest horticulture industry sector in terms of production and exports with a gross value of production in 2005/06 of \$191 million The industry has shown resilience to the impact of strong competition from China in major export markets over the past four years with a redirection of exports to Middle East and Eastern States markets. This is resulting in a restructure of the industry in terms of grower’s choice of crops in traditional production areas.

WA vegetable production 2005/06 (est) Total: A\$191 million



Source: ABS/DAFWA Bulletin 4702

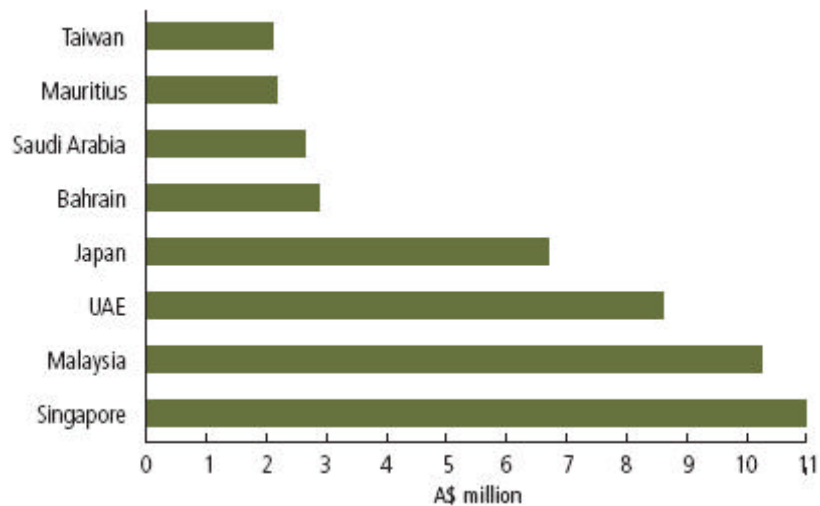
Western Australia is a quality producer of premium vegetables for domestic and overseas markets. Western Australia exports more than 20 types of vegetables to more than 20 countries.

WA vegetable exports, 2005/06 Total: A\$56.6 million

Product	Value	Percentage of Market
Other (Incl mixed food preparations)	A\$7.9m	14%
Carrots	A\$37.5m	66%
Lettuce	A\$0.5m	1%
Chinese cabbage	A\$0.7m	1%
Cauliflowers	A\$1.2m	2%
Celery	A\$1.5m	3%
Potatoes	A\$7.2m	13%

Source: ABS/DAFWA Bulletin 4702

WA vegetable export markets 2005/06



Source: ABS/DAFWA Bulletin 4702

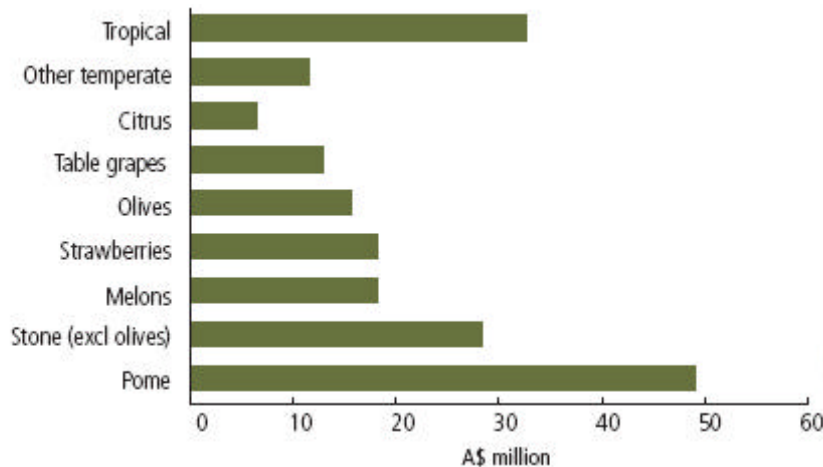
The vegetable industry is investing in research that will reduce production costs and increase opportunities for new market access. There are promising opportunities for future downstream processing of Western Australian vegetable products with a view to export. Western Australia is well situated with advanced supply and cool chain management systems to provide shredded lettuce (and possibly other fresh vegetables) to fast food outlets in South-East Asia. According to DAFWA, efforts have already been made to set up the necessary supply chains for this initiative.^[5]

Fruit

In 2005/06, Western Australia’s gross value of fruit production (including table grapes) was estimated at \$193 million, with an estimated export value of \$21 million.^[5]

Fruit production 2005/06 Total: A\$193 million

(includes A\$13M table grapes, but excludes \$110M wine grapes)



Source: ABS/DAFWA Bulletin 4702

Fruit exports by value 2005/06 Total:A\$21 million

Product	Value	Percentage of Market
Strawberries	A\$8.4m	40%
Apples	A\$3.3m	16%
Plums	A\$2.6m	12%
Melons	A\$2.0m	10%
Table Grapes	A\$0.9m	4%
Mangoes	A\$0.6m	3%
Pears	A\$0.5m	2%
Other	A\$2.7m	13%

Source: ABS/DAFWA Bulletin 4702

The Western Australian Mango industry one of the fastest growing horticultural industries in Western Australia, with approximately 300,000 commercial mango trees in the State, currently producing approximately 3,000 tonnes of fruit, with expectations of reaching 7,000 tonnes per year at full production. Significant export opportunities exist for Western Australian mangoes and mango exports have grown substantially in the last couple of years.^[5]

At present, a majority of tropical fruit produced is sent into Australian domestic markets, but with relatively static domestic population, as production expands, there is the potential to expand existing and emerging export markets where purchasers demand high-quality, 'clean and green', tropical fruit varieties. (GVAP)

GASCOYNE HORTICULTURE PRODUCTION

Overview Gascoyne region

Horticulture is the Gascoyne Region's largest agricultural industry.

The Carnarvon Horticulture Precinct irrigation area is centred on the banks of the Gascoyne River extending from its mouth to 19km inland.

Carnarvon, with its semi-arid subtropical climate, is a major centre for production of winter vegetables and tropical and sub-tropical fruit production.

Last year the Gascoyne Research Station recorded 349.4mm of rainfall, with significant falls in February, March, April, June and July. Long term average annual rainfall is 230mm.

The Gascoyne River flowed for 126 days last year, with three flows in February, April and June with peak levels of 3.52m, 3.21m and 0.7m respectively.

Production

The area zoned for intensive horticulture in Carnarvon is about 2000ha, with about 1030ha of that land actually under crop.

There are about 150 growers on properties ranging from 5-60ha.

Latest plantation industry production statistics for the Department of Agriculture and Fisheries WA (DAFWA) show that the gross value of production from Carnarvon in 2008 was \$72.8 million. This was down 20 per cent compared to the 2007 level of \$87.6 million – mainly due to a big reduction in tomato production.

In 2006, the Carnarvon crop was valued at \$86 million and in 2005 it was worth \$56 million. (GVAP)

The gross tonnage of horticulture produce grown in the region in 2008 was 34,493 tonnes, down 13 per cent from 38,964 tonnes in 2007 but slightly ahead of 2006 levels of 32,955 tonnes. (Ag Dept stats)

Profits from horticulture production in this region fluctuate severely depending on commodity prices, seasons, competition and supply.

*(*NOTE: there is a chart in the GDC report Gascoyne food that shows planting windows for all Carnarvon-produced fruit and vegetables that could be inserted here.)*

Fruit

DAFWA's 2008 production statistics show total fruit crops produced from the Carnarvon plantation area last year had a gross value of \$27.8 million from production of 10,502 tonnes.

Bananas were the highest valued individual fruit crop produced in the Carnarvon Plantation industry in 2008, returning \$11.7 million from production of 6369 tonnes.

This production volume was up 21 per cent, but values were down 3.6 per cent, on the previous year.

Other major fruit crops grown on the plantations are grapes (worth \$9.6 million in 2008), mangoes (\$4.7 million), pawpaw (\$0.5 million), grapefruit (\$0.4 million) and avocado (\$0.06 million).

Increased plantings and sales of bananas and table grapes are among the prime movers in the growth of economic returns to the region. (GVAP)

Volumes of total fruit production for the Carnarvon region were up 20 per cent and values up 4 per cent from the previous year, according to the DAFWA statistics.

All fruit crops increased in tonnes produced in 2008 compared to 2007. The biggest individual increases were from avocados at 63 per cent and pawpaws at 38 per cent.

The exception was grapefruit, which fell 36 per cent.

Vegetables

Vegetables made up 31 per cent of all crops grown on the plantations last year, up 4 per cent from 2007 levels, and were worth \$24.6 million, up from \$24.4 million in 2007.

Melons and tomatoes (including cherry tomatoes) were the biggest volume crops last year at 6669 tonnes and 6568 tonnes worth \$6.1 million and \$14.3 million respectively.

Market feasibility for Carnarvon Produce project

But melon production had fallen 44 per cent from the previous year to represent 19 per cent of the volume all produce grown on the plantations (down from 28 per cent in 2007).

And combined tomato and cherry tomato production also fell in 2008 to represent 19 per cent of the volume of total plantation production (down from 33 per cent in 2007). Although, cherry tomato volumes increased 41 per cent on the previous year while tomato volumes more than halved

There were increases in the 2008 tonnages of basil, beans, butternut pumpkin, capsicum, egg fruit, pumpkin, cherry tomatoes and zucchini produced on the Carnarvon plantations. (Dept Ag plantation report).

Vegetable crops that fell in production tonnages included chilli, cucumber, melons, sweetcorn and tomatoes.

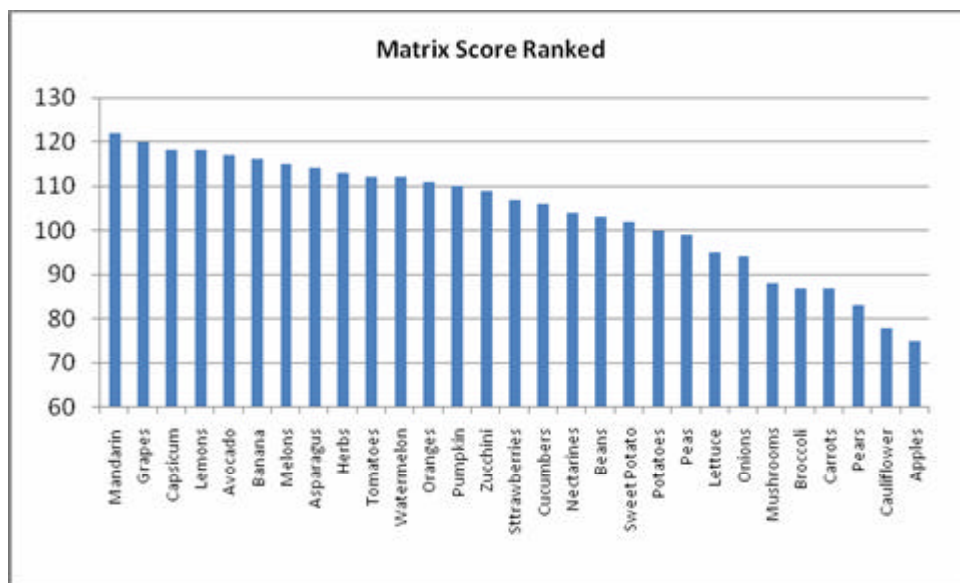
Potential for new crops/horticultural opportunities in the region

A GVAP study team has recently completed a study into the market opportunities for Carnarvon growers.

It has developed a grower's crop matrix to find the top 11 lines specifically suited to the Carnarvon horticultural precinct using 21 criteria based on three main areas of marketing, financial and agronomic indicators.

The Matrix was designed to identify what lines, the relative pros and cons and determine market openings on the domestic market.

It chose 11 crops based on research into the top 30 lines of products going through Market City in Canningvale.



The objective of the Matrix was to look at the top 11 lines suitable for Carnarvon then compare Carnarvon's current production, to overall WA consumption which would then expose possible opportunities for the Gascoyne region.

The top 11 crops identified as suitable for Carnarvon were bananas, tomatoes, capsicum, grapes, oranges, cucumbers, melons, avocado, mandarin, watermelon and pumpkin.

Below is an outline of the 2008 production and gross market value for these crops, all of which are already being grown in Carnarvon at variable volumes, compiled for the Department of Agriculture and Fisheries WA:

Bananas

DAFWA's production statistics show that Bananas made up 18 per cent of the volume of all crops grown on the plantations in 2008, up from 15 per cent in 2007.

As mentioned, they are the biggest individual horticultural crop for the region and are supplied to market year-round.

High density planting – up to 3000 plants per hectare producing 50 tonnes/ha – has meant Carnarvon bananas tend to be smaller than those produced in Queensland.

The locally-based Sweeter Banana Company has been highly successful in marketing these bananas as 'Lunch box' bananas.

In June 2009 the company also launched a new line of 'Smoothy' bananas for 'marked' fruit.

The Sweeter Banana Company is the best example of collective group marketing in the Gascoyne region.

About 80 per cent of local banana growers are members of the group, which supplies product to about 30 outlets across WA – including a major supermarket chain - and makes up about 15 per cent of total banana consumption in WA.

The group recognised its difficulties competing with Queensland bananas on volume and price and has focused its marketing efforts on the superior taste and prolonged shelf-life of its bananas.

It is involved in packaging and is investigating options for value-adding, such as dried banana fruit and puree from lower grade fruit.

Carnarvon bananas are also readily available from plantation-based shops, roadside stalls and the Gascoyne Growers Markets.

At a cottage industry level they have been value-added into chips, dried banana, fruit leather, chocolate coated, chutney, jame and wine (GDC report Gascoyne Food).

DAFWA's 2008 production statistics show the average monthly price for a 13kg carton of Carnarvon bananas varied from a low of \$17.65 in May to a high of \$35.15 in March last year (based on the monthly weighted average of 'most sales' as published by the Perth Market Authority and from grower returns – DAFWA statistics).

(insert graph DAFWA)

Tomatoes

Tomatoes and cherry tomatoes made up 19 per cent of the volume of total horticultural crops grown in Carnarvon in 2008 and, at \$14.3 million, 20 per cent of the gross value of all crops.

In the main season from July to November, tomato average monthly returns varied from a low of \$11.50 to a high of \$23 per 10kg last year.

The main cherry tomato season from July to December saw 2008 prices fluctuate from a low of 70 cents per punnet to a high of \$1.10 per punnet. Highest prices were \$1.60 per punnet when supplies were low in March.

The Love Apple group is one of three horticultural group marketing entities that conduct central packaging in Carnarvon – along with Sweeter Banana Company and Gascoyne Gold (tomato, capsicum and other).

This group marketing initiative was established to meet market demand for continuity of supply, product quality and packing consistency and has helped to build a stronger profile for Carnarvon produce (GDC – Gascoyne Food report)

(insert DAFWA graph)

Capsicum

Another high volume crop grown in the region, total capsicum production grew 11 per cent in 2008 to reach 3217 tonnes worth \$10 million.

Capsicum is usually supplied from May to January and in 2008 average monthly prices ranged from \$2.35/kg to \$4/kg.

(insert DAFWA graph)

Grapes

Table grapes are a significant industry for the Carnarvon Horticulture Precinct, worth \$9.6 million to the local economy in 2008 – or 13 per cent of the total gross value of horticultural production last year.

Last year there were 1865 tonnes of grapes produced in the region, 13 per cent higher than in 2007.

Grapes are supplied to market in November, January and February and last year average monthly prices ranged from \$30 to \$85 per 10kg carton.

The main varieties of grapes grown in Carnarvon are the popular Red Globe, Flame Seedless and Dawn Seedless and this market has grown significantly in the past decade, producing fruit for the domestic and export markets.

Citrus: Oranges/Mandarin/Grapefruit

Carnarvon has a marketing advantage with citrus in that fruit can be ripened early.

But fruit needs to be de-greened to achieve good colour. Citrus is currently being commercially grown and de-greened in the region on a small scale.

Last year there were 8948 cartons of oranges sold out of Carnarvon by two producers and these had an average monthly price of \$18.35 per carton during the season of May to November.

A market niche could be available for sales of grapefruit to Japan.

This is potentially a large high valued market and an orchard in the Gascoyne region would complement the supply timing from Western Australia.

Most of the supply from Australia currently comes from Kununurra however there is a large supply gap opening for quality red grapefruit export into Japan.

Temperatures in Northern WA means better greening qualities due to lower chill factors, allowing better quality (appearance) fruit that will be imperative for the Japanese market. To some extent this may be a vital market edge and may present a higher-valued branding opportunity.

Grapefruit is the second largest (by volume) imported fruit into Japan, only behind bananas.

But grapefruit imports have been declining significantly due to a shortage of supply. Since 2002, grapefruit imports have dropped 25.3% (from 285,000 tonnes to 213,000 tonnes in 2007) and the Japanese market is now trying to source alternative supplies of grapefruit from other countries, especially during supply shortfall months of August to September.

Japan requires 23,000 tonnes per month which equates to 300 - 400 hectares harvested per month, to supply the market.

Kununurra producers have 200 hectares already planted. They can top up South Africa's supply of Grapefruit for two weeks during their harvest.

The timing of the grapefruit season in the Gascoyne (August to October) would follow after the USA grapefruit season (January to May) and could top up supply from the South African market with a fresher product.

But, last year Carnarvon's production of grapefruit slipped 36 per cent to 254 tonnes and it appears there could be some trepidation about markets for this product by producers.

Average monthly returns for Carnarvon grapefruit sales ranged from \$20 to \$30/30 litre carton in the major supply months from May to November.

Cucumbers

There were 1025 tonnes of cucumbers produced in Carnarvon last year, slightly down on the previous year, worth an estimated \$2.5 million.

Cucumbers are mainly supplied to market from May to January and last year during this period average monthly prices ranged from 60 cents to \$1.10 each. Highest monthly prices of \$1.35/cucumber were achieved in April when supply was at its lowest.

Melons

Combined Rockmelon, honeydew melon and watermelon plantings represent 19 per cent of the volume of total horticultural production grown in Carnarvon.

This sector has been enjoying good growth, but 2008 melon production fell 44 per cent to 6669 tonnes worth \$6.1 million.

The peak sales period for Carnarvon melons is November to January for rockmelon and honeydew and November to May for watermelon.

Rockmelon and honeydew enjoyed sustained high average monthly returns in 2008, ranging from \$13.50 to \$28 per 15kg carton.

Average monthly watermelon prices ranged from 65 cents/kg to \$1.05/kg.

(insert graph)

Avocado

Avocado production expanded last year to a total production of 15 tonnes – 63 per cent higher than the 2007 level of 6 tonnes.

This fruit is supplied to market from March through to September and average monthly prices last year ranged from \$18.40/6.5kg tray to \$30/6.5kg tray.

(insert graph)

Pumpkin

In 2008, Carnarvon producers grew 2490 tonnes of pumpkin worth \$2 million.

This was a 12 per cent increase in volume on 2007 levels.

There was also 612 tonnes of butternut pumpkin produced last year, a 40 per cent increase on the previous year's level.

It seems pumpkin is supplied to the market almost year round.

Average monthly prices for butternut pumpkin from Carnarvon last year ranged from 40c/kg to 1.34/kg.

Average monthly prices for pumpkin ranged from 40c/kg to \$1.15/kg.

(insert graph)

Stonefruit

Department of Agriculture and Fisheries WA Carnarvon horticulture district manager Tony Kirwan said he also believed there was good potential for stonefruit to be grown in the Carnarvon region.

He said the two existing local growers of peaches, nectarines and plums were able to get fruit into the market in October and November before supply from Gingin started and were the only WA producers to supply at that time of year.

In 2008, the DAFWA production statistics show there were 6182 trays of nectarine sent to market in September and October that returned an average monthly price of \$39.60/tray.

There were 9799 trays of peaches sold from the region in September and October at an average monthly price of \$31.15/tray.

And there were 3873kgs of plums sold at an average monthly price of \$6.60/kg between September and December.

Tony said commercial operators were currently further investigating the potential of stonefruit production on the Carnarvon plantations.

Mangoes

Mangoes are another big fruit crop for the Carnarvon district and last year 1607 tonnes were produced worth \$4.7 million.

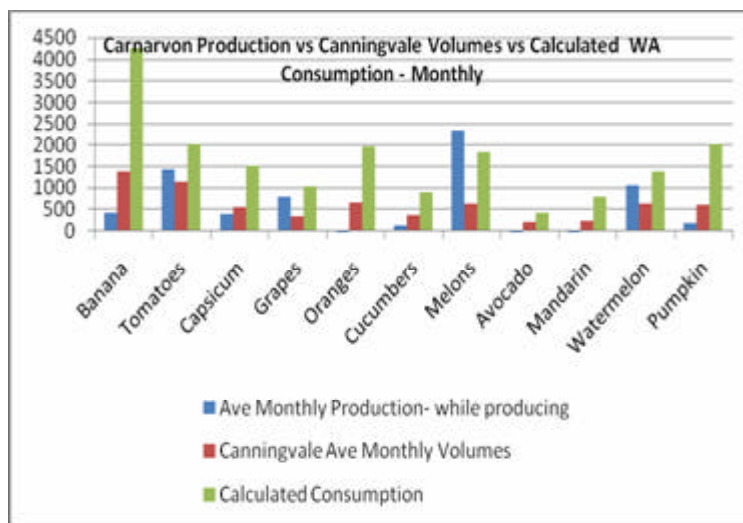
This was a production increase of 24 per cent and a gross value increase of 37 per cent.

The main variety grown in Carnarvon is Kensington Pride and other varieties include R2E2, Zillate, Kielt and Heidi.

Kensington Pride is considered by many to be the industry standard and is most suitable for value-adding into canned, frozen and dried produce.

Locally producers have produced sliced, frozen, leather, dried, chips and wine from mangoes, mainly for the tourist market.

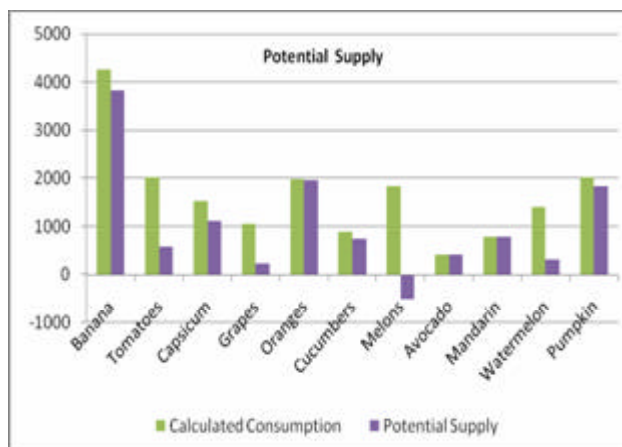
Production v's Volumes v's Consumption of the 11 potential crops (GVAP)



The above chart shows Carnarvon production by month, Canningvale throughput by month and WA consumption by month on the top 11 lines. From this chart we can assume

- Carnarvon’s production as a percentage of consumption.
- The difference between Canningvale throughput and consumption is being met by other producers.
- We can see where there is potential which enables growers to investigate possible strategic advantage. (As part of this, consumer trends need to be considered and Carnarvon may offer strategic advantages through Carbon footprint, low food miles, buy west eat best – local product/ Marketing opportunities)

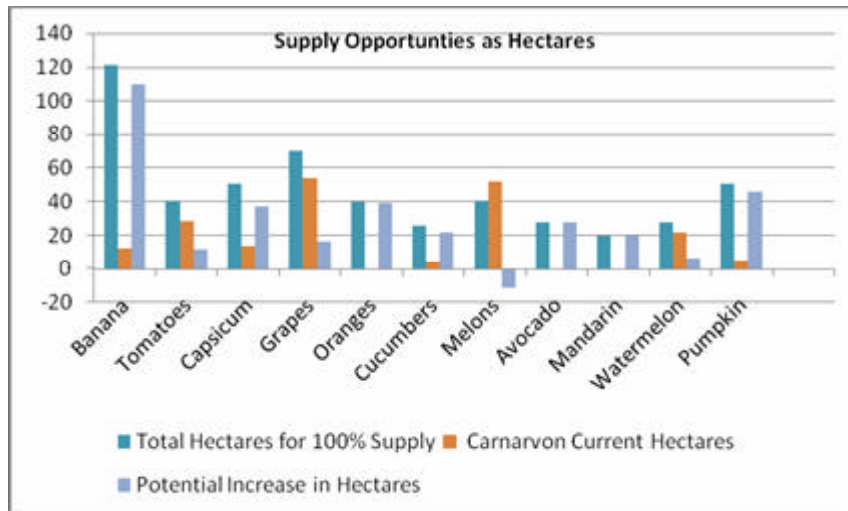
Potential Opportunities for Carnarvon Growers



The above chart shows Carnarvon's shortfall on supply by comparing throughput at Canningvale to overall WA consumption of these lines. What it doesn't take into account is where these products are being grown in other regions of WA and how much of the supply is coming in from other states. With production data from each region of WA, this chart would be a very useful tool to growers as it would comprehensively show where Carnarvon could fill a shortfall in supply in WA's domestic market.

If the above regional information could be obtained, the Matrix could then outline how many extra hectares, growers in Carnarvon would need to farm, to fill the supply gap.

Supply Opportunities in Hectareage



During the process of designing the Matrix, the study team identified two main ways to improve the Matrix functionality for growers, not only for Carnarvon, but other horticulture regions of WA. The Matrix is user friendly and any region could use it to assess and create their own top ten suitable lines. As seen from the above trends in horticulture trade in Australia and the rest of the world, there is opportunity in this industry especially for WA with huge land and water resources. To expose market windows further, a possible extension to this project could be

1. Further investigation into the top 11 lines identified for the Carnarvon region.
2. A systemised approach to the collection of data on WA F&V production, region grown and place of sale.
3. Further investigations into meaningfully reporting & analysing consumer trends. Consumption changes according to seasons, better marketing strategies improve market edges etc.

Marketing of Carnarvon produce

Crops produced on the Carnarvon plantations are primarily grown to take advantage of the region's sub-tropical climate that enables growers to supply produce to the Perth market out-of-season.

The bulk of produce grown in Carnarvon is marketed in Perth – although there has been an increase in sales of produce to the eastern states and overseas markets in recent years.

Distant markets and increasing competition from other areas such as North Queensland, the Northern Territory and Kununurra have forced the need to supply consistent good quality produce from Carnarvon. (Ag dept, Anthony Kirwan)

The vegetables grown in Carnarvon have value-adding potential that could meet consumer demands for convenient foods. (GDC Gascoyne Food Report)

SUPPLY CHAIN ISSUES FOR CARNARVON PRODUCERS

Components of the supply chain

The Australian and WA F&V supply chain includes:

1. Growers or fresh sector producers
2. Consumers
3. Wholesalers/agents
4. Retailers/supermarkets
5. Transporters/storage
6. Importers and exporters

1. PRODUCERS

This report has extensively outlined (above) the current production capability of Carnarvon horticulture producers and potential for future production opportunities.

The GVAP report has identified where producers might be able to control, to some extent, the four marketing variables in the supply chain - price, product, place and promotion – to potentially increase demand/returns for their produce.

Price

Price alone can be influenced for some products. Typically these products are:

- sold at volumes that will not dominate the category and possibly sold separately or in individual packs rather than by the kilogram,
- provide specific benefits;
- in managed supply chains; and
- target consumers with high incomes.

For the higher volume crops, price is driven by volume availability and the need to extract some value from a perishable product before it deteriorates.

The volume and quality produced will be the result of the many decisions of many, often small, growers, and is not highly predictable.

Managing and aligning product volume is a critical component in maximising returns. Mismanaged and/or poorly communicated changes in volumes can erode product values and returns to all stakeholders.

Recommendations

- ➔ Identify products grown in lower volumes with high potential for price influence – niche, specific benefits, targeted at high-income earners.
- ➔ More alignment of producers to increase product consistency and volume.

Product features

Products with greater consistency, improved eating qualities, more suitable portion size and convenience properties have been welcomed and purchased in higher quantities at higher prices.

Tailoring products can increase demand for a particular product and possibly a product category.

Price rises may only be maintained for as long as the first mover advantage is maintained, unless extra value and resource cost is added to the product.

It is clear from this report that big retailers and export markets are seeking differentiated, or value-added products, such as sliced or washed or semi-processed.

This will require new knowledge and technologies to be developed that support private sector development into new value-added products and markets.

Value adding in Carnarvon to date, aside from the three successful collective marketing groups, has generally been in the form of cottage industries specialising in dried, frozen or preserved products.

The GDC report Gascoyne Food report said anecdotal evidence outlined potential barriers to further value adding in the region as:

- lack of capital infrastructure
- lack of suitability of product to be processed
- funding support and resources
- lack of marketing opportunities
- health standard requirements

Recommendations

- ➔ Carnarvon horticultural industry assess crops and markets with potential for value-adding or value-adding to lower quality 'second' grade produce through post-harvest handling, processing, packaging or marketing.
- ➔ Objectives could include:
 - enhancing quality, shelf life and safety of perishable tropical horticultural products.
 - developing generic technology for new and improved processing, manufacturing and marketing methods aimed at the products of tropical horticulture.
 - defining the principles for regionalisation of horticultural production, processing and marketing among horticultural communities to expand markets, extend time of availability of perishable products and improve supply, quality and quality control. (Kirwan report).
 - Investigate opportunities for pulping a wide variety of produce through a central pulping facility or more frozen produce lines, including consideration of cold freight issues.
 - It is possible a full research project is needed to further investigate this area of product development. This may necessitate the Gascoyne Development Commission finding partners, such as researchers, food technologists, marketers to undertake such work.

Place of sale

Products that are conveniently available to consumers are likely to maximise their potential of being consumed.

Large retail channels are attractive because they can be supplied at low cost and maintain products in premium eating condition longest.

But other outlets exist, such as service stations and food service channels.

Limited effort has gone into understanding and developing other channels.

Food services channels are fragmented and complicated but they are taking 'share of stomach' off retail.

Recommendations

- ➔ Investigate other outlets for place of sale, including food service, airlines, restaurants (could be included in scope of previously mentioned research project into product development).

Promotion

Two main forms of promotional activity take place.

Retail promotion

- Retailers tactically advertise often to overcome volume bottlenecks in the supply chain. Sometimes they will do this in connection with suppliers. This is the dominant promotion activity and the main message to consumers about fruit and vegetable availability and value.
 - It can drive increases of up to 200 per cent over normal weekly trading volumes;
 - It is a major influence on consumers switching from one product to another and is used to:
 - communicate seasonal availability, value and a retailer's particular advantage; and
 - reinforce store patronage.
- It is not primarily aimed at incrementally increasing consumption of fruit and vegetables.

Category specific or generic promotion

- Category (brand, variety or product) specific promotional activity is primarily aimed incrementally increasing consumption.
 - It is funded by levies raised from producers.
 - As one example, in the 2006-07 summer-fruit season approximately \$1 million was invested in advertising and the planning aligned the retailer tactical adverts with a wider media campaign.
 - Generic advertising has been sponsored by other stakeholders. Most recent was the Go for2n5 campaign (\$5 million), which was funded by government health sector stakeholders based on the rationale that improved diet translates into reduced health care costs. This campaign was assessed as positively impacting demand.

Effectiveness of promotion and marketing strategies

- Improving quality and consistency, including managing volume supplied to demand, are entry level requirements and without them the scope for the other strategies to impact is limited.
- Innovating and product development work are high risk and expensive. The successes with new plant varieties, the management of new varieties in dedicated supply chains, and the addition of convenience properties have been successful.

- Communicating, packaging, presentation and advertising are required to complement the two strategies above.
- Increasing total domestic fruit and vegetable demand is difficult because consumers switch between products to maintain quality and value due to seasonal availability,
- Increasing total domestic fruit and vegetable demand may require successfully competing with other foods such as snack food.
- Carnarvon had a full-time horticultural marketing facilitator in 2000-01 based at the GCA. This position was responsible for investigating value adding opportunities, identifying new marketing opportunities, facilitating branding of regional produce and developing strategies to improve quality, consistency and supply of product. The position ceased after 12 months.

****(add details of success when I get report Friday)

Main players and degrees of influence

Large retailers are the most influential marketers given their large buying and selling powers.

The larger category managers as gatekeepers are developing increasing influence, particularly given the consolidations occurring in this sector. Fruiterers have some influence within their local catchments and producer groups that have coordinated the larger growers can be effective.

Supermarkets and fruiterers

- The two dominant supermarkets have been the catalyst for many supply chain and marketplace changes. These include:
 - the introduction (via their endorsement) of quality assurance (QA) schemes, direct buying from producers;
 - product specifications and grade standards, duplication in product handling systems;
 - preference of their 'private label' retail brands to be carried on products; and
 - the creation of category managers to coordinate the supply of product from other growers.
- An agreement by a supermarket to purchase a product from a producer and or wholesaler can help increase the viability of that enterprise.
- Supermarket buying decisions, often linked to promotional activity, can set market prices over the short-term. Particularly, with season lines that decrease as volumes increase, and the timing and extent of the reductions in price can have a large impact on producer returns. Longer-term, prices are set by supply and demand.
- Supermarkets are under heavy pressure to deal with a regular spike in demand around evening meal times, which results in long queues and poor shopping experiences. Supermarkets may be losing market share to fruiterers and the food service sector as a result.
- Independent fruiterers are regaining market share and influence in Australia.
- Fruiterers may provide opportunities to offer points of product and market difference along the supply chain but the economies of scale and scope may be limited to those provided by purchasing through central wholesale markets.

The food services sector

- Apart from a small number of large users who have built their own supply chains, food service buyers are expected to deal with product designed mainly for use in retail. But:
 - cafés and restaurants are channels that can introduce and position new products for targeted market segments, although this seldom happens; and
 - usually cafes and restaurants are too small to be influential in driving innovation and marketing of fruit and vegetables - their emphasis is primarily on developing food services.

Wholesalers, exporters and category managers

- Wholesalers and exporters amass small lines of variable quality product and try to develop longer lines of consistent quality for on-sale to supermarkets, fruiterers, the food services sector and in some cases for export.
 - Some are evolving into 'category managers' who may be able to establish the scale to innovate and develop markets.
 - Some are big and have their own supply chains vertically integrated from farm production through to retail.
 - Many are too small to be highly influential and have focussed mostly on trading rather than product and market development.

- As supermarkets have moved toward direct purchase from farms, small wholesalers in central markets have lost market share. The introduction of the Horticultural Code of Practice, which applies only to central markets, is likely to place added restrictions on central market trade, favouring other channels.

Processors

- Processors purchase over a third of all fresh produce in volume terms, but in value terms the share is possibly half this. Nonetheless, they have the scale to be influential in product development and marketing.
- Processing also provides considerable control over product development and marketing relative to fresh products. That said, globally food processing is a highly competitive industry and other countries often have cheaper labour, cheaper produce and larger scale. Only where the regional identity can be easily maintained through processing is their scope for high value adding. The wine industry is an excellent example. Otherwise they face strong import competition.

Producers

- The industry is made up of many small growers.
 - 10 000 produce 18 per cent of output by value.
 - 8000 produce 82 per cent by value.
- Small growers often find it difficult to receive effective demand signals about what consumers want and so have little influence when working alone to be involved in marketing.
 - When working tightly as groups producers can be effective.
 - Alone and un-coordinated their efforts can be counter-productive.
- In recent years larger producers have evolved and scale has proved to deliver advantages. (Woolworths deal direct with 450 growers).
- Producers with the capabilities to interface with those further down the supply chain can understand and meet the demand signals which helps them capture advantages.

Producer associations

- Producer associations add varying levels of value and vary widely by product and industry.
 - Those with widely dispersed and fragmented producer groups can end up devoting considerable resources to the smaller producers. Larger growers look after themselves. This limits what the association can achieve at an industry level.
 - Some have successfully created commercial value often with strong involvement of major producers. Examples are: citrus export program, avocado information, new apple variety development and management.
- For all associations a key role is to influence R&D and marketing program priorities through HAL, but some are limited by the resources of the volunteers on the respective boards/committees.

Researchers

- Researchers' capacity to influence demand is dependent on how linked they are to commercial realities.
 - R&D has developed in institutions that are somewhat separate from the commercial value chain so that accountability for commercial outcomes is not direct.
 - Transfer of deeper demand signals to researchers is not strong.
- Some research has focused on improving domestic supply in protected sectors, such as extending supply into the off-season. However, as trade barriers are removed this research may become redundant with international producers meeting the gap.
- Of particular concern to the Carnarvon Horticultural industry is the fact that DAFWA lost 186 positions in the 2009 budget cuts. This suggests future research and development in the region will rely heavily on commercial investments.

Examples of successful increases in demand

- Pink Lady™ apple - a new plant output (Cripps Pink) that has been managed via controlled supply chains.
- Prepacked lettuce and easy peel citrus - convenience properties added to products.
- Several product variants in tomatoes - range depth.

Sustainability of success

- The examples above are easier to achieve on a small scale within a category, but on a large scale, cannibalisation of sales of other fruit and vegetables occurs on the domestic market. This points to a need to try and compete with other foods such as snack food.
- The scope to achieve volume increases on the domestic market alone is limited. The scope to add and capture value on existing volume may be more likely on the domestic market.???

Recommendations

- Consider ways to improve quality and consistency, including managing volumes supplied to market – as this is the KEY to any successful promotion and marketing.
- Further investigation of direct promotional opportunities with independents, local fruiterers or service sector such as restaurants, cafes etc.
- Consider creating stronger relationships with wholesalers and exporters who amass small lines of variable quality product and try to develop longer lines of consistent quality for on-sale to supermarkets, fruiterers, the food services sector and in some cases for export. Some of these agents are evolving into 'category managers' who may be able to establish the scale to innovate and develop markets.
- Investigate processor relationships, but look where the regional identity can be easily maintained through processing as this is their scope for high value adding. The wine industry is an excellent example. Otherwise they face strong import competition.
- Investigate opportunities where working tightly as a group will be possible, as this will be most effective.

2. CONSUMERS

Consumer demand trends and price drivers

The Australian fresh F&V supply chain successfully provides Australian consumers with a big choice of F&V year-round.

Economic conditions, social and demographic factors and changing lifestyles are the main drivers of F&V consumption.

Three major trends in consumer preferences are now influencing the demand for F&V by Australian consumers:

- * convenience – ready to eat products such as sliced fruit, fresh cut and washed salads, ripe and ready to eat avocados.
- * experience – enjoyment of products with superior taste or appearance.
- * wellbeing – healthy products and products that give consumers satisfaction in being; home grown, meeting diet requirements, organic or produced in a socially responsible manner etc. (Rabobank)

Fresh fruit and vegetables are the most frequently purchased, freshest items in the shopping basket.

Australian households spend about 2.3-4.5 per cent of their after tax incomes on F&V, evenly split between fruit and vegetables.

Apples, pears, bananas and citrus make up 37 per cent of fruit consumption and potatoes and tomatoes are the main vegetables consumed.

It is estimated that 30 per cent of Australian supermarket shoppers buy their fresh produce outside of the supermarket system.

It is expected domestic demand for F&V will expand by about 3 million people by 2020.

But a key factor for growth of the industry is the potential for an increase in consumption over and above population growth.

Australia's F&V per capita consumption of 199kg per year is relatively low compared to other developed countries such as Italy at 298kg, New Zealand at 250kg and the US at 246kg. This suggests there is good scope to increase Australian per capita consumption levels. (Rabobank)

(could insert Rabobank consumption pie charts here)

In April 2005 the Australian Government, recognising the importance of healthy eating and supported by the industry, launched the \$5 million Go for 2&5@ Campaign, which encourages consuming 2 serves of fruit and 5 serves of vegetables per person every day^[6].

The scope to achieve volume increases on the domestic market alone is limited as it is a relatively small market with declining population growth.

The scope to add and capture value on existing volume may be more likely on the domestic market.

Increased consumer spending on F&V is largely expected to be driven by better range and availability of produce and an increased focus on health and nutrition in food.

Time-poor consumers are driving the need for more convenient products and shopping locations and their expectations continue to rise, wanting high quality alternative health and snack food options.

There is a challenge for the fresh produce sector to retain consumer loyalty, especially with young people, as there is a wide array of new health, snack and other product alternatives available on the market and supported by highly competitive marketing.

(DAFF, price determinants report)

Latest Australian consumer trends to impact on horticulture, as reported in the Nielson Grocery Report in spring 2008 found:

- Australian consumers are more optimistic than most across the globe – ranking 8th globally in Nielson's consumer confidence index in Nov 08.
- Consumers in Australia are still heavily in debt and the trend is away from discretionary spending on food in cafes, restaurants and take-away back to supermarkets in the past six months as families opt to 'eat-in'.
- Overall national retail sales growth has been subdued at 5.6 per cent in the 12 months to August 2008.
- Reduced petrol prices in early 2009 was anticipated to prompt some recovery in retail spending, but real recovery in grocery sales growth may be slowed by increasing costs of food on the back of product shortages and pricey raw materials.
- The supermarket sector has increased its 'share of stomach' sales, but overall packaged grocery sales have been trending down because of economic conditions and general belt tightening.

Recommendations

- ➔ Consider these trends at a local level
- ➔ Discuss potential for health/nutrition/convenience products to be developed and marketed from the region.

3. WHOLESALERS AND AGENTS

Fresh produce wholesalers in Central Markets play a key role in price setting and distributing F&V product to food service and retail channels.

Nationally there are six Central Markets, including one in Perth, that provide the industry with:

- 400 primary wholesalers/marketers
- total throughput worth around \$6.5-7 billion
- total throughput volume of about 4 million tonnes
- more than 11,000 employees nationally
- more than \$1 billion investment in the industry by market owners and tenants.

(Rabobank)

Market City, WA

In WA the Perth Market Authority (PMA), a WA Government agency, is responsible for the ownership and management of Market City, the State central market.

Market City was established at its current site in Canningvale in 1989 and more than \$350-450 million worth of fresh produce is traded through the central trading area annually.

The market has about 600 customers, including major supermarkets, independent supermarkets and food service, catering and producer suppliers.

There are 23 primary wholesalers and 30 secondary wholesalers, providers, distributors and food processing facilities.

Spokesman for the PMA, Peter Cooper, said a database was being developed whereby groups such as the Carnarvon Growers Association could access data about volumes of individual fruit and vegetable lines being traded through the markets weekly, monthly or annually and the region or State this produce was coming from.

He believed the database would be ready for use in July this year and CGA could apply to PMA for the specific information required.

This could be beneficial for further analysis of the 11 potential suitable lines identified in the GVAP report – enabling collection of data about where competitors are and what times of the year they are supplying to the WA market.

Peter said it was difficult to determine what percentage of total WA fruit and vegetable production was marketed through Market City and what percentage was sold direct to retailers, mainly because of difficulties knowing how much produce Coles and Woolworths bought through the markets.

Nationally, it is estimated that about 95 per cent of Australia's F&V growing establishments supply product to a Central Market, making it an integral and competitive component of the fresh F&V supply chain – where an estimated 25 million transactions take place every year.

It is estimated about 2/3 of total Australian F&V production passes through this sector.

Recommendation

- CGA apply to PMA after July 2009 for information on volumes, prices and areas of origin for F&V being traded through the markets to identify supply gaps and benchmark where their produce 'sits' in the market in general.

Wholesale pricing through central market systems:

Wholesale price setting is not set up to pay the highest value for best quality, but to clear all produce supplied.

This frequently creates demand aberrations, for example where over-supplied or poor quality produce become in demand through short-term price discounting which then flows through into the retail product.

A major weakness of this system is the lack of discipline that is sought by the supplier to the market and the general lack of complete information as to the supply and satisfied demand at any point in time.

Market pricing is therefore open to manipulation by the intermediary and to a lesser extent by the major buyers due to the lack of total market visibility.

A major fresh food market is a place for the well informed buyer and seller in this day and age, otherwise participants are exposed to price/return risks, regardless of product quality. (DAFF price report)

Impacts for producers

A lack of accurate quantitative data from the Central Markets system inhibits the ability of the industry to direct its marketing resources according to the importance of its different channels. (Rabobank)

A lack of visibility of market conditions is a key inhibitor in the development of fresh food supply chains where central markets have a key role.

Despite the increasing role that direct supply is playing with big retailers, fresh wholesale markets continue to play a central role in enabling buyers to manage quality, volume and risks.

Central markets operate with limited visibility which prevents producers, retailers and wholesalers optimising value by matching supply to demand.

Poor industry information about price, demand and supply volumes and a 'cash only' mentality among many buyers and agents undermines attempts to improve the functionality of wholesale central markets, better price signals reaching producers to meet demand for produce and achieving rewards for providing quality production to meet consumer requirements.

Such central markets remain dysfunctional and volatile and are structured to clear supply, rather than match supply and demand.

Industry will need to drive changes to central marketing systems, as it is outside the scope of Government.

Modern trading conditions at central markets requires producers to have high presentation and quality of produce, as well as good knowledge of market conditions prior to time of harvesting and packing.

Producers need to have a close relationship with the traders working on the floor as well as having one or more options for sale of F&V to the retail market.

Suppliers to central markets can opt to seek any one of a number of positions regarding the sale of their produce – from top to poor quality supplier – and this can have a major impact on their returns (insert p59 from DAFF pricing report) (DAFF price report)

Recommendation

- Does the Carnarvon Horticultural industry want to be involved in driving changes to central marketing systems. Discuss the way forward.

A wholesale marketing agent perspective - WA

FreshExchange, a division of major Australian fruit and vegetable distributor CostaExchange, is the biggest WA fruit marketer operating out of Market City.

The company sources and markets about 50 per cent of total table grapes and 50 per cent of total Bananas produced in Carnarvon.

It has developed a strong relationship with Sweeter Banana Co-operative during the past 68 months, resulting from an invitation to assist the group's marketing sub-committee.

Company representative Ben Tanner said the company had quickly recognised a good opportunity to work with Sweeter Bananas to develop its markets further and resigned from the committee to do so.

He said FreshExchange was able to use its strong relationships with the big supermarket chains to benefit Sweeter Banana Co-operative members with increased sales.

FreshExchange is assisting Sweeter Banana with brand development and feedback about quality.

It has sent its marketing manager to Carnarvon to develop a good understanding of the supply process and is continually looking at ways to improve the brand in the market and develop new lines for differentiated products. This month saw the successful launch of the Smoothie banana for 'marked' fruit.

Ben said prices for Sweeter Banana fruit were structured and clear for the benefit of both producers and buyers.

He said prices were negotiated weekly and agreed-to and fixed before product was sold.

FreshExchange has been handling Carnarvon-produced table grapes during the marketing season between November and January for the past five years.

Ben said the company worked closely with grape producers during picking to assess quality and has been assisting its customers to get a more direct supply from Carnarvon growers.

Ben said FreshExchange mainly dealt with fruit in WA and he said there were many products with potential for increased supply out of Carnarvon – mainly citrus, stonefruit and avocados.

"Citrus, especially, has huge potential with the increasing demand for product and high costs associated with bringing oranges in from Queensland," he said.

"It costs about \$8 per box to transport oranges from Queensland, compared to less than \$1 per box to get fruit here from Carnarvon."

Ben said his company preferred to deal with growers who had control over their product and were quick to make decisions.

"We tend to deal with bigger growers and we only deal with Quality Assured growers," he said.

"We sometimes deal with grower groups or co-operatives such as Sweeter Banana, but they tend to have marketing committees that will make quick decisions – that is imperative.

"The success of our business tends to rely on using bigger suppliers who control their own destiny."

Ben said he believed it was a positive step for Carnarvon producers to look at the potential for a regional brand exploiting the benefits of produce grown in the region.

He said this was mainly due to a trend from the big supermarket chains to source and promote locally-grown (ie. WA) product.

"We are getting good feedback from supermarket and store buyers on produce labelled as grown in WA," he said.

"Coles is leading this push more aggressively than Woolworths, which is taking a more national approach," he said.

Ben said he believed Carnarvon had a quality advantage with its horticulture produce.

He said in the table grape sector this arose from very disciplined grading systems to meet the quality standards set down by customers, as well as the product being high standard.

With bananas, there was a demand-pull from a national shortage of supply and increasing demand for locally-produced product.

"Customers are actively seeking locally produced bananas, rather than those grown in Queensland," Ben said.

Key messages from the wholesaler:

- high volume supply of consistent quality product is necessary for a direct relationship with a wholesale agent
- Grower co-operatives can work if they are cohesive and quick to make decisions
- Individual suppliers of big volumes are preferable to deal with
- Quality assurance is essential
- Regional brand seen as a positive step as a result of retailers increasingly aiming to source and promote locally-grown fresh produce
- Potential is there for more citrus supplies from Carnarvon

4. RETAILERS - SUPERMARKETS

The consolidation of the major food retail chains puts them in a powerful position in comparison to their F&V producer suppliers – not only in regards to price and trading terms negotiations, but also in terms of requiring specifications such as just-in-time delivery, quality, uniformity, packaging, food safety and corporate social responsibility. (Rabobank)

Producers are impacted by supermarket activities such as:

- Promotional activities for processed foods that are dominated by companies with global scale and extensive brand synergies over other categories.
- Requirements for high production volumes, especially for products viewed by consumers as alternatives.
- Increasing competition that reduces the price of fresh food.
- Increasing use of loyalty schemes.
- Commoditisation of basic core grocery lines.
- More direct supply chains to control quality and cost in the fresh food segment.

(Dept AG, Fisheries and Forestry, Price determination in the Australian Food Industry & GVAP report)

Fresh F&V is increasing in importance to supermarkets as consumers seek out better quality produce. Ability to source quality F&V has become the most important factor in consumers choosing which retailer to shop at. (Rabobank)

The two retail giants in Australia – Coles and Woolworths – dominate the national supermarket supply chain and typically source about 50 per cent of their fresh F&V requirements directly from growers and the remainder from wholesalers.

If they are direct suppliers, growers are typically able to negotiate on a weekly, seasonal or year-to-year basis the volume of product with certain specifications – such as size, shape, colour and weight – they will supply.

When sourcing produce, retail chains generally:

- demand year round or good seasonal supply
- emphasise logistics factors
- require different supply chain models for each particular product
- are more relationship-driven than transaction-driven
- have developed some supply contracts directly with growers
- focus on preferred suppliers
- search for higher-margin products
- emphasise tracking, tracing and labelling systems.

(Rabobank)

Retail pricing:

Retail prices are influenced by the seasonal costs of supply and the level of spending by the consumer, who is sensitive to the cost of fresh food items going into their shopping basket.

Retailers seek a target margin to achieve corporate/business targets and cover losses associated with spoilage, clearance discounting and labour in presenting fresh food.

Retail prices are influenced also by wholesale prices set in the fresh wholesale marketing system. These prices are generally used as a reference when producers supply direct to retailers.

Supermarkets maintain significant facilities in wholesale markets to support procurement and distribution of many major F&V lines as it suits their risk management in terms of cost, security of supply and quality. They will continue to do so until direct supply arrangements can provide the same security of quality, volume and cost.

Supply is the largest price driver for F&V and varies with seasonal crop output, fruit size, climate/storm damage, pest/disease damage and perishability. (DAFF pricing report)

Impacts for producers

As rising input costs and retail concentration become more significant, economies of scale are critical for sustainability of production enterprises.

Horticultural enterprises are increasingly growing in scale and diversity of production and a significant level of vertical integration has been occurring as growers also become packers, marketers, importers and exporters of their own and third parties' produce and wholesalers have an increasing financial interest in production as well as business investment in the food service and retailing sectors. (Rabobank)

Recommendation

- ➔ As more fresh produce volumes are being bought direct by supermarkets and retailers, discuss the increasing pressures on producers to enhance their product and varietal differentiation, information and supply management systems and how this could be achieved.

A supermarket buyer perspective – WA

A WA trading manager with one of the major supermarket chains was happy to provide comment to this report, but did not want to be identified.

His company spends about \$120 million annually on WA grown fresh produce.

It has a preference for sourcing product grown in this State where possible and about 80 per cent of its purchases of F&V are produced in WA.

The trading manager said there was definite potential to grow that figure and Carnarvon producers could be part of that expansion.

This major retail supermarket sources about 40 per cent of its weekly F&V purchases from the central market system, which includes purchases through consolidated agents/buyers who deal direct with growers.

The trading manager said the 60 per cent of produce sourced directly from growers was an increasing trend.

“We prefer direct buying because the quality is consistent and it is easier to control supply,” he said.

“We also get a strong commitment from producers and we can better strategically plan production with our suppliers.

“We can sit down with growers and look at base volumes, future production and growth potential.”

The trading manager said negotiating prices with direct suppliers to the supermarket used the central market as a price reference point.

He said the company’s prices needed to be competitive with the market but it recognised that growers needed to make a profit also.

He said the company had to allow for some flexibility and re-negotiation in its system.

This supermarket tends to deal with producer groups or small groups of suppliers growing the same product rather than with individual producers, mainly to ensure sufficient volume and staggered supply of product.

The trading manager cited the Sweeter Banana Company as the best example in WA of a collaborative marketing approach, incorporating the producer group, the retailer and the consolidated agent.

He stressed the importance of the third-party agent in this process, saying it improved the working relationship of the supplier and the seller.

“It is exactly the type of relationship we want to develop with other products,” he said.

But he warned that such relationships would probably not add value to the supply chain for F&V staples.

“Rather, we would be concentrating on mid-tier and premium product lines - which may have been traditionally bought through the central markets - to go down that path,” he said.

“Such a move would require efficient supply and improved quality – where quality is not necessarily related to appearance or aesthetics, but could focus on flavour or juiciness.

“An example of this is the recent move by Sweeter Banana Company into ‘Smoothy’ bananas that are not first grade, but have targeted a specific market.

“The response to this product has exceeded everyone’s expectations and supply can not keep up with store orders across the State.”

The trading manager said Carnarvon could capitalise on this potential, but generally, growers in the region needed to concentrate on overcoming inconsistencies in produce quality and supply and overcome a mentality of ‘best price’ supply.

“Growers really need to have a clear understanding of where they want to go and look at developing clear strategic relationships for the long-term,” he said.

The trading manager was enthusiastic about development of a regional brand for Carnarvon fresh produce, if the produce to be supplied was supplied consistently and had consistent quality.

“We would support and want to get involved in such a move and promote Carnarvon if there was a commitment by growers to make improvements and put the branding behind them,” he said.

“Such branding is something our company would certainly take all the way through to the consumer, who is increasingly seeking locally-grown fresh produce.”

The trading manager said there were opportunities for value adding and product differentiation through his supermarket company, but he stressed Carnarvon growers needed to concentrate on getting the basics right for consistent supply of good quality produce.

Key messages from the retailer interviewed for this report

- There is potential for Carnarvon producers to participate in a growing supermarket trend to buy more produce grown locally in WA.
- Percentage of direct supply relationships is increasing.
- Preference is to deal with small groups of producers.
- Sweeter Banana Company-type relationship for products that can be differentiated viewed as ideal.
- Efficient supply and consistent quality essential – Carnarvon industry needs to improve in this area.
- Development of a regional brand viewed as very positive – as long as there was consistent quality of supply.

5. TRANSPORTERS AND STORAGE/PACKING

High costs and low accessibility to transport are restrictive for Gascoyne producers, especially to export markets.

Carnarvon airport is not suited to export freight from the region, but any future upgrades could have this as a priority. An alternative could be Learmonth airport.

Road transport in the region is tightly controlled by one operator, Gascoyne Gold, which also has a monopoly on Carnarvon's two packing sheds and coldstores in the region.

It appears all transport systems need to be further developed to assist with any major future expansion of the horticultural precinct in Carnarvon to improve profitability.

Recommendations

- ➔ Ensure Carnarvon Shire is aware that export freight is a high priority when it considers any upgrade of Carnarvon airport.
- ➔ Back this up with further research into markets, volumes and times of year to identify peak periods and potential freight volumes.
- ➔ Alternatively, there could be Investigations into the use of Learmonth airport as an export freight base.
- ➔ Further investigate other transport operators being attracted to the region.
- ➔ Discuss any problems/issues with efficiencies or quality that need identifying and addressing that could be looked at in supply chain workshop sessions/talking with individuals?

6. EXPORTERS AND IMPORTERS OF FRESH AND PROCESSED PRODUCTS

It appears Carnarvon-produced table grapes and mangoes are the only fresh produce to be exported from the region and it appears these are marketed through agents in Perth, not sold direct into the export market.

A joint GDC and Austrade initiative provides the Gascoyne region with the Tradestart program.

This is designed to help Gascoyne businesses develop their manufacturing and export potential.

It can help companies venture into and establish business relationships overseas and reduce the risks associated with developing an internationally-focused business.

(GDC Gascoyne Food Report)

Key import competition is increasing from New Zealand, especially with apples, and South East Asia, with pineapples and bananas.

(DAFF, price determination report)

Recommendation

- ➔ Consider what, if any, products could meet niche, counter-season or volume export market requirements and assess potential for development using programs such as Tradestart.

Regional Branding opportunities

Regional branding is not a new idea to WA and there are many successful examples.

One of the aims of regional branding is to establish a regional, national and –sometimes – international reputation for products that possess or offer a unique flavour or characteristic.

Progress Rural WA ran a series of regional branding workshops, food events and forums in 1999-2000 but the program finished in 2001.

Sweeter Banana Co-operative is the major example of successful branding carried out by Carnarvon producers. Love Apple and Gascoyne Gold also undertake group marketing successfully and are helping to build a strong profile for Carnarvon produce.

But is branding a dated concept for fresh produce?

Discussions with the central wholesale marketer interviewed for this report found he believed branding of Carnarvon produce was a positive move, mainly because it identified produce as locally (WA) grown.

The retail buyer interviewed was also very supportive of a regional brand for Carnarvon produce, but stressed the need for it to be based on quality and consistency of product.

With the increasing push by retailers to promote local produce, it could be argued that a label identifying product origin as WA or Carnarvon-grown will provide strong marketing benefits.

Recommendations

- Discuss the product 'candidate' products for a regional brand.
- Determine from interviews and workshops the local support for developing a regional brand and who would lead this process.
- Maybe further investigation into past work is warranted?

Tourism opportunities

It is estimated that there are around 900,000 tourists visiting the Coral Coast annually and Carnarvon is often referred to as the 'food bowl' of the north west region. (GDC report Gascoyne Food).

The connection between food and health, food and culture and food and tourism is becoming more understood and regional centres are developing initiatives that provide benefits for their local and visiting populations.

The Gascoyne Development Commission is preparing a proposal for a food trail using local produce to tie-in with tourism and hospitality in the Gascoyne region.

There could be other opportunities for agro-eco-tourism that could offer significant opportunities for the development of market niches based on new food and nutrition experiences for the tourist consumer and new educational experiences by exposure to various agricultural production systems. This could include plantation visits, food trails, nature trails, parks, gardens and golf courses (Kirwan report)

Carnarvon has a diversity of cultures, including Aboriginal, Vietnamese and Croatian, with their own food preparation and consumption habits driven by interesting customs and beliefs.

These cultural advantages could be used effectively with fresh produce to appeal to local residents – helping to build an identity connecting them to their region – or to tourists.

There is an increasing consumer trend to travel to seek out regional products first-hand and in many cases the local food production is putting the region 'on the map'.

Recommendations

- Discuss involvement by horticulture producers in GDC's proposed food trail.
- Investigate other opportunities for food and tourism and food and culture.

North West supply opportunities

There could be potential marketing opportunities for Carnarvon producers distributing and selling fresh produce to communities and mining operations in the north west.

This may require partnerships with independent retail operators or mining companies and the aim would be to increase supplies to the entire north west region.

Such a strategy would be likely to necessitate further investigation into potential volumes of supply and transport methods, as well as production issues such as potential for consistency supplying the necessary volumes of product needed at a good quality.

This may necessitate a market floor system, or may be carried out through direct sales with customers.

Limitations/risk factors to potential future F&V supply from the Carnarvon horticultural sector

WATER

Groundwater in the aquifer systems of the Lower Gascoyne River provide a permanent water supply for Carnarvon's potable water, horticultural industries and dependent ecosystems along the river.

Carnarvon's climate of high temperatures, high evaporation and seasonally variable rainfall contributes to the vulnerability of these groundwater resources to excessive pumping between periods of river flow.

Regular river flows are needed to recharge the aquifers.

Horticultural plantations have a private draw from Basin A and the Gascoyne Water Cooperative distributes water licences from Basins B-L.

According to the Department of Water's strategy for 'Managing the Groundwater Resources of the Lower Gascoyne River (Carnarvon)' report, when the river ceases to flow, the storage of groundwater in the total system with a salinity of less than 500mg/litre total dissolved salts is conservatively estimated at 340,000 megalitres (ML).

The report says the sustainable yield of the system has been estimated by modelling as 18,000ML/year.

The Department of Water started a review of this strategy in June this year to re-assess management guidelines for the Lower Gascoyne.

The first stage has been to model the limits of groundwater in the aquifers and undertake scenario planning for sustainable water use limits during periods of drought and climate change.

This modelling has almost been completed and the information will be used as part of the Gascoyne Foodbowl Initiative.

*Gascoyne Foodbowl Initiative

This initiative comprises a ministerial reference group made up of the Departments of Water, Agriculture/Fisheries and Land, a local consultative committee and the Carnarvon Artesian Basin group.

These groups are investigating the issues surrounding expansion of the Carnarvon horticulture precinct.

Such expansion is limited by water availability and the cost of providing water to growers.

The Foodbowl proposal is currently awaiting Cabinet Approval to be submitted for funding consideration under the Royalties for Regions Program.

Since 2001, DAFWA and the Department of Water (DoW) have been conducting investigatory drilling and bore construction on the northern side of the Gascoyne River. The results of this program indicated there was an extensive area of groundwater of irrigation quality on the northern side of the Gascoyne River.

The Department of Water is currently considering an application for 4 gigalitres of water from the northern side of the Gascoyne River for the further development of the Carnarvon horticultural irrigation industry. In addition DoW have indicated that they are considering release of a further 3.6 Gigalitres within the current allocation plan which suggest that with both allocations there is potential for 7.6 Gigalitres (equiv. 800ha) for future expansion.

At the same time, the Gascoyne Water Cooperative (GWC) has been investigating opportunities to replace the existing irrigation distribution scheme with a new scheme of greater capacity. DAFWA recognises that the development of new water resources must be accompanied by an upgraded distribution scheme and therefore see the two projects as intricately linked.

The expansion of the Carnarvon Horticultural Precinct (both infill and additional land) is reliant on 1) an upgrade to the distribution scheme and 2) the development of a borefield on the northern side of the river.

- 1) The upgrade of the Gascoyne Water Cooperative's (GWC) distribution system to cater for the increased volume is estimated at \$20 million. With the Federal Government commitment of \$6.6 Million and \$3.4M contribution from GWC the funds sought from the State Government will be in the order of \$10 million. The previous government recently appointed a working group (led by GWC with DAFWA, DoW and Water Corporation) to develop a business case for this upgrade and this should be presented to Government late November 2008.
- 2) The feasibility study undertaken by URS indicates the proposed northern borefield, supply pipeline and farm layout/headworks have been estimated to cost \$15 million.

The feasibility study that reviewed the impact of the proposed additional 4 Gigalitres of water from the northern borefield indicated it would create \$20 million in gross value of agricultural production (GVAP) per year - an increase of about 30 per cent - and 200 jobs with concomitant knock-on multipliers.

By simple extrapolation if the additional 3.6 gigalitres was released from within the current allocation plan this would see the GVAP figure expand by an additional \$20 million to a total of \$40 million from the proposed 7.6 gigalitres.

Issues

- The initiative needs to work across government, including Departments of Environment, Water and Planning and Infrastructure as well as the Gascoyne Development Commissions.
- Public debate has been somewhat divided regarding the potential impact of further development on the Carnarvon horticultural industry.
- Some growers have expressed concern that additional development will result in competition that may adversely affect the price of Carnarvon produce on the Perth market.
- There was originally a concern that the extraction of additional water (from a northern bore field) may impact on the existing groundwater extraction area that provides town and horticultural scheme water to Carnarvon. This concern was a primary focus of the exploratory and modeling work, resulting in advice that extraction from the northern resource would **not** affect the existing groundwater extraction area.
- Other growers are keen to embrace the opportunity for expansion and development of their businesses.
- DAFWA recognizes the concerns of growers who believe additional competition will negatively affect their profitability. However DAFWA is also cognisant of a number of key factors that negate this concern logically if not emotionally, including:
 - The competition for Carnarvon growers will come from many areas and sources not just those related to the immediate geographical area.
 - Carnarvon growers do not have the capacity to constrain development in other areas that will in time compete with their produce.
 - There is significant interest in the development of new products in the Carnarvon area including stone fruit, avocados and more bananas.
 - The table grape industry that is now a significant component of the Carnarvon Horticultural industry did not exist 15 years ago and DAFWA is confident that new opportunities will be explored and developed in the Carnarvon horticultural area, just as table grapes were.
 - Increased scale provides for the opportunity to develop collaborative efforts such as central packing facilities and cooperative's. This is evidenced by the Sweeter Banana Group improving the position of the Carnarvon horticultural industry with further potential to increase the demand for quality produce from the area.

LAND

There is a Carnarvon Artesian Basin Group assessing potential for horticultural expansion on pastoral properties in the Gascoyne.

Areas of land available for possible expansion have been identified at Meedo and Brickhouse stations , but any development would be dependent on water quality and availability.

There is some resistance from some growers whether these areas should be developed.

There is a perception that expansion of horticulture industry will over-supply already flooded markets and result in falling returns for existing growers.

And there is a view that a big area of the horticultural precinct in Carnarvon (almost half) is underutilised and should be used before more land is opened up.

DAFWA has been involved in planning and opening 40ha of table grapes and citrus at Wooramel, 100km inland from Carnarvon. (ag dept – Kirwan)

A tender for production at Meedo station received minimal response and Brickhouse station is yet to start any trials or commercial production.

The GVAP report suggested there was big potential to develop the Meedo Horticultural Precinct, 200km from Carnarvon by road and 140km by air.

It said the station represented an opportunity combining an excellent land resource and a large groundwater aquifer of good quality water, together with an ideal climate for producing high quality Ruby red Grapefruit.

As described above, GVAP researchers said they believe a market niche is available for grapefruit to Japan. It is potentially a large high valued market and an orchard in the Gascoyne region would complement the supply timing from Western Australia.

The inland site at Meedo has better greening qualities due to lower chill factors allowing better quality (appearance) fruit that will be imperative for the Japanese market. To some extent this may be a vital market edge and may present a higher-valued branding opportunity. (GVAP)

WEATHER

The Gascoyne climate can cause wind and sun damage to crops, especially citrus, bananas, mangoes and exotic fruits, downgrading quality and price. (ag dept – Kirwan)

Climate Change – scientific consensus is that global temperatures are rising and the implications are likely to be increased temperatures and changing rainfall patterns. Particular risks for horticulture include potential for heat stressed and sunburnt plants, diseases that remain active for longer periods, higher insect infestations and a shift in growing regions as temperature ranges move.

Industry is investing in R&D to provide a wider range of varieties suited to the expected conditions of higher temperatures and less water availability.

TRANSPORT

As mentioned above, high costs and low accessibility to transport are restrictive for Gascoyne producers, especially to export markets.

Carnarvon airport is not suited to export freight from the region, but any future upgrades could have this as a priority. An alternative could be Learmonth airport.

Road transport in the region is tightly controlled by one operator, who also has a monopoly on packing and coldstores in the region.

All transport systems need to be further developed to ensure any expansion of the horticultural precinct in Carnarvon will be profitable.

R&D

Is there a renewed effort needed with R&D priorities, aims and consultation with growers?

Ag Dept has proposed a review of the Gascoyne Horticulture R&D Plan, with priorities on mangoes, bananas, grapes, citrus, bio-fuels, longans, stone fruit, dragon fruit, wheat and sandalwood. (ag dept – Kirwan)

Current trials and R&D – bananas in the shade, screening of fruit under netting, gm veg????

Research efforts continue into non-indigenous pests to deal with potential threats to prodn.

LABOUR

Australian horticulture is labour intensive and seasonal in nature, with the industry employing more than 100,000 people (20 per cent of the total employment in agriculture).

It is estimated Australia currently has a 22,000 shortfall of seasonal workers, likely to get worse with an ageing population.

Although the recent burst of the mining bubble in WA may alleviate some of this problem for local agricultural industries.

HIGH INPUT COSTS

Horticulture is an input-intensive industry, with labour, fuel, crop protection products, fertilisers and plastics costs largely driven by petroleum prices.

While the global financial crisis has resulted in a rapid decline in oil and fertiliser prices, horticulturalists are still dealing with higher costs for labour, packing, water, compliance and other services such as wrapping, bin and pallet hire.

Necessary refrigeration transport also pushes up costs and there is a limit to which producers can pass on the full extent of these price rises to consumers before demand starts to fall. (Rabobank)