Cauliflowers in Western Australia - an industry plan

Paul Mattingley

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Cauliflowers in Western Australia
Compiled by: Paul Mattingley
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Horticulture Australia

Warren Cauliflower Group
CHAPTER ONE – ASSESSMENT OF THE CURRENT CAULIFLOWER INDUSTRY

1.1 A snapshot of Cauliflowers in Western Australia

Location

The Western Australian cauliflower industry is largely centered around the south-west of the State which, with its cool winter climate and medium to heavy loam soils is well suited to year round cauliflower production and accounts for 77% of State’s output. The Shire of Manjimup alone accounts for about 60% of the State’s cauliflower production. The second most significant region is the Swan Coastal Plain which has lighter soils, and a warmer climate. The Swan Coastal Plain is also suitable for year round production.

Source: Australian Bureau of Statistics

Comparative advantage of the West Australian Cauliflower industry

High quality product – market analysis indicates that West Australian cauliflower, whilst appearing more expensive than produce from the Eastern States or the USA and China, benefits from a quality advantage. This quality is in high demand in South East Asian markets.

Technological base – on-farm technology and management together with cool chain management facilities such as cool stores and refrigerated transport ensure the perishable cauliflower arrives at the market place in good condition with a long shelf life.

Year round reliable supply – production from the south-west of Western Australia is heaviest from October to April whilst the Perth region has peak production from April to December.

Export orientated industry – the industry benefits from good transport facilities including the State’s extensive sealed roads, a modern port in Fremantle and Perth’s international airport. The limited domestic market has lead to the horticultural industry being export focused.

Proximity to main export markets – Western Australia has good transport links to markets in South East Asia. As a result there are already established relationships with importers in Singapore, Malaysia, Hong Kong and throughout the region which benefits cauliflower exporters.

Production

Cauliflower production in both volume and value terms, has increased in Western Australia over the past 30 years, particularly in the south-west of the state.

In 1999, Western Australia produced nearly 30% (21,000 tonnes) of the total Australian cauliflower production of 73,000 tonnes per annum. Victoria produced about 22% of the nations output with NSW and Queensland producing 15% – 20% and Tasmania and South Australia producing 6% – 7%. Cauliflower exports are dominated by Western Australia, which supplies nearly 90% of cauliflower exported from Australia.

Yield

Yields appear to have declined over time. The decline in yield is in part due to growers focusing more on export market requirements with changes in varieties being grown, management and harvesting techniques.

In contrast average world cauliflower yield has increased by about 25% over the past decade.
PRODUCTION

Area of cauliflower production in the South West of Western Australia

Source: Australian Bureau of Statistics

Cauliflower Exports by State

Source: Australian Bureau of Statistics

YIELD

Cauliflower yields in the South West of Western Australia

Source: Australian Bureau of Statistics
Markets

Australian per capita consumption of cauliflower has fallen since 1945. Whilst this has been offset by slight population growth, domestic demand will most likely remain static. The Eastern States market is well supplied by local growers. Western Australia’s cauliflower industry is export focused, facing limited opportunities in the Eastern States and a small domestic market.

World demand for cauliflower has increased over the past 20 years. Western Australia exported A$26 million of cauliflower in 2001. The major markets for West Australian cauliflower are Singapore and Malaysia, which account for 95% of exports.

The Singapore market is considered a "mature market" with prices declining in Singapore dollars from 1989 until 1995. Western Australian exporters have been cushioned from the falling Cost Insurance Freight (CIF) price by the devaluation of the Australian dollar.

The importance of the Malaysian market has increased over the past 20 years and Western Australian produce now accounts for over 85% of the Malaysian market’s requirements.

There is potential to consolidate existing markets through promotional campaigns and value adding. Newer markets such as Indonesia and Japan are also being investigated to enable the West Australian cauliflower industry to consolidate its position.

Export Markets for WA Cauliflower, 2001

Source: Australian Bureau of Statistics
1.2 SWOT Analysis of the Export Cauliflower Industry

**Strengths**

- Most of the technology used by industry is up-to-date.
- Product quality is high, however, this strength is not unique.
- Close proximity to market.
- Same time zone as major markets
- Long-standing and good customer relationships in export markets.
- Well developed and suitable natural resource base.
- Industry focus on export as a priority.

**Opportunities**

- Aggressively defend what we have already – through improved post harvest handling and value adding.
- Improve efficiency through new technology, innovation and improved business practices.
- Develop new approaches to managing on-farm and packing shed labour.
- Identify alternative rotational crops to share equipment, overheads and technology.
- Conduct a pro-active, coordinated marketing campaign in export markets.
- Develop a Western Australian export cauliflower brand, with marketing agents using uniform packaging.
- Improve market information gathering and dissemination.

**Weaknesses**

- Market expansion limited by lack of marketing.
- Failure to promote cauliflower as a long-term option to existing growers.
- Cost structures are such that smaller growers may not survive.
- Future decline in the grower base as cauliflower growing is seen as unattractive.
- No uniform industry (West Australian) branding.
- Disjointed purchasing arrangements (high input costs).

**Threats**

- Control problems with diamond back moth, leading to supply problems at certain times.
- Continued spread of clubroot disease.
- Escalation in the cost and availability of labour for on-farm work and packing sheds.
- Increased competition from other suppliers (China, USA).
- Lack of competitiveness in export markets due to apparent falling yields and rising costs.
- Loss of favoured positions (relationship) with customers.
- Decline in available natural resource base (alternative land use, government regulations etc.).

- Develop cauliflower growing for export in new areas in Western Australia which complement existing production areas.
1.3 Background to Industry Concerns

- Export cauliflower industry has grown strongly, but has reached a plateau, with decline in the industry possible in the future.

- Existing markets are being actively targeted by competitors.

- Time lag in responding to market signals is at least 12 months.

- Production of curds (yield) appears to be stagnant or falling (per ha).

- Australian dollar devaluation has been holding prices steady, revaluation could expose a serious problem.

- Industry is focussed on maintaining the status quo, satisfying established markets.

- A cultural/philosophical change may be required for industry to develop new opportunities.

- Some cauliflower enterprises are vulnerable to competition from large-scale operations.

- Australian cauliflower is a commodity item to overseas customers, competing on price.

- Australian cauliflower is focussed on supplying Asian wet markets, which are price sensitive.

**Why are yields falling?**

- Increased incidence of club root disease.

- Diamond back moth is spreading and control is difficult.

- Current varieties do not adequately cover the full 12-month supply season. Increased yield would result from the development of improved varieties to cover all supply times or through growing cauliflower in different areas.

- Growers are now servicing the market demand for smaller curds (i.e. weight of 800-900 g).

- Declining seed quality of current varieties.
CHAPTER TWO – VISION FOR THE WESTERN AUSTRALIAN CAULIFLOWER EXPORT INDUSTRY

The West Australian cauliflower industry will maintain and improve its productivity, competitiveness and profitability.

Steps to realise the vision:
CHAPTER THREE – ISSUES FOR WESTERN AUSTRALIA
CAULIFLOWER EXPORTS

3.1 Growers - Issues

3.1.1 Seedlings
• Cost of seedlings for export growers can be high.
• High price may be due to low volume and the high cost of hybrid seed used to produce export cauliflower.
• Quality of the seedlings is variable with certain varieties producing lower yields than previously. This is thought to be due to seed quality rather than being a nursery issue.

3.1.2 Planting
• Paddock selection is sometimes poor, with costly mistakes made.
• Ground preparation must be done in advance, farm planning/organisation should be improved.
• A formal planning system is needed prior to planting (Quality Assurance approach).
• Research is needed to fine tune basic agronomy for major varieties.
• Automatic planters, used in Europe, should be evaluated for export crops.
• Contract planting services may lead to efficient use of capital and labour.

3.1.3 Growing
• Adopt more efficient irrigation systems (centre pivots, underground mainlines, low impact sprinklers, irrigation scheduling devices).
• Adoption of improved management strategies are needed for pests and diseases.
• Adoption of new spray technology to reduce chemical costs and improve their effectiveness.
• Improved education of agricultural supply personnel (fertiliser, pesticides etc.).
• Cost of growing inputs using the current retail relationship is high.
• Investigate alternative growing systems.
• Investigate State-wide and National alliances.

3.1.4 Harvesting
• Varieties need to be improved with particular emphasis on ease of cut, even maturity and number of picks required.
• Maintaining experienced labour with a low turnover to reduce harvest costs.
• Labour supply tends to be transient and the use of contract harvesting crews may be more efficient.
• Improving harvesting efficiency through developing improved cutting implements.
• Reduce covering costs.
• Harvest and postharvest costs need to be reduced and there is a need to investigate new technology for field packing.
• Reducing labour costs through development of technology that may lead to once over mechanical harvesting.

3.1.5 Post harvest
• Examine field packing and cooling in paddock.
• Refrigerated vehicles for cartage (contract) and in-field storage.
• Reduce in-field damage (bruising).
• Reduce in-field dehydration.

• Improve cartage efficiency, rationalise use of trucks from field.

• Investigate the collective development of “on farm” coolstores.

3.2 Packers - Issues

3.2.1 Inconsistent volume over time
• Inconsistent volume over time leads to logistic problems in sheds

• Inconsistent supply creates marketing problems

3.2.2 Labour
• Identification and retention of quality staff is a problem.

3.2.3 Cartons and packing materials
• There are a limited number of manufacturers of cartons and packing materials.

• Small runs of cartons and packing materials lead to high prices, one brand/logo could lead to large runs and cost efficiencies.

• Possibility of bulk handling as an option.

3.3 Post harvest - Issues

3.3.1 Efficiency
• Supply fluctuations lead to storage problems at sheds

• There is limited controlled atmosphere storage available and no long life bags in use.
• Alternative crops are needed to fill holes in schedules, these would use existing infrastructure.

• Packing shed efficiency is closely related to the quality of the raw product input.

3.3.2 Waste

• The cost of waste disposal is rising.

• The volume of waste is high at times due to pests, diseases and oversupply.

• The use of current waste as a processed or value added product needs development.

• There is agreement on the need to conduct a general study into waste.

3.4 Exporters – Issues

3.4.1 Freight

• Export cauliflower is well served by sea freight to SE Asian markets, costs are likely to rise.

• The Trade Facilitation Group of shipping companies control freight pricing.

• Air freight is expensive, rates are high due to limited availability due to other products which have a higher price.

3.4.2 New Markets

• Cooperation within the industry is needed to develop new export markets.

• A single brand should be investigated.

• Cauliflower is not part of the staple diet in potential new markets, like Indonesia and Thailand, however this could change as Western food becomes increasingly popular.

• Infrastructure such as cool rooms and refrigerated transport is lacking in new markets.

• Competition exists for new markets. China can dump excess produce on new markets.

3.4.3 Communication with growers

• Communication with growers about markets and demand needs to be improved. An industry news sheet may be suitable.

3.5 Indirect (intangible) - Issues

• There is a perception that the Cauliflower Improvement Group and the Cauliflower Planning Group need development in order to effectively support the industry.

• Regulations (Government) can restrict industry outlook.

• Research and development is important to drive innovation for the benefit of industry.

• Improved education and training programs are needed for growers and labour.

• Costs of inputs are rising faster than returns.

• Choice of inputs should reflect industry best practice.
CHAPTER FOUR – STRATEGIES TO ADDRESS ISSUES AND AN ACTION PLAN

Objective 1 – Strengthen grower base

Strategies

• Promote positive media exposure about the export cauliflower industry.

• Plan and sponsor study tours.

• Develop the Cauliflower Improvement Group (Inc.), with positive articles released regularly.

• Develop rotational options to improve the viability of growers.

Action Plan

Media Exposure

The Western Australian Department of Agriculture to provide articles concerning developments in the cauliflower industry to the media. Information for the articles to come from the industry. The export cauliflower industry, through industry groups is also to promote themselves.

Plan and sponsor study tours

The Western Australian Department of Agriculture in conjunction with industry groups to select people for study tours.

Study tour to focus on:

• Growing and post-harvest techniques.

• Improved grower collaboration and strategic supply alliances.

• Targeting young growers to act as agents of change.

• Ensuring knowledge and insights are passed on to other growers after the tour through a formal reporting structure.

The best time for the study tours is late August to early September.

There could be benefit from having a suitable person visit Western Australia to look at the cauliflower industry and work with growers in the short-term.

Objective 2 – Improved industry co-ordination

There is a perception amongst the industry that the Grower groups lack support and consequently direction.

Strategy:

• Flatten the industry coordination structure.

• Assist the Grower groups to develop a structure and obtain resources to effectively develop the industry.

Action

It is proposed that the Cauliflower Improvement Group amalgamate with the Cauliflower Planning Group. The functions of the Planning Group would be taken on by a sub-committee of the Improvement Group who could report to industry. This proposal will have to be discussed by both Committees.

The revised industry committee needs the services of an Executive Officer and support from the Industry.
Objective 3 – Reduce inputs costs for growers

*Strategy*

- Investigate the bulk buying of inputs, in discussion with local suppliers. Follow on issues:
  - Collaboration between sheds.
  - A credit system to facilitate the business.
  - Orders for inputs should go through local companies to maintain services.
  - Outside case studies should be examined to aid the development of a local model, these should include other industries in different States.
  - Investigate, develop and adopt technology for the efficient use and application of pesticides.

*Action Plan*

In order to demonstrate the benefits of collaboration, small focus groups will be formed comprising 6-8 neighbouring farmers. The Western Australian Department of Agriculture and the Cauliflower Improvement Group will initiate these focus groups.

The focus groups will act as a forum for the sharing of information between farmers. Once the focus groups are functioning well, each group will be charged with undertaking specific industry driven research.

The focus groups will report to other members of the export cauliflower industry at regular meetings of all industry members. These meetings are to be organised by the Executive Officer.

Objective 4 – Develop a system to use labour better.

*Strategy*

- Ideally the industry would establish a separate entity to develop a contract cutting/packing labour service. This seems unlikely given the problems incurred by sheds trying this approach previously. Instead it may be more practical for farmers to share labour.

- Examine technical issues that may reduce labour, feasibility of mechanised harvesting.

*Action Plan*

The sharing of labour between farmers is a possible solution and is to be investigated by the small focus groups comprising 6-8 neighbouring farmers.

The Western Australian Department of Agriculture is conducting research work to reduce the number of harvests and examine the potential for mechanised harvesting. This work will be presented to industry via the Cauliflower Improvement Group for discussion. A review of mechanised harvesting options may be included as a component of a study tour.

Objective 5 – Reduce seedling costs and improve seedling quality

*Strategy*

- Adopt more labour efficient machinery, e.g. automatic planter.

- Develop alternative growing systems, e.g. direct seeding.

*Action Plan*

Grower groups to lobby for greater quality control of seed imports.

Grower groups to investigate sourcing seed from different countries or possibly produce seed domestically.

The Western Australian Department of Agriculture to examine the costs and benefits of alternative growing systems.

Objective 6 – Raise yields

*Strategy*

- Identify, develop and promote superior new varieties.

- Improve grower knowledge of basic cauliflower agronomy. Follow on issues:
• Greater emphasis on tailoring information for individual requirements.
• Establish small "hands on" workshop groups.
• Update and distribute current information.
• Promote Safe Quality Food/Quality Assurance approach to cauliflower growing.

**Action Plan**

Grower groups to identify superior varieties in conjunction with seed companies.

The Western Australian Department of Agriculture and the Cauliflower Improvement Group to initiate small focus groups of farmers.

The Western Australian Department of Agriculture staff to work closely with a small group of farmers providing economic and agronomic farm models to indicate the benefits of improved practices.

The Western Australian Department of Agriculture to provide updated information on cauliflower production to growers.

Liaison with the New Opportunities in Australia Horticulture (NOAH) Group on other possible rotation crops for cauliflower growers.

**Objective 7 – Develop and adopt cost effective new post harvest technology**

**Strategy**

• Promote SQF/QA approach to cauliflower growing to enable effective scheduling of product by pack houses.

• Search for the best available technology, e.g. "USA fast chill".

• Develop recommendations for future post harvest projects, including access to funding.

• Develop post harvest options for other rotational commodities.

• Access specialist skills through the involvement of Universities and research organisations.

**Action Plan**

A study needs to be conducted into the following post harvest issues to assess their potential for improving post-harvest handling:

– field packing

– field cooling

– covered sheds

– old sea containers / tautliners converted to mobile cool rooms

– application of clean water to harvested cauliflower in the field to allow evaporative cooling

– covers on harvesters

Post harvest options raised by NOAH must be disseminated to the export cauliflower industry.

**Objective 8 – Improve the export marketing of cauliflower**

**Strategy**

• Investigate the benefits and problems of developing a cauliflower brand.

• Examine options for the active promotion of Australian cauliflower in export markets i.e. "Safe food" aspects.

**Action Plan**

The export cauliflower industry to examine the potential for branding in supermarkets in Malaysia and Singapore and other export destinations.

NOAH is charged with looking at value adding options. Information from this group to be relayed to the Export Cauliflower Group.