

VG97104

Cowra Vegetables to Asia Group

Meyers Strategy Group



Know-how for Horticulture™

VG97104

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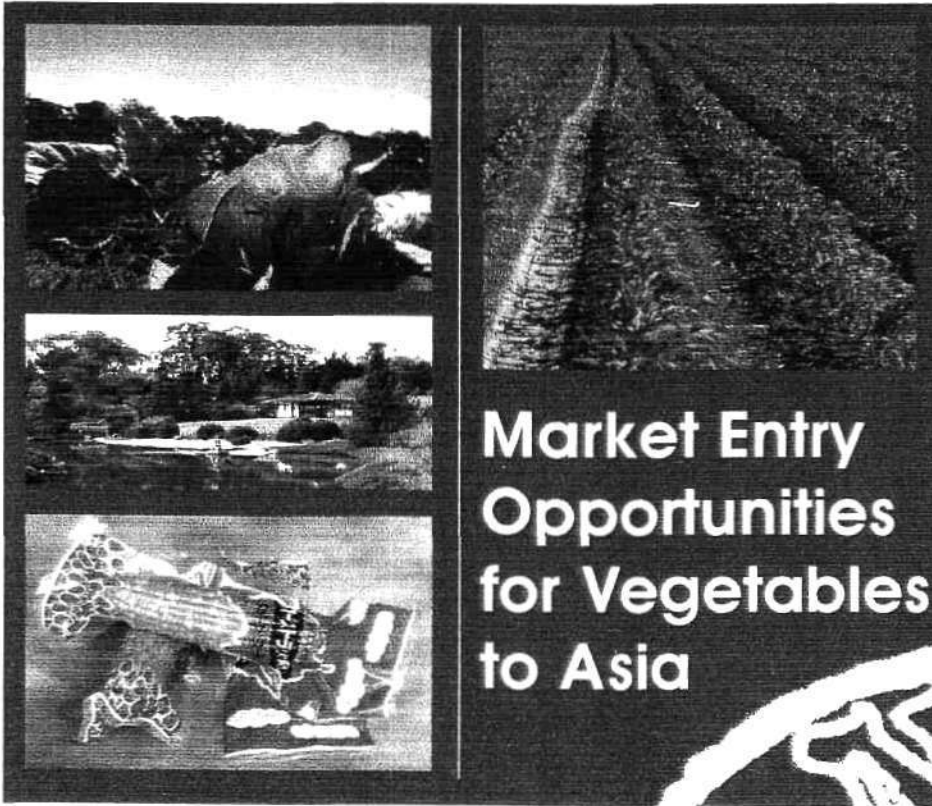
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Partnership in
horticulture



Cowra Vegetables to Asia Group

Final Report

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Executive summary

The Cowra region of the Lachlan Valley in New South Wales, is well known as a vegetable producing area. A group of vegetable growers, local business people, the Cowra Export Packers food processing plant and the Cowra City Council have come together as a common interest group known as Cowra Vegetables to Asia Group (CVTAG). The prime objective of the group is to show benefit to the vegetable industry within the region through expanding vegetable production and processing with a focus on Asian markets.

A steering committee representing the major participants guided the project.

Funding support for the project came from the Horticultural Research and Development Corporation and key, local, agribusiness supporters such as The Cowra Community Trust. The project analysed market opportunities in north and south east Asia for vegetable products, both fresh and processed from the region and matched this analysis with local production capability. The method involved capturing Australian and Asian market information and analysing issues surrounding the information.

Many vegetable crops are produced in the area represented by CVTAG and further processing is carried out by the locally owned and managed processing plant, Cowra Export Packers. The main destination of the fresh vegetables is the domestic market with focus on Sydney. Processed product is marketed domestically under Cowra's own label and as contract packer for a range of food companies, with a small volume for export .

Meyers Strategy Group were the project consultants and produced this report from desk research on Asian market prospects and production capability within the region provided by members of the steering committee of CVTAG. The desk analysis was supported with in country review where critical price, specification and customer needs can impact CVTAG market entry plans.

Without doubt, the financial crisis in Asian countries is influencing food purchasing patterns, domestic production, Government support and market place dynamics. At the same time this crisis creates opportunities to establish new contacts and to show interest when other suppliers may be less active.

There is well established domestic production in most Asian regions and this local production is by far the most important supply source. Imports are required to add to the range of products, to provide year round supply of staple food products, and to meet some of the special requirements of niche markets not possible through local production. Recovery from the current financial problems will be slow, but recover they will, thus taking the opportunity to establish contacts now may pay off substantially in the long run.

Many market opportunities have been revealed in this study. The report concentrates on a limited number of products in a few countries. During the project the consultants met with the Steering committee and gained agreement to focus on this small number rather than adopt a shot-gun approach with no clear direction for CVTAG.

It was also agreed with the steering committee that products which are currently produced efficiently within the region are more appropriate to promote rather than develop new-to-the-area crops. There is one exception to this and that is green vegetable soy beans. The other crops are already established and production of large volumes are either part of the local scene or within the capability of producers with little capital outlay and minimal new technology. Producers state that they could increase the volume of products currently produced very rapidly but would require a two year learning curve to efficiently produce a new crop.

Thus the underlying recommendations of this report are to continue to do that which is done well today and to concentrate on a few markets rather than a scattered approach.

It is emphasised that this report should be considered as the first step for Cowra Vegetables to Asia Group towards entry to Asian markets. Careful development of a market entry strategy, detailed in country research, setting of priorities, time lines and budgets and structures required must follow.

Key Findings

The economic problems in Asia are having an influence on imports of all products including food. The full effects are yet to be felt but it can be assumed that Australia's opportunity to develop new food exports to the region will face barriers not previously encountered until a clearer way ahead is determined. Vegetables are an essential part of the diet and demand remains high, but focus has turned to domestic production and for imports of lower cost items.

It is reported that those in the supply chain whose business has depended on imports are finding the going very tough. Currency problems and changed consumer habits have reduced the volumes handled. During the course of this consultancy it has been noted that corporate structures are changing, international enterprises are investing in businesses affected by local financial crises. These changes alter supply line dynamics and previously well established supply arrangements may be in doubt.

The face of retailing is changing and large supermarkets are now more common than five years ago creating opportunities for more direct lines of supply.

Entry to Asian markets requires a clearly focused strategy based on well researched data concerning target markets. The pathway to enter Asian markets is difficult in times of normal trading activity, the complexities should not be underestimated. The conditions applying in Mid 1998 make that pathway more difficult.

Asian markets for fresh vegetables are highly competitive from both world wide supply chains and from domestic production.

With the exception of Hong Kong, all Asian countries have large, well developed domestic production activities for vegetable products. Domestic production is not restricted to "Asian" vegetables either, there are very large production centres for those vegetables Australians may consider as "traditional European" vegetables. Market opportunities are year round, but in colder areas the opportunities change in the off season as domestic production slows.

To enter Asian markets, supply chain and producer groups should research not only the product characteristics and sector opportunities but also the market dynamics. What constitutes a commercial relationship in Asia is different to that which drives the Australian market. Adopting a focused approach is a key to success as is a commitment to listening to the customers needs and then taking a very long term approach. Rewards do not come quickly and a three year time line before real return on time and resources invested is not unusual.

Quality assurance and food safety are concerns for these markets. For the more discerning markets already calling for quality assurance and food safety, CVTAG should develop and apply simple quality assurance procedures to all phases of production to meet those needs. The product quality and basic customer specifications are within the capability of CVTAG

The expectation of the markets reviewed is that the supply chain will commit to a nominated volume of a specified product for a nominated period. The market expects to receive consistent product throughout the currency of the supply period. CVTAG must have the commitment from supporters that they will deliver the quality required when required. Cowra's export activity should not take second place to domestic activity; the markets reviewed are demanding and discerning, and failure to supply or variation from agreed quality standards will influence the attitude towards continuous supply and repeat business

CVTAG must develop their competitive advantage and highlight this in negotiations. The combined local resources of Cowra Export Packers and production capability for good quality vegetables is an advantage this region has over other Australian areas. Cowra Export Packers has spare capacity and innovative management who have demonstrated the ability to respond to different demands (for example the processing of carp in special sauce) The two facilities of production and processing side by side provides the opportunity for development of a strategic advantage in rapid response to customers demands.

The long term strategy should include establishment of a fully representative regional group that would have the potential to identify, consolidate and market agricultural products and added value food products of the region. The full focus of a consolidated group, working to a business plan has the advantage that it can identify product champions and specialist groups to work together within the region to capitalise on well defined and researched international market opportunities.

Key recommendations in this report are summarised as follows.

- A long term strategy for Cowra Vegetables to Asia Group or a group representing all horticulture in the catchment area is required.
- The strategy must address funding for the future, structure of the Group and commitment from participants
- Consider networks with other interstate and intrastate producers and processors
- Concentrate on a few key products in a small number of markets
- Complete market visits and extend market research from these visits

Existing product opportunities considered appropriate are

- Vacuum packed sweet corn to Japan
- Green beans to Japan
- Drum head cabbages to Taiwan, and Japan

There are obvious, immediate problems in entering these markets at the present time, and CVTAG has to develop the expertise required to meet the challenges of exporting. But, without doubt, the region has the capability to produce and process horticultural products to meet the demanding needs of Asian export markets. A well planned approach and appropriately structured organisation will confirm the customers real needs and reward the participants with ongoing, profitable business for the products from the Cowra and Lachlan Valley region.

1 Introduction

Cowra Vegetables to Asia Group is a committee in the Cowra region of New South Wales. The committee comprises representatives from the vegetable growing industry, service providers, the Cowra Shire Council and Cowra Export Packers Ltd. CVTAG is considering incorporation.

CVTAG receives support from 26 horticulturists in the region. Cowra Export Packers operates a food processing plant, canning and vacuum packing vegetables and other food products for domestic and export markets. The products processed are sourced from any region within reasonable distance with the immediate local district receiving first preference. The opportunity to utilise the technical resources and capability of Cowra Export Packers is a strong point favouring CVTAG intention to enter Asian markets.

Cowra Shire Council Support

The Cowra Shire Council strongly supports the basic plan of CVTAG and provided the original initiatives to consider the project. CVTAG also have support from AGSELL who participated in the initial search conference.

Benefits to the region from increased exports of fresh and processed vegetables would be direct in terms of value of exports and indirect in terms of increased local employment.

Increased vigour within the vegetable industry in the region is estimated to have very limited adverse effect on other agricultural and agribusiness activity in the area. Indeed the intensity of vegetable production could see increased employment opportunities.

Transport infrastructure to support export activity is available outside Cowra and these facilities are judged to be adequate. Exports would be via sea and air from Sydney.

The region covered by the Cowra Vegetables to Asia Group lies mainly within the Lachlan River Valley in the Central highlands belt of New South Wales. The geological development of the region has seen the river carve a valley through the rocks of the valley which has in turn filled with eroding material providing the valley with its deep river loams. The soil is ideal for horticulture and combined with the mild climate and good water supply have seen the district develop into an attractive area for the cultivation of a wide range of crops. Soil types in the region vary and thus cropping varies across the region depending on soil types. Generally speaking the best soils for Horticulture are close to the Lachlan River and these soils are well suited to irrigation.

Rainfall varies from 600 to 800 mm with even distribution throughout the year. Rainfall is supplemented by irrigation. There are an average of 192 frost free days with the frost season from late April till October

High temperatures are common in January and February with Cowra having a summer average maximum of 27. The low temperatures in winter do limit some vegetable production

Horticultural Focus

Vegetable crops have been produced in the Cowra and Lachlan Valley region for many years.

Mid Season Production

In terms of seasonality the most commonly grown products from the Cowra region mature in what is regarded as mid season for Australian vegetables. The cooler conditions limit the growing period so that for Sweet Corn for example the Lachlan Valley season may last for 16 weeks compared with the far north Queensland season of 42 weeks and the southern Queensland 32 weeks.

However, the cooler climate has an advantage for Lachlan Valley growers in that insect pressures are usually lighter in cooler areas. Sweet corn for example in hotter climates requires more attention to insect control making it more difficult to meet the customers requirements for no insect damage and residue levels of insecticides within tolerance. With lower insect pressures in the valley than other sweet corn producing levels Cowra has a distinct advantage over north Queensland.

Previous successful activities in the region have been focused on the requirements for a Cannery. Asparagus was the "big thing" when the cannery was at it's peak under Edgell ownership. This processing facility still cans asparagus as well as Potatoes, Mushrooms, tomatoes and corn. For many reasons, asparagus is no longer a vital crop in the area and horticulturists have turned to other products.

Export Markets

In each of the countries reviewed there are trends similar to that which are occurring in Australia. Consistent quality, food safety, regular supply, quality assurance, best practices are all important considerations. "Organic" food is emerging as a special requirement in certain markets particularly Japan.

Export markets are different

In these markets getting to know your customer and the needs and wants of the customer and gaining a basic understanding of why certain things are important to that customer are vital. These markets are distinct and different from one another and very different from the culture in which CVTAG producers usually operate in the domestic market.

Entry to an Asian market means a long slow process of development of relationships is most important.

Avoid a fragmented approach

Similar to Australian conditions, large enterprises through the region studied are investigating and initiating direct supply from producers. This emphasises the need for careful management of the supply chain. An example is the move by Makro Supermarkets in Indonesia to deal directly with Australian citrus growers. Management of the supply chain would require Cowra Vegetables to Asia Group to bring together all in the area capable of and willing to produce the products in question. Fragmentation of the vegetable growing industry must be avoided. This is not easily achieved in a situation where most of the operators are family businesses with a long history of domestic marketing. Export is not for surplus product but is a dedicated activity requiring co-ordination of supply which should bring with it economies of scale.

Local duties and phytosanitary requirements must be noted and adhered to. Agencies such as Supermarket to Asia Council and Department of Foreign Affairs and Trade can provide precise and up to date information.

Changed conditions in Asia

The Asian currency crises has influenced export opportunities. The ability to pay has been reduced, many importers are reported facing grave financial problems through falling volumes and higher prices. The community in some countries, Indonesia in particular is facing social distress and staple foods rather than imports come first. These tougher conditions make it all the more important that CVTAG make sure they get it right first time. Take the opportunity to show your interest while it is tough and the relationship may be stronger in the future.

Opportunities for in depth market focus on one country with one or two products may exist using the services of Asia Market Bridge from the Supermarket to Asia Council. This should be a further action item by CVTAG after considering this report

Throughout the regions under study there appears to be continued demand for mainstream fresh product. Demand has not been substantially influenced in Japan and Taiwan by financial crises affecting these countries, but market prices may have been influenced by contraction of incomes. Indonesia and Malaysia have been considerably influenced by the downturn.

Local production remains the major supply source and imports have come under pricing pressures. With the financial problems in many Asian centres it appears that "spot trading" is an option that importers choose. Local policies may be adjusted to allow freer imports. Some of this advantage may be offset by unfavourable exchange rates.

***Local produce
preferred***

Local produce is preferred to imports and pricing reflects this approach. The exceptions are where no local production is available. Technology has been exported by some countries thus we see an attractive temperate vegetable production sector in the Cameron Highlands area of Malaysia, much of it benefiting in the last ten years from technology exports from Australia's competitors.

Economies of the region vary considerably. The regions are not the same markets nor are the economies the same. The differences that exist in each market are now more pronounced than prior to deterioration in financial conditions.

Taiwan has full employment with strong demand and solid economy. Japan is faltering, Malaysia is still feeling its way and Indonesia is in decline.

There may be added focus in these regions for industries to add value to imported product to keep total cost down and to encourage local involvement in the manufacturing process.

Exporters focus is not on "Asian Vegetables" but Vegetables for Asia.

***Establish Contact
now***

While the Asian economies are currently depressed and vegetable imports have declined substantially, establishing contacts now and providing information, sample product and supply conditions ahead of a return to more normal conditions is recommended.

Section 1

Market Potential

2 Production Capability Assessment

By providing a matrix of key features considered necessary to check on the capability of local producers and through discussions with those closely involved in production and processing in the region, a listing of products 'most likely to succeed' has been established.

These products are:

- drum head cabbage;
- green beans;
- sweet corn;
- green vegetable soy bean; and
- for the long term, asparagus.

This data was gathered to commence the match between market opportunities identified from the desk research and the capability to produce. The process has been one of refinement where, over a period of time, review has confirmed those products and markets most likely to be successful.

Production costs from NSW Agriculture have been allocated to each product under examination with costs for Eda Mame from QDPI work.

With the exception of Green Soy beans, this production opportunity chart covers vegetables which are currently produced in volume in the region. This follows the recommendation accepted by CVTAG that they first concentrate on the things they know they can do well. For example, to move from large scale ball head cabbage production to Chinese cabbage may take two full seasons, hence the first recommendation is to continue what can obviously be done well. It is advisable to leave the new learning until a foothold is established in the export market place.

Table 1 — CVTAG production opportunity chart

	Water	Labour	Capital	production economics	growing techniques	processing techniques	storage handling	Quality management	Overall assessment
Green beans*	4	4	3	4	<4	4	<4	3	4
Lettuce	4	3	3	3	<4	3	3	3	3
Carrots	4	4	4	3	3	3	3	3	3
White drum head cabbage	4	3	4	3	4	3	4	>3	4
Chinese Cabbage	4	3	4	<3	3	3	<3	>3	3
Green Soy bean **	4	1	3	?	2	2	2	3	4**
Radish	4	2	3	?	2		2	<3	2-3
Cauliflower	4	3	2	<3	3	2	<3	<3	3
Broccoli	4	3	2	<3	3	2	3	<3	3
Onion	4	2	2	3	<3	2	3		3
Sweet Corn	4	4	4	3	4	4	4	4	> 4
Asparagus	4	3	4	3	4	4	4	4	> 4
Celery	4	2	2	-	2	2	2	-	2

Key 1 = Consider capability/resources to respond is poor
 2 = Consider capability/resources to respond is low
 3 = Consider capability/resources to respond is good
 4 = Consider capability/resources to respond is very good
 > = Greater than < = Less than

* Reference to green beans in this report are *Phaseolus spp*s

** The rating is low for each of the features measured, but the opportunity is high and basic technology to support production is available.

The above table was compiled by representatives of the CVTAG. Each member was asked to rank each of the processes/resources which may influence production in the area. The result ranks the "production capability" of one product to another.

Vegetable producers in the Lachlan Valley appear to have the capacity to respond to increased demands for products which they currently produce. A move from one product to another can be achieved but growers comment that it may take two seasons before they are able to produce a new crop to the same standard of crops currently grown.

Capital for additional equipment for crops requiring, for example, different harvesting techniques is limited and would only be invested on firm indication that a market exists for the new crop.

Investment in a new industry must therefore be considered as limited.

***Concentrate on a
few products***

Production has the capability to respond to a confirmed demand, the market needs must be clearly identified to trigger production to match the needs.

This report recommends that Cowra Vegetables to Asia Group concentrate on the products which are currently produced efficiently and limit the export focus to those few products where some clear definition of market is identified for those products.

Doing better than which is currently done well and providing focus on a few markets rather than a shot gun approach to try to cover too wide a market place is the key.

3 Production costs

The following table estimates landed costs.

Variable production cost is estimated farm gate price.

Deliver to processor is estimated cost of delivery either to processor or to point of further transport when value adding is completed at the production site.

Processing is estimated cost to process ready for market presentation.

Freight is estimated sea freight to Asian destination.

Exporter and importer are charges from agencies handling export and imports.

These costs do not include AQIS charges, duty on entry and insurance.

Table 2 — Specific Product costs - \$/Kg

	\$/Kg			
	Sweet Corn	Cabbages	Beans	Green Soy beans
Variable Pdn cost	0.125**	0.25	0.187	0.25
Deliver to processor	0.04	0.04	0.04	0.04
Processing	3.00		0.05	0.75
Freight	0.30	0.35	0.35	0.25
Exporter	0.04	0.05	0.05	0.075
Importer	0.15	0.15	0.15	0.15
Total landed	3.655	0.84	0.827	1.515

These costs do not include AQIS charges, insurance and duty

** Assumes variable production costs of 7.5 c/kg, but yield at processing is approximately 60% of delivered product. The preferred route is to contract for producer to supply "usable cobs" and pre-sort at the production point. Contract would then reflect pre-sort and payment made accordingly.

3.1 Freight costs

Freight from Sydney to Jakarta and Kuala Lumpur (indicative only) is \$2900 per 20 foot container. To Japan and Taiwan indicative quotations are \$3900

Table 3 — Air freight charges

Destination	Charge per Kg
Sydney to Tokyo	\$4.20
Sydney to Taipei	\$4.20
Sydney to Kuala Lumpur	\$1.75
Sydney to Jakarta	\$1.60

To these costs are to be added Handling fees, export document fees, loading fees of approx. \$300 per AV unit.

4 Markets and Prospects-Key Opportunities

Analysis indicates that there are significant ongoing opportunities in key mainstream vegetable products where CVTAG focuses on the requirements highlighted in this report. Such products include: sweet corn, white ball head cabbage, green beans, asparagus, broccoli and onions. This opportunity exists across most Asian markets under consideration.

Asparagus has not been highlighted in this study in this analysis even though the production assessment chart on Page 9 indicated that it was a product rated highly. Long term strategic planning is required to position this product either fresh or canned in the CVTAG future. Other production areas in Australia are likely to decline over the next five years creating an opening for CVTAG's re-entry as a major producer. For anything under five years Asparagus is not seen as an important part of this analysis.

*sweet corn,
cabbages, green
beans, vegetable
soy beans*

Broccoli and Onions are not products which local producers rate highly and are thus not included in the assessment. Green Soy Beans, (Eda Mame) is included because of the large opportunity in Japan, however there is very strong competition from China and Taiwan. There is an emerging industry in Queensland which has the potential to produce Green vegetable Soy beans over a very long season. Those involved in Queensland state that there is little opportunity to augment supply from the Lachlan Valley, a comment which may be driven by their desire to keep the industry to themselves in Australia rather than to enhance an export opportunity! It is a challenging product, Australian varieties have been developed that may be grown in the Lachlan Valley so it is worth trialing to seek a share of this very large market. Customer demands in this large sector are very specific.

Fresh vegetable opportunities can be augmented by the development of partially prepared products, mainly for the food service market. This opportunity needs to be researched further.

Niche opportunities exists, mainly at the top-end of the market. The restriction on this market is its size and costs of development to meet specifications.

Further processing opportunities are a much more difficult prospect and require very careful research. Unless the right opportunity can be found, it is highly likely that this type of business will at best be marginal and perhaps more likely it will be unprofitable business. Any opportunities become more clear when commercial relationship is established and buyers share their strategic intent.

While the above approach is recommended to CVTAG, any strategy should include the option of exploiting alternative markets as a hedge as well as the possibilities for short-term "trading" opportunities. That is, while CVTAG may be pursuing a clear strategy for the development of a given market for a given product, the fickle nature of the fresh produce business is such that the back-up of alternative market/business opportunities will be a vital element of security of any chosen business direction. This aspect of Cowra's export endeavours should be further developed. CVTAG should not allow this "safety Valve" to work to the detriment of the long term strategy of growing market share in well defined markets.

The following tables summarise market opportunities for:

- Fresh/frozen unprocessed/partially processed products; and
- Processed products.

These tables have been developed following the desk research summarised in Appendix 1 "Market Characteristics". The opportunity rating 1-5 has been allocated after due consideration by the consultants of factors which may influence acceptance of Australian product into each market.

The decision to focus on a specific market has been made after consideration of these factors.

Summary — Fresh/frozen unprocessed/partially processed products

Covers basic fresh/frozen whole products and those which have been cleaned, trimmed, cut/diced or partially prepared for food service/retail/processing use.

Table 4 — Fresh/frozen unprocessed/partially processed products

Product	Japan	Hong Kong	Taiwan	Singapore	Malaysia	Indonesia	Overall Assessment
Beans	4	2	2	3	2	2	2-3
Lettuce	3	3	3	4	4	2	3-4
Carrots	5	4	4	5	5	3	4-5
White Cabbage	3	4	4	5	5	4	4-5
Chinese Cabbage	3	3	4	4	4	4	3-4
Gr. soy-bean	3	2	2	2	2	1	2
Radish	2	2	2	2	2	1	2
Cauliflower	4	4	4	4	4	3	4
Broccoli	4	4	4	4	4	3	4
Onion	5	3	3	4	4	3	4
Sweet. corn	4	3	2	2	2	2	2-3
Asparagus	3	3	3	4	3	3	3
Celery	4	3	4	4	4	3	3-4

Key:

- 1 = Poor market opportunity
- 2 = Limited niche/seasonal opportunity
- 3 = Moderate "trading"/seasonal opportunity
- 4 = Ongoing volume business
- 5 = High market opportunity

Summary — Processed products

Covers all products which are processed beyond the partial processing described above and in particular bottling, canning, pickling, drying, etc.

Table 5 — Processed products

Product	Japan	Hong Kong	Taiwan	Singapore	Malaysia	Indonesia	Overall Assessment
Beans	2	2	2	2	2	2	1-2
Lettuce	1	1	1	1	1	1	1
Carrots	2	2	2	2	2	2	2
White Cabbage	2	2	2	2	2	2	2
Chinese Cabbage	3	2	3	2	2	2	2-3
Gr. soy-bean	3	2	2	2	2	2	2-3
Radish	2	2	2	2	2	2	2
Cauliflower	3	2	3	2	2	2	2-3
Broccoli	2	2	2	2	2	2	2
Onion	3	2	2	2	2	2	2-3
Sweet. corn	2	2	2	2	2	2	2
Asparagus	2	2	2	2	2	2	2
Celery	1	2	2	1	1	1	1-2

Key:

- 1 = Poor market opportunity
- 2 = Highly competitive market
- 3 = Small niche opportunities
- 4 = Moderate volume opportunity
- 5 = High market opportunity

Summary — Identified Market Opportunities

Desk research has identified opportunities that can be matched by the Lachlan Valley capability to produce.

These opportunities are outlined in the following tables.

JAPAN

Product	Sweet corn	Cabbage	Green Vegetable Soy Bean	Green Beans *
Imports	Shows rapid growth in imports	strong import growth	China and Taiwan major importers	high value market, small volume
	Import volume 850 tne	Import Vol 76,400 tne	Import Vol 57,000 tne	Import Vol 1500 tne
			Large market	
Opportunity	an opportunity for value adding by CEP	Jan to April appears to be best opportunity	reasonable Australian opportunity	very specific packaging requirements
	Supersweet is preferred	May be an opportunity for adding value by shredding	Frozen only permitted from Australia	
Duty	10% duty applies		10% duty	10% duty
Specifications	Product and packaging specs not identified	Smaller product preferred, (less than 2 Kgs) 10 kg packs	Very specific customer requirements	
Market Prices	Min Market price A\$2.13/kg	Current w'sale price = A\$1.25/ kg	prices stable Current price A\$3.00	Current price fresh A\$14 frozen A\$1.50/kg

* = *Phaseolus spp.*

Note that in some literature Green Bean figures for Japan refer to *Vigna spp* for sprouting, not *Phaseolus spp* which is the type grown in the Lachlan and adjoining valleys. Analysis in this report is for *Phaseolus spp.*

Summary — Identified Market Opportunities

Desk research has identified opportunities that can be matched by the Lachlan Valley capability to produce.

These opportunities are outlined in the following tables.

JAPAN

Product	Sweet corn	Cabbage	Green Vegetable Soy Bean	Green Beans *
Imports	Shows rapid growth in imports	strong import growth	China and Taiwan major importers	high value market, small volume
	Import volume 850 tne	Import Vol 76,400 tne	Import Vol 57,000 tne	Import Vol 1500 tne
			Large market	
Opportunity	an opportunity for value adding by CEP	Jan to April appears to be best opportunity	reasonable Australian opportunity	very specific packaging requirements
	Supersweet is preferred	May be an opportunity for adding value by shredding	Frozen only permitted from Australia	
Duty	10% duty applies		10% duty	10% duty
Specifications	Product and packaging specs not identified	Smaller product preferred, (less than 2 Kgs) 10 kg packs	Very specific customer requirements	
Market Prices	Min Market price A\$2.13/kg	Current w'sale price = A\$1.25/ kg	prices stable Current price A\$3.00	Current price fresh A\$14 frozen A\$1.50/kg

* = *Phaseolus spp.*

Note that in some literature Green Bean figures for Japan refer to *Vigna spp* for sprouting, not *Phaseolus spp* which is the type grown in the Lachlan and adjoining valleys. Analysis in this report is for *Phaseolus spp.*

INDONESIA

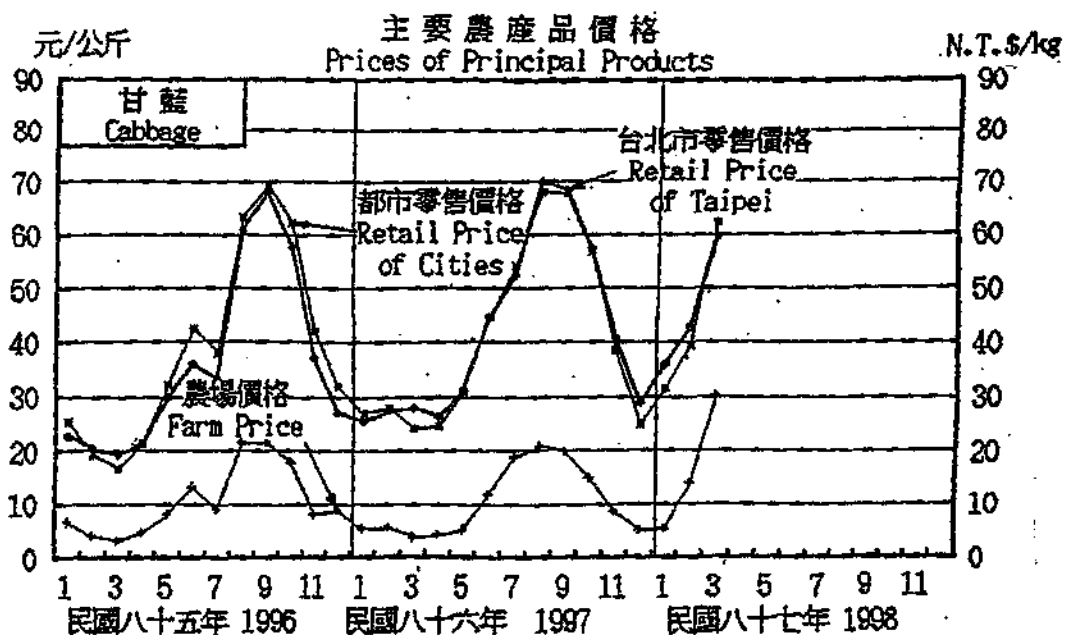
Product	Sweet Corn	Cabbage	Green Beans
Imports	no figures available	Vol Imports 2181	Vol Imports very small
	Canada major supplier, New Zealand next, frozen product	Australia a major supplier, but product available all year from domestic production	Small market for imports, miscellaneous suppliers.
Opportunity	Good long term Australian opportunity for Vacuum packed particularly for up market retail		Australian quality more than meet local requirement, reasonable long term prospect for small volume in food service
Duty	5% Duty applies	5% Duty applies	5% duty
Local Production	Market was increasing sharply	Large local production	Large local production
Local Consumption		Local consumption 1990 = 150 grams /head Packaging depends on market 1-2 kgs each, s.g. 0.78, round head & compact, clean fresh, well trimmed	Local consumption 1990 = 280 gms / head Local product sold in bulk
Market Prices		June 98 W'sale A\$0,26 Supermarket A\$0.75	June 98 W'sale A\$0,13 - local product Supermarket A\$0,62 - local product

TAIWAN

Product	White Cabbage	Green Beans
Imports	US significant importer Vol Imported 16,300 tne	US Imports and domestic supply Small imports < 10 tonnes
Opportunity	Monsoon season is best opportunity** Demand increasing	Small but "quality" market
Duty	Duty 25%	40% duty applies
Local Production	Domestic production meets most of market demand	
Specifications	20 Kg final packages, Unit size approx 1.5 to 2 kg. Supermarket offer 100 gm pieces	20 Kg containers for w'sale market
Market Prices	W'sale price Mar A\$1.44 / kg Retail Mar 98A\$2.95/kg June 98 Supermarket A\$3.80/kg in approx 100 gm lots	June 98 Supermarket A\$13.50 / kg

** Note Chart supplied from Taiwan Council of Agriculture (COA) indicating price movements for Cabbage from retail and "farm price" figures. Farm price is equivalent to Australian wholesale market price. There is a distinct high summer peak in price when local supply is interrupted by poor weather conditions. A similar high in price is noted for other "principal products" information supplied by COA

Prices of Principal Products



MALAYSIA

Product	White Cabbage	Carrots	Lettuce	Green Beans
Imports	Imports 38,700 tne Subject to licensing for imports			Imports 450 tonnes
Opportunities	Retail experiencing strong growth	Australia is already the dominant supplier Nante is the preferred variety	Small sized, Iceberg is preferred	
Duty		no duty	No duty applies	No duty applies
Specifications		20 cm x 4 cm, not tapered and glossy preferred		

5 Market Potential Recommendations

Suggested Products

Sweet corn

Current supply from Australia of super sweet varieties meets Japanese customers requirements as far as product quality is concerned. One example of a an exporter not being able to meet commitments due to shortage of supply from Cowra at one particular time emphasises the absolute necessity to have full and free discussions with exporters and customers to resolve issues surrounding supply. Confidence in the long term ability to meet commitments must be established.

CVTAG has the advantage of the potential to produce sweet corn under conditions that limit insect damage and may require less insecticide than other areas. Match this capability with the supply chain logistical requirements and useful trade will follow.

Sweet corn of the style grown in Cowra region is also considered to be a good prospect in Taiwan and Indonesia for up market retail trade. Hotel and some top end food service outlets are good prospects.

Previous experience of Cowra Export Packers indicates the vacuum packed sweet corn with three cobettes per package is acceptable. As noted above, continuity of supply has been a problem from Cowra region, this must be addressed to ensure that existing or prospective customers will receive the volumes requested.

Green beans

Markets for fresh and frozen green beans exist in the regions highlighted. The Japanese market is high priced but very discerning compared with the Australian market. In the fresh market, beans are presented in two Kg packages with all beans of approximately equal size and aligned in the same direction in each package. The market price ranges from A\$13 to \$16 per kg. The market is small with a typical day seeing 12 tonnes offered in Tokyo. For comparison a high use product such as mushrooms sees 55 tonnes per day on offer.

The economies of production in Cowra are right but the packing demands of Japanese markets currently exceed the local ability to respond. A regional visit to the markets would establish the requirement for CVTAG to aim for this special market.

Beans are significant in Indonesia and quality of Cowra production probably exceeds local production. Investigation is warranted for the high end supermarket and hotel trade.

Eda mame or green soy beans

Very large imports into Japan in this competitive market. Cowra VTAG has the opportunity to grow this new to the area product but would require freezing capacity to suitably prepare the product for the market.

Total imports to Japan are about 60,000 tonnes Exports to Japan from Australia must be frozen because of potential (as seen by Japanese) for fruit fly infestation. Production in Lachlan Valley is possible, and while a potential for production and processing at first appears suitable, large scale production of this crop and freezing facilities are planned for the area surrounding Bundaberg, Queensland. The opportunity for CVTAG and Southern Queensland producers to approach the market as "Australian exporters" should be explored. CVTAG and Queensland producers should avoid competing with one another. Market price was ¥163 per kg in 1995 and recent prices are ¥185 per kg.. Taiwan and China are the largest suppliers with about 25,000 tonnes per annum each. Prices have come off from a high of 6 years ago and now appear stable.

While there is reasonable prospect for this product into Japan, from Australian sources, substantial investment in freezing capability is required to support the production. The production season is relatively short in NSW and it would not seem realistic to invest in freezing facility to handle green soy bean only. Market acceptance of Australian produced product is crucial for such a sensitive product. Varieties have been developed by researchers in Queensland and plant varietal rights applied. The varieties have been specially adapted to meet the consumers needs for appearance and taste. Varieties from Japan and Taiwan have not been successful in the Queensland trial work, disease resistance was poor and yield unacceptable.

This product is frozen, in the pod, with the ideal being 80% of pods with three seeds per pod. Single seeded pods are unacceptable. Average weight should be about 45 grams per 100 seeds. NSW Agriculture consider green vegetable soy beans can be successfully grown in the Lachlan and adjoining valleys.

Now it is believed that the varieties developed are suitable, all that remains is to increase the critical mass to allow dedicated time in a freezing plant and volumes great enough to take part of the market. Small trial volumes have been sent from SE Queensland to the Japanese market and very small volumes have been introduced to the Japanese expatriate market in Australia.

The economics appear to be acceptable, providing freezing capacity is not designed for this product alone. Average paid in Japan is approx. A\$2.35 and landed cost estimated at \$1.50 per kg.

Local, Australian, trial markets could be assessed through the Asian supermarkets chains in capital cities. Taiwanese frozen product is available in Sydney.

Queensland observers consider 10,000 tonnes (at about 5 tonnes per hectare) would represent a viable Australian industry, and CVTAG has a prospect of being part of that industry. Discussion with the champions of the Queensland industry are recommended to confirm a place for CVTAG.

Cabbages

Taiwan and Japan are both reasonable prospects for fresh drum head cabbage. Local production is supplemented by imports throughout the year but imports in July August and September achieve best prices. US is the main supplier of imports. Farm prices for local Taiwanese production is NT\$18-20 (approximately A\$1.00 per kg) in the northern Autumn, market price approx. NT\$55-65 and retail approx. NT80 per kg (approx A\$4.00).

Product is supplied fresh and value added by the retail chain. Product is then frequently offered in 100 gram lots.

Taiwan Council of Agriculture graph (see page 33) indicates a peak in price each year at monsoon time. Thus an opportunity exists at this time for CVTAG.

Asparagus

The market for both green and white fresh asparagus is strong in Japan and Taiwan.

The opportunity for Cowra region to expand its operations in the fresh asparagus market must be considered carefully. As "de-planting" occurs in other Australian production centres the focus could return to CVTAG. With a five year lead up to full production CVTAG should carefully examine Australian plantings and particularly Japanese and Taiwanese market needs and consider a return to Asparagus for these fresh markets.

Current market prices in Japan are approx. \$14 per kg for green asparagus. In Taiwan \$8 for white and \$10 for Green asparagus.

In Japan in November, peak Australian harvest time, Australian Green asparagus sold for \$7.50 in 1997.

Section 2

Key Issues to be Addressed by CVTAG

6 Key Issues

The following section addresses issues which need to be addressed by CVTAG to ensure long term sustainability throughout the region

Domestic vs Export

The Cannery (Cowra Export Packers,) under new ownership, is still a very important component of the local vegetable scene but the Sydney fresh vegetable market is the single most significant outlet for the area. The range of products produced in the area is shown as Appendix 3 (Set of ABS Stats). Export activity has not been significant for vegetable producers in this valley. Some of the basic requirements for export action must therefore become a priority for this group.

Understand the culture

The region can and does produce fresh and processed product that meets the Australian customers' needs, but can that capability be translated into far flung markets where understanding the culture of the consumer and the vastly different competitive pressures are, at first, more important than having the right product?

A vital component then is to check the real requirements of the market before taking the easy steps of producing a product that you think will meet the market needs.

In the retail market in Asian countries, as in Australia, enterprises have invested heavily in improved distribution and greater emphasis on fresh foods. To ensure that customers receive the product judged to be most appropriate for their needs, a step in the distribution chain is either taken away or used less and less. This influences costs of distribution and can influence some quality factors of fresh produce.

Changing distribution systems

The wet market is now less significant as large supermarkets become more attractive as one stop food stores. Deterioration of fresh product occurs more rapidly in the wet market distribution chain so bypassing that step in the chain gets product to the consumer in a more attractive condition. A similar situation is occurring in Australia with supermarkets negotiating directly with producer suppliers.

Cowra Vegetables to Asia Group therefore has to be ready to meet the demands of this changed distribution system in the export scene. Direct contact between an exporter and the Asian retail customer will become key to successful fresh produce exports from CVTAG to Asia. Thorough understanding of the components of this demand and supply chain must be a priority for CVTAG.

Asian demographics are also changing and these have influence on the market for fresh produce. Food safety is certainly emerging as an issue along with the continuing desire for extra freshness.

**Market visits
essential**

Market visits by CVTAG are absolutely essential to make direct contact and build understanding of the nuances of the regional market place.

Strategic Alliances

CVTAG producers need to match their capacity to produce against the special needs of particular markets on which they can focus. At the same time CVTAG should consider the capacity of other areas in Australia to produce the same crop and thus add to the CVTAG initiative.

Other Australian producers should not be regarded as competitors in supply to Asian markets. There is much to be gained by producers approaching markets as one entity, not competing against one another. CVTAG may be regarded as a competitor with say the Lockyer Valley in South East Queensland where similar crops are grown and the same markets likely to be targeted. Two potential alliances revealed during the process of this study are Northern Rivers Agricultural Development Association (NORAD) from North Coast of NSW and Lockyer Valley Group in SE Queensland. It is a general recommendation of this report that the notion of "competition" with other areas producing similar products be cast aside and rather look to those other areas as supporters and network partners rather than competitors in export activity. This concept should be regarded as a major initiative flowing from this study.

Each area has its special advantages and as a basic philosophy of supply, Australia should be taking each of those advantages to create one big competitive advantage instead of operating as small independent areas.

**Identify
opportunities to
work with other
groups**

For this reason, it is recommended that the Cowra Vegetables to Asia Group seek alliances with other horticultural producers to identify synergy that may better meet an Asian customer's needs. A focused team approach is a key success factor to be considered by Australian exporters. Team activity will in the long run reduce costs and assist in developing and managing the supply chain.

Increased contact between producers and the market and more networking is required to get the feel of export markets. Changes in this area would provide positive feedback to producers to clarify their planning both short and long term.

NSW Agriculture is very positive on the future for vegetables in the Lachlan Valley.

Technical support

Develop "self contained" technical support

The opportunity to obtain service support for new product development or for managing current activity will rest with the CVTAG itself. NSW Agriculture are project oriented suppliers to the horticultural industry and do not set out to provide one on one support to any producers. Previously NSW Ag and the canneries supplied field service to assist producers in their crop management activities. To day that occurs only to a very limited extent. Implications for this project are that should a change in direction be required then producers and Cowra Export Packers may have to provide their own technical support. How this should be resourced is a key question for this project as it is likely that for the future new practices may be indicated.

Supplying service support as part of the overall CVTAG activity would enhance opportunities to develop new markets.

Product range

The region is well suited to a wider range of vegetable crops that are grown at present.

Vegetable production in the area has changed. Reasons for the change are both market related and cannery related. There is some uncertainty due to changed ownership of the cannery and changed markets for Asparagus, once the top crop in the Cowra part of the Lachlan Valley.

NSW Agriculture suggest that some of the potential crops for consideration in the Valley could be Red Lotus, Green Soy Beans, Chicory, and daikon radish for Japan with more to be done in the super sweet corn arena. Green soy bean is discussed in this report and daikon was considered. Sweet corn is indeed an opportunity but daikon to Japan is an exceeding competitive market with declining prices in recent years.

Capital

Development costs of horticulture are high with considerable up front capital needed before embarking on a new crop. While there is plenty of labour in the area, other industries are seen to be more attractive than vegetables. Wine grape growing is attracting new entrants to rural activity and is seen as being a lifestyle farming opportunity as opposed to the less glamorous horticultural production activity associated with vegetables. A new approach and some easily noticed "runs on the board" could potentially reinvigorate the vegetable production sector.

Value adding

The long term future course lies in value adding . A champion or driver is required to head a development group and growers need to be convinced by sound market facts that will demonstrate how profitable a new venture may be. Trialing right in the area is absolutely essential if focus is to be directed towards a new crop or change in approach.

Producers consider they could change to other crops or increase the volume of existing crops providing they have access to facts supporting the change. Capital for expansion is a problem. The risk needs to be spread among other growers and on a range of markets. Technical support is definitely required and will not come from NSW Agriculture.

Cowra Export Packers facilities are currently under-utilised thus opportunities for adding value to local vegetable production can be directed to CEP. Freezing facilities at Simplot in Bathurst, and dehydration at Narromine and Young could also be utilised by producers for adding value where such is indicated.

Structure

A "corporate" or "co-operative" approach to the activity may be appropriate for development of new projects in the locality. For example, in other areas, cotton has that approach, limited assistance from outside agencies, self contained some very large players, but all approach it as one business, a corporate approach by non related entities with a common interest, the growing ginning and marketing of cotton. All have a sense of co-operation and competition is among the final marketers and not among the producers. Development of CVTAG as a corporate entity to "hold" producers together is recommended.

Operate with one voice

At present the CVTAG is a loose association of very interested parties all keen to enter new markets. Does the group have sufficient backing to enter the market and meet the challenges of Asian food markets and will commitment last through the project? Will CVTAG form a formal structure to ensure long term sustainability? These are vital questions to be addressed before the group seriously enters the markets in Asia.

While close customer focus and business planning to back the approach may seem some way off and difficult to handle, being prepared to do so with long term strategies to capitalise on opportunities is important.

Workforce and Training

Training for new projects is a key issue. The provision of training for the available workforce in this locality is an issue which will need to be addressed. The viticulture industry overcame this issue by working with Cowra TAFE and perhaps this method can also be employed for horticulture. Reliability of labour for the perceived arduous tasks associated with horticulture is questioned. Competition for labour comes not so much from other enterprises but from the dole payments which are more attractive to the labour force likely to be employed for these tasks. Some enterprises are way out of town, and while seemingly of easy access the physical barrier of being able to get there and then accept the general conditions of work in a horticultural enterprise are considered to be barriers to expansion of the activity by some of these operators.

Water

There is divided opinion on the availability of water for new projects. Some say water is no restriction, while other producers say that it is a limited resource and is a restriction. Producers now are more inclined to base decisions of what to grow on the return per megalitre of water consumed rather than margins for each crop. These details should be included in the financial projects for the target crops.

6.1 Other Issues

Before examining the opportunities identified, Cowra Vegetables to Asia Group were advised in the consultants presentation during May 1998 that the following key considerations need to be taken on board before entering the Asian Market for fresh and value added horticulture produce:

Commit for the long term

- Concentrate on selected markets, a shot gun approach will not succeed
- Commit for the long term
- Supply consistent product specifically as required or agreed with the customer
- Implement appropriate quality systems which will include specified safety components and
- Accept lower or equal to domestic pricing returns for at least 2-3 years while markets are developing.

A recent Supermarket to Asia publication nominated these fundamental business tips for success:

Deliver consistent quality, on time, at agreed price

- Be motivated to succeed
- Understand the market and the culture of your customer
- Develop good business relationships
- Be innovative, stay abreast of technology
- Deliver a quality product- on time, at the specified price
- Seek advice and help and
- Don't give up.

Adopting an approach that export product will be from surplus production only will not work. Once committed, the Group must stay with the program all the way. Once involved, stay involved and be fully committed.

Reliability

Suppliers should be aware of over commitment and under supply and the adverse influence this has on the customer. Customers must be informed if the supplier anticipates a shortage or hitch in delivery. The ideal is not to over commit and arrange supply for continuous customer satisfaction of the specified product. Substitution with product not originally intended for the export customer is viewed adversely by export customers.

Cowra Export Packers

The capacity of this facility is presently under utilised. Available facilities in production at present enable full canning from 130 grams to 3 kgs and vacuum packing

There is an unused glass packing line. This facility is not in use and not assembled. This unit is for sale, but could be commissioned if market opportunity were identified.

A limiting factor at this establishment is trained staff. They could very readily work a second shift but currently do not because of the need for contracts that represent continuous operation. At its peak this plant employed 600 people. Additional work force can be trained at the local TAFE and if contracts confirmed continuous work, there would be cannery personnel who currently travel daily to Bathurst who would seek employment in Cowra.

Supply is contracted directly with producer suppliers, co-ordinating supply is no problem.

What is a concern for CEP is that before embarking on a new product or project a substantial volume is required to make a project viable. There must be sustainable business to warrant investment in new activity. CEP observe that producers are prepared to take risks on new projects because new activity is usually more rewarding than repeat actions.

Under-utilised facility

Currently a three year supply agreement is in place with Simplot with Asparagus being a significant product in that contract.

Table 7 — Production and capacity of Cowra Export Packers

	Actual tonnes	Capacity
Asparagus	1250	3000
Potatoes	1550	2000
Mushrooms	200	800
Tomatoes	3500	10000
Corn	300	1200

Can sizes are 130, 210, 330, 410, 440, 750, 825, 3000 grams.

Glass capacity ranges from 100 gms to 400 gms

In addition to Simplot, CEP has contact packing arrangements for a range of customers and have their own brand products marketed via a distributor under the Cowra Gold brand.

Food safety program with HACCP No formal quality assurance programs are in place in this plant. For long term international contracts a full HACCP plan at the least should be installed. It is recommended that CEP commence development of a food safety program based on the principles of HACCP. The forthcoming ANZFA Food Safety and Hygiene Code and regulations in NSW are likely to mandate this within 12 months.

The plant is locally owned, starting life as an Edgell cannery back in the mid 40's, it is now owned by management and the local community

Useful connections The Cowra Export Packers has established contacts with a distributor in Indonesia, and also have arrangements in Hong Kong, Japan, Germany and France. This agent is well connected in Indonesia with supply lines into Hero and other retail outlets. Labels have been developed for Hero and two others.

Agents are also established in Pakistan, India and Kuwait for fresh pulses

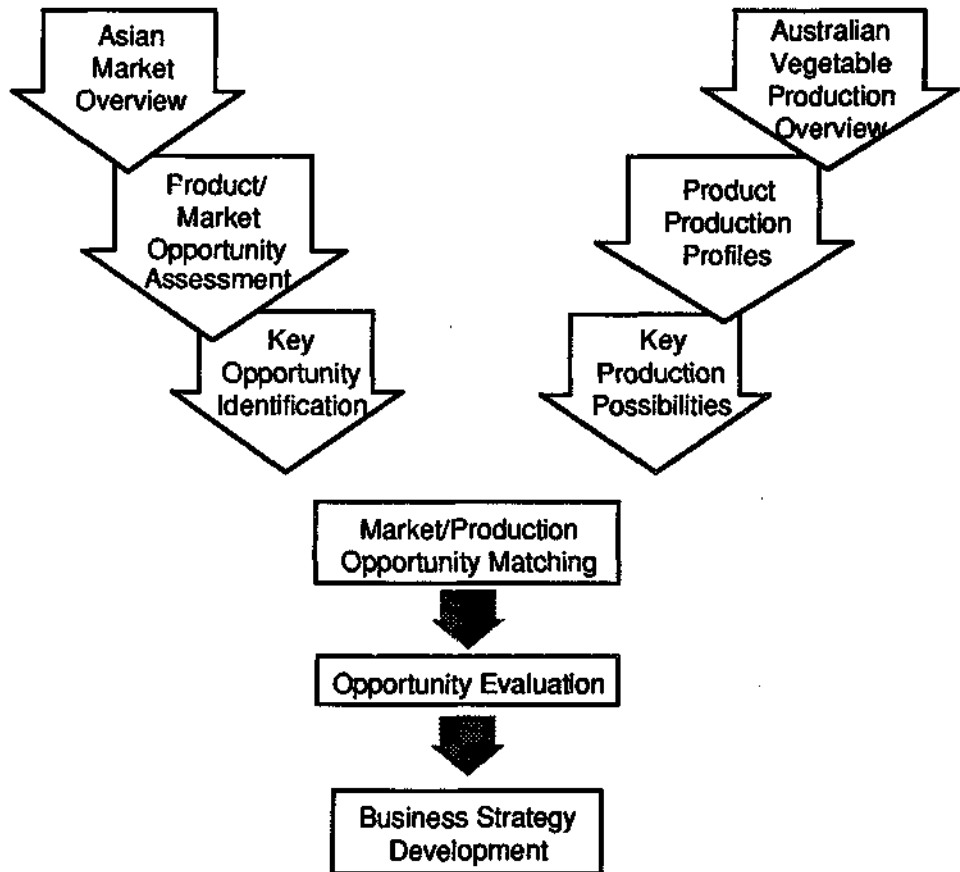
CEP has developed products identified for specific Asian needs and have a canned crocodile soup and canned carp with Asia sauce. Both appear worthy of promotion via Supermarket to Asia and Asia Market Bridge.

7 Matching Market Opportunities to Products

While this report focuses on market opportunities for Cowra vegetable products, it is essential that the rest of the process of export development is followed. It is necessary to match market opportunities with CVTAG's capabilities and comparative advantages and then to evaluate key opportunities further, particularly in the area of processing/value-adding.

Part of the process has been completed in this study and several key markets/products have been identified as opportunities. It is now necessary to reconcile these opportunities with CVTAG's capabilities and, then, to move onto the further evaluation of the key opportunities before, finally, developing a full business strategy to develop the opportunities to be pursued.

The chart below illustrates the process that needs to be followed:



The market opportunity assessment described here has been matched with a production assessment completed by members of the Cowra Vegetables to Asia project team.

8 Market Review

8.1 Overview

Asian markets investigated for the purposes of this report are Japan, Hong Kong, Taiwan, Singapore, Malaysia, and Indonesia

Despite the current economic crisis, the potential for vegetable exports from Australia appears to be good in key Asian markets, especially in the medium term. Markets like Singapore and Taiwan have remained more resilient than expected, while other markets like Malaysia and Hong Kong have only been affected to a small, but less than expected, degree. Even in the worst affected countries, such as Indonesia and Thailand, there are already signs of some recovery. As Governments implement reforms to address their financial problems it is considered by most commentators that regional economies should regain economic health within 2 to 3 years.

Market conditions difficult

Australia's interests and trade in the region could be affected by short term changes in protection within countries of the region, as cheaper imports influence local production. Those countries affected by the economic crisis must themselves embark on vigorous export actions to relieve their foreign exchange problems. Any action to substantially curb imports by increased tariffs would harm Australia's trade, this is an unlikely scenario but needs to be considered.

An AHEA survey in January 1998 indicated that market conditions would remain difficult for the remainder of 1998, with a further loss of business possible. However, the survey verified that vegetable exports had not been as badly affected as fruit. Other factors have also helped prop-up the vegetable market in the short term such as the effect of the El Nino weather pattern, which has caused some lower than normal production from countries like New Zealand, S America. Heavy rain has also significantly affected supplies from some parts of the USA.

Vegetable demand remains strong

Further review as to why the vegetable trade has held up considerably better than fruit in the current financial conditions is advisable. The demand for vegetables has remained reasonably strong, even if prices have eased. It can be assumed that vegetables are a staple food and people do not suddenly stop eating such food. One market for the products studied is with the expatriate community in Indonesia. An immediate fall off in demand since this study commenced comes from the fact that 180,000 expatriates exited Jakarta at the time of the riots and three weeks later (early June 98) only 80,000 had returned. Additionally there has been some supply switching (e.g. from the USA to Australia - based on the currency differential) and there has been some cut-back in demand. A major impact has been in price levels and terms of trade.

While Australia's "top-end" niche in the market has suffered like the rest of the market, our best chance of maintaining an ongoing viable export business is to defend this upmarket position. Historically, Australian vegetable exporters have been accused of attempting to sell at high prices while offering fair to inferior quality vegetables. In Asian markets Australian produce is regarded as:

- of good quality but,
- variable quality shipment by shipment with
- erratic supply, not always dependable and
- too often treated as spot trade with lack of serious commitment.

Australia's competitors such as the USA, New Zealand, Holland and others rate much better in these regards.

Success in key Asian markets will not be achieved unless attention is paid to these basic statements. Exporters may be seriously hindered through not understanding these simple requirements of these markets.

8.2 Changing distribution arrangements

As stated earlier (Critical Issues) distribution arrangements are changing in South and North Asia. Supermarkets are gaining an increased share, some are seeking more direct supply, wet markets are less significant. Supermarket growth may slow as a result of the Asian financial crisis and the face of management of food retailing and food service is changing with the pace of development. The changes in these regions are not unlike Australia.

Distribution arrangements are complex and require careful consideration before leaping in.

In 1997, Japan External Trade Organisation (JETRO) described distribution systems for Fresh and Frozen vegetables as follows.

Fresh vegetables

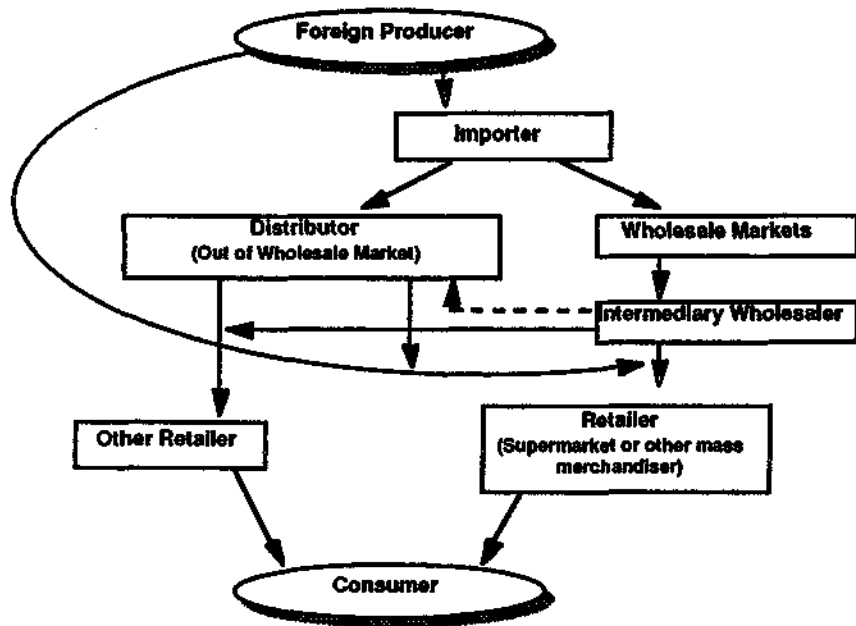
Fresh vegetables are usually distributed in Japan through wholesale markets. Industry insiders claim that roughly 85% of all vegetables consumed in Japan are distributed in this manner. The remaining 15% is distributed direct, by passing the wholesale markets, to food co-operatives, trading companies and volume purchasers in the food service industry.

Understand the structure

Imported vegetables brought in by importers and then either put on the wholesale market just as if they were grown in Japan or sold direct to wholesalers, who in turn sell to retailers.

Prospective fresh vegetable importers face potential problems with understanding the auction system in the wholesale markets and with distribution costs. Distribution costs are high because of the need for measures to minimise damage, refrigeration costs and sorting and packing costs. The key is whether the importer can sell the produce at a lower rate than domestically grown produce while maintaining freshness and quality. There are a number of cases where importers have found success by contracting with mass merchandisers or large food service industry firms to supply fresh vegetables on an ongoing basis.

Typical Japanese Distribution Channels for Imported Fresh Vegetables



Frozen vegetables

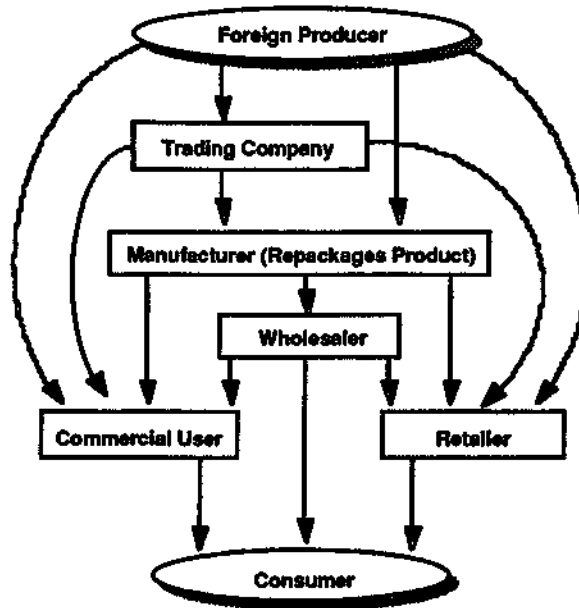
The most common distribution method for frozen vegetables is for a trading company to provide the frozen vegetables to a Japanese frozen food maker, which repacks the vegetables and sells them through wholesalers to retailers or commercial users along with Japanese made frozen vegetables and other frozen foods products. Sometimes imported frozen vegetables go directly from the trading company to a processed food manufacturer for use in making processed food products.

Frozen vegetable imports (to Japan) are usually bulk ordered in shipping container lots. Imports incur freezing, refrigeration sorting and packaging costs during the distribution process.

In addition, Japanese quality and labelling standards are fairly stringent. This means that prospective importers must make sure their products meet exacting requirements for freshness, breakage and spoilage, size and colour.

It is especially important that proper food health and safety procedures be followed at every stage of the process, from production in the country of origin to importation and distribution in Japan."

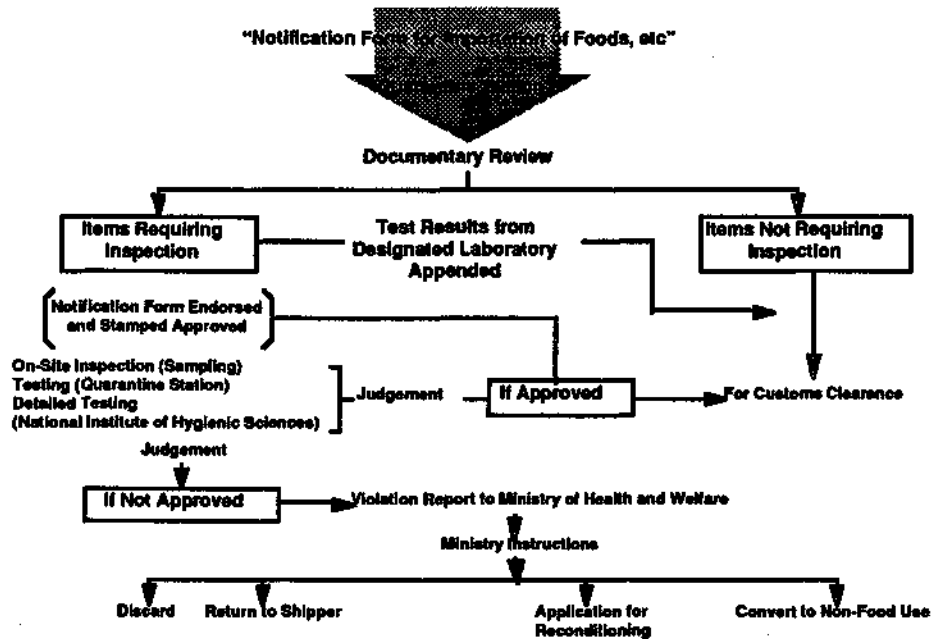
Typical Japanese Distribution Channels for Imported Frozen Vegetables



Structures not unlike this apply in each country. It is essential component of an export plan that these structures be understood. It is very difficult to operate outside the established system.

Plant Quarantine and food sanitation regulations must also be considered. Again such regulations vary from country to country. Japan is the most onerous. Their entry requirements are charted by JETRO thus

Food Sanitation Law Procedures



As with distribution structures entry requirements must be fully understood. They vary from product to product and across processes for each country. Agencies such as Supermarket to Asia, Austrade, DPI&E, AQIS can provide updated information.

8.3 Branding

Branding is a more complex issue, but also a very important one that is somewhat overlooked by growers. Supplier brands are very important at the trade level, to win the confidence of buyers. However, as one key industry body, AusVeg, believes there is an enormous opportunity to more strongly identify Australian vegetables nationally and differentiate ourselves from other competitors. This opportunity must be looked at by the industry.

9 Market Opportunities

The following analyses and identifies several areas of opportunity for CVTAG. It also begins to outline the strategy that CVTAG might follow to evolve its business over time. The conclusions have been developed from a combination of the consultants' literature review and exporter/importer interviews and analysis.

These conclusions are divided into the following:

- Volume unprocessed fresh/frozen business;
- Partial processing;
- Niche products/segments; and
- Processed products.

Each business area requires a quite different approach by CVTAG and presents a different set of benefits and challenges.

9.1 Volume unprocessed fresh/frozen business

Stick to key, mainstream products

One major Australian vegetable producer/exporter, considers that his company lost its way in the vegetable business by not sticking to what Australia is best at. "We are good broadacre producers. We have available land and capital. We have agronomic expertise. We should focus on producing mainstream vegetables well by pursuing varietal selection, improving growing techniques, improving harvesting and logistics, creating national and international supply networks, developing strong and appropriate market relationships and using our regional climatic advantages. We can apply these principles well to such products as carrots, cauliflower, celery, onions and cabbages and similar products."

There is evidence to demonstrate that a long term comparative advantage for Australia is to be a world class supplier of key mainstream vegetables. A recommendation in this report is that CVTAG enhance what they currently do well, and support this Australian advantage.

9.2 Partial processing

Consistent with the above comments, there is also an opportunity to supply selected partially processed vegetable products (e.g. diced carrots) to Asia if we go about this in the right way. Convenience requirements in the food service industry and for on-processing use are driving a demand for this type of product.

However, there are traps in adding value where market competition is too strong and/or where intrinsically we do not have comparative advantages in this type of production or processing.

One major company has said "we are moving away from further processing in our Asian business for a number of reasons. Many market segments are now mature or in decline, like canned foods, local production is often preferred or is cheaper, near Asian supplies are normally cheaper, or, we face competition from large international suppliers with economies of scale that we cannot match. We have found that these endeavours have often not been profitable".

Further assessment of these opportunities is required.

9.3 Niche products /segments

A smaller but significant amount of opinion was that if Australia correctly assesses selected market/product niches, there is an opportunity to supply smaller volumes of new or differentiated products. For example, specially prepared vegetables for particular customers (e.g. different size grading), new products such as "sweet" onions, "baby" carrots, large eggplants, parsley, etc. offer potential opportunities for CVTAG.

High returns, small volume

Many of these opportunities are similar to the types of new products emerging in Western markets and, almost without exception, they need to be of a very high quality and are limited to the niches at the top-end of the market where there is a demand by customers who can pay. A specific example of this type of opportunity was in Indonesia where, even in the current disastrous market, a demand exists for very high quality new potatoes, parsley, coloured capsicums and brussels sprouts.

This business offers potentially higher returns business, but a very much smaller volume.

9.4 Processed products

The consultants' research was much less positive about opportunities for traditional processed vegetable products and inconclusive about a number of new opportunities. There was much feedback to suggest that the medium-long term prospects for traditional canned/bottled products were not good. In large part this was due to cost and local preferences. For example, Kim chi is a traditional North Asian product which is based on the processing of a cheap raw material.

Where local production costs have risen for these canned/bottled products (e.g. pickled cabbage) suppliers have moved to new low cost sources of raw materials (e.g. China).

Opportunities for processed products appear to exist primarily at the top-end of the market for superior quality and/or sufficiently differentiated products which can carry a price premium. For example, the Queensland Dept of Primary Industry work already done on partially prepared and packaged green soybean may be such an opportunity.

Other opportunities in Japan have been noted. Frozen vegetable consumption in that country is increasing with "pre-cooked frozen vegetables" and frozen "organic" vegetables both seeing growth. Pre-cut fresh product is also increasing but concerns for freshness and food safety surround these pre-cut products.

Into Japan, bulk, frozen vegetables imports are a common source of supply for the local food industry to either use in further processing or to repackage for local retail and food service markets. The image is thus one of lesser quality than domestically produced product.

10 Market Characteristics

The following pages provide a summary of key country features. Desk analysis of product data is included as Appendix 1.

Japan

Market Characteristics

Population (1996):	125.7 million
Population Growth (1996):	1%
Major Religion:	Shinto and Buddhism
GDP per capita 1997 (US\$):	\$39,640
Real GDP Growth 1997:	0.9%
Food Expenditure 1995 (US\$ per capita):	\$3,965
1996 Agricultural Production as % of GDP:	1%
Total Food Imports 1996 (US\$)	\$46 billion
Growth in Total Food Imports (1990-1996):	10.2% p.a.
Total Vegetable Imports 1996 (US\$)	\$3.06 billion
Growth in Vegetable Imports (1990-1996)	14.4 % p.a.

(Source: Department of Foreign Affairs and Trade, May 1998)

Trends in Food Imports

- Declining domestic production and therefore food self-sufficiency.
- Appreciation of the Japanese yen making imports more affordable, which is also putting pressure on the competitiveness of many local food manufacturing businesses.
- Increasing consumption of western style foods and diverse food types.
- Increasing acceptance of the utilisation of imported ingredients in traditional style meals.
- Increasing demand for convenience foods.
- Improving distribution system.
- Increasing interest in health and food safety and organic supply
- Distributors are looking for out of season supply sources..

Demand for Vegetables

With some decline in domestic production and increasing reliance on imported fresh produce, Japan offers considerable potential to Australian vegetable exporters. Fresh imported vegetables account for approximately 15 per cent of total fresh vegetable consumption. Total volume of vegetable imports was more than 2 million tonnes in 1997 valued at A\$3.8 bn, 650000 tonnes were fresh. There are many instances where Japanese production can no longer meet rising demand, and consequently, vegetables which used to be imported only in times of domestic shortages, are now being imported all year round. Tatsuo Horiuchi, Dole Food Co. projects "more than \$20 million (wholesale) worth of Japanese fruit and vegetable production will need to be replaced by imports on an annual basis".

Increasing interest in western style and healthy foods has also lead to increased consumption of fresh produce, especially in vegetables such as lettuce, asparagus, carrots and capsicum. There is also strong demand for convenience foods such as prepared vegetables and organic produce, from both the supermarket and food service sectors.

There is strong demand for fresh vegetables from both the food service and retail sectors. Demand for imported vegetables is particularly strong during the northern hemisphere's off season between November and April (Japanese winter). Japanese demand very high quality produce and importers generally have very strict product specifications. There is also strong demand for differentiated products such as mini vegetables, value added, organic or very high quality vegetables.

Although tariff duties are steadily declining as a result of the WTO agreement, quarantine barriers still remain high. Imported vegetables are subject to strict Plant Protection Laws and the Food Sanitation Laws. Vegetables are heavily scrutinised for residual chemicals.

China has emerged as a significant threat to Australian produce exporters in Asian export markets. Currently, China is a significant supplier of cheap, low quality vegetables. However, the Japanese market is more quality conscious and is more likely to look towards suppliers of higher quality produce in the medium term. Consistency is an issue and Australian suppliers often lose long term business based on supply interruptions.

China and USA dominate this market with about 68% of imports. Australia represents just over 2%. Of the 31,000 fresh vegetables from Australia in 1996, valued at A\$79m, 65% were fresh with Asparagus, broccoli and carrot the major contributors in value

Good opportunities for Australian fresh vegetable exporters appear to be in the supply of lettuce, carrots and asparagus, especially during the northern hemisphere's off season, providing they can supply suitable varieties and quality. There is particularly strong growth in demand for value added vegetables.

Super sweet corn is exported from Australia and is in strong demand as a vacuum packed long shelf life product. High quality green beans are a sought after delicacy, a small volume is imported against substantial domestic production. Prices remain high throughout the year. Green vegetable soy beans are sourced both locally and from Taiwan and China with some small volumes now from Vietnam. Total imports exceed 56,000 tonnes.

There is also strong demand for the other imported vegetables such as potatoes (for French fries), wasabi, organic produce, broccoli, bamboo shoots, burdock, turnips, celery, garlic, ginger, onions, peas, taro and semi-processed and pre-cut vegetables.

Total fresh vegetable imports to Japan was 656,000 tonnes in 1996 and frozen vegetables 633,000 tonnes. Fresh produce imports were down 11% and frozen up 8% on the previous year total Value in 1996 was A\$3,626m Australia accounted for \$51.8m.

Imports of fresh or chilled vegetables must undergo import inspection mandated by the Plant protection law. They are also subject to the Food Sanitation Law. Summary of these requirements is included on page 43.

A general summary of product characteristics, The distribution system and Points to consider when first entering the Japanese market are set out in Appendix 1.

Most vegetables, fresh, frozen or processed are subject to Duty, generally 5% for fresh and from 10 to 25% for frozen.

Hong Kong

Market Characteristics

Population (1997):	6.5 million
Population Growth (1997):	3%
Major Religion:	Most major religious groups are represented.
GDP per capita 1997 (US\$):	\$26,320
Real GDP Growth 1997:	5.2%
Food Expenditure 1995 (US\$ per capita):	\$4,800
1996 Agricultural Production as % of GDP:	0.1%
Total Food Imports 1996 (US\$)	\$8.42 billion
Growth in Total Food Imports (1990-1996):	13% p.a.
Total Vegetable Imports 1996 (US\$)	\$502 million
Growth in Vegetable Imports (1990-1996)	0.1% p.a.

(Source: Department of Foreign Affairs and Trade, May 1998)

Trends in Food Imports

- Continued reliance on imports for the majority of its food requirements (local agricultural and food industries are virtually non-existent).
- Increasing number of tourists (approximately 10 million visitors per annum). A short term tourism slump has occurred in 1998.
- Continued proliferation of supermarkets and fast food outlets.
- Increasing demand for convenience foods, value added products, frozen and packaged foods, as a result of increasing ownership of modern cooking appliances such as microwaves and refrigeration.
- Increasing utilisation of western style ingredients within traditional cuisine.
- Lack of import duties on food imports.

- Re-export activity of food and agricultural products into China and significant increase in imports from China.

Demand for Vegetables

Consumption of vegetables in Hong Kong is among the highest in the world on a per capita basis. With very limited domestic production, Hong Kong is reliant on fresh produce imports.

Hong Kong is also a significant re-exporter of fresh produce, with a large amount being channelled into mainland China. Thus, demand from China will indirectly influence demand for imports from Hong Kong.

The Hong Kong fresh produce market is highly competitive and price conscious. China is a major supplier dominating the fresh produce trade from September-April. Hong Kong seeks alternative suppliers of high quality temperate vegetables such as carrots, lettuce and broccoli. US is the second largest supplier, primarily during China's low season.

Major lines of vegetables imported into Hong Kong are potatoes, onions, lettuce, celery, broccoli, carrots, Chinese cabbage, cucumbers, cauliflower, asparagus, sweet corn, radish and a wide variety of leafy vegetables. Australian has established a good reputation for supplying high quality asparagus to Asian markets.

Although consumers have a strong preference for fresh produce, opportunities in the supply of value added vegetables are emerging, primarily due to the growing demand for prepared vegetables from the food service sector. In the medium term, there are good prospects for the supply of value added vegetables to Hong Kong, as currently China cannot compete in this area. However in the long term, it is likely that Chinese producers will move to fill this niche. Australian suppliers must be competitive with other value added suppliers such as the US.

With Hong Kong's reliance on imports and the lack of tariff duties, this market presents considerable opportunity for Australian horticultural exporters. Australian exporters have an advantage by being able to supply fresh produce in the northern hemisphere's off-season. Demand for many vegetables is generally higher in the period May to October when supplies from other producers are low.

Taiwan

Market Characteristics

Population (1997):	21.5 million
Population Growth (1997):	0.4%
Major Religion:	Taoism, Buddhism
GDP per capita 1997 (US\$):	\$13,260
Real GDP Growth 1997:	6.4%
Food Expenditure 1995 (US\$ per capita):	\$2,400
1997 Agricultural Production as % of GDP:	3.3%
Total Food Imports 1996 (US\$)	\$4.2 billion
Growth in Total Food Imports (1990-1996):	10.7% p.a.
Total Vegetable Imports 1996 (US\$)	\$160 million
Growth in Vegetable Imports (1990-1996)	14.5% p.a.

(Source: Department of Foreign Affairs and Trade, May 1998)

Trends in Food Imports

- Declining domestic agricultural sector and increasing reliance on imports.
- Deregulation of the retail sector encouraging the development of modern supermarkets and leading to greater import opportunities.
- Liberalisation of Taiwan's import market (in its bid to join the WTO agreement) is projected to lead to an expansion of existing markets and the emergence of new markets.
- Increasing demand for western style foods such as wheat products, meat and dairy products, brought about by the proliferation of western restaurants.
- Increasing demand for quality and variety of food products, and in particular convenience foods, as a result of increasing interest in health and rising incomes.
- Rapidly growing food service sector.
- Rising concern over food safety and increasing movement towards low chemical foods leading to increasing interest in Australia as a source of 'clean' foods.

Demand for Vegetables

Taiwan is a major producer and exporter of many vegetables and in the past, the Government has tried to protect its industry through high import barriers. However, opportunities for Australian vegetable exporters in Taiwan are emerging as a result of the gradual reduction of trade barriers as Taiwan moves towards joining the WTO agreement. As a result, fresh vegetable imports have doubled in the last five years (1990-1995).

Since 1990, there has been very strong growth in demand for fresh or chilled vegetables from Australia. Most significant imported vegetables are celery, lettuce, broccoli, onions and long cabbage.

Demand for vegetable imports is projected to continue to increase as Taiwan's agricultural production falls. Rising labour and land costs in Taiwan have reduced the competitiveness of locally produced vegetables, thus reducing Taiwan's self sufficiency and increasing the demand for imports.

Rising incomes, increased interest in western style foods and healthy food are all contributing to rising consumption of fresh vegetables. The fast food and five star hotel sectors continue to demonstrate strong demand for fresh vegetables. There is also strong demand for produce which is natural and chemical free.

Australia's has a significant advantage in the ability to supply in the northern hemisphere's off season (from November to April). Although the US is a main supplier of vegetables to Taiwan, the recent wet weather across major production regions in the US has caused major shortages. This has opened up opportunities for other suppliers to this market to pick up the US shortfall.

The Taiwanese market, however, is highly price oriented. Demand and prices are highly seasonal. Tariff duties for some vegetables remain relatively high at 40 per cent (e.g. carrots and beans) and there are strict phytosanitary requirements making exporting to Taiwan difficult.

There appears to be good prospects in the supply of lettuce, onions, broccoli, asparagus (particularly around New Year and Chinese New Year), squash, endive, artichokes, Chinese cabbage, celery and garlic. Sweet corn offers good prospects in top end food service sector

Singapore

Market Characteristics

Population (1997):	3.1 million
Population Growth (1997):	2%
Major Religion:	all major religions
GDP per capita 1997 (US\$):	\$47,039
Real GDP Growth 1997:	7.8%
Food Expenditure 1995 (US\$ per capita):	\$1,767
1997 Agricultural Production as % of GDP:	0.2%
Total Food Imports 1996 (US\$)	\$3.5 billion
Growth in Total Food Imports (1990-1996):	8% p.a.
Total Vegetable Imports 1996 (US\$)	\$351 million
Growth in Vegetable Imports (1990-1996)	9% p.a.

(Source: Department of Foreign Affairs and Trade, May 1998)

Trends in Food Imports

- Singapore's reliance on imports for almost all of its food requirements.
- Lack of market access barriers (virtually all food from Australia can be imported without restriction).
- Large ex-patriate population (approximately 230,000 people) and tourist trade (approximately 7 million tourist per annum).
- Strong re-export growth. Singapore is considered a showcase for other ASEAN countries and products which find acceptance in Singapore will be in a better position to gain acceptance in other ASEAN countries.
- Proliferation of western style restaurants and fast food chains leading to increasing familiarisation of western style, convenience and processed foods.
- High per capita income (approximately US\$22,300) in comparison to other Asian countries and greater purchasing power and demand for higher quality foods.

Demand for Vegetables

Singapore is dependent on imports for almost of its food requirements, including vegetables. Since 1990, there has been strong growth in demand for fresh, chilled and prepared vegetables from Australia.

There are good prospects in the supply of fresh and prepared vegetables to Singapore. There are few market access barriers and there is increasing consumption of fresh western style vegetables as a result of increasing interest in healthy foods and increasing consumption of western style meals such as salads. Continued growth in consumption of semi-processed and pre-cut vegetables is projected.

With the proliferation of western style restaurants and booming tourism industry, Singapore's food service market is showing strong demand for both fresh and semi-processed produce. Singapore is also a significant re-exporter of vegetables to other Asian countries.

Currently, consumers mostly purchase fresh vegetables at the wet markets, however, sales through supermarkets are rapidly increasing. Although the proportion of vegetables sold through supermarkets is currently relatively small, it is projected to continue to increase.

Despite the rising demand for vegetables, Singapore is a highly competitive market and success is based on consistent delivery of vegetables at a reasonable price. Singapore has strong ties with Malaysia and Thailand, who are also significant suppliers of cheap, low quality fresh vegetables. In many cases, Australia is not competitive against these countries, where labour costs are significantly less.

Nevertheless, Australia has a number of advantages over its competitors, such as its close geographical proximity, reputation as a clean, green supplier of fresh produce and the ability to supply in the Northern Hemisphere's off-season.

There are good prospects for Australian exports of avocados to Singapore. Avocados are a luxury item in Singapore and are primarily used in catering. Australia is already one of the main suppliers of avocados to Singapore. Hass is the preferred variety due to its favourable colour and thick skin which makes it better suited to transportation.

Demand for broccoli is projected to increase as a result of growth in semi-processed and pre-cut vegetable products. There is a general preference for broccoli with small heads and stems. Broccoli is generally used in both traditional and western dishes. Again, Australia has the advantage of continuous supply throughout the year. Broccoli must be of high quality.

Singapore is a large importer of cabbage, with Australia being a significant supplier. Chinese cabbage is a major part of the Asian diet and there is a general preference for the both the long and short Wom bok varieties. There are strict food safety regulations imposed on imported Chinese cabbage.

There may be opportunities in niche markets such as pre-packaged or pre-cut vegetables for the food service market, although there is likely to be strong competition in these markets.

Malaysia

Population (1997):	21.8 million
Population Growth (1997):	2.7%
Major Religion:	Islam (there is freedom of worship)
GDP per capita 1997 (US\$):	\$4,368
Real GDP Growth 1997:	7%
Food Expenditure 1995 (US\$ per capita):	\$950
1996 Agricultural Production as % of GDP:	12.8%
Total Food Imports 1996 (US\$)	\$3.6 billion
Growth in Total Food Imports (1990-1996):	18% p.a.
Total Vegetable Imports 1996 (US\$)	\$305 million
Growth in Vegetable Imports (1990-1996)	17% p.a.

(Source: Department of Foreign Affairs and Trade, May 1998)

Trends in Food Imports

- Rapid population growth of approximately 2.7 per cent annually.
- Continuing economic growth and rising disposable incomes, with GDP projected to increase 8 per cent per annum from 1996 to 2000.
- Gradual liberalisation of market access, with the Government committed to reducing tariffs on food items as a part of the ASEAN agreement (by 2003, tariffs on all food items will be reduced to less than 5 per cent).
- Declining domestic agricultural sector and increasing reliance on imports, particularly for rice, vegetables, beef and mutton.
- Strong growth in the retail sector, with supermarkets, hypermarkets and convenience stores experiencing an expansion boom.
- Strong growth in the food service sector, which is being driven by high incomes, greater propensity to eat out and the proliferation of western style restaurants.
- Increasing tourist trade (currently estimated to be approximately 8 million visitors per annum).
- Increasing demand for convenience foods, healthy foods and western style foods, particularly from the younger generation.

- Increasing utilisation of imported foods in both Asian and western style diets.
- Growing labour shortage problems is limiting domestic production of value added foods.

Demand for Vegetables

Although Malaysia is a large vegetable producer, it is not self sufficient and is reliant on imports to meet the growing demand. In recent years, there has been an increase in direct trade to Malaysia, making it one of the largest Asian export markets for vegetables. Previously, the majority of produce came from Singapore.

Both retail and food service sectors are driving strong growth for fresh and processed vegetables. Malaysian supermarkets are experiencing at least 10 to 20 per cent growth in turnover of vegetables. Proliferation of food service sector has lead to increased demand for high quality imported vegetables.

There is strong demand for prepared vegetables and imported vegetables which are of better quality, available out of season or are not grown in Malaysia. There is a general preference for fresh vegetables however, frozen vegetables are popular with the food service sector or when local supplies are not available.

Growing affluence in the market has seen the emergence of a more quality conscious consumer. A trend further enforced as the supermarket infrastructure develops offering an increasing range of pre-packed and semi prepared lines. However, there is also opportunity to supply a wider market base during the wet season, when domestic shortages occur.

The Malaysian market presents two main areas of opportunity to Australian vegetable exporters. Firstly in the supply of premium quality product lines, year round, and secondly in the supply of a broader range of product quality through the wet season (December to February).

Australia is already a dominant supplier of horticultural products to Malaysian due to its ability to supply a large range of products at competitive prices, with shorter delivery times. There is considerable growth potential in fresh produce if suppliers are prepared to invest in market development and promotions.

Best prospects for Australian vegetable suppliers are in broccoli, lettuce, red radish, carrots, potatoes, cauliflower, tomatoes, red cabbage and exotic vegetables such as fennel, Brussels sprouts, chicory and culinary herbs. There are also good prospects in the supply of pumpkin, particularly the Butternut variety, however some market development activities would be required.

Indonesia

Market Characteristics

Population (1997):	203.1 million
Population Growth (1997):	3.2%
Major Religion:	Islam
GDP per capita 1997 (US\$):	\$1,057
Real GDP Growth 1997:	6.6%
Food Expenditure 1995 (US\$ per capita):	\$100
1996 Agricultural Production as % of GDP:	16.3%
Total Food Imports 1996 (US\$)	\$3.9 billion
Growth in Total Food Imports (1990-1996):	35.7% p.a.
Total Vegetable Imports 1996 (US\$)	\$134 million
Growth in Vegetable Imports (1990-1996)	22.8% p.a.

(Source: Department of Foreign Affairs and Trade, May 1998)

Trends in Food Imports

- Indonesia's continued strong economic growth and rising disposable incomes (with per capita GDP projected to rise by 8 per cent per annum, to reach US\$1,000 by the year 2000) have been dislocated over the past 6-12 months. The market remains depressed and may yet decline further.
- Rapidly increasing population, which is projected to grow by 20 per cent between 1995 and 2005 to reach 238 million people.
- Increasing urbanisation, with the urban population projected to increase from approximately 20 per cent to 35 per cent by 2000.
- Government's deregulation strategy leading to reduction in barriers to market access.
- Rapidly expanding tourist industry and food service sector.
- Rapid development of the retail sector and distribution infrastructure.
- Developing local food and beverage industries placing increased reliance on imported raw materials.

Since July 1997 the Indonesian economy has changed dramatically leading to a reduction in the import of vegetables. Currency variations are the main contributor to the change in import volumes and no wonder when the exchange rate has deteriorated from AUD\$1 to Rupiah 1832 on July 16 1997 to AUD\$1 to Rp 9350 on July 1 1998.

Indonesian consumers are price sensitive especially low to middle income earners. Exchange rate changes have forced importers to reduce their volumes and stock and wait for improvements in conditions.

High interest rates and a very tight monetary policy are having a drastic effect and general business activity has stalled following the 400 percent devaluation.

Indonesian vegetable consumption is high. Based on figures from the National Socio-Economic Survey (SUSENAS) growth in demand for vegetables will be 51%. Vegetable consumption is dominated by traditional leaf vegetables (Bayam, Kangkung, Cassava) accounting for more than 35% of the total consumed volume. Green/ beans, vegetable spices such as shallots, garlic and chilli, plus cabbage each account for another 10-12% of consumption. Around 8% of vegetable consumption is cucumber and Labu Siam.

Urban Indonesians in the SUSENAS census of 1990 consumed

"round" cabbage	150 grams per month per capita
Chinese cabbage	110 g/m
Carrots	70 g/m
French beans	90 g/m
Beans	280g/m

Duty on 576 food items changed on 21 January 1998 from 25% to 5% which helps reduce selling price but this is substantially offset by exchange rate variations

Phytosanitary certificates must be provided for all fresh product imports which are then subject to further inspection on arrival.

Compliance with maximum pesticide residue limits are also a requirement for imported food products

Demand for Vegetables

Indonesia is a major producer of vegetables, supplying both domestic market demand and an increasing export market in the Asian region. Indonesia is a large producer of temperate vegetables and production is increasing in volume, both fresh and value added. Some local enterprises now export fresh and canned vegetables.

Markets close to Indonesia have rapidly rising labour costs. Many of these regional markets with the exception of Japan are generally less rigorous in their quality requirements than are the European markets. This all creates opportunities for local export from Indonesia where Singapore and Malaysian markets are emerging for Indonesian potatoes, cabbage carrots, tomatoes and chilli

Overall, the market for imported fresh vegetables in Indonesia is small due to the high price of imported products compared with local produce and Indonesia's unfamiliarity with imported products. However, since 1990, there had been strong growth in most imported vegetable categories as a result of growth in consumer incomes, expatriate community and the food service sector, demand for imported vegetables. The most common imported vegetables are onion, lettuces, broccoli and celery. The market for 'exotic' or special types of vegetables is increasing, being primarily driven by the food service sector. Greatest growth has been in the airflown sector for hotels, restaurants and the fast food sector. The current economic crisis has had a major effect on the demand for imported vegetables in the short term however, in the long term, demand is forecast to be high.

There is a moderate ongoing market for high quality vegetable products as these cannot be supplied to an adequate standard locally.

Imported vegetables represent a small share of the market and are sold mainly through supermarkets such as Sogo, Kemchicks and selected Hero stores which all cater for expatriates and wealthy Indonesians. Hotel and restaurant trade is also a buyer of imported vegetables.

There are (or were) specialist importers serving these specific market sectors with vegetable imports.

Export opportunities for Australian producers in the Indonesian market do exist in the medium term, but require careful investigation, in consideration of the domestic market supply. Australia's proximity is a distinct advantage in relation to supplying vegetables to Indonesia. Indonesian importers are looking for consistency in quality and supply, long term commitment and service and the provision of promotional support. Canned vegetables have been identified as having potential, particularly within the food service segment. There are opportunities in the supply of potatoes. Demand for potatoes is increasing as consumption of snack foods and western style meals are rising.

Frozen vegetables are gaining a share particularly French fries, Sweet Corn, baby carrots, peas and mixed vegetables. Frozen imports face competition from good quality local production.

At times of weather disturbance in mid summer local transport from production centres is not always adequate to supply metropolitan markets, thus as in other areas affected by monsoons in summer a special window of opportunity exists for imported vegetables.

The Indonesian Government is encouraging foreign investment in export oriented industries. Therefore, where fresh produce imports are restricted, investment may be an alternative. Indonesia is seeing an emergence of joint venture arrangements with Malaysia, Singapore, Japan, Taiwan and Brunei in production and distribution of fresh and value added products. Indonesia has begun to exports both fresh and canned products and is focusing on expanding exports, particularly of value added products. Joint venture opportunities exist in providing technology, technical advice and/or management expertise for fresh produce businesses, such as production, handling, packing and storage. There are opportunities for joint ventures in production of value added vegetable products in Indonesia for the export market, primarily Japan.

11 Key Issues to be addressed by CVTAG - Recommendations

From the forgoing broad analysis the consultants recommend the following.

Production Capability

The group of growers participating in this study have demonstrated their high levels of expertise in growing a range of vegetables to meet local market demands. The main concern they express in regard to export market entry is the experience and expertise required to demonstrate that they can deliver export market requirements every time.

***Must match
importers
requirements
every time***

The acknowledgement that there is a learning curve can be assumed as a competitive advantage and must be included in any strategic planning work undertaken as a result of this study.

To address the issue of experience, the Group must continue to gather data relating to other grower groups, state departments of agriculture and research organisations.

The wine industry has demonstrated that its international competitiveness has been achieved by implementing worlds best practice, a process of continuous improvement based on customers feedback.

The development of best practice should include each component of growing and harvesting, storage, packing, transport to the customer.

Supply /Demand Chain Expertise

***Understand
distribution/
supply chain
structures***

With a previous focus on the domestic market, CVTAG has little knowledge of the markets in Asia, apart from this study. It is imperative that the distribution charts included in the report for Japan are developed further for each country where significant opportunities are identified.

Once the charts are in place, Group members need to establish priorities for meeting the key operators and learning cultural practices and expectations.

Once again, drawing on the experience of successful exporters such as the citrus and apple exporters to Asia will assist this process. Only by developing and implementing best practice can the Group secure long term business in the target country.

Market Capability

***In country visits
essential***

In country statistical evidence of price and trends, competitor activity, consumers expectations will need to be added to the data provided in this report. The Group will need to visit target countries and establish conduits for gathering data as it becomes available. This step can be achieved with limited resources, however it must be done whilst visiting the various agencies who are charged with collection and dissemination.

Strategy, Structure and alliances

Finally, the information contained in this report will not achieve long term export sustainability, unless there is clear commitment to strategy and structure. This does not mean that each grower must give up their independence in managing their farming operations. It does mean that growers must work together meeting their individual commitments every time, working with importers, distributors, retailers and every doorkeeper identified to ensure that once achieved, that business continues to flow.

Work together

It is the consultants view that CVTAG should meet to agree their strategic plans based on this report and establish a draft heads of agreement to implement the recommendations based on the key findings.

Consider future strategy for the CVTAG . Such strategy should consider:

- development of a "vision" or Purpose for the Group;
- seeking commitment from all parties within the region of supply for the concept of CVTAG;
- determining costs, resources and structures necessary to support future activity, including vital service provision to support new activity;
- establishing Priorities for action;
- potential networks with other Australian vegetable production areas and with agencies such as NSW Ag, DPIE;
- confirmation of recommended products and markets through direct contact within the regions;
- develop a quality ethos among those directly involved;
- develop an export ethos among those directly involved; and
- seeking co-operation of other agencies such as DFAT, DPIEs, Austrade, Supermarket to Asia and selected exporters.

Key aspects to guide future involvement would be:

- absolute confirmation of market prospects revealed from this desk research project;
- then focusing on customer needs for vegetable crops sourced within the region;
- while acting as one voice for Vegetable growers committed to participating in selected export markets;
- then developing marketing plans that match customers and supply chain needs. These opportunities to benefit; producers, CEP and the community; and
- all should be supported with quality management programs including food safety plans based on HACCP to match customer needs.

Appendices

Appendix 1

Market Characteristics —
Summary of Key Country Features

Appendix 2

Strengths, Weaknesses, Opportunities and Threats —
Cowra Vegetables to Asia Group
and Cowra Export Packers

Appendix 3

ABS Production Reports for the Region

Appendix 1

Market Characteristics.

The following pages provide a summary of key country features.

Japan

Market Characteristics

Population (1996):	125.7 million
Population Growth (1996):	1%
Major Religion:	Shinto and Buddhism
GDP per capita 1997 (US\$):	\$39,640
Real GDP Growth 1997:	0.9%
Food Expenditure 1995 (US\$ per capita):	\$3,965
1996 Agricultural Production as % of GDP:	1%
Total Food Imports 1996 (US\$)	\$46 billion
Growth in Total Food Imports (1990-1996):	10.2% p.a.
Total Vegetable Imports 1996 (US\$)	\$3.06 billion
Growth in Vegetable Imports (1990-1996)	14.4 % p.a.

(Source: Department of Foreign Affairs and Trade, May 1998)

Trends in Food Imports

- Declining domestic production and therefore food self-sufficiency.
- Appreciation of the Japanese yen making imports more affordable, which is also putting pressure on the competitiveness of many local food manufacturing businesses.
- Increasing consumption of western style foods and diverse food types.
- Increasing acceptance of the utilisation of imported ingredients in traditional style meals.
- Increasing demand for convenience foods.
- Improving distribution system.
- Increasing interest in health and food safety and organic supply
- Distributors are looking for out of season supply sources..

Demand for Vegetables

With some decline in domestic production and increasing reliance on imported fresh produce, Japan offers considerable potential to Australian vegetable exporters. Fresh imported vegetables account for approximately 15 per cent of total fresh vegetable consumption. Total volume of vegetable imports was more than 2 million tonnes in 1997 valued at A\$3.8 bn, 650000 tonnes were fresh. There are many instances where Japanese production can no longer meet rising demand, and consequently, vegetables which used to be imported only in times of domestic shortages, are now being imported all year round. Tatsuo Horiuchi, Dole Food Co. projects "more than \$20 million (wholesale) worth of Japanese fruit and vegetable production will need to be replaced by imports on an annual basis".

Increasing interest in western style and healthy foods has also lead to increased consumption of fresh produce, especially in vegetables such as lettuce, asparagus, carrots and capsicum. There is also

strong demand for convenience foods such as prepared vegetables and organic produce, from both the supermarket and food service sectors.

There is strong demand for fresh vegetables from both the food service and retail sectors. Demand for imported vegetables is particularly strong during the northern hemisphere's off season between November and April (Japanese winter). Japanese demand very high quality produce and importers generally have very strict product specifications. There is also strong demand for differentiated products such as mini vegetables, value added, organic or very high quality vegetables.

Although tariff duties are steadily declining as a result of the WTO agreement, quarantine barriers still remain high. Imported vegetables are subject to strict Plant Protection Laws and the Food Sanitation Laws. Vegetables are heavily scrutinised for residual chemicals.

China has emerged as a significant threat to Australian produce exporters in Asian export markets. Currently, China is a significant supplier of cheap, low quality vegetables. However, the Japanese market is more quality conscious and is more likely to look towards suppliers of higher quality produce in the medium term. Consistency is an issue and Australian suppliers often lose long term business based on supply interruptions.

China and USA dominate this market with about 68% of imports. Australia represents just over 2%. Of the 31,000 fresh vegetables from Australia in 1996, valued at A\$79m, 65% were fresh with Asparagus, broccoli and carrot the major contributors in value

Good opportunities for Australian fresh vegetable exporters appear to be in the supply of lettuce, carrots and asparagus, especially during the northern hemisphere's off season, providing they can supply suitable varieties and quality. There is particularly strong growth in demand for value added vegetables.

Super sweet corn is exported from Australia and is in strong demand as a vacuum packed long shelf life product. High quality green string beans are a sought after delicacy, a small volume is imported against substantial domestic production. Prices remain high throughout the year. Green vegetable soy beans are sourced both locally and from Taiwan and China with some small volumes now from Vietnam. Total imports exceed 56,000 tonnes.

There is also strong demand for the other imported vegetables such as potatoes (for French fries), wasabi, organic produce, broccoli, bamboo shoots, burdock, turnips, celery, garlic, ginger, onions, peas, taro and semi-processed and pre-cut vegetables.

Total fresh vegetable imports to Japan was 656,000 tonnes in 1996 and frozen vegetables 633,000 tonnes. Fresh produce imports were down 11% and frozen up 8% on the previous year total Value in 1996 was A\$3,626m Australia accounted for \$51.8m.

Imports of fresh or chilled vegetables must undergo import inspection mandated by the Plant protection law. They are also subject to the Food Sanitation Law. Summary of these requirements is included on page 3864976 (REFER MARKETING GUIDEBOOK FOR MAJOR IMPORTED PRODUCTS from Jetro)

A general summary of product characteristics, The distribution system and Points to consider when first entering the Japanese market are attachment 45454

Most vegetables, fresh, frozen or processed are subject to Duty, generally 5% for fresh and from 10 to 25% for frozen.

Japan	
Sweet Corn , fresh or chilled	
Production 1996:	0
Exports 1996:	0
Imports 1995:	828 tonnes
Growth in Imports (1991-1995):	2567%
Major Suppliers:	Australia, NZ
Imports from Australia 1995:	248 tonnes
Growth in AUST. Imports (5 yrs):	Strong growth from low base
Per capita consumption:	Very small
Trends in Imports:	Overall imports of sweet corn increased considerably, particularly from Australia and New Zealand (519 tonnes). The majority of imports of fresh sweet corn are as whole unstripped cobs or as de-silked, dehusked or vacuum packed product.
Market Demand:	Steady market growth and increasing focus on value-added product. Domestic production can no longer meet demand.
Target Market:	Export opportunities for suppliers continue to be excellent in the Japanese food service sector. Japanese consumers spent an average of 36% of their total food budget on eating out. Fast food and family style restaurants are experiencing healthy growth.
Product Specifications:	Importers apply strict specifications in terms of product size, quality, uniformity and taste. Preferred types are bi-colour and supersweet varieties, size—19cm x 5 cm, and may have leaves on, otherwise must be free of damage to the cob.
Tariff Duty:	10%
Quarantine Requirements:	Imports are subject to Plant Protection Laws and the Food Sanitation Laws. Vegetables are scrutinised for residual chemicals against a criteria of 25 agricultural chemicals.
Export Opportunity Prospects:	Imports of fresh sweet corn are expected to increase as Japan's domestic production can no longer meet demand. There is good potential for Australian exporters but there needs to be an improvement in consistency of supply and quality.

Japan	
Beans , green, fresh	
Production 1996:	75,400
Exports 1996:	0
Imports 1996:	1,389 tonnes
Growth in Imports (1990-1996):	188%
Major Suppliers:	Oman, New Zealand and Mexico
Imports from Australia 1996:	14 tonnes
Growth in Aust. Imports (90-96):	There were nil imports from Australia in 1990.
Annual per capita consumption:	1kg
Trends in Imports:	<p>Imports have increased steadily across all suppliers. Australia has developed greater market share since 1991.</p> <p>Gradual increase in direct purchase arrangements, with supermarkets and restaurant chains.</p> <p>With domestic production decreasing, import supplies are increasing. The US, South America and New Zealand are important exporters, there is some trade in Kenyan/African beans.</p>
Product Specifications	<p>Various varieties of green beans, French and runner.</p> <p>Consistent grading. Bright, firm beans. Washed, trimmed, bunched or loose in carton</p> <p>Wrapped or loose packed in 5-10kg cartons.</p> <p>Cooling and temperature control required.</p>
Market Demand:	<p>Strong growth in demand, for imported beans. Currently Australia has a small market share (less than 3%). Exports from Australia declined considerably in 1996 to 14 tonnes. Suppliers to meet strict specifications on product size, quality, uniformity and taste.</p> <p>Strong traditional fresh consumption. Increasing acceptance of new varieties and imports.</p> <p>Increase in supermarket selling, C-Stores still 15-20% of market. Economic slow down has increased buying aggression.</p>

Japan

Beans , green, fresh cont...

Market Demand:	Local fresh product often highest priced. US and Australian produce similarly priced.
Target Market:	Export opportunities for suppliers continue to be excellent in the Japanese food service sector. Japanese consumers spent an average of 36% of their total food budget on eating out. Fast food and family style restaurants are experiencing healthy growth.
Tariff Duty:	5%
Quarantine Requirements:	Imports are subject to Plant Protection Laws and the Food Sanitation Laws. Vegetables are scrutinised for residual chemicals against a criteria of 25 agricultural chemicals. Imports of fresh beans from mainland Australia are prohibited due to the presence of Mediterranean Fruit Fly.
Export Opportunity Prospects:	Recently of the quarantine bans on bean imports from Tasmania have been lifted. There are no export opportunities for Victorian fresh beans to Japan due to quarantine restrictions. in the short term, the Asian market conditions have curbed imports and increased market competitiveness. In the medium to long term, imports are likely to increase as local production declines.

Japan	
Lettuce	
Domestic Production 1996:	548,400 tonnes
Exports 1996:	0
Imports 1996:	1,419 tonnes
Growth in Imports (1990-1996):	311%
Major Suppliers:	US
Imports from Australia 1996:	75 tonnes
Growth in Aust. Imports (90-96):	Nil
Annual per capita consumption:	4kg
Trends in Imports:	<p>US is the major supplier of lettuce to Japan. China is increasing exports</p> <p>There has been a significant increase in imports over the past 5-10 years.</p> <p>Gradual increase in direct purchase arrangements especially by supermarket and restaurant chains.</p>
Product Specifications:	<p>Varieties include: iceberg, local Asian varieties, bok choi, pak choi etc, radicchio (Royal Red).</p> <p>Cleaned, trimmed heads required. Firmness, uniformity of size are critical. Large size preferred.</p> <p>Heads individually wrapped in plastic, required by supermarkets (due to past E-coli scare).</p> <p>4.5-10kg cartons.</p>
Market Demand:	<p>Although there is still some resistance to raw vegetable consumption, salad consumption has increased in the Japanese market both as a home prepared and food service dish. This trend is set to continue with a strong focus on healthy eating.</p> <p>Western style salad mixes are increasing.</p> <p>Increase in supermarket selling. The US-style and local 'fresh cut' salad sales increasing.</p> <p>The Asian economic slow down has increased buying aggression.</p>

Japan

Lettuce cont...

Target Market:	There are good opportunities for shredded lettuce in the food service sector with the increase of western style fast food outlets that use lettuce in many of their dishes i.e. hamburgers, portion salads.
Tariff Duty:	5%
Quarantine Requirements:	Imports are subject to Plant Protection Laws and the Food Sanitation Laws. Vegetables are scrutinised for residual chemicals against a criteria of 25 agricultural chemicals.
Export Opportunity Prospects:	<p>Value added lettuce such as shredded lettuce has some opportunities in the Japanese market, although buyers prefer the shredding to be done in Japan. For both retail and food service there is greatest demand for imported supply between November and April (Japanese winter).</p> <p>Poor Asian market conditions have curbed imports and increased market competitiveness.</p>

Japan Carrots	
Production 1996:	736,200 tonnes
Exports 1996:	3 tonnes
Imports 1996:	30,200 tonnes
Growth in Imports (1991-1996):	725%
Major Suppliers:	Taiwan, China
Imports from Australia 1996:	2,635 tonnes
Growth in Aust. Imports (5yrs):	Substantial growth from a very low base in 1991.
Annual per capita consumption:	6kg
Trends in Imports:	<p>Since 1991, there has been significant growth in imports, from all major suppliers, due to liberalisation of the market.</p> <p>Gradual increase in direct purchase arrangements, especially by supermarket and restaurant chains.</p> <p>The US and New Zealand are key competitors.</p>
Product Specifications:	<p>Highest quality required. The Nantes (Top Pack) and Kuroda (Koyo No. 2) varieties command premium prices, while other varieties do not, even in times of short supply.</p> <p>Quality is critical for fresh market sales. Carrots should be straight, 10cm in length and 3 cm in diameter.</p> <p>Prefer drum washed carrots as opposed to brush wash. Australian exports have been restricted by wrong varieties and insufficient quality.</p> <p>Consistent size grading.</p> <p>Cleaned, size graded, washed, hydro-cooled.</p> <p>Bundled, retail packed, packed loose into 5-10kg cartons.</p> <p>Chilled to 33° F.</p>

Japan

Carrots cont...

Market Demand:	<p>In the long term, the demand for carrots will be strong due to the growth in western style foods such as salads.</p> <p>The market demands very high quality carrots. Opportunities are emerging as domestic supply continues to decline and market access opens up.</p> <p>Demand is seasonal with higher prices obtained in the off season (February to May).</p> <p>Increase in supermarket sales.</p> <p>Economic slow down has increased buying aggression.</p> <p>A large proportion of carrots go to the processing industry, frozen/cooked products. There is strong demand for differentiated products such as peeled mini carrots, organic and very high quality carrots.</p> <p>As far as pricing goes, Europe is the most expensive, and the US is competitive.</p>
Target Market:	<p>The Japanese food service sector, particularly the fast food and family style restaurants are experiencing healthy growth.</p>
Tariff Duty:	<p>5%</p>
Quarantine Requirements:	<p>Imports are subject to Plant Protection Laws and the Food Sanitation Laws. Vegetables are scrutinised for residual chemicals against a criteria of 25 agricultural chemicals.</p>
Export Opportunity Prospects:	<p>Good prospects for supply of fresh Nantes and Kuroda carrots during February to May. Major barriers to Australian market growth are an increasing threat from other cheaper suppliers such as the US and China.</p> <p>The poor Asian market conditions have curbed imports and increased market competitiveness. Ongoing demand for competitive product.</p> <p>In the medium to long term, there is little growth in the juice market, but continued growth in fresh sales, depending on seasonal conditions and quality.</p>

Japan	
Cabbages, fresh	
Production 1996:	2,703,000 tonnes
Exports 1996:	489 tonnes
Imports 1996:	76,462 tonnes
Growth in Imports (1990-1996):	845%
Major Suppliers:	US
Imports from Australia 1995/6:	640 tonnes (white varieties) - 1996, 1166 tonnes (Chinese) - 1995
Growth in Aust. Imports (90-96):	Imports have grown from virtually nil in 1990.
Annual per capita consumption:	22kg
Trends in Imports:	<p>Since the early 1990s, there has been strong growth in demand for imported brassicas. Imports of fresh Chinese cabbage into Japan are limited due to the difficulties in maintaining quality during transportation. Imports are generally cheaper than local produce.</p> <p>Whilst the US remain strong market leaders, demand for Australian imports increased substantially.</p> <p>Gradual increase in direct purchase arrangements by supermarket and restaurant chains.</p>
Market Demand:	<p>Japanese prefer soft cabbage usually served fresh (shredded) not cooked. Prices are highest between January and April. Japan currently imports Korean style pickled Chinese cabbage called Kimchi.</p> <p>Strong traditional consumption. Pickled cabbage has increased in popularity.</p> <p>Increase in supermarket selling. C-stores still have 15-20% of the market.</p> <p>Local fresh product is the highest priced. The US and Australian product is similarly priced.</p> <p>Economic slowdown has increased buying aggression.</p>
Target Market:	There are good opportunities for shredded cabbage in the food service sector. With the increasing trend towards convenience, there may be opportunities in fresh cut cabbage and frozen mixed vegetables with Chinese cabbage.
Tariff Duty:	5%

Japan
Cabbages, fresh cont...

Quarantine Requirements:	Imports are subject to Plant Protection Laws and the Food Sanitation Laws. Vegetables are scrutinised for residual chemicals against a criteria of 25 agricultural chemicals.
Export Opportunity Prospects:	<p>Japan produces 1.2 million tonnes of Chinese cabbage annually yet there is a shortage of supply between March and September. Export opportunities exist for Australian suppliers during this period.</p> <p>Production of Kimchi in Australia for export is worthwhile considering.</p> <p>The market for fresh cut cabbage and frozen mixed vegetables with Chinese cabbage should also be investigated.</p> <p>In the medium to long term, market opportunities depend upon seasonal supply and demand.</p>

Japan	
Asparagus, fresh or chilled	
Production 1996:	8,000 tonnes
Exports 1996:	0
Imports 1996:	22,200 tonnes
Growth in Imports (1990-1996):	91%
Major Suppliers:	US, Philippines, Australia
Imports from Australia 1996:	4,434 tonnes
Growth in Aust. Imports (90-96):	83%
Annual per capita consumption:	N/A
Trends in Imports:	<p>Asparagus imports showed healthy increases across major suppliers. Australia's ranking dropped from second to third over the five year period although quantities remained high.</p> <p>Australian asparagus still commands a relatively high price even though there has been a reduction in prices received by countries exporting to Japan.</p> <p>Gradual increase in direct purchase arrangements by supermarket and restaurant chains.</p> <p>The US lead import development with many new sources coming into the market from Mexico, Chile and Peru. The Philippines has become an important 12 month supplier. Thailand and China are new suppliers but the quality is not so good.</p>
Product Specifications:	<p>Primarily green asparagus varieties are preferred.</p> <p>Full green colour, small but full spears preferred, 14-16mm uniform size, straight, stems, tightly budded, 100-120g bundles, 5-7 stems per bundle.</p> <p>Mostly packed in bundles, sometimes packed loose, in 5kg cartons.</p> <p>Hydro cooled and careful temperature control required to achieve the best quality.</p> <p>Fresh by air freight, frozen by sea freight.</p>

Japan

Asparagus, fresh or chilled cont...

Market Demand:	<p>Increasing market demand for all quality of product.</p> <p>Significant growth in the recent years, in past 1-2 years growth has slowed.</p> <p>Increase in supermarket selling.</p> <p>Economic slowdown has increased buying aggression.</p>
Target Market:	<p>Export opportunities for suppliers continue to be excellent in the Japanese food service sector. Japanese consumers spent an average of 36% of their total food budget on eating out. Fast food and family style restaurants are experiencing healthy growth which call for suppliers to meet strict specifications on product size, quality, uniformity and taste.</p>
Product Specifications:	<p>Market has a requirement for both premium quality product (Australia, US) and lower quality, lower cost product (Philippines).</p>
Tariff Duty:	<p>5%</p>
Quarantine Requirements:	<p>Imports are subject to Plant Protection Laws and the Food Sanitation Laws. Vegetables are scrutinised for residual chemicals against a criteria of 25 agricultural chemicals.</p>
Export Opportunity Prospects:	<p>There may be opportunities for growers to further add value to their produce for export by pre-packaging the asparagus rather than selling bulk-packed produce. There is scope to diversify the range of processed and minimally processed products to include frozen, pickled and freeze dried asparagus, purees and pastes and pre-cooked lines.</p> <p>Best prospects are during "shoulder periods between the end of the Northern hemisphere supply and the start of the volume of Southern hemisphere product (Aug/Sept) and towards the end of the Southern hemisphere season (Dec/Jan).</p>

Japan	
Green Soya beans	
Production 1996:	N/A
Exports 1996:	N/A
Imports 1996:	57,973 tonnes
Growth in Imports (1990-1996):	45%
Major Suppliers:	China and Taiwan
Imports from Australia 1996:	0
Growth in Aust. Imports:	Nil
Annual per capita consumption:	1.2 kg
Trends in Imports:	<p>Demand is highest between January and March.</p> <p>Imports of fresh/frozen green soybean have increased in the past 5 years.</p>
Market Demand:	<p>International trade in green soybeans focuses on supply to Japan. Total Japanese demand is approximately 160,000 tonnes per annum. Demand is concentrated on fresh and frozen green soybeans.</p> <p>Green soybeans are the key ingredient in "eda-mame" (flavoured bean paste) for the bar-snack product.</p> <p>Organic green soybeans are also required by Japanese trade houses.</p>
Target Market:	Food service market
Product Specifications:	<p>There is a preference for fresh green colour, large size (more than 4.5cm and 1.3cm width), white pubescence, colourless hilum, high ratio of 2 or 3 seeds per pod and be of good eating quality. Of 22 cultivars imported, GSB-1 and GSB-4 are the most popular.</p> <p>The 3 most common ways vegetable green soybeans are marketed in Japan are described below. In Japan, the first 2 are the most popular.</p>

Japan

Green Soya beans cont...

Product Specifications:

1) The attached type (pod bearing plant) marketed in bundle form, with top leaves and small damaged pods are removed. Whole plants with leaves, pods, stems and roots are packed in bundles or in 5 kg wooden boxes or cartons (most desirable in fresh markets).

2) Detached type (pod only) is marketed in plastic net bags. Only 2 and 3 seed pods are packed into these bags.

3) Fresh beans (bean only) in which beans are shelled and marketed as fresh beans.

Tariff Duty:

Frozen 10%, fresh 5%

Quarantine Requirements:

Due to quarantine problems, only green soybean grown in Tasmania is allowed to be exported to Japan as fresh product. Frozen green soybeans are imported from Australia.

Export Opportunity Prospects:

Imports appear likely to increase and there is potential to develop a moderate frozen (and potentially fresh) business.

Japan

Salad beetroot, salsify, celeriac, radishes, fresh or chilled

Production 1996:	N/A
Exports 1996:	N/A
Imports 1996:	178 tonnes
Growth in Imports (1991-1996):	-8%
Major Suppliers:	N/A
Imports from Australia 1996:	0
Growth in Aust. Imports (90-96):	Imports have dropped from 12 tonnes in 1990.
Annual per capita consumption:	Pickled Radish — 1.8 kg per household
Trends in Imports:	<p>Separate statistics are not recorded for processed radish. Although imports of pickle ingredients such as radish depend on the movement of the exchange rate, a growth in imports of highly processed vegetables is likely.</p> <p>Developing import trade in "daikon" style radish. Imports are coming in from other Asian countries.</p> <p>Gradual increase in direct purchase arrangements by supermarket and restaurant chains.</p> <p>Australia can produce celery well and should be able to develop this business in the future.</p>
Product Specifications:	<p>Most popular variety of radish is daikon.</p> <p>Consistent grading required, washed, large sizes preferred.</p> <p>Mostly bundled, 2-3 per bundle, sometimes loosely packed, mainly 10-15kg cartons.</p> <p>Sea or air freight option.</p>
Market Demand:	<p>Long white radish, which is one of the 4 types of radishes, is the most extensive vegetable crop grown in Asia.</p> <p>Domestic production is declining despite increased demand for processed products such as radish pickles, takuan, dried radish and frozen radish.</p> <p>Pickled radish represents approximately 30 per cent of the A\$6 billion Japanese pickle market. Of these, takuan is the most popular form of pickled radish.</p>

Japan

Salad beetroot, salsify, celeriac, radishes, fresh or chilled cont...

Demand for fresh low salt pickles is expected to grow.

Strong traditional consumption.

Increase in supermarket selling. C-stores still have 15-20% of market.

Economic slow down has increased buying aggression.

Local fresh product is often highest priced. The US and Australian produce is similarly priced.

Target Market: Retail and food service

Tariff Duty: 5%

Quarantine Requirements: Celery is affected by "fruit fly" restrictions.

Export Opportunity Prospects: Opportunities for supplying fresh and semi-processed long white radish to Japan due to the strong demand for processing products such as radish pickles, takuan, dried radish and frozen radish.

There are prospects for daikon in a partially prepared form.

There is a market for the right varieties of good quality as domestic production is stable and declining.

Japan	
Onions and shallots, green	
Production 1996:	545,600 tonnes
Exports 1995/96:	10,295 tonnes
Imports 1995:	245844 tonnes
Growth in Imports (1991-1995):	Import requirements have increased (e.g. 1990 - 86646 tonnes)
Major Suppliers:	
Imports from Australia 1995:	12614 tonnes
Growth in Aust. Imports (5 yrs):	Exports have increased, but remain volatile.
Per capita consumption:	
Trends in Imports:	<p>Most produce is directly purchased by supermarket and restaurant chains.</p> <p>Imports are based largely on Hakakido production. Japan also exports some onions.</p> <p>The US is a main supplier to Japan with around 50% of total imports.</p> <p>New trade has developed for sweet onions from Peru and Chile.</p> <p>Domestic production varies annually. Production is stable.</p> <p>Import supplies are increasing but the market is highly competitive. Inter-Asian trade is developing.</p>
Product Specifications:	<p>Brown varieties dominate trade, however, red and "sweet" white onions as well as French shallot business is now increasing.</p> <p>Consistent grading.</p> <p>Bright, clean bulbs preferred, sized 80-100mm. Sizes 95mm and bigger are especially popular.</p> <p>Usually presented bagged in bulk bins, loose in container.</p> <p>The US send 50lb bags, Australia, New Zealand and Europe send quantities of 10/20/25kg bags.</p> <p>Some retail packing of shallots in 250g packs.</p> <p>Produce is best stored in a dry, clean environment, ambient or preferably chilled conditions.</p>

Japan

Onions and shallots, green cont...

Market Demand:	<p>Strong traditional fresh consumption.</p> <p>Increasing acceptance of red, "sweet" varieties. High quality required at a competitive price.</p> <p>Demand for shallots is on the increase.</p> <p>Sea freight "fantainers" are the preferred method of transportation used because of their better ventilation.</p> <p>Local fresh produce is normally highest priced. European prices are generally high as well.</p> <p>US, Australia and New Zealand produce is similarly priced.</p>
Target Market:	<p>Food service and processing mainly.</p>
Tariff Duty:	<p>10%</p>
Quarantine Requirements:	<p>Imports are subject to Plant Protection Laws and the Food Sanitation Laws. Vegetables are scrutinised for residual chemicals against a criteria of 25 agricultural chemicals.</p>
Export Opportunity Prospects:	<p>In the medium to long term, imports are likely to increase as local production declines. The market opportunity for Australia remains significant for brown onions, depending upon seasonal condition. Good potential also exists for red and white varieties.</p>

Japan

Cauliflower and headed broccoll, fresh or chilled

Production 1996:	0
Exports 1996:	0
Imports 1995:	99,182 tonnes
Growth in Imports (1991-1995):	
Major Suppliers:	Australia, US
Imports from Australia 1996:	21 tonnes (cauliflower), 1022 tonnes(broccoli)
Growth in Aust. Imports (5 yrs):	A small steady trade has developed.
Per capita consumption:	
Trends in Imports:	<p>Gradual increase in direct purchase arrangements by supermarket and restaurant chains.</p> <p>Taiwan is a major supplier.</p> <p>The US is by far the largest sender of broccoli to Japan (73309 tonnes in 1995) and New Zealand is another important exporter.</p> <p>The USA is also an important sender of cauliflower to Asia.</p> <p>Domestic production is decreasing. Import supplies are increasing.</p>
Product Specifications:	<p>Popular variety white cauliflower heads and green, European varieties of broccoli.</p> <p>Consistent grading, large, bright firm cauliflower heads, washed and often wrapped.</p> <p>Cauliflower presented in store wrapped and often loose packed in 10-15kg waxed cartons.</p> <p>Cooling and temperature control required for cauliflower.</p> <p>Dark green broccoli heads with good symmetry, mushroom shaped, 1.8-2cm diameter buds, 130-150 heads, stem same length, free of blemish.</p> <p>High quality required at a competitive price.</p> <p>The US sends broccoli 38 crowns per carton, stalks 5 inches high, very uniform grading, usually 10-15kg waxed cartons. There is some pre-cut, bagged product being trialled.</p> <p>Broccoli needs hydro-cooling, icing and immediate shipment required to retain colour and quality.</p>

Japan

Cauliflower and headed broccoli, fresh or chilled cont...

Product Specifications (Cont):	Mainly sea freight used to ship, air freight used to service spot markets.
Market Demand:	Strong traditional fresh consumption as well as major pickled consumption of cauliflower. Demand for broccoli is increasing. Increase in supermarket selling, C-stores still hold 15-20% of the market. Domestic supplies regarded as highest quality.
Target Market:	Significant food service and large processing demand.
Tariff Duty:	
Quarantine Requirements:	
Export Opportunity Prospects:	The poor Asian economic conditions have curbed imports and increased market competitiveness. The medium to long term opportunities for both cauliflower and broccoli are good.

Hong Kong

Market Characteristics

Population (1997):	6.5 million
Population Growth (1997):	3%
Major Religion:	Most major religious groups are represented.
GDP per capita 1997 (US\$):	\$26,320
Real GDP Growth 1997:	5.2%
Food Expenditure 1995 (US\$ per capita):	\$4,800
1996 Agricultural Production as % of GDP:	0.1%
Total Food Imports 1996 (US\$)	\$8.42 billion
Growth in Total Food Imports (1990-1996):	13% p.a.
Total Vegetable Imports 1996 (US\$)	\$502 million
Growth in Vegetable Imports (1990-1996)	0.1% p.a.

(Source: Department of Foreign Affairs and Trade, May 1998)

Trends in Food Imports

- Continued reliance on imports for the majority of its food requirements (local agricultural and food industries are virtually non-existent).
- Increasing number of tourists (approximately 10 million visitors per annum). A short term tourism slump has occurred in 1998.
- Continued proliferation of supermarkets and fast food outlets.
- Increasing demand for convenience foods, value added products, frozen and packaged foods, as a result of increasing ownership of modern cooking appliances such as microwaves and refrigeration.
- Increasing utilisation of western style ingredients within traditional cuisine.
- Lack of import duties on food imports.
- Re-export activity of food and agricultural products into China and significant increase in imports from China.

Demand for Vegetables

Consumption of vegetables in Hong Kong is among the highest in the world on a per capita basis. With very limited domestic production, Hong Kong is reliant on fresh produce imports.

Hong Kong is also a significant re-exporter of fresh produce, with a large amount being channelled into mainland China. Thus, demand from China will indirectly influence demand for imports from Hong Kong.

The Hong Kong fresh produce market is highly competitive and price conscious. China is a major supplier dominating the fresh produce trade from September-April. Hong Kong seeks alternative suppliers of high quality temperate vegetables such as carrots, lettuce and broccoli. US is the second largest supplier, primarily during China's low season.

Major lines of vegetables imported into Hong Kong are potatoes, onions, lettuce, celery, broccoli, carrots, Chinese cabbage, cucumbers, cauliflower, asparagus, sweet corn, radish and a wide variety of leafy vegetables. Australian has established a good reputation for supplying high quality asparagus to Asian markets.

Although consumers have a strong preference for fresh produce, opportunities in the supply of value added vegetables are emerging, primarily due to the growing demand for prepared vegetables from the food service sector. In the medium term, there are good prospects for the supply of value added vegetables to Hong Kong, as currently China cannot compete in this area. However in the long term, it is likely that Chinese producers will move to fill this niche. Australian suppliers must be competitive with other value added suppliers such as the US.

With Hong Kong's reliance on imports and the lack of tariff duties, this market presents considerable opportunity for Australian horticultural exporters. Australian exporters have an advantage by being able to supply fresh produce in the northern hemisphere's off-season. Demand for many vegetables is generally higher in the period May to October when supplies from other producers are low.

Hong Kong

Sweet corn , fresh or chilled

Production 1995:	Limited
Exports 1995:	No figure available
Imports 1995:	No figure available
Growth in Imports (1992-1995):	N/A
Major Suppliers:	China, US
Imports from Australia 1995:	No figure available
Growth in Aust. Imports:	N/A
Annual per capita consumption:	N/A
Trends in Imports:	—
Market Demand:	—
Target Market:	Supermarket and the food service sector.
Product Specifications:	Cob length 6-7 inches with tassels, full leaf, kernels to top of cob, and ends of the cob should not be trimmed.
Tariff Duty:	None
Quarantine Requirements:	None
Export Opportunity Prospects:	Difficult to determine due to lack of data. Increasing trade in other N. Asian markets would suggest at least a moderate medium-long term potential.

Hong Kong	
Beans , green, fresh or chilled	
Production 1996:	217 tonnes
Exports 1996:	21 tonnes
Imports 1996:	109 tonnes
Growth in Imports (1990-1996):	-96%
Major Suppliers:	N/A
Imports from Australia 1995:	N/A
Growth in Aust. Imports (90-95):	N/A
Annual per capita consumption:	Minimal - Less than half a kilogram per year.
Trends in Imports:	<p>Hong Kong's imports of green beans have declined quite significantly since 1990.</p> <p>China has around a 64% share of vegetable imports and is a very important supplier to market.</p> <p>The US, South America and New Zealand are other important exporters. Some trade in Kenyan/African beans.</p>
Production Specifications:	<p>Various of varieties of beans e.g. French, runner.</p> <p>Consistent grading. High quality required at a competitive price.</p> <p>Bright firm beans, washed and trimmed, bunched or loose in cartons, 10-15kg cartons.</p> <p>Usually presented wrapped, loosely packed.</p> <p>Cooling and temperature control required.</p> <p>Shipped via both sea and air.</p>
Market Demand:	<p>Hong Kong is not a significant consumer of green beans and import demand has dropped in recent years.</p> <p>Market share approximately 60% wet market, 40% supermarket.</p> <p>The US pricing is competitive.</p>
Target Market:	Supermarkets and the food service sector.
Tariff Duty:	None
Quarantine Requirements:	None
Export Opportunity Prospects:	<p>Difficult to determine due to the lack of import statistics.</p> <p>In the medium to long term, market opportunities depend upon seasonal supply and demand.</p>

Hong Kong

Lettuce

Domestic Production 1996:	4,714 tonnes
Exports 1996:	920 tonnes
Imports 1996:	28,342 tonnes
Growth in Imports (1990-1996):	33%
Major Suppliers (1995):	US (21926 tonnes), China, Holland
Imports from Australia 1995:	961 tonnes
Growth in Aust. Imports (92-95):	52%
Annual per capita consumption:	4kg
Trends in Imports:	<p>Hong Kong is heavily reliant on imports to satisfy consumer demand. Total imports have grown significantly in recent years.</p> <p>The US is the major supplier of lettuce to Hong Kong and although Australia ranks second, its volumes are markedly smaller. Despite this, imports from Australia have increased.</p> <p>Direct retail imports are increasing.</p> <p>Mainland Chinese supply has affected traditional imports.</p> <p>China now holds approximately 65% of vegetable imports. Other Asian countries, the US and European imports are increasing.</p> <p>Competition is primarily from the US, yet Chinese supply quantities are increasing and priced extremely low.</p>
Product Specifications:	<p>Main varieties include iceberg and local Asian varieties such as bok choi, pak choi etc...</p> <p>Cleaned, trimmed heads required.</p> <p>Firmness, uniformity of size are critical. High quality required.</p> <p>Packed in 4.5-10kg cartons.</p> <p>Imports are air freighted.</p> <p>The US individually wrap lettuce heads in plastic.</p>
Market Demand:	<p>Strong and growing market for fresh lettuce as a result of increased interest in western style foods e.g. salads and a proliferation of fast food chains.</p> <p>European imports are the most expensive, while the US are price competitive.</p>
Target Market:	Supermarkets and food service sector.

Hong Kong

Lettuce Cont...

Tariff Duty: None

Quarantine Requirements: None

Export Opportunity Prospects: Whilst the market continues to grow steadily, the greatest challenge is in gaining market share from the US.

In the medium to long term a good market opportunity exists, depending upon seasonal conditions and quality.

Hong Kong

Carrots , fresh or chilled

Production 1996:	Limited
Exports 1996:	9 tonnes
Imports 1996:	29,110 tonnes
Growth in Imports (1990-1996):	34%
Major Suppliers(1995):	Taiwan (19521 tonnes), China, USA, NZ, Korea
Imports from Australia 1995:	6,226 tonnes
Growth in Aust. Imports (92-95):	120%
Annual per capita consumption:	6kg
Trends in Imports:	<p>Hong Kong is a very large importer of carrots. It is almost totally reliant on imports to satisfy demand.</p> <p>Hong Kong importers have identified that Australian carrots are considered to be of very high quality and supply is of consistent quality.</p> <p>Although Australia is ranked third behind Taiwan and China in terms of volume exported, Australia showed the strongest growth amongst its immediate competitors increasing exports 120% whilst Taiwan and China showed marginal increases of 4% and 13% respectively.</p> <p>Mainland Chinese supply has affected traditional imports.</p> <p>China now holds approximately 65% of vegetable imports.</p> <p>Chinese supply quantities are increasing and extremely competitively priced although the quality of produce is not of a high standard.</p>
Production Specifications:	<p>Smaller nantes variety preferred for raw consumption. Length 6-10 ins, diameter 2.5 ins. As straight as possible, no black spots or splits.</p> <p>Consistent size grading. High quality required at a competitive price.</p> <p>Cleaned, size-graded, washed, hydro-cooled.</p> <p>Bundled, retail-packed loose into carton, usually 5-10kg cartons.</p> <p>Chilled to 33°F (USA)</p>

Hong Kong

Carrots , fresh or chilled

Market Demand:	<p>Hong Kong is a large consumer of carrots.</p> <p>Demand is growing as a result of increasing interest in healthy foods and increasing consumption of western style foods such as salads.</p> <p>Strong market demand met almost entirely by import supply. Hong Kong is a highly competitive market.</p> <p>Consumption uses included salads, juice, cooked and local/western "fresh cut" salads.</p> <p>European supply is the most expensive with the US offering a very competitive price.</p>
Target Market:	<p>Supermarkets and the food service sector.</p>
Tariff Duty:	<p>None</p>
Quarantine Requirements:	<p>Phytosanitary certificate is required.</p>
Export Opportunity Prospects:	<p>In addition to fresh market supply, there are good prospects in the supply of value added vegetables, particularly to the fast food sector.</p> <p>There is ongoing demand for competitive product.</p> <p>With increasing competition from China, market opportunities on the medium to long term depends upon seasonal conditions and quality of supply.</p> <p>There is little demand for traditional Australian varieties (e.g. Western Reds).</p>

Hong Kong	
Cabbages, fresh	
Production 1996:	1,515 tonnes
Exports 1996:	2,721 tonnes
Imports 1995:	52815 tonnes
Growth in Imports (1990-1996):	-12%
Major Suppliers:	China, US
Imports from Australia 1995:	5,437 tonnes
Growth in Aust. Imports (92-95):	-37%
Annual per capita consumption:	8kg
Trends in Imports:	<p>Hong Kong is totally dependent on imports. Demand for imports have been static between 1992-1995. Australian imports have remained flat in the last two years due to large volumes imported from China.</p> <p>Hong Kong prefers to import Chinese cabbage from China during October to April and from Australia during April to September.</p>
Product Specifications:	<p>Most popular varieties are white cabbage as well as Chinese varieties Wom Bok and Michihili. Size – 1-3kg heads (preference for very large heads), free of grubs, insects, infestation and dirt, exported in 50kg bins or 20kg cartons</p> <p>Consistent size grading.</p> <p>Product is presented mostly bundled and sometimes loose packed.</p>
Market Demand:	<p>There is strong demand for Chinese cabbage all year round as it forms a major component of traditional dishes.</p> <p>The US is leading importer and well as a key competitor in pricing.</p> <p>Direct retail imports are increasing.</p>
Target Market:	Supermarkets and the food service sector.
Tariff Duty:	None
Quarantine Requirements:	None
Export Opportunity Prospects:	<p>Limited potential for exports of fresh brassicas because increased demand for cheaper product form China. Frozen stir fry vegetable mixes containing Chinese cabbage may have potential for market development.</p> <p>Poor Asian market conditions has curbed imports and increased market competitiveness.</p> <p>Market opportunities in the medium to long term depends upon seasonal supply and demand, particularly from China.</p>

Hong Kong	
Asparagus, fresh or chilled	
Production 1996:	Limited
Exports 1996:	0
Imports 1996:	582 tonnes
Growth in Imports (1990-1996):	-14%
Major Suppliers:	USA, Australia
Imports from Australia 1995:	98 tonnes
Growth in Aust. Imports (90-95):	N/A
Annual per capita consumption:	Very limited
Trends in Imports:	The market for high quality asparagus is dominated by USA, NZ and Australian imports, with most of the produce sold to upmarket hotels and restaurants. Hong Kong relies on imports for its supply. There are increasing re-exports of high quality asparagus for China.
Product Specifications:	<p>Primarily green asparagus varieties are preferred (e.g. UC157).</p> <p>Consistent size grading, medium sizes acceptable. High quality required at a competitive price.</p> <p>Asparagus is presented mostly bundled, sometimes loosely packed, packaged in 5kg cartons.</p> <p>Hydro-cooling and careful temperature control required to achieve best quality.</p> <p>Full green colour, tight headed, 16mm in diameter, 22-23cm in length. There are no specific labelling requirements other than the carton must show name and variety of product and the country of origin.</p>
Market Demand:	<p>The demand for asparagus is currently relatively small, however, demand is growing, especially from the food service sector.</p> <p>There is strong competition between suppliers. Australia supplies between September and January. The US supplies between February and August. China and Thailand are able to supply all year round.</p> <p>China and Thailand offer a low priced product. Peru and Chile can offer frozen asparagus cheaper than the US.</p> <p>The US and New Zealand are our main competitors.</p>
Target Market:	Supermarkets and food service sector
Tariff Duty:	None
Quarantine Requirements:	None

Hong Kong

Asparagus, fresh or chilled

Export Opportunity Prospects:

Australia commands a strong position as a supplier of premium quality asparagus, whilst China and Thailand compete primarily for share of lower quality markets. Some opportunity to expand premium market, although with increasing volume of supply, the product will need to compete on price and quality.

Market opportunities in the medium to long term depend upon seasonal conditions and quality as there is increasing competition from many new sources.

Hong Kong	
Onions and shallots, green	
Production 1996:	4,178 tonnes
Exports 1996:	
Imports 1995:	16873 tonnes
Growth in Imports (1991-1995):	
Major Suppliers:	China, US and NZ
Imports from Australia 1996:	3093 tonnes
Growth in Aust. Imports (5 yrs):	Little recent growth in imports.
Per capita consumption:	
Trends in Imports:	<p>Hong Kong prefers larger onions of a better quality.</p> <p>Most product is directly purchased by supermarket and restaurant chains. There are tight retail specifications to be adhered to.</p> <p>China is an important supplier to this market even though the quality of their produce is inferior.</p> <p>The US and New Zealand are other important exporters. There are limited exports from Europe. European prices are high, while the US, Australia and New Zealand price their produce similarly.</p> <p>South America are coming into this market with generally cheaper produce.</p> <p>This is a highly competitive open market. Chinese and other suppliers are increasing their trade.</p>
Product Specifications:	<p>Main variety is the brown onion with some sweet and red onions.</p> <p>Consistent grading of sizes. Good quality required at a competitive price.</p> <p>Bright, clean, trimmed bulbs, large sized preferably 80-100mm, bagged in bulk bins, loose in container, 10/20/25kg bags.</p> <p>Dry, clean environment for storage required, ambient or preferably chilled conditions are best.</p> <p>Produce is best sea freighted in "fantainers" for best ventilation</p>

Hong Kong

Onions and shallots, green Cont ...

Market Demand:

Strong traditional fresh consumption.

There is an increasing acceptance of red onions.

There is an emerging demand for "sweet" white onions and shallots, particularly in the hotel, restaurant sectors.

Retail market share is approximately 60% 'wet market' and 40% supermarket.

Target Market:

Tariff Duty:

Quarantine Requirements:

Export Opportunity Prospects:

The poor Asian market conditions have increased market competitiveness.

This is a stable and competitive market. Opportunities for the medium to long term depend upon seasonal supply and demand.

Hong Kong

Cauliflower and headed broccoli, fresh or chilled

Production 1996:

Exports 1996: 142 tonnes

Imports 1996: 11,340 tonnes

Growth in Imports (1991-1995):

Major Suppliers: China, US

Imports from Australia 1996: 1236 tonnes

Growth in Aust. Imports (5 yrs): Imports have increased during this period.

Per capita consumption:

Trends in Imports: The USA is the dominant exporter to HK.

There are significant direct retail imports, but the traditional market is still very important.

China is an important supplier to this market, but of inferior quality product.

Product Specifications:

White cauliflower heads are preferred.

Bright, firm cauliflower heads, washed and often wrapped, packaged in 10-15kg waxed cartons.

European varieties of green broccoli remain popular, with Chinese varieties gaining interest.

Size grading must be consistent. High quality required at a competitive price.

Dark green, mushroom shaped broccoli heads with good symmetry. Heavier crowns with shorter stems are allowed in this market.

Cooling and temperature control required to achieve best quality.

Produce is normally sea freighted to export destinations with air freight used for spot markets.

Market Demand:

Strong traditional fresh consumption as well as major pickled consumption of cauliflower.

The demand for broccoli has risen in the past decade and is still increasing.

Retail market share is approximately 60% wet markets and 40% supermarkets.

Export Opportunity Prospects:

The poor Asian market conditions have curbed imports and increase market competitiveness.

Opportunities in the medium to long term depend upon seasonal supply and demand, but are still regarded as good.

Taiwan

Market Characteristics

Population (1997):	21.5 million
Population Growth (1997):	0.4%
Major Religion:	Taoism, Buddhism
GDP per capita 1997 (US\$):	\$13,260
Real GDP Growth 1997:	6.4%
Food Expenditure 1995 (US\$ per capita):	\$2,400
1997 Agricultural Production as % of GDP:	3.3%
Total Food Imports 1996 (US\$)	\$4.2 billion
Growth in Total Food Imports (1990-1996):	10.7% p.a.
Total Vegetable Imports 1996 (US\$)	\$160 million
Growth in Vegetable Imports (1990-1996)	14.5% p.a.

(Source: Department of Foreign Affairs and Trade, May 1998)

Trends in Food Imports

- Declining domestic agricultural sector and increasing reliance on imports.
- Deregulation of the retail sector encouraging the development of modern supermarkets and leading to greater import opportunities.
- Liberalisation of Taiwan's import market (in its bid to join the WTO agreement) is projected to lead to an expansion of existing markets and the emergence of new markets.
- Increasing demand for western style foods such as wheat products, meat and dairy products, brought about by the proliferation of western restaurants.
- Increasing demand for quality and variety of food products, and in particular convenience foods, as a result of increasing interest in health and rising incomes.
- Rapidly growing food service sector.
- Rising concern over food safety and increasing movement towards low chemical foods leading to increasing interest in Australia as a source of 'clean' foods.

Demand for Vegetables

Taiwan is a major producer and exporter of many vegetables and in the past, the Government has tried to protect its industry through high import barriers. However, opportunities for Australian vegetable exporters in Taiwan are emerging as a result of the gradual reduction of trade barriers as Taiwan moves towards joining the WTO agreement. As a result, fresh vegetable imports have doubled in the last five years (1990-1995).

Since 1990, there has been very strong growth in demand for fresh or chilled vegetables from Australia. Most significant imported vegetables are celery, lettuce, broccoli, onions and long cabbage.

Demand for vegetable imports is projected to continue to increase as Taiwan's agricultural production falls. Rising labour and land costs in Taiwan have reduced the competitiveness of locally produced vegetables, thus reducing Taiwan's self sufficiency and increasing the demand for imports.

Rising incomes, increased interest in western style foods and healthy food are all contributing to rising consumption of fresh vegetables. The fast food and five star hotel sectors continue to demonstrate strong demand for fresh vegetables. There is also strong demand for produce which is natural and chemical free.

Australia's has a significant advantage in the ability to supply in the northern hemisphere's off season (from November to April). Although the US is a main supplier of vegetables to Taiwan, the recent wet weather across major production regions in the US has caused major shortages. This has opened up opportunities for other suppliers to this market to pick up the US shortfall.

The Taiwanese market, however, is highly price oriented. Demand and prices are highly seasonal. Tariff duties for some vegetables remain relatively high at 40 per cent (e.g. carrots and beans) and there are strict phytosanitary requirements making exporting to Taiwan difficult.

There appears to be good prospects in the supply of lettuce, onions, broccoli, asparagus (particularly around New Year and Chinese New Year), squash, endive, artichokes, Chinese cabbage, celery and garlic. Sweet corn offers good prospects in top end food service sector

Taiwan	
Sweet corn, fresh or chilled	
Production 1995:	N/A
Exports 1995:	19.6 tonnes
Imports 1995:	0
Growth in Imports (1991-1995):	minimal growth
Major Suppliers:	Indonesia
Imports from Australia 1995:	0
Growth in Aust. Imports (5yrs):	0
Annual per capita consumption:	minimal
Trends in Imports:	Demand for imported fresh corn is very small.
Market Demand:	Fresh sweet corn is becoming increasingly popular in Taiwan. Demand is primarily met by local production.
Target Market:	The fast food, hotel and hospitality sectors of the food service industry continue to demonstrate remarkable growth offering new opportunities for agribusiness suppliers of these markets.
Product Specifications:	Consumers prefer tenderness and softness rather than crunchiness.
Tariff Duty:	35%
Quarantine Requirements:	A phytosanitary certificate is required for fresh sweet corn.
Export Opportunity Prospects:	Lack of demand for imported sweet corn.

Taiwan

Beans, green, fresh or chilled

Production 1995:	4,460 tonnes
Exports 1995:	less than 1 tonne
Imports 1995:	7 tonnes
Growth in Imports:	Minimal growth
Major Suppliers:	Vietnam
Imports from Australia 1996:	0
Growth in Aust. Imports:	0
Annual per capita consumption:	0.2kg
Trends in Imports:	Small demand for imported beans.
Market Demand:	Demand is primarily met by domestic production.
Target Market:	The fast food, hotel and hospitality sectors of the food service industry continue to demonstrate remarkable growth offering new opportunities for agribusiness suppliers of these markets. Particular demand has been created for products made to specifications to ensure product consistency and quality.
Tariff Duty:	40%
Quarantine Requirements:	Phytosanitary certificate required. Special application required for vegetables that require fumigation and/or cold storage treatment.
Export Opportunity Prospects:	Limited export opportunities due to small demand for imports, high tariffs and strict quarantine requirements.

Taiwan	
Lettuce	
Domestic Production 1995:	N/A
Exports 1995:	40 tonnes
Imports 1995:	3,362 tonnes
Growth in Imports (1991-1995):	53%
Major Suppliers:	US, Thailand
Imports from Australia 1995:	62 tonnes
Growth in Aust. Imports (91-95):	Increased steadily from zero in 1991.
Annual per capita consumption:	N/A
Trends in Imports:	<p>Imports of lettuce increased remarkably across all suppliers over the five year period. The US remains the dominant supplier. Demand for imports is limited.</p> <p>Currently, small amounts of 'romaine' cos and iceberg are going to Taipei.</p>
Market Demand:	Market demand is greatest in the food service sector.
Target Market:	Fast food outlets and the hotel/hospitality sector remain the major growth sectors in Taiwan's food service industry and, thus, the best target markets.
Tariff Duty:	27-30%
Quarantine Requirements:	There are a number of limiting barriers to the import of most vegetables. A special application for permission to import must be made for vegetables that require fumigation and cold storage treatment. All vegetables require a phytosanitary certificate.
Export Opportunity Prospects:	<p>High tariff barriers and other non-tariff barriers make market developments difficult for Australian exporters.</p> <p>However, in the medium term a small market exists for lettuce.</p>

Taiwan

Carrots, fresh or chilled

Production 1995:	156,179 tonnes
Exports 1995:	4,119 tonnes
Imports 1995:	293 tonnes
Growth in Imports (1991-1995):	257%
Major Suppliers:	Australia, Japan
Imports from Australia 1995:	179 tonnes
Growth in Aust. Imports:	There were negligible exports from Australia until 1995.
Annual per capita consumption:	7kg
Trends in Imports:	Imports have grown steadily in recent years but still account for a very limited portion of total market demand.
Market Demand:	Strong market demand met primarily by domestic production.
Target Market:	The fast food, hotel and hospitality sectors of the food service industry continue to demonstrate remarkable growth offering new opportunities for agribusiness suppliers of these markets. Particular demand has been created for products made to specifications to ensure product consistency and quality.
Tariff Duty:	40%
Quarantine Requirements:	Yes. Phytosanitary certificate required for all vegetables. A special application must be made to BCIQ for the importation of vegetables that require fumigation and cold storage treatment. Nematode presence makes meeting this market difficult for Australian producers.
Export Opportunity Prospects:	Opportunities for Australian suppliers are improving as the Taiwanese are becoming increasingly health conscious and are seeking produce that is natural and chemical free. A gradual reduction of tariff rates through Taiwan's bid to join the WTO, may open up the horticultural import market and provide greater opportunities for Australian horticultural exporters in the future.

Taiwan	
Cabbages	
Production 1995:	No figure available
Exports 1995:	10,388 tonnes
Imports 1995:	16,334 tonnes
Growth in Imports (1991-1995):	457%
Major Suppliers:	Vietnam, Indonesia
Imports from Australia 1995:	1,916 tonnes
Growth in Aust. Imports (91-95):	555%
Annual per capita consumption:	N/A
Trends in Imports:	Total imports of white and Chinese cabbage have grown significantly over the five year period. Australia is the fourth largest supplier. Australia has a distinct market advantage by supplying production during the northern hemisphere off season.
Market Demand:	Chinese cabbage forms a major component of traditional Taiwan dishes and therefore is in strong demand all year round.
Target Market:	The food service sectors of fast food and hotel/hospitality continue to show the strongest growth.
Tariff Duty:	25-27%
Quarantine Requirements:	A special application for permission to import must be made for vegetables that require fumigation and cold storage treatment. All vegetables require a phytosanitary certificate.
Export Opportunity Prospects:	Demand for imports are highest during the monsoon season when local production falls. Although the market is currently small, there may be opportunities for mixed Asian vegetables such as Chinese cabbage with Wom Bok.

Taiwan	
Asparagus, fresh or chilled	
Production 1995:	7,617 tonnes
Exports 1995:	No figure available
Imports 1995:	27 tonnes
Growth in Imports (1991-1995):	No figure available for 1991
Major Suppliers:	Australia and NZ
Imports from Australia 1996:	35 tonnes
Growth in Aust. Imports	Significant growth
Annual per capita consumption:	N/A
Trends in Imports:	Limited demand for imports
Market Demand:	Demand for asparagus is highest between New Year and the Chinese New Year.
Target Market:	The fast food, hotel and hospitality sectors of the food service industry continue to demonstrate remarkable growth offering new opportunities for agribusiness suppliers of these markets. Particular demand has been created for products made to specifications to ensure product consistency and quality.
Tariff Duty:	10%
Quarantine Requirements:	Phytosanitary certificate required for all vegetables. A special application must be made to BCIQ for the importation vegetables that require fumigation and cold storage treatment.
Export Opportunity Prospects:	Limited demand for imports at this stage.

Taiwan

Onions and shallots, green

Production 1996:

Exports 1996:

Imports 1995:

Growth in Imports (1991-1995):

Major Suppliers: USA, NZ, Japan(seasonal)

Imports from Australia 1995: Small

Growth in Aust. Imports (5 yrs): Little growth

Per capita consumption:

Trends in Imports: NZ and USA imports are very important

Product Specifications:

Market Demand:

Target Market:

Tariff Duty:

Quarantine Requirements:

Export Opportunity Prospects: Depending upon the season there is an opportunity to import brown onions early in the season before NZ arrives.

Taiwan

Cauliflower and headed broccoli, fresh or chilled

Production 1996:

Exports 1996:

Imports 1995: 2131 tonnes(cauliflower)

Growth in Imports (1991-1995):

Major Suppliers:

Imports from Australia 1996: 140 tonnes (cauliflower), 252 tonnes (broccoli)

Growth in Aust. Imports (5 yrs): Good recent growth in imports.

Per capita consumption:

Trends in Imports: Imports have varied seasonally

Product Specifications: Similar to other Asian markets (e.g. HK).

Market Demand: Used in traditional Chinese cooking.

Target Market:

Tariff Duty:

Quarantine Requirements:

Export Opportunity Prospects: Opportunities for both products, particularly broccoli appear good.

Market conditions will remain competitive.

Singapore

Market Characteristics

Population (1997):	3.1 million
Population Growth (1997):	2%
Major Religion:	all major religions
GDP per capita 1997 (US\$):	\$47,039
Real GDP Growth 1997:	7.8%
Food Expenditure 1995 (US\$ per capita):	\$1,767
1997 Agricultural Production as % of GDP:	0.2%
Total Food Imports 1996 (US\$)	\$3.5 billion
Growth in Total Food Imports (1990-1996):	8% p.a.
Total Vegetable Imports 1996 (US\$)	\$351 million
Growth in Vegetable Imports (1990-1996)	9% p.a.

(Source: Department of Foreign Affairs and Trade, May 1998)

Trends in Food Imports

- Singapore's reliance on imports for almost all of its food requirements.
- Lack of market access barriers (virtually all food from Australia can be imported without restriction).
- Large ex-patriate population (approximately 230,000 people) and tourist trade (approximately 7 million tourist per annum).
- Strong re-export growth. Singapore is considered a showcase for other ASEAN countries and products which find acceptance in Singapore will be in a better position to gain acceptance in other ASEAN countries.
- Proliferation of western style restaurants and fast food chains leading to increasing familiarisation of western style, convenience and processed foods.
- High per capita income (approximately US\$22,300) in comparison to other Asian countries and greater purchasing power and demand for higher quality foods.

Demand for Vegetables

Singapore is dependent on imports for almost of its food requirements, including vegetables. Since 1990, there has been strong growth in demand for fresh, chilled and prepared vegetables from Australia.

There are good prospects in the supply of fresh and prepared vegetables to Singapore. There are few market access barriers and there is increasing consumption of fresh western style vegetables as a result of increasing interest in healthy foods and increasing consumption of western style meals such as salads. Continued growth in consumption of semi-processed and pre-cut vegetables is projected.

With the proliferation of western style restaurants and booming tourism industry, Singapore's food service market is showing strong demand for both fresh and semi-processed produce. Singapore is also a significant re-exporter of vegetables to other Asian countries.

Currently, consumers mostly purchase fresh vegetables at the wet markets, however, sales through supermarkets are rapidly increasing. Although the proportion of vegetables sold through supermarkets is currently relatively small, it is projected to continue to increase.

Despite the rising demand for vegetables, Singapore is a highly competitive market and success is based on consistent delivery of vegetables at a reasonable price. Singapore has strong ties with Malaysia and Thailand, who are also significant suppliers of cheap, low quality fresh vegetables. In many cases, Australia is not competitive against these countries, where labour costs are significantly less.

Nevertheless, Australia has a number of advantages over its competitors, such as its close geographical proximity, reputation as a clean, green supplier of fresh produce and the ability to supply in the Northern Hemisphere's off-season.

There are good prospects for Australian exports of avocados to Singapore. Avocados are a luxury item in Singapore and are primarily used in catering. Australia is already one of the main suppliers of avocados to Singapore. Hass is the preferred variety due to its favourable colour and thick skin which makes it better suited to transportation.

Demand for broccoli is projected to increase as a result of growth in semi-processed and pre-cut vegetable products. There is a general preference for broccoli with small heads and stems. Broccoli is generally used in both traditional and western dishes. Again, Australia has the advantage of continuous supply throughout the year. Broccoli must be of high quality.

Singapore is a large importer of cabbage, with Australia being a significant supplier. Chinese cabbage is a major part of the Asian diet and there is a general preference for both the long and short Wom bok varieties. There are strict food safety regulations imposed on imported Chinese cabbage.

There may be opportunities in niche markets such as pre-packaged or pre-cut vegetables for the food service market, although there is likely to be strong competition in these markets.

Singapore

Sweet corn, fresh or chilled

Production 1995:	Limited
Exports 1995:	No figure available
Imports 1995:	No figure available
Growth in Imports (1991-1995):	No figure available
Major Suppliers:	Not available
Imports from Australia 1995:	No figure available
Growth in Aust. Imports (90-95):	No figure available
Annual per capita consumption:	N/A
Trends in Imports:	—
Market Demand:	—
Target Market:	Rapidly growing food service and retail sectors are providing strong demand for imported vegetables. The food service sector is very large due to growing affluence of consumers and the large number of tourists. In relation to the retail sector, the number of supermarkets has almost doubled in the last 10 years. Supermarkets are increasing market share at the expense of wet markets and general grocery stores.
Tariff Duty:	None
Quarantine Requirements:	None
Export Opportunity Prospects:	Difficult to determine due to lack of information. Singapore is a highly competitive market.

Singapore

Beans, green, fresh or chilled

Production 1996:	Limited
Exports 1996:	4,244 tonnes (probably re-exports)
Imports 1996:	12,362 tonnes
Growth in Imports (1990-1996):	Total imports grew from zero in 1990.
Major Suppliers:	
Imports from Australia 1995:	Very small
Growth in Aust. Imports (90-95):	Little growth
Annual per capita consumption:	N/A
Trends in Imports:	Singapore is a net importer of fresh vegetables, as well as a significant re-exporter. Imports have increased significantly in recent years.
Market Demand:	Both Western and Chinese cuisine.
Target Market:	Rapidly growing food service and retail sectors are providing strong demand for imported vegetables. The food service sector is very large due to growing affluence of consumers and the large number of tourists. In relation to the retail sector, the number of supermarkets has almost doubled in the last 10 years. Supermarkets are increasing market share at the expense of wet markets and general grocery stores.
Tariff Duty:	None
Quarantine Requirements:	None
Export Opportunity Prospects:	Total imports of green beans have grow significantly since 1990. Difficult to determine Australia's potential as a supplier due to a lack of data relating to its competitors. Competitor supply is increasing (e.g. Africa, NZ).

Singapore

Lettuce

Domestic Production 1996:	Limited
Exports 1996:	1,040 tonnes (re-exports included)
Imports 1996:	7,973 tonnes
Growth in Imports (1990-1996):	Imports grew from zero in 1991
Major Suppliers:	US, Australia
Imports from Australia 1996:	634 tonnes
Growth in Aust. Imports (90-95):	Imports grew from zero in 1990, but fell from 1191 tonnes in 1995.
Annual per capita consumption:	2kg
Trends in Imports:	<p>No imports of lettuce were recorded until 1995. Australia is the second largest supplier after the US. The USA is the dominant supplier to the market.</p> <p>There have been substantial growth in imports from Australia since 1990.</p>
Market Demand:	Demand for lettuce is increasing due to increasing interest in western style foods e.g. salads.
Target Market:	<p>Rapidly growing food service and retail sectors are providing strong demand for imported vegetables. The food service sector is very large due to growing affluence of consumers and the large number of tourists. In relation to the retail sector, the number of supermarkets has almost doubled in the last 10 years. Supermarkets are increasing market share at the expense of wet markets and general grocery stores.</p>
Tariff Duty:	None
Quarantine Requirements:	No tariff barriers or quarantine restrictions for vegetables, however, strict food safety regulations are enforced by the Ministry of the Environment.
Export Opportunity Prospects:	<p>Australia is already in a good position, potential to gain market share from the US should be investigated.</p> <p>Demand for various traditional and non-traditional lettuces appears good.</p>

Singapore	
Carrots, fresh or chilled	
Production 1996:	Limited
Exports 1996:	3,024 tonnes
Imports 1996:	18,943 tonnes
Growth in Imports (1990-1996):	84%
Major Suppliers:	Australia, Malaysia, USA, NZ
Imports from Australia 1995:	12,470 tonnes
Growth in Aust. Imports (91-95):	11%, growth has now declined.
Annual per capita consumption:	6kg
Trends in Imports:	<p>Total demand for imported carrots has grown significantly since 1990. Australia is the dominant supplier of carrots in Singapore, with demand remaining relatively constant throughout the year.</p> <p>Market demand is now saturated and competition has increased.</p>
Market Demand:	Demand for carrots is strong with carrots becoming part of the staple diet. Australian carrots are popular due to consistency of availability and quality.
Target Market:	Rapidly growing food service and retail sectors are providing strong demand for imported vegetables. The food service sector is very large due to growing affluence of consumers and the large number of tourists. In relation to the retail sector, the number of supermarkets has almost doubled in the last 10 years. Supermarkets are increasing market share at the expense of wet markets and general grocery stores.
Product Specifications:	<p>Nantes variety, straight, clean, non tapered shape with rounded blunt ends, firm texture, sweet taste, 20 cm in length, 4cm diameter at top, glossy appearance.</p> <p>Little demand for traditional Australian varieties.</p>
Tariff Duty:	None
Quarantine Requirements:	No tariff barriers or quarantine restrictions for vegetables however, strict food safety regulations are enforced by the Ministry of the Environment.
Export Opportunity Prospects:	<p>There are further opportunities in niche markets such as pre-cut or packaged peeled mini carrots.</p> <p>Australia has a number of advantages over its competitors such as close geographic proximity, reputation as a clean, green supplier of fresh produce and the ability to supply the Northern hemisphere in the off season.</p> <p>While the ongoing prospects are good, the market has become highly competitive.</p>

Singapore

Cabbages

Production 1996:	Limited
Exports 1996:	8,383 tonnes
Imports 1996:	29,923 tonnes
Growth in Imports (1990-1996):	-52%
Major Suppliers:	Australia, Malaysia
Imports from Australia 1995:	12,525 tonnes
Growth in Aust. Imports (90-95):	40%
Annual per capita consumption:	10kg
Trends in Imports:	Although the overall demand for imported cabbages has declined in recent years, Australia remains the dominant supplier to Singapore. Australian imports have steadily increased over the 5 year period. Australia's nearest competitor Malaysia, whose volumes were in the tens of thousands over the last five years, imported less than 10,000 tonnes in 1995, dropping from 74, 788 tonnes in 1994.
Market Demand:	There is a strong demand for Chinese cabbage all year round because it is a major part of the Asian diet. There is a general preference for both the long and short Wom bok varieties.
Target Market:	Rapidly growing food service and retail sectors are providing strong demand for imported vegetables. The food service sector is very large due to growing affluence of consumers and the large number of tourists. In relation to the retail sector, the number of supermarkets has almost doubled in the last 10 years. Supermarkets are increasing market share at the expense of wet markets and general grocery stores.
Tariff Duty:	None
Quarantine Requirements:	No tariff barriers or quarantine restrictions for vegetables, however, strict food safety regulations are enforced by the Ministry of the Environment.
Export Opportunity Prospects:	Australia has an advantage to supply in the Northern hemisphere's off season during May to October. The major competitors supply between mid September and mid April.

Singapore

Asparagus, fresh or chilled

Production 1996:	0
Exports 1996:	0
Imports 1996:	533 tonnes
Growth in Imports (1990-1996):	Total imports grew from zero in 1990.
Major Suppliers:	N/A
Imports from Australia 1996:	193 tonnes
Growth in Aust. Imports (90-96):	Exports have increased significantly.
Annual per capita consumption:	Minimal
Trends in Imports:	Total imports grew from zero in 1990. Supply sources are now many and varied.
Market Demand:	Singapore relies on imports for most of their supply of vegetables.
Target Market:	Rapidly growing food service and retail sectors are providing strong demand for imported vegetables. The food service sector is very large due to growing affluence of consumers and the large number of tourists. In relation to the retail sector, the number of supermarkets has almost doubled in the last 10 years. Supermarkets are increasing market share at the expense of wet markets and general grocery stores.
Tariff Duty:	None
Quarantine Requirements:	None
Export Opportunity Prospects:	Difficult to determine due to lack of data. However, due to the lack of import barriers, reliance on imports to meet domestic demand and growing food service market and opportunities for exports to Singapore may exist, providing the product is competitive.

Singapore

Onions and shallots, green

Production 1996:	Nil.
Exports 1996:	Only re-export.
Imports 1995:	
Growth in Imports (1991-1995):	Imports and sources of supply have increased.
Major Suppliers:	USA, NZ, Australia
Imports from Australia 1996:	2229 tonnes.
Growth in Aust. Imports (5 yrs):	Varies annually, 1995 - 4116 tonnes
Per capita consumption:	
Trends in Imports:	While import share increased, competition has also increased.
Product Specifications:	Smaller sizes acceptable - 40/60mm, 50/70mm Bagged (10/20/25kg) Cleaned, trimmed, bright colour
Market Demand:	
Target Market:	Retail and food service
Tariff Duty:	
Quarantine Requirements:	
Export Opportunity Prospects:	Ongoing market opportunity, but in a market which has become much more competitive.

Singapore

Cauliflower and headed broccoli, fresh or chilled

Production 1996:

Exports 1996: 2,569 tonnes

Imports 1996: 10,891 tonnes

Growth in Imports (1991-1995):

Major Suppliers:

Imports from Australia 1996: 3792 tonnes (broccoli), 7072 tonnes (cauliflower)

Growth in Aust. Imports (5 yrs): Exports of both items have increased significantly.

Per capita consumption:

Trends in Imports: Australia is the dominant cauliflower sender to the market.

Product Specifications: White varieties

Cleaned, trimmed heads

Market Demand:

Target Market: Retail and food service, processing.

Tariff Duty:

Quarantine Requirements:

Export Opportunity Prospects: Prospects appear to be very good, especially for high quality whole fresh product and further cut/processed product.

Malaysia

Population (1997):	21.8 million
Population Growth (1997):	2.7%
Major Religion:	Islam (there is freedom of worship)
GDP per capita 1997 (US\$):	\$4,368
Real GDP Growth 1997:	7%
Food Expenditure 1995 (US\$ per capita):	\$950
1996 Agricultural Production as % of GDP:	12.8%
Total Food Imports 1996 (US\$)	\$3.6 billion
Growth in Total Food Imports (1990-1996):	18% p.a.
Total Vegetable Imports 1996 (US\$)	\$305 million
Growth in Vegetable Imports (1990-1996)	17% p.a.

(Source: Department of Foreign Affairs and Trade, May 1998)

Trends in Food Imports

- Rapid population growth of approximately 2.7 per cent annually.
- Continuing economic growth and rising disposable incomes, with GDP projected to increase 8 per cent per annum from 1996 to 2000.
- Gradual liberalisation of market access, with the Government committed to reducing tariffs on food items as a part of the ASEAN agreement (by 2003, tariffs on all food items will be reduced to less than 5 per cent).
- Declining domestic agricultural sector and increasing reliance on imports, particularly for rice, vegetables, beef and mutton.
- Strong growth in the retail sector, with supermarkets, hypermarkets and convenience stores experiencing an expansion boom.
- Strong growth in the food service sector, which is being driven by high incomes, greater propensity to eat out and the proliferation of western style restaurants.
- Increasing tourist trade (currently estimated to be approximately 8 million visitors per annum).
- Increasing demand for convenience foods, healthy foods and western style foods, particularly from the younger generation.
- Increasing utilisation of imported foods in both Asian and western style diets.
- Growing labour shortage problems is limiting domestic production of value added foods.

Demand for Vegetables

Although Malaysia is a large vegetable producer, it is not self sufficient and is reliant on imports to meet the growing demand. In recent years, there has been an increase in direct trade to Malaysia, making it one of the largest Asian export markets for vegetables. Previously, the majority of produce came from Singapore.

Both retail and food service sectors are driving strong growth for fresh and processed vegetables. Malaysian supermarkets are experiencing at least 10 to 20 per cent growth in turnover of vegetables. Proliferation of food service sector has lead to increased demand for high quality imported vegetables.

There is strong demand for prepared vegetables and imported vegetables which are of better quality, available out of season or are not grown in Malaysia. There is a general preference for fresh vegetables however, frozen vegetables are popular with the food service sector or when local supplies are not available.

Growing affluence in the market has seen the emergence of a more quality conscious consumer. A trend further enforced as the supermarket infrastructure develops offering an increasing range of pre-packed and semi prepared lines. However, there is also opportunity to supply a wider market base during the wet season, when domestic shortages occur.

The Malaysian market presents two main areas of opportunity to Australian vegetable exporters. Firstly in the supply of premium quality product lines, year round, and secondly in the supply of a broader range of product quality through the wet season (December to February).

Australia is already a dominant supplier of horticultural products to Malaysian due to its ability to supply a large range of products at competitive prices; with shorter delivery times. There is considerable growth potential in fresh produce if suppliers are prepared to invest in market development and promotions.

Best prospects for Australian vegetable suppliers are in broccoli, lettuce, red radish, carrots, potatoes, cauliflower, tomatoes, red cabbage and exotic vegetables such as fennel, Brussels sprouts, chicory and culinary herbs. There are also good prospects in the supply of pumpkin, particularly the Butternut variety, however some market development activities would be required.

Malaysia

Sweet corn, fresh or chilled

Production 1996:	N/A
Exports 1996:	N/A
Imports 1996:	N/A
Growth in Imports (1990-1996):	N/A
Major Suppliers:	Thailand
Imports from Australia 1995:	1 tonne
Growth in Aust. Imports:	Minimal
Annual per capita consumption:	N/A
Trends in Imports:	The import market grew substantially over the four year period, however, demand is primarily for products from Thailand.
Market Demand:	Both the retail and food service sectors are experiencing rapid growth. There are now over 400 supermarkets in Malaysia. In relation to fresh produce, supermarkets are rapidly gaining market share from the traditional wet markets. In relation to food service, the hotel and restaurant (fine food) sectors are showing the strongest growth, with 100 new hotels opening between 1995-98.
Target Market:	Retail and food service sectors are both showing strong growth particularly in fresh produce.
Tariff Duty:	None
Quarantine Requirements:	None
Export Opportunity Prospects:	Limited opportunity for Australian exporters.

Malaysia	
Beans, green, fresh or chilled	
Production 1996:	N/A
Exports 1996:	10,461 tonnes
Imports 1996:	450 tonnes
Growth in Imports (1990-1996):	-28%
Major Suppliers:	China, South Africa and Indonesia
Imports from Australia 1994:	17 tonnes
Growth in Aust. Imports (90-95):	There were no imports recorded for Australia in 1990.
Annual per capita consumption:	N/A
Trends in Imports:	<p>Overall demand for imports have declined. China increased their market share between 1991-1994 to become the dominant supplier.</p> <p>There are significant direct retail imports despite increasing domestic production in Lojing Highlands</p> <p>There has been growth in imports. The US New Zealand and Africa are key competitors.</p> <p>The US, South America, New Zealand are important exporters. There is also some trade in Kenyan/African beans.</p> <p>The US pricing is competitive.</p>
Product Specifications:	<p>Varieties of green beans include French and runner varieties.</p> <p>Consistent grading. High quality required at a competitive price.</p> <p>Bright firm beans, washed, trimmed.</p> <p>Bunched or loose in carton, packaged in 5-10kg cartons.</p> <p>Cooling and temperature control required.</p>
Market Demand:	<p>Demand for imported fresh beans has declined.</p> <p>Strong traditional fresh consumption with increasing acceptance of new varieties and imports.</p> <p>Market share approximately 60-65% 'wet market', 35-40% supermarket.</p>
Target Market:	<p>Both the retail and food service sectors are experiencing rapid growth.</p> <p>There are now over 400 supermarkets in Malaysia.</p> <p>In relation to fresh produce, supermarkets are rapidly gaining market share from the traditional wet markets.</p> <p>In relation to food service, the hotel and restaurant (fine food) sectors are showing the strongest growth, with 100 new hotels opening between 1995-98.</p>

Malaysia

Beans, green, fresh or chilled

Tariff Duty:	None
Quarantine Requirements:	None. Although there are no tariff or non-tariff barriers, there are limited export opportunities in Malaysia
Export Opportunity Prospects:	Malaysia is a major exporter of beans and overall demand for imports has decreased. Poor Asian market conditions have curbed imports and increased market competitiveness. Demand is likely to increase with economic recovery.

Malaysia	
Lettuce	
Domestic Production 1996:	0
Exports 1996:	881 tonnes
Imports 1996:	4,390 tonnes
Growth in imports (1990-1996):	1776%
Major Suppliers:	USA, Australia
Imports from Australia 1996:	620 tonnes
Growth in Aust. Imports (91-95):	239 tonnes were imported in 1991.
Annual per capita consumption:	Minimal
Trends in Imports:	<p>Australia recorded excellent growth until 1994 as did Taiwan and Thailand.</p> <p>Direct retail imports increasing despite increasing domestic production in Lojing Highlands.</p> <p>Improved market access has increased import competition. The market is now much more competitive.</p> <p>Competition is mainly from the US and Europe with Asian countries gaining momentum.</p>
Product Specifications:	<p>Main varieties include iceberg and local Asian varieties such as bok choi, pak choi etc...</p> <p>Smaller sized lettuce heads are acceptable. High quality required at a competitive price.</p> <p>The US present their lettuce imports individually wrapped in plastic.</p> <p>Imports are usually packaged in 4.5-10kg cartons and air freighted.</p>
Market Demand:	<p>Steady market demand is largely met by domestic production.</p> <p>Popularity of western style salad mixes as well as 'fresh cut' salads is increasing.</p> <p>Market share approximately 60-65% 'wet market' 35-40% supermarket.</p> <p>European supply is the most expensive while the US offers a competitive alternative.</p>
Target Market:	Consumers are finding the longer opening hours, convenient locations and the added variety of supermarkets very attractive and are now moving towards buying their fresh produce from supermarkets over the traditional wet markets.
Tariff Duty:	None
Quarantine Requirements:	None

Malaysia

Lettuce Cont ...

Export Opportunity Prospects: Moderate demand for imports, market supply largely being met by domestic production.

Market opportunities in the medium to long term will depend upon seasonal conditions and quality of produce.

Malaysia	
Carrots, fresh or chilled	
Production 1996:	0
Exports 1996:	8,040 tonnes
Imports 1996:	40,563 tonnes
Growth in Imports (1990-1996):	215%
Major Suppliers:	Australia, Indonesia, NZ, Australia
Imports from Australia 1995:	21,882 tonnes
Growth in Aust. Imports (90-96):	72%
Annual per capita consumption:	1.5 kg
Trends in Imports:	<p>There is a strong demand for imported carrots (fresh) into Malaysia.</p> <p>Australia is the dominant supplier, Australian imports have experienced considerable growth since 1991.</p> <p>Direct retail imports are increasing as well as increasing domestic production in Lojing Highlands.</p> <p>Improved market access has increased import competition, resulting in a more competitive market.</p> <p>The US is a major exporter with New Zealand, another key competitor.</p>
Product Specifications:	<p>Preference for Nante variety, 20cm in length, 4cm diameter, glossy appearance, non tapered varieties with rounded ends.</p> <p>Consistent size grading, medium sizes acceptable. High quality at a competitive price.</p> <p>Cleaned, size graded, washed and hydro-cooled.</p> <p>Produce is usually presented bundled, retail packed and packed loose into carton, packaged into 5-10kg cartons.</p> <p>Chilled to 33°F.</p> <p>Carrots exports are both air freighted and sea freighted.</p>
Market Demand:	<p>Although Malaysia is itself a producer of carrots, there is still a strong demand for imported product.</p> <p>Retail market share approximately 60-65% 'wet market' 35-40% supermarket.</p> <p>Local/western 'fresh cut' salads are popular amongst consumers as well as juice and cooked carrots.</p> <p>Europe supply an expensive product with the US offering a competitive alternative.</p>

Malaysia

Carrots, fresh or chilled cont ...

Target Market:	Both the retail and food service sectors are experiencing rapid growth. There are now over 400 supermarkets in Malaysia. In relation to fresh produce, supermarkets are rapidly gaining market share from the traditional wet markets. In relation to food service, the hotel and restaurant (fine food) sectors are showing the strongest growth, with 100 new hotels opening between 1995-98.
Tariff Duty:	None
Quarantine Requirements:	None
Export Opportunity Prospects:	<p>There is potential to maintain the already large market for carrots in Malaysia.</p> <p>Currently, carrots are primarily marketed throughout supermarket chains, however as demand increases, the wet markets will increase their trade.</p> <p>Market opportunities in the medium to long term will vary depending upon seasonal conditions as well as quality of produce.</p> <p>There is an ongoing demand for competitive product and continued growth in fresh sales.</p> <p>Some key Australian exporters are looking to reduce their dependence upon the Malaysian market.</p>

Malaysia	
Cabbages	
Production 1996:	50,000 tonnes
Exports 1996:	21,247 tonnes (primarily re-exports)
Imports 1996:	38,708 tonnes
Growth in Imports (1990-1996):	19%
Major Suppliers:	Indonesia, Australia
Imports from Australia 1996:	331 tonnes
Growth in Aust. Imports (91-95):	Steady recent growth.
Annual per capita consumption:	3 kg
Trends in Imports:	Although ranked third, Australian imports were strong over the five year period to 1995 against other competitors who experienced only slight increases. Indonesia is the main sender to Malaysia. Direct retail imports are increasing.
Product Specification:	Main varieties include white cabbage as well as Chinese styles bok choy, wom bok, pak choy etc... Consistent size grading, medium sizes acceptable. Product is presented mostly bundled sometimes loosely packed, packaged in 5kg cartons. Hydro-cooling and careful temperature control is required to achieve best quality.
Market Demand:	Although Malaysia is not a significant producer, it is a major re-exporter. it sources product primarily from Indonesia and Australia. Strong traditional consumption. Pickled cabbage has increased in popularity. Retail market share approximately 60-65% 'wet market' 35-40% supermarket.
Target Market:	Both the retail and food service sectors are experiencing rapid growth. There are now over 400 supermarkets in Malaysia. In relation to fresh produce, supermarkets are rapidly gaining market share from the traditional wet markets. In relation to food service, the hotel and restaurant (fine food) sectors are showing the strongest growth, with 100 new hotels opening between 1995-98.
Tariff Duty:	None
Quarantine Requirements:	Round cabbages are subject to import licensing.

Malaysia

Cabbages Cont ...

Export Opportunity Prospects: Australia has increased its market share in recent years. There are good prospects for increased exports to Malaysia.

The poor Asian market conditions have curbed imports and increased market competitiveness.

Market opportunities in the medium to long term are good but depend on seasonal supply and demand.

Malaysia	
Asparagus, fresh or chilled	
Production 1996:	0
Exports 1996:	0
Imports 1996:	145 tonnes
Growth in Imports (1990-1996):	314%
Major Suppliers:	Thailand, Australia, China
Imports from Australia 1996:	8 tonnes
Growth in Aust. Imports (91-94):	Exports have fallen from 26 tonnes in 1994.
Annual per capita consumption:	Minimal
Trends in Imports:	<p>Demand for imports have grown. Although the volume of Australian asparagus imports increased over the last five year period, Australia's domination of this market was surpassed by Thailand in 1994.</p> <p>Thailand and China are new suppliers but the quality of their product is low.</p> <p>Direct retail imports increasing despite increasing domestic production in Lojing highlands.</p> <p>The US has lead import development and are co-ordinating South American exports from new suppliers Mexico, Peru and Chile.</p>
Product Specifications:	<p>Primarily green varieties of asparagus are preferred.</p> <p>Consistent size grading, medium sizes acceptable. High quality required at a competitive price.</p> <p>Produce is presented mostly bundled and sometimes loosely packed, packaged into 5kg cartons.</p> <p>Hydro-cooled and careful temperature control required to achieve the best quality.</p>
Market Demand:	<p>A lack of domestic production figures makes it difficult to assess overall market demand.</p> <p>In the past 1-2 years growth has slowed</p> <p>Market share approximately 60-65% 'wet market', 35-40% supermarket.</p> <p>Chinese and Thai produce is low priced.</p>
Target Market:	<p>Malaysian supermarkets are gaining an edge over traditional wet markets with better prices and varieties and are enjoying a higher turnover in their fresh produce sections. Growing affluence has seen the emergence of a more quality conscious consumer, with pre-packed and pre-selected vegetables becoming more visible in supermarket chains.</p> <p>Restaurant consumption.</p>

Malaysia

Asparagus, fresh or chilled Cont ...

Tariff Duty: None

Quarantine Requirements: None

Export Opportunity Prospects: Opportunities for Victorian exporters is dependent upon Australia's competitiveness with Thailand and China.

Future prospects for the market appear fair-good, but are subject to the increasing threat from Asian and S American competitors.

Malaysia	
	Onions and shallots, green
Production 1996:	Small but increasing.
Exports 1996:	
Imports 1995:	176896 tonnes
Growth in Imports (1991-1995):	Significant growth in the past 5 years.
Major Suppliers:	US, New Zealand, Holland
Imports from Australia 1996:	3787 tonnes
Growth in Aust. Imports (5 yrs):	Significant growth(e.g. 2072 tonnes in 1995)
Trends in Imports:	Significant direct retail imports. Overall there has been a growth in imports. Holland, the USA and New Zealand are important suppliers to this market. Inter-Asian trade is developing.
Product Specifications:	Mainly brown onions are purchased, with some red and sweet white onions now increasing in popularity. Consistent grading is required. Good quality at a competitive price. Bulbs should be bright, clean and trimmed. Medium sized bulbs are preferred from 40-60mm- 50-70mm. The "Asian" grade is lower than that for Japan based on higher blemish and poor skin finish tolerances. Onions are normally bagged, but sometimes are shipped in bulk bins. New Zealand, Australia and Europe freight 10/20/25kg bags. Onions should be stored in a dry clean environment in ambient or preferably chilled conditions.
Market Demand:	Strong traditional fresh consumption. Increasing acceptance of red onions. Sweet onions and shallots are an emerging market. Market share approximately 60-65% wet markets and 35-40% supermarkets. European prices remain high while US/NZ/Australian pricing is similar. Red onions are generally more expensive than brown onions.
Target Market:	Mainly food service and processing.
Export Opportunity Prospects:	Demand is likely to increase with economic recovery, however, local production is increasing. Short term demand is strong (to mid 1998) based on poor USA, NZ, etc supply.

Malaysia

Cauliflower and headed broccoli, fresh or chilled

Production 1996:

Exports 1996: 48 tonnes

Imports 1996: 17,288 tonnes

Growth in Imports (1991-1995):

Major Suppliers: US, Taiwan, China

Imports from Australia 1996: 1159 tonnes (broccoli), 10276 tonnes (cauliflower)

Growth in Aust. Imports (5 yrs): Very significant increase (e.g. cauliflower up from 6727 tonnes in 1995)

Per capita consumption:

Trends in Imports:

There are significant direct retail imports.

The US is an important supplier to this market and Australia's main competition for broccoli.

Australian still has limited export competition for cauliflower.

Product Specifications:

Main product varieties are white cauliflower and green European varieties of broccoli.

Consistent size grading required for both products. High quality at a competitive price

Bright, firm cauliflower heads, washed and often wrapped packed in 10-15kg waxed cartons.

Dark green, mushroom shaped broccoli heads with good symmetry packed in 10-15kg waxed cartons. Good quality and keen prices required.

Cooling and temperature control required to achieve best quality results.

Mainly sea freighted to export destinations and air freighted to spot markets.

Market Demand:

Market demand has increase over the last decade.

Market share is approximately 60-65% wet markets and 35-40% supermarkets.

Economic slow down has increased buying aggression.

Export Opportunity Prospects:

Opportunities for both broccoli and cauliflower remain very good. Competition has increased for broccoli, while at this stage it has not to a great extent for cauliflower.

Both products offer volume business potential.

Indonesia

Market Characteristics

Population (1997):	203.1 million
Population Growth (1997):	3.2%
Major Religion:	Islam
GDP per capita 1997 (US\$):	\$1,057
Real GDP Growth 1997:	6.6%
Food Expenditure 1995 (US\$ per capita):	\$100
1996 Agricultural Production as % of GDP:	16.3%
Total Food Imports 1996 (US\$)	\$3.9 billion
Growth in Total Food Imports (1990-1996):	35.7% p.a.
Total Vegetable Imports 1996 (US\$)	\$134 million
Growth in Vegetable Imports (1990-1996)	22.8% p.a.

(Source: Department of Foreign Affairs and Trade, May 1998)

Trends in Food Imports

- Indonesia's continued strong economic growth and rising disposable incomes (with per capita GDP projected to rise by 8 per cent per annum, to reach US\$1,000 by the year 2000) have been dislocated over the past 6-12 months. The market remains depressed and may yet decline further.
- Rapidly increasing population, which is projected to grow by 20 per cent between 1995 and 2005 to reach 238 million people.
- Increasing urbanisation, with the urban population projected to increase from approximately 20 per cent to 35 per cent by 2000.
- Government's deregulation strategy leading to reduction in barriers to market access.
- Rapidly expanding tourist industry and food service sector.
- Rapid development of the retail sector and distribution infrastructure.
- Developing local food and beverage industries placing increased reliance on imported raw materials.

Since July 1997 the Indonesian economy has changed dramatically leading to a reduction in the import of vegetables. Currency variations are the main contributor to the change in import volumes and no wonder when the exchange rate has deteriorated from AUD\$1 to Rupiah 1832 on July 16 1997 to AUD\$1 to Rp 9350 on July 1 1998.

Indonesian consumers are price sensitive especially low to middle income earners. Exchange rate changes have forced importers to reduce their volumes and stock and wait for improvements in conditions.

High interest rates and a very tight monetary policy are having a drastic effect and general business activity has stalled following the 400 percent devaluation.

Indonesian vegetable consumption is high. Based on figures from the National Socio-Economic Survey (SUSENAS) growth in demand for vegetables will be 51%. Vegetable consumption is dominated by traditional leaf vegetables (Bayam, Kangkung, Cassava) accounting for more than 35% of the total consumed volume. Green/string beans, vegetable spices such as shallots, garlic and chilli, plus cabbage each account for another 10-12% of consumption. Around 8% of vegetable consumption is cucumber and Labu Siam.

Urban Indonesians in the SUSENAS census of 1990 consumed

"round" cabbage	150 grams per month per capita
Chinese cabbage	110 g/m
Carrots	70 g/m
French beans	90 g/m
String beans	280g/m

Duty on 576 food items changed on 21 January 1998 from 25% to 5% which helps reduce selling price but this is substantially offset by exchange rate variations

Phytosanitary certificates must be provided for all fresh product imports which are then subject to further inspection on arrival.

Compliance with maximum pesticide residue limits are also a requirement for imported food products

Demand for Vegetables

Indonesia is a major producer of vegetables, supplying both domestic market demand and an increasing export market in the Asian region. Indonesia is a large producer of temperate vegetables and production is increasing in volume, both fresh and value added. Some local enterprises now export fresh and canned vegetables.

Markets close to Indonesia have rapidly rising labour costs. Many of these regional markets with the exception of Japan are generally less rigorous in their quality requirements than are the European markets. This all creates opportunities for local export from Indonesia where Singapore and Malaysian markets are emerging for Indonesian potatoes, cabbage carrots, tomatoes and chilli

Overall, the market for imported fresh vegetables in Indonesia is small due to the high price of imported products compared with local produce and Indonesia's unfamiliarity with imported products. However, since 1990, there had been strong growth in most imported vegetable categories as a result of growth in consumer incomes, expatriate community and the food service sector, demand for imported vegetables. The most common imported vegetables are onion, lettuces, broccoli and celery. The market for 'exotic' or special types of vegetables is increasing, being primarily driven by the food service sector. Greatest growth has been in the air flown sector for hotels, restaurants and the fast food sector. The current economic crisis has had a major effect on the demand for imported vegetables in the short term however, in the long term, demand is forecast to be high.

There is a moderate ongoing market for high quality vegetable products as these cannot be supplied to an adequate standard locally.

Imported vegetables represent a small share of the market and are sold mainly through supermarkets such as Sogo, Kemchicks and selected Hero stores which all cater for expatriates and wealthy Indonesians. Hotel and restaurant trade is also a buyer of imported vegetables.

There are (or were) specialist importers serving these specific market sectors with vegetable imports.

Export opportunities for Australian producers in the Indonesian market do exist in the medium term, but require careful investigation, in consideration of the domestic market supply. Australia's proximity is a distinct advantage in relation to supplying vegetables to Indonesia. Indonesian importers are looking for consistency in quality and supply, long term commitment and service and the provision of promotional support. Canned vegetables have been identified as having potential, particularly within the food service segment. There are opportunities in the supply of potatoes. Demand for potatoes is increasing as consumption of snack foods and western style meals are rising.

Frozen vegetables are gaining a share particularly French fries, Sweet Corn, baby carrots, peas and mixed vegetables. Frozen imports face competition from good quality local production.

At times of weather disturbance in mid summer local transport from production centres is not always adequate to supply metropolitan markets, thus as in other areas affected by monsoons in summer a special window of opportunity exists for imported vegetables.

The Indonesian Government is encouraging foreign investment in export oriented industries. Therefore, where fresh produce imports are restricted, investment may be an alternative. Indonesia is seeing an emergence of joint venture arrangements with Malaysia, Singapore, Japan, Taiwan and Brunei in production and distribution of fresh and value added products. Indonesia has begun to exports both fresh and canned products and is focusing on expanding exports, particularly of value added products. Joint venture opportunities exist in providing technology, technical advice and/or management expertise for fresh produce businesses, such as production, handling, packing and storage. There are opportunities for joint ventures in production of value added vegetable products in Indonesia for the export market, primarily Japan.

Indonesia	
Sweet corn , fresh or chilled	
Production 1996:	No figure available
Exports 1996:	No figure available
Imports 1996:	N/A
Growth in Imports (1990-1996):	Minimal
Major Suppliers:	Australia
Imports from Australia 1996:	N/A
Growth in Aust. Imports:	Minimal
Annual per capita consumption:	N/A
Trends in Imports:	Indonesia is not a significant importer of fresh sweet corn.
Market Demand:	Limited demand for imported fresh sweet corn.
Target Market:	In major centres such as Jakarta, the food service sector is growing rapidly. In terms of fresh produce, Australia supplies the bulk food service industry such as luxury hotels, restaurants, and retailers.
Tariff Duty:	20% Recently Indonesia has cut a large number of agricultural tariffs including many of those placed on fresh fruit and vegetables.
Quarantine Requirements:	All food imports must be registered with the Department of Health.
Export Opportunity Prospects:	Limited demand for imported sweet corn to the Indonesian market.

Indonesia

Beans, green, fresh or chilled

Production 1996:	23,500 tonnes
Exports 1996:	1,593 tonnes
Imports 1996:	5 tonnes
Growth in Imports (1990-1996):	Total imports were zero in 1990.
Major Suppliers:	China
Imports from Australia 1996:	3 tonnes
Growth in Aust. Imports (90-96):	Imports were 1.5 tonnes in 1990.
Annual per capita consumption:	minimal
Trends in Imports:	Australia is a small player in this market. China commands significant market share.
Market Demand:	Market largely satisfied by domestic production
Target Market:	In major centres such as Jakarta, the food service sector is growing to supply the burgeoning middle class. In terms of fresh produce, Australia supplies the bulk food service industry such as luxury hotels, restaurants, and retailers.
Tariff Duty:	25%
	Recently Indonesia has cut a large number of agricultural tariffs including many of those placed on fresh fruit and vegetables.
Quarantine Requirements:	All food imports must be registered with the Department of Health.
Export Opportunity Prospects:	Indonesia is a major producer and exporter of beans. Limited demand for imports, with China the major supplier.

Indonesia	
Lettuce	
Domestic Production 1996:	0
Exports 1996:	26 tonnes
Imports 1996:	179 tonnes
Growth in Imports (1990-1996):	214%
Major Suppliers:	Australia, France, USA
Imports from Australia 1996:	75 tonnes
Growth in Aust. Imports (90-96):	Little recent growth.
Annual per capita consumption:	Minimal
Trends in Imports:	Although lettuce imports to Indonesia have increased, the total import market remains relatively low. Australia is an important supplier of fresh lettuce to the market.
Market Demand:	Demand is largely met by domestic production.
Target Market:	Food service remains a major target market, especially in larger urban centres such as Jakarta. The increasing popularity of fast food outlets and Western-style restaurants is opening up opportunities for the supply of uniform and quality consistent foods.
Tariff Duty:	20%
	Recently, Indonesia has cut a large number of agricultural tariffs including many of those placed on fresh fruit and vegetables.
Quarantine Requirements:	All food imports must be registered with the Department of Health.
Export Opportunity Prospects:	Limited up-market demand for imported lettuce, with demand largely being met by domestic production. Australia is the dominant supplier of imported fresh lettuce in periods when domestic supply falls short of demand.
	Medium-long term prospects also appear limited.

Indonesia

Carrots

Production 1996:	269,036 tonnes
Exports 1996:	0
Imports 1996:	99 tonnes
Growth in Imports (1990-1996):	Imports have grown substantially from a low base (2 tonnes in 1990).
Major Suppliers:	Australia
Imports from Australia 1996:	84 tonnes
Growth in Aust. Imports (90-96):	Imports have grown from a very low base (2 tonnes in 1990).
Annual per capita consumption:	1.3 kg
Trends in Imports:	There is relatively small demand for imported fresh carrots. Australia is the main supplier and imports have increased considerably since 1991.
Market Demand:	Domestic production dominates market supply.
Target Market:	In major centres such as Jakarta, the food service sector is growing to supply the burgeoning middle class. In terms of fresh produce, Australia supplies the bulk food service industry such as luxury hotels, restaurants, and retailers. The expansion of the fast food industry provides excellent opportunities for the supply of quality processed foods.
Tariff Duty:	25%
	Recently Indonesia has cut a large number of agricultural tariffs including many of those placed on fresh fruit and vegetables.
Quarantine Requirements:	All food imports must be registered with the Department of Health.
Export Opportunity Prospects:	Demand is largely met by domestic production, with limited opportunity for imported product in fresh form.
	Future processed carrot product demand may offer some potential.

Indonesia	
Cabbages	
Production 1996:	1,530,210 tonnes
Exports 1996:	61,758 tonnes
Imports 1996:	263 tonnes
Growth in Imports (1990-1996):	3657%
Major Suppliers:	Australia
Imports from Australia 1996:	222 tonnes
Growth in Aust. Imports (90-96):	Imports have grown substantially from a low base (2 tonnes in 1990)
Annual per capita consumption:	7 kg
Trends in Imports:	In 1995, Australia was the sole importer of imported cabbage into Indonesia. Imports have continued to grow over the five period. Although Indonesia is a major producer of cabbage current domestic production cannot keep up with demand, hence increasing reliance on imports.
Market Demand:	Chinese cabbage imported from Australia is currently twice the price of locally produced product selling in the wholesale markets. Supermarkets prefer Chinese cabbage with larger heads than previous imports from Australia.
Target Market:	The food service sector remains the major target market in larger centres such as Jakarta, catering to an increasing middle class who demand consistent quality and variety.
Tariff Duty:	25%
	Recently Indonesia has cut a large number of agricultural tariffs including many of those placed on fresh fruit and vegetables.
Quarantine Requirements:	All food imports must be registered with the Department of Health
Export Opportunity Prospects:	There is a significant opportunity and growing interest in joint ventures for Chinese cabbage in relation to processing and value adding using Australian produce in Indonesia for export.

Indonesia	
Asparagus , fresh of chilled	
Production 1996:	0
Exports 1996:	0
Imports 1996:	1,004 tonnes
Growth in Imports (1990-1996):	Total imports grew from zero in 1990.
Major Suppliers:	US
Imports from Australia 1996:	3 tonnes
Growth in Aust. Imports (90-96):	Imports were virtually nil in 1990.
Annual per capita consumption:	minimal
Trends in Imports:	Although Australia remained a dominant supplier of fresh asparagus over the five years, other suppliers recorded healthy growth.
Market Demand:	Demand is primarily met by domestic product. Demand for imported fresh asparagus is limited.
Target Market:	In major centres such as Jakarta, the food service sector is growing to supply the burgeoning middle class. In terms of fresh produce, Australia supplies the bulk food service industry such as luxury hotels, restaurants, and retailers. The expansion of the fast food industry provides excellent opportunities for the supply of quality processed foods.
Tariff Duty:	25%
	Recently Indonesia has cut a large number of agricultural tariffs including many of those placed on fresh fruit and vegetables.
Quarantine Requirements:	All food imports must be registered with the Department of Health.
Export Opportunity Prospects:	Export opportunities in fresh asparagus to Indonesia are limited. Indonesia is a significant producer of asparagus, however, opportunities may lie in value added asparagus products.

Indonesia

Onions and shallots, green

Production 1996:	N/A
Exports 1996:	7,171 tonnes
Imports 1996:	42,057 tonnes
Growth in Imports (1991-1995):	
Major Suppliers:	NZ, USA, Australia
Imports from Australia 1996:	2264 tonnes
Growth in Aust. Imports (5 yrs):	Exports have risen significantly.
Per capita consumption:	
Trends in Imports:	Imports have increased strongly until the recent change in economic conditions.
Product Specifications:	Similar to Singapore/Malaysia.
Market Demand:	
Target Market:	Food service and processing.
Tariff Duty:	25%
	Recently Indonesia has cut a large number of agricultural tariffs including many of those placed on fresh fruit and vegetables.
Quarantine Requirements:	All food imports must be registered with the Department of Health.
Export Opportunity Prospects:	There is a medium-long term opportunity for brown, red, and white onions. The market will always be competitive, but a niche exists for high quality and partially prepared products.

Indonesia

Cauliflower and headed broccoll, fresh or chilled

Production 1996: N/A

Exports 1996: 219 tonnes

Imports 1996: 179 tonnes

Growth in Imports (1991-1995):

Major Suppliers: Australia

Imports from Australia 1996: 177 tonnes

Growth in Aust. Imports (5 yrs):

Per capita consumption:

Trends in Imports:

Product Specifications:

Market Demand:

Target Market:

Tariff Duty: 25%

Recently Indonesia has cut a large number of agricultural tariffs including many of those placed on fresh fruit and vegetables.

Quarantine Requirements: All food imports must be registered with the Department of Health.

Export Opportunity Prospects:

Appendix 2

Identified Strengths Weaknesses, Opportunities and Threats

Cowra Vegetables to Asia Group

Strengths

- natural resources, soil, climate, water - stable predictable climate west of the range;
- experienced innovative farmers;
- high degree of mechanisation with adequate mechanisation for existing crops;
- Ready to co-operate and accept change;
- processing capability within the area;
- Simplot support of Cowra Export Packers (CEP);
- good leadership and management;
- large volume of refrigerated transport available; and
- support of Local Government.

Weaknesses

- conservative horticulturists;
- few growers who are 100% vegetable producers;
- high cost of new developments;
- availability of suitable labour and training for some activities;
- the specialist needs of vegetable growers;
- mid season production;
- lack of real commitment to market opportunities;
- NSW Ag concentrates on project activity thus limited agronomic support;
- all growers busy with current activity;
- do not like to step outside the usual practices, currently comfortable, why change;
- limited by on farm chilling capacity;
- not attracting new money to the area (unlike wine grapes);
- restructured food processing industry;
- no clear definition of the Vision or intent of the VTAG;
- limited export experience;
- no producers with formal quality assurance or food safety systems; and
- lack of experience in different crops to those now produced.

Opportunities

- ability to buy/source outside the area
- close to Australia's biggest domestic market
- CEP "hungry" to seek new opportunities
- creation of new employment within the area
- be first into a full QA program for vegetables
- bicolour sweet corn can be produced in an area of relatively low insect pressure
- Asparagus may have a place as an import replacement product
- CEP and others can develop and deliver technical support
- Ready to move to exports
- Need to attract investment capital to Cowra vegetables
- Need a champion to lead each sector
- Develop a clear cut marketing plan for the area
- Back a marketing plan with R & D to match the producers requirements
- examine and develop farm efficiency programs.
- Find and develop a champion to drive progress

Threats

- Potential for those involved to accept a "group" approach not known
- Support may not last through to successful culmination of the project

Cowra Export Packers

Strengths

- The cannery is well located
- expertise to can most things
- infrastructure to support cannery is in place
- some expertise in vacuum packing
- well serviced with FCL containers ex Blainey
- Cool Rooms and hydra coolers both under-utilised

Weaknesses

- Availability of capital for new developments
- Skilled labour at least in the short term
- need for activities that are fully mechanised or more mechanised in the field
- limited technical support
- some district fall off in interest in horticulture
- growers are mainly older people
- no tax deductions for vegetables
- a lack of knowledge of competitors
- vegetables are not as fashionable and trendy compared with vines which are expanding rapidly within the area
- limited market knowledge
- a distinct off season for CEP

Opportunities

- Development of multi use field equipment
- co-operative use of equipment
- development of technical support services
- chance to have a NSW Ag staffer to provide technical support
- Development of existing support services
- development of a group champion
- this whole valley is expanding and is progressive
- Development of new crops and new opportunities
- meting the thirst for new knowledge
- products to utilise CEP equipment for a longer period to take up the base load
- Implement a HACCP and QA program
- Capitalise on new markets while A\$ is declining

Note the potential change in tariffs by some countries and the favourable impact this could have on Australian exporters. Such tariff changes may be a fallout factor of the Asian financial crisis.

Threats

- currency failure or dramatic change in market place economics
- too steep a start up and learning curve
- head on competition with NZ
- In international markets knowledge of competitors is very limited
- Asian change of direction with stronger competition in export markets

Appendix 3

ABS Production Reports for the Region

The following definitions clarify abbreviations used in these tables:

Region	Local Government Area (LGA or Shire)
Item	this describes the selected commodities from the Agricultural Census
Amount and TP	<p>This is the data collected about the item. It is expressed in a number of different ways depending on the commodity /item, including number (eg number of sheep), hectares (eg area of holdings, tonnes (eg wheat for grain - production) or kilograms (eg mushrooms - production). These commodity values are abbreviated on the printout as follows:</p> <p>N = Number T = Tonnes HA = Hectares KG = Kilograms</p> <p>Commodities not present in your selected Regions may not appear on the printout ie zero values are generally not shown.</p>
Popn	This represents the total number of establishments in the selected Region(s) which have been included in the Agricultural Census. This figure does not accurately reflect the total number of farms in the Shire/Region.
Resp	This represents the number of respondents reporting the commodity/item. This is also referred to as the number of holdings. It gives an indication of the number of respondents reporting the commodity/item. In the case of area of Holding, this will equal the Popn column as this is the one item/commodity which all holdings must report.
EVAO	<p>- Estimated Value of Agricultural Operations</p> <p>In order to minimise demands on small operators for statistical information and to reduce the cost of processing the Census, the Australian Bureau of Statistics (ABS) excludes from the Census, establishments with an estimated value of agricultural operations (EVAO less than a certain amount (\$5,000).</p>
Season	Data for season 1995/96 refers to the agricultural season between 1 April 1995 and 31 March 1996 and includes production harvested after 1 April 1995 from crops planted before that date.

1995/96 Agriculture Census Statistics

Total number
of Holdings

Numbers
reporting
this p/a

Region	Item Code	Commodity	Unit	Amount	Population	Respondents
Cabonne (A)	3503101	Potatoes - early/spring - harvest before 31 March - area	HA	5	867	1
Cabonne (A)	3503102	Potatoes - early/spring harvest before 31 March - production	Tonnes	30	867	1
Cabonne (A)	3503601	Potatoes (main/autumn) harvested after 31 March - area	HA	71.6	867	3
Cabonne (A)	3503602	Potatoes (main/autumn) harvested after 31 March - production	T	706.6	867	3
Cabonne (A)	3505901	Potatoes - total area	HA	76.6	867	4
Cabonne (A)	3505902	Potatoes - total production	T	736.6	867	3
Cabonne (A)	3601301	Beans (french and runner) - area	HA	12	867	1
Cabonne (A)	3601302	Beans (french and runner) - production	KG	58000	867	1
Cabonne (A)	3604701	Marrows and squashes - area	HA	0.5	867	1
Cabonne (A)	3604702	Marrows and squashes - production	KG	2000	867	1
Cabonne (A)	3604801	Zucchini - area	HA	2.4	867	1
Cabonne (A)	3604802	Zucchini - production	KG	10000	867	1
Cabonne (A)	3604911	Marrows, squashes and zucchinis - area	HA	2.9	867	1
Cabonne (A)	3604912	Marrows, squashes and zucchinis - production	KG	12000	867	1
Cabonne (A)	3605101	Melons (rock - incl. cantaloupe) - area	HA	1.2	867	2
Cabonne (A)	3605201	Melons (water) - area	HA	13	867	3
Cabonne (A)	3605202	Melons (water) - production	T	270	867	3
Cabonne (A)	3606601	Peas, green (for processing) - area	HA	24	867	1
Cabonne (A)	3606602	Peas, green (for processing) - production - (shelled weight)	KG	91000	867	1
Cabonne (A)	3606701	Peas, green (for fresh market) - area	HA	48.2	867	3
Cabonne (A)	3606702	Peas, green (for fresh market) - production (pod weight)	KG	111800	867	3
Cabonne (A)	3606811	Peas, green - total area	HA	72.2	867	4
Cabonne (A)	3606812	Peas, green - total production (pod weight)	KG	312000	867	4
Cabonne (A)	3606901	Peas, snow - area	HA	5	867	1
Cabonne (A)	3606902	Peas, snow - production	KG	5000	867	1
Cabonne (A)	3607101	Pumpkins, triambles, trombones, etc. - area	HA	13.6	867	3
Cabonne (A)	3607102	Pumpkins, triambles, trombones, etc. - production	T	21	867	3
Cabonne (A)	3608801	Tomatoes - area	HA	0.7	867	1
Cabonne (A)	3608802	Tomatoes - production	T	10	867	1
Cabonne (A)	3609511	Vegetables for human consumption - total area	HA	197.2	867	13

Total number
of Holdings

Number reporting
this product.

Region	Item Code	Commodity	Unit	Amount	Population	Respondents
Cabonne (A)	3505958	POTATOES - GVP	\$	225816	867	3
Cabonne (A)	3601358	BEANS (FR & RUN) - GVP	\$	114927	867	1
Cabonne (A)	3604758	MARROWS AND SQUASH - GVP	\$	4240	867	1
Cabonne (A)	3604858	ZUCCHINI - GVP	\$	12335	867	1
Cabonne (A)	3605258	MELONS (WATER) - GVP	\$	163357	867	3
Cabonne (A)	3606658	PEAS - GR (PROC) - GVP	\$	23660	867	1
Cabonne (A)	3606758	PEAS - GR (FRESH) - GVP	\$	345004	867	3
Cabonne (A)	3606858	PEAS GREEN - TOTAL - GVP	\$	368664	867	0
Cabonne (A)	3606958	PEAS - SNOW - GVP	\$	24750	867	1
Cabonne (A)	3607158	PUMPKINS, ETC - GVP	\$	4546	867	3
Cabonne (A)	3608858	TOMATOES - GVP	\$	1999	867	1
Cabonne (A)	3610059	VEGETABLES - TOTAL - GVP	\$	920634	867	0

1995/96 Agriculture Census Statistics

Region	Item Code	Commodity	Unit	Amount	Population	Respondents
Carrathool (A)	3503101	Potatoes - early/spring - harvest before 31 March - area	HA	228.4	287	2
Carrathool (A)	3503102	Potatoes - early/spring harvest before 31 March - production	T	5676	287	2
Carrathool (A)	3503601	Potatoes (main/autumn) harvested after 31 March - area	HA	592.4	287	2
Carrathool (A)	3503602	Potatoes (main/autumn) harvested after 31 March - production	T	15055.2	287	2
Carrathool (A)	3505901	Potatoes - total area	HA	820.8	287	2
Carrathool (A)	3505902	Potatoes - total production	T	20731.2	287	2
Carrathool (A)	3601301	Beans (french and runner) - area	HA	0.1	287	1
Carrathool (A)	3601302	Beans (french and runner) - production	KG	100	287	1
Carrathool (A)	3601901	Cabbages - area	HA	0.1	287	1
Carrathool (A)	3601902	Cabbages - production	T	0.4	287	1
Carrathool (A)	3602401	Carrots - area	HA	0.1	287	1
Carrathool (A)	3602402	Carrots - production	T	1	287	1
Carrathool (A)	3604501	Lettuce - area	HA	0.1	287	1
Carrathool (A)	3604502	Lettuce - production	T	0.2	287	1
Carrathool (A)	3605101	Melons (rock - incl. cantaloupe) - area	HA	0.1	287	1
Carrathool (A)	3605102	Melons (rock - incl. cantaloupe) - production	T	1	287	1
Carrathool (A)	3605201	Melons (water) - area	HA	1.2	287	1
Carrathool (A)	3605202	Melons (water) - production	T	13.7	287	1
Carrathool (A)	3606101	Onions, white and brown - area	HA	0.1	287	1
Carrathool (A)	3606102	Onions, white and brown - production	T	2.2	287	1
Carrathool (A)	3607101	Pumpkins, triambles, trombones, etc. - area	HA	12.9	287	3
Carrathool (A)	3607102	Pumpkins, triambles, trombones, etc. - production	T	147.4	287	3
Carrathool (A)	3608801	Tomatoes - area	HA	0.5	287	1
Carrathool (A)	3608802	Tomatoes - production	T	5	287	1
Carrathool (A)	3609511	Vegetables for human consumption - total area	HA	836	287	5

1995/96 Agriculture Census Statistics

Region	Item Code	Commodity	Unit	Amount	Population	Respondents
Carrathool (A)	3505958	POTATOES - GVP	\$	6355471	287	2
Carrathool (A)	3601358	BEANS (FR & RUN) - GVP	\$	198	287	1
Carrathool (A)	3601958	CABBAGES - GVP	\$	143	287	1
Carrathool (A)	3602458	CARROTS - GVP	\$	264	287	1
Carrathool (A)	3604558	LETTUCE - GVP	\$	238	287	1
Carrathool (A)	3605158	MELONS (ROCK) - GVP	\$	623	287	1
Carrathool (A)	3605258	MELONS (WATER) - GVP	\$	8289	287	1
Carrathool (A)	3606158	ONIONS - WHITE/BROWN - GVP	\$	1139	287	1
Carrathool (A)	3607158	PUMPKINS, ETC - GVP	\$	31909	287	3
Carrathool (A)	3608858	TOMATOES - GVP	\$	1000	287	1
Carrathool (A)	3610059	VEGETABLES - TOTAL - GVP	\$	6399274	287	0

1995/96 Agriculture Census Statistics

Region	Item Code	Commodity	Unit	Amount	Population	Respondents
Cowra (A)	3503101	Potatoes - early/spring - harvest before 31 March - area	HA	6	483	1
Cowra (A)	3503102	Potatoes - early/spring harvest before 31 March - production	T	208	483	1
Cowra (A)	3505901	Potatoes - total area	HA	6	483	1
Cowra (A)	3505902	Potatoes - total production	T	208	483	1
Cowra (A)	3600601	Asparagus - total area	HA	225	483	6
Cowra (A)	3600602	Asparagus - production	T	768	483	6
Cowra (A)	3601301	Beans (french and runner) - area	HA	81	483	4
Cowra (A)	3601302	Beans (french and runner) - production	KG	387585	483	4
Cowra (A)	3601501	Beetroot - area	HA	78	483	3
Cowra (A)	3601502	Beetroot - production	T	1247	483	3
Cowra (A)	3601901	Cabbages - area	HA	15	483	3
Cowra (A)	3601902	Cabbages - production	T	552	483	3
Cowra (A)	3602701	Cauliflower - area	HA	23.5	483	3
Cowra (A)	3602702	Cauliflower - production	T	878	483	3
Cowra (A)	3603201	Cucumbers - area	HA	1	483	1
Cowra (A)	3603202	Cucumbers - production	KG	7854	483	1
Cowra (A)	3604501	Lettuce - area	HA	9.9	483	2
Cowra (A)	3604502	Lettuce - production	T	188.6	483	2
Cowra (A)	3605101	Melons (rock - incl. cantaloupe) - area	HA	0.2	483	1
Cowra (A)	3605102	Melons (rock - incl. cantaloupe) - production	T	2.2	483	1
Cowra (A)	3605201	Melons (water) - area	HA	7.2	483	3
Cowra (A)	3605202	Melons (water) - production	T	127.6	483	3
Cowra (A)	3606601	Peas, green (for processing) - area	HA	337	483	7
Cowra (A)	3606602	Peas, green (for processing) - production - (shelled weight)	KG	1475300	483	7
Cowra (A)	3606701	Peas, green (for fresh market) - area	HA	27	483	1
Cowra (A)	3606702	Peas, green (for fresh market) - production (pod weight)	KG	170000	483	1
Cowra (A)	3606811	Peas, green - total area	HA	364	483	8
Cowra (A)	3606812	Peas, green - total production (pod weight)	KG	3415660	483	8
Cowra (A)	3606901	Peas, snow - area	HA	20	483	1
Cowra (A)	3606902	Peas, snow - production	KG	1015	483	1
Cowra (A)	3607101	Pumpkins, triambles, trombones, etc. - area	HA	87	483	5
Cowra (A)	3607102	Pumpkins, triambles, trombones, etc. - production	T	538	483	5
Cowra (A)	3608001	Sweet corn - area	HA	1363	483	12
Cowra (A)	3608002	Sweet corn - production	T	16733	483	12

1995/96 Agriculture Census Statistics

Region	Item Code	Commodity	Unit	Amount	Population	Respondents
Cowra (A)	3608801	Tomatoes - area	HA	220	483	3
Cowra (A)	3608802	Tomatoes - production	T	1591	483	3
Cowra (A)	3609511	Vegetables for human consumption - total area	HA	2502.8	483	25
Cowra (A)	3609801	Vegetables, other (not elsewhere included) - area	HA	2	483	1

1995/96 Agriculture Census Statistics

Region	Item Code	Commodity	Unit	Amount	Population	Respondents
Cowra (A)	3505958	POTATOES - GVP	\$	63766	483	1
Cowra (A)	3600658	ASPARAGUS - GVP	\$	5015601	483	6
Cowra (A)	3601358	BEANS (FR & RUN) - GVP	\$	768000	483	4
Cowra (A)	3601558	BEETROOT - GVP	\$	665092	483	3
Cowra (A)	3601958	CABBAGES - GVP	\$	196911	483	3
Cowra (A)	3602758	CAULIFLOWER - GVP	\$	451735	483	3
Cowra (A)	3603258	CUCUMBERS - GVP	\$	5891	483	1
Cowra (A)	3604558	LETTUCE - GVP	\$	224590	483	2
Cowra (A)	3605158	MELONS (ROCK) - GVP	\$	1371	483	1
Cowra (A)	3605258	MELONS (WATER) - GVP	\$	77201	483	3
Cowra (A)	3606658	PEAS - GR (PROC) - GVP	\$	383578	483	7
Cowra (A)	3606758	PEAS - GR (FRESH) - GVP	\$	524603	483	1
Cowra (A)	3606858	PEAS GREEN - TOTAL - GVP	\$	908181	483	0
Cowra (A)	3606958	PEAS - SNOW - GVP	\$	5024	483	1
Cowra (A)	3607158	PUMPKINS, ETC - GVP	\$	116465	483	5
Cowra (A)	3608058	SWEET CORN - GVP	\$	3018235	483	12
Cowra (A)	3608858	TOMATOES - GVP	\$	318107	483	3
Cowra (A)	3609757	VACP - GVP	\$	51373	483	1
Cowra (A)	3609758	VEGIES - OTHER (NEC) - GVP	\$	51373	483	0
Cowra (A)	3610059	VEGETABLES - TOTAL - GVP	\$	11887543	483	0

Region	Item Code	Commodity	Unit	Amount	Population	Respondents
Crookwell (A)	3503101	Potatoes - early/spring - harvest before 31 March - area	HA	37	525	4
Crookwell (A)	3503102	Potatoes - early/spring harvest before 31 March - production	T	1160	525	4
Crookwell (A)	3503601	Potatoes (main/autumn) harvested after 31 March - area	HA	108.6	525	14
Crookwell (A)	3503602	Potatoes (main/autumn) harvested after 31 March - production	T	2451	525	14
Crookwell (A)	3505901	Potatoes - total area	HA	145.6	525	17
Crookwell (A)	3505902	Potatoes - total production	T	3611	525	16
Crookwell (A)	3601701	Broccoli - area	HA	9.7	525	2
Crookwell (A)	3601702	Broccoli - production	KG	54000	525	2
Crookwell (A)	3602101	Capsicum, chillies and peppers - area	HA	0.3	525	1
Crookwell (A)	3602102	Capsicum, chillies and peppers - production	KG	2600	525	1
Crookwell (A)	3604401	Leeks - area	HA	1	525	1
Crookwell (A)	3604402	Leeks - production	KG	6000	525	1
Crookwell (A)	3604801	Zucchini - area	HA	1.5	525	1
Crookwell (A)	3604802	Zucchini - production	KG	10000	525	1
Crookwell (A)	3604911	Marrows, squashes and zucchinis - area	HA	1.5	525	1
Crookwell (A)	3604912	Marrows, squashes and zucchinis - production	KG	10000	525	1
Crookwell (A)	3609511	Vegetables for human consumption - total area	HA	158.1	525	20

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Region	Item Code	Commodity	Unit	Amount	Population	Respondents
Crookwell (A)	3505958	POTATOES - GVP	\$	1107008	525	16
Crookwell (A)	3601758	BROCCOLI - GVP	\$	88225	525	2
Crookwell (A)	3602158	CAPSICUM, CHILLIES - GVP	\$	2455	525	1
Crookwell (A)	3604458	LEEKS - GVP	\$	14611	525	1
Crookwell (A)	3604858	ZUCCHINI - GVP	\$	12335	525	1
Crookwell (A)	3610059	VEGETABLES - TOTAL - GVP	\$	1224634	525	0

Region	Item Code	Commodity	Unit	Amount	Population	Respondents
Forbes (A)	3605201	Melons (water) - area	HA	7	474	2
Forbes (A)	3605202	Melons (water) - production	T	180	474	2
Forbes (A)	3607101	Pumpkins, triambles, trombones, etc. - area	HA	12.5	474	2
Forbes (A)	3607102	Pumpkins, triambles, trombones, etc. - production	T	204	474	2
Forbes (A)	3608001	Sweet corn - area	HA	24	474	1
Forbes (A)	3608002	Sweet corn - production	T	168	474	1
Forbes (A)	3609511	Vegetables for human consumption - total area	HA	43.5	474	4

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Region	Item Code	Commodity	Unit	Amount	Population	Respondents
Forbes (A)	3605258	MELONS (WATER) - GVP	\$	108905	474	2
Forbes (A)	3607158	PUMPKINS, ETC - GVP	\$	44162	474	2
Forbes (A)	3608058	SWEET CORN - GVP	\$	30303	474	1
Forbes (A)	3610059	VEGETABLES - TOTAL - GVP	\$	183370	474	0

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Region	Item Code	Commodity	Unit	Amount	Population	Respondents
Gunning (A)	3604801	Zucchini - area	HA	1	297	1
Gunning (A)	3604802	Zucchini - production	KG	25000	297	1
Gunning (A)	3604911	Marrows, squashes and zucchinis - area	HA	1	297	1
Gunning (A)	3604912	Marrows, squashes and zucchinis - production	KG	25000	297	1
Gunning (A)	3606901	Peas, snow - area	HA	0.1	297	1
Gunning (A)	3606902	Peas, snow - production	KG	317	297	1
Gunning (A)	3609511	Vegetables for human consumption - total area	HA	1.1	297	2

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Region	Item Code	Commodity	Unit	Amount	Population	Respondents
Gunning (A)	3604858	ZUCCHINI - GVP	\$	30838	297	1
Gunning (A)	3606958	PEAS - SNOW - GVP	\$	1569	297	1
Gunning (A)	3610059	VEGETABLES - TOTAL - GVP	\$	32407	297	0

Region	Item Code	Commodity	Unit	Amount	Population	Respondents
Young (A)	3601901	Cabbages - area	HA	2	466	1
Young (A)	3601902	Cabbages - production	T	70	466	1
Young (A)	3602701	Cauliflower - area	HA	4	466	1
Young (A)	3602702	Cauliflower - production	T	150	466	1
Young (A)	3604501	Lettuce - area	HA	4	466	1
Young (A)	3604502	Lettuce - production	T	100	466	1
Young (A)	3605801	Mushrooms - area	HA	0.1	466	1
Young (A)	3605802	Mushrooms - production	KG	174548	466	1
Young (A)	3609511	Vegetables for human consumption - total area	HA	10.1	466	2

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Region	Item Code	Commodity	Unit	Amount	Population	Respondents
Young (A)	3601958	CABBAGES - GVP	\$	24971	466	1
Young (A)	3602758	CAULIFLOWER - GVP	\$	77176	466	1
Young (A)	3604558	LETTUCE - GVP	\$	119083	466	1
Young (A)	3605858	MUSHROOMS - GVP	\$	563703	466	1
Young (A)	3610059	VEGETABLES - TOTAL - GVP	\$	784933	466	0