



DRAFT Report on an

Australian Prawn Market Analysis

For the

Australian Prawn Farmers Association

By

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EXECUTIVE SUMMARY

The domestic market situation for farmed prawns was examined by means of desk research on published and unpublished information and interview data from farmers, wholesalers, retailers and importers of prawns and other seafoods.

Phone interviews with 29 farmers indicated that the 2000/01 production from 29 farms in Queensland, the Northern Territory and NSW, production totalled 2629 tonnes of black tiger and bananas alone. Of this 2629 tonnes, six farms reported a total of 793 tonnes of banana while the total tiger production from 27 farms was 1836 tonnes. Forty percent of the tigers were cooked and frozen while 50% was sold fresh cooked.

In Sydney, cooked farmed tiger prawns now outsell medium cooked king prawns in the majority of fishmongers and the farmed product is well accepted. It is however not clearly identified as Australian farmed product and we believe the time is ripe for the aquaculture industry to be bolder and proudly announce the origins of their produce.

Australian production is likely to increase on almost all existing farms and according to the farmers' forecasts aggregate output of tiger and banana in 2001-2 from the 29 farms will exceed 3000 tonnes, and then exceed 6300 tonnes in five years. With new farms, total production from all of Australia's farms may exceed 10000 tonnes per annum if all goes as planned by current and prospective farmers.

However we believe that black tiger prawn production from existing farms will not grow so fast and output just double to about 3700 tonnes in 2006/7. The output of banana prawns is too difficult to forecast with any confidence given that most farms have reverted to tiger prawns for now at least and the new farms have yet to operate.

The statistics on prawn production, exports, imports and retail sales indicate that per capita whole prawn consumption in Australia has not increased over the past decade but demand for raw prawns is increasing and the per capita consumption of cooked (boiled) whole prawns has been declining.

Retailers and consumers have a preference for Australian products versus imports and fresh over frozen seafood, but the prawn farming industry has increased output of cooked prawns while the domestic demand is growing faster for green prawns. Furthermore the industry's continued reliance on frozen cooked prawns places it in direct price competition with cheaper frozen imports.

Opportunities identified in this analysis include:

1. A widening of the raw product range, increase sales of
Green prawns, fresh and frozen
2. Further product development and value adding: live tiger & banana

More plate ready and ready to eat prawn products for food service and retail.

Retail (consumer) IQF packs of cooked and green prawns.

3. Widening the distribution of current products to more retail outlets :

Minor supermarkets, convenience stores, specialist food outlets

4. Wider distribution of current products to more food service/restaurants

5. A widening of distribution away from eastern capitals and to regional areas;

Adelaide and Perth are still a challenge/opportunity for fresh Australian produce

6. Tourism. Income from prawns and various tourism products; also a public relations avenue for promoting farmed prawn products and the farming industry.

7. Niche markets eg organics and ecolabelling

8. Expand demand for existing products/markets through coordinated generic promotions program

9. Import replacement: Promote the *Australian* and *fresh* features and benefits.

10. Diversification and additional species; eastern king prawn perhaps

11. Export growth through collaborative marketing, for trade and consumer packs

Prawns are arguably the most popular seafood in the world, demand in Australia and overseas is mostly strong and will continue to grow with increasing population and with increasing disposable income around the world. We believe Australian farmers can continue to expand output of tigers profitably but there is no single simple method of increasing prawn prices or farm income or coping with the anticipated increase in aggregate output.

Farmers should recognise that expenditure on advertising or other promotional activities alone are not enough. Each farmer has different capabilities and resources and will need to assess these accordingly but they can nevertheless work together more closely than they have in the past. Individually or collectively they should rely less on passive selling of cooked prawns in Australia and engage in more active marketing of various products both here and abroad.

We recommend that the APFA produce and manage an industry market development plan, based on a vision shared by all farmers, to strengthen the market for Australian farmed prawns through a number of integrated initiatives. We suggest that this plan include the following initiatives:

New product and market development for Australia and overseas

A review of how prawns are frozen and stored, then thawed and labelled in retail outlets; followed by the development of a Code of Practice on these activities.

Greater investment in market research, in particular on consumer attitudes to farmed and wild prawns and what consumers are really looking for in prawns. This would enable an evaluation on what impact the farming of alternate species such as the eastern king prawn would have on existing markets for tiger and banana prawns.

The development of a more active marketing culture to replace the passive selling widespread in the industry today

A three year rolling plan for promoting the farmed prawn products and the prawn farming industry.

A number of weaknesses in the industry were identified by farmers and the consultants which should be addressed prior to or as part of any industry promotion program.

1. INTRODUCTION

The Australian prawn farming industry has grown substantially in the past decade and the industry has increased its aggregate output of black tiger prawns each year with very little investment in generic market development.

In the past couple of years the industry has changed emphasis on species and several large developments have been initiated in northern Australia and so farmers have become more interested in marketing issues and the idea of generic promotion to strengthen their prices and markets.

The Australian Prawn Farmers Association has therefore commissioned this research on the domestic prawn market to provide reliable information for members to discuss possible initiatives in the light of up to date information.

The report deals mostly with fresh cooked black tiger prawns because that is the most voluminous product, the one best known by consumers and the seafood trade, and hence one on which there are quantitative data, and most people have an opinion.

Disclaimer

This research and report preparation was undertaken with a limited budget and a limited time frame. While every care has been taken and we believe the report to be accurate, readers should make their own enquiries to satisfy themselves on all matters.

2. METHODOLOGY

Information was derived from published reports, unpublished material and trade interviews and every effort has been made to produce quantitative data wherever possible. However in order to protect commercially sensitive information provided by interviewees some data has been amalgamated and precision knowingly sacrificed in order to respect confidentiality.

Our research included interviews with 20 retail fishmongers in Sydney as well as another 20 people around the country involved in prawn marketing in some capacity as importers, processors, wholesalers or supermarket management. We were also able to interview 29 prawn farmers by telephone.

This study dealt with the domestic markets and kuruma prawns were therefore not examined in this report.

2. OVERVIEW OF THE AUSTRALIAN PRAWN MARKET

The Australian prawn trade consists of many locally produced species and a handful of imported products totalling about 20,000 tonnes per annum according to the ABARE national statistics. The trade is dominated by retail sales of whole fresh cooked eastern king prawns, cooked farmed black tiger prawns and frozen whole uncooked wild prawns, in the three eastern states.

The other main area of trade in prawns is the distribution of frozen whole, headless (shell on or shelled) and cooked and raw prawn meat to food service institutions, restaurants and cafes; the eastern states dominate this area too because of their larger populations.

South Australia and Western Australia have smaller populations, substantial local prawn fisheries but no operating prawn farms, and have not been targeted by Australian prawn farmers selling fresh prawns. Seafood importers in these states have however introduced frozen cooked Thai farmed prawns to the supermarkets in these states.

The Australian demand for whole prawns is mostly for cooked prawns of the species that has traditionally come from local or nearby fisheries. Green prawn sales—of the large and medium size grades — have grown in the past decade with the influence of more cosmopolitan cooking styles but still remain marginally less than those of cooked.

Penaeus monodon has by virtue of being a new/unusually coloured prawn to the Australian market has faced considerable resistance in all areas when first introduced. In Queensland, where wild caught banana prawns are well known and enjoyed, farmed banana prawns too face buyer resistance because they are frequently dearer than wild caught prawns and commonly perceived as not being as good as the wild product in terms of shell hardness/peelability, taste or shelf life.

It is noteworthy that the taste of farmed black tigers in the first decade on the Australian market was frequently judged as unsatisfactory.

A characteristic of the Australian seafood trade is the consumer preference for fresh rather than frozen product and the practice of selling thawed cooked and green prawns when fresh product is unavailable because retailers believe sales will suffer if they offer the product in the frozen form. This practice of selling fresh (never been frozen) seafood as well as frozen thawed product at other times and the consequent variable taste experience has led to consumers questioning whether the seafood they buy is truly fresh or has first been frozen (Ruello & Associates 1999).

This report deals with the production and marketing of whole farmed and wild caught prawns in Australia and starts with an overview of the various fisheries, their seasons and their supply to markets. Prawn prices are noted here in general terms but the price competition between these products from Australia and the farmed local and overseas prawns are discussed in detail in section 4.1.

3.1 The Supply From Australian Fisheries

The Northern Prawn Fishery (NPF) which covers the Gulf of Carpentaria and neighboring parts of the Northern Territory and north Queensland, and therefore managed by the Australian Fisheries Management Authority, is the largest producer in Australia (Table 1).

Table 1. Australian prawn fishery landings and percentage of prawns sold domestically. (The average landed price for the SA catch is given here because it consists almost entirely of one species only : western king prawns; other available prices are shown on following pages).

State/fishery	Year 1997/98	1998/99	1999/2000	2000/01*
WA	4077 tonnes	4649	4463	2976
Qld	8421	9244	6536	6916
NSW	1683	2120	2315	2410
Vic	48	88	124	172
SA	2759 (\$12.05/kg)	2416 (\$18.12/kg)	2416 (\$18.11/kg)	2988 \$17.63
NPF	8531	7544	5403	9278
Torres Strait	1885	2203	1802	1779
TOTAL	27404	28264	23259	26519
EXPORTS	12387	11995	11630	12124
Net tonnage	15017	16269	11629	14359
Wild Prawns in Australia	55%	58%	50%	54%

Source : Australian Bureau of Agriculture & Resource Economics (ABARE).* Provisional data

Of interest in this table is the large annual variation in landings from some fisheries such as the NPF (see discussion below) and the steadier landings in others (eg Torres Strait and in the national total). Also noteworthy is the low variability in annual total export volume.

The NPF

The NPF has two seasons each calendar year and the fishery's output is almost all frozen at sea raw for export and domestic markets. The target species are brown tiger and bananas, both of which are mostly exported, but endeavour, blue leg king and other species are landed too for export and domestic sale.

The export oriented fisheries such as the NPF and those in Torres Strait, Western Australia and South Australia land mostly medium to large prawns (count of 25 per pound and larger prawn) and target export markets where higher prices can be found most years; domestic sales are common for the small sizes and when export prices are weak. Trade is however strongly influenced by exchange rates with the Japanese yen and the US dollar and the relative strengths of the economies in Japan, the USA and Australia and so the supply from these fisheries to the domestic market is highly variable and difficult to forecast.

Table 2. Northern Prawn Fishery production and average prices.

Source: ABARE annual statistics

Species	Year 1997/98	1998/99	1999/2000	2000/01
Tiger	2811 tonnes (\$21.21/kg)	2795 (\$18.82/kg)	2195 (\$28.02/kg)	2116 29.78
Banana	3711 (\$9.58)	360 (\$11.81)	2222 (\$13.96)	6286 13.50
Endeavour	1975 (\$10.61)	1129 (\$12.11)	972 (\$13.80)	868 13.75
King	21 (\$11.14)	12 (\$11.58)	11 (\$14.08)	7 13.43
Other	14	6	3	2
Total	8531 tonnes	7550	5404	9278

The seasons extend from April to mid May and from September to November. The NPF landings fluctuate markedly from year to year (Table 2) and are strongly influenced by rainfall, with large volume banana prawns landings at the beginning of the year's fishery correlating with heavy rainfall over the catchment in the preceding months.

Good banana years can markedly depress the prices of the small green prawns of other species throughout Australia and can therefore impact on the prospects for farmed banana prawns, frozen green ones in particular. This was evident this year when again large catches of banana prawns were recorded in the early season.

Western Australia

The Western Australian prawn fisheries are dominated by major fisheries in Shark Bay and Exmouth Gulf. The Shark Bay fishery operates from March to November with king prawns making up about two thirds of landings — almost all frozen— and brown tigers much of the remainder. The Exmouth fishery operates from April to November and the landings consist of kings, tigers and endeavour prawns in that order of abundance.

The frozen green king prawns from WA are well regarded in NSW and in years past would be cooked in December to help provide “fresh cooked” prawns for Christmas retail sales; the imported farmed tiger prawns now help fill this Christmas supply role.

South Australia

South Australia also has two major fisheries, in Spencers Gulf and Gulf St Vincent, and a smaller fishery on the west coast targeting medium to large king prawns (the southern, blue leg or western king *Penaeus latisulcatus*) for export markets. Unlike WA some of the catch is cooked at sea and sold fresh into Victoria and NSW, particularly before Christmas.

Both of the Gulfs have two seasons, or a split season, in each financial year, the first in November-December which lands fresh cooked prawns for domestic sales, and the longer winter season from March to June. The much smaller West Coast fishery fishes for 9 months each year with closures in October and again in January and February; the output from this fishery has little impact on trade in eastern Australia.

The SA fleet has arguably the best equipped trawlers and has increasingly changed over from holding fresh prawns in brine tanks to freezing at sea. Another noteworthy feature of the SA fleet is the industry focus on high quality and the restriction of fishing to the dark half of the lunar month so as to avoid the higher proportion of soft shelled prawns common with the full moon.

Fresh or frozen southern kings cooked or green are both well regarded in the neighboring state Victoria, a state without a prawn fishery as recently as 20 years ago and now with only a very small fishery. In NSW however the southern king is better received as a frozen green product because the paler colour of this species cooked compared to its eastern relative makes it less popular. Nevertheless good years of southern kings coupled with weak demand overseas can mean that substantial volumes of southern kings come to NSW and Victoria at attractive prices and impact on other species/markets.

Queensland

Queensland is the largest state fishery (Table 1) with prawn fishing operating from almost every port on the east coast. The eastern king is the major target south of Fraser Island and tiger prawn and endeavours are the target north of Cairns but bananas and red spot king prawns are also landed along the Queensland coast, with the banana landings being the most variable and least predictable from month to month or year to year.

Table 3. Queensland East Coast Trawl landings (from Williams 2002, p20)

	1998	1999	2000
King prawn	3262	2756	2373
Brown tiger	2587	2434	1530
Endeavour	1348	1520	1414
Banana	1044	812	369
Bay	573	534	266
Other	191	203	229

The Queensland east coast fishery is of interest to the prawn farming industry because much of its landings are fresh prawns, cooked or green, and therefore compete with the farmed products for space in the retail store display. This is particularly so for king prawn catches from the southern ports which are mostly cooked at sea and sold fresh as far as Melbourne. Exports are usually not a key part of the southern Queensland prawn fishery.

Moreton Bay is a prolific producer of king prawns and several other species which are sold as cooked or raw product, mainly in Queensland, but also forwarded as far as Melbourne. The "Bay king" or a medium brown tiger from Moreton Bay for example is the benchmark that many Queensland consumers and fish merchants would use in examining a 20/30 size grade black tiger while the farmed banana prawn would be compared to the wild catch along the coast.

There is more than one species of banana prawn identified in landings from northern Australia now and Table 4 shows the species of prawns seen in the prawn trade in Queensland and NSW and demonstrates some of the difficulty faced by consumers and fish merchants in understanding why "Prawns ain't Prawns". The difficulty of prawn species identity and uncertainty in the marketplace is sometimes seen in media publicity and advertising where photos of an incorrect species are used.

The estuarine catch in Moreton Bay is strongest in the summer months December to April. The ocean landings are typically low in January and February (about 100 tonnes

per month), increase rapidly to a peak of about 600 tonnes in March and then steadily fall through the year to low levels in the summer months of December to February. The noteworthy point about the Queensland east coast fishery is that the species and volumes harvested change significantly from year to year and can be difficult to predict.

Table 4. Common prawn names in use

<i>Species /group</i>	<i>Names in use</i>
Black tiger	Black tiger Leader Tiger/Giant tiger Farmed prawn
Banana prawn	Banana prawn/White banana Red leg /Indian banana Crystal Bay prawn
Eastern king Melicertus plebejus	Ocean king/Qld king Eastern king
Western king Melicertus latisulcatus	Western king/blue leg king Southern king

New South Wales

NSW has the oldest prawn fisheries in Australia with prawn fishing carried out in many estuaries from its northern to southern border. NSW landings are dominated by the eastern king and the school prawns from estuarine and coastal fisheries and the royal red prawn in the deep offshore waters. The royal red prawns are a soft pink prawn and commonly peeled and sold as raw meat or otherwise sold raw whole and do not have much influence on Australian farmed prawn market.

The estuarine catch is mostly restricted by regulation to December to April and consists of small size grades while the ocean fishery has no seasonal restrictions and lands medium to large grades. The ocean landings are typically strongest in autumn and winter, with peak catches earlier on the central coast than in the northern coast because the king prawns move north along the coast on a spawning migration.

The king and school prawn landings, particularly those for school prawns are subject to weather and climatic factors and can vary considerably from one part of the coast to another and from year to year. Heavy rainfall and flooding usually brings about an initial local increase in landings and a price decline and a more widespread positive influence on the subsequent season's catches.

About half of the NSW king and school prawn catch goes to the Sydney Fish Market in the fresh cooked or green state, with a trend to increased sales of green; small school prawns are commonly sold locally for bait. The other half of the catch is sold locally or to wholesalers intrastate or interstate. Sydney wholesalers also buy in fresh eastern king prawns from southern Queensland to help meet the demand for this popular species.

Table 5. Sydney Fish Market king prawn sales statistics

	1999/2000		2000/01		2001/02*	
	Tonnes	\$/kg	Tonnes	\$/kg	Tonnes	\$/kg
<i>Cooked medium king</i>	221.3	18.70	273.1	19.52	220	19.86
<i>Large medium kings</i>	156.2	22.71	173.7	24.28	182	23.49
<i>All king categories</i>	497	19.92	560	20.97	499	21.11

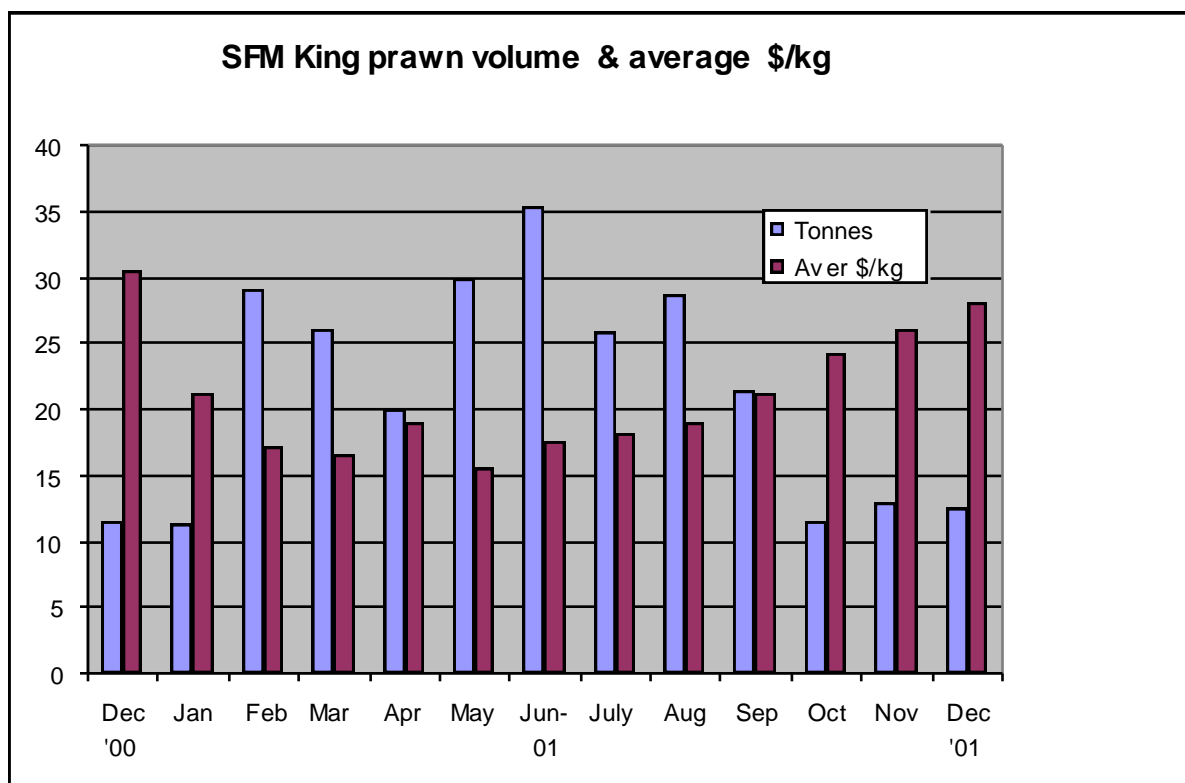
*provisional

Figure 1 on the next page shows the king prawn volume and average price for the month in calendar year 2001. This represents a good picture of the seasonal landings and prices because the SFM sells about half of the NSW harvest each year.

King prawn prices are related to size and abundance with the large category averaging a higher price than the medium, and prices usually inversely related to supply. Prices at

the Sydney Fish Market auction are influenced by many factors and so some remarkably high or low prices are not unusual.

Figure 1. Sydney Fish Market cooked medium king prawns sales data



The cooked medium king prawn is probably the benchmark against which farmed tiger prawns—and other farmed species—are judged in Sydney, in relation to appearance, taste and price. Thus the “strange” colour of uncooked black tigers and the pale appearance of a cooked banana prawn has impeded the market acceptance of these products in NSW. Unlike Queensland and the other states a cooked brown (ie sea) tiger is not well known although the raw brown tiger is well regarded by Asian fishmongers and consumers who are more familiar with this tiger than most of the old time Sydney residents.

Victoria

The prawn fisheries in Victoria are still very small with annual catches less than 200 tonnes (Table 1) despite rapid growth in the past decade. The catch of eastern king and school prawns are mostly sold in Victoria and southern NSW. Occasionally, when an attractive market opportunity arises or when landings exceed local demand the surplus is forwarded to the Sydney Fish Market.

Victoria has traditionally relied heavily on king prawns, mostly frozen but some fresh, from the South Australian fisheries for its supply. So the farmed black tiger and banana prawns have faced indifference or market resistance from consumers and fishmongers familiar with the red colour of the southern/blue leg king prawn.

3.2 Australian Aquaculture Production

Prawns are currently being farmed in the Northern Territory, Queensland and NSW and farms are being planned for Western Australia. A company attempting to grow kuruma prawns indoors in Victoria recently went into voluntary administration.

Prawn aquaculture has grown relatively rapidly in the past decade and there are some 36 operating farms with an aggregate output of all species exceeding 2660 tonnes in 2000/2001 according to the ABARE 2001 annual report. That provisional figure is slightly less than the total derived from more recent figures from the state governments.

Table 6 below summarises the performance of the industry over the past 4 years according to the statistics compiled by QDPI and NSW Fisheries.

	1997/98	1998/99	1999/00	2000/01
<i>Qld</i>	1554 \$14.88	1702 \$14.56	2301 \$15.23	2372 \$15.72
<i>NSW</i>	348 \$14.68	462 \$14.78	403 \$15.04	261 (excl. 33 tonnes of banana) \$16.98
<i>Total tonnes</i>	1902	2164	2704	2666 with NSW banana
<i>Sydney Fish Market Auction. Black tigers</i>	54 \$15.08	87 14.29	125 15.78	135 15.80

Data has not been available on banana prawn production in the past because of the small number of farms engaged in this activity in the past and so the changes in tiger prawn industry in recent years are not clear. Table 6 however clearly shows a modest increase in average farm gate price from NSW and Queensland production as well as the SFM auction average despite substantial increases in aggregate output and in the SFM auction volumes.

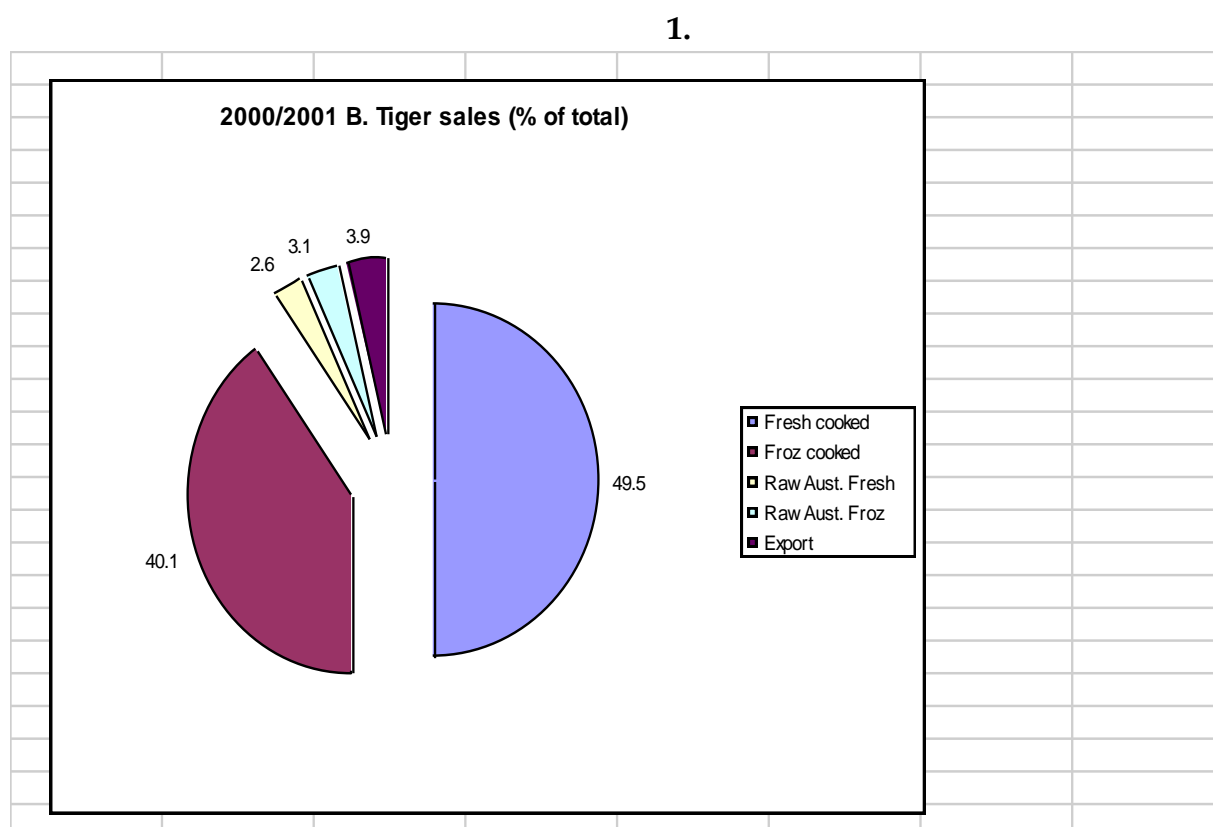
From our survey on 2000/01 production from 29 farms only in Qld, NT and NSW, production totalled 2629 tonnes of black tiger and bananas alone. Of this 2629 tonnes, six farms reported a total of 793 tonnes of banana while the total tiger production from 27 farms was 1836 tonnes. The majority of this production is in the medium and medium-large size category of prawns.

The tiger production was directed to the domestic market which accounted for 94% of sales. Cooked prawns from all farms accounted for 90% of total tiger sales and raw or

live prawns from just a third of the farms accounted for 10% of total production. The disposition of all products in 2000/01 is summarised in the pie chart on the next page.

The disposition of farmed banana prawns cannot be described without disclosing confidential information because the market was dominated by two companies. What can be reported here is that most of the companies growing banana prawns in 2000 /01 have discontinued with bananas for now and focus on tigers.

Figure 2 Disposition of black tiger prawns from 2000/20001 production from 29 farms



3.2.1 Production Forecasts

Australian production is likely to increase on almost all existing farms and according to the farmers' forecasts aggregate output of tiger and banana in 2001-2 will exceed 3000 tonnes, and then exceed 6300 tonnes in five years.

In addition, several large farms are planned for opening in Western Australia and new farms are proposed for Queensland and Northern Territory which could add another few thousand tonnes to this industry forecast. In all production may exceed 10000 tonnes per annum if all goes as planned by current and prospective farmers.

Our experience in similar research with other aquaculture sectors suggests that these forecasts are unlikely to be reached. We believe that black tiger prawn production from existing farms will just double to about 3700 tonnes in 2006/7.

It is difficult to guess at output from new farms but again history suggests that production will be far less than the proponents plan for. Nonetheless it appears that there will be about 5000 tonnes or more of Australian tiger prawns for sale in 2006/7 if we add 1300 tonnes for new entrants to our forecast.

The output of banana prawns is too difficult for us to forecast with any confidence given that most farms have reverted to tiger prawns for now at least and some new farms have yet to decide on which species to focus on.

3.2.2 Distribution Channels of Australian Produce

Four distribution and marketing practices were reported by farmers interviewed:

1. Farm sales to seafood wholesalers, retailers and processors
2. Consignment to Sydney Fish Market
3. Sale via SFM Live
4. Farm sales to supermarket chains and seafood wholesalers via agent.

Many farmers use a combination of these marketing channels, especially a combination of one and two.

Other channels reported were direct sales to retail stores, fishermen's cooperatives, food service-hotel and farm gate sales; each was reported by one farm only and represented but a minority of the farm's sales.

Several farms reported small volumes of export sales of tiger or banana prawns.

Farm sales to wholesalers, retailers and processors

A third of the respondents said that they sell most of their output to wholesalers in Brisbane, Sydney, Canberra, Melbourne or as far as Tasmania with farmers arranging the transport and selling on a pre-agreed Free in Store (FIS basis). This channel accounted for more than half of the tiger prawn production of 2000/01. Farm owners/managers are generally responsible for marketing but several have staff employed full or part time to undertake the marketing function.

Sydney is the most common and most important target market for almost all, and the fish merchants and the Sydney Fish Market combined receive about half of the product sold away from the production area, even though NSW only accounts for a third of the nation's population.

Air transport to Sydney was the common route for most farmers until the demise of Ansett transport but the loss of this transport option has swung the balance to road transport via a refrigerated transport route along the east coast.

Several of the large farms have their own marketing personnel who have been able to offer varying levels of marketing support to wholesale, retail and other customers and gain a premium price for their branded product. The marketing staff have also sought out new buyers and thereby directed an increasing proportion of the product away from NSW retail marketing outlets and more to food service-hotels and other geographical areas. In short they have reduced the industry's reliance on the traditional Sydney centred fishmonger marketing chain.

The product received by wholesalers is mostly sold to retail fishmongers with a small part, predominantly larger sizes than the 20/30 grade, sold to food service organisations, restaurants and hotels. Two farms relied on outside processors to cook and sell their prawns; these too were also then distributed to fishmongers.

The notable feature of this distribution channel is that it is largely price driven in response to consumer demand for value for money. Seafood wholesalers and retailers commonly operate on a Cost Plus(profit margin) basis and seek to buy — and sell— as cheaply as they can to maximise turnover and hence profit.

Sydney Fish Market

The Sydney Fish Market (SFM) is commonly used as the first method to selling prawns by new farmers because it perceived as an easy, transparent and safe approach. Almost all farms have used this avenue in the beginning but then widen their distribution channels to wholesalers and others as their production volume increases and as they gain a greater understanding of the prawn market.

About a quarter of the farms continue to use the SFM as a marketing channel for prawns at some time and several repeatedly use it as their principal marketing channel. The SFM has received about 7% of Australian farmed tiger prawn production in the past few years according to our farmers survey and SFM statistics.

The product at the SFM is mostly purchased by retail fishmongers at auction although at Christmas time a few of these buyers make use of the new SFM Live electronic purchasing system as well as the auction. About 20 of the buyers at the SFM are wholesalers and they too buy at the auction or the SFM Live when attractive buying opportunities present themselves.

SFM Live

This electronic selling and buying system which was launched in February 2001 has attracted several prawn farmers who sold part of their product in the past year in Sydney via this system; total sales were estimated at about than 20 tonnes for calendar 2001. The forward selling facility and the lower commission charged for this (versus the traditional auction sales) were cited by users as the attraction of this selling option.

Agent Sales

Farmers offer product to agents in the eastern states who arrange sales to wholesalers and retailers, including the supermarkets, on an agreed commission basis. The farm orders the transport and consigns direct to the buyer. This option is used by a third of the farms, who mostly utilise the one agent.

The majority of the prawns moving along this channel also end up in retail stores, particularly the supermarket sector as frozen product, with a minor volume of the larger sizes going to food service, restaurants and hotels.

4. IMPORTED FARMED PRAWNS

Australia has always had a strong reliance on imported processed prawn meat and cutlets with recent annual imports of all chilled or frozen prawn products exceeding 10000 tonnes. Thailand is the major supplier of whole prawns to Australia and farmed cooked whole black tiger prawns have been imported from Thailand in significant volumes for some ten years now with annual imports estimated at about 3000 tonnes in the last couple of years (1999-2001).

The other 7000 tonnes of imports includes about five hundred tonnes of whole green prawns with the reminder made up mostly of a wide variety of processed meat and tails.

The whole cooked prawns are imported by about ten companies around south eastern Australia, ranging from large retail companies to specialist seafood importers. These companies in turn sell the product to seafood wholesalers, retail fishmongers and supermarket chains.

The vast majority of imports land in Australia in our spring so that stock is in cold storage with sufficient time for the Christmas upsurge in demand. We believe that about half of the imports are retailed in supermarkets while most of the remaining volume is sold in fishmongers and fish and chips outlets or consumed in lower priced food service outlets.

Imported cooked black tigers were outselling Australian cooked wild prawns in Sydney supermarkets in 1999 (Ruello & Associates) and they are retailed in all states now, but as with the domestic farmed prawn, the imported product is more common in Sydney/NSW than other cities or states. The imports have however opened up distribution of farmed whole prawns in Western Australia because the Australian product has yet to make any inroads there.

Imports of whole cooked prawns from other countries are insignificant today although five years ago cooked farmed whole prawns from New Caledonia were common in Sydney too.

Table 7. Imports (tonnes) of fresh, chilled and frozen prawn products*

Country	1998/99	1999/00	2000/01
Thailand	5162	5769	3859
India	956	873	1652
Vietnam	1059	1081	1256
New Caledonia	432	306	186

Total All Countries	9632	10423	10290
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*Source ABARE Fisheries Statistics 2001

The decline in aggregate imports from Thailand evident in Table 7 above are believed to be a reflection of a decline in imports of prawn meat and cutlets and not the whole cooked prawn category, according to industry sources.

As indicated earlier the price of imports is dependent on exchange rate between A\$ and the US\$ and the aggregate overseas demand for prawns or shrimp. The USA and Japan are the main buyers of exports, farmed and wild, from many countries (including Australia) and so the price of imports in Australia is determined mostly by international factors.

Nevertheless they have sold at about \$1-3 per kilogram cheaper than equivalent sized Australian prawns at the wholesale price level over the past few years.

Despite price increases in the past year or two the imported farmed tiger prawn has a strong toe hold in Australia and sales continue to increase steadily each year according to industry sources.

Some farmers and fishmongers have a perception that imported prawns are mostly of poor quality but this is just as erroneous as the belief that all Australian producers have excellent product. Thai farmers and processors have improved quality each year as have Australian companies and so the competition between the two now revolves more around price and marketing services than quality.

Nevertheless this perception and the import of some poor quality prawns in the past has kept these prawns as "third choice" (after fresh Australian and frozen Australian for most retail fishmongers to be used as back up stock at times of supply shortages/peak demand.

For the seafood wholesalers and supermarkets in Australia, Thailand offers the opportunity to source large volumes of prawns to enable large scale distribution, especially for Christmas business.

The supermarkets groups need to pre buy high volumes with some assurance of delivery and consistent quality to schedule state wide promotions and advertising. They have expressed a desire to increase their purchase of Australian farmed prawns and reduce their reliance on imports, so as Australian prawn farms increase their size and their output becomes more assured their share of the supermarket trade should continue to grow from its current minority or secondary role.

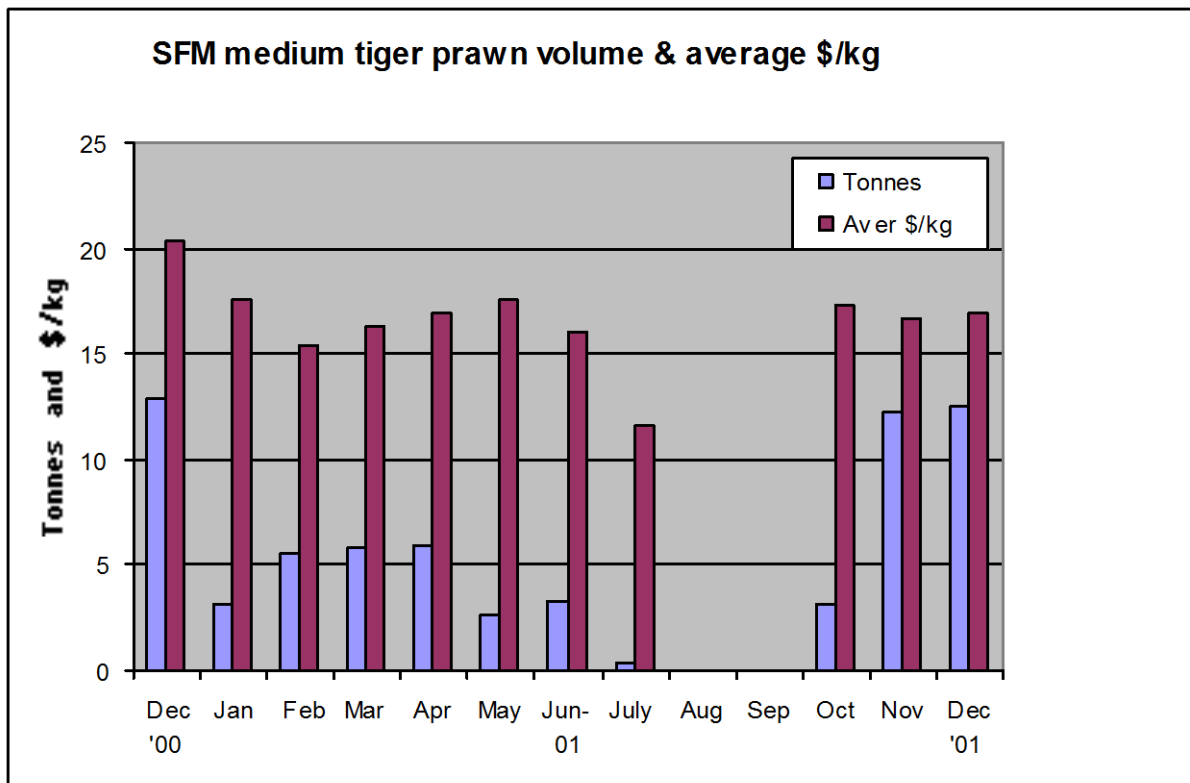
4.1 Comparative Prices Of Imported And Local Product.

The typical picture for the industry's "seasonal price" of fresh cooked farmed tiger prawns is rising prices early in the year falling to a low around April -May, depending on weather and the timing of Easter. From July prices typically rise again to a peak around September, falling slightly in late spring just prior to a sharp rise and maximum the week before Christmas.

The following figure shows the monthly supply and prices at the Sydney Fish Market auction in 2001. As indicated earlier the Sydney Fish Market receives only a small part of the annual farmed tiger harvest, the majority is sold by wholesalers in Sydney and elsewhere and auction prices do not fluctuate as much as the king prawn prices do, despite large changes in supply of farmed tiger to the SFM.

As discussed in the following section there are many factors affecting prices so one needs to review this graph and the wholesalers' price data for this winter and last summer, on the following pages, with caution.

Figure 3. SFM auction sales of medium size grade (ie 20/30 count) farmed black tiger prawns for 2001.



King prawn prices from the Sydney Fish Market (SFM) pictured earlier are more representative of the industry average for that species because the SFM sells about half of the NSW harvest each year, almost all of which is sold in the fresh form.

The notable point for prawn farmers is that cooked medium king prawn prices at the Sydney Fish Market are noticeably higher than those for medium cooked black tigers (20/30 count) most months because the supply of kings is usually so small : less than 300 tonnes a year (half of the annual landings of around 600 tonnes) while some 1750 tonnes of Australian black tiger were sold in Australia in 2000/01.

A sample of wholesaler's prices (Selling price of Sydney wholesaling companies to retail fishmongers) is presented here to provide a guide to comparable prices of other species/products too for this month and last summer. These prices are about 10% higher than that the price the fisher or farmer received for product deliver to Sydney.

These wholesale prices demonstrate the stronger prices of fresh over frozen and Australian over imported products and the variability in prices according to product and time.

Table 8 Sydney prices of Australian and imported prawns at wholesale level, a week before Christmas 2001 and SFM December 2001 statistics

Cooked prawns

<i>Species/size grade</i>	<i>Fresh</i>	<i>Frozen</i>
Aust. Black tiger 10/20	\$21.00-23.50/kg	\$20.50
Aust. Black tiger 20/30	18.00-20.50	19.00
Aust. Banana 20/30	19.50	
Imported Black Tigers 15/25 Imported Black Tigers 20/30		\$18.80-19.50/kg \$16.50-17.50
December 2001 SFM prices Fresh cooked black tiger medium (20/30count) were \$16.90 per kilogram average \$14.09/kg minimum \$24.74 maximum for a total of 12.5 tonnes sold		

Table 9 Sydney prices of Australian and imported prawns at wholesale level first week of July 2002

<i>Cooked</i>		<i>Uncooked</i>	
<i>Product</i>	<i>Price \$/kg</i>	<i>Product</i>	<i>Price \$/kg</i>
Fresh farmed prawns			
Banana 10/20	17.50		
Banana 20/25	16.50		
B tiger 10/20	18.00		
B tiger 20/30	16.50		
Frozen farmed Australian			
B tiger 10/20	18.50		
B tiger 20/30	17.50		
Frozen imported			
B tigers 15/25	17.00		
Wild catch			
Red spot king U15	22.00	Red spot king 10/20	17.50
E. kings 10/15	23.00	Red spot king 20/30	13.50
SA king 16/20	17.00	WA king 21/30	15.00
SA king 21/30	16.00	SA king 16/20	16.00
WA brown tiger 21/30	17.00	Brown tiger 21/30	13.50
		Qld. Banana 20/30	10.80

5. SEASONAL OUTPUT AND BEST SELLING TIMES

The best selling time is that which allows each farm to maximise its final profit from its total annual harvest. This will depend on the farms productivity and the supply and demand situation for the particular product (Species/size grade/processing and preservation method) and each farm's financial and other resources.

Farms in southern Queensland and NSW only have the capability of producing one crop per year and for most of these businesses this necessitates freezing part of the harvest at this time and incurring the financial costs and risks of having prawns in cold storage for at least several months (quality deterioration; total loss from power failure or other mishap etc).

The net returns and profit will vary considerably from farm to farm as a result of their varying expertise in prawn farming, processing, financial management and risk management. Costs can be lowered and profits enhanced by farms buying resources collectively through the association eg cheaper product and public liability insurance can be negotiated by the association than most farmers.

The negative impact of the September 11 attacks on world tourism, should serve as a reminder of the risk entailed in holding frozen seafood for sale at a later date on the expectation of greater profit than that available from the sale of that seafood fresh.

All other things being equal higher prices are attainable when demand for the product exceeds supply, but there are many factors influencing supply and demand over the short and long term. Thus there is no simple single answer as to when is THE BEST time to sell, because all of the factors discussed below should be carefully considered by each farmer to decide when to sell to maximise profits.

Various factors are detailed here one after another but it should be noted that many are inter-related and may act together synergistically or in opposite directions.

Anyone wishing to simply take account of the availability of competing wild prawns can review figure 4 which summarises the seasonal harvest of wild prawns.

Supply factors for farmed prawns

Quality of post larvae affects growth and survival

Warm weather positively influences growth rates and volume produced by farmers, if it does not get too hot, in which case it may prove lethal and counter-productive.

Disease or a "pond crash" can badly reduce survival and output.

Cyclonic weather and /or flooding can disrupt harvest and supply in the short term

Figure 4. Seasonal harvest from wild catch and Australian farms.

The ticked area in this figure is the time of year when fresh prawns, farmed or wild, are least abundant. The king prawns harvested at this time of year from the NPF or WA are frozen at sea and the landings from the West Coast of South Australia are of low volume and do not come to the east coast in fresh form.

Fishery	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
NPF Frozen only				■	■				■	■	■	■
S..Qld-NSW ocean, fresh		■	■	■	■	■	■					
S.Qld NSW estuary, fresh	■	■	■	■	■	■					■	■
SA Frozen & fresh			■	■	■	■	■	■	■	■	■	■
WA Frozen only			■	■	■	■	■	■	■	■	■	
Farmed	■	■	■	■	■	■	■	✓	✓	✓	✓	■

Stocking time and stocking densities affect the timing and size of prawns harvested

The location of each individual farm greatly affects the volume and timing of output

Most farms have fresh product for sale from March to May, some have product for sale November to January and in June –July but few have fresh product from August –to October.

The supply of wild prawns and prawns farmed overseas are demand factors and are discussed below.

Factors driving or dampening demand

Demand drivers

Low landed volumes and high prices of competitive wild prawn species/products especially fresh east coast prawns.

High priced imports due to heavy overseas demand (USA, EU or Japan) or weak A\$ reduces demand for these competitive products.

Good/mild weather encourages outdoor eating at home or dining out;this is important at Easter .

Positive publicity, promotion or advertised specials can greatly increase demand.

Christmas Week is peak demand, followed by Easter, New Year and other public holiday in the warm half of the year. Christmas week demand is about 10 times average demand according to retail fishmongers while Easter demand is about five times average and New Year double average.

Public holiday demand can boost sales by about 20-50 % on the average weekly figures.

Demand dampeners

Unusually cold or stormy weather keeps people indoors and dampens demand

Low volumes/high price of imported farmed prawns helps strengthen demand for Australian product

High volumes and low prices of competitive wild prawn species/products especially east coast prawns.

Low prices of competitive seafoods such as Atlantic salmon (2001 & 2) Western Australian lobster (eg Xmas 2000)

Promotion of competitive products such as Atlantic salmon and lobster at Xmas.

6. TRADE AND CONSUMER PACKAGING

The common packaging material for prawns is the styrene case for the distribution of fresh prawns and a cardboard pack for frozen product. Retail (consumer) packs are not produced by farms but are sometimes produced on behalf of farmers by outside firms; they are more common with imports. Several Australian seafood companies are producing retail packs both here and overseas but these are not yet commonplace.

The Australian trade packaging is generally very good, the styrene cases are well regarded and deliver prawns with adequate temperature control. Seafarm is notable in that it packs its styrene case inside an attractive cardboard case which clearly differentiates its product.

The only unsatisfactory finding from our research is that a few farms have insufficient information on the styrene cases to meet the food standards code requirements. Most companies however normally provide all the necessary information as well as some artwork on their self adhesive label.

Date marking is also omitted by some farms and this makes it difficult for fish merchants who wish to identify and rotate stock so that the oldest stock is sold first and that care is taken not to sell spoiled (old) product.

The 16 kg styrene case is the most common size used by farmers but a growing number of farmers are using or offering the smaller 10 kg styrene case. Retailers mostly were not concerned if the product was in 10 or 16 kg packs but one major wholesaler reported that he thought sales would improve if the 10 kg pack alone were offered.

Several retailers probed about differences between 10 and 16 kilogram packs commented that they were obviously lighter and more able to be handled by women but that they were not essential. Another retailer commented that the 10kg packs delivered better quality and that he was prepared to pay a little more for this pack if necessary. One also noted that the 10kg cases would be a greater disposal problem than the larger ones. Thus it would appear that there is scope for farmers to service customers according to their particular requirements.

The cardboard cartons the industry uses are generally very well regarded in regard to strength and appearance but there are still some farms using staples to seal cartons. This practice is outdated and can be a problem with regard to Occupational Health and Safety and HACCP programs.

The 10 kg carton is the most common size but a few farms still have old stock of 15 kg cartons which they are running out and there is still the occasional use of top loading trawler cartons. Five kilogram cartons are becoming the norm for trade distribution and

several companies are using smaller cartons for trade and consumer use; farmers using the 15 kg cartons are thus falling behind the market trend. Most of these cartons are satisfactory regarding appearance and strength and several use the APFA logo or other artwork to add to the appearance of the packs.

With frozen prawns too Seafarm has led the way by investing in professionally designed attractive packs to differentiate its frozen products from one category to another (cooked and green) and from competitive products.

Consumer or small trade packs on offer in Australia are similar to those used by the wild fisheries but remain uncommon as the farming industry is focussed on trade packing and distribution.

Several companies are examining the costs and benefits of modified atmosphere packaging (MAP) to extend the shelf life but there is no information publicly available as yet regarding prawns in Australia.

The notable point about MAP packing is that it entails considerable R & D to ensure that the products, packaging and factory plant and personnel are maintained in a microbiologically clean state. In other words it would require a substantial investment in R & D and quality assurance programs before it could be used.

Paradoxically, fresh cooked farmed prawns have a remarkably long shelf life in normal packaging if temperature control is maintained in the distribution chain. Sufficient shelf life for distribution to all capital cities by air for almost all Queensland or NSW farms.

Imported Packs

Imported prawn trade packs are, like Australian ones, variable in appearance and labelling. Some brands have invested heavily in professionally designed cartons while other companies make do with a cheaper, lighter “no frills” version with minimal information and artwork.

The overseas cartons are sometimes superior in two regards:

1. Instructions in several languages
2. Bar coding, for electronic identification and stock control internationally.

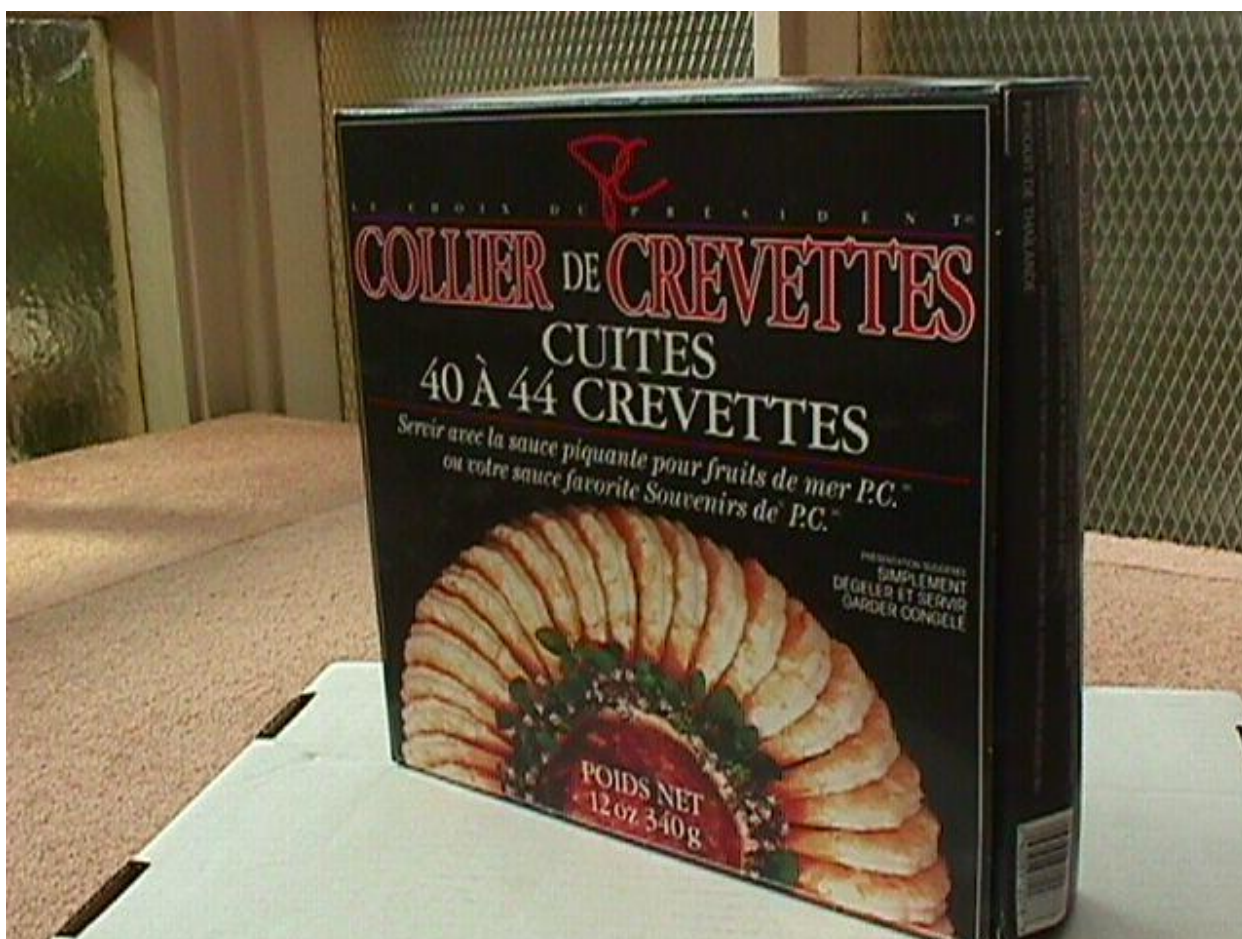
Overseas producers however are notably more advanced with consumer packs for highly processed products such as the Shrimp Ring where peeled cooked tails are

neatly arranged on a tailor made plastic stand and packed inside a sturdy small cardboard pack with attractive artwork.

See figure 5 next page. This shows the Shrimp Ring from a Thai factory, with labelling in English on one face and French on the other. The pack has a bar code and storage instructions.

One Australian company has also invested in professional designed packaging with retail packs of cooked black tiger shrimp from Thailand. Seafood Australia magazine issue 38 last year carried a full page coloured advertisement showing two of the De Costi brand shrimp products.

Figure 5. Thai pack of Shrimp Ring for export markets



7. CONSUMER AND TRADE PERCEPTIONS

7.1 Consumer perceptions

It was evident from discussion with visitors at Aquafood festival at the Sydney Fish Market with the World Aquaculture Society's meeting in Sydney in 1999 that consumers who try fresh cooked farmed tiger prawns are overwhelmingly impressed with the product's taste and appearance. It was almost always enjoyed and Gold Coast Marine Hatchery (GCMH) and Tru Blu prawn farms were able to demonstrate to thousands of Sydney consumers that farmed prawns were as good as wild prawns, and arguably better.

It was also very obvious that many of these people did not even understand what prawn farming or aquaculture was. The word aquaculture was foreign to many. So to answer the question commonly asked by farmers, *we believe the word farmed is better understood in this country and hence a better label than aquacultured*; it is also shorter and easier to spell and pronounce.

Consumer awareness of farmed prawns has grown in Sydney and elsewhere since 1999 more as a result of the products' growing presence in stores and the occasional newspaper or other media exposure as a price special by the two major supermarket chains rather than active promotion by farmers.

Although cooked farmed prawns are very common in Sydney retail outlets today the majority of people are not aware that they are buying farmed prawns because most retailers do not have a ticket which explicitly identifies the product as farmed (or Australian)..

Outside Sydney consumer awareness falls markedly and it is evident from discussion with fish merchants in Perth that farmed prawns are hardly known in Western Australia because the only farmed prawns visible there are imported frozen products sold in supermarkets. This situation will change once farms are operative in WA and they receive media exposure locally and elsewhere. In short consumer awareness of farmed prawns around Australia is highly variable.

The reception of farmed prawns by consumers varies by State and according to the region within the State. Consumers generally are looking for a prawn like the one they have grown up with and people in Sydney and Brisbane are familiar with king prawns of all sizes and Brisbane and northern cities commonly have sea tigers and banana prawns on sale, cooked and green. The black tiger prawn remains strange looking, to all Australians, when uncooked because it has yet not been marketed in volume .

Farmed banana prawns are similar in appearance to wild banana prawns but in the past few years there has been an abundance of cheaper wild banana prawns which has made market penetration difficult and hence many prawn farmers have discontinued growing banana prawns. Seafarms has worked hard to differentiate its Crystal Bay prawns from other prawns —wild or farmed—and continues to widen its market penetration for both cooked and raw prawns.

This differentiation may however be “too effective” and prove counterproductive for the industry because many fishmongers interviewed did not recognise them as banana prawns nor as farmed in some instances. The majority of interviewees had to be prompted about banana/Crystal Bay prawns when asked if they purchased farmed prawns, most just replied that they sold tigers even if they currently or formerly stocked Crystal Bay banana prawns. This uncertainty on their identity and provenance is being passed onto consumers who inquire as to the nature and origins of the prawns.

To sum up, consumer awareness and liking for cooked farmed prawns, principally black tigers is increasing but uncooked farmed prawns are still not widely used and offer a challenge to the industry. The consumers’ perception of farmed banana prawns is uncertain because there is almost no identification of the species and the farm origin, and retailers generally had too little experience with this species to comment on.

Farmed Versus Wild

Consumer focus group research and a large scale consumer survey in Sydney in 1999 and Perth in 2000 (Ruello & Associates 1999, 2000) clearly showed that consumers were interested in where their food came from. Nevertheless three in four consumers were not concerned whether their seafood came from the wild or was farmed. In other words Australian consumers overwhelmingly are comfortable with the idea of eating farmed seafood.

Some consumers did speculate about overfishing at sea or what the farmed animals were fed and if chemicals or drugs were used. So Australian farmers need to ensure that they follow best practices and truly remain “clean and green” to maintain their reputation and avoid the marketing problems reported from overseas in the past year.

Our recent discussion with retailers and wholesalers on consumer feedback on prawns indicates that consumers who inquire about farmed prawns are not anti farmed prawns but are uncertain as to their taste compared to the wild prawn they have consumed traditionally. And some customers express concerns about the growing practices on farms or if the wild fisheries are being overfished.

According to retail fishmongers once consumers are given a taste most are happy with the product, although a small minority stick with the wild prawn and avoid buying farmed ones. This free tasting was commonly cited as the key to success with getting consumers to buy farmed prawns: "let them taste it". Retailers argued that farmers must be prepared to provide free tastings if they wanted to penetrate the market with "new" prawns.

The only area of notable resistance is in coastal towns where prawn fishing has long been practiced and here there is an element of sticking with the local industry rather than the farmed product not being satisfactory; this is fueled in some areas by negative media exposure of prawn farming in the district.

The 1999/2000 Sydney and Perth research and recent trade interviews clearly point out that there is an overwhelming preference for fresh over frozen seafood and for Australian versus imports. It should be added that this preference for Australian is commonly overcome if retail price differences are significant (say 10% or \$2 or more per kilo for medium sized prawns). The influence of price and perceived value for money in purchasing decisions should not be overlooked.

7.2 Trade Attitudes And Perceptions

Trade attitudes however are somewhat different to the consumers and some fish merchants throughout Australia seem to be more conservative than their customers. As with consumers, trade perception and attitudes to farmed prawns are strongest in Sydney and weaker elsewhere.

In Sydney all of the 20 retail fishmongers interviewed regularly sell cooked farmed tiger prawns and raw wild prawns, but only 10% sell raw farmed prawns.

Cooked banana prawns were currently stocked by a minority of interviewees. What is evident from this study is that trade attitudes to banana prawns, or more precisely Crystal Bay banana prawns, is polarised: current sellers find them satisfactory, others have mostly tried them but report "they don't sell here ".It should be noted that this study was undertaken while fresh tiger prawns and king prawns were readily available This demonstrates the need for the farming industry to be prepared for long term investment in introducing new products to the market.

The pale colour [of boiled bananas] vis a vis cooked kings and tigers was cited as the main weakness in Sydney and competition from cheaper wild banana prawns the notable observation elsewhere.

Almost all fish merchants in Sydney are supportive of farmed prawns and for the majority (65% of interviewees) cooked farmed tiger prawns outsell medium wild king prawns but there are a small number of fish merchants in Queensland who will not sell farmed prawns simply because they “want to stick with the wild ones”. Only 10% of respondents reported that medium king prawn sales outweighed farmed prawns.

Attitudes are also different in regard to imported prawns. Importers and wholesalers who are familiar with prawn farms and prawn processing here and overseas are more favourably disposed to imported product than the retail fishmonger who has little understanding of farming or processing.

Retail fishmongers commonly believe the imported products to be inferior to the Australian product in safety and quality and mostly use the imports only as back up stock, at Christmas or other times when local supply becomes too expensive for many of their customers.

Retail business such as fish and chips shops with small turnover of prawns however commonly make use of imported prawns all year because of their year round availability in a convenient 5kg case and their lower price.

Importers, wholesalers and supermarket buyers buy products only from factories with quality management systems and see imports as safe reliable products and as an essential part of their business to serve a multitude of customers with varying budgets.

The widespread view of fish wholesalers and retailers and the supermarket operators is that aquaculture provides seafood products that are more reliably available and of more uniform quality than the wild equivalent products. Furthermore the more stable price of farmed prawns is better for them directly and is more satisfying to consumers than the large variation in wild prawn prices. To quote one satisfied Sydney fishmonger “They are like Craven A” [cigarettes], they’re consistent”[*they never vary*, was the brand’s advertising claim].

8. PRAWN PROMOTION AND BRANDING

Promotion has largely been ignored by the Australian prawn farming industry because prawns were considered to be a common seafood product and therefore easily sold by farmers. This was somewhat true in the early 1990's but it is now evident to farmers that selling alone is not effective marketing.

Tru Blu Prawn Farm's promotional work with black tigers in the early 1990's, the Gold Coast Marine Hatchery's and Tru Blu's participation in Aquafood 1999 and Seafarm's efforts with the Crystal Bay banana prawn are laudable individual efforts but they have had no underpinning generic promotion by the industry itself. These same three companies have also been in the forefront for overseas trade promotion.

Woolworths and Coles supermarkets also deserve mention for their expenditure on advertising of farmed prawns, local and imported, in their shopping catalogues and newspaper specials.

The farming industry as a group has only invested in the distribution of a colour poster on Australian farm prawns, some ten years ago. This investment in generic promotion pales besides that of other industries, including the investment by the Australian salmon farmers.

Prawn farmers have mostly been content to rely on free publicity in the media to raise community awareness of farmed prawns although there has often been formal and informal talk of doing something about "marketing and promotion." Most APFA members have failed to take advantage of the promotional opportunities provided by the aquaculture competition at the Sydney Royal Agriculture Show prior to Easter.

The commissioning of this research paper is the first investment in market promotion by the Association in almost a decade.

Branding is more than just putting a company label or Association logo on a carton of prawns. A good brand is built up on a promise of consistent product features and reliable service; a successful brand has explicit guarantees or implied warranty on the features, benefits and service. A good brand has intangibles such as trust, which is valued by consumers and thereby adds to the company's intangible assets.

A good brand manager protects the company's brand and ensures that the product is well handled and sold by customers so that consumers do not lose trust in the product or the brand.

Almost all Australian farms put a label on their boxes of prawns and many labels and a handful of brand names are well known to many seafood merchants. But even those

companies with a distinctive logo and label commonly provide little in the way of market support service to their customers and even less to the consumers of their products.

Seafarm deserves special mention here because it has invested in market development via various promotional exercises and tools, regular advertising and distinctive packaging. This investment has not gone unnoticed and many buyers have been prepared to pay a premium for the company's marketing support and fresh prawn availability. The Seafarm brand has thereby built up trust with many fish merchants and presumably consumers too, and therefore has a financial value to the company.

Our interviews with fish merchants indicate that there is nevertheless room for improvement in the quality of prawns and delivery service provided by all companies if any wishes to stake a claim for THE leading brand. The common opinion amongst trade users is that the quality of Australian product and service has improved over the years but still requires more effort. The imported products are perceived by wholesalers as being marginally more reliable, particularly in regard to availability and delivery.

Frozen prawns which are thawed and sold as "fresh" by retailers is a branding issue. As noted earlier most prawns are not clearly identified as to their provenance but if individual companies, groups of farmers or the APFA wish to promote the Australian fresh prawns they have to address this matter in conjunction with their customers.

The majority of retailers and consumers who are knowingly using/consuming fresh cooked farmed black tiger prawns acknowledge that they are as good as wild prawns, and that most have a more uniform good quality than is common in wild king prawns.

However many consumers also report that farmed prawns are not as good as wild prawns and this too is true because thawed out frozen farmed prawns, sold as fresh prawns after more than three months of frozen storage, would not be as tasty as fresh prawns. Some would be totally unsatisfactory because not all retailers can adequately handle frozen- thawed prawns.

Thawed out frozen prawn can be very good eating but they should not be labelled as fresh prawns. The farmers who value their brand reputation and ignore the misleading labels are confusing their consumers with the variable taste of their product (ie fresh and thawed) and sacrifice credibility and brand value for short term gains in market distribution.

The concept of farmers working together to establish a joint brand name and marketing their product under one brand name is a fine one but farmers interested in doing so should assure themselves that they all share the same vision of what the brand will offer customers and consumers.

These farmers must also be prepared to sacrifice some income for a few years while they invest in building up the brand's specifications and reputation; equally important they must be prepared to acknowledge that some of their product will not meet the agreed specification at some time and will need to be sold at a reduced price.

The greatest strength of the Australian farmed prawns is that fresh safe prawns can be grown here all year round now. This freshness and local provenance are key features that need to be protected and proudly promoted via personal selling, free publicity, public relations exercises and paid advertising. There is no simple promotional exercise that will magically raise the fortunes of Australian prawn farmers, but there are a number of strategies, including promotion, recommended in Section 10 to help do so.

9. SWOT Analysis

The following analysis of the strengths, weaknesses, opportunities and threats facing the Australian prawn farming industry is the result of the input of farmers and the consultant's research.

Strengths

Australia's clean and green" image. Australian aquaculture's image for safe food

The majority of output is high quality safe prawns

Available to deliver fresh prawns to major populations in 36 hours by road

Colour and taste is mostly good for black tigers

3 out of 4 Australians interviewed in 1999 didn't care about wild vs farmed

Strong R & D support from government and universities; brood stock selection program should be rewarding

Weaknesses

Farmers are mostly production oriented not customer or consumer focused. Little collaboration in marketing or sharing of market and price information Ill informed farmers become price takers selling cheaply.

Limited control of marketing chain and product.

Most farms are small scale with no economy of scale for many and production costs are high.

Quality is still inconsistent, for some farms, usually the newest producers. A few farms have poor understanding of food safety and QA

Much of the catch is cooked and frozen when domestic demand is growing faster for fresh and green. This opens up direct price competition with imports and the switch from fresh to thawed frozen adds to the variability in quality from one meal to the next.

Over reliance on Sydney retail fishmongers, largely ignores the demands of food service/ caterers/restaurants.

Market support, Promotion and communication is mostly non existent until recently
 Much is sold without differentiation from wild and with little species identity
 Australian farmed identification is often not evident in retail display; ticketing typically imprecise.

Brood stock and post larve shortages have been a problem

Confusion and uncertainty around multiple names Tiger .Black Tiger/ Leader/Giant tiger/farmed prawn. Ditto for farmed banana/Banana/Crystal Bay

Thawed frozen quality and misleading labelling : the variable quality after lengthy frozen storage and thawing

Few farms segregate/exclude soft & broken and other "seconds" from a standard pack.

Opportunities

The global liking for prawns, increasing disposable income from a growing population and the limitation on the harvest from wild fisheries augers well for Australian farmers

Widen raw product range, increase sales of
Green prawns, fresh and frozen

Further product development : live monodon & merguensis
More plate ready and ready to eat prawn products for food service and retail.
Retail IQF packs of cooked and green prawns.

Widen distribution of current products to more retail outlets :
Minor supermarket, convenience stores, specialist food outlets
Widen distribution of current products to food service /restaurants

Widen geographical distribution to regional areas;
Adelaide and Perth still a challenge/opportunity for fresh Australian produce

Tourism. Income from prawns and various tourism products; public relations avenue for promoting farmed prawn products and the farming industry.

Expand exports through collaborative marketing, for trade and consumer packs

Niche markets eg organics and ecolabelling

Diversification and additional species; eastern king ?

Expand demand for current products/markets through coordinated generic promotions program

Import replacement: Promote Australian and fresh features and benefits.

Threats

Animal disease from within or outside Australia

Uninformed or misinformed landowners, "greenies", media or others. Overzealous Environmental Officers adding to environmental management costs

Inertia; staying with the status quo.

A major seafood safety scare could depress demand for farmed prawns.

10. GENERAL DISCUSSION AND RECOMMENDATIONS

The Australian prawn farming industry is facing a very large increase in output over the next five years from existing farms and new businesses in northern Australia. It is evident from recent experience that the existing Australian market cannot absorb the extra thousands of tonnes without significant price falls if the industry just continues with the status quo regarding product handling and marketing.

A number of critical issues were identified in Section 9 and these are discussed here for deliberate consideration by the ABFA. These issues should be addressed for developing the domestic as well as export markets although the following discussion focuses on the domestic trade.

New Product And Market Development For Australia And Overseas

New product and market development can be tackled both on an industry wide basis as well as by individual companies; company or brand promotion is compatible with generic promotion so companies should not be hesitant to collaborate in developing new products (eg 1kg premium IQF retail pack) or markets here or particularly overseas.

A number of farms working together can produce a critical mass to successfully serve new markets here and overseas.

Frozen Fresh/ Prawn And Industry Image

Branding is more than just labelling It means delivering consistently on a promise or offer. What is each company or the ABFA offering ? Delicious fresh prawns one week and mislabelled and unpredictable “fresh prawns “ another time ?

The retail sale and labelling of thawed frozen prawns is an issue that the industry should address individually and collectively before it embarks on any generic promotion campaign. This and the other industry weaknesses identified in this report such as the lack of date marking by some farms should be considered by the APFA executive in planning any industry and product promotion.

The individual companies and the ABFA can stay with the status quo on handling/labelling of frozen thawed product or they can develop and adopt a code of practice on freezing, storage, distribution and labelling of frozen and thawed prawns. If farmers choose to stay with the status quo they leave themselves open to the criticism of complicity in misleading consumers and a consequent loss of reputation and business.

Consumer and trade education is important in this regard and the ABFA would need to work with seafood merchants to provide trade education and thereby get their active cooperation in this issue.

Consumer education is also needed to convey the message that IQF prawns bought frozen and thawed at home can be as good as fresh product; this would help open up the market for retail packs of frozen Australian prawns.

Alternate Species : Opportunity And Threat

The economic opportunity offered by farming alternate or “new “ species such as brown tiger and eastern king prawns should also be recognised and evaluated as a threat to the aquaculture industry as it exists today. These species would “cannibalise” some of the market share already gained by black tiger and farmed banana at the expense of wild prawns; needless to say it also will also influence the wild prawn industry.

Active Marketing Should Replace Passive Selling

Farmers need to review their marketing channels and sometimes meet with their customers as well as their agent or wholesaler, because customers are of no value if they do not have the expertise or resources to look after the product satisfactorily; some do not have the skills and knowledge needed to handle frozen prawns satisfactorily.

Some customers can be damaging the business/brand reputation as well as harming the reputation of Australian aquaculture produce generally. Recalcitrant customers may need to be discarded and far more market support should certainly be given to the deserving ones.

Supermarkets are often singled out for unfavourable mention on prawn quality and country of origin labelling by farmers and fishmongers although supermarkets are more likely than fishmongers to have a label indicating thawed product. But farmers should review the performance of all of their customers : wholesale, retail and food service in the light of contemporary consumer expectations and their own obligations in statutory law as well as common law.

Farmers should also review the products they are producing and keep up to date with changing tastes and emerging trends. The retail and food service trades have been experiencing stronger growth for raw prawn products than for the traditional boiled prawn (Ruello & Associates 1996, 1999). In a 1999 survey of 140 supermarkets, fishmongers and fish and chips outlets raw whole prawns represented approximately 40% of the whole prawns sold in Sydney.

This trend to the raw medium and large green prawns has continued and the whole prawn domestic trade today is probably close to 50:50 cooked to raw, so prawn farmers should review their focus on cooked prawns and frozen prawns.

Invest More In Marketing R & D

The APFA and most members individually have invested far too little in marketing research and development and many are selling prawns with little understanding of what their customers and consumers really want. It can be argued that this low investment in marketing research and knowledge has had a negative impact on the farmers' returns.

We believe that farmers should invest more in marketing R & D and not just continue to talk about the need to "do something about marketing". Detailed research on what Australian consumer preferences are, especially vis a vis wild prawns, what they are actually looking for in prawns and what drives sales would be of particular value in deciding on the merits of alternate prawn species for aquaculture.

Encourage and facilitate sharing of supply and market information.

The ABFA should encourage members to share supply and market information more widely and it should consider offering a mentoring service to new entrants to guide them in their first forays into marketing.

Promotion Of Products And Industry

Expand demand for current products/markets through coordinated generic promotions program including personal selling and tastings, free publicity, public relations exercises and paid advertising.

Australian consumers clearly have a preference for fresh Australian product so farmers should proudly and clearly label their produce as farmed in Australia and differentiate it fully from other prawn products, be they wild prawns or imported farmed prawns.

Most farmers are sacrificing a strong marketing advantage when they freeze their product and it is sold as "fresh" or when they fail to clearly identify and differentiate their product. The features and benefits of IQF frozen prawns can be promoted for the long term benefit of farmers.

The APFA should develop a rolling three year program which integrates personal demonstrations and tastings, free publicity, public relations exercises and paid

advertising. The program should be updated at least annually or as needed to take advantage of unplanned opportunities. Tourism avenues should be used as a means of promoting the products and industry to consumers too; these can be subcontracted or leased out farmers do not have to be personally involved.

Three years is suggested because promotions need time to work, time to repeat and reinforce messages and to get maximum impact; any short term benefits from quickly implemented or poorly planned one-off exercises are soon dissipated. A cash budget of at least \$100,000 per annum and contribution of prawns by farmers for consumer tasting each year would be required.

It would be prudent to address many of the weakness identified above prior to or as part of the overall market development program for the industry.

11. CONCLUSIONS

The volume of prawns coming from existing Australian farms appears set to at least double over the next five years to more than 5000 tonnes of tigers prawns alone per annum.

This rapid increase in output will lead to a decline in average prices of prawns unless much of the additional product is exported or the farmers play a stronger role in the marketing chain and have more influence over the domestic retail sale of the product. Australian farmers produce some of the best prawns in the world but commonly the consumers do not realise they are farmed prawns; but consumers too often do not enjoy the farmed prawns they buy.

The Australian prawn farming industry has many strengths and many opportunities here and overseas but it also has weaknesses that are impeding success, particularly in the domestic market which currently favours fresh over frozen product. Nevertheless frozen prawns and processed prawn products too offer challenging opportunities.

The Australian market still has ample capacity to grow but further growth will require some hard decisions from farmers and a greater investment in marketing research and development and recognition that advertising or other promotion alone is not enough.

We believe it is time for farmers to replace the current widespread industry culture of passive selling with more active marketing. Will Rogers the late American humorist once said: *Even if you are on the right track you will get run over if you just sit there.* This is relevant today.

Some of the recommendations in this report are difficult and seem costly to implement but they will prove profitable in the long term because prawns are almost universally loved and farmed prawns are becoming more and more common. The demand for prawns in Australia and overseas is mostly strong and the wild fisheries are unable to meet the increasing global demand. So the demand for farmed prawns will continue to grow with increasing population and increasing disposable income around the world and as the global aquaculture industry stimulates demand with promotion.

12. REFERENCES

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