



Report On

YABBY MARKETING COOPERATIVE FEASIBILITY STUDY

Prepared For

NSW Fisheries

and the

Department of State and Regional Development

by

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Foreword and Disclaimer

This report has been prepared for NSW Fisheries
and NSW State and Regional Development. Department

The report was based on information gathered from published reports,
primary desk research and by means of interviews
with persons believed to be reputable and reliable.

I believe the report to be accurate but it contains evaluations of future events and readers should
make their own inquiries
to satisfy themselves on all matters.

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Executive Summary

The yabby *Cherax destructor* has long been harvested for pleasure and profit in NSW and has an aquaculture history of about 30 years. The introduction of a Class E extensive multi-site aquaculture permit in the State 1999 led to renewed interest in yabby growing on farm dams and heightened interest in the concept of a group of landowners or intensive yabby farmers working together, pooling resources, in a yabby processing and marketing venture in NSW. This in turn led to the commissioning of this study.

An analysis of the supply and marketing of yabbies in Australia indicates that the national aggregate aquaculture supply has been relatively steady at about 300 tonnes per annum.

In addition to this, there is a highly variable harvest of yabbies from wild stocks (30 to about 80 tonnes per annum) mostly in NSW, each year. The wild product is sold into different markets and at lower price levels than the farmed produce.

Western Australia's yabby aquaculture industry is mostly based on multi-site semi-intensive aquaculture networks and provides about two thirds of each years national output. WA sells almost half of its output overseas as live purged yabbies with interstate and intrastate sales making up the balance of sales in about equal proportions.

WA is regarded as the market leader by virtue of its high quality assurance of products as well as the more consistent supply it offers. A handful of yabby producer-marketing companies in the state account for a little more than half of the national turnover.

The NSW yabby farming industry is the nations second largest and consists mostly of a diversity of extensive and intensive enterprises with the focus on live yabbies and limited volumes of boiled yabbies and several other processed products.

Most NSW operators undertake their own marketing to local and more distant intrastate customers — their export trade is very limited — but there are currently several grower-marketing networks developing around the Class E multi site permits.

The demand for farmed yabbies commonly outstrips the limited supply and the latent demand appears to be as much as five times the current level of about 300 tonnes per annum.

The opportunities for yabby marketers are very attractive because the supply of these tasty crustaceans is growing at a modest rate and they are still unknown and untried for many consumers and yet their price is only about half of that of equivalent sized large prawns. With a greater investment in promotion of yabbies than has been seen in past years the aggregate demand can be raised considerably.

Any group of yabby producers in almost all areas of NSW is well placed to take advantage of the market opportunities in Australia and overseas because of the mild climate, extensive transport links and strong infrastructure in the state.

Sydney is essentially underserved as far as yabbies are concerned and NSW producers have the capability to become the market leaders in a short time.

Financial analyses on a model yabby cooperative in NSW indicated that breakeven fixed handling costs/charges at a turnover of 50 tonnes per annum level are \$2.36 per kilo; packaging costs (styrene case and other materials) would also have to be paid for by the producer and the freight costs would be charged to the buyer.

However it is unlikely that such supply and sales level can be achieved by a new cooperative in NSW in less than a few years because a number of business challenges lie ahead. At low sales levels the fixed overhead costs of running a yabby cooperative become prohibitive and substantial losses would be incurred. At high levels of course the prospective business looks more attractive and can make a profit.

The forecast break even handling costs of \$2.36 per kg at 50 tonnes pa throughput represents 15.7% of the estimated average selling price of NSW farmed yabbies. This is remarkably similar to the 14.5% charges sought by the Commercial Fishermen's Cooperative based at Newcastle, to market much smaller quantities of yabbies than 50 tonnes per annum. It is also similar to the 20% of selling price or \$2-\$ per kilogram seafood wholesaler's margin.

There are a number of alternatives to the full service cooperative model examined in the financial analyses. A staged development of a yabby cooperative, for example, starting with a half time manager and voluntary assistance by members progressing to full service from a full time staff may prove more attractive.

Yabby producers interested in forming a cooperative should examine the market forecasts and financial data in this report in the light of their own risk profile and financial and human resources and decide on the most appropriate way forward.

The decision to form a cooperative or indeed to work collaboratively in another legal entity such as a company is a personal as well as an economic one.

Regardless of the legal entity utilised to operate the business, the critical success factor is that there is enough commitment and trust amongst the group members to get sufficient quantity and high quality of product to be profitable.

1. INTRODUCTION

The yabby *Cherax destructor* is a widely distributed species of freshwater crustacean endemic in NSW which has long been harvested for pleasure and profit. In the past 30 years yabbies have also attracted attention as a species for aquaculture, particularly in inland areas, and in the past decade they have also been grown in coastal areas of NSW.

Cherax destructor and several other related freshwater species are also found in other mainland states and consequently yabby aquaculture has developed in purpose built ponds in Victoria, South Australia and Western Australian too. Despite a history of some 30 years yabby aquaculture in NSW, Victoria and SA is essentially a small industry, principally because most people are only involved in a semi-intensive to extensive manner to gain supplementary income in an existing agriculture or pastoral enterprise with little `invested in aquaculture infrastructure.

NSW yabby aquaculture in 1999/2000 consisted of 204 active permits with total output of 42 tonnes from 59 enterprises according to NSW Fisheries Status Report for the year.

Yabby farming in Western Australia, principally for the species *Cherax albidus*, is also still a small industry but Western Australia has become the major producer of yabbies because of the output from commercial trapping in thousands of farm dams in the state's wheatbelt region.

Furthermore the yabby industry in WA has developed to the stage where there is specialisation and vertical integration whereby four of the larger yabby farming enterprises have established a network of landowners and trappers to harvest yabbies to boost supply to their licensed processing and marketing facility. Other licensed yabby processors (non farmers) also buy yabbies directly from landowners or licensed yabby trappers in WA who act as an intermediary in the marketing chain.

Two other freshwater crayfish species are farmed in Australia in addition to the yabby species, but at much lower volumes, as described later. The redclaw crayfish which is farmed almost exclusively in Queensland (WA, NT and NSW production are negligible) and is sold mostly within the State and in Sydney, with small volumes overseas. The marron, a WA native species is farmed in WA and on Kangaroo Island (SA) and is sold in WA, other States and overseas in similar volumes.

In NSW the introduction of the Class E extensive multi -site aquaculture permit in 1999 led to renewed interest in yabby farming and the concept of a cooperative venture whereby landowners can pool resources and work together to:

- ◆ enjoy some economies of scale from a shared processing, packing and marketing facility with a large volume
- ◆ have sufficient throughput to tackle export markets
- ◆ retain more control of the product than selling to a distributor or agent
- ◆ gain more of the marketing profit margin by eliminating some market intermediaries.

This study on the feasibility of a yabby cooperative commissioned by NSW Fisheries and the Department of State and Regional Development was initiated in response to an approach from a group of yabby growers in the Hunter region of NSW for such a study.

The project was not restricted to the Hunter area nor to Class E aquaculture alone. It aims to provide information to enable landowners and aquaculturists anywhere in NSW wishing to work together, to market yabbies, in a collaborative manner such as with a registered cooperative, to make a more informed decision.

More specifically the report aims to provide:

- ◆ a market analysis covering domestic and overseas markets
- ◆ information on costs in establishing a cooperative enterprise
- ◆ financial forecasts, and sensitivity analysis, for such a venture
- ◆ guidelines on developing an operating and marketing strategy.

1.1 Methodology

Most of the information used in the market analysis and financial analyses were gathered by personal discussion (face to face and by telephone) with producers, marketers, restaurateurs, research and development officers and other parties around the country and overseas. This was supplemented with desk research of the literature and information from web resources.

Every effort was made to obtain quantitative data as well as descriptive information but the bulk of the domestic and overseas trade in farmed yabbies is undertaken by only a handful of grower companies and seafood wholesalers operating in a competitive open market. Consequently only the price/volume information that interviewees were prepared to make available for public release has been documented.

2. YABBY PRODUCTION, SUPPLY AND MARKET SHARE

Yabbies have traditionally been harvested from wild stock in waterways in South Australia, Victoria and NSW and in the last two decades from purpose built aquaculture ponds in these southeastern States. In WA yabbies are harvested from farm dams only, as wild stocks in that State were not fished commercially.

The volume and value of production of yabbies from aquaculture in these four states is shown in the accompanying Table 1. The NSW Fisheries data from the wild harvest in NSW are also shown in this table; data from the wild fishery in other states are unavailable, but landings are reportedly smaller than for NSW.

This table demonstrates a large year to year variation in each State and in the aggregate supply from all states; much of this annual fluctuation is due to rainfall variations as discussed later.

Table 1 Annual production and farm gate value of yabbies from producing states (Data from Australian Fisheries Statistics (ABARE 2001) and NSW Fisheries.

State	1997/8		1998/9		1999/2000	
	tonnes	\$'000	tonnes	\$'000	tonnes	\$'000
NSW	38. 37 wild	435	40 43 wild	472	42 64 wild	550 540
Vic	24	184	13	125	15	139
SA	11	115	27	231	14	143
WA	231	2253	165	1591	211	2781
Total	341		288		346	

WA clearly dominates the supply of yabbies by virtue of the large number of farm dams being harvested and the growth of large networks of growers (See below). According to Craig Lawrence of the WA Fisheries department some 5000 farm dams are being harvested by various networks around the State and that most of these ponds can be considered as semi-intensive or extensive aquaculture providing supplementary income. Another feature of WA production is that many of the ponds are harvested by the women and children living on the properties.

As noted earlier, the yabby in WA is *Cherax albidus* while *Cherax destructor* is the dominant species in the south eastern states.

It is noteworthy that wholesale buyers and consumers of yabbies are mostly unaware of the different yabby species in the marketplace although some wholesalers and retailers may have noticed that the yabbies from WA are of a paler appearance than those from the south east of the country. Poor product awareness and differentiation of crayfish is commonly seen inside the Sydney Fish Market at Pyrmont where wild and farmed yabbies are not identified and differentiated, and redclaw crayfish are frequently referred to as redclaw yabbies.

NSW is the second most important producer of yabbies and has an almost equal contribution from aquaculture and wild stocks. The wild harvest varies considerably from year to year and is strongly dependent on the timing and size of floods in the inland waterways. The aquaculture

production from NSW comes mostly from semi intensive enterprises characterised by relatively low stocking density and ponds without aeration or regular feeding but farmers are increasingly investing in pond aeration and draining facilities to boost productivity.

Yabby farming commenced about 20 years ago in SA and now the State has close to 400 registered growers mostly with purpose built ponds operated in an extensive or semi intensive manner and about four yabby grower-distributors according to SA Development Officer Tara Ingerson. SA is currently considering the development of suitable policy to support the farm dam harvesting model seen in WA.

Victorian aquaculture of yabbies has had an equally lengthy history and modest growth too but it is focussed more on semi intensive farming in purpose built ponds than other states. In recent years there has been an increase in intensive culture and an investment in aeration and pond drainage according to the regular items in the Austasia Aquaculture magazine. But with the introduction of multiple property harvesting licences in 1999 (similar to the NSW Class E permit) and the continuing drought some farmers have let their aquaculture permits lapse according to Peter Lawson from the Department of Natural Resources and Environment.

2.1 Market Share

Western Australia clearly dominates supply and hence market share in both the domestic and export trade on an annual basis (and in every month of the year according to distributors). Table 2 shows the relative contribution of yabbies in each State as a percentage of the aggregate national supply over the past three years and demonstrates NSW's increasing contribution to the national yabby supply. NSW's trade is essentially confined within the State and small volumes only are exported or sold interstate.

Table 2. State market share as a percentage of the total yabby supply (Wild plus Farmed)

State/Year	1997/8	1998/9	1999/2000
NSW	22	29	31
Vic	7	5	4
SA	3	9	4
WA	68	57	61

NSW production of wild yabbies is likely to increase as the structural adjustment of inland fishing continues with commercial fishers shifting their effort from native fish and yabbies to just yabby and carp (NSW Fisheries, various sources). The large annual fluctuations in NSW landings of wild yabbies are attributed to the timing and size of floods and so large landings may be expected in wet years.

The annual variation in each state's aquaculture production is mostly due to climatic variation, particularly rainfall and runoff to waterways, according to yabby research and development officers Craig Lawrence in WA and Tara Ingerson in SA.

The marked decline in production in SA from 1998/9 to 1999/2000 shown in Table 1 dramatically demonstrates the negative impact that drought can have on productivity in semi intensive yabby aquaculture. This fall in yabby supply can be attributed principally to the lack of rain in SA according to Ms Ingerson. The decline in landings from WA from 1997/8 to 1998/9 is also attributed to drought conditions.

2.2. Seasonal Supply

One of the notable characteristic of the aquaculture yabby trade is the seasonality in supply. Throughout the country the supply of yabbies has a direct relationship with water temperature which in turn is dependent on air temperature as the season changes from summer to winter.

Yabbies are more active and more easily trapped when water temperatures are high and consequently usually most abundant at the end of summer and in early autumn (February to April) when animals are active and of a larger size as a result of the summer growth.

In all states supply is usually small and often negligible in July and August, as the yabby's catchability declines markedly when pond temperatures fall. It is widely agreed by growers and research officers alike that it is invariably difficult to catch yabbies at a water temperature of 10°C or less.

Craig Lawrence however reports that WA licenced trappers are becoming more proficient at trapping at winter temperatures and advises that there is now a small supply of yabbies from WA all year round and that he expects more and more people to harvest all year round and generate a greater continuity of supply to markets.

2.1.2 Australian Freshwater Crayfish Supply

Yabbies are just one of several Australian freshwater crayfish competing in the seafood marketplace both here and overseas and it is instructive to review the supply of yabbies in relation to the aggregate supply of all commercial species ie yabbies, redclaw *Cherax quadricarinatus* and Marron *Cherax tenuimanus* from aquaculture.

Table 3 Aggregate Australian freshwater crayfish supply (ABARE Annual statistics)

State/Year	1997/8	1998/9	1999/2000
Qld Redclaw	60	77	75
SA Marron	6	7	10
WA Marron	42	42	42
Yabbies All States	341	288	346
Total All FW Crayfish	451	414	473

This table shows that aggregate Australian production of freshwater crayfishes has been remarkably steady from year to year and that yabbies clearly dominate the supply.

Prices of marron and redclaw are marginally higher than yabbies for equivalent sizes but marron grow to a much larger size than the other species and specimens over 200 grams attain prices well over \$20 per kilogram according to industry sources. The relatively higher flesh recovery rate of marron (*vis a vis* other species) contributes to the high price of large individuals.

NSW's yabby supply as a percentage of the total national freshwater crayfish supply was

17% in 1997/8
20% in 1998/9
22 % in 1999/2000

a steadily increasing contribution to trade each year.

But the national aggregate production of all freshwater crayfishes in Australia is but a tiny part of the international output of more than 100,000 tonnes per annum, of which China and the USA account for more than 25,000 tonnes per annum each.

3. YABBY MARKETS AND MARKETING

Yabbies are sold by farmers and specialist yabby processors to a number of market intermediaries who use various channels to get the product to consumers in Australia and overseas. Yabbies from wild harvest are usually cooked by the fishermen and sold in the traditional “wet fish” marketing system of wholesalers and the central fish market in Sydney, Melbourne and Adelaide.

Trade in farmed yabbies however has been dominated by live purged crayfish † because this product fetches the highest price — and cooked (boiled) crayfish mostly chilled, but sometimes frozen, forms a smaller secondary market for many farmers. More highly processed products such as pate form the basis of what can be described as a minor “cottage industry” for home made products which are rarely seen beyond the local region of production and are typically produced and sold by the farming family.

Western Australia dominates the farmed yabby trade and exports (mostly live crayfish) account for at least half of Western Australian output and the trade is mostly undertaken by a handful of companies. It would appear from discussion with producers around the country that the total domestic and export sales volumes from Australia are almost equal, with exports totaling about 100+ tonnes per annum, as described below.

3.1 Domestic Markets And Marketing Channels

Boiled yabbies have been a traditional product in the Australian seafood marketplace and Sydney and Melbourne have been the major markets for product from wild fisheries. Sydney because of its large population and Melbourne because of its proximity to inland areas such as Lake Hindmarsh and Lake Albacutyla, which have been large producers of wild yabbies in certain years.

In the past 25 years yabbies have increasingly been sought after alive because higher prices have been paid by restaurateurs and consumers for live seafood because it is perceived to have better eating qualities † than chilled or boiled crustacean † because it is clearly fresh. Live yabbies are then cooked in a variety of ways according to the chef’s/consumer’s preference.

Boiled yabbies have traditionally been cooked and sold by fishermen (or farmers) to seafood wholesalers, fish auction markets and consumers, and occasionally live yabbies too were marketed directly by the fishermen. Boiled yabbies have mostly been consumed in home, although some product has been bought by chefs for buffet use in clubs and restaurants; retail outlets are the main sellers of cooked wild yabbies.

The development of semi-intensive farming of yabbies in WA farm dams in the 1990’s led to a diversification of markets, a lengthening of the marketing chain and a specialisation in marketing functions, in that State.

Thus today there are four yabby farming companies (Cambinata, Farm Fresh Yabbies, Mulataga and Southern Yabby Farms [SYF]) which act as a processor-marketer of yabbies from several hundred yabby growers under one brand. The SYF web site notes that its supply network covers 700 landowners while the Cambinata publicity material refers to a network of 500 landowners as one of its strengths. It would therefore appear that these four companies between them distribute yabbies from more than half of the dams in the entire State.

There are also a dozen other yabby processing companies in Western Australia which buy and sell yabbies but these are not directly involved in the growing of crayfish. The four grower's marketing companies dominate interstate and overseas trade but distribution amongst local, interstate and overseas markets is highly variable from year to year (and company to company) as it is determined by supply and the strength of demand from each market.

This evolution of specialist yabby processor-marketing enterprises in WA, and in SA too, was largely brought about by the very large distances between the producers and the consumers in eastern states and overseas, the focus on purged live product and the increasing role of export markets.

Yabby grower-marketing companies built around a network of growers evolved in SA in parallel with those in WA. The notable difference between the industry development in these two states is that export markets are so not important for South Australian producers; this is because South Australia has significant wild stocks at times and a long history of consumption of local yabbies in Adelaide and elsewhere. In SA the networks cover a smaller geographic area and have fewer participants, all of whom are registered yabby farmers and not simply landowners with farm dams.

Galloway Yabbys for example represents one of a handful of networks of growers in SA working together in marketing, and 80% of Galloway Yabbys product is sold to Adelaide restaurants (according to publicity release) with the remaining going interstate and overseas. The strong local market in SA has meant that SA brands are not as well known interstate as are the dominant WA brands.

In Victoria and NSW yabbies from extensive and semi-intensive farming are mostly marketed by the growers individually through a number of channels to consumers in NSW principally, but with small volumes of interstate and overseas sales.

Live product is the main form and NSW wholesalers and restaurateurs are the dominant marketing channels for most producers although several growers prefer to cook their yabbies and focus on farm gate sales with some sales of live and cooked to local restaurants and clubs.

In some Riverland and other popular angling areas small sized yabbies of less than 20 or 30 grams are also sold as live bait at times. The NSW Fisheries are currently reviewing supply for the bait market as it is seen as a growth area for fishers and farmers.

Victorian and NSW growers are increasingly working together in informal networks where they share facilities, customers and market information to supply well graded purged live yabbies to wholesalers and restaurateurs within the state and interstate; export sales are also utilised but remain small scale. These two states too have several grower companies (Central Victorian

Yabby Farms, Yabby Blue etc) but these two are not as widely known in Sydney as the leading WA brands are.

Unlike fishermen, yabby farmers do not commonly use the auction markets in Sydney or Melbourne to sell their product, but prefer to sell their product at pre-agreed prices to seafood wholesalers in these cities who on sell mainly to restaurateurs. Unlike boiled yabbies, live yabbies are not commonly sold in retail outlets except in a few specialist fishmongers.

Historical data on sales volumes and product flow are unavailable but intrastate sales of live yabbies would probably account for the majority of the output of NSW and Victorian aquaculture. Cooked yabbies, damaged or smaller yabbies (which are not so sought after in the live trade) make up just a minority of the farmed trade.

A notable feature of the yabby trade is the rather small regular demand for live yabbies in Sydney and Melbourne and the emergence of an unusually long and circuitous marketing channel at times. The erratic supply of high quality live (and cooked) yabbies over the past 25 years has constrained trade in yabbies and the irregular supply has become an impediment to the development of strong marketing channels so much so that several wholesalers serving leading restaurants do not bother to have stock in store and are prepared to buy from fellow wholesalers ♦ their competitors ♦ as needed.

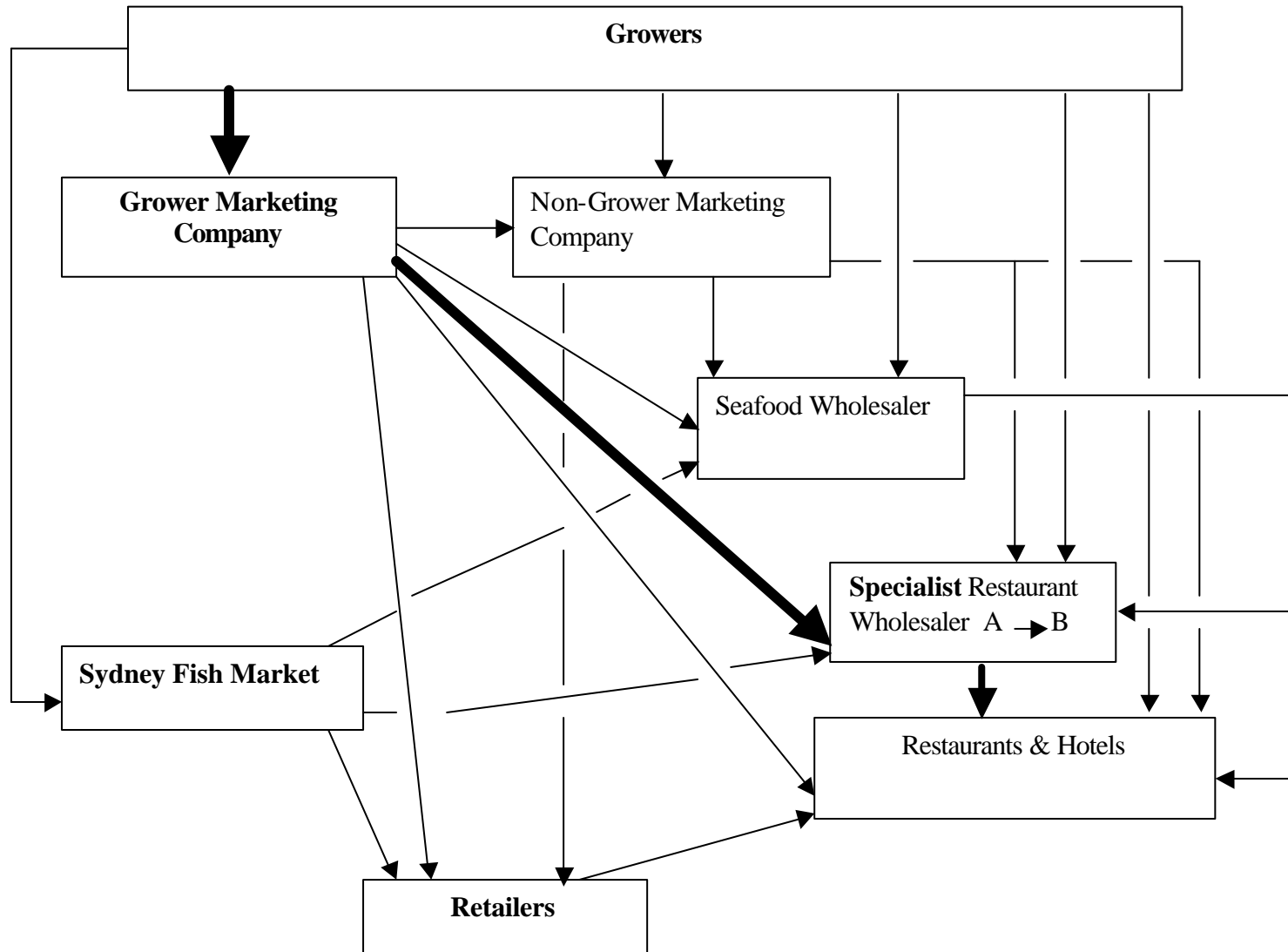
This unusual lengthening of the marketing chain as depicted in Figure 1 leads to increased prices which in turn constrains demand and acts as an impediment to trade development.

Yabby Products

Live yabbies: Various size and quality grades
 Boiled yabbies chilled small medium and large
 Boiled yabbies frozen
 Uncooked frozen whole yabbies
 Boiled yabby tails
 Boiled yabby meat
 Boiled yabby meat pickled
 Yabby flesh pate
 Yabby oil
 Yabby shell waste for fertiliser or animal feed
 Live yabbies for bait
 Live yabbies for aquaria/display

Figure 1. Domestic Marketing Channels for farmed yabbies.

The heavy arrows show the most important marketing channel.



3.1.1 Domestic Prices

The prices paid for yabbies are highly variable as they reflect changes in supply and demand for a particular product form, size, the different point in the marketing chain and the quality grade. Furthermore the size grade categories and quality grading practices used by different companies are not always the same and this adds to the complexities in analysing the market for live or cooked yabbies.

Most of the major producer-marketers commented that price cutting was common and added to the price fluctuations and uncertainty in the marketplace.

Prices vary according to the marketing company and the implied quality warranty too. The better established WA and SA companies (ie with larger supplier networks, greater throughput and reliable QA programs) are usually able to fetch a better price than their competitors because they offer better quality live yabbies – the major quality parameters being reliable size grading, clean attractive shells, vitality in the packed animals and mortality as low as zero percentage.

From our discussion with regular wholesale buyers of live yabbies in Sydney and Melbourne, it would appear that WA enjoys the best reputation with SA second and Victoria and NSW coming an equal third in reputation for reliability of product and service.

The price premium achieved by the leading companies in WA such as Cambinata and Southern Yabby Farms with their AQIS Food Processing Accreditation can often be as much as \$2 per kilogram for medium or large size yabbies but discussion with the buyers suggests that a large and reliable supply is equally important as reliable (high) quality in price setting.

Domestic Prices

The FOB (Free on Board) Perth prices quoted for premium live grade by one of the major WA grower processor-marketer company in early December 2001 were:

Size	Price/kg
90g+	\$22
70-90g	\$19
50-70g	\$16.50
30-50g	\$14.50
<30g	not available

Second grade. ie animals with missing claws and/or stained shell which are bought mostly for flesh use in restaurants, are commonly sold for about \$3 per kilogram less than the above prices for premium.

Other growers around Australia were selling yabbies for less, as much as two dollars per kilo less, at that time for live yabbies. This price differential is a reflection of the different supply, demand and quality of yabbies each company had at the time.

Cooked yabbies, a major output of NSW and Victoria, sell for about \$3 per kilo less than those indicated above for WA live yabbies, for the reasons outlined earlier.

There are three unusual features of the domestic and export trade in yabbies. One is the relatively steady prices quoted throughout the year by the individual processor-marketing companies; other crustacean prices typically go through significant price fluctuations throughout the year according to seasonal supply and demand considerations eg prawn prices soar in the second half of December (for Christmas consumption) or when supply is substantially less than demand for extended periods.

The second notable feature is the small volumes in a typical transaction to wholesalers: about 20-100 kilograms; larger shipments are unusual.

The third feature is the relatively large number of direct sales to restaurateurs, retailers and consumers, compared to other seafoods (farmed or wild). Related to this is the equally atypical practice of selling product at much the same price to consumers, restaurateurs and retailers regardless of the volume of sale. Most aquaculture and fisheries produce is sold to distributors or in auction markets, and priced according to volume purchased (lower prices for increasing volumes) and direct sales to consumers are unusual.

3.1.2 Sydney Fish Market and Spot Prices

The Sydney Fish Market (SFM) has traditionally been a seller of cooked yabbies and some live ones—at its auction. In recent years the auction has also sold increasing quantities of product from farms although this aquaculture origin is not indicated during the sale or in the statistics on the SFM web site.

Table 4 below shows the average price of yabbies, almost all wild product from fishers and other suppliers in Victoria NSW and South Australia for the past two years.

Table 4. Sydney Fish Market Average Prices for 1999/2000 and 2000/01.
1999/2000

Product form	Size	Kilos	Min price	Max Price	Average
Cooked	Ungraded	2660	4.38	10.00	7.55
Live	Ungraded	263	6.50	11.50	8.84
Live	X Large	5	13.50	13.50	13.50
Live	Large	82	5.00	14.00	10.94
Live	Medium	18	7.50	7.50	7.50
Live	Small	18	5.50	5.50	5.50

2000/2001

Product form	Size	Kilos	Min price	Max Price	Average
Cooked	Ungraded	2258	5.52	14.35	9.73
Live	Ungraded	256	2.00	15.50	8.70
Live	X Large	17	16.00	16.50	16.32

These tables show the strong predominance of cooked and ungraded product; this is because commercial fishermen usually just cook all of the catch, and select and size grade live ones just occasionally. The live ungraded category shows no significant change in average price from one year to the next while the cooked shows a significant price rise.

The supply of yabbies at the SFM on any one day is usually less than 150 kilograms and weekly supply is usually less than 300 kg and the supply is dominated by the SFM “ungraded” category which is mostly crayfish of about 50-60 grams.

In December last year the market sold several consignments of large yabbies from aquaculture and a comparison of the prices received demonstrates the variability in “spot prices” at this auction. The prices in the Friday preceding Christmas were approximately double that received by the same supplier a week earlier.

Discussion with the buyers of these consignments revealed that they were bought to fill orders and that the very high price paid just before Christmas was due to rivalry between competing buyers and that only at such times would customers pay such extraordinary prices.

There are also days when prices are lower than usual too. Spot prices can be low or high in any auction market.

Table 5. Crayfish prices at SFM. Friday 14 & 21 December 2001.

Product form	Size	No of cases	Min price \$/kg	Max Price	Average
14 December Yabbies Live	Medium	1	14.50	14.50	14.50
Yabbies	Large	3	16.00	16.00	16.00
Yabbies	X Large	1	18.50	18.50	18.50
Redclaw Live	Small	1	14.00	14.00	14.00
Redclaw	Medium	1	15.50	15.50	15.50
Redclaw	Large	2	19.00	19.00	19.00
21 December Yabbies Live	Large	1	32.50	32.50	32.50
Yabbies	X Large	7	31.00	32.50	31.64
Redclaw Live	Small	2	13.50	13.50	13.50
Redclaw	Medium	6	15.50	18.50	16.60
Redclaw	Large	1	17.00	17.00	17.00
Redclaw	X large	2	20.00	20.00	20.00

Monthly data on yabby sales at the SFM in 2000 are summarised in appendix 1.

3.1.3 Historical prices

The best time-series of prices for yabbies are the data published annually by ABARE but regrettably it is of limited value because it does not give any indication of the different products or the sizes of the yabbies.

The data from the Sydney Fish Market sales is more precise but they also have limited value as they essentially refer to wild product, and the size grades small, medium, large and extra large are not defined.

Of interest are the modest price rises over the past few years in farm gate price of yabbies even with a steady level of output, indicated by the ABARE data below. WA has had a significant increase in price but much of this is a result of larger, better quality produce being marketed in the last two years according to C. Lawrence. This “macro data” is supported by a comparison of the prices sought for the 50-70 and 70-90g categories by a leading WA distributor in December 2001 with those of August 1997 — only about \$1 per kilo more.

Table 6. Annual farm gate prices of farmed yabbies. (Australian Fisheries Statistics ABARE 2001).

State	1997/8		1998/9		1999/2000	
	tonnes	\$/kg	tonnes	\$/kg	tonnes	\$/kg
NSW	40	11.72	40	11.80	50	11.80
Vic	24	7.67	13	9.62	15	9.27
SA	11	10.45	27	8.55	14	10.21
WA	231	9.75	165	9.64	211	13.18

3.2 Export Markets And Marketing Channels

The export market like the domestic scene is a complex and competitive one dominated by the same handful of WA and SA companies as in the domestic trade.

Live yabbies are being exported to more than 20 countries but the total volume to most countries is less than a tonne per year. The significant importing countries are listed in the table below.

Table 7. Yabby exports 1999/2000*

Country	Tonnes
Hong Kong	27
Singapore	19
Belgium	14
Germany	14
Switzerland	12
USA	5
Taiwan	3
United Kingdom	3
Total (all exports)	99

*Data from various sources

Live yabbies have been the major item of international trade with Hong Kong Singapore and Europe reported by exporters as the major markets; other products such as cooked yabbies and IQF (Individually Quick Frozen) uncooked yabbies are not important. Singapore is a small island nation with limited natural resources but a successful trading hub, and many products shipped into Singapore are sold into neighbouring countries such as Malaysia. Although Malaysia is a substantial aquaculture nation it is also becoming an increasingly important importer of seafood too.

Enquiries from Norway, the Phillipines, the United Arab Emirates and VietNam are currently being followed up by a number of parties in Australia.

Awareness of freshwater crayfish generally is low throughout most countries and awareness of yabbies in particular is even lower and most buyers would not be familiar with the different species of Australian freshwater crayfishes. Hence overseas consumption of yabbies and other Australian freshwater crayfish is mostly limited to what may be referred to as more affluent and better informed seafood consumers eating at finer restaurants.

Although there are repeated reports of insufficient supply to meet overseas demand, a close analysis of the information available on export trading revealed that total export sales are about 100 or more tonnes per annum, depending on supply and demand conditions, with WA by far the major exporter responsible for more than two thirds of exports.

Most exporters comment that overseas marketing of yabbies is not as easy nor as profitable as the public reports in the media seem to portray. The reasons for this follow:

- ◆ Current trade and marketing channels have been developed over many years, after costly overseas trade promotions by several companies.
- ◆ Individual sales are not of large volumes therefore
 - ◆ Customers and sales are often gained at great expense (travel, communication, samples shipment)
- ◆ Sales are often at prices no better than domestic prices, hence net returns are the same or less than domestic trade
- ◆ Greater packaging costs and financial risk in shipping product to distant customers (overseas debt collection is more costly if a dispute arises).

- ◆ Airport delays, transshipment and mishaps leading to unrecoverable costs
- ◆ The market is sensitive to oversupply, and price cutting by aggressive Australian companies is not unusual

A fall in the inspection charges levied by the Australian Quarantine and Inspection Services (AQIS) at the end of the 2001 year has however alleviated the overhead costs on small shipments a little. Air freight however remain high.

The current export market of about 100+ tonnes per annum is remarkably similar to the peak exports of cooked wild yabbies from SA in the mid 1970s when 115 tonnes, mostly from Lake Alexandrina, were exported to Sweden in 1975 by Ocean Foods (Olszewski, 1980).

Although export trade volume is now currently narrowly focussed on live product there have been and still are repeated attempts to widen the markets beyond the existing products and trading partners (see below) and raise aggregate demand and prices.

The freshwater crayfish industry has been a regular exhibitor at overseas trade fairs such as the ANUGA Fair in Germany, European Seafood Exposition in Brussels and the Boston Fish Show (USA) over the past decade and several companies have engaged Austrade's consulting services to undertake specific market research and development exercises.

As noted above price remains a key factor in driving sales as much cheaper — albeit mostly smaller—crayfish are available from exporters in China, the USA and elsewhere. Chinese production of crawfish meat is very cheap, exports of frozen cooked crayfish, tails and meat (including 1 kg consumer packs) have had a negative impact on the economics of the Louisiana producers and processors which led to a Congressional investigation and imposition of a tariff on crawfish meat in September 2000 (Huner 1997).

A prohibition on the import of live freshwater crayfish is an impediment to trade in this product in some countries (eg France; detailed information available at web site www.aqis.gov.au/animex/asp/search.asp). A more wider use of tariffs on the import of various aquaculture products such as exists in Korea and China is a more general impediment to export of Australian freshwater crayfish.

3.2.1 Distribution Channels

The distribution channels for live crayfish are as varied as they are for trade within Australia. One of the major grower processor-marketing companies in Western Australia is promoting direct sales, utilising fax and internet, to trade buyers such as restaurateurs and distributors as well as to consumers willing to pay in advance by credit card.

The other major companies in WA and SA are focussing on trade sales only, usually to seafood distributors, and other larger buyers of seafood such as hotel or restaurant groups, who then on sell.

Some of the WA companies are also offering marron and other farmed and wild crustaceans to their overseas and domestic clients so yabbies — at least the larger size grades— are being distributed overseas alongside marron and sometimes with redclaw too although these two species are typically larger and higher priced.

3.2.2 Export Prices

The FOB Perth prices quoted by one of the major companies for in early December 2001 were:

Size grade	Price/kg
90g+	\$23
70-90g	\$20
50-70g	\$17
30-50g	\$15

Higher prices still can be obtained for the very large crayfish about 150gram or heavier.

The prices above are marginally higher than those quoted for domestic sales and most exporters report that exports are sought as much for additional sales volumes/outlets as well as the possibility of greater net return per kilogram. The export price levels too have not changed much in the past few years according to distributors.

These prices are lower than those quoted for marron mainly because of crayfish size differences but they are similar to equivalent sized redclaw prices.

Yabbies are however much dearer than the size equivalent (small) American crawfish or the even cheaper Chinese freshwater crayfish which have adversely impacted on the USA's industry.

4. SITUATION ANALYSIS AND RISK MANAGEMENT

The strengths and weakness of a yabby marketing cooperative and the opportunities and possible threats confronting a prospective cooperative in NSW were examined (SWOT analysis) and a number of risk management strategies developed to meet prospective challenges.

4.1 SWOT Analysis

The following STRENGTHS were identified:

- ◆ Yabbies are a very attractive and tasty crustacean
- ◆ Yabbies lend themselves to a variety of cuisines and dishes
- ◆ Live yabbies are easily handled with very low mortalities
- ◆ Live yabbies can be transported easily over long distance/long times without water without significant mortalities
- ◆ Boiled yabbies have a relatively long shelf life
- ◆ The Hunter region and most of NSW have excellent and cheap transport links to Sydney and international ports
- ◆ Infrastructure in NSW is excellent
- ◆ The Hunter Valley a major tourist destination; this offers opportunities for low cost highly effective cross promotional exercises
- ◆ Location offers potential for tourism activity and links in the mid to long term
- ◆ Extensive aquaculture of yabbies mostly qualifies for the label organic farming, which should prove advantageous vis a vis salmon and prawn farming which are typically intensive operations. Can be promoted as “bush tucker”
- ◆ NSW Fisheries, CSIRO and universities provide a strong R & D base for yabby farming
- ◆ Northern NSW has a mild climate which will allow all year round harvesting, albeit of smaller quantities than summer peak
- ◆ Thousand of farm dams in NSW capable of producing yabbies
- ◆ Strong interest in improving productivity of yabby farming in NSW will increase State supply.

WEAKNESSES

- ◆ Experienced seafood/aquaculture staff are difficult to recruit and maintain
- ◆ Product liability claim, stock loss, fire or other disaster due to human error leads to loss of key customers
- ◆ Difficulties in attracting sufficient suppliers to obtain the required economies of scale and achieve desired market share
- ◆ Market pressures lead to member dissatisfaction, resignations and loss of economic viability
- ◆ Staff error or inadequate debtor control leads to financial loss.

OPPORTUNITIES:

- ◆ Australian has a strong “clean and green” image overseas and our stock is essentially disease free
- ◆ Yabby prices are relatively low for crustaceans; for example they are wholesaled at only about half the price of equivalent large prawns
- ◆ Worldwide increasing interest and demand in high quality seafoods as a result of increasing population and rising affluence in most countries.

- ◆ Markets in Australia and overseas are still underdeveloped and capable of substantial growth. Most people in Australia and elsewhere have not yet eaten these tasty crustaceans
- ◆ Yabbies have many inherent taste attributes which renders them as good raw material for innovative value added product
- ◆ Australian economy is strong and stable; a weak Australian dollar facilitates exports
- ◆ Major competitors overseas such as Turkey, China and the USA face rising prices and environmental degradation or constraints.
- ◆ Research indicates that growth rates and tail flesh yield can easily be improved over the next few years with traditional selection techniques (Without Genetically Modified Organisms); this will help increase supply substantially, assist farm profitability, lower prices slightly and generally stimulate demand.
- ◆ Single sex and hybrid stock can increase supply, farm profitability and stimulate demand.
- ◆ Aquaculture research will produce a cheaper and better pellet diet which will assist farm profitability and increase supply
- ◆ Decreasing trade barriers and tariffs with time open up more markets and more profitable business.

THREATS

- ◆ Depressed economic conditions in some countries, recession in Japan, constraining international demand for seafood
- ◆ Disease outbreaks and yabby supply loss is a possible but unlikely threat
- ◆ Consecutive “wet years” leads to overwhelming oversupply of wild yabby and disruption to yabby trade; possible but unlikely to have sustained impact on farmed yabby markets
- ◆ Massive growth in redclaw and marron supply and price crash leading to yabby market disruption; possible but unlikely
- ◆ Major seafood safety scare leads to extended downturn in demand; possible but impact can be limited
- ◆ Oversupply of yabbies and price war from other yabby producer-marketing enterprises depresses prices and leads to grower dissatisfaction. Possible but can be avoided.

These potential threats to the business and management strategies for other possible risks are explored in the following section.

4.2 Risk And Risk Management

There are a number of risks common to any business venture but a business specialising in the packing and marketing of live aquatic animals faces all the common business and financial risks as well as the additional risks entailed in the holding of live animals under high density conditions.

If the business is established with substantial debt capital (borrowed funds) there is the further risk of not being able to meet interest payments which could trigger a financial crisis if the principal then also becomes payable under the terms of the contract.

The following business risks are fairly common and need not be discussed at length here as they are insurable without great cost :

- ◆ Fire damage to premises
- ◆ Burglary, theft or sabotage
- ◆ Motor vehicle fire, theft or damage
- ◆ Machinery breakdown (excluding those due to wear and tear)
- ◆ Product Liability and Public Liability.

The sale of live or cooked yabby products entails a number of common seafood business hazards such as transport delays and product loss by airlines or road transport. These damages or financial losses can be insured for but premiums are prohibitively expensive and the common industry practice is to “carry the risk” and seek redress from the transport company for damages incurred. At times the customer seeks to have shipments insured and this is undertaken and charged to the customer.

4.2.1 Seasonal And Unexpected Supply Discontinuity

Climatic conditions are variable from year to year and yabby reproduction, survival and growth are dependent on temperature and rainfall conditions, which are essentially uncontrollable but predictable.

As noted earlier seasonal supply is commonly lowest around July and August each year but the impact of this seasonal downturn can be minimised by:

- ◆ having a diversity of supplier properties scattered around the state to take advantage of the microclimate in different regions
- ◆ a diversity of growers/production systems which offers greatest opportunities for a range of yabby sizes and all year round supply; ie by having a mix of Class E, intensive and semi intensive operations
- ◆ training growers in the practical procedures and business advantages of harvesting yabbies in winter
- ◆ offering financial incentives to members for product delivery in winter months.

In NSW some growers believe that they can produce small volumes of yabbies all year round and in WA researcher C. Lawrence reports that farmers are getting better at trapping yabbies in winter temperatures in that state. It appears that reliable all year round supply is just a matter of time.

There is a widely held view amongst aquaculturists that all year round supply is essential for success. This is not necessarily so. There are many examples of success in the food trade where year round supply is unavailable: cherries are one example where the industry thrives without continuous supply and in fact enjoys free publicity when the new season is heralded in the media. In the Australian seafood scene it is noteworthy that the Atlantic salmon and prawn farming industry have grown strongly without all year round supply in the first 15 years.

All year round supply can be beneficial but it is certainly not essential. What is essential is being able to advise customers reliably on the period of availability and then meeting that promise.

Unseasonal weather, extended drought or rain, or catastrophic weather induced supply shortage are also a risk and these too can be alleviated by the measures described above.

Special insurance against supply shortfall is potentially a risk management strategy but given the short history of yabby marketing and the lack of information on this type of business the insurance premiums would not be attractive.

In short, good supplier training and networks to provide a range of products from different properties are the best supply risk management strategy.

4.2.2 Stock Loss From Plant Breakdown Or Animal Disease

A business with most of its stock held alive faces special risks which require careful analysis and a tailor made management plan. The risk management plan should consist of a risk prevention strategy and risk mitigation strategy.

Risk analysis entails:

- ◆ Identify what risks may exist
- ◆ Assess the chances of occurrence
- ◆ Assess what the severity might be.

The risk prevention methodology should include:

1. Adequate training for suppliers to minimise intake of diseased animals
2. Adequate staff training and operating manuals
3. Animal inspection on arrival; quarantine arrangements
4. Use of new or reliable equipment, particularly back up gear
5. Regular stock and water monitoring, data logging and analysis.

Risk mitigation protocols and procedures should therefore cover:

- ◆ Procedures for advising customers of supply problems
- ◆ Disposal of spoiled product
- ◆ Sale of injured or weakened product which is food safe
- ◆ Plant sterilisation before restocking
- ◆ Purchasing stock in a short time to make up for losses.

Insurance is available for some aquaculture stock on farms —at a substantial premium — and for stock in a packing plant, but given the relatively new status of yabby marketing and the lack of actuarial data it would be assessed on an individual business risk basis and would be prohibitively expensive for a newly established business.

4.2.3 Food Safety Risks

Live yabbies are a low risk food and do not present any special public health risk. Boiled yabbies are a ready -to-eat food and may present a moderate risk if not handled carefully, particularly to at risk consumers such as the very young, very old, pregnant women and anyone with a compromised immune system.

The risk of a food safety problem should be managed by maintaining the plant and equipment in hygiene conditions and having adequately trained staff following procedures documented in a HACCP based food safety plan that has been passed by Safe Food NSW and AQIS where needed. A product recall plan following guidelines developed by the ANZFA should be developed as part of the food safety plan (ANZFA 2001).

This of course does not guarantee that a food safety problem will not occur but it demonstrates due diligence to customers and government agencies and minimises the chances of charges under State or Commonwealth legislation or a public liability claim for faulty product or illness.

Adequate product liability insurance should nevertheless be taken out from day one to protect against a civil claim for faulty product or illness.

5. FINANCIAL ANALYSES

5.1 Financial Model

Our analysis of supply and demand factors (described in the earlier sections of this report) suggested that about 50 tonnes or more of product throughput per year would be needed to make the cooperative project viable ie have sufficient product sales volume to provide some continuity and reliability of supply to compete against other sellers and sufficient economy of scale to be profitable, hence the selection of 50 tonnes per annum for a base economic model for a cooperative business.

A computer model of a modest cooperative facility capable of packing at least a tonne of yabbies per week with a focus on live yabbies and with cooked (boiled) yabbies as a secondary or residual product market (for dead or weak crayfish) was then set up. The capital items and equipment for this model cooperative and their costs are shown in Table 8 following.

The model and accompanying financial data are based on income and outgoings over a 10 year period, with a 3% inflation rate in years 3-10, costs were held constant for year two. The building is depreciated over a 20 year period, the second hand motor vehicle is replaced after five years and other equipment is depreciated over the 10 years unless otherwise indicated.

The fixed operating costs for running this facility employing a full time manager were then estimated, as shown in Table 9. The computer model was then used to examine the outcome over a ten year period using discounted cash flow methodology, particularly the price members would need to be charged to recover the handling and marketing of the yabbies ie the breakeven “sale price” or handling costs charge per kilogram of yabbies sold on behalf of members. Discounted cash flow is discussed in the box below.

The aim of the exercise was to examine this breakeven price/charge in relation to prevailing marketing charges (eg other cooperatives or company processing-marketing margins) so growers could assess the costs/benefits from joining a cooperative and compare it to their status quo or other marketing options.

Discounted cash flow methods for evaluating investments recognise that a dollar today is better than a dollar received in several years time because it could have earned interest in the interim. Thus we discount the future earnings by the “discount rate” to get present value.

Internal Rate of Return (IRR) is the interest rate at which the present value of earnings (or savings) from the investment over future years is equal to the present value of all of the investment and all cash outgoings from the project ie the discount rate which gives a Net Present Value (NPV) of zero.

The IRR represents the highest rate of interest at which a firm can borrow money for a project without making losses.

Table. 8 Facility establishment costs.

Estimates of initial /capital expenditure for a modest processing facility capable of purging, boiling (domestic sales only), chilling and packing yabbies.

Item	Cost \$
Processing packing shed Approx. 14 X 8 m with chiller shower room, office facilities and purging/holding tanks and packing room	80,000
4 Holding/purging tanks and filters	10,000
Chiller room with "shower drip" 2.5 x 3 m	10,000
100 Plastic "prawn baskets"	1,600
Yabby boiling equipment Gas cooker and cooling tank	1,000
Two work/packing benches	3,000
Electric scales (5 grams to 20 kilograms capacity)	2,500
Insulated 1-tonne vehicle (2 nd hand)	30,000
QA system development	5,000
Office equipment Computer, fax, printer, visitors chairs and table etc	6,000
Cleaning equipment	1,000
Miscellaneous	2,500
Establishment and Legal fees	10,000
TOTAL	162,500

Table 9. Fixed costs/minimum operating expenses per annum

Item	Cost \$
Manager's remuneration package	55,000
Motor vehicle costs	8,000
Insurances	5,000
Electricity and cooking gas	3,000
Phone and fax	1,500
Water	2,000
Accounting and administration	2,000
Market development & promotion	20,000
Repairs and maintenance	4,000
License fees and registrations	2,000
Miscellaneous	2,500
TOTAL	105,000

The assumptions behind the model were:

The members would assist in assembling the facility and the major plant and equipment to contain costs so that it could compete against established operators. (Twice this amount, or more, could easily be spent if funds were not limited). Note that this modest facility is intended for export of live yabbies only; cooked yabbies are intended for domestic sale only.

Capital costs would be contributed by members, and in an alternative option \$80,000 of the total of \$162,500 could be borrowed.

There is no provision for purchase of land as it assumes land is available at a negligible rent or lease. (Substantial land cost or heavy investment in buildings would render a new business uncompetitive and unprofitable in the yabby market environment).

There is no provision for income from sales of equipment such as traps, bait, fuel etc.

No cash income in July and August each year when yabby supplies are seasonally lowest.

The cooperative operates with one full time multi skilled manager. Any additional requirements for labour would be provided on a voluntary basis by members or casual labour employed and charged out as needed.

The cooperative would sell at competitive prices and would not actively undercut nor seek higher prices than existing processor-marketers. ie sell at the same price as established companies for equivalent product (product form, size and quality grade). It would be unlikely that the newest entrant to the market could gain higher prices with the increasing supply forecast (100% in five years, Section 7).

The model takes no account of actual yabby sales price (because the cooperative's revenue comes from its fee for service) but we have estimated \$15 as the average sales price (across the common size grades) for discussion in this report as this approximates the current farm gate return from NSW yabbies.

The cooperative would invoice producers for the direct packaging costs (eg styrene cases, foam sheets, ice pack at cost) and the buyers for freight on all sales.

The model was used to examine the breakeven sales price/handling fee at lower sales volumes ie 20, 30, and 40 tonnes and at 60, and 70 tonnes sales levels in a year.

Seventy tonnes was selected as the upper turnover figure because it is the greatest annual throughput recorded by existing yabby processors and 20 tonnes was selected as the lowest foreseeable throughput because it is unlikely that anyone would enter a new business based on a lower throughput.

Additional underlying financial assumptions are listed below

Start date	July 2002
Business structure	Cooperative in NSW
Overdraft rate (% of overdraft balance)	10%
Superannuation rate (% of wages)	8%
Workcover rate (% of wages)	1%
CPI increases – costs (% per annum)	3%
Annual increase in price (% per annum)	3%
Capital introduced (owners' equity)	\$162,500
Loan funds	\$0
Loan interest rate (% per annum)	8%
Loan term	10 years
Loan start date	July 2002
Discount rate for NPV calculation (% per annum)	5% real (8.2% nominal @ 3% CPI)

The computer model was used to produce the following financial data sheets:

- ◆ The monthly cash flow budget (year 1) and the breakeven fixed costs per kilogram of crayfish
- ◆ Year 10 cash flow budget (quarterly)
- ◆ Profit and loss statement for years 1-10
- ◆ Balance sheet, years 1-10.

These sheets are attached at the end of this section.

Profit and Loss and Balance Sheets for the other scenarios (20, 30, 40, 60 and 70 tonnes pa) are attached in Appendix II.

The Key Findings are :

1. At a throughput of 50 tonnes per annum the cooperative would have to charge members a handling-marketing fee of \$2.36 per kilogram to break even on its fixed operating costs. This \$2.36 represents 15.7% on the estimated average sale price of \$15 per kilogram of yabby.
2. The model shows that breakeven price/cost for the business is not achieved until year three with the capital and operating costs as shown in Section 5 ie the fixed overhead costs are not met for the first two years and it is costing more than \$2.36 per kilogram to handle the product.
3. The profitability of the model cooperative is of course most sensitive to the price charged to members.
4. The salary paid to the manager is the most sensitive item in the schedule of fixed costs.

At lower throughput levels the breakeven cost, eg \$3.93 at 30 tonnes pa, would be considered intolerable by farmers. At 70 tonnes per annum the breakeven cost of course is much lower at \$1.69 per kilogram. At this sales level there would be scope for the cooperative to charge more than breakeven and make a profit.

It is instructive to examine the cooperatives breakeven handling-marketing cost as a percentage of a prospective average sale price of \$15 per kilo as shown below. As noted earlier the members would be charged for packaging costs related to their sales in addition to the cooperative's handling-marketing charge.

Table 10. Breakeven price/costs at various throughput levels

Annual Throughput in tonnes	BreakEven (Fixed Operating Cost) in \$/kg	Price	BE price/ costs as % of \$15 average market price
20	5.90		39.3
30	3.93		26.2
40	2.95		19.7
50	2.36		15.7
60	1.97		13.1
70	1.69		11.3

Many businesses such as seafood wholesalers would be prepared to market yabbies for a fee of about \$2.36 per kilogram plus the cost of all packaging. The Commercial Fishermen's Cooperative at Newcastle, for example, only charges 14.5% commission for sales of members' product plus some ancillary charges (eg ice) which are negotiable.

Each group of producers interested in forming a cooperative would need to examine these figures in the light of their financial and human resources, their propensity for risk taking and their assessment of market conditions.

5.2 Sensitivity Analyses

Sensitivity analyses were conducted on some of the key expenditure items listed in our schedule of fixed costs and the results are discussed below. Interestingly, profitability is not greatly affected if a loan of approximately 50 % is arranged at 8% interest.

The results of the analysis were re-estimated under the assumption that about half the required start up capital was provided by the owners (\$82,500 owners' equity and \$80,000 loan) rather than the base assumption that all capital would be provided by the owners. This made virtually no difference to the outcome of the analysis (i.e. the breakeven price). This is because the discount rate used, a nominal rate of 8.2% (derived from a real rate of 5.0% with CPI=3.0%) is similar to the loan interest rate of 8.0%.

Because a loan will affect cash flow it does however impact on accumulated profits and annual operating profits, although the impact, particularly on the latter, is fairly small.

5.2.1 Breakeven Prices/Costs

Breakeven price (cost to farmer/coop member) is defined as the price that gives the investment a net present value of zero calculated over a 10-year period. Table 10 showed the breakeven prices ranged from \$5.90 per kg to \$1.69 per kg for throughputs over the range 20 tonnes to 70 tonnes (capital and fixed operating costs were assumed constant, regardless of throughput).

Table 11 Sensitivity of Yabby Cooperative Investment to Changes in Price

Price	Net Present Value ^a	Benefit/Cost Ratio	Internal Rate of Return ^b	Breakeven year ^c	Year 10 op. profits ^d
\$2.36/kg	\$0	1.00	8.2%	Year 3	\$8,000
+10% (\$2.59)	\$103,000	1.10	22.7%	Year 2	\$23,000
+20% (\$2.82)	\$205,000	1.20	37.2%	Year 1	\$39,000
+50% (\$3.53)	\$514,000	1.50	94.4%	Year 1	\$85,000

^a Calculated as the discounted stream of benefits from the investment over a 10 year period less the discounted stream of costs over the same period. The discount rate is 8.2% (derived from a real rate of 5.0% with CPI=3.0%).

^b The internal rate of return is the discount rate at which an investment has a net present value of zero.

^c The year in which operating profit (before tax) is positive i.e. total sales exceed total expenses.

^d Operating profits (before tax) earned in year 10 of the investment.

The investment is most sensitive to the price variable, as shown above. A 10 per cent increase in the price paid to the cooperative by growers would increase the benefit cost ratio to 1.1 (from 1.0) and the operating profits (before tax) in year 10 would almost treble to \$23,000.

Note that estimates of net present value and year 10 operating profit have been rounded to the nearest thousand dollars. The salary paid to the manager is the most important component of the fixed costs (next section).

5.2.2. Management Labour Cost

The base case assumption was that a manager would be employed full-time and paid \$50,000 per annum salary. Table 12 shows a salary 20% smaller than the \$50,000 pa in the base model will increase the cost benefit ratio for the project from 1.00 to 1.2 and :

- ◆ brings the break even date forward to year two
- ◆ increase operating profit in year ten from \$8,000 to \$22,000.

A reduced salary however suggests acceptance of a lower level of expertise in the manager, which may prove senseless.

Table 12. Sensitivity of Cooperative Investment to Changes In Management Salary*

Wages	Net Present Value	Benefit/Cost Ratio	Internal Rate of Return	Breakeven year	Year 10 op. profits
\$50,000 pa	\$0	1.00	8.2%	Year 3	\$8,000
-10% (\$45K)	\$45,000	1.05	14.6%	Year 2	\$15,000
-20% (\$40K)	\$89,000	1.10	20.9%	Year 2	\$22,000
-50% (\$25K)	\$224,000	1.28	40.4%	Year 1	\$44,000

*Superannuation cost not included here

A 50% lower salary brings about a massive increase in profitability as shown above but would be possible only if the manager was employed on a half time basis, however it is unlikely that all of the manager's duties could be fulfilled on a half time basis.

Employment of a manager on a 50% basis may prove successful if this is supplemented with the provision of voluntary assistance by members on a rotational basis.

5.2.3 Market Development And Promotion Cost

The profitability of the cooperative is less sensitive to the cost of market development/promotion. The base case assumption was that \$20,000 would be allowed for market development expenses to develop and support market share and product prices in the face of existing competitors.

Table 13 shows that a 10 per cent reduction in market development costs (to \$18,000) would increase the net present value of the investment by \$16,000, the benefit cost ratio would increase to 1.02 and the operating profits (before tax) in year 10 would increase from \$8,000 (base case) to \$11,000.

Table 13. Sensitivity of Cooperative Investment to Changes in Marketing Costs

Market Development	Net Present Value	Benefit/Cost Ratio	Internal Rate of Return	Breakeven year	Year 10 op. profits
\$20,000/an	\$0	1.00	8.2%	Year 3	\$8,000
-10% (\$18K)	\$16,000	1.02	10.5%	Year 2	\$11,000
-20% (\$16K)	\$32,000	1.03	12.8%	Year 2	\$13,000
-50% (\$10K)	\$80,000	1.08	19.5%	Year 2	\$21,000

A 20% reduction in the market development budget would increase the cost benefit ratio from 1.0 to 1.03 but this reduced budget would reduce the capability for market development and hence overall success.

**Yabby Cooperative - 50 tonnes
Projected Cash Flow
For the Period Ending 30 June 2003**

	Total	Jul-02	Aug-02	Sep-02	Oct-02	Nov-02	Dec-02	Jan-03	Feb-03	Mar-03	Apr-03	May-03	Jun-03
Operating Cash Receipts													
Income (from Sales Schedule)	118000	0	0	11800	11800	11800	11800	11800	11800	11800	11800	11800	11800
Other Non-operating Income	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Operating Income	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Income	118000	0	0	11800	11800	11800	11800	11800	11800	11800	11800	11800	11800
Capital Introduced - Equity	162500	162500	0	0	0	0	0	0	0	0	0	0	0
Loan Funds	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Cash Receipts	280500	162500	0	11800	11800	11800	11800	11800	11800	11800	11800	11800	11800
Operating Cash Payments													
Direct Expenses (from Sales Sche	0	0	0	0	0	0	0	0	0	0	0	0	0
Accountancy/Bank Fees	2100	175	175	175	175	175	175	175	175	175	175	175	175
Consultants/Contractors	0	0	0	0	0	0	0	0	0	0	0	0	0
Electricity	3000	250	250	250	250	250	250	250	250	250	250	250	250
Employees													
Superannuation	4500	375	375	375	375	375	375	375	375	375	375	375	375
Wages	50000	4167	4167	4167	4167	4167	4167	4167	4167	4167	4167	4167	4167
Workcover	500	42	42	42	42	42	42	42	42	42	42	42	42
Education/Training	0	0	0	0	0	0	0	0	0	0	0	0	0
Fuel & Oils	0	0	0	0	0	0	0	0	0	0	0	0	0
Insurance													
Stock	3000	3000	0	0	0	0	0	0	0	0	0	0	0
Public Liability	500	500	0	0	0	0	0	0	0	0	0	0	0
Fire/Burglary	500	500	0	0	0	0	0	0	0	0	0	0	0
Machinery Breakdown	500	500	0	0	0	0	0	0	0	0	0	0	0
Household	0	0	0	0	0	0	0	0	0	0	0	0	0
Personal Disability	500	500	0	0	0	0	0	0	0	0	0	0	0
Interest													
Loan	0	0	0	0	0	0	0	0	0	0	0	0	0
Overdraft	941	0	135	204	175	145	116	86	56	25	0	0	0
Lease Charges	0	0	0	0	0	0	0	0	0	0	0	0	0
Legal Expenses	10000	10000	0	0	0	0	0	0	0	0	0	0	0
Licences (inc. Rego. Business Nar	2000	2000	0	0	0	0	0	0	0	0	0	0	0
Lab Supplies/Chemicals	0	0	0	0	0	0	0	0	0	0	0	0	0
Motor Vehicle													
Fuel	4800	400	400	400	400	400	400	400	400	400	400	400	400
Insurance	500	500	0	0	0	0	0	0	0	0	0	0	0
Registration	500	500	0	0	0	0	0	0	0	0	0	0	0
Repairs & Maintenance	2400	200	200	200	200	200	200	200	200	200	200	200	200
Other/Miscellaneous	2400	200	200	200	200	200	200	200	200	200	200	200	200
Protective Clothing	0	0	0	0	0	0	0	0	0	0	0	0	0
Water	2100	175	175	175	175	175	175	175	175	175	175	175	175
Rent	0	0	0	0	0	0	0	0	0	0	0	0	0
Rep. & Maint.	3960	330	330	330	330	330	330	330	330	330	330	330	330
Subscriptions	0	0	0	0	0	0	0	0	0	0	0	0	0
Telephone	1500	125	125	125	125	125	125	125	125	125	125	125	125
Market Development	20000	1666.6667	1666.6667	1666.6667	1666.6667	1666.6667	1666.6667	1666.6667	1666.6667	1666.6667	1666.6667	1666.6667	1666.6667
QA System	5000	5000	0	0	0	0	0	0	0	0	0	0	0
Total	121201	31105	8240	8309	8280	8250	8221	8191	8161	8130	8105	8105	8105
Non-Operating Cash Payments													
Drawings	0	0	0	0	0	0	0	0	0	0	0	0	0
Fixtures & Fittings	6000	6000	0	0	0	0	0	0	0	0	0	0	0
Motor Vehicle	30000	30000	0	0	0	0	0	0	0	0	0	0	0
Land & Buildings	90000	90000	0	0	0	0	0	0	0	0	0	0	0
Plant & Equipment	21600	21600	0	0	0	0	0	0	0	0	0	0	0
Principal Repayment - Loans	0	0	0	0	0	0	0	0	0	0	0	0	0
Tax Payable	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	147600	147600	0	0	0	0	0	0	0	0	0	0	0
Total Cash Payments	268801	178705	8240	8309	8280	8250	8221	8191	8161	8130	8105	8105	8105
Net Cash Flow	11699	(16205)	(8240)	3491	3520	3550	3579	3609	3639	3670	3695	3695	3695
Opening Bank Balance	0	0	(16205)	(24445)	(20954)	(17433)	(13884)	(10304)	(6695)	(3056)	614	4309	8004
Add/Subtract Net Cash Flow	11699	(16205)	(8240)	3491	3520	3550	3579	3609	3639	3670	3695	3695	3695
Closing Bank Balance	11699	(16205)	(24445)	(20954)	(17433)	(13884)	(10304)	(6695)	(3056)	614	4309	8004	11699

Yabby Cooperative - 50 tonnes
Projected Cash Flow
For the Period Ending 30 June 2012

	Total	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun
Operating Cash Receipts					
Income (from Sales Schedule)	168911	30344	46189	46189	46189
Other Non-operating Income	0	0	0	0	0
Other Operating Income	0	0	0	0	0
Total Income	168911	30344	46189	46189	46189
Capital Introduced - Equity	0	0	0	0	0
Loan Funds	0	0	0	0	0
Total Cash Receipts	168911	30344	46189	46189	46189
Operating Cash Payments					
Direct Expenses	0	0	0	0	0
Accountancy/Bank Fees	2660	665	665	665	665
Consultants/Contractors	0	0	0	0	0
Electricity	3800	950	950	950	950
Employees					
Superannuation	5871	1468	1468	1468	1468
Wages	65239	16310	16310	16310	16310
Workcover	652	163	163	163	163
Education/Training	0	0	0	0	0
Fuel & Oils	0	0	0	0	0
Insurance					
Stock	3800	950	950	950	950
Public Liability	633	158	158	158	158
Fire/Burglary	633	158	158	158	158
Machinery Breakdown	633	158	158	158	158
Household	0	0	0	0	0
Personal Disability	633	158	158	158	158
Interest					
Loan	0	0	0	0	0
Overdraft	0	0	0	0	0
Lease Charges	0	0	0	0	0
Legal Expenses	0	0	0	0	0
Licences (inc. Rego. Business Nam	2534	633	633	633	633
Lab Supplies/Chemicals	0	0	0	0	0
Motor Vehicle					
Fuel	6080	1520	1520	1520	1520
Insurance	633	158	158	158	158
Registration	633	158	158	158	158
Repairs & Maintenance	3040	760	760	760	760
Other/Miscellaneous	3040	760	760	760	760
Protective Clothing	0	0	0	0	0
Water	2660	665	665	665	665
Rent	0	0	0	0	0
Rep. & Maint.	5016	1254	1254	1254	1254
Subscriptions	0	0	0	0	0
Telephone	1900	475	475	475	475
Market Development	25335	6334	6334	6334	6334
QA System	0	0	0	0	0
0	0	0	0	0	0
Total	135430	33858	33858	33858	33858
Non-Operating Cash Payments					
Drawings	0	0	0	0	0
Fixtures & Fittings	0	0	0	0	0
Motor Vehicle	0	0	0	0	0
Land & Buildings	0	0	0	0	0
Plant & Equipment	0	0	0	0	0
Principal Repayment - Loans	0	0	0	0	0
Tax Payable	1621	0	0	1621	0
Total	1621	0	0	1621	0
Total Cash Payments	137051	33858	33858	35479	33858
Net Cash Flow	31860	(3513)	12331	10710	12331
Opening Bank Balance	204649	204649	201136	213467	224177
Add/Subtract Net Cash Flow	31860	(3513)	12331	10710	12331
Closing Bank Balance	236509	201136	213467	224177	236509

Yabby Cooperative - 50 tonnes
Projected Profit & Loss Statement
For the Ten Years Ending 30-6-2012

	12 Months									
	30 Jun 03	30 Jun 04	30 Jun 05	30 Jun 06	30 Jun 07	30 Jun 08	30 Jun 09	30 Jun 10	30 Jun 11	30 Jun 12
Income										
Sales	118000	121540	125186	128942	132810	136794	140898	145125	149479	15396
Less Cost of Sales										
Opening Stock	0	0	0	0	0	0	0	0	0	0
Add - Direct Costs	0	0	0	0	0	0	0	0	0	0
Less Closing Stock	0	0	0	0	0	0	0	0	0	0
Total Cost of Sales	0	0	0	0	0	0	0	0	0	0
Gross Profit	118000	121540	125186	128942	132810	136794	140898	145125	149479	15396
Gross Profit Margin	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Other Income										
Other Non-operating Income	0	0	0	0	0	0	0	0	0	0
Other Operating Income	0	0	0	0	0	0	0	0	0	0
Total Other Income	0	0	0	0	0	0	0	0	0	0
Less Expenses										
Accountancy/Bank Fees	2100	2100	2163	2228	2295	2364	2434	2508	2583	266
Consultants/Contractors	0	0	0	0	0	0	0	0	0	0
Electricity	3000	3000	3090	3183	3278	3377	3478	3582	3690	380
Employees	0	0	0	0	0	0	0	0	0	0
Superannuation	4500	4635	4774	4917	5065	5217	5373	5534	5700	587
Wages	50000	51500	53045	54636	56275	57964	59703	61494	63339	652
Workcover	500	515	530	546	563	580	597	615	633	65
Education/Training	0	0	0	0	0	0	0	0	0	0
Fuel & Oils	0	0	0	0	0	0	0	0	0	0
Insurance	0	0	0	0	0	0	0	0	0	0
Stock	3000	3000	3090	3183	3278	3377	3478	3582	3690	380
Public Liability	500	500	515	530	546	563	580	597	615	63
Fire/Burglary	500	500	515	530	546	563	580	597	615	63
Machinery Breakdown	500	500	515	530	546	563	580	597	615	63
Household	0	0	0	0	0	0	0	0	0	0
Personal Disability	500	500	515	530	546	563	580	597	615	63
Interest	0	0	0	0	0	0	0	0	0	0
Loan	0	0	0	0	0	0	0	0	0	0
Overdraft	941	274	0	0	0	0	0	0	0	0
Lease Charges	0	0	0	0	0	0	0	0	0	0
Legal Expenses	10000	0	0	0	0	0	0	0	0	0
Licences (inc. Rego. Business Name)	2000	2000	2060	2122	2185	2251	2319	2388	2460	253
Lab Supplies/Chemicals	0	0	0	0	0	0	0	0	0	0
Motor Vehicle	0	0	0	0	0	0	0	0	0	0
Fuel	4800	4800	4944	5092	5245	5402	5565	5731	5903	608
Insurance	500	500	515	530	546	563	580	597	615	63
Registration	500	500	515	530	546	563	580	597	615	63
Repairs & Maintenance	2400	2400	2472	2546	2623	2701	2782	2866	2952	304
Other/Miscellaneous	2400	2400	2472	2546	2623	2701	2782	2866	2952	304
Protective Clothing	0	0	0	0	0	0	0	0	0	0
Water	2100	2100	2163	2228	2295	2364	2434	2508	2583	266
Rent	0	0	0	0	0	0	0	0	0	0
Rep. & Maint.	3960	3960	4079	4201	4327	4457	4591	4728	4870	501
Subscriptions	0	0	0	0	0	0	0	0	0	0
Telephone	1500	1500	1545	1591	1639	1688	1739	1791	1845	190
Market Development	20000	20000	20600	21218	21855	22510	23185	23881	24597	253
QA System	5000	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
Depreciation										
Plant & Equipment	5487	2987	2987	2987	2987	2735	845	585	0	0
Fixtures & Fittings	1020	1020	1020	1020	1920	0	0	0	0	0
Land & Buildings	4500	4500	4500	4500	4500	4500	4500	4500	4500	450
Motor Vehicles	6000	6000	6000	6000	6000	6016	6000	6000	6000	598
Total Expenses	138208	121691	124624	127928	132230	133580	135283	138741	141986	14591
Operating Profit (Loss) Before Tax	(20208)	(151)	562	1014	580	3215	5615	6384	7493	804
Taxable Profit (Excluding Private Use)	(20208)	(151)	562	1014	580	3215	5615	6384	7493	804
Less Tax Expense	0	0	0	0	0	0	0	0	1621	288
Profit (Loss) After Tax Before Drawings	(20208)	(151)	562	1014	580	3215	5615	6384	5872	515
Breakeven Year	By Year4									
Break Even Sales	138,208	121,691	124,624	127,928	132,230	133,580	135,283	138,741	141,986	145,91

**Yabby Cooperative - 50 tonnes
Projected Balance Sheet
For the Ten Years Ending 30-6-2012**

	12 Months									
	30 Jun 03	30 Jun 04	30 Jun 05	30 Jun 06	30 Jun 07	30 Jun 08	30 Jun 09	30 Jun 10	30 Jun 11	30 Jun 12
Current Assets										
Cash at Bank	11699	26054	53277	81317	110198	109945	140585	172143	204649	23650
Debtors	0	0	(12154)	(24673)	(37567)	(50848)	(64527)	(78617)	(93130)	(108077)
Stock	0	0	0	0	0	0	0	0	0	0
Total	11699	26054	41123	56644	72631	59097	76057	93526	111519	12843
Non-Current Assets										
Fixtures & Fittings	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000
Less Accumulated Depreciation	1020	2040	3060	4080	6000	6000	6000	6000	6000	6000
	4980	3960	2940	1920	0	0	0	0	0	0
Land & Buildings	90000	90000	90000	90000	90000	90000	90000	90000	90000	90000
Less Accumulated Amortisation	4500	9000	13500	18000	22500	27000	31500	36000	40500	45000
	85500	81000	76500	72000	67500	63000	58500	54000	49500	45000
Motor Vehicles	30000	30000	30000	30000	30000	60000	60000	60000	60000	60000
Less Accumulated Depreciation	6000	12000	18000	24000	30000	36016	42016	48016	54016	60000
	24000	18000	12000	6000	0	23984	17984	11984	5984	0
Plant & Equipment	21600	21600	21600	21600	21600	21600	21600	21600	21600	21600
Less Accumulated Depreciation	5487	8474	11461	14448	17435	20170	21015	21600	21600	21600
	16113	13126	10139	7152	4165	1430	585	0	0	0
Total	130593	116086	101579	87072	71665	88414	77069	65984	55484	4500
TOTAL ASSETS	142292	142140	142702	143716	144296	147511	153126	159510	167003	17343
Current Liabilities										
Overdraft	0	0	0	0	0	0	0	0	0	0
Creditors	0	0	0	0	0	0	0	0	0	0
Provision for Tax	0	0	0	0	0	0	0	0	1621	289
Loans	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1621	289
Non-Current Liabilities										
Loans	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Total Liabilities	0	0	0	0	0	0	0	0	1621	289
Proprietor's/Partners' Capital										
Capital Introduced	162500	162500	162500	162500	162500	162500	162500	162500	162500	162500
Accumulated Profits/Losses	(20208)	(20360)	(19798)	(18784)	(18204)	(14989)	(9374)	(2990)	2882	803
Less Accumulated Drawings	0	0	0	0	0	0	0	0	0	0
Total Funds	142292	142140	142702	143716	144296	147511	153126	159510	165382	17053
TOTAL LIABILITIES & FUNDS	142292	142140	142702	143716	144296	147511	153126	159510	167003	17343

6. ESTABLISHING AND OPERATING A COOPERATIVE

6.1 Legislative Requirements

The legislative requirements for establishing a cooperative to process and market yabbies for domestic and overseas customers include:

- ◆ registration of the cooperative with the Registry of Cooperatives in NSW,
- ◆ food business (safety) registration with SafeFood NSW,
- ◆ registration of the establishment (ie premises and facilities) with the Australian Quarantine Inspection Service for exports
- ◆ and compliance with state and commonwealth food hygiene requirements for the facility and staff.

These requirements are discussed here but full details are available in various documents freely available and these and the organisation's web site should be consulted to obtain up to the minute information.

6.1.1 Registration Of Cooperative.

Once a group of people have had informal meetings which lead to agreement on the objectives and general operation rules for a cooperative and a decision to formally register a cooperative has been made certain documents must be prepared and submitted to the Registry of Cooperatives. (General cooperatives in NSW are administered under the provision of the NSW Co-operatives Act 1992 and the Co-operatives Regulation 1997; these regulations are available from the Government Information Service (Phone 1800 463955).

The documents for registering a cooperative can be prepared by the prospective members, directors or employees of the cooperative but it is probably prudent to seek the assistance of an accountant or solicitor too, unless someone has the expertise to prepare the documents as indicated below.

The Registry of Cooperatives provides a kit to assist in this and it is highly recommended. The kit includes:

- ◆ A copy of the standard rules
- ◆ A copy of the disclosure statement format
- ◆ The cooperatives formation booklet "Forming a Cooperative" which has the steps involved in forming a cooperative.

It is important that the notes in the kit are followed closely and amendment is not made to any standard rule unless it is in accordance with the guidelines and the Co-operatives Act. Registry officers can advise on the proposed rules and completion of other documents.

The disclosure statement includes information on :

- ◆ The need for the cooperative, the resources available, the benefits to flow from its formation, and the details of member involvement such as liability and financial involvement. Of particular interest here is the share capital cost per member
- ◆ A list of persons who have indicated their intention to join the cooperative
- ◆ A budget covering at least the first 12 months of operation. This should cover source of funds, properties and assets
- ◆ How the cooperative will be managed and how the cooperative will perform its functions
- ◆ A list of persons willing to be appointed directors with details of their qualifications and experience
- ◆ Copies of market research, letters evidencing availability of loans grants, subsidies and any particular resources necessary for operation.

A draft of the rules of the cooperative and a draft Disclosure Statement should be submitted to the Registry of Cooperatives before making any formal arrangement or commitment to forming the cooperative. These draft documents should be submitted at least 28 days before the scheduled formation meeting.

The formal meetings and preparation of documents will take at least several months and there is a registration fee of \$160.00. However it is prudent to budget a total of about \$10,000 to cover professional accounting and legal assistance in the preparation and registration.

The operating requirements for a cooperative are discussed in Section 6.2 following.

6.1.2 Food Hygiene Requirements For The Facility

Any new business facility packing yabbies for sale will be required to conform with the “Food Premises and Equipment“ standards outlined by the Australian New Zealand Food Authority which are to be enforced by Safe Food NSW, the authority responsible for food safety in the seafood processing and wholesale sectors. Furthermore any seafood processor or wholesaler located in NSW must register with the SafeFood authority, develop a food safety plan and fulfill various staff training requirements.

Prospective exporters will also have to meet a similar set of provisions for their premises which are contained in the Export Control Orders, particularly Schedule 2, administered by the Australian Quarantine Inspection Services (AQIS) for the Commonwealth.

The general requirements for food premises and equipment for the Commonwealth and State governments are similar however because they are all formulated to facilitate the food business operator’s compliance with food safety practice requirements.

These requirements, referred to as Australian Food Safety Standard 3.2.3 of the Australian New Zealand Food Standards Code are briefly described below; full details are in the newly released free publication “A Guide to the Food Safety Standards” (ANZFA Safe Food Australia 2001).

In short, food businesses are required to ensure that their:

- ◆ food premises
- ◆ fixtures
- ◆ fittings
- ◆ equipment

- ◆ and transport vehicles.

are all designed and constructed to be cleaned and where necessary sanitised (Full details in Division 2-5, Standard 3.2.3).

Businesses must ensure that the premises are provided with the necessary services of:

- ◆ Water
- ◆ Waste disposal
- ◆ Light
- ◆ Ventilation
- ◆ Cleaning and personal hygiene facilities
- ◆ Storage space
- ◆ And access to toilets.

Fixtures and fittings must be designed, constructed, located and installed and equipment must be designed, constructed, located and, if necessary, installed, so that:

- (a) there is no likelihood that they will cause food contamination
- (b) they are able to be easily and effectively cleaned
- (c) adjacent floors, walls, ceilings and other surfaces are able to be easily and effectively cleaned.

(Full details are in Division 4, Standard 3.2.3. Full details on the AQIS requirements can be found in the Export Control Orders No. 9 (on sale at Commonwealth bookstores).

These new Australian Standards are not prescriptive, as they formerly were, ie they do not stipulate what material the surface of walls must be, it merely stipulates that surfaces must be impervious and easily cleaned and leaves the choice of material etc to the proprietor.

The requirements in plant, equipment, staff training and quality systems for small volumes of highly processed products such as boiled yabby tails would far outweigh the likely returns from such products in the short to mid term. Some European Union nations and the AQIS have marginally more demanding, requirements for all boiled crustaceans than the national food standards hence export of boiled yabbies (whole or tails) were not proposed for a new yabby cooperative.

The facilities and equipment outlined in Section 5 for a modest cooperative facility have been selected and costed to meet the AQIS requirements for live yabbies only and the ANZFA requirements for live and cooked yabbies.

6.1.3 Food Safety and QA Systems

The AQIS and SafeFood NSW both require food premises to develop and manage a HACCP based system to manage food safety hazards (HACCP = Hazards Analysis and Critical Control Points).

Government agencies no longer require the presence of authorised government officers on site for inspection of the end product before it is sold. In 1994 AQIS moved away from product inspections by government officers to a system of self inspection/regulation by processors and a scrutiny of the production/packing process by government officers via its Food Processing Accreditation (FPA) or its Agreed Quality Assurance (AQA) arrangements.

SafeFood NSW has recently produced a Seafood Safety Manual with a number of model food safety plans and instructional material which will help operators to develop the necessary food safety plans for their operations (eg packing live crayfish, and boiling crayfish) to meet the State requirements for food safety. (SafeFood NSW does not concern itself with quality issues, its charter is restricted to the administration of food safety hazards).

The AQIS' FPA requirements for packing live yabbies are essentially similar to the food safety requirements of Safe Food NSW. The AQIS AQA requirements are more complex and demanding, as they must address more issues than just food safety, and hence requires the development of a quality manual which is to be modeled on the ISO 9001 or 9002 quality management requirements (ISO= International Standards Organisation).

We have budgeted \$5000 in the set up costs for professional assistance in the development of a food safety/QA system. Registration under the AQA arrangement does not imply that the company concerned has a higher quality of seafood than a company registered under the FPA arrangement with AQIS. Most seafood exporters today are registered under the FPA arrangement because it is more easily developed and maintained and cheaper to operate.

The AQIS costings listed below are based on a new cooperative registering with AQIS under a FPA arrangement and the establishment maintaining its registration in an A or B category. AQIS registers establishments with a five class rating system depending on performance: highest quality/lowest number of defects establishments earn a Class A rating and establishments with a high number of defects on inspection are given a D or E rating.

AQIS charges

Annual registration for FPA or AQA system is charged at a fee for service of \$19.80 per quarter of an hour. With an A or B rating there are two mandatory inspections of the premises per year. These occupy about 2.5 hours hence there is a cost of about \$100 per year for these inspections. Entry to the EXDOC system costs \$150 per annum and there is a fee of \$15 per shipment.

Companies registered with the FPA system are charged for Health Certificates where needed by the importing country.

SafeFood Charges.

SafeFood NSW has yet to finalise its charges for seafood premises but has indicated that registration will be several hundred dollars per annum and that on site inspections will require about several hours and charged at \$120 per hour. SafeFood has indicated that it will seek to minimise costs for seafood premises.

6.2 Operational Considerations For A Cooperative

A cooperative established to pack and market yabbies on behalf of members should start business with well defined objectives and a broad membership who share similar values in fulfilling these objectives. The objectives will have been included in the registration but operational manuals and procedures will need to be developed once facilities are available and staff appointed.

Financial success will depend on having a diversity in member type (Class E extensive as well as more intensive farmers) and a geographical spread of members to provide high volumes of a diverse range of high quality product. The geographical range of the cooperative services and functions however need to be defined and controlled.

6.2.1 Membership Recruitment And Selection Criteria

Procedures for recruitment and selection criteria for members need to be formulated with care so that the number of satisfied members can quickly be built up so the cooperative functions harmoniously and profitably.

This is probably the greatest challenge that such a venture faces.

Ideally prospective members should have:

- ◆ Trust in other members and the cooperative
- ◆ Strong commitment to producing yabbies regularly throughout the year and exclusive sales via the cooperative so that members do not compete with the cooperative. Any less than 100% requires rules for handling misbehaviour and compliance, even if they are not enforceable by law
- ◆ Shared short and long term financial objectives for the cooperative
- ◆ A commitment to following the cooperative's product specifications and Code of Practice to yield conforming produce.

Operational procedures for the management of the day to day operations of the cooperative as well as the recommended harvesting and handling by producers should be documented as soon as possible once full time staff is appointed.

6.2.2 Human Resources And Staffing

The cooperative will need a multi-skilled manager because in the early years the manager will need to undertake marketing, financial, bookkeeping and manual duties. Ideally expertise in food handling, animal husbandry or management of recirculating tank systems would be advantageous too but it is unlikely to find all these skills in one person. Therefore training in some of these areas may need to be provided to an otherwise competent applicant.

Good marketing skills are required to find new customers and develop reliable markets at high prices so that members get prices as good as or higher than their colleagues elsewhere, otherwise members will become disgruntled if they feel that there are better prices available elsewhere.

A salary package of \$55,000 has been used in the financial forecasts but this may have to be raised if the cooperative is profitable in order to retain the services of a successful manager.

A key success factor will be the capability to recruit, train and provide technical support and encouragement for newly recruited Class E landowners. The Commonwealth Farm Biz training support program can probably be accessed to provide financial assistance in training new landowner-producers in the necessary food safety –QA procedures.

6.2.3 Harvesting And Handling On Farm

The following “best practice” procedures have been developed from the WA Producers Code of Practice for the farming and handling of yabbies (1998) and recommendations from yabby farmers in NSW.

The recommended harvesting strategy is the use of a series of baited traps (dog pellet food is cheap bait and easily handled) set around the perimeter of the pond/dam rather than nets: Traps allow for selective harvest of the larger yabbies and avoid damage to the yabbies and to the pond bottom.

The traps are set for several hours at least and best times for harvest are early morning or late afternoon to avoid the heat and bright light of the midday and unnecessary stress to the yabbies. Overnight setting and morning harvesting is an ideal arrangement.

The necessary handling gear: plastic tubs, mesh baskets or styrene cases, and clean water if needed, are prepared at pondside prior to lifting traps. A tub with clean water is used to hold and gill flush the yabbies for a few minutes immediately after the trap is removed from the dam.

Gill flushing is necessary to allow the yabbies to flush out the dirty water held under the gill cover so as to maximise vitality and cleanliness of yabbies in the packing facility and subsequent shipping to customers.

The clean yabbies should then be sorted, in the trap or a basket, removing any dead, soft shelled, “undersize” or other rejects (berried females) and transferred to a holding floating basket or floating “sock bag” awaiting pick up or delivery to the processing facility. This sorting should ideally be undertaken under the shade and not in the open exposing yabbies to excessive heat, wind and light.

Initial size grading can be undertaken manually by eye or with the aid of a basket with a slotted bottom to allow for a quick size sort to allow escape of undersized individuals.

6.2.4 Transport To Processing Facility.

Live yabbies should be transferred to a holding tank without delay once they are removed from the water. They may be transported to a processing facility in shallow plastic baskets in an insulated vehicle with overhead drip/shower arrangement, or in styrene cases interspersed between several damp foam sheets.

The latter is used by producers to deliver their produce to a nearby facility, with ice or chiller packs in summer, while the specially fitted vehicle is used by processors.

6.2.5 Purging

The purging of yabbies is typically undertaken in holding tanks for a period of 1-3 days depending on water temperature. The tanks may be round or rectangular in shape and the yabbies are held in shallow plastic baskets with lids firmly fixed; a Nally “prawn basket” is commonly used in NSW for this.

One to two days purging at ambient temperature is typical in warmer months but three days are commonly used in cold weather; the hind gut is examined visually to check that the intestine is actually clear before the yabbies are chilled and packed for shipment.

The yabbies are then sorted thoroughly and graded for quality and size according to the groups specifications. Five size grades and two quality grades are common and recommended here but this may need to change in accordance with customer specifications.

6.2.6 Product Grading

Key quality parameters recommended are :

Uniform size grades: 90 gram+,
 70-90g,
 50-70g,
 30-50g,
 and less than 30 gram (bait)

Quality grade: Premium and second grade.

Premium grade is restricted to attractive, lively and undamaged yabbies. Seconds include damaged, deformed, dirty/dark; missing legs; infested with external fouling organisms *Temnocephala* or *Epistylis*.

Weak, lifeless or soft shelled individuals should not be used for the live market but maybe used for frozen or cooked product or otherwise sold.

6.2.6 Chilling And Packing

Graded yabbies are held in plastic baskets in a cool room fitted with shelving/racks designed to hold the baskets under a shower sprinkling device which keeps the yabbies cool and clean. A room about 2.5 x 3 m with three rows of shelving is adequate for handling one tonne of yabbies.

The temperature of this holding room is usually held at 15°C or about 10°C cooler than ambient in summer or about 12°C in winter. Yabbies can be held under these cool conditions (12-15°C) for several weeks but there may be losses from death and weight losses with extended storage.

Yabbies are “finger packed” in 5 or 10 kg lots in new styrene cases with a sheet of damp new foam on the bottom, in the middle and on top; with small cases and large yabbies, foam on bottom and the top is sufficient. A half kilogram/half liter ice pack (water frozen in plastic bottle) or 1 kilogram/liter icepack — depending on shipment requirements — is packed inside the case; the larger ice pack is used for long transit times/large case while the half kilo icepack suffices for the small case.

The lid is fitted to the styrene case and sealed with tape and the case strapped with tape across both ends. A self adhesive label is attached bearing information on customer details product description and net weight as well the date of packing or other code to enable product lot identification and traceability. The packing information is recorded with data on pond harvested, etc as per the facility’s food safety plan.

6.3 Alternative Cooperative Structures

The prospects of a mixed aquaculture cooperative handling and marketing several species has been canvassed by some aquaculturists, pointing to the opportunity for economies of scale and the marketing strength gained from having a broad portfolio of products rather than limited volumes of one species alone to offer customers.

A diversified cooperative may gain some advantage in the marketplace if it can offer a portfolio of seafood products to buyers rather than focusing on one group alone such as yabbies. But this is not certain. There are however many examples in Australian aquaculture of successful single species companies in the yabby, prawn and salmon farming industry.

Business turnover can be raised and product supply risk reduced if the cooperative markets produce from growers of other species, as well as yabbies, but it then raises the risk of introducing inefficiencies or major losses as the staff's efforts and the cooperative's other resources are spread over a number of product groups and markets. For example, the promotional budget needs to be adequate for each species and it is unlikely that there would be sufficient funds available in a new cooperative to concurrently develop strong markets for several species at once.

There are a number of other ways producers wishing to work together in a cooperative manner can reduce risk. If deemed satisfactory by prospective participants they can reduce salaries on the earlier proposed model, with members providing 50% of management assistance to a half time manager (Note management is costing approximately \$1 per kilo in the financial model).

Another way to achieve objectives is to work around a successful producer-marketer with proven processing facilities and established marketing network and pay a mutually agreeable handling fee for service (per kilo or percentage of sales price).

These two options or perhaps a combination of the two can be used for a short term or the long term while the proponents develop more trust in each other and the proposed cooperative. Thus there can be a staged development starting with one of these options leading to the full service independent cooperative model.

Another completely different approach to the traditional cooperative is to form a joint venture company with a business, which can be an existing fishermen's cooperative, an aquaculture company or cooperative or a thriving seafood processing and marketing company. That is, a joint venture with a profitable cooperative or company which has low operating costs and experienced seafood handling and marketing staff who could quickly and inexpensively be trained to handle yabbies too. In this manner the benefits and liabilities of the expanded business are shared according to the terms of the agreement between the parties.

There is of course the option to form a new (limited) company rather than a cooperative. While many farmers and fishers have a "soft spot" for the concept of a cooperative because they feel comforted by the idea that each member has the same (equal) voting power as another, in reality some personalities and agendas will come to the fore and play a stronger role than others in a cooperative too.

A major drawback to a company structure is that membership would need to be restricted to 50 shareholders for a private company to comply with legislation; a public company, to

accommodate many more shareholders, would not be as attractive an option as it entails far greater set up costs and year to year reporting obligations and costs.

Any business, cooperative or company, needs to have a “driving force” who shows great determination, and hopefully leadership talents, if it is to succeed; unfortunately this determined driver may find the equal voting rights within a cooperative frustrating leading to a resignation, loss of the cooperative’s driving force and perhaps the birth of a competing company.

It is noteworthy that the most successful yabby marketing enterprises in Australia today are those in WA that started as growing operations more than five to twelve years ago. These companies † not cooperatives † started off with a small capital outlay and added to their facilities each year and increased their network of suppliers and customers over a period of 5+ years. Yabby cooperatives have not proven so successful in WA.

Regardless of the legal entity utilised to operate the business, the critical success factor is that there is enough commitment and trust amongst the group members to get sufficient quantity, diversity and high quality of product to be profitable.

Each group of producers has to examine its human and financial resources and risk taking profile and then decide on the best course of action.

7. MARKETING PLAN CONSIDERATIONS

7.1 Demand And Supply Outlook

The current demand for yabbies is about three hundred tonnes per annum divided about equally between domestic and overseas markets. Growers with little experience in marketing, particularly export sales, commonly say that demand often exceeds supply, however the size and strength of this demand remains unknown, although it is quoted by producers as being as much as five times current supply levels.

Our discussion with experienced seafood export brokers indicates that there are few unsolicited enquiries from overseas for yabbies (and other freshwater crayfish) and that these enquiries usually cease once prices and terms of trade are discussed and found to be unattractive.

What is often overlooked in discussion on prospective yabby markets is the elasticity (strength) of the market demand and the price that buyers are willing to pay for larger volumes than have been available in the past.

A common factor creating confusion about market demand is the practice by aquaculturists of overestimating aggregate demand by giving too much credence to unqualified enquiries from “tyre kickers” and by multiple counting of the demand from seafood buyers simply because their knowledge of seafood consumption and markets is limited.

This inadvertent multiple counting by aquaculturists is a result of the propensity of seafood buyers to indicate that they could sell X times the current sales volumes if the supply were available, without adding that this prospective demand is predicated on a situation where other (competing) buyers continue to have limited supply.

Thus the aquaculturist adds the market demand suggested by buyer A with the market demand indicated by buyers B and C too and comes up with the aggregate demand $A+B+C$, whereas the demand is considerably less because while buyers A and B and C all intend to sell yabbies to particular restaurateurs or retailers (assuming that they alone have supply) these restaurateurs will not be buying yabbies from all three of these yabby buyers (A, B and C) at any one time.

The latent market demand could indeed be five or more times current sales levels of about 300 tonnes per year but it is widely agreed amongst major sellers that the market is price sensitive and is easily saturated hence we would conclude that such volumes could not be sold at current price levels if supply grew to such a level in just a few years.

Market expansion to about 1500 tonnes pa at current prices requires well planned and executed sales promotion activities, which in turn require time and money. In the absence of such promotion efforts, some innovative yabby products, a major change in seafood consumption preference or other key driving factor the price would substantially fall if supply were to increase rapidly to this level.

Figure two demonstrates the competitive environment in which yabbies are marketed; this shows that there are many competing seafoods and indeed other foods and services operating today in the Australian and overseas economic environment.

In short, the demand and prices obtained for existing yabby products in domestic and overseas markets will be determined by the resources invested in market development, particularly in

seeking new users of yabbies. As noted earlier market awareness of yabbies is low so there is indeed ample capacity to attract many new users in Australia and overseas.

We do not expect Australian yabby supply to increase dramatically over the next few years despite some overly optimistic predictions (eg Piper 2000 reported a forecast increase of 293%); supply from aquaculture is more likely to grow at the aquaculture industry average of about 100% volume growth over five years. At this rate of growth in supply (ie doubling in five years) the industry could maintain existing prices or experience only a relatively small fall in prices if it continues with the historically low investment in market development.

If supply were to increase about 293% in five years as forecast in Piper's report with a continuation of current marketing practices and budgets the yabby farming industry would almost certainly suffer substantial price falls and a decline in net returns. The challenge for the yabby industry is to increase demand in parallel with growth in supply so prices remain strong.

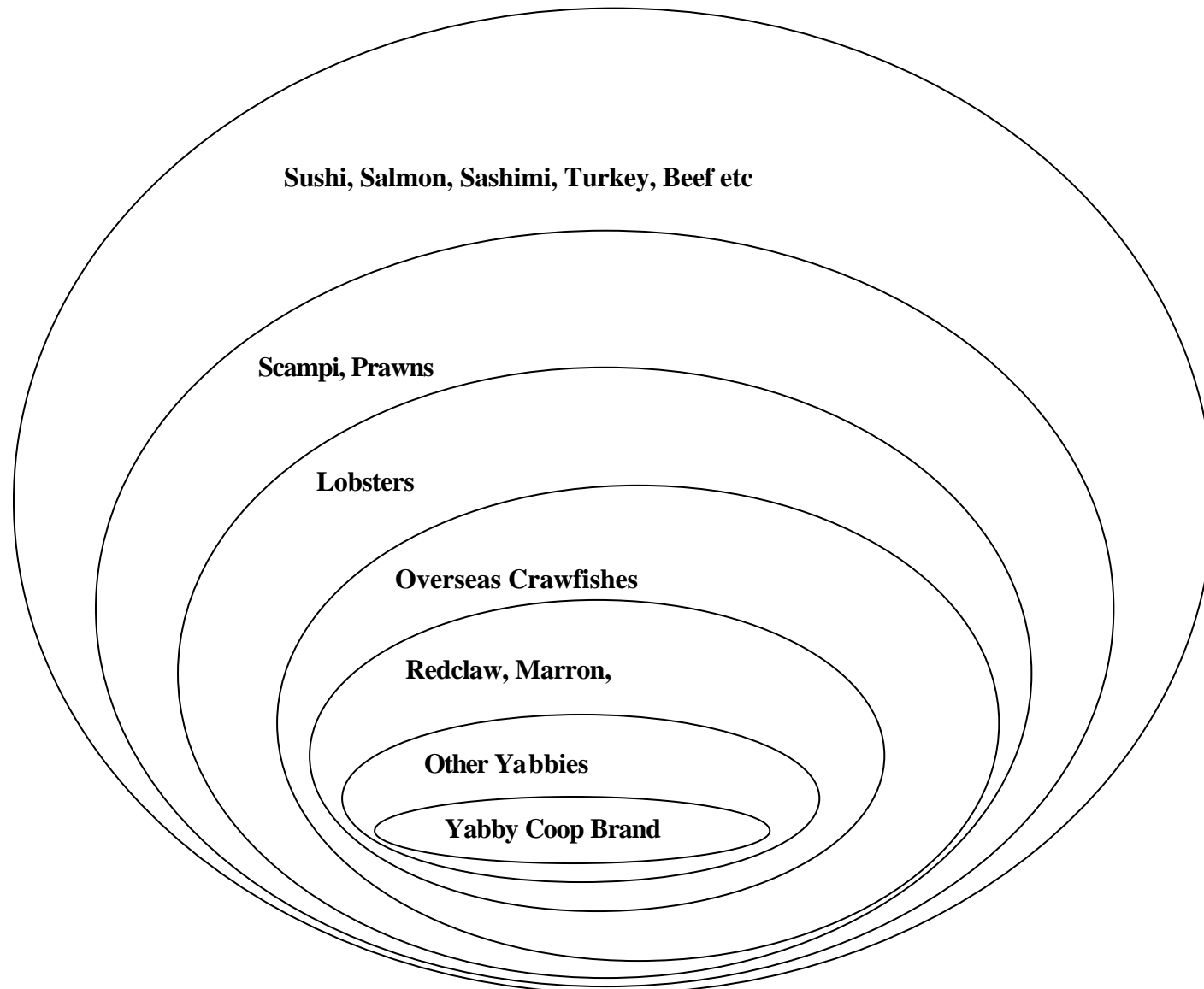
We do not see redclaw or marron as particularly strong threats to the marketing of yabbies as there is no evidence that these industries will grow any faster than yabby production or that either are planning a substantial boosts to generic promotion and market development. Wild yabby supply from NSW will grow but it is mostly lower quality and cooked and fits into different market segments to the aquaculture product and is no more a threat than other crayfish.

Thus we believe that the aquaculture yabby supply and sales volumes could possibly double over a period of a few years with a fall no greater than about 10% if the industry makes a modest increase in brand promotion. But industry can maintain current price levels and perhaps even raise them in the face of this increasing output if it makes a concerted effort at generic and brand promotion.

Hence our recommendation that a new business entering the yabby trade should budget about \$20,000 per annum for market development and promotion if it is to enter the market successfully and then maintain a significant market share. A new cooperative can use this budget to source additional funds from State and/or Commonwealth agencies (eg Supermarket to Asia project) to undertake specific in-country market research to help formulate a strong export marketing plan.

The information on existing markets and the market demand forecasts described above have been analysed to propose a number of strategies that may be used by any group in developing a marketing plan for yabbies. It should be noted however that the seafood market is dynamic and therefore these strategies should be reviewed in the light of prevailing market and economic conditions.

Figure 2. Yabby Marketing Environment. The size and closeness of each concentric ring just reflect the level of similarity of each food product to the proposed cooperative's yabbies and not necessarily the level of competition in the marketplace.



7.2 Marketing Strategies

A new cooperative should aim “To become the Australian leader in the delivery of high quality yabby products and service” and the market entry strategy to achieve this worthy mission statement is to offer superior service to customers in Australia and overseas at competitive prices.

The cooperative should become a member of the state and national crayfish associations and review the latest market information with other yabby producer-distributors or networks prior to approaching prospective customers. A frank and honest approach highlighting that it is the cooperative’s intention to compete on service and not undercut prices is crucial to establishing a constructive relationship with other yabby producer-distributors. A sound relationship enables the sharing of market and price information, without resorting to any illegal price fixing.

7.2.1 Product Strategy

The first product decision facing a new cooperative is the selection of a brand name and an appropriate logo to facilitate brand promotion, recognition of the packaging label and brand recall. The brand name selected should be easy to spell and pronounce in English and in the languages of any target markets overseas. A different brand can be used for overseas trade but two brands and the related stationary are cumbersome, costly and unnecessary.

As indicated elsewhere the focus of the proposed cooperative is on live product. The smallest supply and strongest prices for yabbies prevails for the larger grades so the new cooperative can gain some market strength in encouraging producers to maximise the proportion of the product in the larger size categories.

Producers however need to sell all size grades harvested to be profitable so the cooperative management therefore needs to concurrently develop strong demand for all size grades providing they meet the agreed product specifications for the key quality parameters (discussed in Section 6.2). There is also a need to sell seconds in order to maximise returns from these, and bait sales may prove to be a profitable market niche.

Small size grades should therefore not be dismissed as a nuisance as they are needed to provide a product range, economies of scale and to allow for a diversity of customers. The Class E landowners are more likely to have a larger proportion of smaller sizes but these can complement the larger product from more intensive production. The old adage “There is strength in numbers“ is relevant here.

Product quality and quality of service needs to be the best on offer and so a documented Service and Quality Assurance program should be developed and made available for prospective customers to examine. This QA program should be taken seriously by cooperative members and staff and price gained by producers should reflect quality; non conforming producers should feel the price penalty.

Customers should be given a quality guarantee which clearly states the survival/ vitality on offer. Common practice is to have no more than 1 to 2% mortality on delivery. Some companies have no more than 3% mortality 3 days after consignment. A guide on “How to look after our products” should accompany first consignments to new customers to help them and develop an image of expertise; growers should not assume that all seafood buyers know how to look after yabbies.

A single page Quality and Service Guarantee can be produced for distribution to all customers; this should summarise the features of the program and highlight the benefits for the customers. The service guarantee should be enforced and if possible customers compensated in some way when service is substandard.

7.2.2 New Product Development And Value Adding

As noted earlier there are a number of products produced by yabby producers in a cottage industry manner where the labour costs and overheads are mostly disregarded. There is no evidence however that production of these products increases returns for the producer, it merely provides another avenue to sell some of the seconds.

A new business needs to be up to date and innovative but new operators need to be cognisant of the fact that processing of high priced seafood such as yabbies into “value added” highly processed products such as frozen vacuum packed cooked meat or pate is accompanied by cost adding and increased financial risk.

The new HACCP based food safety requirements in Australia make special facilities and food safety plans mandatory and render such activities more costly for a new business. In short, the costs and benefits of any new product development should be carefully assessed.

Interest in organically grown food is increasing and although organically grown yabbies may not yet fetch a sufficiently attractive price premium over conventionally grown product it may give a marketing advantage as demand for organics seafood increases. This is a low risk option for product development for growers and minimal risk for a cooperative to market them; it may in fact provide a great opportunity for free publicity for the business.

Soft shell yabbies, as commonly produced commercially in Louisiana USA with crawfish, represent another innovative product worthy of attention. This trade however requires investment in special holding facilities and operating procedures (See Huner 1997) and may prove attractive if sufficient funds are available for such specialised activities.

7.2.3 Prices And Pricing Strategy

As indicated earlier a market entry based on competitive prices and terms of trade is proposed. Price levels should be explored with other yabby producer-marketers to ensure that the most up to date information is used to establish appropriate “start up” prices to help both the producers and buyers.

The flipside of the price decision is the matter of rebates for stock losses on arrival. A new business needs to be cognisant of the need for patience and tolerance in the first couple of shipments of live crayfish as mortality may be higher than average in the first few shipments.

A new cooperative also has to make a policy decision of prices relative to volumes purchased and the related question of price discounts to wholesale buyers to enable them to distribute the products in a profitable manner too.

However to make an offer to prospective new trade customers more appealing an introductory allowance/discount for market development and promotion may be offered; this may take the form of an extra 10% for free with the first order so that the cooperative’s customer can use these as free trade samples or for free tasting by consumers.

This introductory allowance needs to be offered on top of the typical overpack of about 5% which compensates buyers for water drainage and evaporation from the live crayfish in transit.

The pricing message to convey should be along the lines of “Best value for money based on high quality product and premium service”. This however needs to be coupled with strong debtor control in order to avoid bad debts and minimise losses from defaulting or weak businesses.

7.2.4 Distribution Strategy

One of the major questions to be resolved by any new entrant to the seafood market is the selection of a profitable mix of customer types (Markets, wholesalers, retailers, restaurateurs and consumer direct sales) and appropriate distribution channels to achieve desired market penetration and maximise net returns to producers. Related to this is to select a pricing policy which relates to the volume of sales; if product is sold too cheaply to restaurateurs or consumers, for example, the cooperative does not gain anything from the elimination of the “middleman”.

There is no single correct or right answer to this question, nor to the question of overseas or domestic sales alone, as the right answer will depend on the business’ location, financial resources and marketing skills.

Marketing channel decisions are best made after face to face meetings with prospective buyers so both parties understand and respect each others interests. This of course adds to the costs of interstate and overseas sales.

The major yabby marketers are using a number of overlapping distribution channels to maximise sales across the range of products they sell to customers in Australia and overseas and to optimise returns for the producers and themselves.

Direct sales to consumers should be considered with caution because they commonly generate a situation where the cooperative may be competing with its own customers and thereby raise distribution channel conflicts.

Sydney should however be a prime target market for any NSW yabby cooperative as it is a major consumer of seafood and so close yet it is currently served best by WA and SA producers shipping over long distances. “Plan global start local” can serve as a useful guiding principle, as can the old adage “Do not put all your eggs in one basket”.

The Sydney Fish Market should not be disregarded as a distribution option simply because hitherto it has not played a large role with farmed yabbies. SFM Live the Market’s electronic marketing innovation offers another distribution option.

Sweden is the largest fresh water crayfish market in Europe because of consumption in restaurants and at home, but it is very price conscious and demand is strongly seasonal (greatest in August for the festive Krafta season when there is a demand of about two thousand tonnes for the retail stores). Sweden should become attractive for Australian producers in coming years when their production levels and economies of scale increase and Swedish prices become profitable.

Japan is also of particular interest because it is a major importer of many seafood products but to date has shown little interest in yabbies and other freshwater crayfish because of low awareness and a strong preference for marine products. Nevertheless Japan too remains a challenge that warrants greater attention.

Producers should review their distribution channels regularly to ensure that they remain appropriate as the marketing environment or the members’ needs change.

7.2.5 Promotion Strategy

A new business entering the market for yabbies needs to quickly initiate a promotion plan and spend time and money seeking new customers. These can quickly be accessed through advertising and free publicity in various trade magazines and journals such as Seafood Australia, (A Sydney quarterly publication) Seafood International (A London monthly publication) or Seafood Leader (An American bimonthly publication) and by “cold calling” on known wholesalers of seafood in key cities.

Web sites are more commonly being used too for promotional purposes and cooperatives can link their own web site with various networks such as Sea-Ex in Australia, the Fishing Information Service from Tokyo or agencies such as Austrade in Canberra.

Food Fairs and seafood expos are also very useful for gaining new customers and launching new products. The Boston Seafood Show in the USA, The European Seafood Expo in Brussels and the ANUGA show in Cologne, Germany are amongst the leading ones. In Australia the Fine Food Show in Sydney and in Melbourne in alternate years have proven cost effective for many seafood marketing companies and organisations.

Twenty thousand dollars was suggested as an annual budget for market development and promotion elsewhere in this report but this represents the cash expenditure for the cooperative only. Producers need to be prepared to donate product for free samples and consumer tastings in order to generate sales and customer loyalty and help maximise the benefits from the expenditure budget.

The brand promotion by the cooperative can complement any generic promotion yabby farmers around Australia may choose to fund jointly.

The Atlantic salmon farming industry in Australia has a long history of ongoing promotion and generous donations to food industry functions to promote its product to the food trade and consumers. It provides a good example to follow.

Free publicity should be sought and public relations exercises initiated in the community to help spread the word about yabbies and make consumers and the food trade more conversant with these tasty creatures. Yabbies are photogenic creatures for the print and electronic media and lend themselves to carefully planned publicity stunts/games such as yabby races and peeling competitions. A bush tucker theme may prove useful for domestic and overseas promotion.

Individual producers should take a role in generic and brand promotion, publicity and public relations too, at a local level and on their business and recreational travels, to add to the \$20,000 per annum budgeted efforts.

Price, promotion, product and distribution are the four components of what is known as the marketing mix. Although these four factors have been discussed one after another they are inter-related and hence a change in one generates a need to re-examine and perhaps change the others to ensure that the marketing mix continues to be effective in the forever changing marketing environment.

10. CONCLUSIONS

Australian yabby supply and trade is still small, as is the redclaw and marron industry. Yabby supply volume will grow about 100% over the next five years, redclaw and marron supply will probably increase at a similar rate. This rate of increase should not present any obvious marketing difficulties for these crayfishes but producers can assure a stronger economic outcome if they invest more in market development than has been the practice.

A group of yabby producers in the Hunter area of NSW, or indeed in almost all areas of NSW are well placed to take advantage of the market opportunities in Australia and overseas because of the good climate, transport links and strong infrastructure in the state. Furthermore Sydney offers an essentially underserved market as far as yabbies are concerned and NSW producers have the capability to become the market leaders in a short time if they accept the challenges facing them.

They should think global but certainly start local. They should not be deterred by small volumes nor by the absence of year round supply.

The Australian aquaculture industry has generally not invested much in market development and promotion. But promotion will determine the fate of the yabby industry as it will other aquaculture sectors. The proposed market development and promotion budget of \$20,000 per annum may appear large to some aquaculturists but it is a relatively modest sum and an essential investment for success. The Tasmanian salmon farming industry last year spent at least \$800,000 on generic promotion alone in a three month period.

The financial analyses on a prospective yabby cooperative indicated that breakeven handling costs/charges at a turnover of 50 tonnes pa level are \$2.36 per kilo. However it is unlikely that such supply and sales level can be achieved by a new cooperative in NSW in less than a few years.

At low sales levels the fixed overhead costs of running a yabby cooperative become prohibitive and substantial losses would be incurred. At higher levels of course the prospective business looks very attractive.

The breakeven handling costs at 50 tonnes per annum throughput represents 15.7% of the estimated average selling price of yabbies. This is remarkably similar to the 14.5% charges sought by the Commercial Fishermen's Cooperative based at Newcastle to market much smaller quantities of yabbies than 50 tonnes per annum. It is also similar to the 20% of the selling price or \$2-\$3 per kilogram of a wholesaler's margin on fresh seafood.

Yabby producers have to examine the financial data and other material in this report and assess it after considering the opportunities and challenges facing a prospective cooperative in the light of their own personal risk taking profile.

There are other means of "cooperative minded yabby farmers" pooling resources to achieve all or most of their objectives without having to go the cost of establishing a new full service cooperative. Farmers have a choice of options as discussed earlier.

The decision to form a cooperative or indeed to work collaboratively in another legal entity such as a company is a personal as well as an economic one. Regardless of the legal entity utilised to

operate the business, the critical success factor is the establishment of enough commitment and trust amongst the group members to get sufficient quantity and quality of product to be profitable.

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11. APPENDIX

Appendix I. Monthly sales data from Sydney Fish Market

Sydney Fish Market yabby sales 2000.

YEAR	MONTH	PROCESS	SIZE	Total Weight	Min Price	Max Price	Ave Price
2000	1			0			
2000	2	GREEN		9.26	\$6.50	\$6.50	\$6.50
2000	2	GR	L	6.2	\$5.00	\$5.00	\$5.00
2000	2	GR	M	18.4	\$7.50	\$7.50	\$7.50
2000	2	GR	S	18.3	\$5.50	\$5.50	\$5.50
2000	3			0			
2000	4	COOKED		9.2	\$8.71	\$8.71	\$8.71
2000	4	GR		72	\$6.95	\$7.24	\$7.13
2000	5	C		100	\$8.13	\$8.13	\$8.13
2000	5	GR	XL	5.50	\$13.50	\$13.50	\$13.50
2000	6	C		954.0	\$4.38	\$8.00	\$6.83
2000	6	C	M	48	\$6.91	\$6.91	\$6.91
2000	6	GR		110	\$6.50	\$9.50	\$8.68
2000	7	C		340.0	\$6.53	\$7.05	\$6.72
2000	9	C		17	\$8.11	\$8.11	\$8.11
2000	10	C		231.5	\$7.95	\$10.29	\$9.26
2000	10	GR		20	\$4.00	\$4.00	\$4.00
2000	11	C		543.0	\$8.88	\$11.51	\$10.07
2000	12	C		479.50	\$9.57	\$14.35	\$11.38
2000	12	C	S	20	\$8.52	\$8.52	\$8.52
2000	12	GR		20	\$14.50	\$14.50	\$14.50

Appendix II.

Profit and Loss and Balance Sheets for various annual sales

Yabby Cooperative - 20t (\$5.90)
Projected Profit & Loss Statement
For the Ten Years Ending 30-6-2012

	12 Months									
	30 Jun 03	30 Jun 04	30 Jun 05	30 Jun 06	30 Jun 07	30 Jun 08	30 Jun 09	30 Jun 10	30 Jun 11	30 Jun 12
Income										
Sales	118000	121540	125186	128942	132810	136794	140898	145125	149479	153963
Less Cost of Sales										
Opening Stock	0	0	0	0	0	0	0	0	0	0
Add - Direct Costs	0	0	0	0	0	0	0	0	0	0
Less Closing Stock	0	0	0	0	0	0	0	0	0	0
Total Cost of Sales	0	0	0	0	0	0	0	0	0	0
Gross Profit	118000	121540	125186	128942	132810	136794	140898	145125	149479	153963
Gross Profit Margin	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Other Income										
Other Non-operating Income	0	0	0	0	0	0	0	0	0	0
Other Operating Income	0	0	0	0	0	0	0	0	0	0
Total Other Income	0	0	0	0	0	0	0	0	0	0
Less Expenses										
Accountancy/Bank Fees	2100	2100	2163	2228	2295	2364	2434	2508	2583	2660
Consultants/Contractors	0	0	0	0	0	0	0	0	0	0
Electricity	3000	3000	3090	3183	3278	3377	3478	3582	3690	3800
Employees										
Superannuation	4500	4635	4774	4917	5065	5217	5373	5534	5700	5871
Wages	50000	51500	53045	54636	56275	57964	59703	61494	63339	65239
Workcover	500	515	530	546	563	580	597	615	633	652
Education/Training	0	0	0	0	0	0	0	0	0	0
Fuel & Oils	0	0	0	0	0	0	0	0	0	0
Insurance										
Stock	3000	3000	3090	3183	3278	3377	3478	3582	3690	3800
Public Liability	500	500	515	530	546	563	580	597	615	633
Fire/Burglary	500	500	515	530	546	563	580	597	615	633
Machinery Breakdown	500	500	515	530	546	563	580	597	615	633
Household	0	0	0	0	0	0	0	0	0	0
Personal Disability	500	500	515	530	546	563	580	597	615	633
Interest										
Loan	0	0	0	0	0	0	0	0	0	0
Overdraft	941	274	0	0	0	0	0	0	0	0
Lease Charges	0	0	0	0	0	0	0	0	0	0
Legal Expenses	10000	0	0	0	0	0	0	0	0	0
Licences (inc. Rego. Business Name)	2000	2000	2060	2122	2185	2251	2319	2388	2460	2534
Lab Supplies/Chemicals	0	0	0	0	0	0	0	0	0	0
Motor Vehicle										
Fuel	4800	4800	4944	5092	5245	5402	5565	5731	5903	6080
Insurance	500	500	515	530	546	563	580	597	615	633
Registration	500	500	515	530	546	563	580	597	615	633
Repairs & Maintenance	2400	2400	2472	2546	2623	2701	2782	2866	2952	3040
Other/Miscellaneous	2400	2400	2472	2546	2623	2701	2782	2866	2952	3040
Protective Clothing	0	0	0	0	0	0	0	0	0	0
Water	2100	2100	2163	2228	2295	2364	2434	2508	2583	2660
Rent	0	0	0	0	0	0	0	0	0	0
Rep. & Maint.	3960	3960	4079	4201	4327	4457	4591	4728	4870	5016
Subscriptions	0	0	0	0	0	0	0	0	0	0
Telephone	1500	1500	1545	1591	1639	1688	1739	1791	1845	1900
Market Development	20000	20000	20600	21218	21855	22510	23186	23881	24598	25335
QA System	5000	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
Depreciation										
Plant & Equipment	5487	2987	2987	2987	2987	2735	845	585	0	0
Fixtures & Fittings	1020	1020	1020	1020	1920	0	0	0	0	0
Land & Buildings	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500
Motor Vehicles	6000	6000	6000	6000	6000	6016	6000	6000	6000	5984
Total Expenses	138209	121691	124624	127928	132230	133580	135283	138741	141986	145914
Operating Profit (Loss) Before Tax	(20209)	(151)	562	1014	580	3215	5615	6384	7493	8049
Taxable Profit (Excluding Private Use)	(20209)	(151)	562	1014	580	3215	5615	6384	7493	8049
Less Tax Expense	0	0	0	0	0	0	0	0	1621	2898
Profit (Loss) After Tax Before Drawings	(20209)	(151)	562	1014	580	3215	5615	6384	5872	5152
Breakeven Year	By Year4									
Break Even Sales	138,209	121,691	124,624	127,928	132,230	133,580	135,283	138,741	141,986	145,914

Yabby Cooperative - 20t (\$5.90)
Projected Balance Sheet
For the Ten Years Ending 30-6-2012

	12 Months									
	30 Jun 03	30 Jun 04	30 Jun 05	30 Jun 06	30 Jun 07	30 Jun 08	30 Jun 09	30 Jun 10	30 Jun 11	30 Jun 12
Current Assets										
Cash at Bank	11698	26054	53277	81317	110198	109945	140584	172143	204649	236508
Debtors	0	0	(12154)	(24673)	(37567)	(50848)	(64527)	(78617)	(93130)	(108077)
Stock	0	0	0	0	0	0	0	0	0	0
Total	11698	26054	41123	56644	72631	59097	76057	93526	111519	128431
Non-Current Assets										
Fixtures & Fittings	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000
Less Accumulated Depreciation	1020	2040	3060	4080	6000	6000	6000	6000	6000	6000
	4980	3960	2940	1920	0	0	0	0	0	0
Land & Buildings	90000	90000	90000	90000	90000	90000	90000	90000	90000	90000
Less Accumulated Amortisation	4500	9000	13500	18000	22500	27000	31500	36000	40500	45000
	85500	81000	76500	72000	67500	63000	58500	54000	49500	45000
Motor Vehicles	30000	30000	30000	30000	30000	60000	60000	60000	60000	60000
Less Accumulated Depreciation	6000	12000	18000	24000	30000	36016	42016	48016	54016	60000
	24000	18000	12000	6000	0	23984	17984	11984	5984	0
Plant & Equipment	21600	21600	21600	21600	21600	21600	21600	21600	21600	21600
Less Accumulated Depreciation	5487	8474	11461	14448	17435	20170	21015	21600	21600	21600
	16113	13126	10139	7152	4165	1430	585	0	0	0
Total	130593	116086	101579	87072	71665	88414	77069	65984	55484	45000
TOTAL ASSETS	142291	142140	142702	143716	144296	147510	153126	159510	167003	173431
Current Liabilities										
Overdraft	0	0	0	0	0	0	0	0	0	0
Creditors	0	0	0	0	0	0	0	0	0	0
Provision for Tax	0	0	0	0	0	0	0	0	1621	2898
Loans	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1621	2898
Non-Current Liabilities										
Loans	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Total Liabilities	0	0	0	0	0	0	0	0	1621	2898
Proprietor's/Partners' Capital										
Capital Introduced	162500	162500	162500	162500	162500	162500	162500	162500	162500	162500
Accumulated Profits/Losses	(20209)	(20360)	(19798)	(18784)	(18204)	(14990)	(9374)	(2990)	2882	8033
Less Accumulated Drawings	0	0	0	0	0	0	0	0	0	0
Total Funds	142291	142140	142702	143716	144296	147510	153126	159510	165382	170533
TOTAL LIABILITIES & FUNDS	142291	142140	142702	143716	144296	147510	153126	159510	167003	173431

Yabby Cooperative - 20t (\$2.36)
Projected Profit & Loss Statement
For the Ten Years Ending 30-6-2012

	12 Months									
	30 Jun 03	30 Jun 04	30 Jun 05	30 Jun 06	30 Jun 07	30 Jun 08	30 Jun 09	30 Jun 10	30 Jun 11	30 Jun 12
Income										
Sales	47200	48616	50074	51577	53124	54718	56359	58050	59792	61585
Less Cost of Sales										
Opening Stock	0	0	0	0	0	0	0	0	0	0
Add - Direct Costs	0	0	0	0	0	0	0	0	0	0
Less Closing Stock	0	0	0	0	0	0	0	0	0	0
Total Cost of Sales	0	0	0	0	0	0	0	0	0	0
Gross Profit	47200	48616	50074	51577	53124	54718	56359	58050	59792	61585
Gross Profit Margin	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Other Income										
Other Non-operating Income	0	0	0	0	0	0	0	0	0	0
Other Operating Income	0	0	0	0	0	0	0	0	0	0
Total Other Income	0	0	0	0	0	0	0	0	0	0
Less Expenses										
Accountancy/Bank Fees	2100	2100	2163	2228	2295	2364	2434	2508	2583	2660
Consultants/Contractors	0	0	0	0	0	0	0	0	0	0
Electricity	3000	3000	3090	3183	3278	3377	3478	3582	3690	3800
Employees										
Superannuation	4500	4635	4774	4917	5065	5217	5373	5534	5700	5871
Wages	50000	51500	53045	54636	56275	57964	59703	61494	63339	65239
Workcover	500	515	530	546	563	580	597	615	633	652
Education/Training	0	0	0	0	0	0	0	0	0	0
Fuel & Oils	0	0	0	0	0	0	0	0	0	0
Insurance										
Stock	3000	3000	3090	3183	3278	3377	3478	3582	3690	3800
Public Liability	500	500	515	530	546	563	580	597	615	633
Fire/Burglary	500	500	515	530	546	563	580	597	615	633
Machinery Breakdown	500	500	515	530	546	563	580	597	615	633
Household	0	0	0	0	0	0	0	0	0	0
Personal Disability	500	500	515	530	546	563	580	597	615	633
Interest										
Loan	0	0	0	0	0	0	0	0	0	0
Overdraft	3548	10024	15802	23240	31624	43365	55010	67246	80948	96274
Lease Charges	0	0	0	0	0	0	0	0	0	0
Legal Expenses	10000	0	0	0	0	0	0	0	0	0
Licences (inc. Rego. Business Name)	2000	2000	2060	2122	2185	2251	2319	2388	2460	2534
Lab Supplies/Chemicals	0	0	0	0	0	0	0	0	0	0
Motor Vehicle										
Fuel	4800	4800	4944	5092	5245	5402	5565	5731	5903	6080
Insurance	500	500	515	530	546	563	580	597	615	633
Registration	500	500	515	530	546	563	580	597	615	633
Repairs & Maintenance	2400	2400	2472	2546	2623	2701	2782	2866	2952	3040
Other/Miscellaneous	2400	2400	2472	2546	2623	2701	2782	2866	2952	3040
Protective Clothing	0	0	0	0	0	0	0	0	0	0
Water	2100	2100	2163	2228	2295	2364	2434	2508	2583	2660
Rent	0	0	0	0	0	0	0	0	0	0
Rep. & Maint.	3960	3960	4079	4201	4327	4457	4591	4728	4870	5016
Subscriptions	0	0	0	0	0	0	0	0	0	0
Telephone	1500	1500	1545	1591	1639	1688	1739	1791	1845	1900
Market Development	20000	20000	20600	21218	21855	22510	23186	23881	24598	25335
QA System	5000	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
Depreciation										
Plant & Equipment	5487	2987	2987	2987	2987	2735	845	585	0	0
Fixtures & Fittings	1020	1020	1020	1020	1920	0	0	0	0	0
Land & Buildings	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500
Motor Vehicles	6000	6000	6000	6000	6000	6016	6000	6000	6000	5984
Total Expenses	140815	131441	140426	151168	163855	176945	190293	205987	222934	242188
Operating Profit (Loss) Before Tax	(93615)	(82825)	(90352)	(99591)	(110731)	(122227)	(133933)	(147937)	(163142)	(180602)
Taxable Profit (Excluding Private Use)	(93615)	(82825)	(90352)	(99591)	(110731)	(122227)	(133933)	(147937)	(163142)	(180602)
Less Tax Expense	0	0	0	0	0	0	0	0	0	0
Profit (Loss) After Tax Before Drawings	(93615)	(82825)	(90352)	(99591)	(110731)	(122227)	(133933)	(147937)	(163142)	(180602)
Break-even Year	Not by Year10									
Break Even Sales	140,815	131,441	140,426	151,168	163,855	176,945	190,293	205,987	222,934	242,188

Yabby Cooperative - 20t (\$2.36)
Projected Balance Sheet
For the Ten Years Ending 30-6-2012

	12 Months									
	30 Jun 03	30 Jun 04	30 Jun 05	30 Jun 06	30 Jun 07	30 Jun 08	30 Jun 09	30 Jun 10	30 Jun 11	30 Jun 12
Current Assets										
Cash at Bank	0	0	0	0	0	0	0	0	0	0
Debtors	0	0	(4862)	(9869)	(15027)	(20339)	(25811)	(31447)	(37252)	(43231)
Stock	0	0	0	0	0	0	0	0	0	0
Total	0	0	(4862)	(9869)	(15027)	(20339)	(25811)	(31447)	(37252)	(43231)
Non-Current Assets										
Fixtures & Fittings	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000
Less Accumulated Depreciation	1020	2040	3060	4080	6000	6000	6000	6000	6000	6000
	4980	3960	2940	1920	0	0	0	0	0	0
Land & Buildings	90000	90000	90000	90000	90000	90000	90000	90000	90000	90000
Less Accumulated Amortisation	4500	9000	13500	18000	22500	27000	31500	36000	40500	45000
	85500	81000	76500	72000	67500	63000	58500	54000	49500	45000
Motor Vehicles	30000	30000	30000	30000	30000	60000	60000	60000	60000	60000
Less Accumulated Depreciation	6000	12000	18000	24000	30000	36016	42016	48016	54016	60000
	24000	18000	12000	6000	0	23984	17984	11984	5984	0
Plant & Equipment	21600	21600	21600	21600	21600	21600	21600	21600	21600	21600
Less Accumulated Depreciation	5487	8474	11461	14448	17435	20170	21015	21600	21600	21600
	16113	13126	10139	7152	4165	1430	585	0	0	0
Total	130593	116086	101579	87072	71665	88414	77069	65984	55484	45000
TOTAL ASSETS	130593	116086	96717	77203	56638	68074	51258	34537	18232	1769
Current Liabilities										
Overdraft	61708	130026	201010	281086	371253	504916	622032	753248	900085	1064225
Creditors	0	0	0	0	0	0	0	0	0	0
Provision for Tax	0	0	0	0	0	0	0	0	0	0
Loans	0	0	0	0	0	0	0	0	0	0
Total	61708	130026	201010	281086	371253	504916	622032	753248	900085	1064225
Non-Current Liabilities										
Loans	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Total Liabilities	61708	130026	201010	281086	371253	504916	622032	753248	900085	1064225
Proprietor's/Partners' Capital										
Capital Introduced	162500	162500	162500	162500	162500	162500	162500	162500	162500	162500
Accumulated Profits/Losses	(93615)	(176440)	(266792)	(366384)	(477114)	(599341)	(733275)	(881211)	(1044353)	(1224956)
Less Accumulated Drawings	0	0	0	0	0	0	0	0	0	0
Total Funds	68885	(13940)	(104292)	(203884)	(314614)	(436841)	(570775)	(718711)	(881853)	(1062456)
TOTAL LIABILITIES & FUNDS	130593	116086	96717	77203	56638	68074	51258	34537	18232	1769

Yabby Cooperative - 30t (\$3.93)
Projected Profit & Loss Statement
For the Ten Years Ending 30-6-2012

	12 Months									
	30 Jun 03	30 Jun 04	30 Jun 05	30 Jun 06	30 Jun 07	30 Jun 08	30 Jun 09	30 Jun 10	30 Jun 11	30 Jun 12
Income										
Sales	117990	121530	125176	128931	132799	136783	140886	145113	149466	153950
Less Cost of Sales										
Opening Stock	0	0	0	0	0	0	0	0	0	0
Add - Direct Costs	0	0	0	0	0	0	0	0	0	0
Less Closing Stock	0	0	0	0	0	0	0	0	0	0
Total Cost of Sales	0	0	0	0	0	0	0	0	0	0
Gross Profit	117990	121530	125176	128931	132799	136783	140886	145113	149466	153950
Gross Profit Margin	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Other Income										
Other Non-operating Income	0	0	0	0	0	0	0	0	0	0
Other Operating Income	0	0	0	0	0	0	0	0	0	0
Total Other Income	0	0	0	0	0	0	0	0	0	0
Less Expenses										
Accountancy/Bank Fees	2100	2100	2163	2228	2295	2364	2434	2508	2583	2660
Consultants/Contractors	0	0	0	0	0	0	0	0	0	0
Electricity	3000	3000	3090	3183	3278	3377	3478	3582	3690	3800
Employees										
Superannuation	4500	4635	4774	4917	5065	5217	5373	5534	5700	5871
Wages	50000	51500	53045	54636	56275	57964	59703	61494	63339	65239
Workcover	500	515	530	546	563	580	597	615	633	652
Education/Training	0	0	0	0	0	0	0	0	0	0
Fuel & Oils	0	0	0	0	0	0	0	0	0	0
Insurance										
Stock	3000	3000	3090	3183	3278	3377	3478	3582	3690	3800
Public Liability	500	500	515	530	546	563	580	597	615	633
Fire/Burglary	500	500	515	530	546	563	580	597	615	633
Machinery Breakdown	500	500	515	530	546	563	580	597	615	633
Household	0	0	0	0	0	0	0	0	0	0
Personal Disability	500	500	515	530	546	563	580	597	615	633
Interest										
Loan	0	0	0	0	0	0	0	0	0	0
Overdraft	942	275	0	0	0	0	0	0	0	0
Lease Charges	0	0	0	0	0	0	0	0	0	0
Legal Expenses	10000	0	0	0	0	0	0	0	0	0
Licences (inc. Rego. Business Name)	2000	2000	2060	2122	2185	2251	2319	2388	2460	2534
Lab Supplies/Chemicals	0	0	0	0	0	0	0	0	0	0
Motor Vehicle										
Fuel	4800	4800	4944	5092	5245	5402	5565	5731	5903	6080
Insurance	500	500	515	530	546	563	580	597	615	633
Registration	500	500	515	530	546	563	580	597	615	633
Repairs & Maintenance	2400	2400	2472	2546	2623	2701	2782	2866	2952	3040
Other/Miscellaneous	2400	2400	2472	2546	2623	2701	2782	2866	2952	3040
Protective Clothing	0	0	0	0	0	0	0	0	0	0
Water	2100	2100	2163	2228	2295	2364	2434	2508	2583	2660
Rent	0	0	0	0	0	0	0	0	0	0
Rep. & Maint.	3960	3960	4079	4201	4327	4457	4591	4728	4870	5016
Subscriptions	0	0	0	0	0	0	0	0	0	0
Telephone	1500	1500	1545	1591	1639	1688	1739	1791	1845	1900
Market Development	20000	20000	20600	21218	21855	22510	23186	23881	24598	25335
QA System	5000	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
Depreciation										
Plant & Equipment	5487	2987	2987	2987	2987	2735	845	585	0	0
Fixtures & Fittings	1020	1020	1020	1020	1920	0	0	0	0	0
Land & Buildings	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500
Motor Vehicles	6000	6000	6000	6000	6000	6016	6000	6000	6000	5984
Total Expenses	138209	121692	124624	127928	132230	133580	135283	138741	141986	145914
Operating Profit (Loss) Before Tax	(20219)	(162)	551	1003	568	3203	5603	6372	7480	8036
Taxable Profit (Excluding Private Use)	(20219)	(162)	551	1003	568	3203	5603	6372	7480	8036
Less Tax Expense	0	0	0	0	0	0	0	0	1584	2893
Profit (Loss) After Tax Before Drawings	(20219)	(162)	551	1003	568	3203	5603	6372	5896	5143
Break-even Year	By Year4									
Break Even Sales	138,209	121,692	124,624	127,928	132,230	133,580	135,283	138,741	141,986	145,914

Yabby Cooperative - 30t (\$3.93)
Projected Balance Sheet
For the Ten Years Ending 30-6-2012

	12 Months									
	30 Jun 03	30 Jun 04	30 Jun 05	30 Jun 06	30 Jun 07	30 Jun 08	30 Jun 09	30 Jun 10	30 Jun 11	30 Jun 12
Current Assets										
Cash at Bank	11688	26033	53245	81272	110141	109875	140501	172047	204538	236421
Debtors	0	0	(12153)	(24671)	(37564)	(50843)	(64522)	(78610)	(93122)	(108068)
Stock	0	0	0	0	0	0	0	0	0	0
Total	11688	26033	41092	56602	72577	59032	75980	93436	111417	128352
Non-Current Assets										
Fixtures & Fittings	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000
Less Accumulated Depreciation	1020	2040	3060	4080	6000	6000	6000	6000	6000	6000
	4980	3960	2940	1920	0	0	0	0	0	0
Land & Buildings	90000	90000	90000	90000	90000	90000	90000	90000	90000	90000
Less Accumulated Amortisation	4500	9000	13500	18000	22500	27000	31500	36000	40500	45000
	85500	81000	76500	72000	67500	63000	58500	54000	49500	45000
Motor Vehicles	30000	30000	30000	30000	30000	60000	60000	60000	60000	60000
Less Accumulated Depreciation	6000	12000	18000	24000	30000	36016	42016	48016	54016	60000
	24000	18000	12000	6000	0	23984	17984	11984	5984	0
Plant & Equipment	21600	21600	21600	21600	21600	21600	21600	21600	21600	21600
Less Accumulated Depreciation	5487	8474	11461	14448	17435	20170	21015	21600	21600	21600
	16113	13126	10139	7152	4165	1430	585	0	0	0
Total	130593	116086	101579	87072	71665	88414	77069	65984	55484	45000
TOTAL ASSETS	142281	142119	142671	143674	144242	147445	153048	159420	166900	173352
Current Liabilities										
Overdraft	0	0	0	0	0	0	0	0	0	0
Creditors	0	0	0	0	0	0	0	0	0	0
Provision for Tax	0	0	0	0	0	0	0	0	1584	2893
Loans	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1584	2893
Non-Current Liabilities										
Loans	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Total Liabilities	0	0	0	0	0	0	0	0	1584	2893
Proprietor's/Partners' Capital										
Capital Introduced	162500	162500	162500	162500	162500	162500	162500	162500	162500	162500
Accumulated Profits/Losses	(20219)	(20381)	(19829)	(18826)	(18258)	(15055)	(9452)	(3080)	2816	7959
Less Accumulated Drawings	0	0	0	0	0	0	0	0	0	0
Total Funds	142281	142119	142671	143674	144242	147445	153048	159420	165316	170459
TOTAL LIABILITIES & FUNDS	142281	142119	142671	143674	144242	147445	153048	159420	166900	173352

Yabby Cooperative - 30t (\$2.36)
Projected Profit & Loss Statement
For the Ten Years Ending 30-6-2012

	12 Months									
	30 Jun 03	30 Jun 04	30 Jun 05	30 Jun 06	30 Jun 07	30 Jun 08	30 Jun 09	30 Jun 10	30 Jun 11	30 Jun 12
Income										
Sales	70800	72924	75112	77365	79686	82077	84539	87075	89687	92378
Less Cost of Sales										
Opening Stock	0	0	0	0	0	0	0	0	0	0
Add - Direct Costs	0	0	0	0	0	0	0	0	0	0
Less Closing Stock	0	0	0	0	0	0	0	0	0	0
Total Cost of Sales	0	0	0	0	0	0	0	0	0	0
Gross Profit	70800	72924	75112	77365	79686	82077	84539	87075	89687	92378
Gross Profit Margin	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Other Income										
Other Non-operating Income	0	0	0	0	0	0	0	0	0	0
Other Operating Income	0	0	0	0	0	0	0	0	0	0
Total Other Income	0	0	0	0	0	0	0	0	0	0
Less Expenses										
Accountancy/Bank Fees	2100	2100	2163	2228	2295	2364	2434	2508	2583	2660
Consultants/Contractors	0	0	0	0	0	0	0	0	0	0
Electricity	3000	3000	3090	3183	3278	3377	3478	3582	3690	3800
Employees	0	0	0	0	0	0	0	0	0	0
Superannuation	4500	4635	4774	4917	5065	5217	5373	5534	5700	5871
Wages	50000	51500	53045	54636	56275	57964	59703	61494	63339	65239
Workcover	500	515	530	546	563	580	597	615	633	652
Education/Training	0	0	0	0	0	0	0	0	0	0
Fuel & Oils	0	0	0	0	0	0	0	0	0	0
Insurance	0	0	0	0	0	0	0	0	0	0
Stock	3000	3000	3090	3183	3278	3377	3478	3582	3690	3800
Public Liability	500	500	515	530	546	563	580	597	615	633
Fire/Burglary	500	500	515	530	546	563	580	597	615	633
Machinery Breakdown	500	500	515	530	546	563	580	597	615	633
Household	0	0	0	0	0	0	0	0	0	0
Personal Disability	500	500	515	530	546	563	580	597	615	633
Interest	0	0	0	0	0	0	0	0	0	0
Loan	0	0	0	0	0	0	0	0	0	0
Overdraft	2643	6526	9424	13320	17708	24949	31534	38092	45429	53629
Lease Charges	0	0	0	0	0	0	0	0	0	0
Legal Expenses	10000	0	0	0	0	0	0	0	0	0
Licences (inc. Rego. Business Name)	2000	2000	2060	2122	2185	2251	2319	2388	2460	2534
Lab Supplies/Chemicals	0	0	0	0	0	0	0	0	0	0
Motor Vehicle	0	0	0	0	0	0	0	0	0	0
Fuel	4800	4800	4944	5092	5245	5402	5565	5731	5903	6080
Insurance	500	500	515	530	546	563	580	597	615	633
Registration	500	500	515	530	546	563	580	597	615	633
Repairs & Maintenance	2400	2400	2472	2546	2623	2701	2782	2866	2952	3040
Other/Miscellaneous	2400	2400	2472	2546	2623	2701	2782	2866	2952	3040
Protective Clothing	0	0	0	0	0	0	0	0	0	0
Water	2100	2100	2163	2228	2295	2364	2434	2508	2583	2660
Rent	0	0	0	0	0	0	0	0	0	0
Rep. & Maint.	3960	3960	4079	4201	4327	4457	4591	4728	4870	5016
Subscriptions	0	0	0	0	0	0	0	0	0	0
Telephone	1500	1500	1545	1591	1639	1688	1739	1791	1845	1900
Market Development	20000	20000	20600	21218	21855	22510	23186	23881	24598	25335
QA System	5000	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
Depreciation										
Plant & Equipment	5487	2987	2987	2987	2987	2735	845	585	0	0
Fixtures & Fittings	1020	1020	1020	1020	1920	0	0	0	0	0
Land & Buildings	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500
Motor Vehicles	6000	6000	6000	6000	6000	6016	6000	6000	6000	5984
Total Expenses	139910	127943	134048	141248	149939	158528	166818	176833	187415	199543
Operating Profit (Loss) Before Tax	(69110)	(55019)	(58937)	(63883)	(70253)	(76452)	(82279)	(89758)	(97727)	(107165)
Taxable Profit (Excluding Private Use)	(69110)	(55019)	(58937)	(63883)	(70253)	(76452)	(82279)	(89758)	(97727)	(107165)
Less Tax Expense	0	0	0	0	0	0	0	0	0	0
Profit (Loss) After Tax Before Drawings	(69110)	(55019)	(58937)	(63883)	(70253)	(76452)	(82279)	(89758)	(97727)	(107165)
Breakeven Year	Not by Year10									
Break Even Sales	139,910	127,943	134,048	141,248	149,939	158,528	166,818	176,833	187,415	199,543

Yabby Cooperative - 30t (\$2.36)
Projected Balance Sheet
For the Ten Years Ending 30-6-2012

	12 Months									
	30 Jun 03	30 Jun 04	30 Jun 05	30 Jun 06	30 Jun 07	30 Jun 08	30 Jun 09	30 Jun 10	30 Jun 11	30 Jun 12
Current Assets										
Cash at Bank	0	0	0	0	0	0	0	0	0	0
Debtors	0	0	(7292)	(14804)	(22540)	(30509)	(38716)	(47170)	(55878)	(64846)
Stock	0	0	0	0	0	0	0	0	0	0
Total	0	0	(7292)	(14804)	(22540)	(30509)	(38716)	(47170)	(55878)	(64846)
Non-Current Assets										
Fixtures & Fittings	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000
Less Accumulated Depreciation	1020	2040	3060	4080	6000	6000	6000	6000	6000	6000
	4980	3960	2940	1920	0	0	0	0	0	0
Land & Buildings	90000	90000	90000	90000	90000	90000	90000	90000	90000	90000
Less Accumulated Amortisation	4500	9000	13500	18000	22500	27000	31500	36000	40500	45000
	85500	81000	76500	72000	67500	63000	58500	54000	49500	45000
Motor Vehicles	30000	30000	30000	30000	30000	60000	60000	60000	60000	60000
Less Accumulated Depreciation	6000	12000	18000	24000	30000	36016	42016	48016	54016	60000
	24000	18000	12000	6000	0	23984	17984	11984	5984	0
Plant & Equipment	21600	21600	21600	21600	21600	21600	21600	21600	21600	21600
Less Accumulated Depreciation	5487	8474	11461	14448	17435	20170	21015	21600	21600	21600
	16113	13126	10139	7152	4165	1430	585	0	0	0
Total	130593	116086	101579	87072	71665	88414	77069	65984	55484	45000
TOTAL ASSETS	130593	116086	94287	72268	49125	57905	38352	18813	(394)	(19846)
Current Liabilities										
Overdraft	37203	77715	114852	156717	203826	289058	351784	422003	500523	588236
Creditors	0	0	0	0	0	0	0	0	0	0
Provision for Tax	0	0	0	0	0	0	0	0	0	0
Loans	0	0	0	0	0	0	0	0	0	0
Total	37203	77715	114852	156717	203826	289058	351784	422003	500523	588236
Non-Current Liabilities										
Loans	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Total Liabilities	37203	77715	114852	156717	203826	289058	351784	422003	500523	588236
Proprietor's/Partners' Capital										
Capital Introduced	162500	162500	162500	162500	162500	162500	162500	162500	162500	162500
Accumulated Profits/Losses	(69110)	(124129)	(183066)	(246949)	(317201)	(393653)	(475932)	(565690)	(663417)	(770582)
Less Accumulated Drawings	0	0	0	0	0	0	0	0	0	0
Total Funds	93390	38371	(20566)	(84449)	(154701)	(231153)	(313432)	(403190)	(500917)	(608082)
TOTAL LIABILITIES & FUNDS	130593	116086	94287	72268	49125	57905	38352	18813	(394)	(19846)

Yabby Cooperative - 40t (\$2.95)
Projected Profit & Loss Statement
For the Ten Years Ending 30-6-2012

	12 Months									
	30 Jun 03	30 Jun 04	30 Jun 05	30 Jun 06	30 Jun 07	30 Jun 08	30 Jun 09	30 Jun 10	30 Jun 11	30 Jun 12
Income										
Sales	118000	121540	125186	128942	132810	136794	140898	145125	149479	153963
Less Cost of Sales										
Opening Stock	0	0	0	0	0	0	0	0	0	0
Add - Direct Costs	0	0	0	0	0	0	0	0	0	0
Less Closing Stock	0	0	0	0	0	0	0	0	0	0
Total Cost of Sales	0	0	0	0	0	0	0	0	0	0
Gross Profit	118000	121540	125186	128942	132810	136794	140898	145125	149479	153963
Gross Profit Margin	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Other Income										
Other Non-operating Income	0	0	0	0	0	0	0	0	0	0
Other Operating Income	0	0	0	0	0	0	0	0	0	0
Total Other Income	0	0	0	0	0	0	0	0	0	0
Less Expenses										
Accountancy/Bank Fees	2100	2100	2163	2228	2295	2364	2434	2508	2583	2660
Consultants/Contractors	0	0	0	0	0	0	0	0	0	0
Electricity	3000	3000	3090	3183	3278	3377	3478	3582	3690	3800
Employees										
Superannuation	4500	4635	4774	4917	5065	5217	5373	5534	5700	5871
Wages	50000	51500	53045	54636	56275	57964	59703	61494	63339	65239
Workcover	500	515	530	546	563	580	597	615	633	652
Education/Training	0	0	0	0	0	0	0	0	0	0
Fuel & Oils	0	0	0	0	0	0	0	0	0	0
Insurance										
Stock	3000	3000	3090	3183	3278	3377	3478	3582	3690	3800
Public Liability	500	500	515	530	546	563	580	597	615	633
Fire/Burglary	500	500	515	530	546	563	580	597	615	633
Machinery Breakdown	500	500	515	530	546	563	580	597	615	633
Household	0	0	0	0	0	0	0	0	0	0
Personal Disability	500	500	515	530	546	563	580	597	615	633
Interest										
Loan	0	0	0	0	0	0	0	0	0	0
Overdraft	941	274	0	0	0	0	0	0	0	0
Lease Charges	0	0	0	0	0	0	0	0	0	0
Legal Expenses	10000	0	0	0	0	0	0	0	0	0
Licences (inc. Rego. Business Name)	2000	2000	2060	2122	2185	2251	2319	2388	2460	2534
Lab Supplies/Chemicals	0	0	0	0	0	0	0	0	0	0
Motor Vehicle										
Fuel	4800	4800	4944	5092	5245	5402	5565	5731	5903	6080
Insurance	500	500	515	530	546	563	580	597	615	633
Registration	500	500	515	530	546	563	580	597	615	633
Repairs & Maintenance	2400	2400	2472	2546	2623	2701	2782	2866	2952	3040
Other/Miscellaneous	2400	2400	2472	2546	2623	2701	2782	2866	2952	3040
Protective Clothing	0	0	0	0	0	0	0	0	0	0
Water	2100	2100	2163	2228	2295	2364	2434	2508	2583	2660
Rent	0	0	0	0	0	0	0	0	0	0
Rep. & Maint.	3960	3960	4079	4201	4327	4457	4591	4728	4870	5016
Subscriptions	0	0	0	0	0	0	0	0	0	0
Telephone	1500	1500	1545	1591	1639	1688	1739	1791	1845	1900
Market Development	20000	20000	20600	21218	21855	22510	23186	23881	24598	25335
QA System	5000	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
Depreciation										
Plant & Equipment	5487	2987	2987	2987	2987	2735	845	585	0	0
Fixtures & Fittings	1020	1020	1020	1020	1920	0	0	0	0	0
Land & Buildings	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500
Motor Vehicles	6000	6000	6000	6000	6000	6016	6000	6000	6000	5984
Total Expenses	138209	121691	124624	127928	132230	133580	135283	138741	141986	145914
Operating Profit (Loss) Before Tax	(20209)	(151)	562	1014	580	3215	5615	6384	7493	8049
Taxable Profit (Excluding Private Use)	(20209)	(151)	562	1014	580	3215	5615	6384	7493	8049
Less Tax Expense	0	0	0	0	0	0	0	0	1621	2898
Profit (Loss) After Tax Before Drawings	(20209)	(151)	562	1014	580	3215	5615	6384	5872	5152
Break-even Year	By Year4									
Break Even Sales	138,209	121,691	124,624	127,928	132,230	133,580	135,283	138,741	141,986	145,914

Yabby Cooperative - 40t (\$2.95)
Projected Balance Sheet
For the Ten Years Ending 30-6-2012

	12 Months									
	30 Jun 03	30 Jun 04	30 Jun 05	30 Jun 06	30 Jun 07	30 Jun 08	30 Jun 09	30 Jun 10	30 Jun 11	30 Jun 12
Current Assets										
Cash at Bank	11698	26054	53277	81317	110198	109945	140584	172143	204649	236508
Debtors	0	0	(12154)	(24673)	(37567)	(50848)	(64527)	(78617)	(93130)	(108077)
Stock	0	0	0	0	0	0	0	0	0	0
Total	11698	26054	41123	56644	72631	59097	76057	93526	111519	128431
Non-Current Assets										
Fixtures & Fittings	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000
Less Accumulated Depreciation	1020	2040	3060	4080	6000	6000	6000	6000	6000	6000
	4980	3960	2940	1920	0	0	0	0	0	0
Land & Buildings	90000	90000	90000	90000	90000	90000	90000	90000	90000	90000
Less Accumulated Amortisation	4500	9000	13500	18000	22500	27000	31500	36000	40500	45000
	85500	81000	76500	72000	67500	63000	58500	54000	49500	45000
Motor Vehicles	30000	30000	30000	30000	30000	60000	60000	60000	60000	60000
Less Accumulated Depreciation	6000	12000	18000	24000	30000	36016	42016	48016	54016	60000
	24000	18000	12000	6000	0	23984	17984	11984	5984	0
Plant & Equipment	21600	21600	21600	21600	21600	21600	21600	21600	21600	21600
Less Accumulated Depreciation	5487	8474	11461	14448	17435	20170	21015	21600	21600	21600
	16113	13126	10139	7152	4165	1430	585	0	0	0
Total	130593	116086	101579	87072	71665	88414	77069	65984	55484	45000
TOTAL ASSETS	142291	142140	142702	143716	144296	147510	153126	159510	167003	173431
Current Liabilities										
Overdraft	0	0	0	0	0	0	0	0	0	0
Creditors	0	0	0	0	0	0	0	0	0	0
Provision for Tax	0	0	0	0	0	0	0	0	1621	2898
Loans	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1621	2898
Non-Current Liabilities										
Loans	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Total Liabilities	0	0	0	0	0	0	0	0	1621	2898
Proprietor's/Partners' Capital										
Capital Introduced	162500	162500	162500	162500	162500	162500	162500	162500	162500	162500
Accumulated Profits/Losses	(20209)	(20360)	(19798)	(18784)	(18204)	(14990)	(9374)	(2990)	2882	8033
Less Accumulated Drawings	0	0	0	0	0	0	0	0	0	0
Total Funds	142291	142140	142702	143716	144296	147510	153126	159510	165382	170533
TOTAL LIABILITIES & FUNDS	142291	142140	142702	143716	144296	147510	153126	159510	167003	173431

Yabby Cooperative - 40t (\$2.36)
Projected Profit & Loss Statement
For the Ten Years Ending 30-6-2012

	12 Months									
	30 Jun 03	30 Jun 04	30 Jun 05	30 Jun 06	30 Jun 07	30 Jun 08	30 Jun 09	30 Jun 10	30 Jun 11	30 Jun 12
Income										
Sales	94400	97232	100149	103153	106248	109435	112719	116100	119583	123171
Less Cost of Sales										
Opening Stock	0	0	0	0	0	0	0	0	0	0
Add - Direct Costs	0	0	0	0	0	0	0	0	0	0
Less Closing Stock	0	0	0	0	0	0	0	0	0	0
Total Cost of Sales	0	0	0	0	0	0	0	0	0	0
Gross Profit	94400	97232	100149	103153	106248	109435	112719	116100	119583	123171
Gross Profit Margin	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Other Income										
Other Non-operating Income	0	0	0	0	0	0	0	0	0	0
Other Operating Income	0	0	0	0	0	0	0	0	0	0
Total Other Income	0	0	0	0	0	0	0	0	0	0
Less Expenses										
Accountancy/Bank Fees	2100	2100	2163	2228	2295	2364	2434	2508	2583	2660
Consultants/Contractors	0	0	0	0	0	0	0	0	0	0
Electricity	3000	3000	3090	3183	3278	3377	3478	3582	3690	3800
Employees	0	0	0	0	0	0	0	0	0	0
Superannuation	4500	4635	4774	4917	5065	5217	5373	5534	5700	5871
Wages	50000	51500	53045	54636	56275	57964	59703	61494	63339	65239
Workcover	500	515	530	546	563	580	597	615	633	652
Education/Training	0	0	0	0	0	0	0	0	0	0
Fuel & Oils	0	0	0	0	0	0	0	0	0	0
Insurance	0	0	0	0	0	0	0	0	0	0
Stock	3000	3000	3090	3183	3278	3377	3478	3582	3690	3800
Public Liability	500	500	515	530	546	563	580	597	615	633
Fire/Burglary	500	500	515	530	546	563	580	597	615	633
Machinery Breakdown	500	500	515	530	546	563	580	597	615	633
Household	0	0	0	0	0	0	0	0	0	0
Personal Disability	500	500	515	530	546	563	580	597	615	633
Interest	0	0	0	0	0	0	0	0	0	0
Loan	0	0	0	0	0	0	0	0	0	0
Overdraft	1738	3028	3046	3400	3792	6532	8059	8938	9910	10984
Lease Charges	0	0	0	0	0	0	0	0	0	0
Legal Expenses	10000	0	0	0	0	0	0	0	0	0
Licences (inc. Rego. Business Name)	2000	2000	2060	2122	2185	2251	2319	2388	2460	2534
Lab Supplies/Chemicals	0	0	0	0	0	0	0	0	0	0
Motor Vehicle	0	0	0	0	0	0	0	0	0	0
Fuel	4800	4800	4944	5092	5245	5402	5565	5731	5903	6080
Insurance	500	500	515	530	546	563	580	597	615	633
Registration	500	500	515	530	546	563	580	597	615	633
Repairs & Maintenance	2400	2400	2472	2546	2623	2701	2782	2866	2952	3040
Other/Miscellaneous	2400	2400	2472	2546	2623	2701	2782	2866	2952	3040
Protective Clothing	0	0	0	0	0	0	0	0	0	0
Water	2100	2100	2163	2228	2295	2364	2434	2508	2583	2660
Rent	0	0	0	0	0	0	0	0	0	0
Rep. & Maint.	3960	3960	4079	4201	4327	4457	4591	4728	4870	5016
Subscriptions	0	0	0	0	0	0	0	0	0	0
Telephone	1500	1500	1545	1591	1639	1688	1739	1791	1845	1900
Market Development	20000	20000	20600	21218	21855	22510	23186	23881	24598	25335
QA System	5000	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
Depreciation										
Plant & Equipment	5487	2987	2987	2987	2987	2735	845	585	0	0
Fixtures & Fittings	1020	1020	1020	1020	1920	0	0	0	0	0
Land & Buildings	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500
Motor Vehicles	6000	6000	6000	6000	6000	6016	6000	6000	6000	5984
Total Expenses	139005	124445	127670	131328	136022	140112	143342	147680	151896	156898
Operating Profit (Loss) Before Tax	(44605)	(27213)	(27521)	(28174)	(29774)	(30676)	(30624)	(31579)	(32313)	(33727)
Taxable Profit (Excluding Private Use)	(44605)	(27213)	(27521)	(28174)	(29774)	(30676)	(30624)	(31579)	(32313)	(33727)
Less Tax Expense	0	0	0	0	0	0	0	0	0	0
Profit (Loss) After Tax Before Drawings	(44605)	(27213)	(27521)	(28174)	(29774)	(30676)	(30624)	(31579)	(32313)	(33727)
Breakeven Year	Not by Year10									
Break Even Sales	139,005	124,445	127,670	131,328	136,022	140,112	143,342	147,680	151,896	156,898

Yabby Cooperative - 40t (\$2.36)
Projected Balance Sheet
For the Ten Years Ending 30-6-2012

	12 Months									
	30 Jun 03	30 Jun 04	30 Jun 05	30 Jun 06	30 Jun 07	30 Jun 08	30 Jun 09	30 Jun 10	30 Jun 11	30 Jun 12
Current Assets										
Cash at Bank	0	0	0	0	0	0	0	0	0	0
Debtors	0	0	(9723)	(19738)	(30053)	(40678)	(51622)	(62894)	(74504)	(86462)
Stock	0	0	0	0	0	0	0	0	0	0
Total	0	0	(9723)	(19738)	(30053)	(40678)	(51622)	(62894)	(74504)	(86462)
Non-Current Assets										
Fixtures & Fittings	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000
Less Accumulated Depreciation	1020	2040	3060	4080	6000	6000	6000	6000	6000	6000
	4980	3960	2940	1920	0	0	0	0	0	0
Land & Buildings	90000	90000	90000	90000	90000	90000	90000	90000	90000	90000
Less Accumulated Amortisation	4500	9000	13500	18000	22500	27000	31500	36000	40500	45000
	85500	81000	76500	72000	67500	63000	58500	54000	49500	45000
Motor Vehicles	30000	30000	30000	30000	30000	60000	60000	60000	60000	60000
Less Accumulated Depreciation	6000	12000	18000	24000	30000	36016	42016	48016	54016	60000
	24000	18000	12000	6000	0	23984	17984	11984	5984	0
Plant & Equipment	21600	21600	21600	21600	21600	21600	21600	21600	21600	21600
Less Accumulated Depreciation	5487	8474	11461	14448	17435	20170	21015	21600	21600	21600
	16113	13126	10139	7152	4165	1430	585	0	0	0
Total	130593	116086	101579	87072	71665	88414	77069	65984	55484	45000
TOTAL ASSETS	130593	116086	91856	67334	41612	47735	25447	3090	(19020)	(41462)
Current Liabilities										
Overdraft	12698	25404	28695	32348	36400	73200	81535	90758	100961	112246
Creditors	0	0	0	0	0	0	0	0	0	0
Provision for Tax	0	0	0	0	0	0	0	0	0	0
Loans	0	0	0	0	0	0	0	0	0	0
Total	12698	25404	28695	32348	36400	73200	81535	90758	100961	112246
Non-Current Liabilities										
Loans	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Total Liabilities	12698	25404	28695	32348	36400	73200	81535	90758	100961	112246
Proprietor's/Partners' Capital										
Capital Introduced	162500	162500	162500	162500	162500	162500	162500	162500	162500	162500
Accumulated Profits/Losses	(44605)	(71818)	(99340)	(127514)	(157288)	(187965)	(218589)	(250168)	(282481)	(316208)
Less Accumulated Drawings	0	0	0	0	0	0	0	0	0	0
Total Funds	117895	90682	63160	34986	5212	(25465)	(56089)	(87668)	(119981)	(153708)
TOTAL LIABILITIES & FUNDS	130593	116086	91856	67334	41612	47735	25447	3090	(19020)	(41462)

Yabby Cooperative - 60t (\$1.97)
Projected Profit & Loss Statement
For the Ten Years Ending 30-6-2012

	12 Months									
	30 Jun 03	30 Jun 04	30 Jun 05	30 Jun 06	30 Jun 07	30 Jun 08	30 Jun 09	30 Jun 10	30 Jun 11	30 Jun 12
Income										
Sales	118020	121561	125207	128964	132833	136818	140922	145150	149504	153989
Less Cost of Sales										
Opening Stock	0	0	0	0	0	0	0	0	0	0
Add - Direct Costs	0	0	0	0	0	0	0	0	0	0
Less Closing Stock	0	0	0	0	0	0	0	0	0	0
Total Cost of Sales	0	0	0	0	0	0	0	0	0	0
Gross Profit	118020	121561	125207	128964	132833	136818	140922	145150	149504	153989
Gross Profit Margin	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Other Income										
Other Non-operating Income	0	0	0	0	0	0	0	0	0	0
Other Operating Income	0	0	0	0	0	0	0	0	0	0
Total Other Income	0	0	0	0	0	0	0	0	0	0
Less Expenses										
Accountancy/Bank Fees	2100	2100	2163	2228	2295	2364	2434	2508	2583	2660
Consultants/Contractors	0	0	0	0	0	0	0	0	0	0
Electricity	3000	3000	3090	3183	3278	3377	3478	3582	3690	3800
Employees										
Superannuation	4500	4635	4774	4917	5065	5217	5373	5534	5700	5871
Wages	50000	51500	53045	54636	56275	57964	59703	61494	63339	65239
Workcover	500	515	530	546	563	580	597	615	633	652
Education/Training	0	0	0	0	0	0	0	0	0	0
Fuel & Oils	0	0	0	0	0	0	0	0	0	0
Insurance										
Stock	3000	3000	3090	3183	3278	3377	3478	3582	3690	3800
Public Liability	500	500	515	530	546	563	580	597	615	633
Fire/Burglary	500	500	515	530	546	563	580	597	615	633
Machinery Breakdown	500	500	515	530	546	563	580	597	615	633
Household	0	0	0	0	0	0	0	0	0	0
Personal Disability	500	500	515	530	546	563	580	597	615	633
Interest										
Loan	0	0	0	0	0	0	0	0	0	0
Overdraft	941	273	0	0	0	0	0	0	0	0
Lease Charges	0	0	0	0	0	0	0	0	0	0
Legal Expenses	10000	0	0	0	0	0	0	0	0	0
Licences (inc. Rego. Business Name)	2000	2000	2060	2122	2185	2251	2319	2388	2460	2534
Lab Supplies/Chemicals	0	0	0	0	0	0	0	0	0	0
Motor Vehicle										
Fuel	4800	4800	4944	5092	5245	5402	5565	5731	5903	6080
Insurance	500	500	515	530	546	563	580	597	615	633
Registration	500	500	515	530	546	563	580	597	615	633
Repairs & Maintenance	2400	2400	2472	2546	2623	2701	2782	2866	2952	3040
Other/Miscellaneous	2400	2400	2472	2546	2623	2701	2782	2866	2952	3040
Protective Clothing	0	0	0	0	0	0	0	0	0	0
Water	2100	2100	2163	2228	2295	2364	2434	2508	2583	2660
Rent	0	0	0	0	0	0	0	0	0	0
Rep. & Maint.	3960	3960	4079	4201	4327	4457	4591	4728	4870	5016
Subscriptions	0	0	0	0	0	0	0	0	0	0
Telephone	1500	1500	1545	1591	1639	1688	1739	1791	1845	1900
Market Development	20000	20000	20600	21218	21855	22510	23186	23881	24598	25335
QA System	5000	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
Depreciation										
Plant & Equipment	5487	2987	2987	2987	2987	2735	845	585	0	0
Fixtures & Fittings	1020	1020	1020	1020	1920	0	0	0	0	0
Land & Buildings	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500
Motor Vehicles	6000	6000	6000	6000	6000	6016	6000	6000	6000	5984
Total Expenses	138208	121690	124624	127928	132230	133580	135283	138741	141986	145914
Operating Profit (Loss) Before Tax	(20188)	(130)	583	1036	602	3238	5639	6409	7518	8075
Taxable Profit (Excluding Private Use)	(20188)	(130)	583	1036	602	3238	5639	6409	7518	8075
Less Tax Expense	0	0	0	0	0	0	0	0	1695	2907
Profit (Loss) After Tax Before Drawings	(20188)	(130)	583	1036	602	3238	5639	6409	5824	5168
Break-even Year	By Year4									
Break Even Sales	138,208	121,690	124,624	127,928	132,230	133,580	135,283	138,741	141,986	145,914

Yabby Cooperative - 60t (\$1.97)
Projected Balance Sheet
For the Ten Years Ending 30-6-2012

	12 Months									
	30 Jun 03	30 Jun 04	30 Jun 05	30 Jun 06	30 Jun 07	30 Jun 08	30 Jun 09	30 Jun 10	30 Jun 11	30 Jun 12
Current Assets										
Cash at Bank	11719	26096	53342	81406	110311	110084	140750	172335	204869	236684
Debtors	0	0	(12156)	(24677)	(37573)	(50856)	(64538)	(78630)	(93145)	(108096)
Stock	0	0	0	0	0	0	0	0	0	0
Total	11719	26096	41186	56729	72738	59228	76212	93705	111723	128588
Non-Current Assets										
Fixtures & Fittings	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000
Less Accumulated Depreciation	1020	2040	3060	4080	6000	6000	6000	6000	6000	6000
	4980	3960	2940	1920	0	0	0	0	0	0
Land & Buildings	90000	90000	90000	90000	90000	90000	90000	90000	90000	90000
Less Accumulated Amortisation	4500	9000	13500	18000	22500	27000	31500	36000	40500	45000
	85500	81000	76500	72000	67500	63000	58500	54000	49500	45000
Motor Vehicles	30000	30000	30000	30000	30000	60000	60000	60000	60000	60000
Less Accumulated Depreciation	6000	12000	18000	24000	30000	36016	42016	48016	54016	60000
	24000	18000	12000	6000	0	23984	17984	11984	5984	0
Plant & Equipment	21600	21600	21600	21600	21600	21600	21600	21600	21600	21600
Less Accumulated Depreciation	5487	8474	11461	14448	17435	20170	21015	21600	21600	21600
	16113	13126	10139	7152	4165	1430	585	0	0	0
Total	130593	116086	101579	87072	71665	88414	77069	65984	55484	45000
TOTAL ASSETS	142312	142182	142765	143801	144403	147641	153280	159689	167207	173588
Current Liabilities										
Overdraft	0	0	0	0	0	0	0	0	0	0
Creditors	0	0	0	0	0	0	0	0	0	0
Provision for Tax	0	0	0	0	0	0	0	0	1695	2907
Loans	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1695	2907
Non-Current Liabilities										
Loans	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Total Liabilities	0	0	0	0	0	0	0	0	1695	2907
Proprietor's/Partners' Capital										
Capital Introduced	162500	162500	162500	162500	162500	162500	162500	162500	162500	162500
Accumulated Profits/Losses	(20188)	(20318)	(19735)	(18699)	(18097)	(14859)	(9220)	(2811)	3012	8181
Less Accumulated Drawings	0	0	0	0	0	0	0	0	0	0
Total Funds	142312	142182	142765	143801	144403	147641	153280	159689	165512	170681
TOTAL LIABILITIES & FUNDS	142312	142182	142765	143801	144403	147641	153280	159689	167207	173588

Yabby Cooperative - 70t (\$1.69)
Projected Profit & Loss Statement
For the Ten Years Ending 30-6-2012

	12 Months									
	30 Jun 03	30 Jun 04	30 Jun 05	30 Jun 06	30 Jun 07	30 Jun 08	30 Jun 09	30 Jun 10	30 Jun 11	30 Jun 12
Income										
Sales	118020	121561	125207	128964	132833	136818	140922	145150	149504	153989
Less Cost of Sales										
Opening Stock	0	0	0	0	0	0	0	0	0	0
Add - Direct Costs	0	0	0	0	0	0	0	0	0	0
Less Closing Stock	0	0	0	0	0	0	0	0	0	0
Total Cost of Sales	0	0	0	0	0	0	0	0	0	0
Gross Profit	118020	121561	125207	128964	132833	136818	140922	145150	149504	153989
Gross Profit Margin	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Other Income										
Other Non-operating Income	0	0	0	0	0	0	0	0	0	0
Other Operating Income	0	0	0	0	0	0	0	0	0	0
Total Other Income	0	0	0	0	0	0	0	0	0	0
Less Expenses										
Accountancy/Bank Fees	2100	2100	2163	2228	2295	2364	2434	2508	2583	2660
Consultants/Contractors	0	0	0	0	0	0	0	0	0	0
Electricity	3000	3000	3090	3183	3278	3377	3478	3582	3690	3800
Employees	0	0	0	0	0	0	0	0	0	0
Superannuation	4500	4635	4774	4917	5065	5217	5373	5534	5700	5871
Wages	50000	51500	53045	54636	56275	57964	59703	61494	63339	65239
Workcover	500	515	530	546	563	580	597	615	633	652
Education/Training	0	0	0	0	0	0	0	0	0	0
Fuel & Oils	0	0	0	0	0	0	0	0	0	0
Insurance	0	0	0	0	0	0	0	0	0	0
Stock	3000	3000	3090	3183	3278	3377	3478	3582	3690	3800
Public Liability	500	500	515	530	546	563	580	597	615	633
Fire/Burglary	500	500	515	530	546	563	580	597	615	633
Machinery Breakdown	500	500	515	530	546	563	580	597	615	633
Household	0	0	0	0	0	0	0	0	0	0
Personal Disability	500	500	515	530	546	563	580	597	615	633
Interest	0	0	0	0	0	0	0	0	0	0
Loan	0	0	0	0	0	0	0	0	0	0
Overdraft	941	273	0	0	0	0	0	0	0	0
Lease Charges	0	0	0	0	0	0	0	0	0	0
Legal Expenses	10000	0	0	0	0	0	0	0	0	0
Licences (inc. Rego. Business Name)	2000	2000	2060	2122	2185	2251	2319	2388	2460	2534
Lab Supplies/Chemicals	0	0	0	0	0	0	0	0	0	0
Motor Vehicle	0	0	0	0	0	0	0	0	0	0
Fuel	4800	4800	4944	5092	5245	5402	5565	5731	5903	6080
Insurance	500	500	515	530	546	563	580	597	615	633
Registration	500	500	515	530	546	563	580	597	615	633
Repairs & Maintenance	2400	2400	2472	2546	2623	2701	2782	2866	2952	3040
Other/Miscellaneous	2400	2400	2472	2546	2623	2701	2782	2866	2952	3040
Protective Clothing	0	0	0	0	0	0	0	0	0	0
Rates & Land Tax	2100	2100	2163	2228	2295	2364	2434	2508	2583	2660
Rent	0	0	0	0	0	0	0	0	0	0
Rep. & Maint.	3960	3960	4079	4201	4327	4457	4591	4728	4870	5016
Subscriptions	0	0	0	0	0	0	0	0	0	0
Telephone	1500	1500	1545	1591	1639	1688	1739	1791	1845	1900
Market Development	20000	20000	20600	21218	21855	22510	23186	23881	24598	25335
QA System	5000	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
Depreciation										
Plant & Equipment	5487	2987	2987	2987	2987	2735	845	585	0	0
Fixtures & Fittings	1020	1020	1020	1020	1920	0	0	0	0	0
Land & Buildings	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500
Motor Vehicles	6000	6000	6000	6000	6000	6016	6000	6000	6000	5984
Total Expenses	138208	121690	124624	127928	132230	133580	135283	138741	141986	145914
Operating Profit (Loss) Before Tax	(20188)	(130)	583	1036	602	3238	5639	6409	7518	8075
Taxable Profit (Excluding Private Use)	(20188)	(130)	583	1036	602	3238	5639	6409	7518	8075
Less Tax Expense	0	0	0	0	0	0	0	0	1695	2907
Profit (Loss) After Tax Before Drawings	(20188)	(130)	583	1036	602	3238	5639	6409	5824	5168
Break-even Year	By Year4									
Break Even Sales	138,208	121,690	124,624	127,928	132,230	133,580	135,283	138,741	141,986	145,914

Yabby Cooperative - 70t (\$1.69)
Projected Balance Sheet
For the Ten Years Ending 30-6-2012

	12 Months									
	30 Jun 03	30 Jun 04	30 Jun 05	30 Jun 06	30 Jun 07	30 Jun 08	30 Jun 09	30 Jun 10	30 Jun 11	30 Jun 12
Current Assets										
Cash at Bank	11719	26096	53342	81406	110311	110084	140750	172335	204869	236684
Debtors	0	0	(12156)	(24677)	(37573)	(50856)	(64538)	(78630)	(93145)	(108096)
Stock	0	0	0	0	0	0	0	0	0	0
Total	11719	26096	41186	56729	72738	59228	76212	93705	111723	128588
Non-Current Assets										
Fixtures & Fittings	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000
Less Accumulated Depreciation	1020	2040	3060	4080	6000	6000	6000	6000	6000	6000
	4980	3960	2940	1920	0	0	0	0	0	0
Land & Buildings	90000	90000	90000	90000	90000	90000	90000	90000	90000	90000
Less Accumulated Amortisation	4500	9000	13500	18000	22500	27000	31500	36000	40500	45000
	85500	81000	76500	72000	67500	63000	58500	54000	49500	45000
Motor Vehicles	30000	30000	30000	30000	30000	60000	60000	60000	60000	60000
Less Accumulated Depreciation	6000	12000	18000	24000	30000	36016	42016	48016	54016	60000
	24000	18000	12000	6000	0	23984	17984	11984	5984	0
Plant & Equipment	21600	21600	21600	21600	21600	21600	21600	21600	21600	21600
Less Accumulated Depreciation	5487	8474	11461	14448	17435	20170	21015	21600	21600	21600
	16113	13126	10139	7152	4165	1430	585	0	0	0
Total	130593	116086	101579	87072	71665	88414	77069	65984	55484	45000
TOTAL ASSETS	142312	142182	142765	143801	144403	147641	153280	159689	167207	173588
Current Liabilities										
Overdraft	0	0	0	0	0	0	0	0	0	0
Creditors	0	0	0	0	0	0	0	0	0	0
Provision for Tax	0	0	0	0	0	0	0	0	1695	2907
Loans	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1695	2907
Non-Current Liabilities										
Loans	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Total Liabilities	0	0	0	0	0	0	0	0	1695	2907
Proprietor's/Partners' Capital										
Capital Introduced	162500	162500	162500	162500	162500	162500	162500	162500	162500	162500
Accumulated Profits/Losses	(20188)	(20318)	(19735)	(18699)	(18097)	(14859)	(9220)	(2811)	3012	8181
Less Accumulated Drawings	0	0	0	0	0	0	0	0	0	0
Total Funds	142312	142182	142765	143801	144403	147641	153280	159689	165512	170681
TOTAL LIABILITIES & FUNDS	142312	142182	142765	143801	144403	147641	153280	159689	167207	173588