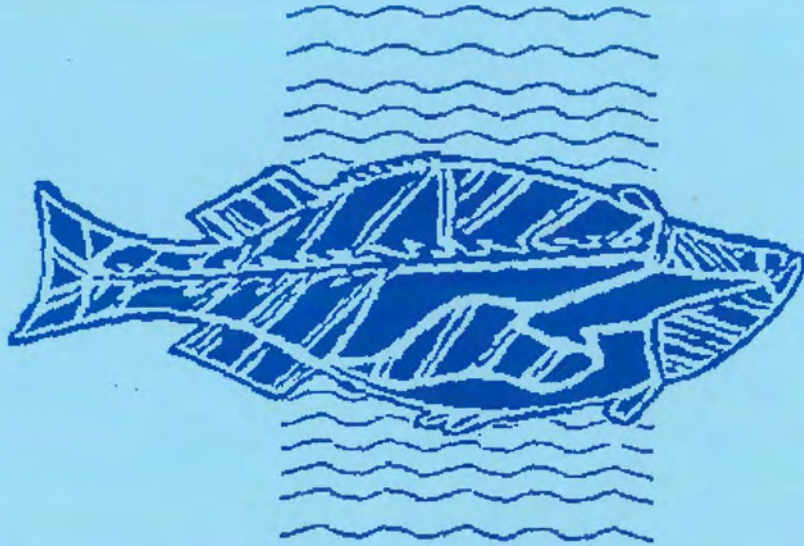


Australian Seafood Extension and Advisory Service (AUSEAS)

S.J. Thrower, A.J. Snow and B.J. Austin



FISHERIES
RESEARCH &
DEVELOPMENT
CORPORATION

Project 93/199

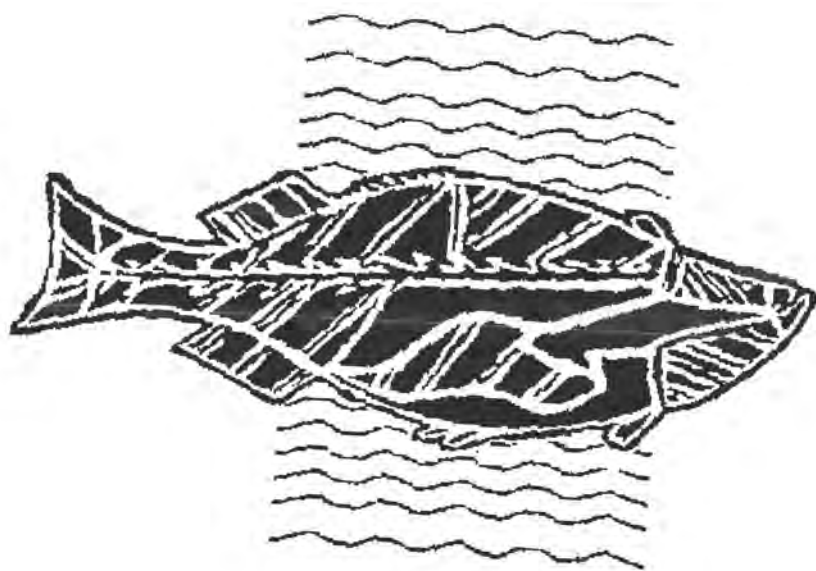
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NON TECHNICAL SUMMARY

93/199

93/199: Maintenance and operation of the National Seafood Information Service (NSIS)

NOTE: A new business plan was adopted in 1994 when the National Seafood Information Service was renamed Australian Seafood Extension and Advisory Service (AUSEAS).

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OBJECTIVES:

1. To maintain existing databases and continue provision of services whilst exploring new avenues for dissemination and technology transfer.
2. To implement a program of promotion and marketing of the NSIS throughout Australia with a view to maximising the level of cost recovery.

NON-TECHNICAL SUMMARY:

AUSEAS has proven itself extremely useful to the Australian seafood industry. The service is regularly patronised by personnel from many different aspects of the seafood industry from aquaculturalists through to retailers.

Along with the information packages which are customised specifically for each customer AUSEAS is also marketing and selling several FRDC and NSC project reports.

In 1995 AUSEAS compiled and published the "Australian Seafood Industry Directory 1995-97". Each business which is listed in the publication was contacted prior to their details being included and there was quite a positive response from these businesses to having this book published.

KEYWORDS: *Post harvest information; Technology transfer; Advisory Service.*

BACKGROUND

The proposal submitted to Fisheries Research and Development Corporation (FRDC) in 1993 was directed at the development and maintenance of the National Seafood Information Service (NSIS) which had been established in 1991. As part of the development, a business plan was prepared and submitted to FRDC and Queensland Department of Primary Industries (QDPI) management. This plan was approved in August 1994 and resulted in the formation of the Australian Seafood Extension and Advisory Service (AUSEAS).

AUSEAS is a joint initiative of QDPI and FRDC. The mission for AUSEAS is

"To provide the seafood industry with a comprehensive extension service on post-harvest seafood technology and thus facilitate the adoption of leading edge technology that is timely and appropriate".

(AUSEAS Business Plan, 1994)

After AUSEAS came into existence mid way through the project, many changes were made to the budget, aims, activities etc. which were specified in the original 1993 application. This report will thus be an amalgam of the NSIS and AUSEAS activities. The main changes are listed below.

BUDGET

The budget requested for NSIS was \$312,434 over the period 1993-1996, the FRDC component being \$170,942. It was estimated that the FRDC component would be approximately \$56,000 p.a. After adoption of the AUSEAS concept, this was raised to \$80,000 p.a., partly in recognition of the fact that AUSEAS provides a large number of quick one-off answers to enquiries which cannot be charged on a fee-for-service basis, yet remain of great value to the industry.

PUBLICATIONS

Another major change in operations has been a move into publications. AUSEAS prepared and published the *"Australian Seafood Industry Directory 1995-97"*, and acts as an agent for several other FRDC/NSC reports. It also provides a maintenance function for the databases of the Directory and the *"Marketing Names for Fish and Seafood in Australia"* and it provides access to FishMAD.

NEED

The Australian seafood industry is facing increasing competition from other seafood exporters in securing and holding markets for premium quality seafood. In order to meet this competition, seafood producers must be able to call on technology that is up-to-date and appropriate. The new, emerging markets are for live and minimally processed product, and these topics are the subject of intense research, both within Australia and overseas. The establishment of the National Seafood Centre (NSC) within QDPI to fund and co-ordinate post-harvest research, means that AUSEAS is in a prime position to disseminate research results and network with industry thus ensuring that research projects result in positive outcomes.

AUSEAS will continue to collect, collate and disseminate the results of research in Australia to industry in a form that can be readily understood and applied.

Assessment of the AUSEAS client base by a number of means indicates that there is a high level of customer satisfaction.

EVALUATION OF PRESENT SERVICE

The common thread in all these questions is that the package should bring about some change in the behaviour of the client that results in a desirable outcome. This basic criterion then forms the basis for an evaluation of our existing operations. The following observations result from an examination of records for the year 1994/5.

• *Repeat Business*

The level of repeat business is one way of measuring the success of a service. AUSEAS achieved a level of 57%, which is quite high considering that clients usually only contact us at critical times such as when major problems occur or when embarking on a new venture. Closer examination shows that repeat business was higher for free services (72%) than for charged ones (43%). Also apart from private consultants AUSEAS has few competitors. This was illustrated when we received a series of enquiries prompted by a Japanese agent travelling the East coast looking for supplies of squalene, a component of shark liver. As one client commented "where else could you go for that information?"

• *Satisfaction Surveys*

From time to time we have carried out surveys of client satisfaction. We sent a sheet asking the client to rate our service using a 5 point scale covering speed, relevance, comprehension, etc. The rate of return was low and the type of information was restricted.

- **Telephone Surveys**

Another evaluation technique used was a telephone interview that tried to assess not only the level of satisfaction, but also the rate of adoption of the advice. This was time consuming and many clients used the opportunity to try to get further service free of charge.

- **Marketing Study**

A series of interviews was done by a TAFE marketing student who did a marketing plan for AUSEAS as her final year project (Wilcox, 1996).

All these evaluations showed a high level of satisfaction with the service but provided little basis on which we could plan improvements to the service. We also had little information on the longer term outcomes of our work. Clearly a better, more detailed approach was needed.

LONGER TERM FOLLOW UP

In most cases there will be a delay between the receipt of our advice and its implementation, so it is unrealistic to expect positive outcomes soon after dispatching the package. With these limitations in mind, we recently followed up 20 enquiries answered between three and six months ago. Two types were selected, firstly specific queries requiring relatively simple changes, and secondly more complex problems where our advice was only one component of the solution, and other factors such as costs, markets etc were important.

The contact took the form of a telephone discussion of around 30 minutes which explored a wide range of questions in an unstructured way.

As was expected, the simpler queries resulted in a high adoption rate (8 out of 10) although some recipients did report difficulty in following some papers. This is in contrast to verbally given advice which, because of the interactive nature of the process, always results in high acceptance and adoption.

The adoption rates for complex packages was lower (4 out of 10). Reasons for this varied. Sometimes financial or market factors were not favourable, technology was foreign or unproven etc. Some clients admitted that they had difficulty in following all of the information provided.

Several clients complained about replication of the same information in different format, although the reason for this was explained in covering letter. Despite these reservations however, they were very satisfied with the service.

OBJECTIVES

1. To maintain existing databases and continue provision of services whilst exploring new avenues for dissemination and technology transfer.
2. To implement a program of promotion and marketing of the NSIS throughout Australia with a view to maximising the level of cost recovery.

As noted above, the scope of this project changed dramatically with the formation of AUSEAS, and this changed the emphasis on cost recovery.

Existing databases were maintained and expanded and represent a major resource for the industry. In addition, several new databases have been added, including a Library database which contains the contents pages of many library books in the Centre's library, and also the Industry contact database which contains the information for the Australian Seafood Industry Directory.

The promotion of AUSEAS through trade show displays, "advertorials", direct advertisements, etc continues. In addition, the launch of publications etc provides a high profile for the service.

Whilst it is recognised that full cost recovery will never be achieved, increasing returns from publications, information packages etc will reduce the cost.

METHODS

MAINTENANCE AND OPERATION OF THE DATABASES

Originally the data was stored on a text retrieval system which performed adequately. This system enabled AUSEAS to store reference information about all of the articles which we were holding in our database. More recently the software package and been upgraded and is now includes a graphics component which will enable AUSEAS to store pictures on the information retrieval system. As with all systems, there are some limitations. Graphics take up a larger amount of storage memory on the computer than straight text so the storage of pictures has not become a common practice.

As well as the database which AUSEAS has created, we have access to world wide databases by on-line searches and CD ROM technology and the Internet. Each time a new package is produced, our store of knowledge is increased. In addition to this, we have a proactive policy of "scanning" journals and abstract services for material that would be of use to the Australian seafood industry.

DISSEMINATION OF INFORMATION

The following media are used to disseminate information:

- information packages/literature searches;
- current awareness surveys;
- articles in journals;
- presentation of papers at conferences;
- seminars;
- training courses; and
- curriculum development services.

PROMOTION AND MARKETING

A program of promotional activities has been carried out. These include:

Mailouts - A periodic Newsletter has been posted to previous clients to prompt them about our service and what is coming up in Seafood Events.

Tours - Some travel was undertaken during this time but was very limited due to other commitments.

Exhibits - Participation in exhibitions and trade displays (e.g. "Catering Trade Fair" - Sydney May 1996)

Conference papers - Presentation of papers giving information about the service have been made at conferences, seminars and other such events likely to attract potential clients.

Advertising - Paid advertisements and press releases in suitable journals have been used to promote the information service and the publication sales.

QUALITY ASSURANCE

A series of quality assurance measures was developed at AUSEAS which have three objectives.

- To keep track of enquiries and ensure they are answered to the clients' satisfaction.
- To establish a database of enquirers who may be contacted to attract repeat business.
- To keep a reliable record of those areas where need is greatest.

A number of different documents were developed to assist in this process (See Appendix A-I). These are:

- An **enquiry log** that is used to record on-line enquiries. Using this system allows us to quickly and easily record information about each contact.
- A **package job sheet** that is used to track the progress of each request for an information package. This document is inserted as the cover page of a folder which is assigned to each request. If any undue delays are encountered the client can be notified and advised. In some cases the package may need to be sent in two sections while we wait for hard to obtain material to arrive from overseas.
- A **record of interview** is filled out when a meeting is held with a client and other experts to plan a consultancy. Although the expert may be performing the consultancy, AUSEAS maintains contact (if confidentiality agreements permit) to ensure that the work is satisfactorily completed.

Although these processes seem rather bureaucratic, they enable us to stay in touch, not only with our clients, but also with the business we are in.

It should be noted that the forms used have been designed in a format that can be quickly filled in during a telephone conversation. Until June 1996 AUSEAS had their own client database which contained all of the information about a client and their literature search. This database allowed us to ensure find out repeat clients, whether clients were paying their accounts etc. The marketing study of AUSEAS (Wilcox 1995 - See Appendix A-II for Contents Page and Executive Summary) recommended that on-line enquiries should also be followed up with a package of promotional material. The Centre has now moved to a central client database, used by all groups. This database has built-in security to maintain confidentiality and should enable us to track our clients more efficiently.

DETAILED RESULTS

ADVISORY SERVICES PROVIDED BY AUSEAS

- ***On-line Advisory Service***

The most frequently used of the AUSEAS services is the on-line advisory service. At least four calls per day are received from people, usually in industry, who need quick answers to problems. Often these can be answered orally or with the provision of a short publication. The range of topics is very wide, for example "Which fish is a good source of omega 3 fatty acids?" or "Is the toxin of puffer fish denatured by canning?" It would be unrealistic to charge for these services, yet they are very valuable to the client. They also provide good opportunities for cross selling and follow-up promotion.

- ***Information and Advisory Packages***

The major fee-for-service business of AUSEAS is the customised information package. These are compilations of material collected after a literature search. The information which makes up these packages is collected specifically for the client after consultation. An brief explanatory letter is also included with the literature package explaining how the information in the package may be applied to the problem.

To illustrate this with an example: Clients often enquire whether they should use vacuum packaging for their seafood products. We show them that this will not give them the chilled shelf life extension they expect, and it may increase the risk of food poisoning. We direct them to other alternative methods of packaging which are safer, cheaper, and give similar protection to the product to that obtained by vacuum packaging. The message is reinforced with both verbal advice and published technical reports.

Clients who purchase packages are put on the circulation list for the AUSEAS/National Seafood Centre (NSC) quarterly newsletter.

- ***Consultancy Services***

AUSEAS also participates in the provision of a variety of consultancy services. For example a client had a shipment of frozen fillets rejected by health authorities in Malaysia. After analysis, we were able to trace high bacterial counts to inadequate chilling between capture and time of processing, not post-harvest contamination as had been suggested by the Malaysian authorities. This work involved collaboration between AUSEAS and the Centre for Food Technology's (CFT's) Analytical Services Section who carried out the analyses on which the interpretation was based.

RESEARCH LIAISON

When a search indicates that there is a deficiency in available knowledge on a subject, some form of research may be needed. In some cases, such as product or process development, a client may wish to commission and pay for the full cost of the research and thus retain ownership and confidentiality. Alternatively, some clients are referred to the National Seafood Centre for funding assistance where applicable.

The role of AUSEAS in this process is a networking one, to find the organisation best able to assist the client in doing the research. Often, when geographical proximity is a priority, we may locate a tertiary institute or TAFE college, private agricultural or food laboratories, sometimes even hospital or veterinary laboratories. When specialist services are needed, we refer clients to specific institutes and expertise taken from our databases. These sources can be found on AGROUND (incorporating ARRIP and ABOA) and from similar directories of national and international agencies. Work is referred to the Centre where it is the most appropriate institute.

OPERATIONS

The operations of AUSEAS cover the whole of Australia, although in the past twelve months, the volume of work generated by the publications has restricted travel, and this has resulted in a concentration of demand in the Eastern States (Table 1).

Table 1 Geographic Distribution of Information Packages Ordered - July 1995 to June 1996.

Location	Number of Packages
New South Wales	18
Northern Territory	3
Queensland	32
South Australia	4
Western Australia	4
Victoria	5
Tasmania	1
Australian Capital Territory	4
United States of America	1

The topics of inquiry continue to show considerable variety. In previous years, live seafood was a very popular topic, but in recent times there has been a diversification into many areas of processing, as can be seen by a selection from our package orders (Table 2) and telephone enquiries (Table 3). Many of our enquiries come from people setting up new ventures.

Table 2 Some Typical Topics for Information Packages.

Topic	Number of Packages
Abalone Processing	3
Live Fish & Seafood	14
Drying of Seafood	4
Sashimi Tuna	4
Seafood Packaging	7
Utilisation of Carp	4
Seaweed Processing	2

Table 3 Some Examples of Requests for which some on-line information was supplied over a one month period.

-
- Information on organisations involved in prawn peeling
 - Address for Overseas importers or seafood processors
 - Problems caused by drip loss in prawns
 - Suppliers of certain species of fish
 - Post harvest handling of seafood
 - Temperature trackers
 - Fish consumption information
 - Information on wild caught and farmed prawns
 - Nutritional information on prawns
 - Phosphate levels in fish
 - Information on abalone
 - Beche de mer transport problems
 - Information about Tuna, processing, species, and current publications
 - Information about jellyfish - processors, possible importers
 - Fish consumption statistics for a television programme
 - Queensland suppliers of live lobsters
 - Address of fish importers in Thailand
 - Names of prawn fleet companies
 - Information on oyster shucking machinery
 - Information on live eel processing and handling
 - Information about spanner crabs
 - Possible suppliers of crocodile meat
 - Phone number of a NZ based fishing organisation
 - Address of live fish exporters in Queensland
 - Mahi Mahi Information
 - Processing of Seaweed
 - Membrane removal from squid by biochemical methods
-

PUBLICATIONS

As part of its dissemination of information, AUSEAS has a role in the production and distribution of a number of publications. The "Australian Seafood Industry Directory 1995-97" was produced under a FRDC grant in both disk and hard copy format. The database which forms the basis of this publication has been continually updated, and a new edition is due to be released in mid 1997. Sales of the directory were very brisk immediately after the launch and still continue at a steady rate (See Appendix B-I). The hard copy format is far more popular than the disk version with most purchasers of disk buying both formats.

Sales have been greater in the Eastern States (See Appendix B-II). The two reasons for this are: there are more seafood producers in the Eastern States; and the media and industry support for the directory is greater there.

A supplement listing additions and amendments was released in January 1996.

AUSEAS is a distributor of "Marketing Names for Fish and Seafood in Australia" and is also responsible for co-ordinating any suggested changes to its contents. A flow chart indicating AUSEAS relationship with the committee of authors is printed in the text (Appendix B-III).

In addition to these books, AUSEAS also distributes publications and reports which arise from FRDC/NSC sponsored research, such as "Food Processing Concepts for the Australian Beche de mer Industry"; "Live Seafood Handling: Strategies for Development"; "Dried Seafood Market Report 1995".

The sale of all of these publications has proven quite successful for AUSEAS. Sales figures and revenue generated are shown in Table 4.

Table 4: Publications sales figures and revenue

Publication	Number sold	Revenue generated
• Australian Seafood Industry Directory 1995-97		
- Book	883)	\$10,127
- Disk	148)	
• Marketing Names for Fish and Seafood in Australia	411	\$3,940
• Live Seafood Handling: Strategies for Development	41	\$1,350
• Food Processing Concepts for the Australian Beche-de-mer Industry	54	\$1,050
• Dried Seafood Market Report 1995	19	\$1,900

BENEFITS

The major benefits that AUSEAS has provided to the seafood industry in general can be broadly categorised into two areas.

TROUBLE SHOOTING SERVICE

AUSEAS regularly received requests for information, advice, and further developmental work from all sectors of the industry. AUSEAS prides itself with having been able to satisfy all enquiries within a minimum timeframe and to a high level of customer satisfaction.

The ability of AUSEAS to provide this service has been achieved through:

- an extensive array of library resources at its disposal;
- an extremely high level of seafood industry knowledge to utilise;
- a substantial network of specialists in the seafood industry throughout Australia who can be called upon for assistance and advice;
- the ability of AUSEAS staff to interpret technical information for the user; and
- a strong customer focus.

Information was provided to the client via the most effective and appropriate method. The most commonly used modes of technology transfer were through:

- the provision of customised information packages which have been developed following a detailed interview with the client;
- the provision of a set of abstracts of articles which have been extracted from specialist databases based on agreed search criteria;
- advice given over the telephone;
- the provision of the name of a specialist or consultant who has more knowledge in the area of concern; and
- further developmental work undertaken at the Centre for Food Technology.

Benefits to the industry from these services have been realised through cost effectiveness with clients having to contact one organisation only to get access to timely and accurate information. Benefits are also achieved through averting the potential for loss of product and the subsequent losses that can occur as a result.

THE VIRTUAL LIBRARY

AUSEAS has access to approximately 300 regular journals, 12 CD-ROM based databases of bibliographic and abstract information, a library of technical seafood information, access to the internet, and the AUSEAS database of approximately 7 000 bibliographic records.

These resources have enabled AUSEAS to access topical information on request. It has alleviated the need for the seafood industry to constantly maintain its own library of current technical information.

AUSEAS has been able to provide current and timely information within a very short timeframe. The savings to the seafood industry have been achieved through:

- alleviating the need for the industry to maintain its own reference library thus leading to significant cost savings;
- alleviating the need for the industry to devote time to scanning journals and seeking information through CD-ROM's, libraries, etc;
- reducing the cost of interpreting scientific and technical literature.

Requests for information from AUSEAS have originated from all sectors of the industry. The information needs and complexity have also varied. The major clients of AUSEAS and their information requirements are discussed below.

AUSEAS CLIENTS

• *The Catching Sector*

People directly involved with harvesting fish stocks in Australia have usually invested a considerable sum in boat, licence fees, equipment etc. Some have risen "through the ranks" from deckhand to skipper. Such people have learned their skills from other fishers. Some of these practices are sound, others are poor resulting in sub-standard product. Other fishers have undergone some type of formal training.

The enquiries received from the catching sector are varied but the following are examples of the most frequent type encountered.

- Trouble shooting enquiries received after a customer has registered a complaint.
- Enquiries about on board preparation and/or storage.
- Enquiries about the different regulations pertaining to various markets.
- Diversification into new fisheries.

The best way of providing information to these clients has been through a hands-on situation preferably in a real life situation. For example, we have conducted prawn cooking workshops on the deck of a trawler using a commercial cooker. Obviously this is not usually possible in a country the size of Australia, so we follow the format of a good oral presentation, usually by phone, backed up by the provision of written material which incorporates a number of diagrams or photographs.

• *The Processing Sector*

Seafood processors come from many backgrounds. Some have a similar long term experience of on-the-job learning to fishers, whilst others come from different industries as varied as the meat industry and the army. Considering the size of the industry there are relatively few qualified food technologists employed.

Enquiries from the processing sector frequently cover such topics as:

- Storage and shipment of live seafood.
- Trouble shooting when customers return a product of inferior quality.
- Use of packaging systems for fresh or chilled product.

-
- Diversification into new products and markets.
 - New or improved products or process development.

Our services to processors are mainly quick one-off answers or researched information packages. As well, we offer enterprise based training for processing staff, however, there has been some resistance to allowing the amount of time necessary for attendance.

• **Aquaculture**

Aquaculture is the fastest growing sector of the fishing industry. Projections are that production from aquaculture will increase by 50% by the year 2001. The aquaculture industry attracts a wide spectrum of investors with little or no knowledge or experience of seafood. Our clients include farmers, developers, teachers and firemen.

Providing customised and relevant information to this industry is a major challenge. Information about startup costs, feeds and markets can be readily supplied. Whilst our area of expertise covers only the post-harvest aspects, we often introduce clients to technological advances in production and refer them to relevant experts.

• **Finance Sector**

Financial institutions such as banks often approach AUSEAS to provide independent advice about information presented to them in business plans etc. Some institutions have made funding contingent on the provision of technical information from AUSEAS. The information provided assists financial institutions to make decisions as to whether to fund or reject the proposal.

• **Insurance Assessors**

Seafood is one of the most perishable of foods and the consumer preference for live and fresh product means that problems occur during transport, and become the subject of legal claims.

AUSEAS has been approached by insurance assessors and lawyers representing parties in such disputes. The form of service provided has varied from giving an opinion based on data supplied, to product examination and analysis. Usually this has been supplied in a written report, although, on occasions, evidences has been given on the witness stand.

• **Consultants**

As a major source of information and advice, AUSEAS has frequently been approached by consultants from many fields. In general they are supplied with technical material with little interpretation being necessary. In some cases, professionals such as engineers have little knowledge of fish, seafood or the disciplines of food technology, and so require a component of interpretation and advice as well as the information itself.

AUSEAS is also ready to work in collaboration with consultants. Such projects may be initiated by either side. The role of AUSEAS is to put clients in touch with the best available expertise. We often refer clients to consultants, and so maintain a database of experts.

- **Education**

AUSEAS provides information to both providers and users of educational services. These include teachers, and university students at post-graduate and pass levels as well as TAFE and matriculation level. As staff of the Centre for Food Technology, AUSEAS officers also contribute to delivery of short courses on subjects such as food hygiene for personnel in the food industry.

- **Traders**

Enquiries are often received from people engaged in the importing and exporting of seafood. These enquiries cover subjects as diverse as:

- government regulations;
- market access and identification;
- packaging;
- troubleshooting when problems occur;
- suppliers of product;
- information on potential markets.

The response to these enquiries is to either provide a quick verbal answer, provide an information package, or refer the client to the relevant authority.

- **The Community**

Members of the community often have specific requests that need to be addressed. These requests cover topics as broad as nutritional information, seasonality of fish, and where to go to get further information.

Since these people do not expect to pay for the information, the response is usually confined to a telephone conversation.

INTELLECTUAL PROPERTY and VALUABLE INFORMATION

As noted above there have been significant changes to the project. In the original proposal no intellectual property or valuable information was specified. Since then however a number of valuable assets have been developed.

These are:

1. Seafood Industry Directory Database.
2. Seafood Information Database.
3. "Library" reference database.
4. "Expert" register database.
5. "Client" database.

FURTHER DEVELOPMENT

FUTURE DIRECTIONS

AUSEAS has achieved its goal of becoming a major source of technical information and advice for the seafood industry in Australia. Rapid advances in innovative telecommunications will provide an ever increasing range of opportunities for AUSEAS to take its service to the doorsteps of seafood producers across Australia. AUSEAS has a commitment to monitor advances in such technology, adopting those which offer real scope for improving services within the context of the capacity of the Australian seafood industry to use them.

A number of new initiatives are currently being explored. These are listed below:

- **Internet**

To an information based service such as AUSEAS, the Internet offers great opportunities for joining networks and forming relationships with a wide range of sources around the world. We are developing a web page for the Internet (Appendix C-I). At this point the Internet will be used as a means of promoting AUSEAS, making contacts, and finding information sources rather than as a means of dissemination.

- **Publications**

The success of the Directory and Marketing Names books has proven what an effective tool a simple publication can be if it is targeted at a real need.

We have held discussions with Martin Bowerman of "Queensland Fisherman" and Dr Shawn Sommerset about producing material that highlights the health benefits of eating seafood. Another publication on the safety of seafood is under consideration. There are many misconceptions about seafood and the National Seafood Consumption Survey of 1991 identified safety concerns as a problem in seafood marketing. At AUSEAS we hold a wealth of information that could be condensed as a package on this topic.

- **Proactive Dissemination**

We have the capacity to supply clients with the very latest information on most seafood topics as we do in our quarterly updates (Appendix C-II) to other industry clients. These bulletins have not proven popular with the seafood industry. Unfortunately our dissemination strategy is still rather reactive, so we will, in the coming years resume a series of industry visits to improve our knowledge of the industry and their knowledge of our services. We will be developing presentation material to "sell" the importance of using up-to-date technology.

Associated with this approach, we are developing very current "off the shelf" packages in conjunction with equipment suppliers etc, to detail prices, sizes of materials, etc. Obviously these will take longer to compile and must be kept current, so that the number and scope will be restricted to very popular topics.

It is envisaged that AUSEAS will remain an integral part of the FRDC's extension strategy. Although the continuation of funding on a three yearly basis provides the opportunity for AUSEAS operations to be reviewed, it is intended that AUSEAS will always maintain the flexibility to change its operation to take advantage of opportunities that may arise at any time. The Directory project is an example of this.

LINKAGES

The closest linkage AUSEAS has is with the NSC. AUSEAS provides a secretarial service for the Commercial Manager of the NSC. Officers of AUSEAS also performs a review function on applications to NSC and assist in planning projects. Joint promotion activities are also undertaken with NSC. The Commercial Manager often refers clients to AUSEAS for information and advice. As a networking service, AUSEAS must have links with a range of organisations both within Australia and overseas. These links were found in a number of ways. "Quick reading" of the technical literature often alerts us to the existence of useful groups within both the industry and the research community. Contact was made with a wide range of organisations during preparation of the "Australian Seafood Industry Directory 1995-97" and in subsequent sales of the book.

AUSEAS also makes linkages with overseas organisations through its own operations and those of the Centre's seafood research group. These include national bodies such as the:

- National Fisheries Institute in the USA, an information service with which we exchange information and data;
- NZ Institute for Crop and Food, a crown research institute with which we have collaboration projects,

and international bodies such as the:

- SEAFDEC;
- International Association of Fish Meal and Oil Manufacturers; and
- INFOFISH network.

These close linkages enable us to get fast, reliable answers to many of our clients' questions. Much of the exchange within these networks is on a personal *quid pro quo* basis, and relies on personal contact to a considerable extent.

The activities of the Commercial Managers of the National Seafood Centre, both within Australia and overseas has also helped AUSEAS to forge links with groups such as the ASEAN Network of Fisheries Post-Harvest Technology Centres.

Links have also been made with local business groups such as the Australian Institute of Management and the Queensland Confederation of Commerce and Industry. Government agencies such as the Department of Foreign Affairs and Trade, AUSTRADE and the Queensland Department of Economic Development and Trade, also provide useful contacts in overseas countries.

STAFFING

The current staff assigned to AUSEAS are a Principal Scientist, two full-time Information Officers.

- The Principal Scientist is responsible for overall management of the service, and also for the provision of most of the advice. He has 24 years experience in seafood research and extension work.
- One full-time Information Officer is responsible for designing software applications, and carries out much of the searching that goes into the preparation of information packages. He has ten years experience in food technology and a further ten years in information technology.
- A second Information Officer is responsible for maintenance of the AUSEAS databases and also for the clerical duties such as invoicing, records etc and sales of the publications. She has 20 years experience in a wide range of office work, especially in designing databases.

All three AUSEAS officers have qualifications and experience in training.

The AUSEAS personnel work as a closely knit team, and are constantly developing new information products. AUSEAS is currently being integrated more closely with the Centre's library using a quality improvement model that will result in multi-skilling. This will give greater flexibility of operations to explore opportunities offered by newer technologies such as Internet and other information networks. By having a pool of six people rather than three to draw on for backup, we can allow time for training on new systems. This will build skills that will enable us to respond quickly to new developments in information technology.

Appendix A-1

Client Contact Forms

Enquiry Log
Package Job Sheet
Record of Interview

AUSEAS - ENQUIRY LOG

Date	Name	Company/ Address	Subject							
	Phone									Act Req
	Fax		R or N	Time	Cost	Fee	Ref	Class	Fin	
	Phone									Act Req
	Fax		R or N	Time	Cost	Fee	Ref	Class	Fin	
	Phone									Act Req
	Fax		R or N	Time	Cost	Fee	Ref	Class	Fin	
	Phone									Act Req
	Fax		R or N	Time	Cost	Fee	Ref	Class	Fin	
	Phone									Act Req
	Fax		R or N	Time	Cost	Fee	Ref	Class	Fin	

Repeat Business (R)			New Venture (N)			Projects (P)		
New Business (N)			Training (T)			Marketing (M)		
Time in Mins			Trouble Shooting (TS)			Aquaculture (A)		
Cost - \$90 per hour			Health Enquiry (H)					
\$15 per pub, \$25 overseas)			Government (G)					
Fee if Charged			Regulatory (R)					



AUSEAS - *Providing Seafood Solutions*

**P
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ENQUIRY DATE: _____

CLIENT NAME: _____

ADDRESS: _____

TOPIC: _____

Repeat client	
Search done by	
Referred to	
Authority sent	
Authority returned	
Invoice	
Letter	
Bind	
Sent	
Comment	



AUSEAS - *Providing Seafood Solutions*

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Date: _____

Commenced: _____

Concluded: _____

Name: _____

Company: _____

Address: _____

Phone: [] _____ Fax: [] _____

Email: _____

Mobile: _____

Present: _____

Type of business: _____

Species: _____

Produce Form: _____

Problem: _____

Action Proposed:

Type: _____

Persons Responsible: _____

Due dates for action: _____

Critical deadline: _____

Costings: _____

Appendix A-II

Marketing Plan

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EXECUTIVE SUMMARY

The *marketing plan* for AUSEAS, ultimately, is a superior client orientated service. A service the client will be perceived as a professional consultancy, with the reputation of quality, industry related information.

The plan is designed to develop long term paying relationships with a loyal clientele, as a sound economic base for a future of the consultancy.

The plan's strategy is to activate change in attitude to the value of information, by post-harvest industry participants. The value currently pervading clients' attitude is a combination of government department freebie and the overall Australian democratic right of freedom of information.

The *introduction* of fee service campaigns must be pre-empted by corporate image issues.

An improved method for prospects contacting AUSEAS, with its own listing in the state capital cities White Pages; and answering procedures within the AUSEAS/IFIQ environment.

The production of a complete satisfactory, brochure and corporate promotional package.

The adoption of continual promotion of client benefits via public relations methods. The post-harvest industry doesn't give credence to blatant space buying advertising compared to editorial, word of mouth or personal contact.

The establishment of a database to build a client and prospect profile, offers to opportunity to cross-sell to repeat customers, and a networking service to AUSEAS government secondary clients.

A quarterly newsletter is the recommended advertising method for AUSEAS services to a more receptive market, rather than a blanket advertising campaign. The content creiterial established, must include *quality* free information, personalised approaches and promotion of AUSEAS fee services.

The marketing plan goal is to build a loyal repeat client. *Sales anticipated* in the short term will be slow but steady as the clients develop the habit of referring to AUSEAS, as part of their business decision making process.

Positive contribution to the long term productivity of the Australian seafood industry is AUSEAS and it s stakeholders priority. *Profitability* isn't predicted for the near future.

The "cottage industry" mentality based on seafood supply has become an antiquated attitude. Seafood producers are forced to look beyond the harvest stage of production, for greater diversification and value-adding to meet current market demands, reach new markets and create sustainable production.

AUSEAS is servicing a *growth niche*, because these environmental changes are being pushed upon the post-harvest seafood participants. Profitability and survival require participants to possess a greater information base than previously needed by the seafood industry.

AUSEAS is in the position to monopolise the information services, to the post-harvest seafood industry. Its resources base is unique and comprehensive, therefore any "*competitor*" must go to AUSEAS to provide a complete or equal quality service to their clients.

BUT also, the "*competitor*" is a member of AUSEAS channels to complete its mission statement, of "facilitating the adoption of leading edge technology that is timely and appropriate".

AUSEAS is at the forefront of changes occurring in its specialised industry. The marketing plan is designed to be compatible with the changes and needs of the post-harvest seafood industry participants.

Appendix A-III

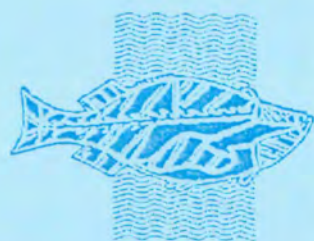
Promotional Material

Newsletter

Journal Advertising (Seafood Australia)

Centre for Food Technology AUSEAS leaflet

**Guide to Industry Development, Products
and Services**



TALKING SEAFOOD Quarterly News

Volume 2, No 1

March 1996



FISHERIES
RESEARCH &
DEVELOPMENT
CORPORATION

Edited by : Alan J Snow

Design & Layout: Bev Austin

NEW TELEPHONE NUMBERS

AUSEAS and the National Seafood Centre have new contact telephone and fax numbers. The new numbers are:

AUSEAS	Phone (07) 3406 8597
	Fax (07) 3406 8677
National Seafood Centre (Deon Mahoney)	
	Phone (07) 3406 8595
	Fax (07) 3406 8677

MAKING THE MOST OF THE CATCH

An international post-harvest seafood symposium to be held on 25, 26, and 27 July 1996 in Brisbane.

Preparation for this symposium which is being organised by the Centre for Food Technology is well advanced.

Keynote speakers from USA, New Zealand, Japan, Norway, Singapore, and Australia have been organised.

The symposium will focus on the technological needs of the Asia-Pacific region and is to be held at the Queensland Art Gallery Theatre, a two minute walk from Brisbane's CBD. It will immediately precede the Second World Fisheries Congress in Brisbane which runs from 28 July to 2 August 1996.

This symposium will concentrate on

- post-harvest practices, processes and products
- obtaining the highest returns through maintenance of quality attributes
- total catch utilisation
- processing of secondary raw materials and bycatch.

Further information can be obtained from the Registration Coordinator on (07) 3406 8630.

ROAD TRANSPORT OF LIVE FISH

The report on Live Fish Transport by Mike Rimmer, Senior Fisheries Biologist with DPI, has been presented to the Fisheries Research and Development Corporation and can be purchased through AUSEAS at a cost of \$15 including postage.

Some of the major points discussed in the report are:

- matching truck size and design to specific needs
- use of insulated tanks
- transporting fish in dark or low light conditions
- design of tanks and loading systems to minimise fish handling
- provision of oxygen to compensate for oxygen consumed by respiration
- provision of water agitators to off-gas carbon dioxide
- use of liquid oxygen instead of gaseous oxygen
- provision of adequate amounts of oxygen during the loading procedures when oxygen consumption is the highest
- reduction of water temperature to reduce the metabolic rate of the fish during transport
- extensive pre-transport 'tempering' to adapt the fish to transport conditions
- effects of temperature and fish size on loading rates
- recommended loading rates for US finfish species

Contact AUSEAS for a full copy of the report.

HAVE YOU GOT YOUR COPY OF THE AUSTRALIAN SEAFOOD INDUSTRY DIRECTORY AND THE MARKETING NAMES FOR FISH AND SEAFOOD IN AUSTRALIA YET? CONTACT AUSEAS TO OBTAIN YOUR COPY.

THESE PUBLICATIONS ARE AVAILABLE AT A COST OF \$10 EACH PLUS POSTAGE.

MARKETS FOR DRIED SEAFOOD

Are you considering drying Australian seafood for the export market?

You need to obtain a copy of the report *Evaluation of the Market for Dried Seafood* from AUSEAS.

Steve Slattery, Scientist at the Centre for Food Technology and co-author of the report said, "This report would be of immense value to anyone who is either currently or considering the export of dried seafood into South East Asia."

The report gives ideated information about:

- Products which are currently marketed overseas
- The volume and value of consumption of dried seafood on a country by country basis
- Prospective specific overseas markets for dried seafood commodities.

Further information about the contents of the report can be obtained from Mr Slattery on (07 3406 8623). The report is available at a cost of \$100 plus postage from AUSEAS.

LIVE SEAFOOD HANDLING - STRATEGIES FOR DEVELOPMENT

Australia's live seafood trade is valued at over \$250 million, and is a major reason behind the growth in seafood exports in recent years.

While the industry enjoys considerable success, there is still the need to solve a variety of highly complex problems associated with the capture, holding, and transport of a range of species.

The National Seafood Centre held a live seafood forum in October to discuss many of these issues.

The proceedings of this forum are now available in this report which is available from AUSEAS for \$35.00 inc postage

The AUSEAS Literature Resources

Staff at AUSEAS are continually scanning the literature related to post harvest handling of seafood to ensure that our resources are as up to date as is possible,

We regularly scan approximately 20 journals per week and add articles of interest to the extensive database.

This ensures that when clients contact us to obtain information on a particular subject, we are able to satisfy their needs extremely quickly.

Some examples of abstracts of articles of interest that have been added to the AUSEAS database in the last month are included.

Eating fish may reduce asthma

Ground-breaking medical research suggests that eating fresh oily fish can protect children from developing asthma.

The research suggests children who regularly eat fresh oily fish are almost two-thirds less likely to have asthma than children who do not eat fish.

In their list of oily fish, the researchers have included mullet, tailor, kingfish, tarwhine, bream, luderick, pilchards and golden perch.

They defined "oily" fish as fish with greater than 2% oil content; tests have shown the oil content in mullet to be up to 9.7%, tailor 5.5%, kingfish 4.8%, tarwhine 4.1%, bream 3.1%, luderick up to 2.4%, pilchards 2.3% and golden perch 2.317c.

The research project that produced these findings was conducted at the Institute of Respiratory Medicine at Royal Prince Alfred Hospital in Sydney and funded by the Fisheries Research & Development Corporation.

REF: The Queensland Fisherman February 1996:5

Serious threat to shrimp

Water pollution and a virus epidemic are posing a serious threat to Indonesia's shrimp industry- meanwhile, harvest failures have led to a sharp drop in exports.

Thousands of hectares of shrimp farms have been abandoned by farmers as banks have cut off their credit and tried to collect unpaid debts.

Indonesia's shrimp exports dropped to 108,000 tonnes last year from 140,000 tonnes in 1991, Production is expected to drop below 108,000 tonnes this year

REF Seafood International February 1996 (11)

Some diseases and parasites that may affect the culture of eels

Eels suffer from many diseases and are attacked by a large number of parasites. Many of these disease organisms are temperature dependent, only living within certain water temperature ranges.

This article continues to discuss common diseases and parasites that affect eel cultures.

REF Austasia Aquaculture 9(5) 40-41

The full text of any of the articles above can be obtained by contacting AUSEAS on 3406 8597.

Please quote the title of the article.

YOUR GUIDE TO SEAFOOD INFORMATION PUBLICATIONS AND SERVICES

MARKETING NAMES FOR FISH AND SEAFOOD IN AUSTRALIA

"... finally an industry developed list of standard marketing names for seafood in Australia."

This publication is designed to ensure the rapid adoption of standard marketing names for commercial seafood products around Australia enabling consumers to buy with confidence and familiarity. Each entry includes an accurate photograph or sketch to help you identify the species, along with some of the previously used names, and the name which now must be used. The book also includes comprehensive cross referencing indexes and details on how existing fish names may be amended.

Cost: \$10 plus \$5 postage.

AUSTRALIAN SEAFOOD INDUSTRY DIRECTORY

"... the quick way to find someone in the seafood industry. "

This 250 page book can provide you with business and government contacts throughout the Australian seafood industry. The scope of this directory ranges from aquaculturalists through to processors and exporters, as well as including a comprehensive listing of support services.

Cost: \$10 per book or disk, plus \$5 postage.

AUSTRALIAN SEAFOOD CATERING MANUAL

"... a great reference book for anyone handling, selling or cooking seafood."

An extremely comprehensive and relevant guide covering seafood quality, buying, storage, hygiene, preparation, cooking, marketing, a glossary and where to find assistance. Presented in two volumes with over 150 colour photographs and illustrations on durable glossy pages. Great value.

Cost: \$80 for two volumes, plus \$10 postage.

FishMAD - Fish Market Analysis Database

"... a powerful source of information for marketers and distributors of seafood."

The Fish Market Analysis Database provides all the information collected in the 1993 National Seafood Consumption Survey together with ongoing market survey updates. If you require up to date information on seafood consumption in Australia, this is for you.

Cost: \$400 for the database complete with application software.

AUSEAS

"... providing speedy technical advice for those in the seafood industry."

The Australian Seafood Extension and Advisory Service is a national consulting service for clients in every state. With access to a large international expert database and to the internet, AUSEAS has a considerable amount of information resources on tap.

Cost: Fees are based on the specific nature of services offered.

***These publications and services
are available by contacting:***

**AUSEAS
19 Hercules Street
Hamilton Qld 4007
Phone: 07 3268 8597
Fax: 07 3268 7532**

YOUR GUIDE TO SEAFOOD INFORMATION PUBLICATIONS AND SERVICES

"... finally an industry developed list of standard marketing names for seafood in Australia."

This publication is designed to ensure the rapid adoption of standard marketing names for commercial seafood products around Australia enabling consumers to buy with confidence and familiarity. Each entry includes an accurate photograph or sketch to help you identify the species, along with some of the previously used names, and the name which now must be used. The book also includes comprehensive cross referencing indexes and details on how existing fish names may be amended.

\$10 plus \$5 postage.

Australian Seafood Industry Directory

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This 250 page book can provide you with business and government contacts throughout the Australian seafood industry. The scope of this directory ranges from aquaculturalists through to processors and exporters, as well as including a comprehensive listing of support services. **\$10 per book or disk, plus \$5 postage.**

Auseas

"... providing speedy technical advice for those in the seafood industry."

The Australian Seafood Extension and Advisory Service is a national consulting service for clients in every state. With access to a large international expert database and to the internet, AUSEAS has a considerable amount of information resources on tap. **Fees are based on the specific nature of services offered.**



**These publications and services
are available by contacting:**

**AUSEAS
19 Hercules Street Hamilton Qld 4007
Phone: 07 3406 8597 Fax: 07 3406 8677**

TECHNICAL INFORMATION & ADVICE FOR THE SEAFOOD INDUSTRY

Supplying technical information and advice to Australia's seafood industry is the aim of the Australian Seafood Extension and Advisory Service or AUSEAS.

AUSEAS is a shared initiative of the Fisheries Research and Development Corporation and the Centre for Food Technology and is located within the Centre's Hamilton headquarters.

AUSEAS is employed by fishers, processors, exporters, regulators, insurance brokers, the legal profession and many other groups with an interest in the seafood trade.

The service offers:

- > on-call specialist advice by telephone or facsimile
- > specific, detailed information packages accessed from Australian and global research databases
- > confidential consultancy services
- > assistance in planning and appraisal and in applying research results and
- > training support.

AUSEAS operates on a commercial fee-for-service basis. The total cost of your request or project will vary depending on its scope and complexity. As a guide, information packages on specific subjects cost between \$100 and \$200 and include the cost of searching and document retrieval as well as interpretation.

- > AUSEAS Abstracts (comprehensive database search of a selected subject with summaries of papers provided) \$30-\$50
- > AUSEAS Updates (quarterly current awareness bulletins providing abstracts of selected papers) \$100/year
- > AUSEAS Annual Membership (providing four quarterly updates and four database searches on the topic of your choice) \$200/year
- > Consultancy \$90/hour

Current industry information

The following can also be purchased from AUSEAS:

- > *Australian Seafood Industry Directory 1995-97* \$10 (plus \$5 postage)
- > *Marketing Names for Fish and Seafood in Australia* \$10 (plus \$5 postage)

Associated with AUSEAS, the **National Seafood Centre** is also located within the Centre for Food Technology. A further initiative of the Fisheries Research & Development Corporation, the NSC provides funds for research and development to foster value-adding and product development in the post-harvest seafood industry.

FOR FURTHER INFORMATION:

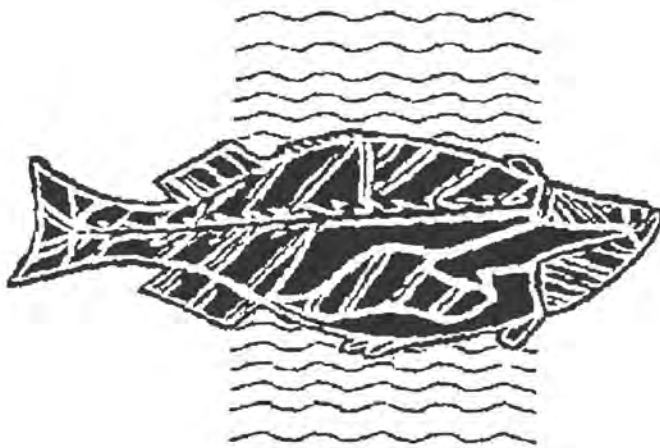
STEPHEN THROWER, AUSTRALIAN SEAFOOD EXTENSION & ADVISORY SERVICE
CENTRE FOR **FOOD TECHNOLOGY**

19 HERCULES STREET HAMILTON BRISBANE QUEENSLAND 4007
TELEPHONE (07) 3406 8597 FACSIMILE (07) 3406 8677



AUSEAS

*Providing
Seafood
Solutions*



AUSEAS is a joint initiative of the Fisheries Research and Development Corporation (FRDC) and the Queensland Department of Primary Industries (QDPI) which is located at the Centre for Food Technology.

AUSEAS Goals

- * Transfer appropriate technology to the Australian seafood industry.
- * Develop a technology-based culture that will encourage industry.
- * Facilitate the interpretation and adoption of research results.

AUSEAS Services

- * *On-line Specialist Advice*
- * *Research Advice*
- * *Confidential Consultancy Services*
- * *Assistance in Planning and Appraisal*
- * *Assistance in Applying Research Results*
- * *Training Support*
- * *Liaison with Research Institutes*

Fees - are charged at commercial rates for services that involve substantial levels of work and significant private benefit.

Located at: Centre for Food Technology
19 Hercules Street
HAMILTON Queensland 4007
AUSTRALIA.

LITERATURE SEARCHES - AUSEAS has access to a wide range of technical information sources. We have the ability to develop an information package to assist you with most of your enquiries. There are several different ways for you to keep abreast of your specific area of interest or expertise. To ensure you can get your best value for money and keep up to date with your information you can subscribe to any one of the annual services offered by AUSEAS.

ANNUAL MEMBERSHIP

\$200.00/year

For this charge you are entitled to four (4) literature searches for the year along with four (4) quarterly updates on the topic of your choice. The literature searches will be performed upon request from you and the quarterly updates will be forwarded to you every 3 months on the topic you requested when you subscribe.

QUARTERLY UPDATES

\$100.00/year

For this charge you are entitled to four (4) quarterly updates on the topic of your choice. These will be forwarded to you every 3 months on the topic you requested when you subscribe.

ABSTRACT SERVICE

\$60/search

For this charge, you will receive a list of published articles, author, date of publication, and a brief description of the article. To use this service, simply supply AUSEAS with the topic you are interested in. The full text of the article can be subsequently supplied on request from you.

As well as the publications listed on the following pages several other reports published by the Fisheries Research and Development Corporation and the National Seafood Centre are available through AUSEAS. Enquire for a price of these reports.

SEAFOOD PUBLICATIONS

★ *Australian Seafood Industry Directory 1995-97*

The Australian fishing industry has grown rapidly in recent years and now makes a major contribution to Australia's rural economy. This directory is intended for use by people dealing with the post-harvest sector of the Australian fishing industry either in Australia or overseas. It contains a number of features that have been included to increase its ease of use. Some of these features are: Grouped into States; Coastal strip maps; Seasonality guide; and Government agencies are listed in the front of the directory giving contact numbers for the head office and regional offices.

PRICE (Book or Disk version): A\$10.00 + postage

★ *Dried seafood marketing report 1995*

This report is a market survey into the processing of seafood using such technological equipment as the heat pump drier. Topics covered in the report include: A survey of products and prices of dried seafood sold in Australia; Market information about dried seafood traded around the world; Import and export statistics; Study tour of manufacturers and wholesale and retail outlets for dried seafood in Hong Kong and Taiwan; A review of likely candidates for Australian production.

PRICE: A\$100.00 + postage

★ *Food processing concepts for the Australian Beche-de-mer Industry*

This publication is the culmination of a project into the processing of beche-de-mer (also known as Sea Cucumber or Trepang). Topics covered in the publication include: Biology of the animals; Processing of the cooked/dried product; Freezing and freeze drying; Handling and hygiene; Quality control and management; and Marketing.

PRICE: A\$20.00 + postage

★ *Handbook of Australian Crocodile Meat*

Challenging times confront the Australian crocodile meat industry. Increasing imports of Papua New Guinea crocodile meat and the growing production of Australian crocodile meat have created a demand for high

quality product and marketing information. In 1993-94 the Australian crocodile meat industry produced about 29t of meat, valued at more than half a million dollars. It is projected that, by the year 2000, Australian crocodile meat production will exceed 79t, valued at more than \$1.5m. This handbook provides a common language for describing crocodile carcass cuts. It is valuable resource for producers, processors, wholesalers, chefs, educators, caterers and other industry employees.

PRICE: A\$24.00 + postage

★ ***Live Seafood Handling - Strategies for Development***

Australia's live seafood trade is valued at over \$250 million, and is a major reason behind the growth in seafood exports in recent years. While the industry enjoys considerable success, there is still the need to solve a variety of highly complex problems associated with the capture, holding, and transport of a range of species. The National Seafood Centre recently held a live seafood forum to discuss many of these issues. The proceedings of this forum are now available in this report.

PRICE: A\$35.00 inc postage

★ ***Marketing names for Fish and Seafood in Australia***

This publication contains a list of over 270 species of fish and seafood. It covers wild caught, farmed and imported fish and seafood. It will be of benefit to overcome economic inefficiencies and assist in fisheries management. This publication will be an essential tool for the marketing of fish and seafood.

PRICE: A\$10.00 + postage

★ ***Seafood Catering Manual - Volume 1***

A feature of the book are the species profiles. These detail, where the species is caught, the main ways it is sold, chef's choice, menu morsels, suggest wines and cooking ideas. Species described in detail include 37 finfish (from Atlantic Salmon to Whiting), 18 shellfish covering prawns, crabs, lobsters, crayfish and molluscs plus crocodile. Two alternative tables provide a quick reference guide to species that can be used as alternatives for another. Finally two nutrition tables, one for finfish, one for shellfish, complete this thoroughly researched book.

PRICE: A\$55.00 + postage

If you wish to purchase any of these books please fill out the form below indicating which book you require and return either by fax if paying by credit card or by post if paying by cheque or money order. All prices are quoted in Australian Dollars.

NAME: _____

ADDRESS: _____

TELEPHONE: _____ **FAX:** _____

SIGNATURE: _____

NUMBER OF BOOKS REQUIRED:

_____ Australian Seafood Industry Directory 1995/97 (Hard copy book OR Windows Disk Version) at A\$10.00 ea + postage.

_____ Dried Seafood Marketing Report 1995 at A\$100.00 + postage.

_____ Food Processing Concepts for the Australian Beche-de-mer Industry at A\$20.00 + postage.

_____ Handbook of Australian Crocodile Meat at A\$24.00 + postage.

_____ Live Seafood Handling - Strategies for Development at A\$35.00 inc postage.

_____ Marketing Names for Fish and Seafood in Australia at \$10.00ea + postage.

_____ Seafood Catering Manual - Volume 1 at A\$55.00 + postage.

CREDIT CARD DETAILS

Amount: A\$.....

Bankcard Mastercard Visa Expiry Date ___/___

Card number | | | | | | | | | | | | | | | | | | | | | |

Cardholder's Name

Signature

Cheques and Money Orders made payable to: *Department of Primary Industries and marked Not Negotiable.*

POSTAGE RATES:

DESTINATION	Australian Seafood Directory Book; Dried Seafood Marketing Report; Marketing Names Book; Seafood Catering Manual - Vol 1		Beche-de-mer Book; Crocodile Handbook	
	1 BOOK	ADDITIONAL BOOK	1 BOOK	ADDITIONAL BOOK
Australia	\$5.00	\$1.00 each	\$3.00	\$1.00 each
Malaysia & Singapore	\$19.00	\$8.00 each	\$3.50	\$3.50 each
Asia	\$21.00	\$10.00 each	\$4.00	\$3.50 each
USA & Canada	\$24.00	\$13.00 each	\$4.50	\$4.00 each
South America	\$26.00	\$15.00 each	\$5.00	\$4.50 each
UK & Europe	\$26.00	\$15.00 each	\$5.00	\$4.50 each
New Zealand	\$17.00	\$6.00 each	\$3.00	\$2.50 each

Along with these publications AUSEAS has access to many industry reports which are available for purchase. To enquire about any of these publications or reports please contact AUSEAS on:

Telephone: [07] 3406 8617 Fax: [07] 3406 8677
 International: +61 7 3406 8617 Fax: +61 7 3406 8677

If you wish to purchase any of these publications please complete the order form over the page and return:

- by post if paying by cheque or money order to:
 AUSEAS
 19 Hercules Street
 BRISBANE Q 4007

OR - by fax if billing to your credit card: [07] 3406 8677.

For information from AUSEAS contact:

	Technical Info	Literature Searches
	<i>Stephen Thrower</i>	<i>Alan Snow</i>
Phone:	[07] 3406 8599	[07] 3406 8645
International:	+61 7 3406 8599	+61 7 3406 8645
Fax:	[07] 3406 8677	[07] 3406 8677
Mobile:	[018] 199508	

	Publications
	<i>Bev Austin</i>
Phone:	[07] 3406 8617
International:	+61 7 3406 8617
Fax:	[07] 3406 8677

The Seafood Network - AUSEAS is part of a national seafood network sponsored by the Fisheries Research and Development Corporation. The other elements in the network are:

☛ **The National Seafood Centre:**

Contact: Ian Wells
Phone: [07] 3406-8595
Fax: [07] 3406-8677
Mobile: [0419] 643043

☛ **Australian Seafood Industry Education Network:**

Contact: Bob Miller
Phone: [08] 303-2780
Fax: [08] 303-2791
Mobile: [019] 695572

☛ **SeaQual:**

Contact: Jayne Gallagher
Phone: [06] 281-0383
Fax: [06] 281-0438
Mobile: [014] 685741

Your Guide

To

*Industry Development
Products and Services*

AUSTRALIAN SEAFOOD INDUSTRY

AUSEAS

technical information and advice

National Seafood Centre

funding research and development

FishMAD

fish consumption data

TELEPHONE NUMBERS

as from 7 June 1996

- **NSC - Ian Wells**
Phone: [07] 3 406 8595
Mobile: [0419] 643043
Fax: [07] 3 406 8677
- **AUSEAS - Stephen Thrower**
Phone: [07] 3 406 8599
Mobile: [018] 199508
Fax: [07] 3 406 8677

AUSEAS

National Seafood Centre

FishMAD

*"...investing for tomorrow's catch."***CONTACT**

Peter Dundas-Smith
Executive Director
FRDC
PO Box 222
Deakin West ACT 2600

Phone: (06) 285 4485
Fax: (06) 285 4421

*Your Guide**To**Industry Development
Products and Services****FISHERIES RESEARCH &
DEVELOPMENT CORPORATION*****What is FRDC?**

The Fisheries Research & Development Corporation (FRDC) is a national body whose mission is to increase economic and social benefits to the fishing industry and the people of Australia, through planned investment in research and development, in an ecologically sustainable framework.

It is responsible for:

- planning, funding and managing research and development programs; and
- facilitating the dissemination, adoption and commercialisation of the results of research and development.

In 1994-95 the FRDC planned, funded and managed 214 projects worth \$34 million. Of this, the FRDC contributed \$11,6 million from its general funds. Other sources of funds were provided by Governments, research agencies, trust funds, industry and other beneficiaries of research results.

Who Is FRDC?

The FRDC is managed by five staff based in Canberra and governed by a board of directors currently with exper-

tise in fisheries science and management, fishing industry, marketing, natural resources science and business and public sector management. The board is responsible to the Commonwealth Minister for Resources.

What Does It Do?

The FRDC's goals for research and development are broadly divided into three areas.

- Resources Sustainability. Goal - to develop in a sustainable manner, Australia's wild fish resources.
- Ecosystems Protection. Goal - to protect Australia's ecosystems upon which fisheries and aquaculture depend.
- Industry Development. Goal - to enhance the competitiveness and resilience of the Australian fishing industry.

To achieve the latter goal, the FRDC invests in the following key areas.

- Aquaculture Development
- Health & Safety
- Information Delivery
- Market Development
- Quality
- Technology
- Value Adding

AUSTRALIAN SEAFOOD INDUSTRY

AUSEAS

National Seafood Centre

FishMAD

*"...adding value
to seafood."*

CONTACT

Deon Mahoney
Commercial Manager
National Seafood Centre
19 Hercules Street
Hamilton Qld 4007

Phone: (07) 3268 8595
Fax: (07) 3268 7532

NATIONAL SEAFOOD CENTRE

The world market for seafood is characterised by dwindling supply and rapidly increasing demand. Increases in production can only result from changes in fisheries management, better use of under-utilised species (especially by-catch), and from aquaculture.

Clearly the seafood industry must adopt strategies which result in better use of raw materials and generate higher returns. Unfortunately, in Australia the seafood processing industry has not fully exploited opportunities to value-add to seafood products.

With this in mind FRDC, with the assistance of the Qld Department of Primary Industries, created the National Seafood Centre (NSC) in 1993. The charter of the NSC is to foster value-adding and product development within the post-harvest sector of the Australian seafood industry, by funding research and development activities.

Since 1993, the NSC has provided funds for over 20 projects. These have been drawn from all States in Australia, and

Typical Projects Funded

- *Development of an automated oyster grading and counting line*
- *Manufacture of finings agents for the brewing industry*
- *Post harvest handling and marketing of blue manna crabs*
- *Effects of capture and transport on wrasse and leatherjackets*
- *Fish silage - can it be used in aquaculture?*
- *Silver perch industry development*



National Seafood Centre
 Commercial Manager, Deon
 Mahoney, at sea sorting blue
 manna (blue swimmer) crabs

include wild caught and aquaculture species. Topics studied have included the development of innovative seafood products, the design and fabrication of seafood processing equipment, trouble shooting, utilisation of by-products and waste, and general industry development.

The National Seafood Centre receives applications from seafood processors, research institutions and industry consultants to undertake project work. A typical project will be completed in less than one year and have potential to add value to Australia's marine resources.

Applications, which may be received at any time, should highlight the need for the study and the benefits that may flow to the Australian seafood industry.

For further information about the NSC and how it may assist you with commercial value-adding and product development ideas, contact the Commercial Manager.

Case Study: Adding Value To Shark Waste

A major waste of the Australian shark fishery is the backbone which, until recently, had no commercial value. Pacific Export Services (Queensland), initiated a project to convert this material into a pure powder. The investigations, undertaken by the International Food Institute of Queensland and funded by the NSC, assisted in the sourcing of the raw material and in the optimisation of the processing operation.

The product, Kartalin, is a fine, free-flowing powder which is marketed as a

food supplement on domestic and export markets.

This study assisted Pacific Export Services (Queensland) to produce a range of value-added products from a previously discarded waste of the fishing industry.

The NSC continues to support Pacific Export Services (Queensland) in the development of value-added products from the waste streams of the Australian fishing industry. Current investigations focus on the utilisation of fish swim bladders for use as a fining agent in the brewing industry.



FishMAD Fish Market Analysis Database

“... providing essential seafood marketing data.”

This is the opportunity to plug into fish marketing and buying trends, and save money in the process.

FishMAD is short for Fish Market Analysis Database, and offers all the information collected in the 1993 National Seafood Consumption Survey, plus updates from an on-going market survey which will keep you in touch with both national and local preferences.

The data is collected in sectors ranging from institutional buyers to fast food outlets and is analysed both nationally and state by state. For individual subscribers, Fish MAD can undertake specific product and market analysis, con-

duct market surveys, or prepare special reports to subscriber specifications. AUSEAS is the point of contact for FishMAD.

The managers of the database, the Technisyst Group, believe it offers potential benefits to every organisation involved in the supply, marketing distribution, buying or analysis of seafood in Australia.

A copy of the Fish Market Analysis Database is available for \$400 which includes TabGen (the search program - normally \$350) and all of the data collected in the 1993 Seafood Consumption Survey.

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AUSTRALIAN SEAFOOD EXTENSION AND ADVISORY SERVICE

What Is AUSEAS?

AUSEAS is the Australian Seafood Extension and Advisory Service, and operates on a national basis with clients in every State.

What Does It Do?

The primary aim of AUSEAS is to provide technological solutions to problems faced by the seafood industry. To do this it has a range of resources.

AUSEAS like the National Seafood Centre (NSC) is located within the International Food Institute of Queensland (IFIQ) which employs the largest group of seafood technologists in Australia with an enormous combined experience in post-harvest seafood Research and Development. In addition, AUSEAS maintains contact with specialists throughout the world through its electronic database of external experts. Using networks such as the INTERNET, AUSEAS is able to seek fast answers to clients' problems.

Speed is a major requirement for many clients and to achieve a fast response AUSEAS has invested in a large on-site collection of key printed reference material, with over 5,000 publications that can be quickly accessed by computer.

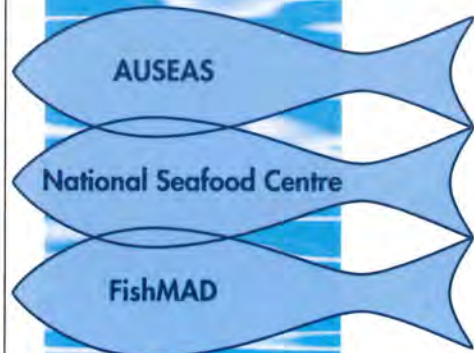
The level of service provided varies from short answers given over the telephone to detailed searches and advisory packages which incorporate the latest available information gathered from on-line international searches and compiled by highly experienced experts. These packages are presented in a form that is readily understood by the clients.

Where there is a significant gap in knowledge AUSEAS is able to bring this to the attention of funding authorities such as the NSC and the FRDC and, if appropriate, this may result in a proposal for a research project.

The resource base available through AUSEAS is very large since it spans published material from around the world and extends back in time over several decades. For example, the answers to some recent problems were found in Russian material published in 1927.

In addition to this essentially reactive service, AUSEAS has a proactive responsibility to ensure that

A bearded Stephen Thrower, AUSEAS Principal Scientist, measuring the temperature of live lobsters in Hobart



"...providing technological advice for the seafood industry."

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Fax: (07) 3268 7532



the Australian seafood industry remains at the forefront of technology. This is done in a number of ways. Firstly, regular scanning of scientific and trade journals from around the world means that new trends can be identified and passed on to companies likely to benefit from such information.

AUSEAS also has a responsibility to work in with other "players" in the area of industry development. This involves identification of problems and assistance in formulation of strategies to meet them, and active participation in the dissemination process when solutions are found.

It is vital that all players in the seafood industry become more aware of the initiatives being taken to increase competitiveness. AUSEAS is well positioned to take on a central role in dissemination.

This can be done through training, publications, etc. The recent publication of the "Australian Seafood Industry Directory 1995-97" is an example of such activities. AUSEAS is to become a central point in the maintenance of the

database of "Marketing Names for Fish and Seafood in Australia".

In order to facilitate access to services available, AUSEAS will in the future be working much more closely with other agencies such as the NSC and FishMAD.

What Does It Cost?

AUSEAS was established to provide the Australian Seafood Industry with access to the best available technology. Funding comes from the Fisheries Research and Development Corporation (FRDC) and the Queensland Department of Primary Industries (QDPI), and revenue from its fee-for-service activities.

AUSEAS has a number of "value-added" information products which are offered on a fee for service basis. Customised packages can be done with charges being levied for search time and procurement of suitable papers, and interpretation of technical material where necessary.

How Does It Work?

The procedure for using the service is

as follows. The client makes contact with AUSEAS and the problem is discussed. If a package is needed, a "Request for Information Service" form is prepared and sent to the client with an indication of cost. The client may amend the request form if necessary and then returns the signed form to AUSEAS. The search is then performed and the package sent together with an invoice.

For clients who want to stay up-to-date with a particular subject "AUSEAS Quarterly Updates" can be supplied. For a subscription fee of \$120/year, the subscriber can be supplied with the summaries of papers published in a key subject area each quarter. Single copies of the whole articles can be supplied on request.

AUSEAS also functions as a gateway to other services. Databases of a wide range of other services such as equipment and ingredient suppliers and a range of consultants and Research and Development Institutes mean that AUSEAS can provide a referral service to a wide range of other expertise.

AUSTRALIAN SEAFOOD INDUSTRY DIRECTORY

Finding information on who does what in the seafood industry has been made much easier by the publication of the Australian Seafood Industry Directory, 1995-97.

This 250 page book is intended to open up the market by putting sellers in touch with buyers and vice versa. It provides a comprehensive listing of businesses in the post-harvest sector of the industry including processors, importers, exporters, agents, storage facilities, and others. Strip maps and seasonality charts are provided to assist overseas traders to plan buying trips. In addition to companies directly involved in the seafood trade, an extensive list of support services such as consultants and an "easy find" guide to government agencies is included.

The Directory seeks to unite the entire distribution chain, linking buyers and sellers from fisherman to the final consumer.

The Fisheries Research & Development Corporation (FRDC) commissioned AUSEAS to prepare the directory to help build networks between all the players in the post-harvest seafood sector.

"In an Industry as decentralised as the Australian fishing industry effective networking is essential. Customers sometimes find it difficult to locate suitable suppliers, and it can be difficult for producers to find help in developing the niche markets that often mean the difference between profit and bankruptcy."



AUSEAS Principal Scientist, Stephen Thrower, with Sydney restaurateur, Gaye Bilson, at the Directory launch

The Australian Seafood Directory is also available in disk form and is extremely user friendly, giving great searching power. It operates in a "Windows" environment and enables the user to search for selected criteria as well as print out results. For example, it is possible to produce a list of producers of dried fish in a given STD area within seconds. (These search results are dependent upon the information supplied by individual companies.)

Although the directory was only released in August, sales are booming and considerable interest has been shown overseas. The printed directory will be updated every two years, and the disk annually (6 monthly).

The directory price is \$10.00/copy (printed or disk) plus postage. Australian postage rates are:

- 1 book - \$5.00 plus \$1.00 for each additional copy
- 1 disk - \$2.00 plus 50 cents for each additional copy.

"... providing essential information for the seafood industry."

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AUSTRALIAN SEAFOOD CATERING MANUAL

The Australian Seafood Catering Manual was developed specifically to meet the needs of the seafood industry's VIP client - the food service industry. It has already been judged a major success since it was launched in 1994.

"It's nice to congratulate a team which includes FRDC and the Qld DPI, for creating another first. It is a wonderful initiative because this guide will help offset a number of significant influences that impact upon the restaurant and food service industry. This book is comprehensive. It was a pleasure being involved with its production, and knowing that its proper use by operators, cooks and those who catch and market the product will give the industry a future leading edge in the presentation of Australian Seafood".

"...delivering commercial advantage to the fishing and foodservice industries"

CONTACT

Joanna Kane
Qld DPI - Agribusiness

Please phone or fax for an order form.

Phone: (07) 3239 3254
Fax: (07) 3239 0439



Catering Manual senior author, Joanna Kane, 'hands-on' at Morgan's Seafood Restaurant near Brisbane and, top, receiving an award from the Qld. Chef's & Cook's Assn.

So said John Gibson, former CEO of the National Restaurant and Catering Assn. (Queensland branch). John will soon open a new 200 seat seafood restaurant in Brisbane called Brett's Wharf Seafood Restaurant and Function Centre

John said the Manual is playing a vital role in his planning and setting up of the restaurant. The storage and handling sections are his guide to the equipment and design of facilities required.

The product information and availability is also essential information John needs for planning menus and ordering seafood. John relies on the Manual for accessing this information easily. It allows him to acquire wild product when it is in its peak. John says this will help him have a viable seafood product in his restaurant every part of the year.

John also uses the creative suggestions on cooking and presentation for different types of seafood. This section of the Manual was written mainly by Robert Henderson an innovative Sydney chef.

What The The Critics Say:

"In its colourful and attractive slip case, this two volume, glossy-stocked, full-colour, wire-bound document is \$80 worth of sheer magnificence. In short, this is the best publication of any sort I've seen on Australian Food."

Stephen Downes, Australian Financial Review

"... an extremely useful reference for anyone who handles, cooks or eats seafood professionally or as an enthusiastic amateur. It covers everything from species identification to preparation, cooking and storage of the most eaten varieties of Australian finfish, shellfish and molluscs."

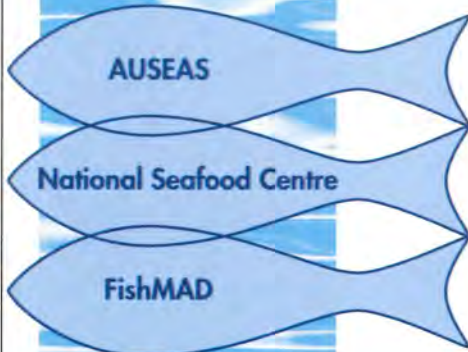
John Newton, The Sydney Morning Herald

"... it can often be difficult to find information about Australian seafood. No longer. The Queensland Department of Primary Industries and the Fisheries Research and Development Corporation have combined to produce the Australian Seafood Catering Manual, a two-volume guide to what, where and when, as well as information about buying, storage, preparation and cooking. ... are filled with maps, colour photos and easy-to-follow information and come with a comprehensive index."

Roslyn Grundy, The Age

"This long overdue masterpiece, which has taken three years to complete, covers every possible aspect of seafood and stops just short of including recipes. ... There is no doubt that the Australian Seafood Catering Manual is the most comprehensive and relevant written work on seafood released in Australia to date ..."

Andrew Wood, Devine



MARKETING NAMES FOR FISH AND SEAFOOD IN AUSTRALIA

The profusion of names, the lack of uniform names around the country, and the resulting confusion regarding marketing names, were compelling reasons behind the development of the publication *Marketing Names for Fish and Seafood in Australia*.

User acceptance of a specific name for a fish is based upon familiarity, and the publication is designed to ensure the rapid adoption of standard names for fish and seafood products in Australia.

In preparing the book, consideration was given to ensure the names selected were generally accepted by the seafood industry and seafood consumers, and that the names were not misleading. Obviously there was a need to make compromises. How-

ever, this was undertaken with considerable input from the fishing industry. As the standardisation of names is an evolving process, there is a mechanism to allow for future editions and to review existing names, if required, by the Seafood Marketing Names Working Group.

After its release in November, the adoption and use of *Marketing Names for Fish and Seafood in Australia* will be promoted to key industry organisations and other stakeholders.

The launch will occur on 10 November 1995, and the book will be distributed by FRDC, the Australian Seafood industry Council network, and through AUSEAS. AUSEAS will also be the initial point of contact for changes to marketing names.

*"...standardising names
for seafood - around
the nation."*

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The Australian Seafood Industry - Key Facts -

- Australian fisheries production has quadrupled over the past decade to reach \$1.6 billion (1993-94 figures - ABARE).
- The industry is a significant earner of foreign exchange, with exports exceeding \$1.2 billion (1993-94).
- Whereas some wild fisheries may have reached sustainable limits, Australian aquaculture production is showing strong growth.
- The fishing and aquaculture industries are dominated by the marketing of unprocessed live and fresh seafoods.
- Opportunities exist to develop new and innovative seafood products as consumer demand continues to grow - both in Australia and overseas.

THE AUSTRALIAN SEAFOOD CATERING MANUAL

A New Lure For The Food Service Industry

It's a first ever for Australia - and the seafood industry is leading the way.

The inaugural **Australian Seafood Catering Manual** is designed specifically to meet the ever growing needs of the Seafood Industry's VIP client - The Food Service Industry.

The extensive knowledge and expertise of three industries:

Seafood, Food Service and Education/Training industries from every state and territory around Australia have been drawn together over the last three years.

This multidisciplinary team is one of the major reasons for the unique and successful compilation of the Australian Seafood Catering Manual.

The manual is an indispensable companion for restaurateurs, commercial caterers and institutional users of seafood. Many others will also find the manual an invaluable source of information and ideas, including wholesalers, retailers, exporters, trainers, researchers, consultants and governments.

What's at the end of the Line?

The manual is a two volume set that is specifically designed to be used on-the-job. As a result, it is spiral bound, has durable glossy pages and has over one hundred and fifty colour photographs and illustrations.

The wide range of topics in the manual are:

- **Species Chapter**
A profile of the major and upcoming species consumed in Food Service.
- **Alternatives Chapter**
Quick referencing of alternative species, based on season, size, flavour, texture and other factors.
- **Quality Chapter**
Quality assurance and quality assessment procedures.
- **Buying Chapter**
Where to buy, how to order, product specifications and what to do on receipt.
- **Storage Chapter**
Topics such as the storage of live, chilled and frozen seafood, using display cases and the shelf life of seafood.
- **Hygiene Chapter**
Hygiene and sanitation requirements, which are particularly important for seafood.
- **Preparation Chapter**
Step by step illustrations on how to prepare seafood.
- **Cooking Chapter**
Preparation and cooking methods for seafood.
- **Marketing Chapter**
How to do your own marketing research and also creative promotional ideas.



Testing the catch is the senior author and Marketing Co-ordinator for the Agribusiness Marketing Services unit of the Department of Primary Industries, Joanna Kane.

- **Assistance Chapter**
Where to go for more information from the Seafood, Catering and Education industries.
- **Glossary**
Seafood and Culinary terms.

The Australian Seafood Catering Manual represents a market driven and proactive approach.

It was an initiative of the Agribusiness Marketing Services unit of the Department of Primary Industries and the Fisheries Research and Development Corporation.

Senior author and Marketing Co-ordinator for Agribusiness Marketing Services, Ms Joanna Kane said, "the first six months of the project were spent out with the Food Service industry to clearly define their needs.

The need was much greater than originally realised.

Although much information existed, it tended to be spread throughout hundreds of books; written by scientist for scientists; or in the heads of experts."

The Australian Seafood Catering Manual centralises the information, presents it in a user friendly format, is designed for practical usage and is tailor made for the Food Service Industry.

The Australian Seafood Catering Manual is \$80.00 for the two volume set plus \$10.00 postage and packaging.



Above: The Australian Seafood Catering Manual - A two volume set in a slip case, with over 150 colour photos and illustrations.

To place an order you can telephone (toll free): 1800 629 099.

Appendix B-1

**Australian Seafood Industry
Directory 1995-97**

Sales Figures by Month

Figure 2A: Australian Seafood Industry Directory 1995-97 (Books) Sales
- Number by Month 1995/96 Financial Year

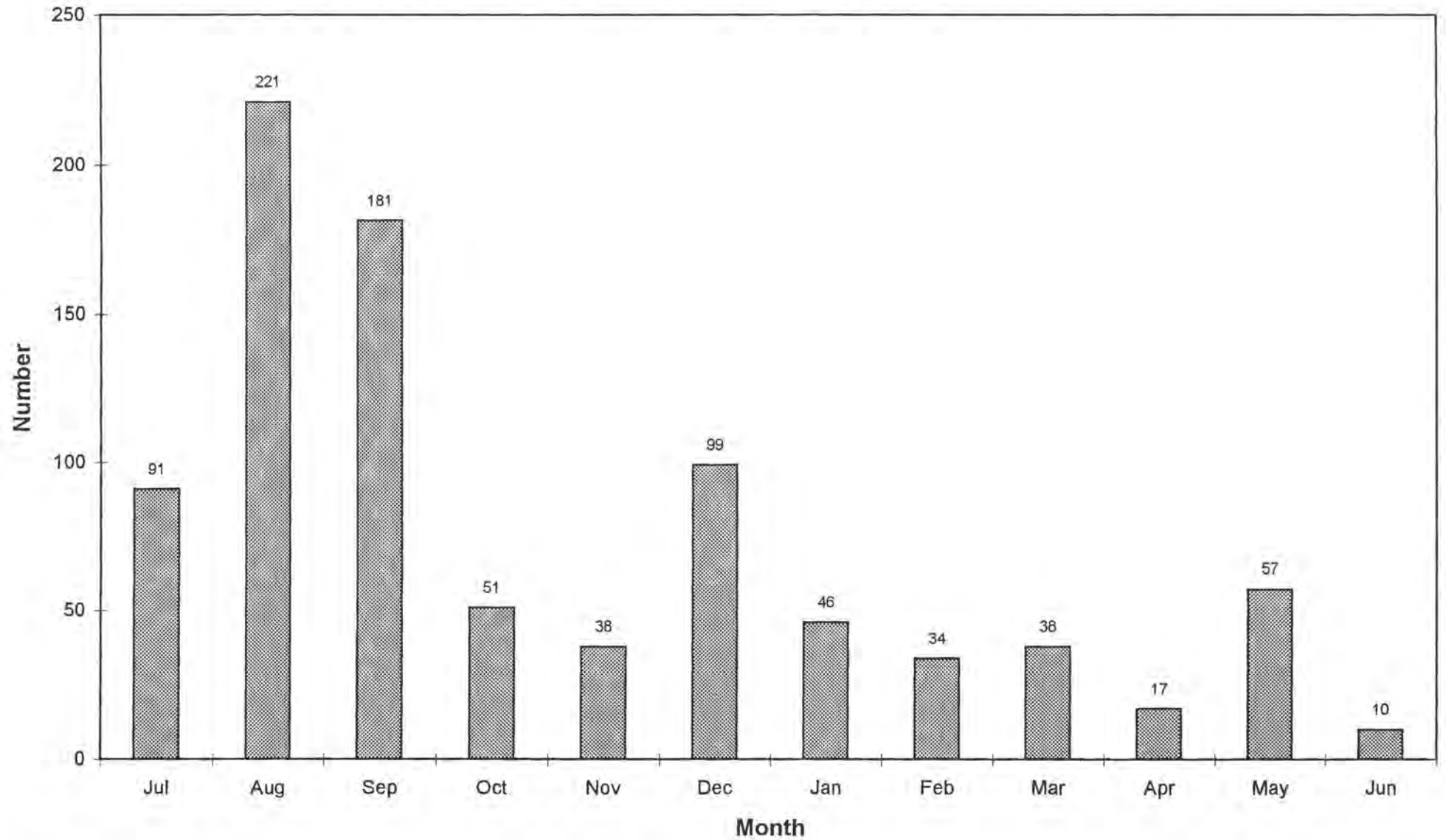


Figure 2B: Australian Seafood Industry Directory 1995-97 (Disks) Sales
- Number by Month 1995/96 Financial Year

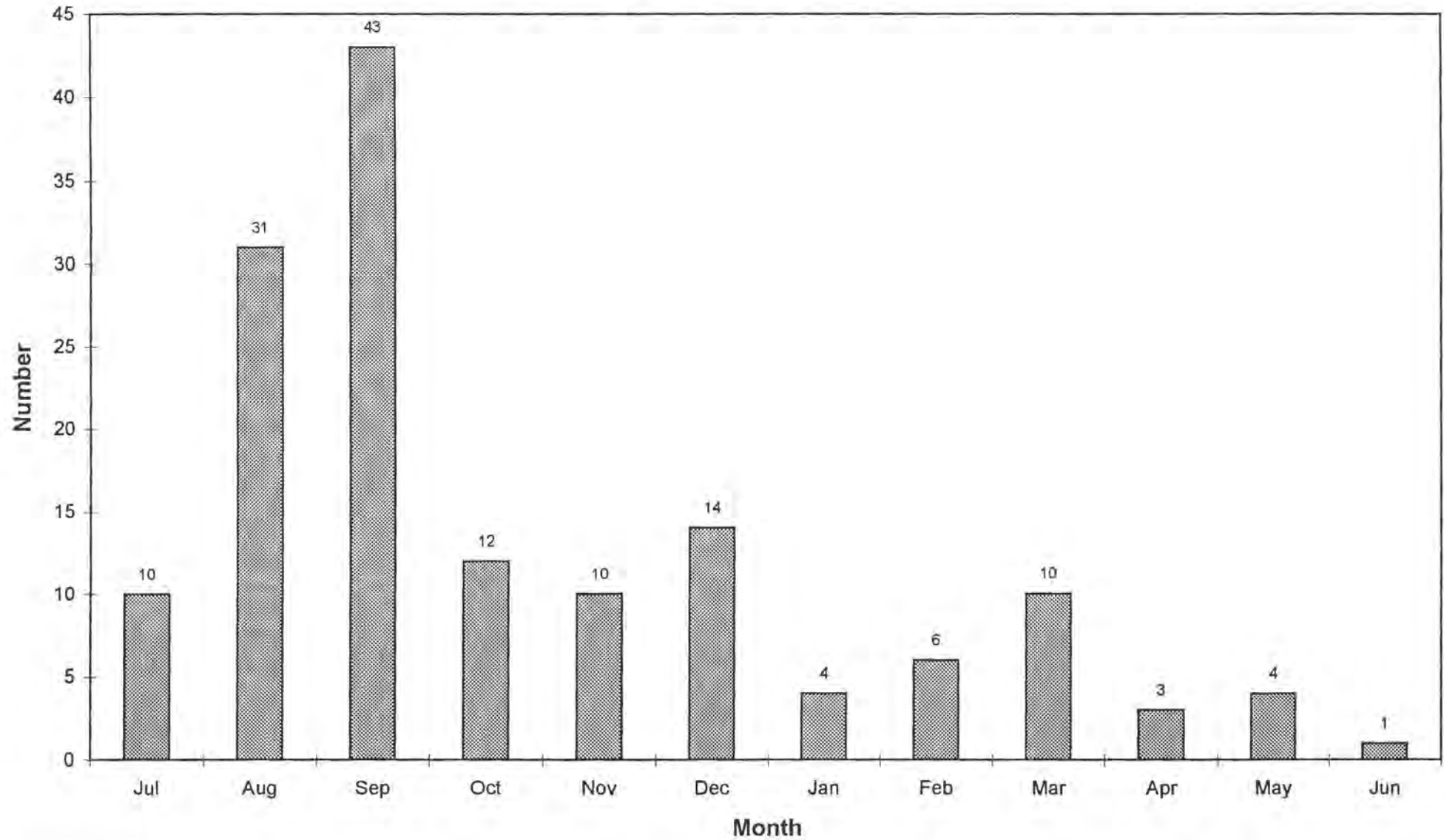
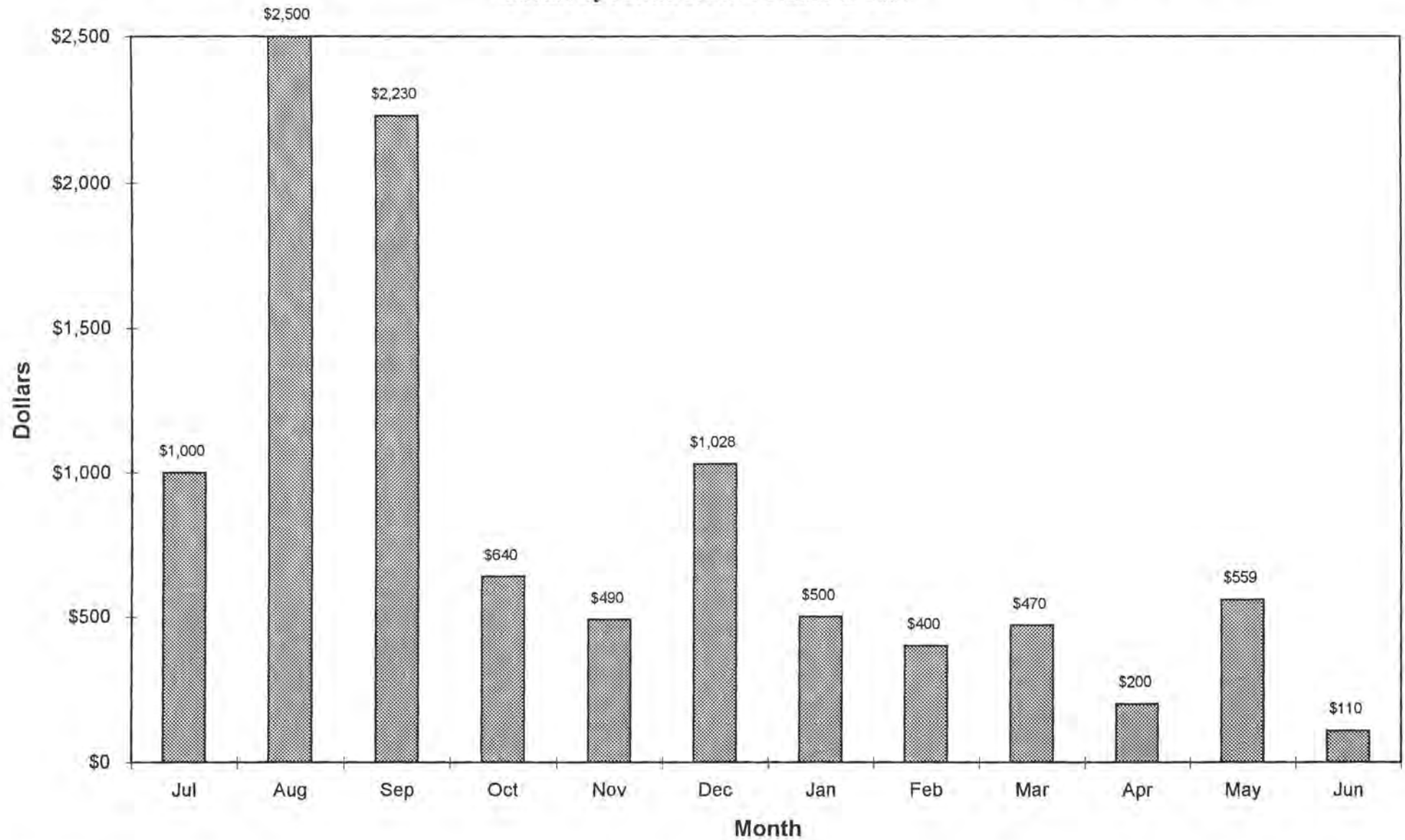


Figure 2C: Australian Seafood Industry Directory 1995-97 (Books and Disks) Sales
- Dollars by Month 1995/96 Financial Year



Appendix B-II

**Australian Seafood Industry
Directory 1995-97**

Sales Figures by Location

Figure 1A: Australian Seafood Industry Directory 1995-97 (Books) Sales
- Number by Location 1995/96 Financial Year

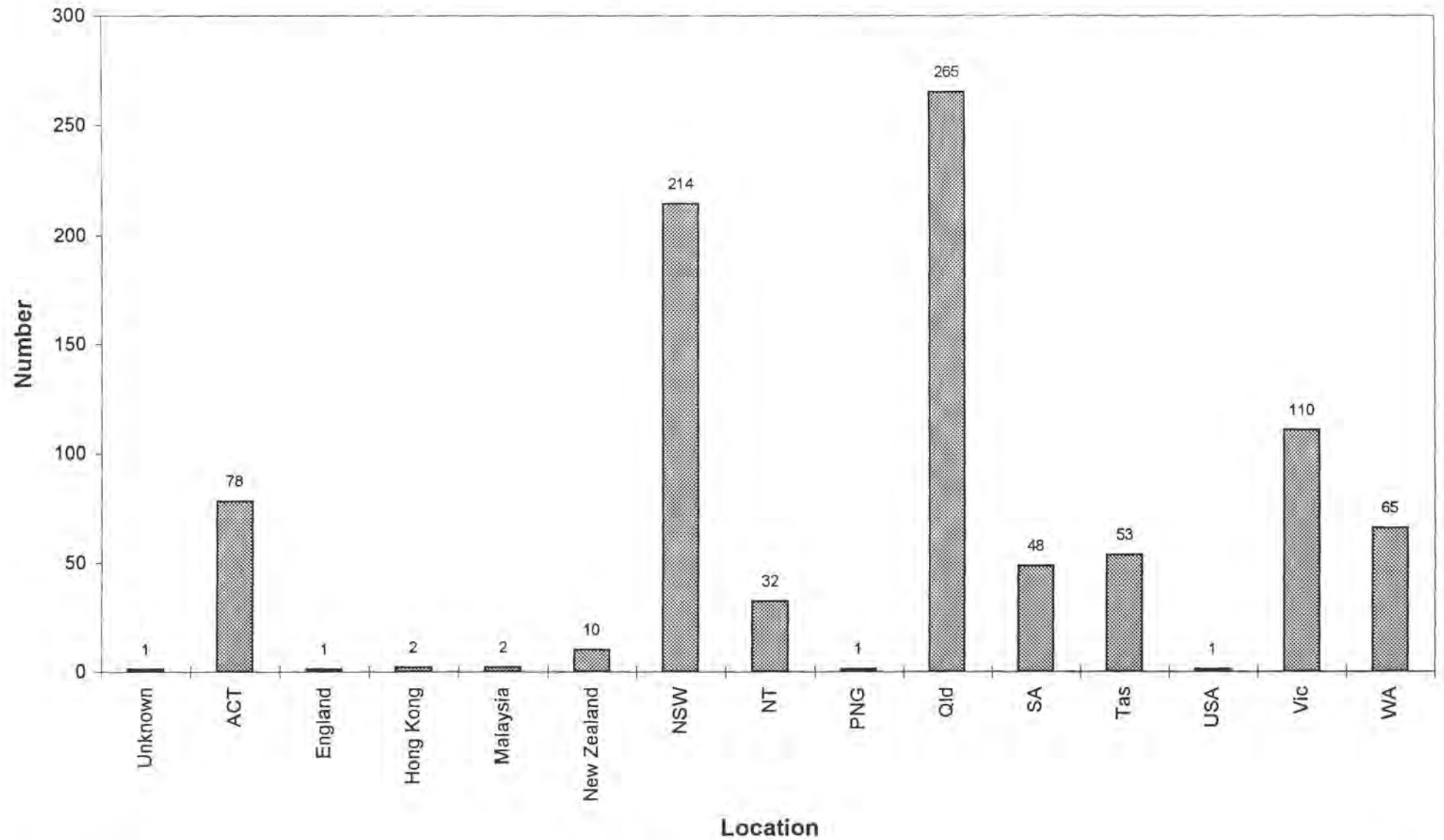


Figure 1B: Australian Seafood Industry Directory 1995-97 (Disks) Sales
- Numbers by Location 1995/96 Financial Year

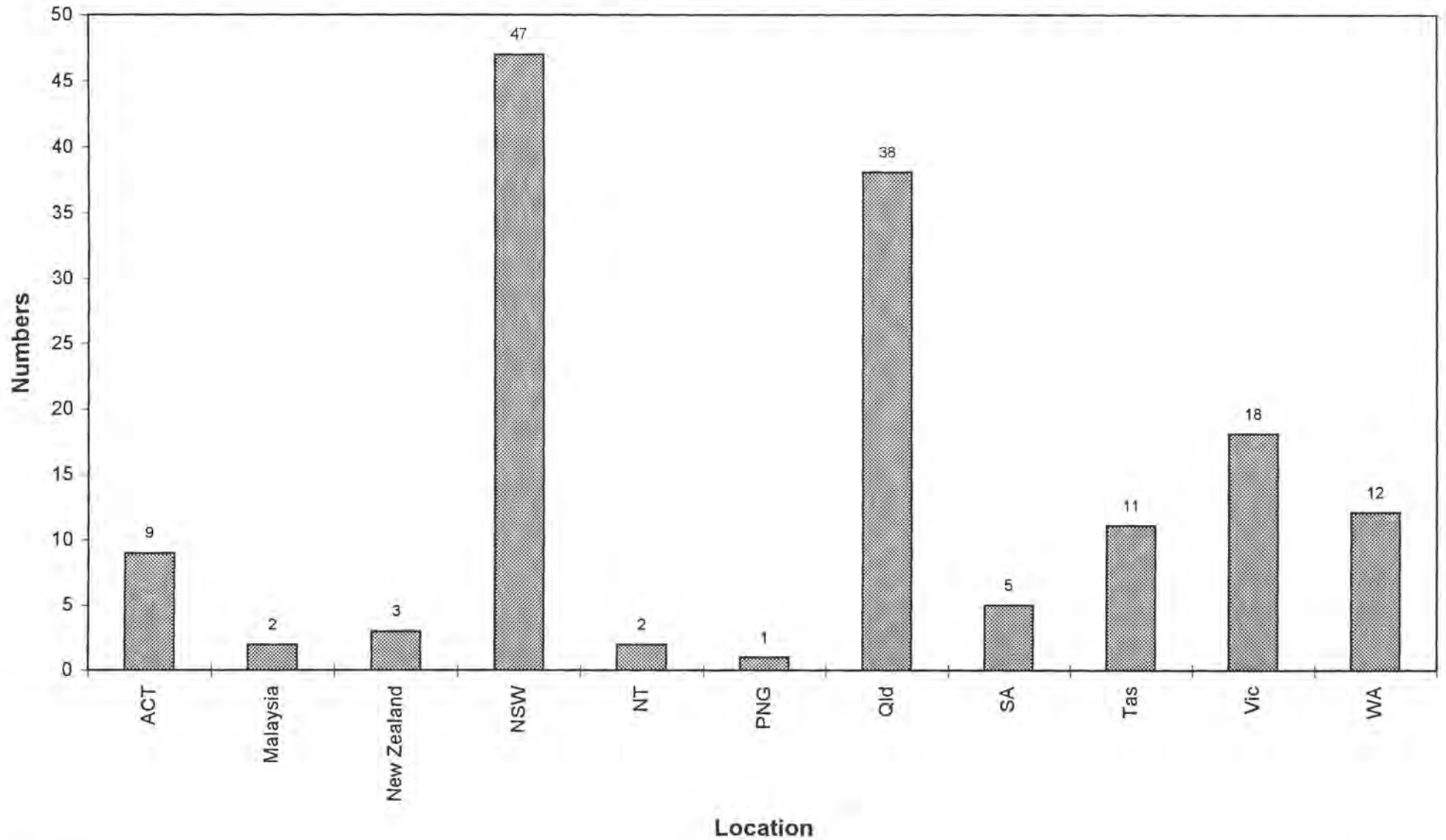
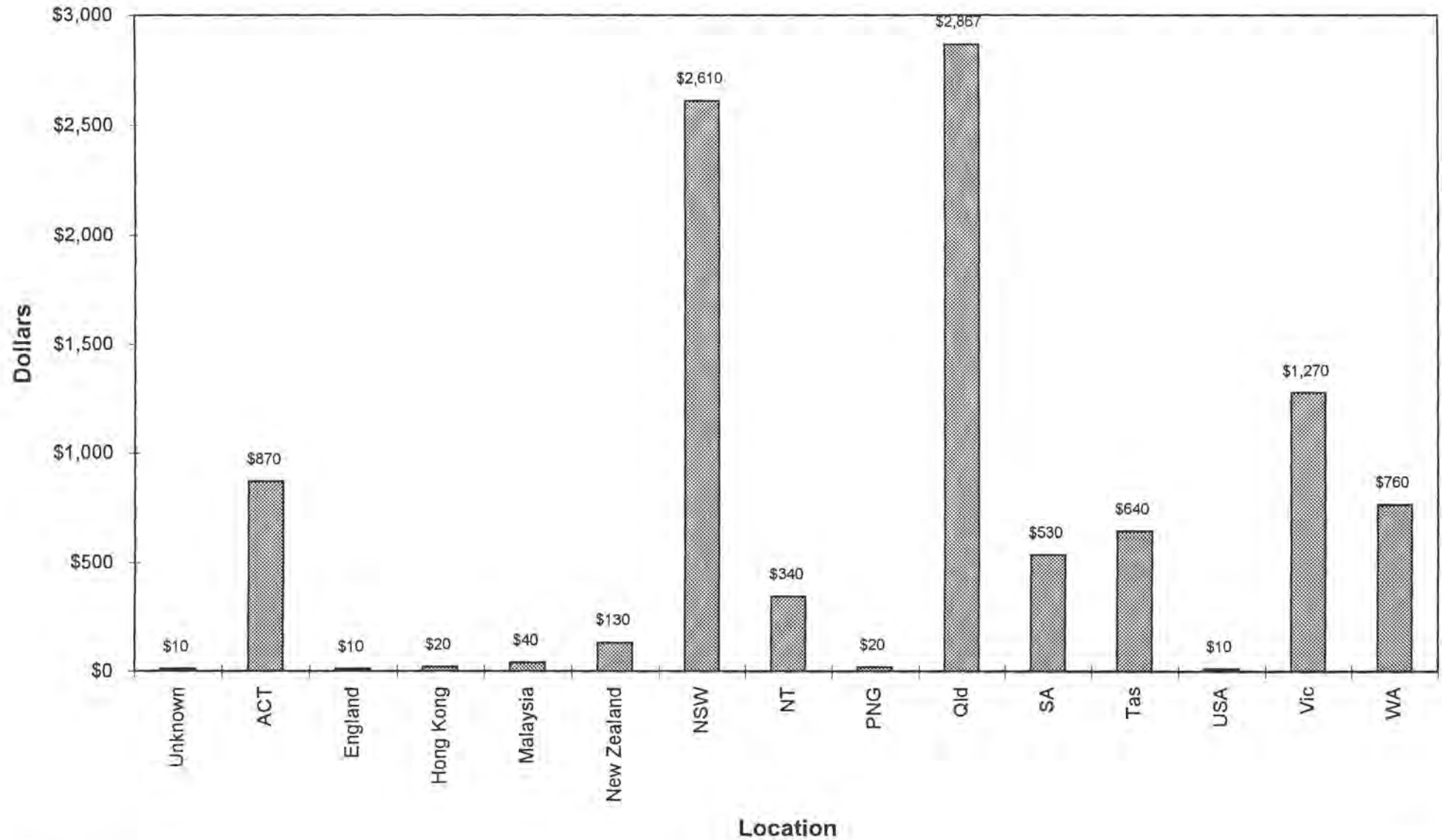


Figure 1C: Australian Seafood Industry Directory 1995-97 (Books and Disks) Sales
 - Dollars by Location 1995/96 Financial Year



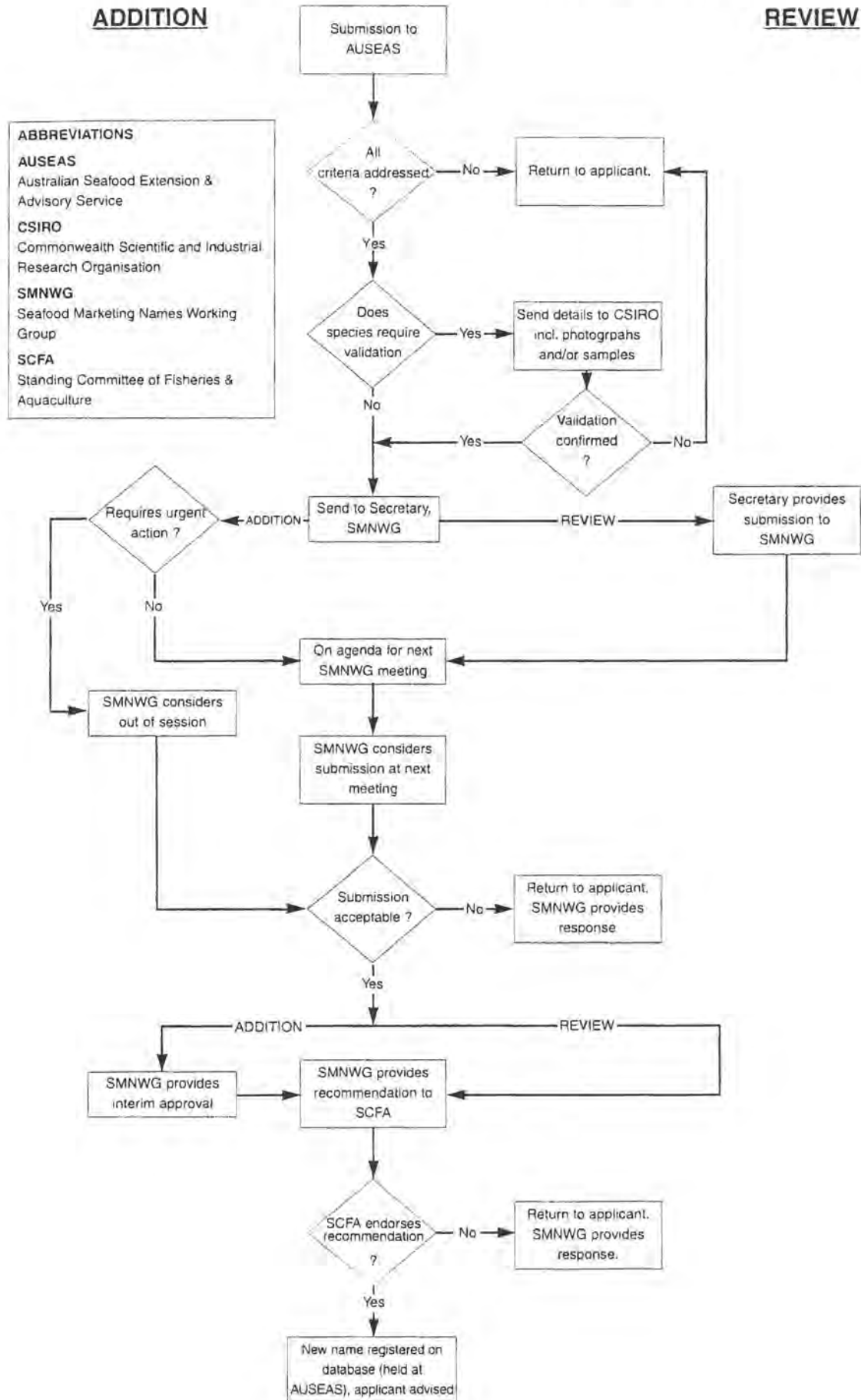
Appendix B-III

Marketing Names for Fish and Seafood in Australia

Changes Proforma

MARKETING NAMES FOR FISH AND SEAFOOD IN AUSTRALIA

Procedure for the addition and review of marketing names



Australian Seafood Extension and Advisory Service

Sponsored by the Fisheries Research and Development Corporation

Thank you for your request for a change to the "*Marketing Names for Fish and Seafood in Australia*" publication. Please find attached a flow chart for the procedure used to review proposed changes. Also included is a proforma for presenting information to the Seafood Marketing Names Working Group.

Below is a check list which you may like to use.

- | | | | |
|-----------------------------------|--------------------------|----------------------------------|--------------------------|
| • Scientific name | <input type="checkbox"/> | • Capture details - Region | <input type="checkbox"/> |
| • Marketing name | <input type="checkbox"/> | - Depth | <input type="checkbox"/> |
| • Suggested marketing name | <input type="checkbox"/> | - Method | <input type="checkbox"/> |
| • Current marketing names used | <input type="checkbox"/> | • Agencies supporting the change | <input type="checkbox"/> |
| • Reasons for alteration/addition | <input type="checkbox"/> | • Sample | <input type="checkbox"/> |
| • Country of origin | <input type="checkbox"/> | • Photograph | <input type="checkbox"/> |
| • Description of fish/seafood | <input type="checkbox"/> | | |

Yours faithfully

Stephen Thrower
Principal Scientist
AUSEAS



Enquiries to: Stephen Thrower, Principal Scientist, AUSEAS

Located at: IFIQ, 19 Hercules Street, Hamilton Q. 4007

Internet: throwes@dpi.qld.gov.au

Telephone: [07] 3406 8599

Facsimile: [07] 3406 8677

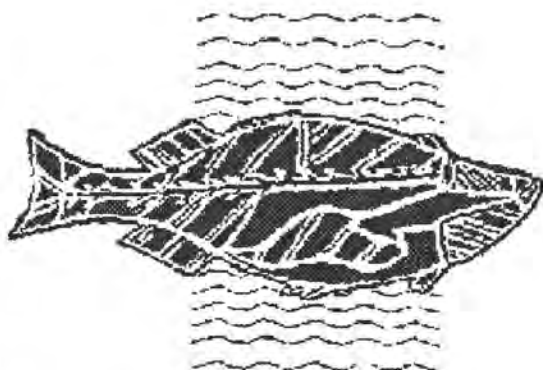
Mobile: [018] 199508

Appendix C-1

Internet

Draft Web Pages

TECHNICAL INFORMATION & ADVICE **FOR THE SEAFOOD INDUSTRY**



AUSEAS - *Providing Seafood Solutions*

What is AUSEAS?

Newsletters

Publications

Abstract Service

Associated with AUSEAS, the **National Seafood Centre** is also located within the Centre for Food Technology. A further initiative of the **Fisheries Research & Development Corporation**, the NSC provides funds for research and development to foster value-adding and product development in the post-harvest seafood industry.

ADDITIONAL LINKS (Other Sites of Interest)

DPI Fisheries

ABARE (Australian Bureau of Agricultural & Regional Economics)

AFMA (Australian Fisheries Management Authority)

AUSTRADE

ASIC (Australian Seafood Industry Council) and (SeaQual)

ASIEN (Australian Seafood Industry and Education Network)

FOR FURTHER INFORMATION:

STEPHEN THROWER, AUSTRALIAN SEAFOOD EXTENSION & ADVISORY SERVICE
CENTRE FOR FOOD TECHNOLOGY

19 HERCULES STREET HAMILTON BRISBANE QUEENSLAND 4007

TELEPHONE (07) 3406 8597 FACSIMILE (07) 3406 8677

[Back to the CENTRE](#)

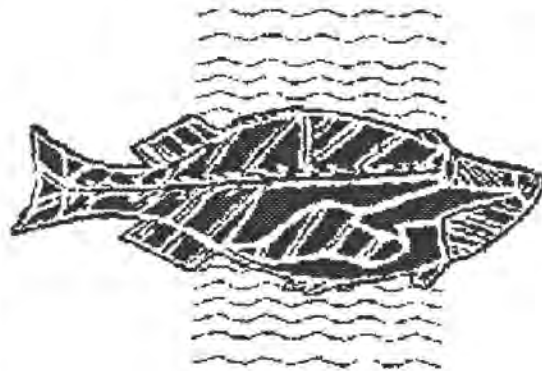


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Created 05th July 1996
Last Updated 28th October 1996

WHAT IS AUSEAS?



AUSEAS - *Providing Seafood Solutions*

Supplying technical information and advice to Australia's seafood industry is the aim of the Australian Seafood Extension and Advisory Service or AUSEAS. AUSEAS is a shared initiative of the Fisheries Research & Development Corporation and the Centre for Food Technology and is located within the Centre's Hamilton headquarters.

AUSEAS is employed by fishers, processors, exporters, regulators, insurance brokers, the legal profession and many other groups with an interest in the seafood trade. The service offers:

- on-call specialist advice by telephone or facsimile
- specific, detailed information packages accessed from Australian and global research databases
- confidential consultancy services
- assistance in planning and appraisal and in applying research results and
- training support.

AUSEAS operates on a commercial fee-for-service basis. The total cost of your request or project will vary depending on its scope and complexity. As a guide, information packages on specific subjects cost between \$100 and \$200 and include the cost of searching and document retrieval as well as interpretation.

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Comprehensive database search of a selected subject with summaries of papers provided.	\$30-50
AUSEAS Updates	
Quarterly current awareness bulletins providing abstracts of selected papers.	\$100/year
AUSEAS Annual Membership	
Providing four quarterly updates and four database searches on the topic of your choice.	\$200/year
Consultancy	\$90/hour

Current industry information The following can also be purchased from AUSEAS:

- Australian Seafood Industry Directory 1995-97 \$10 (+\$5 postage)
- Marketing Names for Fish and Seafood in Australia \$10 (+\$5 postage)

FOR FURTHER INFORMATION:

*STEPHEN THROWER, AUSTRALIAN SEAFOOD EXTENSION & ADVISORY SERVICE
CENTRE FOR FOOD TECHNOLOGY
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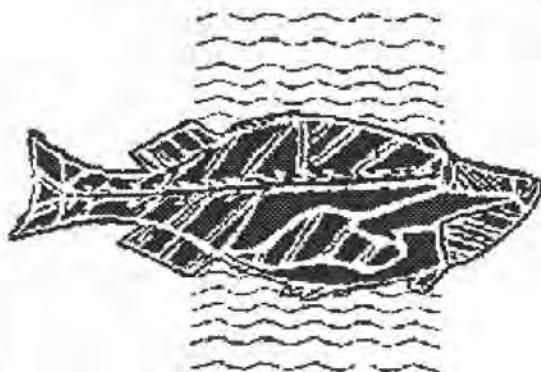


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NEWSLETTERS



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No Newsletters Currently Available. Under Construction



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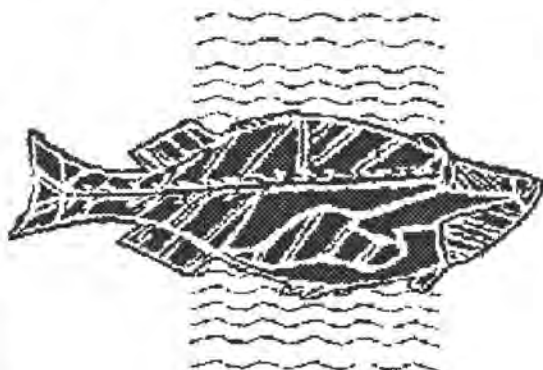
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PUBLICATIONS



AUSEAS - *Providing Seafood Solutions*

SEAFOOD PUBLICATIONS

All prices for these publications are quoted in Australian Dollars. For postage rates please see table at the end of the publications list.

Australian Seafood Industry Directory 1995-97

The Australian fishing industry has grown rapidly in recent years and now makes a major contribution to Australia's rural economy. This directory is intended for use by people dealing with the post-harvest sector of the Australian fishing industry either in Australia or overseas. It contains a number of features that have been included to increase its ease of use. Some of these features are: Grouped into States; Coastal strip maps; Seasonality guide; and Government agencies are listed in the front of the directory giving contact numbers for the head office and regional offices.

PRICE (Book or Disk version): A\$10.00 + postage

Dried seafood marketing report 1995

This report is a market survey into the processing of seafood using such technological equipment as the heat pump drier. Topics covered in the report include: A survey of products and prices of dried seafood sold in Australia; Market information about dried seafood traded around the world; Import and export statistics; Study tour of manufacturers and wholesale and retail outlets for dried seafood in Hong Kong and Taiwan; A review of likely candidates for Australian production.

PRICE: A\$100.00 + postage

Food processing concepts for the Australian Beche-de-mer Industry

This publication is the culmination of a project into the processing of beche-de-mer (also known as Sea Cucumber or Trepang). Topics covered in the publication include: Biology of the animals; Processing of the cooked/dried product; Freezing and freeze drying; Handling and hygiene; Quality control and management; and Marketing.

PRICE: A\$20.00 + postage

Handbook of Australian Crocodile Meat

Challenging times confront the Australian crocodile meat industry. Increasing imports of Papua New Guinea crocodile meat and the growing production of Australian crocodile meat have created a demand for high quality product and marketing information. In 1993-94 the Australian crocodile meat industry produced about 29t of meat, valued at more than half a million dollars. It is projected that, by the year 2000, Australian crocodile meat production will exceed 79t, valued at more than \$1.5m. This handbook provides a common language for describing crocodile carcass cuts. It is a valuable resource for producers, processors, wholesalers, chefs, educators, caterers and other industry employees.

PRICE: A\$24.00 + postage

Live Seafood Handling - Strategies for Development

Australia's live seafood trade is valued at over \$250 million, and is a major reason behind the growth in seafood exports in recent years. While the industry enjoys considerable success, there is still the need to solve a variety of highly complex problems associated with the capture, holding, and transport of a range of species. The National Seafood Centre recently held a live seafood forum to discuss many of these issues. The proceedings of this forum are now available in this report.

PRICE: A\$35.00 inc postage

Marketing names for Fish and Seafood in Australia

This publication contains a list of over 270 species of fish and seafood. It covers wild caught, farmed and imported fish and seafood. It will be of benefit to overcome economic inefficiencies and assist in fisheries management. This publication will be an essential tool for the marketing of fish and seafood.

PRICE: A\$10.00 + postage

Seafood Catering Manual - Volume 1

A feature of the book are the species profiles. These detail, where the species is caught, the main ways it is sold, chef's choice, menu morsels, suggest wines and cooking ideas. Species described in detail include 37 finfish (from Atlantic Salmon to Whiting), 18 shellfish covering prawns, crabs, lobsters, crayfish and molluscs plus crocodile. Two alternative tables provide a quick reference guide to species that can be used as alternatives for another. Finally two nutrition tables, one for finfish, one for shellfish, complete this thoroughly researched book.

PRICE: A\$55.00 + postage

Destination	Australian Seafood Directory Book:		Australian Seafood Directory Disk		Beche-de-mer Book; Crocodile Handbook	
	1 Book	Additional Book	1 Disk	Additional Disk	1 Book	Additional Book
Australia	\$5.00	\$1.00 each	\$2.00	\$1.00 each	\$3.00	\$1.00 each
Malaysia & Singapore	\$19.00	\$8.00 each	\$4.00	\$1.00 each	\$3.50	\$3.50 each
Asia	\$21.00	\$10.00 each	\$4.00	\$1.00 each	\$4.00	\$3.50 each
USA & Canada	\$24.00	\$13.00 each	\$4.00	\$1.00 each	\$4.50	\$4.00 each
South America	\$26.00	\$15.00 each	\$4.00	\$1.00 each	\$5.00	\$4.50 each
UK & Europe	\$26.00	\$15.00 each	\$4.00	\$1.00 each	\$5.00	\$4.50 each
New Zealand	\$17.00	\$6.00 each	\$4.00	\$1.00 each	\$3.00	\$2.50 each

For any additional information about any of these books please contact Australian Seafood Extension and Advisory Service (AUSEAS) on: Telephone: [07] 3406 8617 Fax: [07] 3406 8677 International: +61 7 3406 8617 Fax: +61 7 3406 8677 Email: [Bev Austin](mailto:Bev.Austin@dpi.qld.gov.au)



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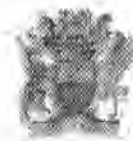
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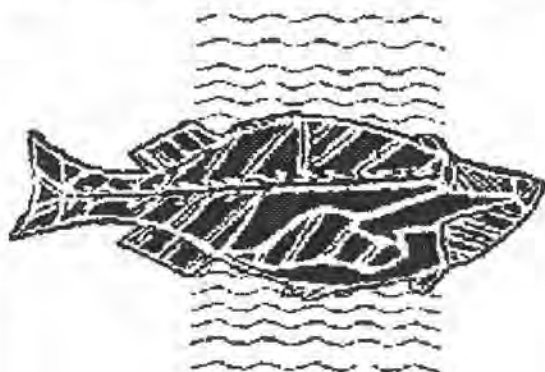


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Appendix C-II

Quarterly Updates

Aquaculture Feeds

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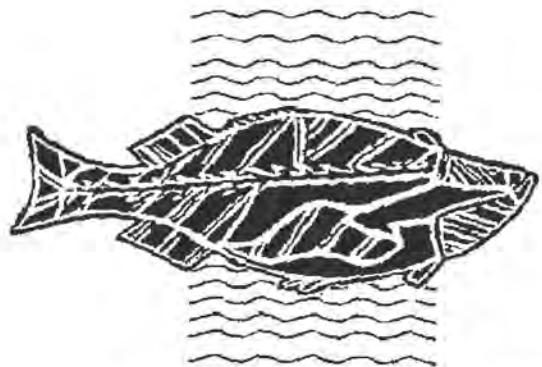
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FEED INGREDIENTS

Feed ingredients for carnivorous fish species: alternatives to fish meal and other fishery resources.

1994

Tacon-AGJ

FAO-Fisheries-Circular. No. 881, 35 pp.; 143 ref.

This document reviews the major studies conducted to date on partial or total replacement of fish meal within aquaculture feeds for carnivorous fish species with alternative protein sources or "fish meal replacers", including land animal byproducts, single cell proteins, oilseeds, legumes, cereal grains and miscellaneous plant products. Information is presented concerning the nutritional value and chemical composition of the individual protein sources, together with their normal and suggested maximum dietary inclusion levels. Emphasis is placed on the important role played by feed technology and biotechnology in the development and nutritional success

MICROALGAL FEEDS

Microalgal feeds for aquaculture.

1994

Gladue-RM; Maxey-JE

Journal-of-Applied-Phycology. 6:2, 131-141; 22 ref.

The aim of this research was to identify algae suitable for heterotrophic production as aquaculture feeds. Of 121 strains tested, 57 tested positive for heterotrophic growth and of these 5 were selected which were judged to have the best potential for development as feeds for rotifers.

Algal biotechnology products and processes - matching science and economics.

1992

Borowitzka-MA

Journal-of-Applied-Phycology., 4:3, 267-279; 40 ref.

Several microalgae, such as *Chlorella*, *Spirulina* and *Dunaliella* spp., are grown commercially and algal products such as beta-carotene and phycocyanin are

U.S. AQUACULTURE

ALGAL CULTURE

MARINE MICROALGA

available. The main focus of algal biotechnology continues to be on high value fine chemicals and on algae for use as aquaculture feeds
Outlook for U.S. aquaculture.

1994

Harvey-DJ

Aquaculture-Magazine., 20: 1, 40-51.

This paper presents a short-term outlook for US aquaculture. In the next several years the commercial availability of major fresh water fish such as striped bass, walleye, and yellow perch and shellfish species will have shifted almost entirely to aquaculture production. With relatively large amounts of suitable land and water supplies, plus a large domestic market, the USA will probably remain a major supplier of cold and temperate fresh water species.

Large-scale algal culture systems: The next generation.

Borowitzka-M-A

1994

Australasian Biotechnology Vol.4, No.4, July-August, P.212-215

Large-scale commercial culture of microalgae is being used to produce high-value fine chemicals, aquaculture feeds, health foods, biologically active substances and, with genetic engineering, it is likely that transgenic microalgae will be used to produce selected chemicals. Table and figures show a comparison of the characteristics of different types of large-scale microalgal culture systems, the effects of cell density and irradiance on the maximum biomass achieved in a semi-continuous culture of a marine diatom grown in a photobioreactor, the effects of the culture conditions on the productivity of eicosapentaenoic acid.

Preservation of the marine microalga, *Isochrysis galbana*: influence on the fatty acid profile.

1994

Molina-Grima-E; Sanchez-Perez-JA; Garcia-Camacho-F; Acien-Fernandez-FG; Lopez-Alonso-D; Segura-del-Castillo-CI

EXTRUSION

Aquaculture 123: 3-4, 377-385; 18 ref.

Preservation of marine microalgae is important for storage in culture collections and for having biomass available for aquaculture feed. Effects of lyophilization, freezing and maintenance of refrigerated cell concentrates on the viability and fatty acid profile of *Isochrysis galbana* were studied for 1 month. Lyophilization led to a viability loss of about 98%, and the initial fatty acid profile remained unchanged throughout the experiment.

SOFRADA extrudes trout feed: Opting for the twin-screw.

1994

Anon

Feed International Vol.15, No.6, June, P.6,8

Societe Francaise de Dietetique Animale (SOFRADA) has expanded production from aquaculture feeds to feeds for game birds and horses. More than 20 years of experience in animal nutrition research and processing technology such as twin-screw extruder equipment has allowed the manufacturer to meet quality and economy demands.

Nutrition and utilization technology in aquaculture.

Lim-CE; Sessa-DJ [Editors]

1995

viii + 294pp. ISBN 0-935315-54-3, many ref.

This book provides an overview of the current status of aquaculture, and discusses constraints and opportunities for aquaculture development. It is intended for use by students, nutritionists, food technologists, feed formulators, feed manufacturers, oilseed producers, and aquaculturalists. The book is divided into 4 sections: Overview of aquaculture (1 chapter, pp. 1-25); Nutrition [for farmed fish] (9 chapters, pp. 26-129); Plant protein utilisation [as feeds] (5 chapters, pp. 130-219); and Utilization technology (6 chapters, pp. 220-288). The last section is of particular interest to the food industry, and chapters presented include: Quantitative sensory evaluation to ensure flavor quality in aquaculture products (pp. 220-232, 20 ref.);

NUTRITION

VITAMINS

MICROCONTROLLERS

AQUACULTURE - R & D

Application of extrusion technology to process fish muscle (pp. 233-245, 34 ref.); Physical and chemical properties of surimi prepared with mince recovered from fillet frames of channel catfish (pp. 246-254, 17 ref.); Extraction, composition, and stability of pigments from crawfish shell waste (pp. 255-268, 22 ref.); Utilization of crawfish pigment and other fishery processing by-products (pp. 269-277, 41 ref.); and Further utilization of seafood processing discards (pp. 278-288, 17 ref.). A 6-pp. index is included.

Vitamins are important in fish diets

1991

Webster,-C.D.

Ky-fish-farming. Frankfort, Ky. Aquaculture Research Center, Kentucky State University, [1988-. Oct 1991. v. 4 (2) p. 4-5.

Microcontrollers in recirculating aquaculture systems

1994

Fowler,-P.; Baird,-D.; Bucklin,-R.; Yerlan,-S.; Watson,-C.; Chapman,-F.

EES. Gainesville, Fla. : Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida., Apr 1994. (326) 7 p.

Aquaculture nutrition and feeding in developing countries: a practical approach to research and development.

1993

Tacon-AGJ; Kaushik-SJ (ed.); Luquet-P

Fish nutrition in practice: 4th international symposium on fish nutrition and feeding. Biarritz, France, June 24-27, 1991. 1993, 731-741; Les Colloques No. 61; 24 ref.

The problems of determining dietary nutrient requirements and formulating practical rations for tropical aquaculture species within semi-intensive

farming systems is examined. Particular emphasis is placed on the development of a multidisciplinary approach to supplementary and complete diet feeding, and the need for the aquaculture nutritionist to work in conjunction with the farmer and feed manufacturer;

