Table 4.6.3.2: Summary of Key Results for the Statement "I can cook it in the microwave": Proportion of Respondents (%)

Meal-Occasion	Responses			
Evening meal by self	P/P	26%	None	34%
	Veg	24%	Don't know	22%
	Fillet	24%		
	Pasta	22%		
Household average meal	WC	24%	None	42%
	Fillet	23%	Don't know	16%
	Pasta	21%		
Weekend household meat lunch	WC	30%	LR	22%
	P/P	26%	None	35%
	WF	26%	Don't know	14%
	Pasta	24%		
Entertaining entrée	Sp	34%	BSC	26%
	Veg	33%	None	31%
	Fillet	33%	Don't know	15%
	Pasta	31%		
Entertaining main	CF/P	30%	Pasta	23%
	Fillet	26%	None	37%
	WF	24%	Don't know	20%
Children's evening meal	All dishes below	21%	Don't know	15%
	None	30%		

BSC = beef short cut pieces; LC = lamb chops; Prwn = prawns; V = veal;
CF = canned fish; LR = lamb roast; Sal = salmon (not canned); Veg = vegetarian dish;
CF/P = chicken fillet/pieces; M/R = mince/rissoles; Saus = sausages; WC = whole chicken;
CV/M = canned vegetables/meat; P/P = pie/pasty; Scall - scallops; WF = whole fish;
FF = fish fingers; Past = pasta; Sp = soup;
Fillet = fish fillet; PR = pork roast; Stk = steak;

4.6.4 Consumer Acceptance of Different Types/Species of Fish and Seafood for Consumption In-Home

Specific types of fish or seafood are served in-home, either very infrequently or not at all by a large portion of fish and seafood eating households.

Figure 4.6.4.1 shows the proportion of fish/seafood eating households which *considered* themselves to be consumers of the types of fish and seafood shown.

92% of households considered themselves fresh fish consumers against only 32% of households consuming mussels.

Molluscs and most types of crustaceans (apart from prawns and shrimps) are consumed in-home by less than half of fish and seafood consumers.

Tables 4.6.4.2, 4.6.4.4 and 4.6.4.6 provide details of household demographics of those households who were consumers of the listed fish and seafood types.

Tables 4.6.4.3, 4.6.4.5 and 4.6.4.7 provide details of regional variations in the proportion of consuming versus non-consuming households of the types of fish and seafood.

Fish

Table 4.6.4.2 shows that a relatively higher proportion of households in which the respondent was under 45 years of age, were consumers of fish from take-away food outlets and prepared or processed fish. This is in part a reflection of the relative popularity of fish fingers in households with children (see Section 3.4.3).

Household income is a factor in the consumption of fish from take-away food outlets, though does not play a significant role in consumption versus non-consumption of other types of fish.

Table 4.6.4.3 shows that a far higher proportion of inland households consume frozen fish, compared to coastal households.

Molluscs

Tables 4.6.4.4 and 4.6.4.5 show significant demographic and regional variations in the proportion of households that were consumers of the various species of molluscs.

Younger households were far more likely to be mollusc consumers, as were higher income households.

Regional variations can largely be explained by where significant catches are landed. For example, a high proportion of Tasmanian householders were consumers of scallops.

Crustaceans

Tables 4.6.4.6 and 4.6.4.7 show a similar pattern as for molluscs.

Again, younger households are more likely to be consumers of crustaceans, as are high income households. Regions in which crustaceans are caught also show an above average proportion of consuming households.

An above average proportion of Canberra households consume crustaceans, particularly shrimps. This may be due to the above average incomes of Canberra households as illustrated in Table 4.6.4.1.

Table 4.6.4.1: Average Annual Household Income by Capital City 1988-89*

Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra	All capital cities
37,547	37,908	31,972	30,642	33,295	29,048	38,980	42,620	35,771

**Source: ABS Catalogue No. 6533.0.*

Figure 4.6.4.1: Respondents who had Served Fish/Seafood Types at Home: Proportion of Fish/Seafood Eating Households

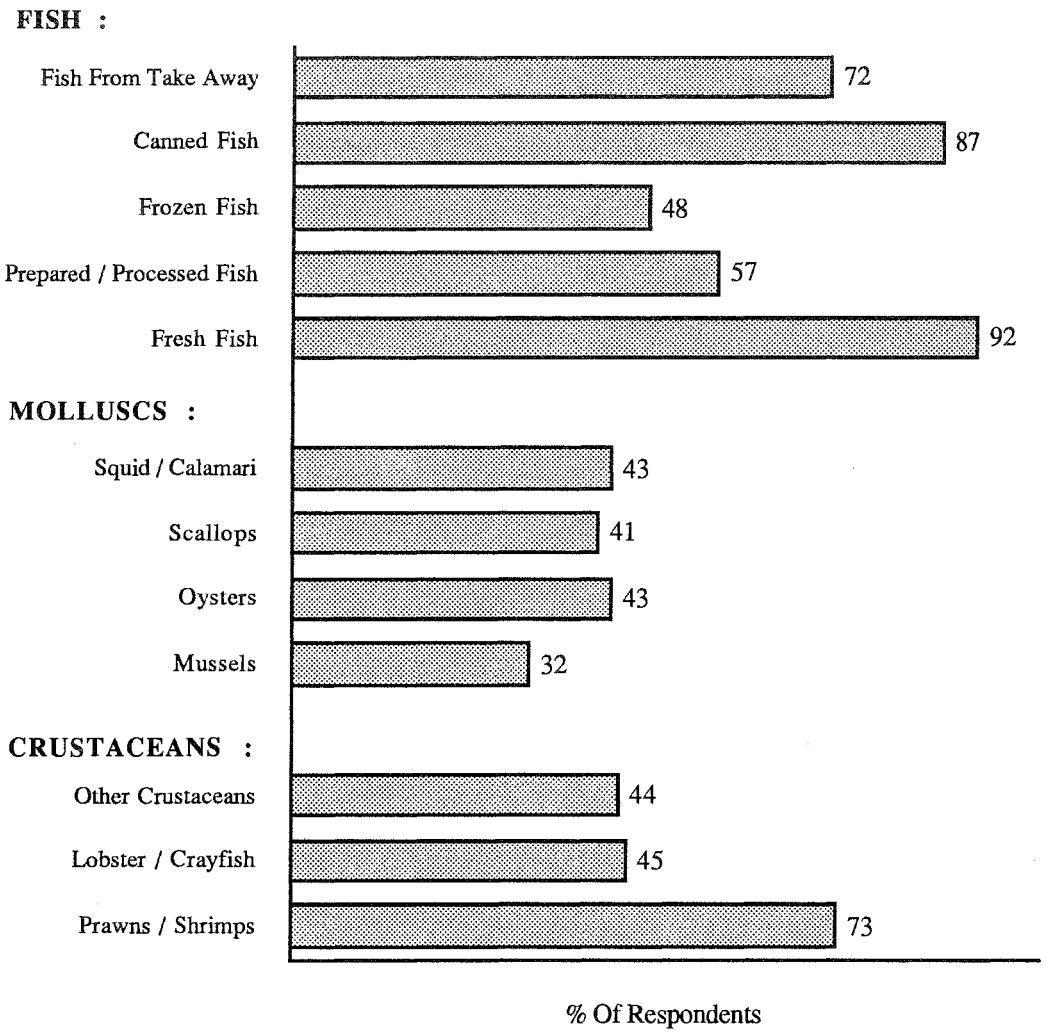


Table 4.6.4.2: Proportion of Fish/Seafood Eating Households in which Fish Types are Served in the Home: by Demographics (%)

Fish Type:	Total Average	Age Group of Respondent			Country of Origin*		Household Income				
		Under 40 years	40-59 years	60+ years	Australian/ English speaking country	Non-English speaking country	Less than $15,000	$15,001 - $25,000	$25,001- $40,000	$40,001- $60,000	Greater than $60,000
Fish from a take-away food outlet	72	84	74	52	73	61	59	72	80	82	80
Canned fish	87	83	90	89	88	81	86	85	87	87	91
Frozen fish	48	48	50	44	48	43	45	50	48	51	48
Prepared/processed fish	57	67	54	44	57	50	54	57	62	61	59
Fresh fish	92	93	94	90	92	95	89	91	94	93	96

** all respondents who emigrated to Australia before their fifth birthday are included in the Australian/English speaking country category*

Table 4.6.4.3: Proportion of Fish/Seafood Eating Households in which Fish Types are Served in the Home: by Region (%)

Fish Type:	Total Average	Sydney	Regional NSW	Melb	Regional Vic	Brisb	Regional QLD	Adel	Regional SA	Perth	Regional WA	Canberra	Hobart	Regional Tas	Coastal	Inland
Fish from take-away food outlet	72	65**	64**	72	82*	75	73	78	72	78	80	76	71	90*	71	78
Canned fish	87	86	86	87	85**	86	87	92*	86	89	89	88	83**	90	87	85
Frozen fish	48	45	48	35**	55	51	46	42**	60	64*	64*	64*	45	79*	45	60
Prepared/ processed fish	57	57	60	51**	61	60	53	49**	58	58	60	70*	55	75*	56	63
Fresh fish	92	92	92	93	92	94	93	92	97*	91**	96*	94	93	94	93	89

** regions with the highest proportion of consuming households*
*** regions with the lowest proportion of consuming households.*

Table 4.6.4.4: Proportion of Fish/Seafood Eating Households in which Mollusc Types are Consumed in the Home: by Demographics (%)

Mollusc Type:	Total Average	Age Group of Respondent			Country of Origin*		Household Income				
		Under 40 years	40-59 years	60+ years	Australian/ English speaking country	Non-English speaking country	Less than $15,000	$15,001 - $25,000	$25,001- $40,000	$40,001- $60,000	Greater than $60,000
Squid/calamari	43	57	46	20	41	63	27	37	49	53	62
Scallops	41	48	44	26	41	45	26	35	49	49	56
Oysters	43	50	46	29	42	50	27	39	49	48	63
Mussels	32	40	34	17	30	49	20	27	37	38	47

** all respondents who emigrated to Australia before their fifth birthday are included in the Australian/English speaking country category.*

Table 4.6.4.5: Proportion of Fish/Seafood Eating Households in which Mollusc Types are Served in the Home: by Region (%)

Mollusc Type:	Total Average	Sydney	Regional NSW	Melb	Regional Vic	Brisb	Regional QLD	Adel	Regional SA	Perth	Regional WA	Canberra	Hobart	Regional Tas	Coastal	Inland
Squid/ Calamari	43	51*	40	44	30**	43	37	40	47	46	47	61*	31**	43	45	35
Scallops	41	42	30**	50	39	44	38	32**	32**	37	41	58	67*	76*	42	37
Oysters	43	50*	42	45	37	46	40	33**	32**	37	47	68*	36	46	44	40
Mussels	32	38	24	36	23**	30	24	25	20**	44*	37	52*	30	34	33	23

** regions with the highest proportion of consuming households*
*** regions with the lowest proportion of consuming households.*

Table 4.6.4.6: Proportion of Fish/Seafood Eating Households in which Crustacean Types are Served in the Home: by Demographics (%)

Crustacean Type:	Total Average	Age Group of Respondent			Country of Origin*		Household Income				
		Under 40 years	40-59 years	60+ years	Australian/ English speaking country	Non-English speaking country	Less than $15,000	$15,001 - $25,000	$25,001- $40,000	$40,001- $60,000	Greater than $60,000
Other crustaceans	44	52	47	29	44	50	23	41	49	50	58
Lobster/crayfish	45	51	49	30	45	49	30	38	52	50	63
Prawns/shrimps	73	77	79	59	72	80	59	68	78	79	88

** all respondents who emigrated to Australia before their fifth birthday are included in the Australian/English speaking country category.*

Table 4.6.4.7 Proportion of Fish/Seafood Eating Households in which Crustacean Types are Served in the Home: by Region (%)

Crustacean Type:	Total Average	Sydney	Regional NSW	Melb	Regional Vic	Brisb	Regional QLD	Adel	Regional SA	Perth	Regional WA	Canberra	Hobart	Regional Tas	Coastal	Inland
Other crustaceans	44	45	39	36	26**	65*	57*	42	50	56	56	53	25**	38	46	35
Lobster/ crayfish	45	43	31**	51	45	42	31**	53	56	55	60	53	63*	70*	46	39
Prawns/ shrimps	73	79	78	70	56**	83*	76	62	57**	80	70	81*	54**	66	74	66

** Regions with the highest proportion of consuming households*
*** Regions with the lowest proportion of consuming households.*

4.7 Market Segmentation by Consumer Attitudes

4.7.1 Introduction

The 'In-Home' consumption questionnaire contained a series of statements concerning fish and seafood that were read to respondents. Respondents were asked whether they agree, neither agree nor disagree, or disagree with each statement. The statements themselves were drawn from key attitudes and issues raised during consumer focus groups, industry leader interviews and the literature review.

Responses to the 20 statements have already been discussed in Section 4.5.4. However, as mentioned in Section 4.5.4, responses to statements can be used to group or segment people of similar attitudes through a technique called "cluster analysis". Population groups segmented in this way are known as "clusters". This allows distinct marketing strategies to be devised to target each population cluster.

This Section details the results of the cluster analysis on the weighted responses of the 6,000 respondents to the 'In-Home' consumption interview administered questionnaire. A list of the statements read out to each respondent is shown in Appendix I.

4.7.2 Cluster Solution

The cluster solution chosen as most appropriate was one in which the total population was segmented into seven distinct attitude clusters. These are outlined in the following paragraphs by the set of attitudes that make each cluster unique. Note that particular attitudes may appear in more than one cluster - it is the set of attitudes attributed to one cluster that is unique rather than any one attitude in particular.

Cluster 1 distinctive attitude grouping is:

- fish costs so much I eat it rarely
- fish/seafood is less filling than chicken
- avoid freezing fish if I can
- are more likely to see fish as being for special occasions
- dislike fish with bones
- believe quality fish/seafood can be bought only from a specialist fish outlet
- like to buy familiar types of fish/seafood and don't like trying different types of fish/seafood.

These attitudes indicate a group of people who are cost value conscious and conservative in their choice of type of fish/seafood and method of storing fish/seafood. For convenience they can be labelled as "**cost/value conscious conservatives**".

Cluster 2 distinctive attitude grouping is:

- not at all concerned over bones in fish
- like trying different types of fish/seafood
- like preparing fish/seafood.

On the other hand, 50% of the people in this group agreed with the statement:

- I would eat more fish/seafood if it was easier to obtain.

This will be of particular interest later when marketing strategies are being developed.

This cluster can quite appropriately be labelled as "**fish/seafood buffs**".

Cluster 3 distinctive attitude grouping is:

- if I knew more ways to cook fish/seafood I would eat more
- don't believe there are enough recipes for fish/seafood
- don't find fish easy to cook
- don't like preparing fish and seafood.

The overriding characteristic of this group of people is they "**dislike cooking or don't know how to cook fish/seafood**".

Cluster 4 distinctive attitude grouping is:

- ambivalent towards the taste of frozen versus fresh fish as compared to people from all other clusters who considered the taste of frozen inferior to fresh fish
- do **not** avoid freezing fish
- believe quality fish/seafood can be bought from other types of retail outlets besides specialist fish outlets
- were, on average, more confident of being able to purchase quality frozen fish/seafood.

This group can be labelled as "**frozen fish/seafood lovers and convenience shoppers**". The element of convenience in their shopping habits can be drawn from the tendency to prefer non-specialist outlets (ie supermarkets).

Cluster 5 distinctive attitude grouping is:

- strong avoidance of freezing fish, if they can
- do not limit fish consumption because of the cost (ie not price sensitive)
- find fish easy to obtain
- like preparing fish and seafood and find it easy to cook
- dislike fish with bones.

It may be inferred that this group preferred filleted **fresh** fish and can afford fish fillets regularly. The group can be labelled "**fresh fillet lovers/non price sensitive**".

Cluster 6 distinctive attitude grouping is more lengthy than most other clusters and has a mix of attitudes some of which are positive and some of which highlight difficulties in fish/seafood purchase and consumption.

Positive attitudes are:

- like preparing fish and seafood
- eat fish and seafood because is better for their health than red meat
- like trying different kinds of fish/seafood
- find fish/seafood easy to cook

and those attitudes pointing to difficulties are:

- would eat more fish/seafood if it was easier to obtain
- eat fish/seafood rarely because of the cost

- if knew more ways to cook fish/seafood would eat more
- avoid freezing fish/seafood if possible
- not always sure that the fresh fish they buy hasn't been frozen
- and half of people in this group thought fish/seafood was less filling than chicken.

It is somewhat difficult to provide a concise label for this group of people because of the number and diversity of distinctive attitudes. For convenience they are a group that is "**positive towards fish/seafood but has difficulties with availability, cost, methods of cooking, suspicion of retailers selling previously frozen fish as fresh, belief that fish/seafood is not as filling as chicken, avoidance of freezing fish/seafood**".

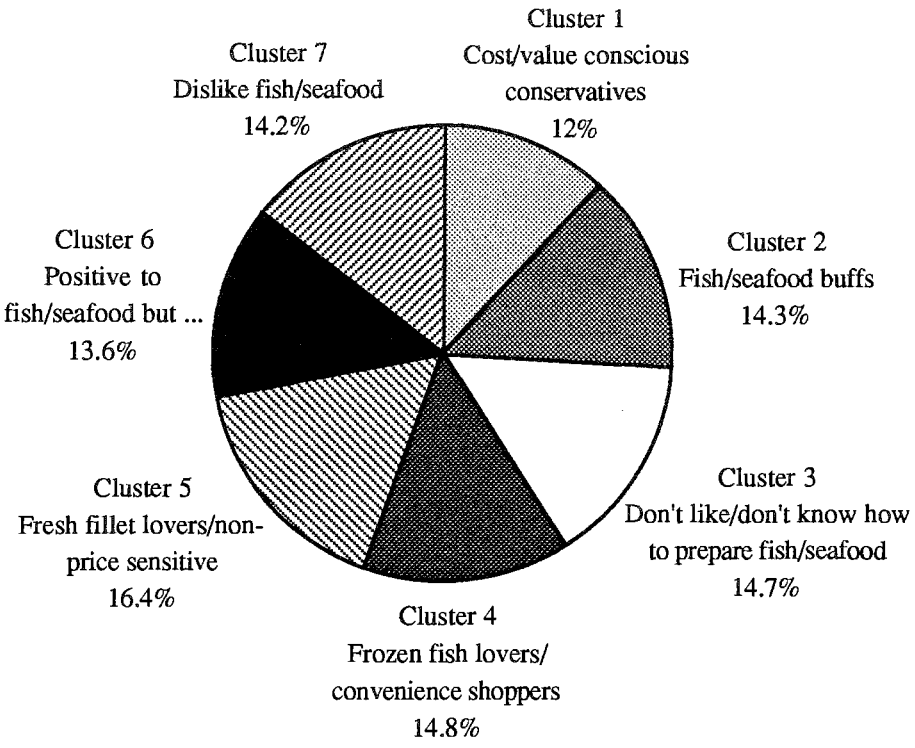
Cluster 7 distinctive attitude grouping is:

- strong dislike for preparing fish/seafood
- do not believe fish/seafood is better for their health than red meat
- would not eat more fish/seafood even if it was easier to obtain
- do not like trying different kinds of fish/seafood
- many do not find fish easy to cook
- but most do not believe they would eat more fish/seafood if they knew more ways to cook it.

This cluster is relatively easy to label by their overriding "**dislike for fish/seafood**".

Figure 4.7.2.1 shows the proportion of respondents who fall into each cluster.

Figure 4.7.2.1: The Attitudes of In-Home Consumption Study Respondents: Seven Cluster Solution



Base: 5,223,000 (weighted) main food purchasers/preparers.

4.7.3 Cluster Demographics

In the previous Section clusters have been defined by the distinctive attitude sets held by people (members) within each cluster .

It is very useful to examine the demographics of cluster members for any distinctive traits that can be valuable to marketers wishing to target a particular cluster. Demographic information can also provide a clue as to why particular attitudes are held by cluster members. With this insight into consumer motivations, marketers can better develop strategies to stimulate the demand for fish and seafood.

Figures 4.7.3.1 and 4.7.3.2, and Table 4.7.3.1 provide the demographic profiles of cluster members. While differences between clusters are not dramatic, they are nonetheless highly useful for marketing purposes. For example, Figure 4.7.3.1 shows Cluster 4 and Cluster 7 members are more likely than members of any other cluster to live inland.

Inland areas are less likely to be served by fresh fish outlets - frozen fish is far more common. It appears that the inland members of Cluster 4 ("frozen fish/seafood lovers and convenience shoppers") have accepted frozen fish/seafood through necessity and have found its quality to be quite acceptable.

In order to develop a picture of members of each cluster, a summary of distinctive demographic tendencies is given in Table 4.7.3.2. Emphasis needs to be placed on the word tendencies, since the tendency for Cluster 1 members to have an older age profile does not exclude younger members under 40 years old who still make up 27% of Cluster 1 (Figure 4.7.3.2).

Figure 4.7.3.1: Proportion of Coastal Versus Inland Respondents; by Cluster

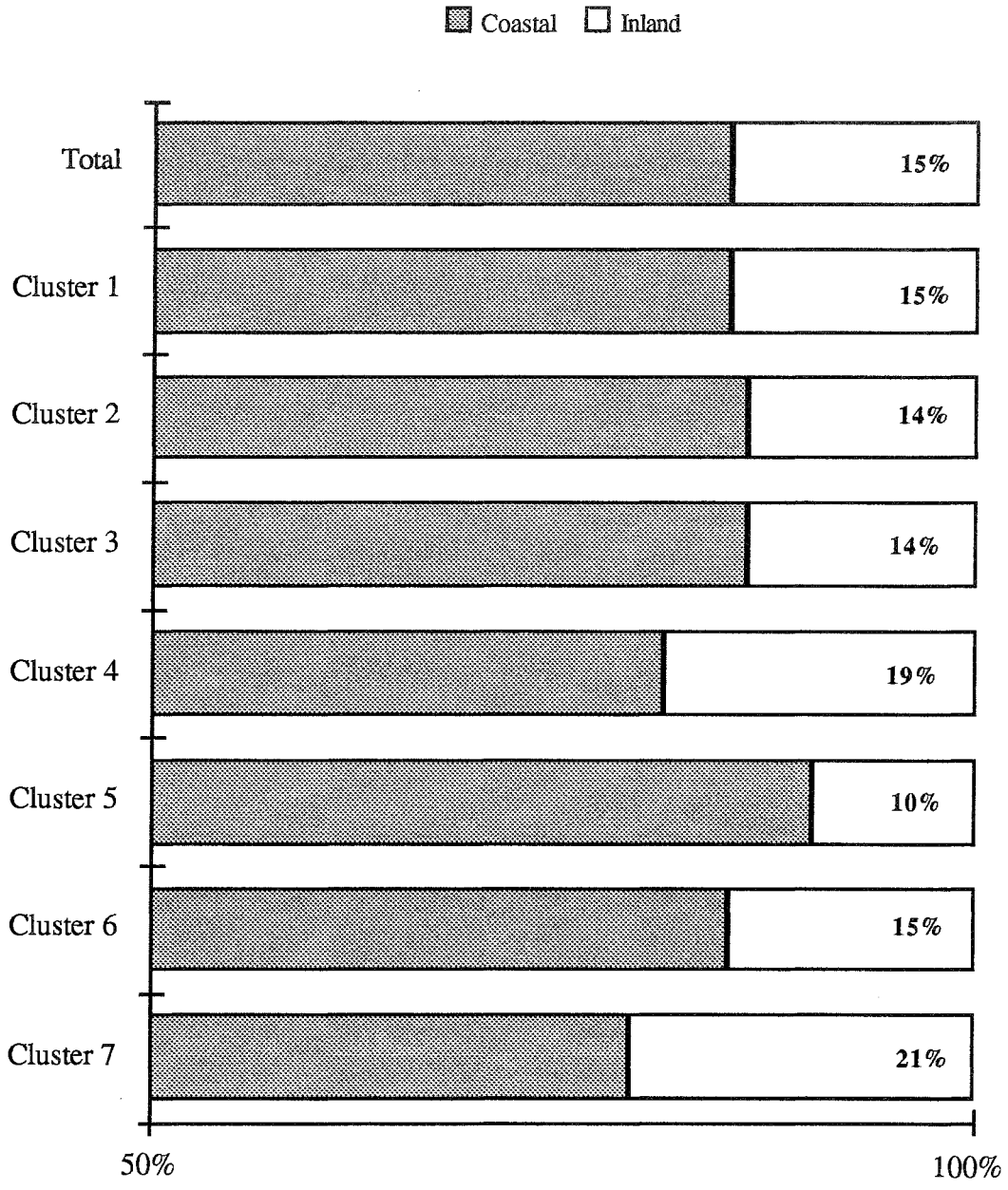


Figure 4.7.3.2: Age Profile of Respondents: by Cluster

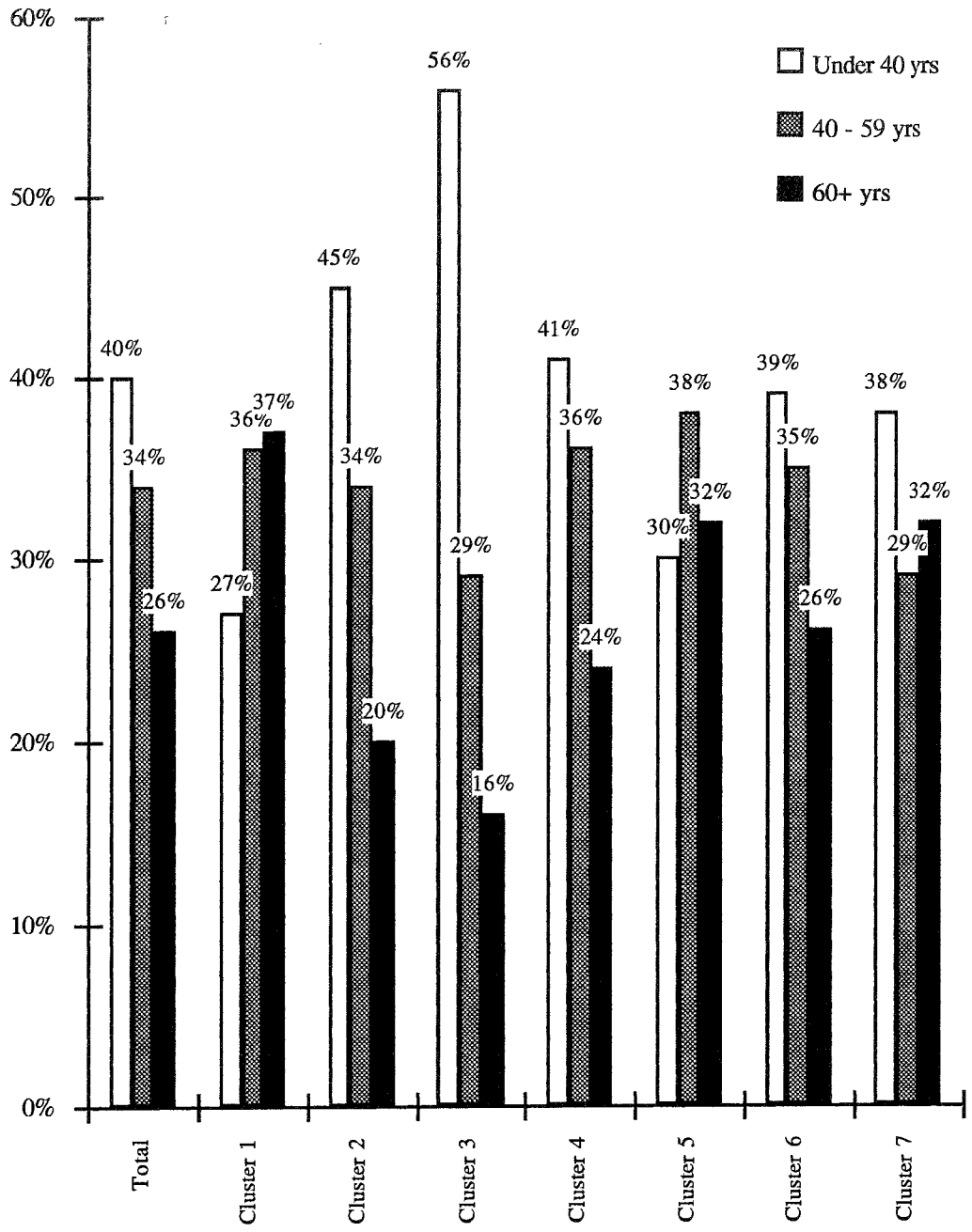


Table 4.7.3.1: Summary of Cluster Demographics*

	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7	Total
Marital Status								
Single	11%	17%	**24%**	14%	12%	14%	16%	16%
Married	62%	67%	63%	68%	**70%**	66%	59%	65%
Divorced/sep/widowed	**26%**	16%	13%	18%	18%	19%	**25%**	19%
Household Composition								
Single/living alone	**24%**	15%	16%	18%	19%	16%	**25%**	19%
Single/with other singles	8%	12%	12%	7%	6%	9%	9%	29%
Married/de facto/no children	23%	25%	20%	24%	26%	24%	21%	23%
Married/de facto/children	**23%**	30%	31%	29%	25%	30%	26%	28%
Married/de facto/adult family members	17%	14%	14%	16%	**20%**	15%	13%	16%
Single parent/children	4%	4%	5%	4%	2%	4%	**3%**	4%
Single parent/adult family members	2%	2%	2%	2%	2%	2%	2%	2%
Nationality								
Australian/English speaking country	**93%**	84%	90%	92%	90%	79%	**93%**	89%
Non English speaking country	5%	**12%**	7%	6%	7%	**15%**	6%	8%
Household Income								
Less than $15,000	**24%**	13%	15%	18%	18%	**24%**	**24%**	19%
$15,001 - $25,000	14%	16%	14%	13%	12%	**16%**	14%	14%
$25,001 - $40,000	18%	**23%**	22%	22%	21%	20%	18%	21%
$40,001 - $60,000	10%	**15%**	15%	**17%**	16%	12%	13%	14%
More than $60,000	8%	**13%**	**13%**	10%	11%	6%	8%	10%
Number of Adult Income Earners								
None/one	**65%**	55%	54%	58%	59%	62%	**64%**	59%
Two or more	35%	**45%**	**46%**	41%	40%	37%	35%	40%

** note that percentages within table columns often do not add to 100% due to non-response or don't know response from respondent.*

Table 4.7.3.2: Summary of Cluster Demographic Tendencies

	1 Cost/value conscious conservatives	2 Fish/ seafood buffs	3 Dislike cooking/don't know how to cook fish /seafood	4 Frozen fish/seafood lovers and convenience shoppers	5 Fresh fillet lovers/non price sensitive	6 Positive to fish/ seafood but ...	7 Dislike fish/ seafood
Coastal/inland	–	–	–	Inland	–	–	Inland
Age Profile	Older	Younger	Younger	–	Middle to older	–	–
Marital Status	Divorced/ separated/ widowed	–	Single	–	Married	–	Divorced/ separated/ widowed
Household Composition	Singles living alone	–	–	–	Married/*de facto*/with adult family members	–	Singles living alone
Nationality	Australian or English speaking country	Non-English speaking country	–	–	–	Non-English speaking country	Australian/ English speaking country
Household Income	Lower	Moderate to high	Moderate to high	–	–	Lower	Lower
Number of Adult Income Earners	None/one	Two or more	Two or more	–	–	–	None/one

Note: blanks indicate the cluster characteristics are approximately that of the total respondent population.

4.7.4 Cluster Consumption Characteristics

The classification of respondents' households into those that are and those that are not fish/seafood consuming shows little variation by clusters. Table 4.7.4.1 shows that even 90% of Cluster 7 members came from fish/seafood eating households.

There are, however, more significant differences in terms of whether respondents had eaten fish/seafood in and out-of-home in the last week. 41% of Cluster 1 and 7 respondents were from fish/seafood eating households but had not eaten any fish/seafood in the last week. The equivalent figure for Clusters 2 and 5 was 18%. Hence fish/seafood consumption behaviour is closely aligned with respondent attitudes in each cluster. Clusters 2, 4 and 5 which have attitudes highly positive to fish/seafood consumption, do indeed eat fish and seafood more often than other clusters, particularly in-home. It is interesting to note that Cluster 3 members, who were characterised as not liking or not knowing how to cook fish and seafood, were relatively frequent consumers of fish/seafood out-of-home.

However, the most startling differences between clusters can be seen in the in-home and out-of-home *per capita* consumption figures of respondents and members of their households (Table 4.7.4.2 and Table 4.7.4.3 respectively). Cluster 2 *per capita* in-home consumption of fish and seafood is almost three times that of Cluster 7.

Table 4.7.4.1: Respondents In and Out-Of-Home Fish and Seafood Consumption Frequency: by Cluster

Respondents who:	Total	1 Cost/value conscious conservatives	2 Fish/ seafood buffs	3 Dislike cooking/don't know how to cook fish /seafood	4 Frozen fish/seafood lovers and convenience shoppers	5 Fresh fillet lovers/non price sensitive	6 Positive to fish/ seafood but ...	7 Dislike fish/ seafood
were from non fish/seafood eating households	2%	2%	0%	3%	0%	1%	0%	10%
were from fish/seafood eating households but did not eat fish/seafood last week	27%	41%	18%	29%	22%	18%	25%	41%
ate fish/seafood last week only at home	42%	34%	49%	37%	51%	49%	44%	30%
ate fish/seafood last week only out-of-home	13%	12%	11%	18%	9%	14%	13%	12%
ate fish/seafood last week both in-home and out-of-home	15%	11%	23%	14%	18%	17%	17%	7%
Total	100%	100%	100%	100%	100%	100%	100%	100%

Table 4.7.4.2: Respondents and Other Household Members *per capita* In-Home Fish and Seafood Consumption: by Cluster (kg)

Fish consumption by form bought to eat in-home	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7	Average all Clusters
Fresh whole	0.65	**1.95**	0.38	1.02	**1.14**	**1.57**	0.34	1.02
Fresh fillet	1.09	**3.57**	1.58	**2.85**	**4.12**	**2.71**	0.69	2.45
Fresh cutlet	0.03	**0.45**	0.06	**0.20**	0.04	**0.25**	0.01	0.15
Fresh headed and gutted/peeled	0.00	**0.13**	0.03	0.05	0.04	**0.09**	0.00	0.05
Frozen whole	0.02	**0.17**	0.00	**0.24**	0.03	0.05	**0.12**	0.09
Frozen fillet	0.13	0.26	0.34	**0.97**	0.37	0.35	0.36	0.41
Frozen cutlet	**0.02**	**0.02**	0.00	0.01	**0.02**	0.00	0.00	0.01
Frozen headed and gutted/peeled	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fresh prepared ready to cook	0.07	**0.12**	0.02	**0.23**	0.04	0.03	0.08	0.09
Frozen packaged ready to cook	0.17	0.24	**0.44**	**0.62**	0.19	0.30	**0.47**	0.35
Smoked	**0.17**	**0.27**	0.08	0.05	**0.26**	0.09	0.03	0.14
Canned	1.20	**1.62**	1.28	**1.73**	**1.59**	1.29	0.95	1.39
Glass bottle	0.00	0.02	0.01	0.02	**0.05**	0.01	0.01	0.02
Cooked fillet	**0.87**	0.50	**0.59**	0.57	**0.69**	0.45	0.47	0.58
Other	0.06	**0.32**	0.11	**0.25**	0.07	0.07	0.08	0.14
Don't know	0.00	**0.13**	0.02	0.04	**0.07**	0.02	0.00	0.04
No answer	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Fish	4.47	**9.77**	4.93	**8.85**	**8.73**	**7.28**	3.62	6.94
Seafood consumption by form bought to eat in-home								
Fresh	0.33	**0.89**	0.52	0.48	**1.00**	**0.68**	0.22	0.60
Frozen including packaged	0.08	**0.16**	0.11	**0.23**	**0.18**	0.11	0.05	0.13
Canned	0.02	**0.06**	0.04	0.05	**0.08**	0.05	0.02	0.05
Other	0.27	**0.47**	0.19	**0.31**	**0.33**	**0.40**	0.23	0.32
Total Seafood	0.70	**1.58**	0.86	**1.08**	**1.59**	**1.23**	0.52	1.10
Total Fish and Seafood	5.17	**11.35**	5.79	**9.93**	**10.32**	**8.51**	4.13	8.04

Note that bolded figures indicate per capita consumption that is above the average of all respondents.

Table 4.7.4.3: The *per capita* Out-Of-Home Consumption of Grocery Buyers and Children under 15 Years of Age* (kg)

	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7	Average all Clusters
Out-of-home fish and seafood consumption	1.68	**2.94**	2.39	2.19	**3.17**	2.31	1.35	2.32

** this is the out-of-home consumption known of by the grocery buyer as sampled by the 'In-Home' questionnaire. The children's consumption is just that which has been purchased by the grocery buyer.*

The bolding of numbers in Tables 4.7.4.2 and 4.7.4.3 showing higher than average *per capita* consumption, emphasises the distinctive preferences of the members of each cluster. These preferences are largely consistent with the label given to each cluster.

For example, the Cluster 1 "cost and value conscious conservatives" have higher than average consumption of smoked fish, cooked fillets and frozen cutlets. Their out-of-home consumption is the second lowest of any cluster.

Cluster 2 "fish/seafood buffs" have the highest in-home and second highest out-of-home *per capita* consumption of total fish and seafood.

Cluster 3 members who "dislike or don't know how to cook fish and seafood" have above average in-home consumption of frozen packaged ready to cook fish and cooked fillets, both forms which alleviate the need for cooking or arduous preparation.

Cluster 4 the "frozen fish/seafood lovers and convenience shoppers" have higher than average in-home consumption of frozen fish and seafood. Also, true to their label as convenience shoppers, they are higher than average consumers of canned fish and frozen, packaged, ready to cook fish - the most convenient forms of fish purchase and preparation.

Cluster 5, the "fresh fish lovers /non price sensitive" obviously do consume above average quantities of fresh fish and seafood in-home. They are the highest *per capita* consumers of fish and seafood out-of-home which indicates they do have the spending power required for discretionary out-of-home meals. This is supported by other results which show Clusters 2 and 5 to eat a higher proportion of out-of-home fish and seafood meal-type-occasions in restaurants, as compared to other clusters.

Cluster 6, the group that is "positive to fish/seafood but ..." has an in and out-of-home consumption pattern that is not far off the average of all respondents. Surprisingly, in spite of the problems and concerns this group has, their in-home consumption of *fresh* fish and seafood is above average. However, this preference for *fresh* fish/seafood may also explain why this group held so many problems and concerns. Their concerns over fish/seafood availability, cost and suspicion of the "freshness" of fish purchased are all most applicable to *fresh* fish/seafood.

However, one characteristic common to all clusters is in-home consumption of canned fish of between 0.95kg and 1.73kg *per capita*. There is comparatively little variation in *per capita* canned fish consumption across clusters, in contrast to that observed with other forms of fish and seafood.

4.7.5 Types/Species Consumed by Cluster

The previous Section established wide differences between clusters in terms of *per capita* consumption of the various types and forms of fish and seafood. However, species is also an important product characteristic considered by consumers when purchasing fish or seafood. This Section examines the species preferences of each cluster as reflected in the comparative popularity of each species consumed in-home.

Table 4.7.5.1 shows, by cluster, the top seven ranked species of finfish in terms of the number of meal-type-occasions in-home in the seven days prior to interviewing the respondent. There are clearly differences in rankings across clusters, though shark and whiting do appear in the top three rankings of all clusters apart from Cluster 6, where shark drops to fourth rank. Also, as per the footnote at the bottom of Table 4.7.5.1, orange roughy is quite likely to be in the top three if the orange roughy meals that respondents have specified as perch were re-allocated to orange roughy. However the number of these meals cannot be reliably estimated.

Table 4.7.5.2 provides the species rankings, for seafood. Whole prawns dominate as the top ranked species of all clusters and account for over half of all seafood meal-type-occasions for each cluster. Other rankings do vary across clusters, though their closeness to each other, in terms of number of meal-type-occasions, prevents any meaningful interpretation.

Table 4.7.5.3 provides the same data for canned fish and seafood. The uniformity of canned fish consumption, already seen in *per capita* consumption figures (Section 4.7.4), is also evident in the species of canned fish consumed.

Table 4.7.5.1: Most Commonly Used Species of Finfish† for In-Home Meals by Cluster: All Meal-Type-Occasions

Rank	1 Cost/value conscious conservatives	2 Fish/ seafood buffs	3 Dislike cooking/don't know how to cook fish /seafood	4 Frozen fish/seafood lovers and convenience shoppers	5 Fresh fillet lovers/non price sensitive	6 Positive to fish/ seafood but ...	7 Dislike fish/ seafood
1	Shark (25)	**Bream (60)	Shark (48)	Whiting (60)	Whiting (49)	Snapper (38)	Shark (28)
2	Whiting (18)	Whiting (52)	Whiting (28)	Shark (34)	**Bream (45)	Whiting (35)	Snapper (20)
3	Cod (9)	Shark (39)	*O roughy (16)	*O roughy (32)	Shark (42)	**Bream (30)	Whiting (14)
4	**Bream (8)	Flathead (36)	Flathead (15)	Flathead (28)	Snapper (40)	Shark (24)	Cod (7)
5	Flathead (8)	*O roughy (35)	Cod (13)	**Bream (25)	*O roughy (37)	Flathead (23)	**Bream (7)
6	O roughy (8)	Snapper (29)	**Bream (12)	Snapper (25)	Flathead (34)	*O roughy (17)	*Perch (6)
7	*Perch (5)	Trevally (27)	Snapper (12)	*Perch (23)	*Perch (34)	Mullet (16)	Flathead (5)
		*Perch (17)	*Perch (7)			*Perch (6)	*O roughy (5)
Total finfish meal-type-occasions ('000)	158	543	240	455	560	353	146

Figures in brackets are number of meal-type-occasions in last 7 days ('000s)
** on the basis of catch statistics it is suspected that a significant portion of perch mentions were actually orange roughy. This would have the effect of boosting orange roughy ranking and dropping perch ranking.*
*** on the basis of catch statistics it is suspected that most of bream mentions were actually morwong*
† does not include canned or processed forms of finfish.

Table 4.7.5.2: Most Commonly Used Species of Seafood† for In-Home Meals by Cluster: All Meal-Type-Occasions

Rank	1 Cost/value conscious conservatives	2 Fish/ seafood buffs	3 Dislike cooking/don't know how to cook fish /seafood	4 Frozen fish/seafood lovers and convenience shoppers	5 Fresh fillet lovers/non price sensitive	6 Positive to fish/ seafood but ...	7 Dislike fish/ seafood
1	Prawns (whole) (29)	Prawns (whole) (79)	Prawns (whole) (40)	Prawns (whole) (51)	Prawns (whole) (87)	Prawns (whole) (55)	Prawns (whole) (42)
2	Scallops (7)	Squid/calamari (14)	Crab (7)	Crab (12)	Crayfish//lobster (9)	Crab (6)	Crab (10)
3	Crayfish/lobster (3)	Crab (13)	Octopus (7)	Squid/calamari (11)	Squid/calamari (9)	Scallops (5)	Bugs (5)
4	Mussels (2)	Scallops (9)	Oysters (7)	Scallops (8)	Crab (7)	Squid/calamari (5)	Seafood extender (4)
5	Oysters (2)	Oysters (7)	Squid/calamari (6)	Crayfish/lobster (4)	Scallops (6)	Seafood sticks (4)	Squid/calamari (2)
Total shellfish meal-type-occasions ('000)	50	141	78	97	137	87	68

Figures in brackets are number of meal-type-occasions in last 7 days ('000s)
† does not include canned or processed forms of seafood.

Table 4.7.5.3: Most Commonly Used Types of Canned Fish/Seafood for In-Home Meals by Cluster: All Meal-Type-Occasions

Rank	1 Cost/value conscious conservatives	2 Fish/ seafood buffs	3 Dislike cooking/don't know how to cook fish /seafood	4 Frozen fish/seafood lovers and convenience shoppers	5 Fresh fillet lovers/non price sensitive	6 Positive to fish/ seafood but ...	7 Dislike fish/ seafood
1	Tuna (79)	Tuna (131)	Tuna (126)	Tuna (158)	Tuna (127)	Tuna (113)	Tuna (79)
2	Salmon, other (55)	Salmon, other (97)	Salmon, other (68)	Salmon, other (98)	Salmon, other (119)	Salmon, other (72)	Salmon, other (66)
3	Sardines (24)	Sardines (38)	Sardines (24)	Sardines (31)	Sardines (51)	Sardines (31)	Sardines (8)
4	Herring fillets (5)	Oysters (9)	Anchovies (9)	Prawns (6)	Anchovies (6)	Mackerel (4)	Anchovies (5)
5	Anchovies (4)	Kippers (6)	Oysters (4)	Anchovies (5)	Mackerel (5)	Anchovies (3)	Herring fillets (4)
Total canned fish/seafood ('000)	173	304	242	317	321	231	169

Figures in brackets are number of meal-type-occasions in last 7 days ('000s).

4.7.6 Where Fish/Seafood is Purchased by Cluster

An understanding of the purchasing habits of each cluster is vital information for marketers wishing to target clusters.

Table 4.7.6.1 shows that each cluster has distinctive place of purchase preferences that differ from the overall average shown in the total column.

These preferences are generally consistent with each cluster's fish/seafood consumption characteristics. For example, Cluster 4 members eat well above average quantities of frozen fish and seafood which is most often sold through supermarkets and food stores. Table 4.7.6.1 indeed shows that Cluster 4 purchases from supermarkets and food stores were well above average. Also of note is the 10% of Cluster 4 meal-type-occasions accounted for by fish/seafood caught by a household member, as against an average of 5%. It could be inferred that the knowledge gained through freezing own caught fish/seafood accounts for the positive attitude of at least some Cluster 4 respondents to frozen fish/seafood generally.

Clusters 2, 5 and 6, whose members have higher than average consumption of fresh fish and seafood, purchased approximately one third of meal-type-occasions at other fish/general markets or retail fish shops (uncooked), as against an average of approximately one quarter. These outlets, of course, specialise in fresh fish and seafood.

Table 4.7.6.1: Where Fish and Seafood is Purchased for In-Home Meals by Meal-Type-Occasion

	1 Cost/value conscious conservatives	2 Fish/ seafood buffs	3 Dislike cooking/don't know how to cook fish /seafood	4 Frozen fish/seafood lovers and convenience shoppers	5 Fresh fillet lovers/non price sensitive	6 Positive to fish/ seafood but ...	7 Dislike fish/ seafood	Total
Fish or general market	4%	**14%**	8%	5%	**12%**	10%	7%	9%
Retail fish shop (uncooked)	10%	**19%**	12%	10%	**20%**	**20%**	9%	15%
Fish and chip shop/take-away	**19%**	9%	**15%**	9%	10%	10%	**16%**	12%
Supermarket/food store	**49%**	36%	**51%**	**52%**	40%	43%	49%	45%
Caught by household member	4%	6%	2%	**10%**	4%	3%	4%	5%
Gift by non household member	5%	5%	4%	5%	4%	6%	2%	5%
*Other	9%	**11%**	8%	9%	10%	8%	13%	9%
Total	100%	100%	100%	100%	100%	100%	100%	100%

** other includes fish/seafood from commercial fisherman. other fisherman, convenience stores (late trading), delicatessen, other, don't know/can't say*
Note: bolded percentages indicate appreciably above average proportion of meal-type-occasions purchased from these outlets
*Numbers and percentages relate to meals and **not** purchases.*

4.7.7 Meal Preparation for In-Home Consumption by Cluster

Respondents were asked whether the fish/seafood they had eaten in the last seven days had been bought to eat as is or had been cooked in-home. Results in Table 4.7.7.1 show a correlation between those clusters with very low *per capita* consumption (Clusters 1, 3 and 7) also having the highest proportion of bought to eat as is fish/seafood in the home. This suggests that a lack of knowledge and/or distaste for cooking fish/seafood may be a major cause of low fish/seafood consumption. Certainly, for many members of Clusters 3 and 7, a dislike of preparing fish/seafood was evident from the attitudes revealed in the cluster analysis (Section 4.7.2).

Table 4.7.7.1: The Proportion of In-Home Fish/Seafood Meal-Type-Occasions Cooked In-Home Versus Bought to Eat As Is: by Cluster

	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7	Total
Cooked and served	61%	**73%**	61%	67%	**73%**	**73%**	56%	68%
Bought to eat in-home	**35%**	25%	**37%**	29%	26%	26%	**42%**	30%
No answer	4%	2%	2%	4%	2%	1%	2%	2%

Respondents were also asked to specify by what method they cooked/prepared the fish/seafood they had eaten in-home. Table 4.7.7.2 shows some minor differences between clusters. Many can be explained by the type of fish/seafood favoured by each cluster. For example Clusters 1 and 7, whose members favour pre-cooked and canned fish/seafood over other types (Section 4.7.4. and Table 4.7.7.1), cite "straight" and "deep fried - bought out-of-home" as their two most common methods of "cooking" fish/seafood in-home (Table 4.7.7.2).

The two heaviest consumers of fish/seafood, Clusters 2 and 5, show slightly higher than average use of grilling and pan frying in-home.

Table 4.7.7.2: Methods of Cooking Fish/Seafood In-Home by Clusters: Proportion of Meal-Type-Occasions

	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7	Total
Boil/boiled in the bag	3%	4%	3%	3%	2%	3%	3%	3%
Baked/oven	4%	6%	8%	8%	6%	6%	**11%**	7%
Grilled	8%	**13%**	9%	11%	**14%**	12%	5%	11%
Deep fried at home	4%	4%	5%	6%	4%	**8%**	4%	5%
Deep fried - bought out of home	**16%**	5%	**12%**	7%	6%	6%	**13%**	8%
Steamed	1%	3%	2%	2%	3%	**5%**	0%	3%
Microwaved	2%	3%	3%	**5%**	3%	2%	4%	3%
Raw	1%	2%	1%	2%	1%	2%	**3%**	1%
Straight	**29%**	20%	24%	22%	21%	23%	**28%**	23%
Barbecued	1%	2%	1%	2%	2%	0%	1%	1%
Pan fried	11%	**18%**	13%	**19%**	**18%**	17%	10%	16%
Poached (water in pan)	2%	1%	0%	0%	1%	0%	1%	1%
Pizza topping	1%	1%	1%	1%	2%	1%	2%	1%
Ingredient - mornay	3%	3%	3%	3%	2%	3%	3%	3%
Ingredient - stir fry	1%	2%	1%	1%	2%	1%	1%	1%
Ingredient - casserole	3%	4%	**5%**	2%	3%	2%	3%	3%
Ingredient - other	5%	3%	3%	4%	5%	4%	3%	4%
Other	4%	5%	4%	2%	5%	4%	**7%**	4%
Don't know	0%	0%	0%	0%	1%	1%	0%	0%

Note: bolded percentages indicate proportions appreciably above the average for total meal-type-occasions

4.7.8 Types of Fish/Seafood Served In-Home by Cluster

Main food purchaser/preparer respondents were quoted a number of different types of fish, molluscs and crustaceans and were asked how often they served each type in the home (see Section 4.6.4). The percentages given in Table 4.7.8.1 refer to the proportion of respondents in each cluster who had served each fish, mollusc and crustacean type at least once in the last several years. Section 4.6.4 has already discussed the general differences in response according to the type of fish/seafood. Table 4.7.8.1 shows respondents in each cluster to serve types of fish and seafood consistent with their distinctive attitudes.

Table 4.7.8.1: Respondents Who Considered Themselves to be Consumers of Fish/Seafood Types In-Home: Proportion of Respondents in Each Cluster

	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7	Total
Fish								
Fish from take-away	72%	71%	80%	74%	67%	71%	68%	72%
Canned fish	88%	90%	86%	89%	90%	84%	80%	87%
Frozen fish	39%	46%	52%	63%	38%	46%	43%	46%
Prepared/processed fish	57%	52%	65%	62%	47%	56%	58%	57%
Fresh fish	89%	98%	93%	93%	97%	95%	77%	92%
Molluscs								
Squid/calamari	31%	60%	49%	41%	42%	46%	26%	42%
Scallops	31%	54%	45%	39%	62%	45%	24%	40%
Oysters	35%	37%	46%	43%	42%	46%	27%	43%
Mussels	23%	46%	36%	29%	29%	36%	17%	31%
Crustaceans								
Lobster/crayfish	35%	58%	46%	45%	48%	47%	29%	45%
Prawns/shrimps	64%	84%	74%	74%	77%	79%	54%	73%
Other crustaceans	35%	59%	42%	46%	45%	49%	26%	43%

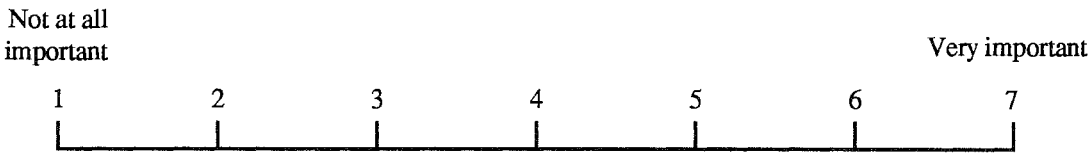
4.7.9 Attitudes to Fresh and Frozen Fish When Purchasing - by Cluster

Section 4.5.2 analysed the attitudes of a subset of respondents to fresh and frozen fish when making a purchase. How this subset was selected is explained in Sections 4.5.1 and 4.5.2.

This Section examines the attitudes of this same group of respondents further broken down according to the cluster in which they belong. Confirming that distinctive attitudes to fresh/frozen fish selection do exist for each cluster will provide marketers with further useful information on which to develop marketing plans to target each cluster.

Table 4.7.9.1 provides details of results for each cluster. The figures in the Table are cluster averages of responses given using a seven-point scale shown in Figure 4.7.9.1.

Figure 4.7.9.1: Seven-Point Scale Used in Table 4.7.9.1



In Table 4.7.9.1 the factors have been ordered according to their importance ranking averaged across all clusters. Hence the column on the right showing the average of all clusters shows the rank in sequential order.

The ranking of factors within each cluster does show consistency with the prevailing attitudes upon which the cluster is based. For example, the "frozen fish/seafood lovers and convenience shoppers" (Cluster 4) rank "it is fresh rather than frozen" as sixth most important, as does Cluster 7, while all other clusters rank it the most important factor of all.

The "cost/value conscious conservatives" (Cluster 1) true to their conservative outlook, rank "it is a familiar type of fish" very highly at third in terms of importance.

It is also interesting to see that all clusters have concerns over the labelling of fish as indicated by their consistent high ranking of "I can be sure that the fish is labelled correctly".

Table 4.7.9.1: Attitudes to Fresh (or Frozen) Fish When Purchasing: by Cluster

Importance of factors when buying fresh (or frozen) fish	1 Cost/value conscious conservatives	2 Fish/ seafood buffs	3 Dislike cooking/don't know how to cook fish /seafood	4 Frozen fish/seafood lovers and convenience shoppers	5 Fresh fillet lovers/non price sensitive	6 Positive to fish/ seafood but ...	7 Dislike fish/ seafood	All clusters average
It is fresh rather than frozen	6.6 (1)	6.5 (1)	6.2 (1)	5.5 (6)	6.7 (1)	6.6 (1)	5.5 (6)	6.3 (1)
I can be sure that the fish is labelled correctly	6.6 (2)	6.3 (2)	6.1 (2)	6.2 (1)	6.5 (2)	6.4 (2)	6.1 (1)	6.3 (2)
The fish is the fish species I want	6.3 (4)	6.0 (3)	5.9 (3)	6.0 (2)	6.3 (3)	6.2 (3)	6.0 (2)	6.1 (3)
Has white or light coloured flesh	6.3 (5)	5.4 (4)	5.8 (5)	5.7 (4)	5.9 (6)	6.0 (5)	5.8 (4)	5.8 (4)
The fish has been cut/filleted	6.2 (6)	5.0 (7)	5.9 (4)	6.0 (3)	6.0 (5)	5.9 (7)	5.8 (5)	5.8 (5)
It is a familiar type of fish	6.4 (3)	5.1 (6)	5.3 (9)	5.6 (5)	6.1 (4)	6.1 (4)	5.9 (3)	5.7 (6)
It is an attractively presented type of fish	6.2 (7)	5.2 (5)	5.5 (8)	5.4 (7)	5.9 (7)	6.0 (6)	5.5 (7)	5.6 (7)
It has a light flavour	5.8 (8)	5.0 (8)	5.6 (6)	5.4 (8)	5.7 (8)	5.9 (8)	5.5 (8)	5.5 (8)
I can be sure that it doesn't have bones	5.7 (9)	4.0 (12)	5.6 (7)	5.4 (9)	5.6 (9)	5.5 (10)	5.2 (10)	5.2 (9)
It is a relatively low price	5.5 (10)	4.9 (9)	5.1 (10)	5.1 (10)	4.8 (10)	5.7 (9)	5.3 (9)	5.1 (10)
Recommended by the retailer	4.9 (11)	4.2 (11)	4.9 (11)	4.2 (11)	4.4 (11)	5.1 (11)	4.2 (11)	4.5 (11)
Has a strong flavour	3.9 (13)	4.5 (10)	4.2 (12)	3.9 (12)	3.9 (13)	4.7 (12)	3.6 (12)	4.2 (12)
It is a deep sea species	4.3 (12)	3.6 (13)	4.0 (13)	3.7 (13)	4.1 (12)	4.7 (13)	3.4 (13)	4.0 (13)

Note: figures in brackets are the ranking of factors within each cluster according to average rating given.

4.7.10 Suggested Actions the Fishing Industry Needs to Take to Increase Respondent's Household Fish/Seafood Consumption

An effective way to further understand the needs and motivations of the members of each cluster is to ask the question "what actions need to be taken by the fishing industry for more fish and seafood to be bought and eaten by your household?".

Table 4.7.10.1 ranks the most often mentioned six suggestions by cluster.

As shown, there is a remarkable consistency across the clusters in the first two rankings being "reasonable/cheaper prices" and "nothing" with exception of Cluster 6 where "nothing" ranked fourth.

Increased availability of fish/seafood or fresh fish in particular are also suggestions that are highly ranked.

It is clear that reasonable/cheaper prices and better fish/seafood availability would increase fish/seafood in-home consumption across the clusters.

Beyond these suggestions, clusters may be targeted through the use of other suggestions given in the minor rankings. For example, 16% of Cluster 3 respondents did suggest the industry publish recipes for the public.

Table 4.7.10.1: Suggested Industry Actions for More Fish/Seafood to be Bought and Eaten by Household: Ranked Suggestions by Cluster

Rank	1 Cost/value conscious conservatives	2 Fish/ seafood buffs	3 Dislike cooking/don't know how to cook fish /seafood	4 Frozen fish/seafood lovers and convenience shoppers	5 Fresh fillet lovers/non price sensitive	6 Positive to fish/ seafood but ...	7 Dislike fish/ seafood
1	Reasonable/ cheaper prices (39%)	Reasonable/ cheaper prices (29%)	Reasonable/ cheaper prices (37%)	Nothing (33%)	Nothing (35%)	Reasonable/ cheaper prices (45%)	Nothing (51%)
2	Nothing (27%)	Nothing (24%)	Nothing (18%)	Reasonable/ cheaper prices (30%)	Reasonable/ cheaper prices (23%)	Fresh fish availability (19%)	Reasonable/ cheaper prices (20%)
3	Fresh fish/ availability (12%)	Availability/ more readily available (15%)	Advertising campaign/ promotion (17%)	Availability/ more readily available (11%)	Advertising campaign promotions (11%)	Availability/ more readily available (14%)	Don't know (8%)
4	Availability/ more readily available (11%)	Fresh fish/ availability (15%)	Recipes/cards/ leaflets (16%)	Advertising campaign/ promotions (10%)	Fresh fish availability (11%)	Nothing (13%)	Advertising campaign/ promotions (7%)
5	No pollution in seas/rivers (8%)	Advertising campaign promotion (11%)	Availability/ more readily available (15%)	Fresh fish availability (9%)	No pollution in seas/rivers (8%)	Advertising campaign/ promotions (9%)	Availability/ more readily available (5%)
6	Advertising campaign/ promotions (7%)	No pollution in seas/rivers (8%)	Fresh fish availability (14%)	No pollution in seas/rivers (5%)	Availability/ more readily available (8%)	No pollution in seas/rivers (8%)	Fresh fish availability (4%)
Average number of suggestions	1.4	1.5	1.7	1.4	1.4	1.6	1.2

Note: proportion of cluster members making suggestion is given by bracketed %.

4.8 Consumer Attitudes to and Trial of Farmed Fish/Seafood

4.8.1 Consumer Perceptions/Preferences for Farmed Versus Wild Fish and Seafood

The majority of respondents were ambivalent to farmed fish. Figure 4.8.1.1 shows that only 14.4% thought that farmed fish were any different from their wild caught cousins. The reasons given by this minority were mostly negative for consumption of farmed fish though some comments with a positive bias were also registered as shown in Figure 4.8.1.2.

Table 4.8.1.1 shows that higher income groups and those respondents in the socio-economic groups upper/upper middle and middle, responded more favourably to farmed fish, possibly as a result of their higher trial rates of farmed fish and seafood.

Figure 4.8.1.1: Response to Question: "If Fish Are Farmed Does it Make Any Difference"

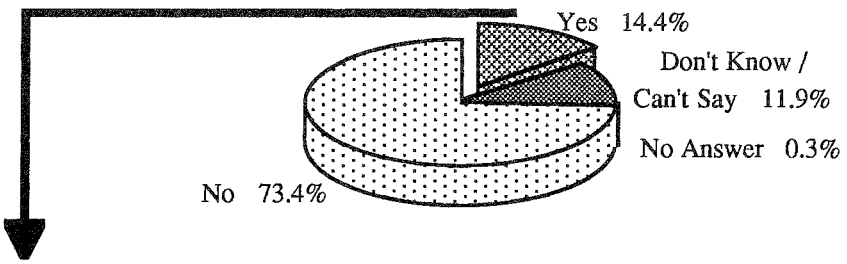
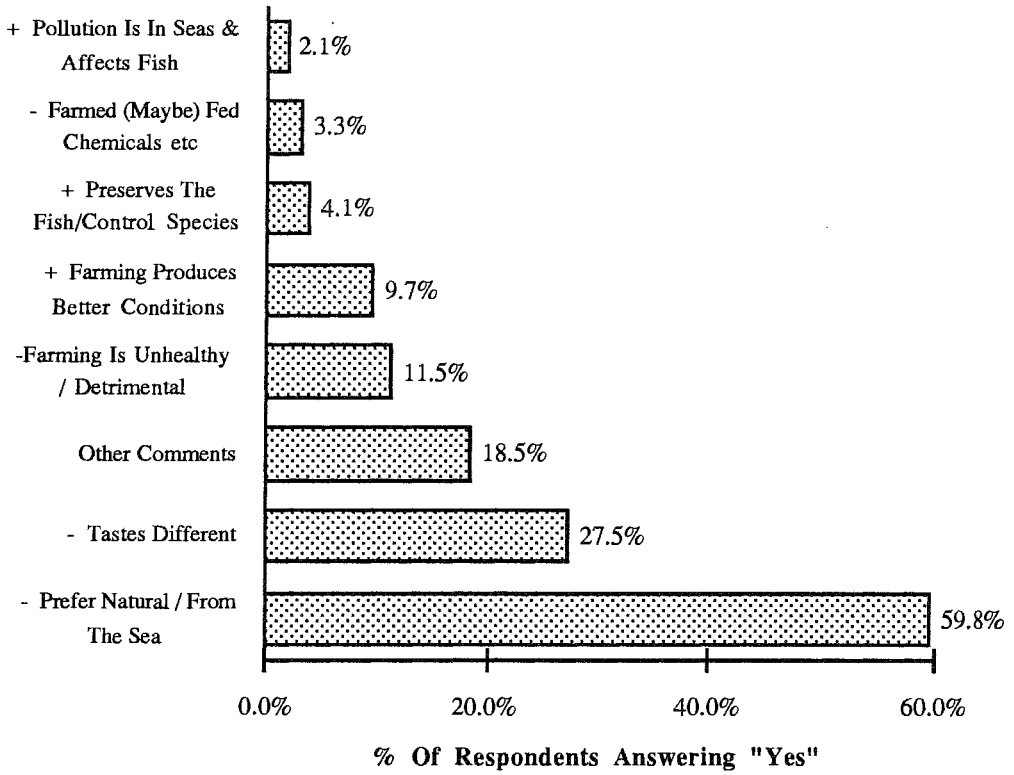


Figure 4.8.1.2: Reasons Given for Farmed Fish "Making a Difference"



"+" indicates a factor positive for farmed fish consumption
"-" indicates a factor negative to farmed fish consumption.

Table 4.8.1.1: Demographics as a Factor in Attitudes to Farmed Fish

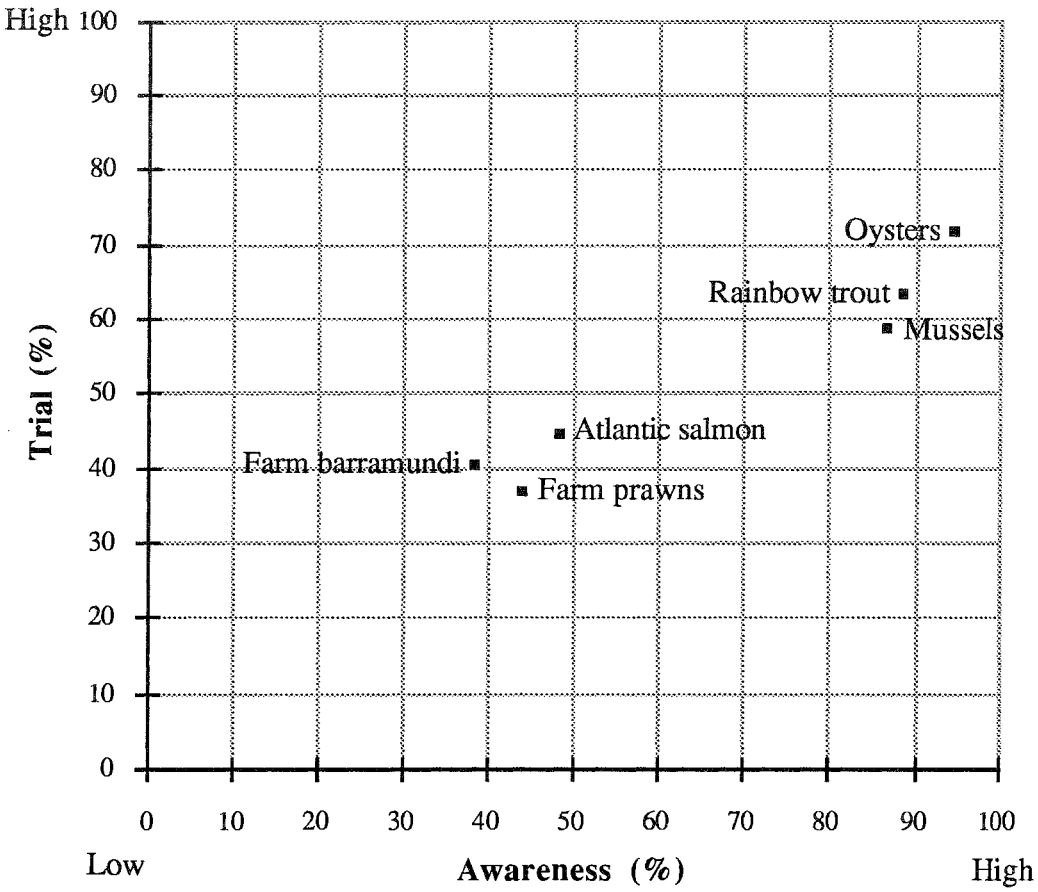
		"If fish are farmed does it make any difference?"			
		Yes	No	Don't know/ can't say	No answer
	All respondents	14.4%	73.4%	11.9%	0.3%
Socio-economic group	Upper/upper middle	9.1%	82.6%	11.9%	0.3%
	Middle	12.8%	77.9%	9.1%	0.2%
	Lower middle	15.3%	73.0%	11.3%	0.4%
	Lower	17.1%	70.3%	12.3%	0.2%
	Retired white collar	15.4%	71.2%	13.3%	0.1%
	Retired blue collar	18.4%	64.8%	16.6%	0.2%
Household Income	Less than $15,000	17.8%	64.8%	16.9%	0.4%
	$15,000 - $25,000	18.7%	70.8%	10.4%	0.0%
	$25,001 - $40,000	13.5%	76.7%	9.5%	0.3%
	$40,001 - $60,000	10.3%	80.2%	9.1%	0.4%
	More than $60,000	11.4%	81.9%	6.4%	0.4%

4.8.2 Recall and Trial of Farmed Fish and Seafood

Figure 4.8.2.1 plots on one axis the proportion of respondents who said they had heard of the farmed fish and seafood species shown. The respondents who had heard of the species ("aware" respondents) were then asked if they had tried it. The proportion of "aware" respondents who had also tried the species is plotted on the "trial" axis of Figure 4.8.2.1.

Oysters rank highly in both awareness and trial while Atlantic salmon, farm prawns and farm barramundi rank poorly in awareness and trial, indicative of their relatively recent entry into the Australian fish and seafood market. The low trial rates amongst respondents who had heard of these three farmed species may be a result of a lack of availability. Some evidence of this is discussed in Sections 4.8.3, 4.8.5 and 4.8.8. Additionally, farm prawns and farm barramundi are often not sold with their farm origins highlighted - rather, they are sold simply as barramundi or the species of prawn. Hence, consumers are unaware that they have tried a farmed fish or seafood.

Figure 4.8.2.1: Respondent Awareness and Trial of Selected Farmed Species



4.8.3 Trial and Attitudes to Farm Prawns

Figure 4.8.3.1 shows the percentage of respondents who had heard of farm prawns and, of this group, those that had actually tried farm prawns. Regional Queensland and regional South Australian residents show high recall rates. This was to be expected for Queensland since black tiger prawns are farmed in Queensland and Northern New South Wales. Perth shows the lowest recall rate, probably due to the lack of availability of farmed prawns in shops. Prawn farming has not been established in Western Australia and wild caught prawns from fishing centres on the Western Australian coast dominate local supply.

Figure 4.8.3.2 shows that 16.1% of all respondents had tried farm prawns and the majority had positive reactions to the trial. Only 6.5% of people who had tried farmed prawns did not like them.

Figure 4.8.3.1: Recall and Trial of Farm Prawns: By Region

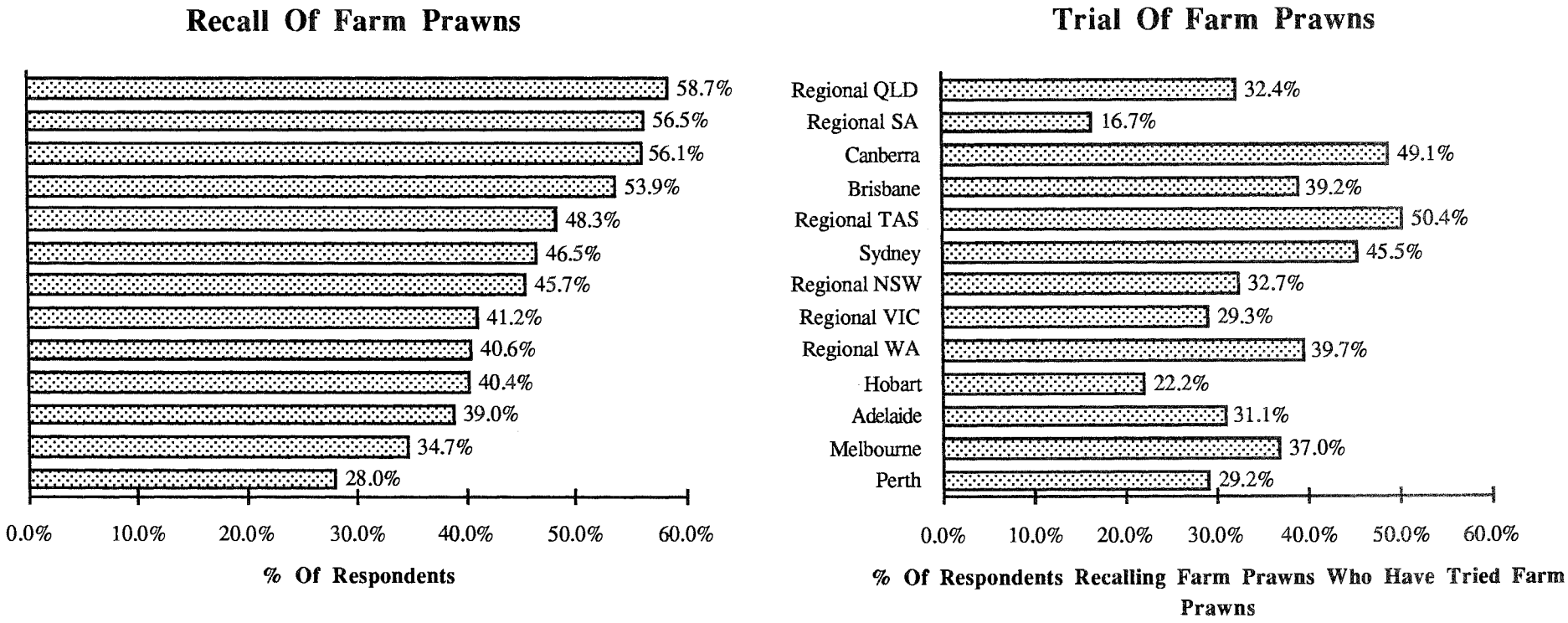
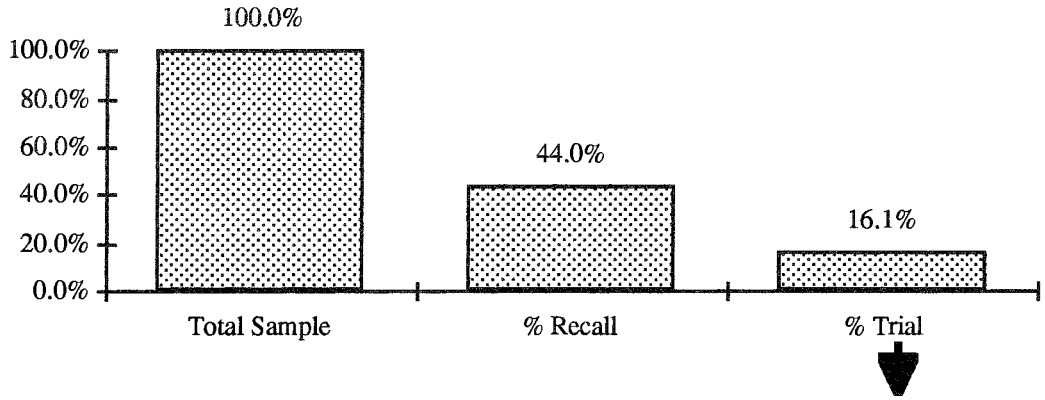
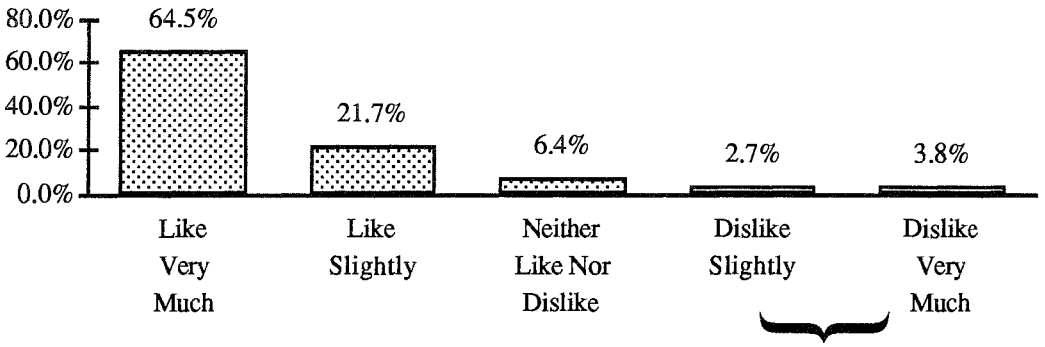


Figure 4.8.3.2: Respondent Attitudes to Farm Prawns

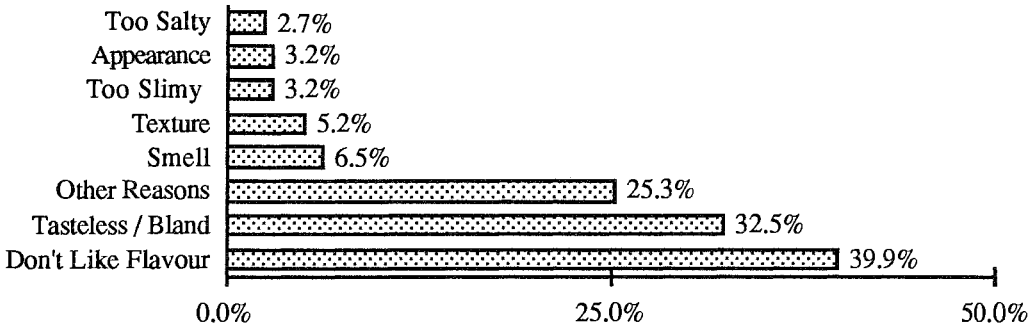
(a) Farm Prawns – Recall, Trial & Dislikes



(b) Responses Of Those Who Have Tried Farm Prawns



(c) Reasons Given For Disliking Farm Prawns



4.8.4 Trial and Attitudes to Rainbow Trout (Freshwater)

Figure 4.8.4.1 shows far less regional bias to the recall rates for rainbow trout than was seen for farm prawns in Section 4.8.3.

The most likely reason for this is the popularity of rainbow trout for inclusion on restaurant menus over many years. This is supported by a high trial rate in Canberra. Table 4.8.4.1 shows that ACT households spend more on restaurant meals than households in any other State. Rainbow trout are also available almost all year round in most States. They are farmed in Victoria, New South Wales, Tasmania and Western Australia.

Table 4.8.4.1: Average Weekly Household Expenditure on Meals Out and Take-away Food: By State, 1988 - 1989 ($)

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Aust
Meals in restaurants, hotels, clubs	12.00	11.94	7.99	8.29	9.01	8.10	11.30	16.34	10.64
Snacks take-away food (not frozen)	12.89	12.87	11.36	10.53	13.16	9.27	13.65	14.01	12.35
School lunch money	0.57	0.47	0.34	0.55	0.52	0.30	1.14	0.35	0.49
Total meals out and take-away food	25.46	25.28	19.69	19.37	22.69	17.68	26.09	30.70	23.48

Source: ABS Catalogue No. 6535.0.

The 56% of respondents who had trialed rainbow trout overwhelmingly reported liking it as shown in Figure 4.8.4.2. Not liking the flavour was the most common reason for not liking it.

Figure 4.8.4.1: Recall and Trial of Rainbow Trout: by Region

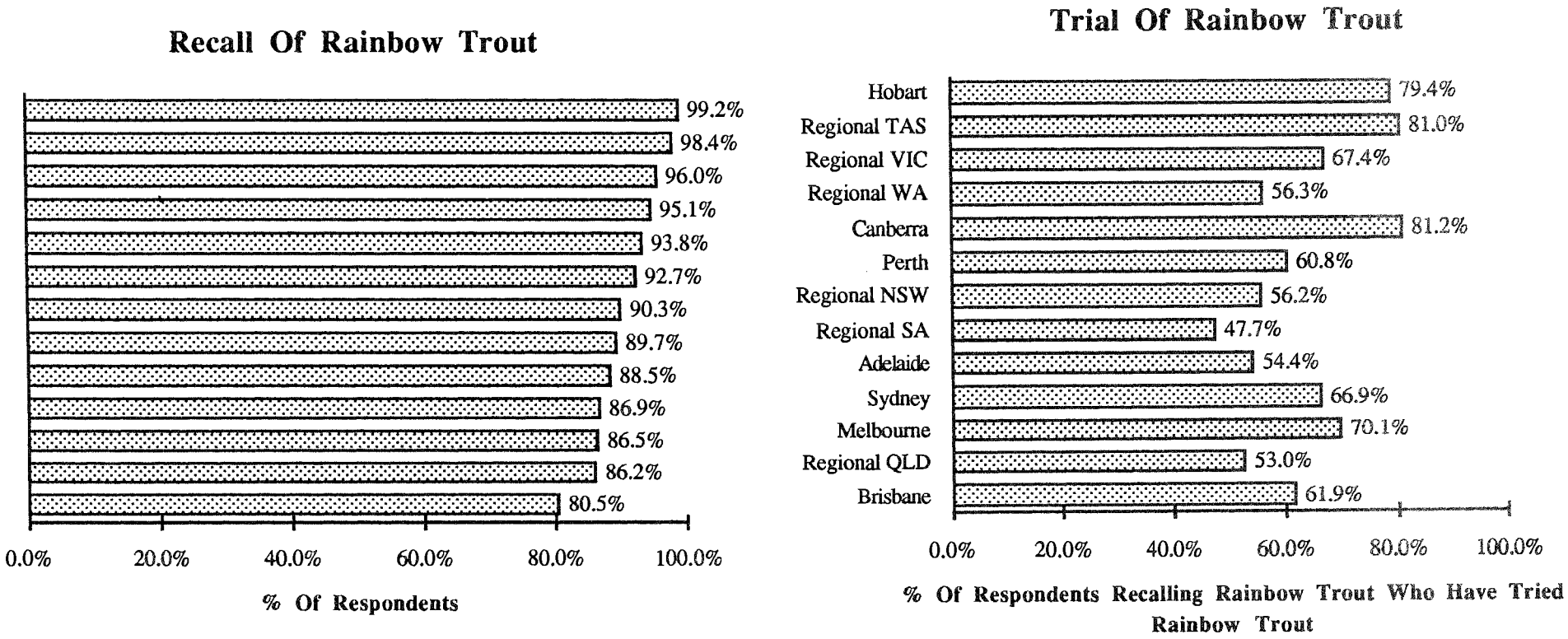
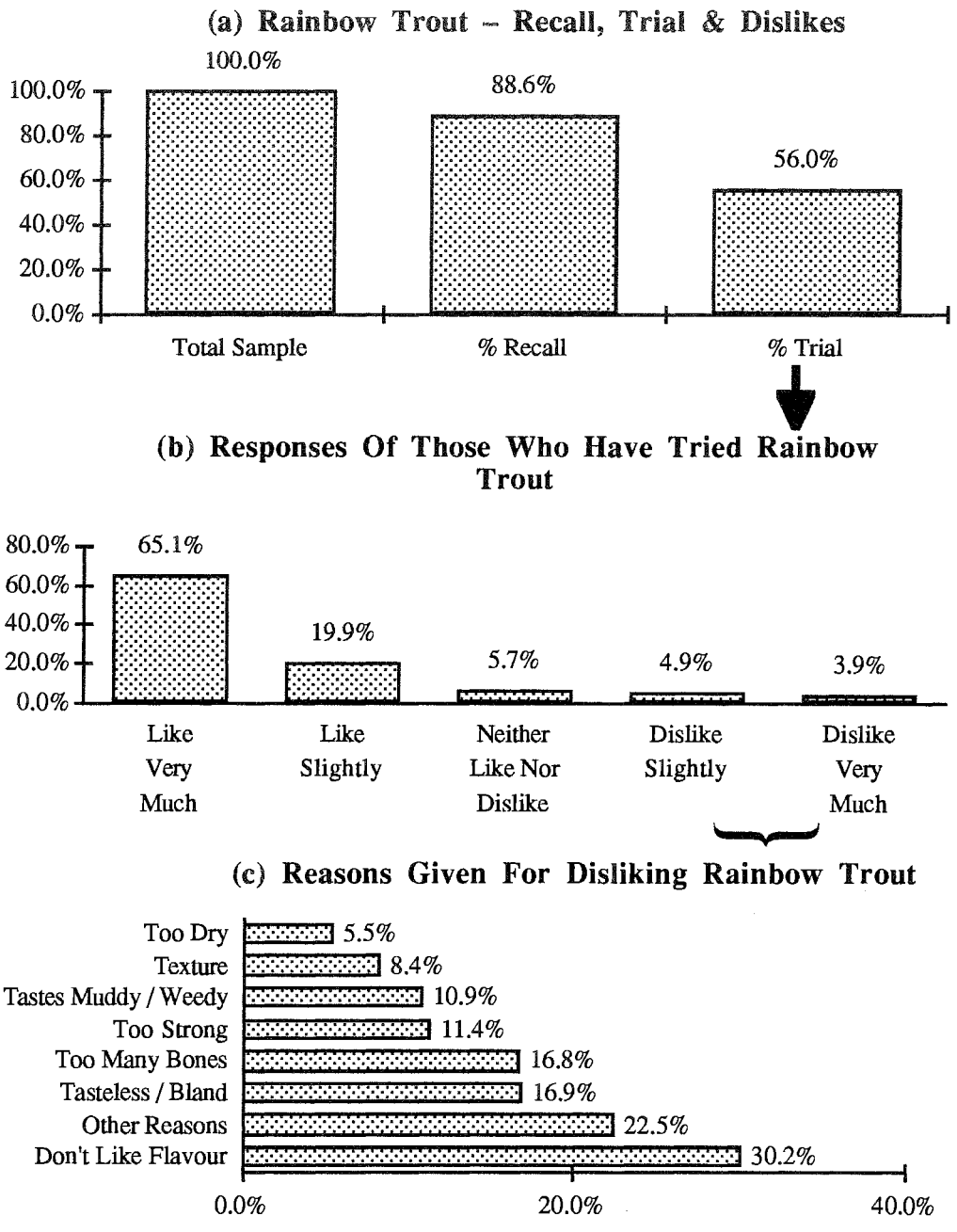


Figure 4.8.4.2: Respondent Attitudes to Rainbow Trout



4.8.5 Trial and Attitudes to Atlantic Salmon (Fresh)

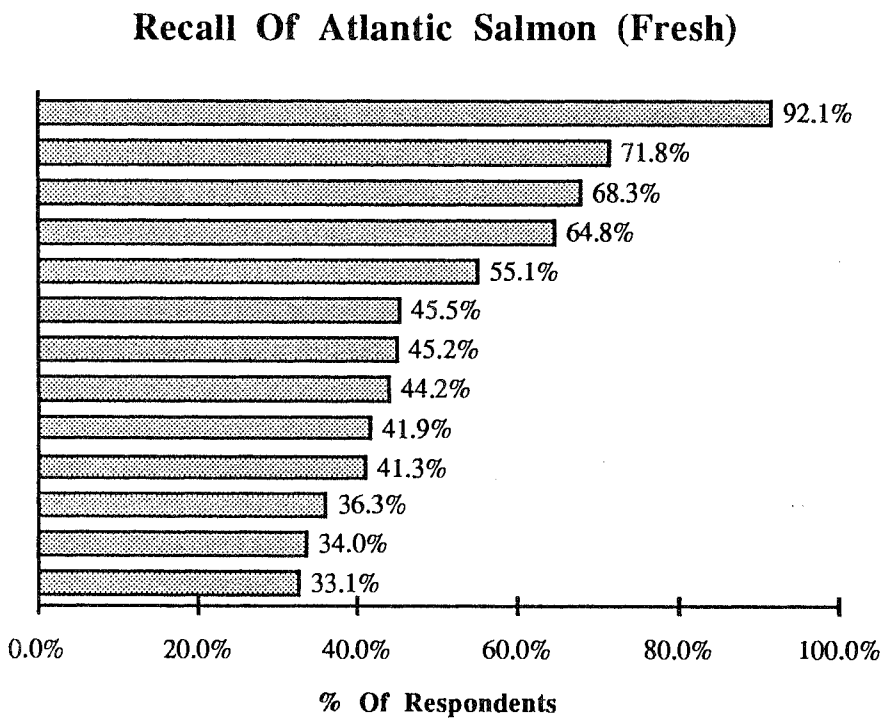
Recall and trial of Atlantic salmon showed strong regional bias as illustrated in Figure 4.8.5.1. Not surprisingly, Hobart registered highest in recall and trial as Tasmania is the centre of Australian Atlantic salmon farming. As for rainbow trout, Canberra respondents also gave high recall and trial rates.

Adelaide and Brisbane respondents had the lowest recall rates and amongst the lowest trial rates.

Figure 4.8.5.2 shows that Atlantic salmon is a well liked fish by those who have tried it. Only 4.8% of trials resulted in negative responses with not liking the flavour and too strong a flavour being the main reasons for dislike.

Figures 4.8.5.3 and 4.8.5.4 show trial rates of Atlantic salmon to be highest in the upper/upper middle socio-economic group and household income group. This points to the positioning of Atlantic salmon as a premium fish sold at high prices to restaurants and the in-home market.

Figure 4.8.5.1: Recall and Trial of Atlantic Salmon: by Region



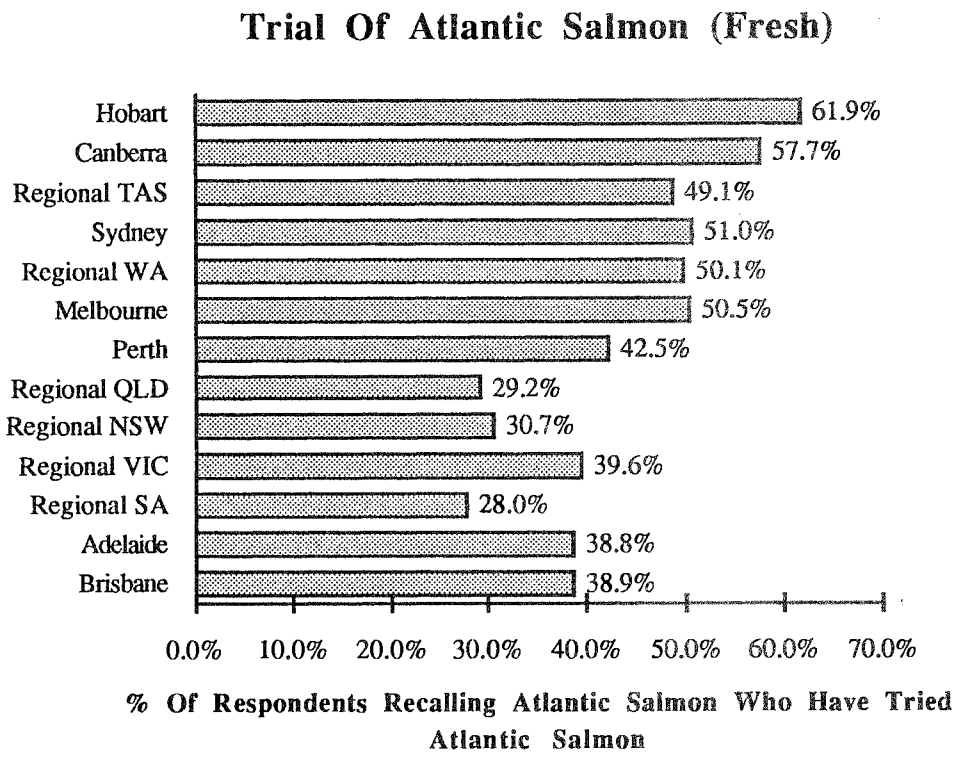


Figure 4.8.5.2: Respondent Attitudes to Atlantic Salmon

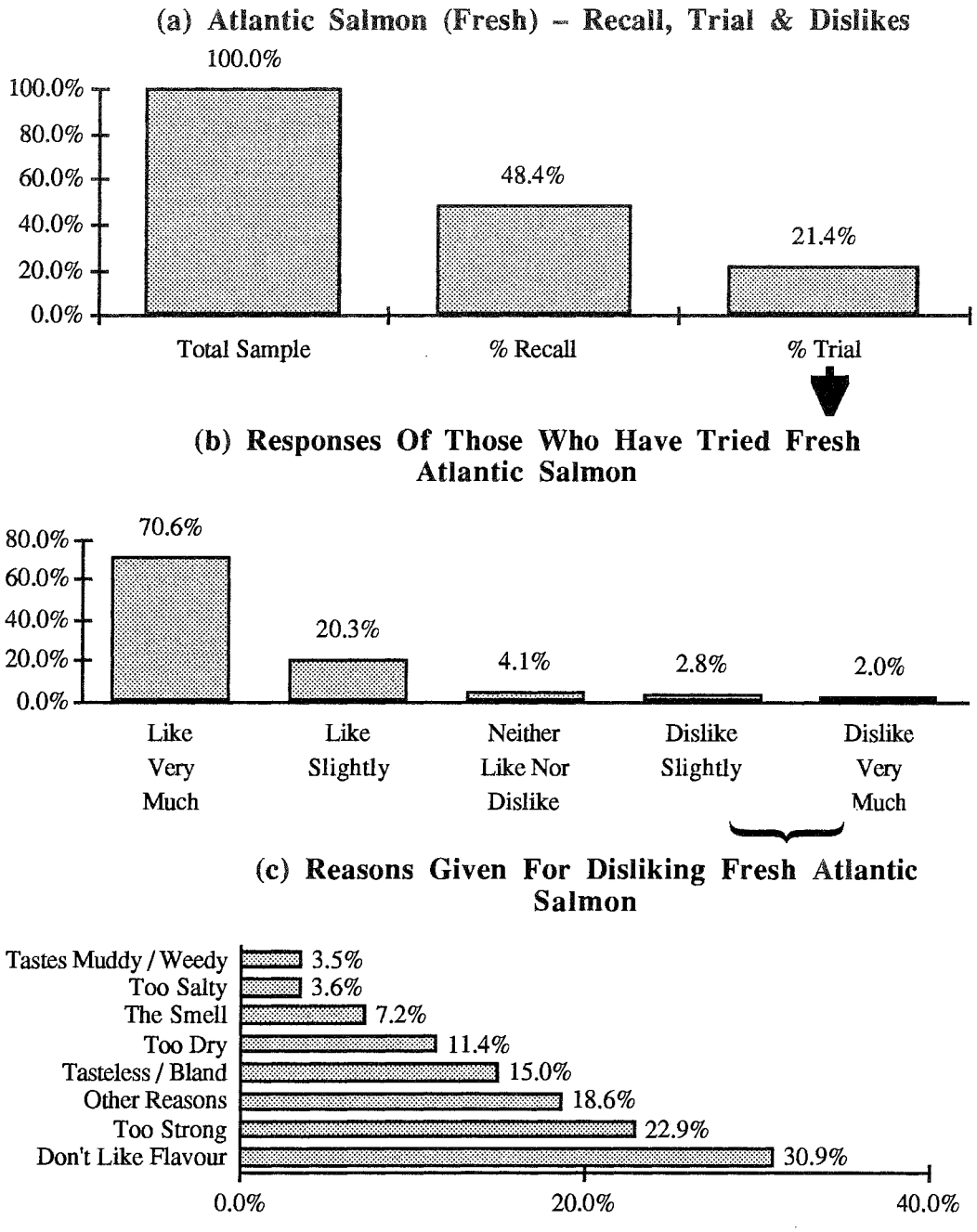


Figure 4.8.5.3: Trial of Atlantic Salmon: By Socio-Economic Group

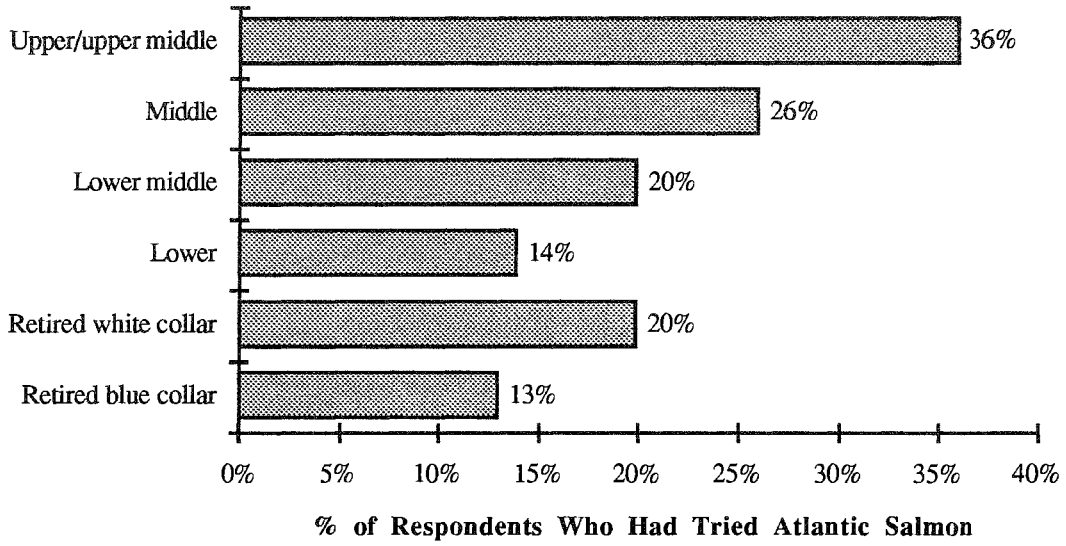
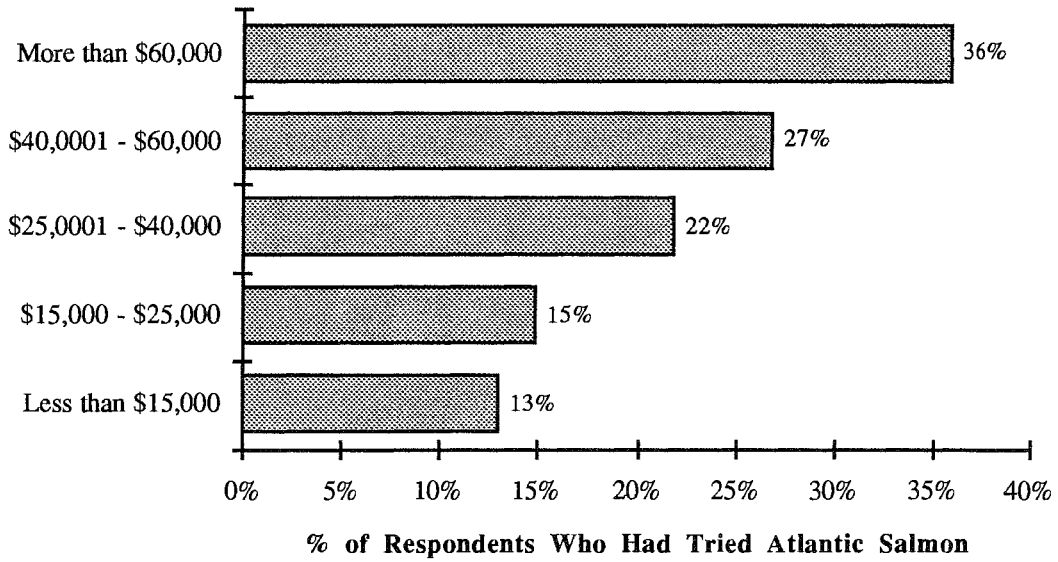


Figure 4.8.5.4: Trial of Atlantic Salmon: By Household Income



4.8.6 Trial and Attitudes to Mussels

Mussels are a well known species as indicated by the recall rates in Figure 4.8.6.1. However trial rates vary considerably and are lowest in regional centres with the exception of regional Western Australia.

Figure 4.8.6.2 shows that of respondents who tried mussels, two groups emerge: those with strong like; and those with strong dislike. Whilst dislike of the flavour is the most common reason given for not liking mussels, several other reasons also feature quite prominently.

Figure 4.8.6.1: Recall and Trial of Mussels: by Region

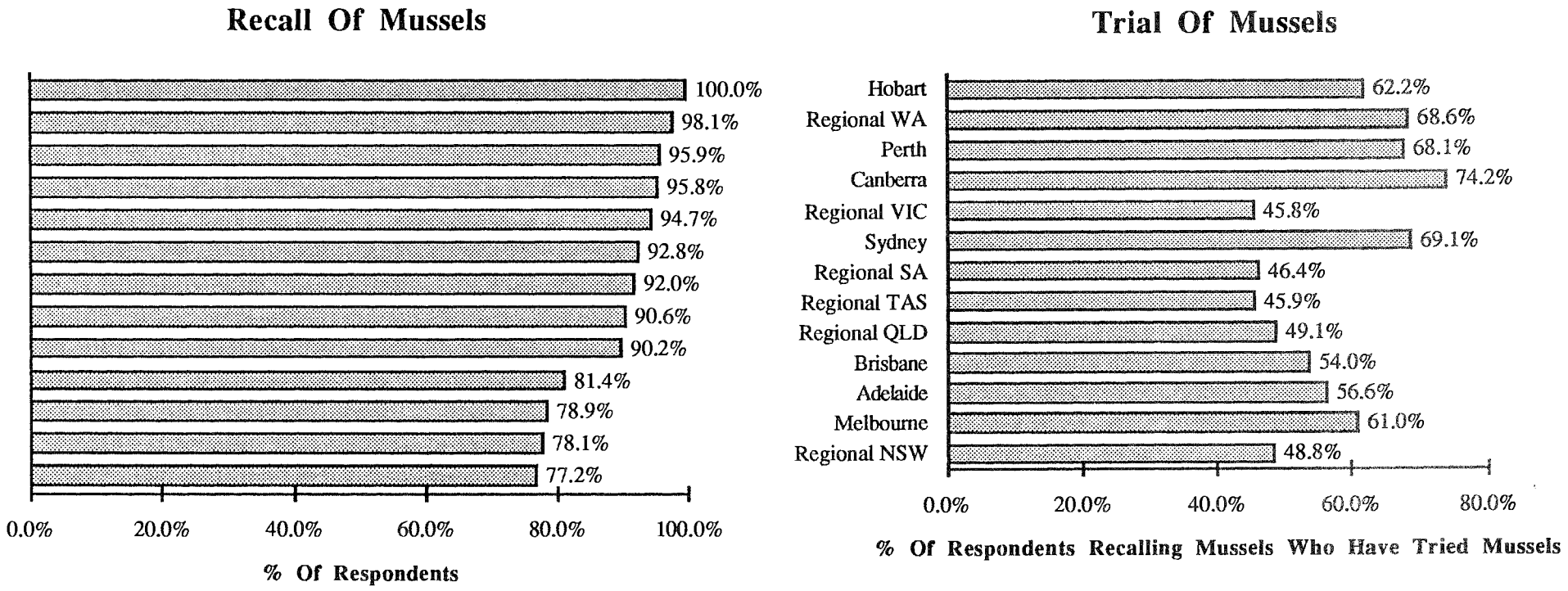
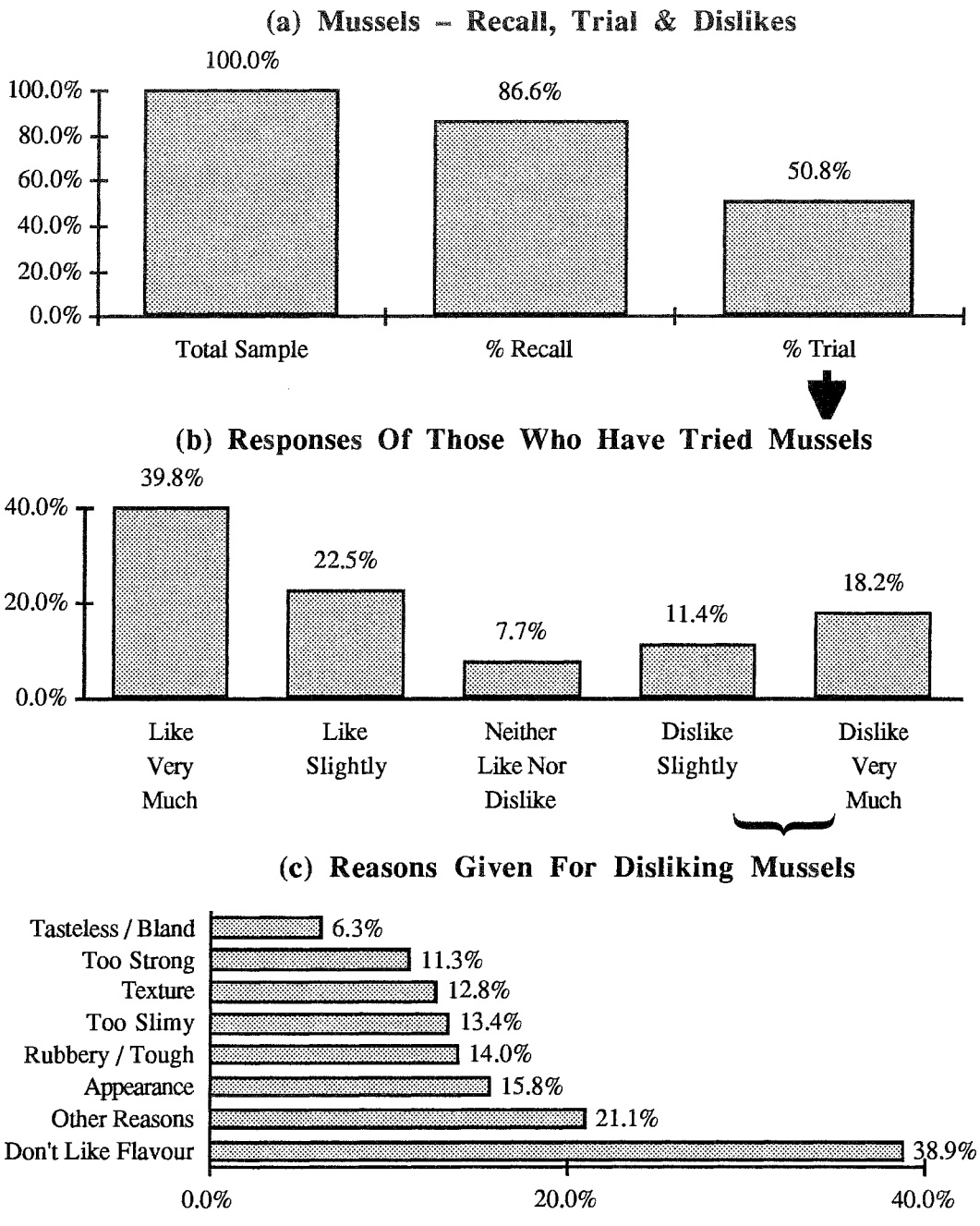


Figure 4.8.6.2: Respondent Attitudes to Mussels



4.8.7 Trial and Attitudes to Oysters

Figure 4.8.7.1 shows oysters to be a very well known species of farmed seafood.

Trial is also high probably due to oysters commonly being used in restaurants or as an hors-d'œuvre at parties.

Again, Canberra, probably due to high restaurant expenditure, has the highest trial rate (see Section 4.8.4).

Figure 4.8.7.2 shows a similar pattern to mussels (Section 4.8.6) where people who have tried oysters fall into two polarised groups characterised by strong like or strong dislike for the product.

The major reason for dislike is that oysters are "too slimy".

Figure 4.8.7.1: Recall and Trial of Oysters: by Region

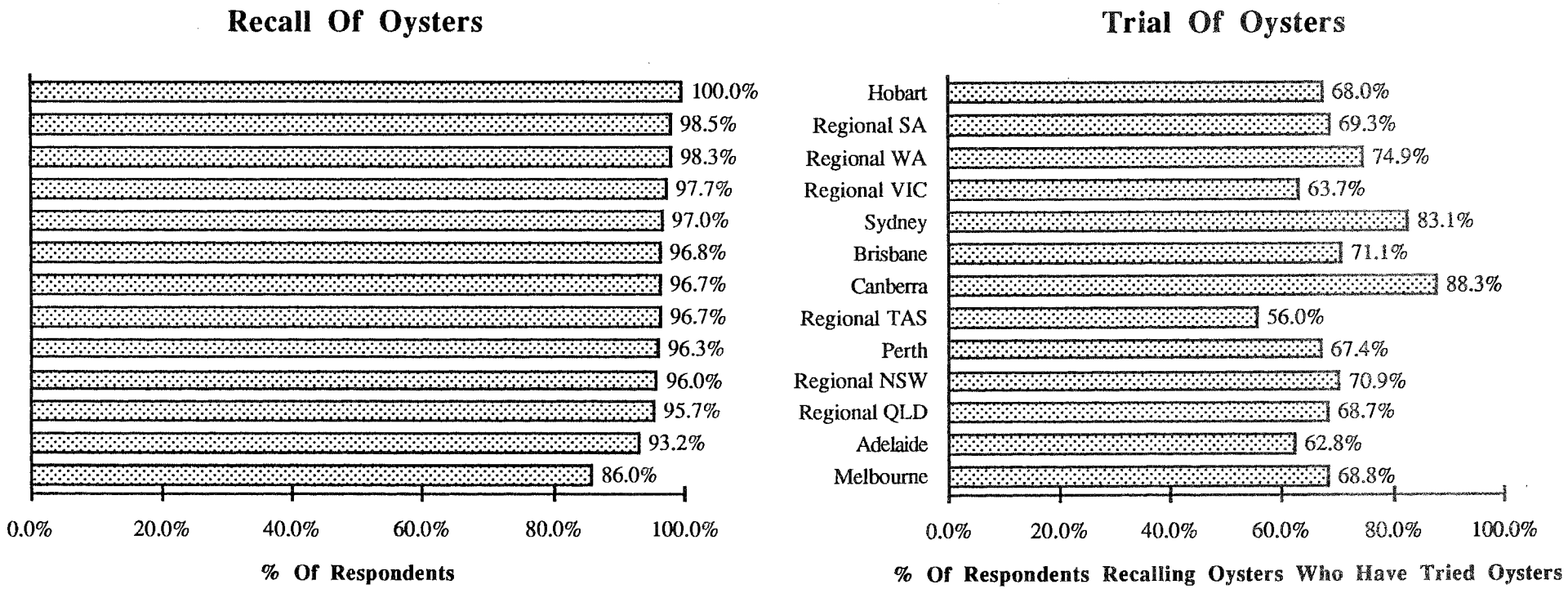
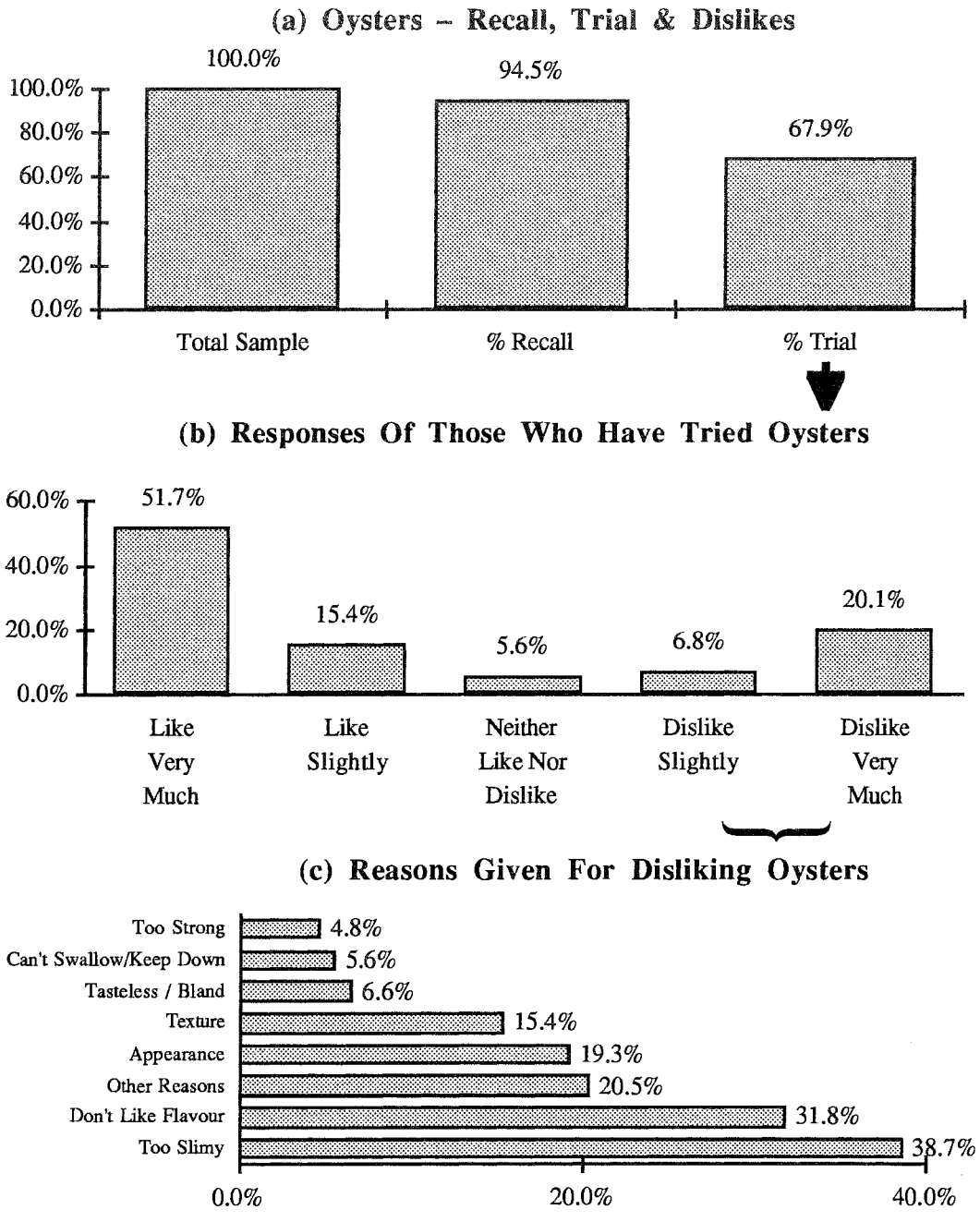


Figure 4.8.7.2: Respondent Attitudes to Oysters

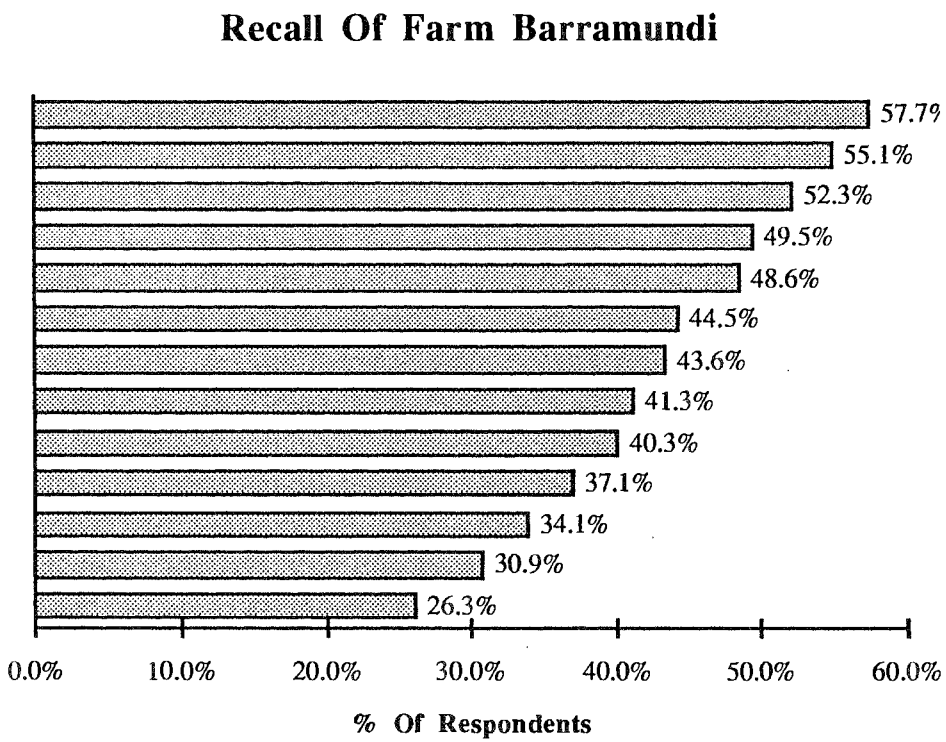


4.8.8 Trial and Attitudes to Farm Barramundi

Similar to patterns seen for farm prawns and Atlantic salmon, Figure 4.8.8.1 shows strong regional bias to the consumption of farm barramundi. Recall rates are high in regional Queensland since most Australian production, at the time of the survey, was in Northern Queensland. Both recall and trial rates are high in Canberra since farm barramundi is a premium fish consumed mostly in restaurants (see Section 4.8.4).

Figure 4.8.8.2 shows that the overall trial rate of all respondents surveyed was a low 15.4%. However, those who had tried farm barramundi almost invariably liked it. On this basis there seems potential for much increased consumption of farm barramundi if the rate of trial can be increased.

Figure 4.8.8.1: Recall and Trial of Farm Barramundi: by Region



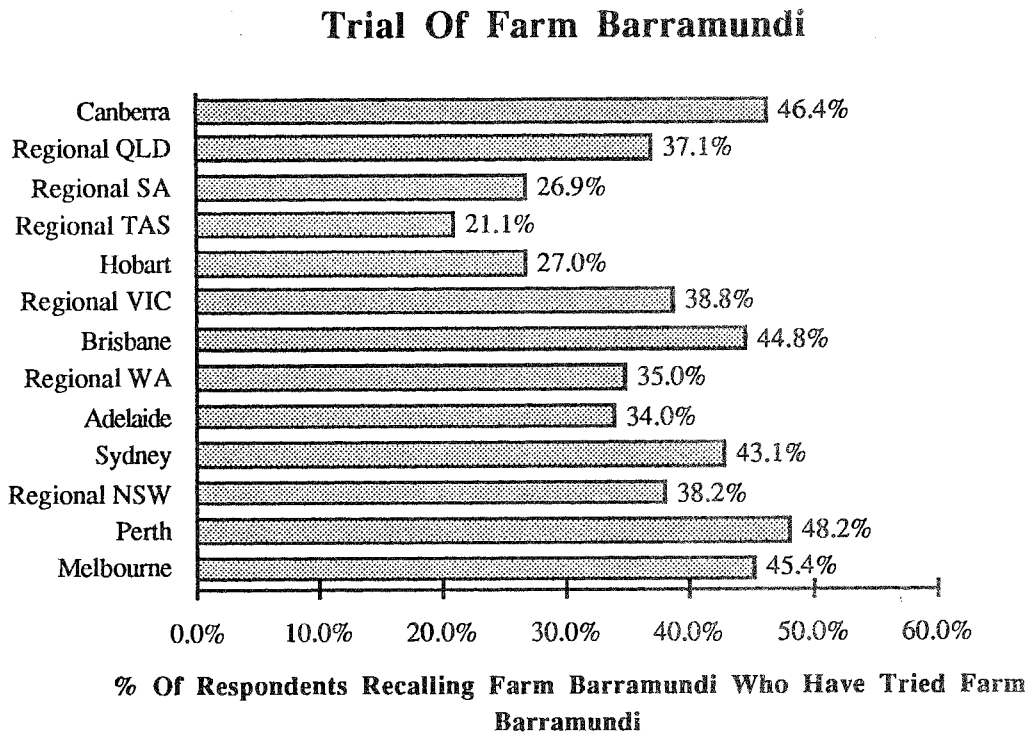
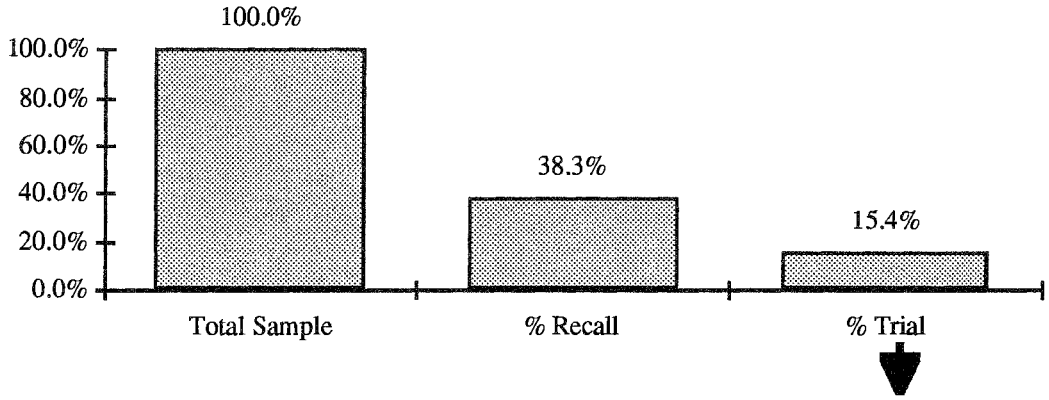
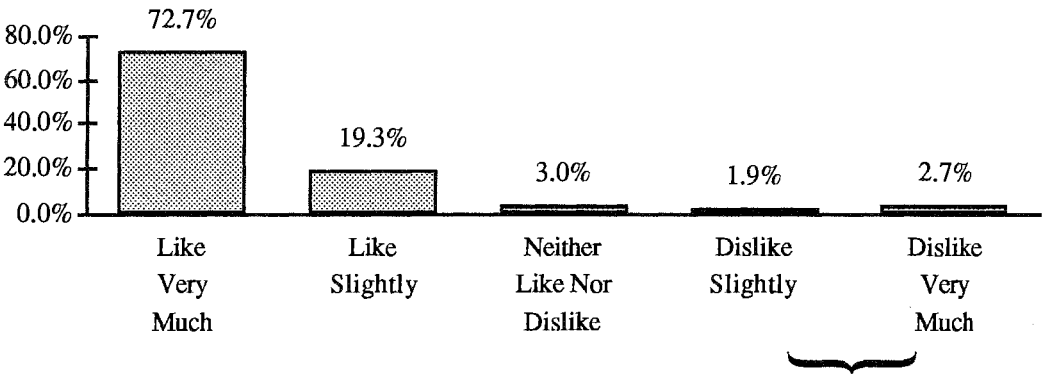


Figure 4.8.8.2: Respondent Attitudes to Farm Barramundi

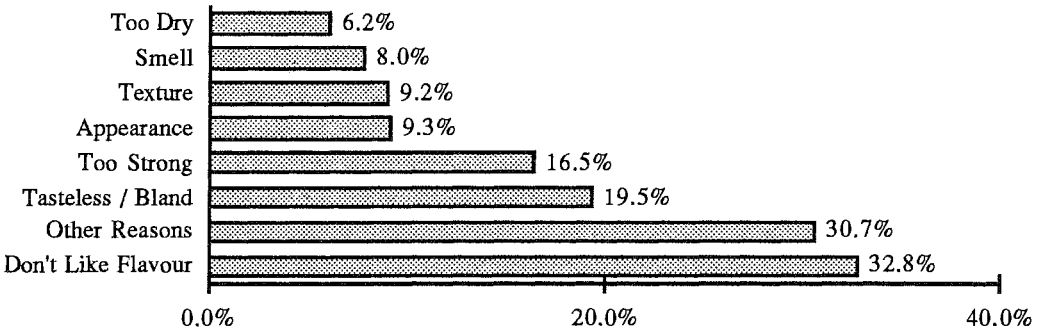
(a) Farm Barramundi – Recall, Trial & Dislikes



(b) Responses Of Those Who Have Tried Farm Barramundi



(c) Reasons Given For Disliking Farm Barramundi



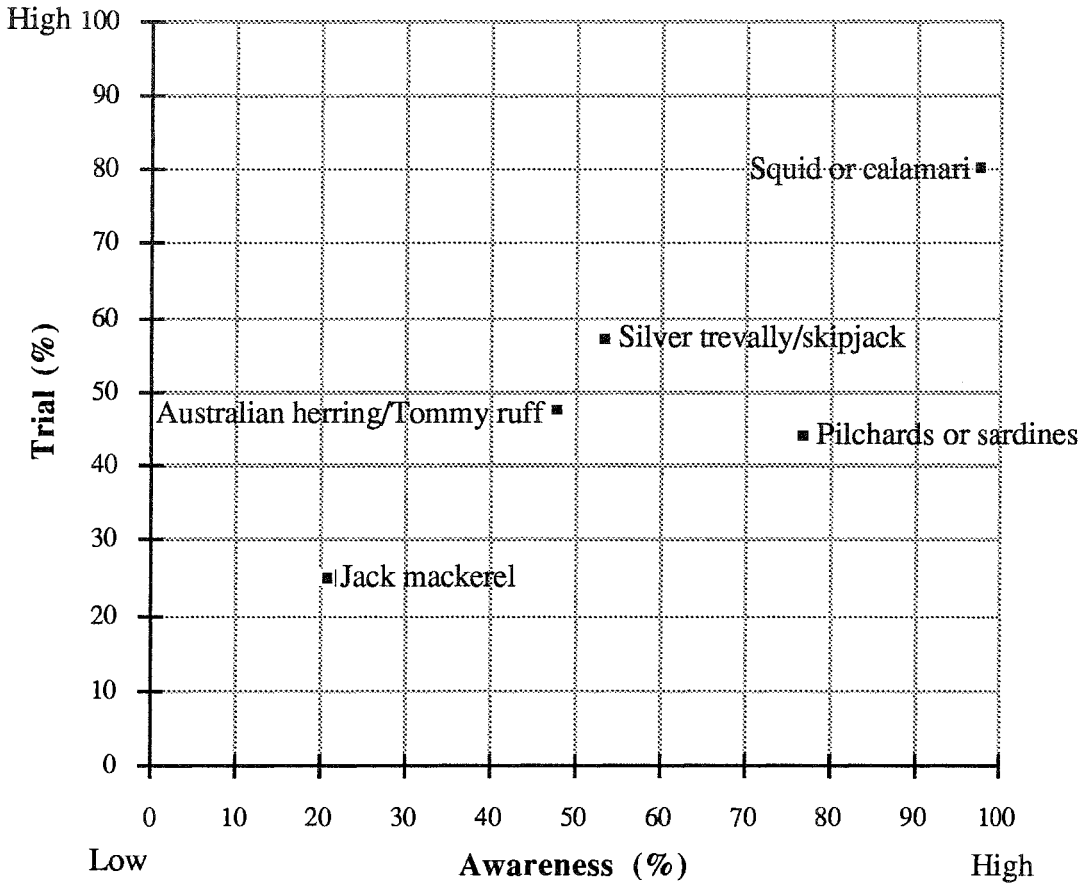
4.9 Under-utilised Wild Species of Fish and Seafood

4.9.1 Recall and Trial of Selected Wild Species

Figure 4.9.1.1 plots recall against trial rates for a selection of under-utilised species. The "awareness" axis plots the proportion of all respondents who had heard of the respective under-utilised species. The proportion that had tried the species, out of the group of respondents that were "aware", is plotted as the trial axis. Jack mackerel fares the worst in this comparison, while squid (calamari) has high recall and high trial rates.

Low trial rates for Jack mackerel and pilchards/sardines amongst consumers that had heard of these species could indicate problems in availability or some negative consumer sentiments blocking trial. Consumer attitudes are explored in further detail in the sections ahead.

Figure 4.9.1.1: Respondent Awareness and Trial of Selected Under-utilised "Wild" Species



4.9.2 Trial and Attitudes to Jack Mackerel

Jack mackerel is caught in Southern New South Wales, Victoria and Tasmania and sold in Sydney and Melbourne fish markets. It is usually a by-catch and hence supply is irregular. It is a budget price fish.

Figure 4.9.2.1 shows distinct regional bias in the distribution of people who have heard of (recalled) Jack mackerel. This suggests that distribution of Jack mackerel through retail and catering outlets may play a role in recall rates. Hobart, where much of the Jack mackerel catch is landed, shows highest recall. Of those who recalled Jack mackerel, a relatively low percentage had actually tried it. Trial rate also exhibits regional bias though not the same bias that recall exhibited. Brisbane and regional Queensland respondents had the highest trial rates.

Figure 4.9.2.2 shows that 71% of the 5.2% of respondents who had tried Jack mackerel reported liking it either very much or slightly.

Of those who disliked it, too strong a flavour and not liking the flavour were the most common reported reasons for their dislike.

Figure 4.9.2.1: Recall of Trial of Jack Mackerel: by Region

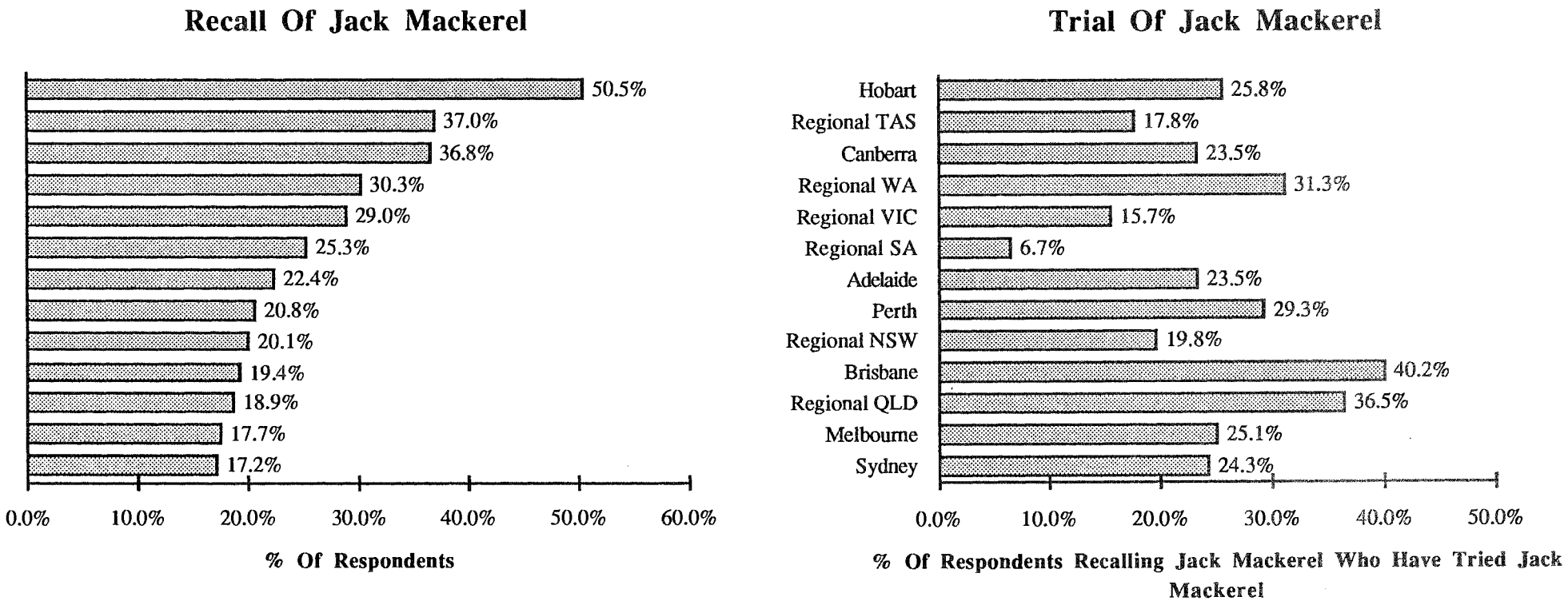
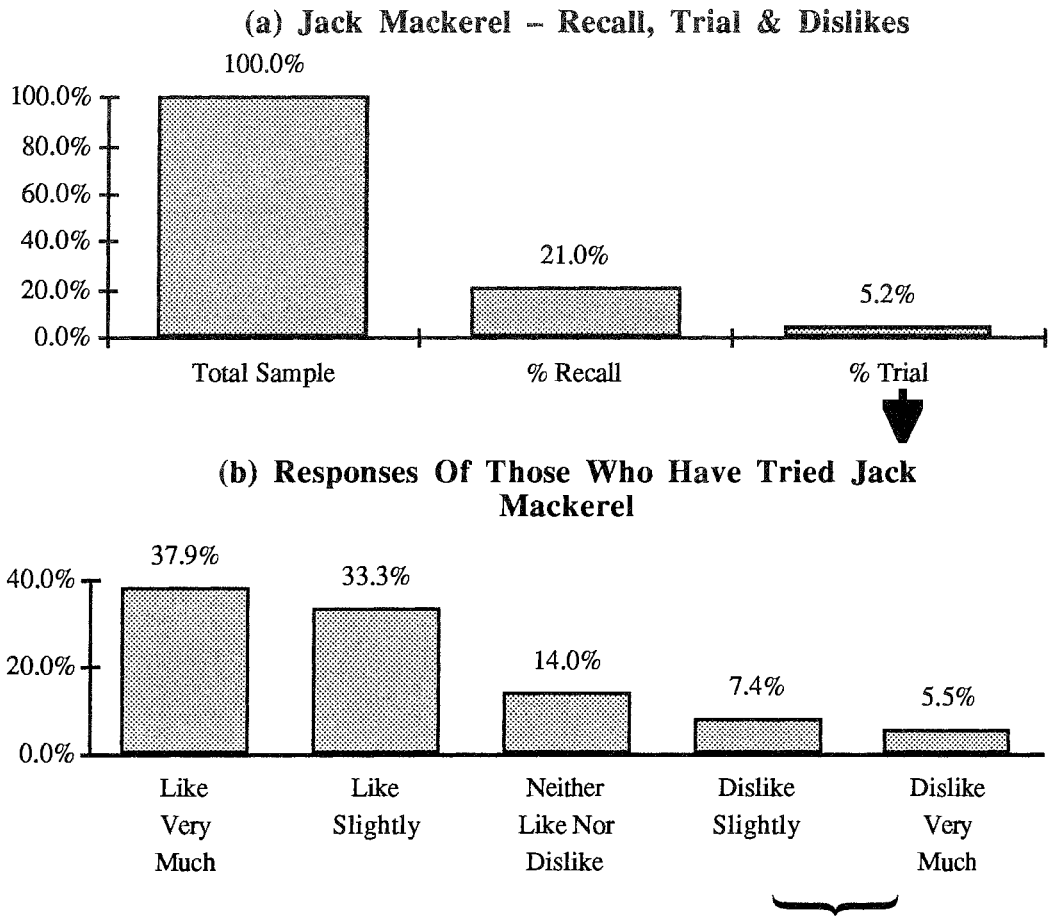


Figure 4.9.2.2: Respondent Attitudes to Jack Mackerel



4.9.3 Trial and Attitudes to Squid/Calamari

Squid, often referred to as calamari, is caught all around Australia and is available year round fresh or thawed.

Figure 4.9.3.1 shows that almost all respondents, irrespective of region recalled the species squid/calamari. Trial rates were also high amongst those that had heard of the seafood, though trial rates are generally lower in regional areas than in the cities.

Figure 4.9.3.2 shows slight polarisation in the responses of those who had tried squid/calamari. Most of those liking it, like it very much whilst most of those disliking it, disliked it very much. The reason for this strong dislike was cited as the rubbery/tough texture of squid.

Figure 4.9.3.1: Recall and Trial of Squid: by Region

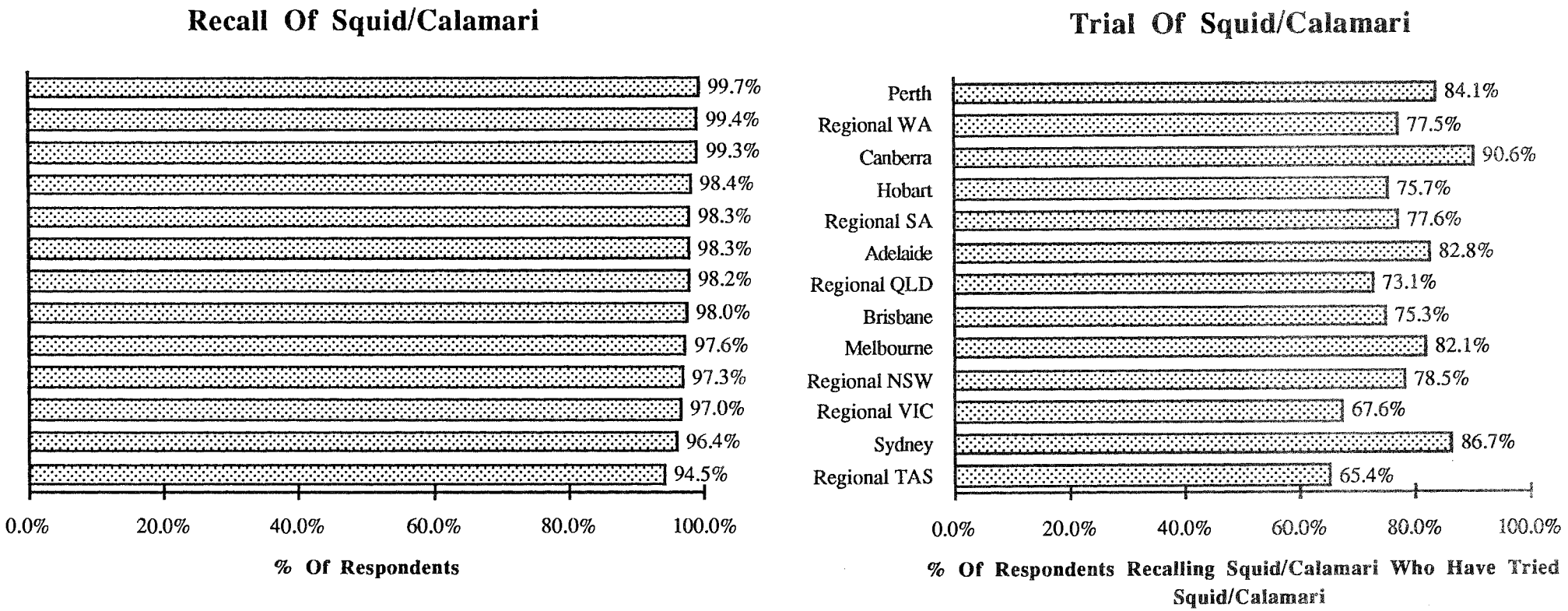
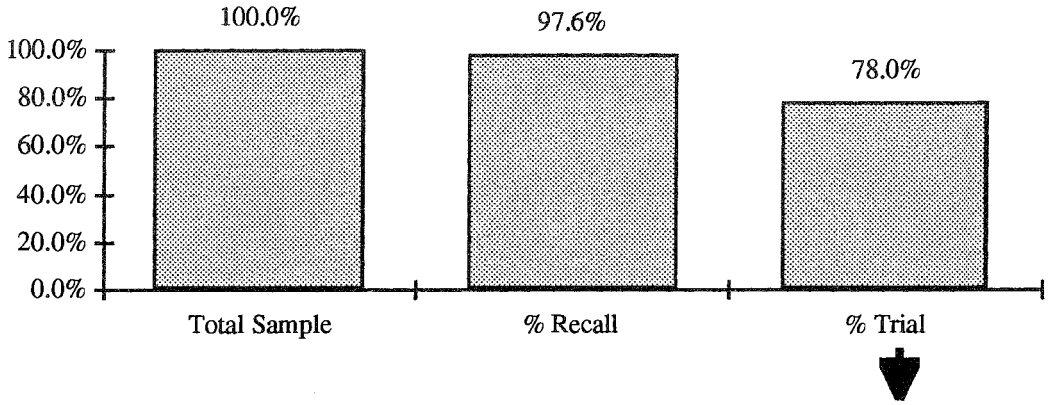
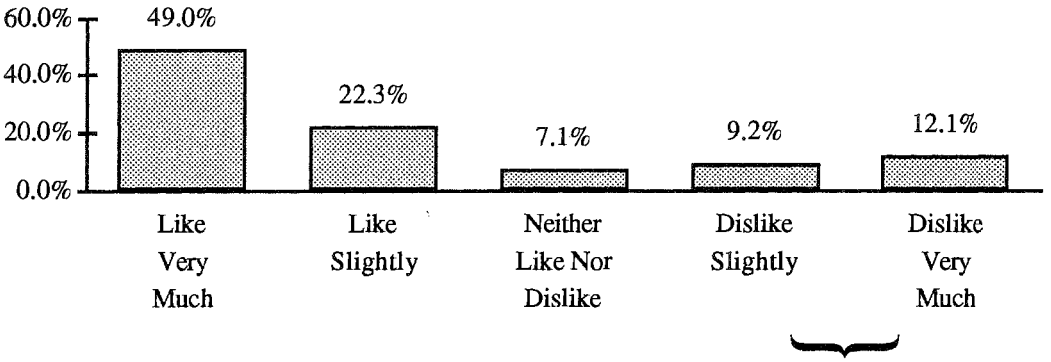


Figure 4.9.3.2: Respondent Attitudes to Squid

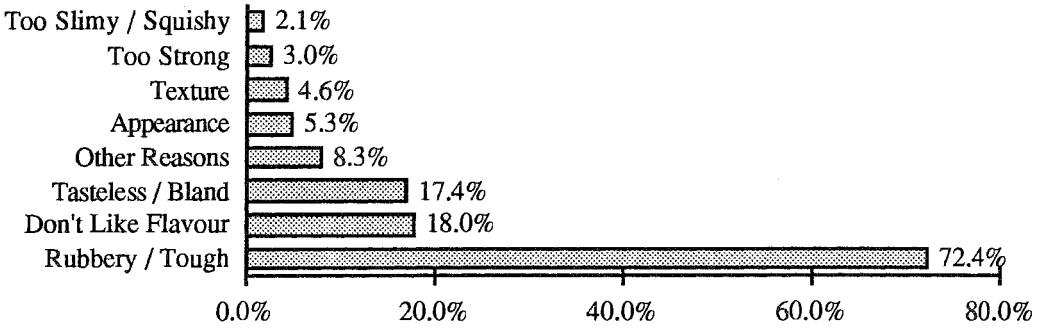
(a) Squid/Calamari – Recall, Trial & Dislikes



(b) Responses Of Those Who Have Tried Squid/Calamari



(c) Reasons Given For Disliking Squid/Calamari



4.9.4 Trial and Attitudes to Pilchards/Sardines

Pilchard/sardines are caught off Tasmania and along the coastline from Southern New South Wales to Perth. They are available fresh almost all year round in Melbourne and Perth and available frozen in Sydney. They are consumed in-home and at restaurants.

Consumption in restaurants probably accounts for the high recall and trial rates in Canberra shown in Figure 4.9.4.1. As discussed in Section 4.8.4, ACT household spending on restaurants is higher than in any other State. Other regions of high trial generally correspond to where pilchards/sardines are readily available such as Melbourne and Perth.

Conversion of those who recalled pilchards/sardines into people who had tried the species is poor. In most regions less than half the people who had heard of the species had actually tried it. Canberra and Melbourne were the only regions in which more than 50% of people who recalled the species had tried it.

In attempting to explain this, demographics provide some possible answers. Table 4.9.4.1 shows that trial rates amongst people from non English speaking countries are far higher than Australians or people from English speaking countries.

Melbourne's large ethnic population from non English speaking countries could explain the high trial rate of Melbourne respondents.

Figure 4.9.4.2 shows the response of those respondents who had tried pilchards/sardines. 20% of this group reported disliking slightly or disliking very much pilchards/sardines. The major reason given was not liking the flavour or too strong a flavour.

Table 4.9.4.1: Comparison of Recall and Trial Rates by Respondents Country of Origin

Country of origin*	A % of respondents having heard of Pilchards/Sardines	B % of 'A' having trialed Pilchards/Sardines	C A x B = C the overall trial rate of all respondents
Australian or from English speaking country	76.8%	41.2%	31.6%
From non English speaking country	79.9%	66.1%	52.8%

** all respondents who emigrated to Australia before their fifth birthday are included in the Australian/English speaking country category.*

Figure 4.9.4.1: Recall and Trial of Pilchards/Sardines: by Region

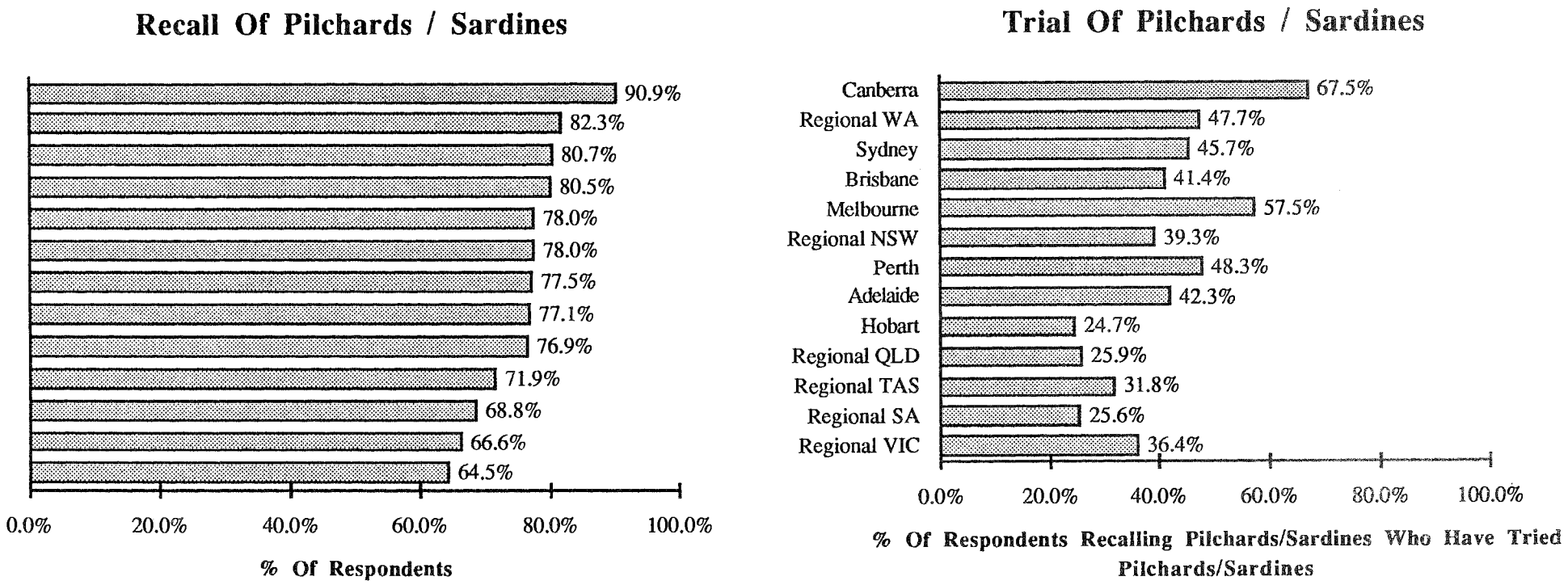
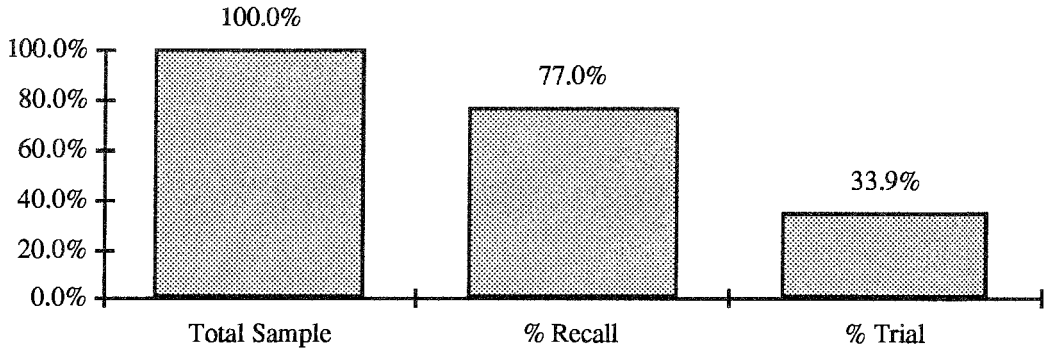
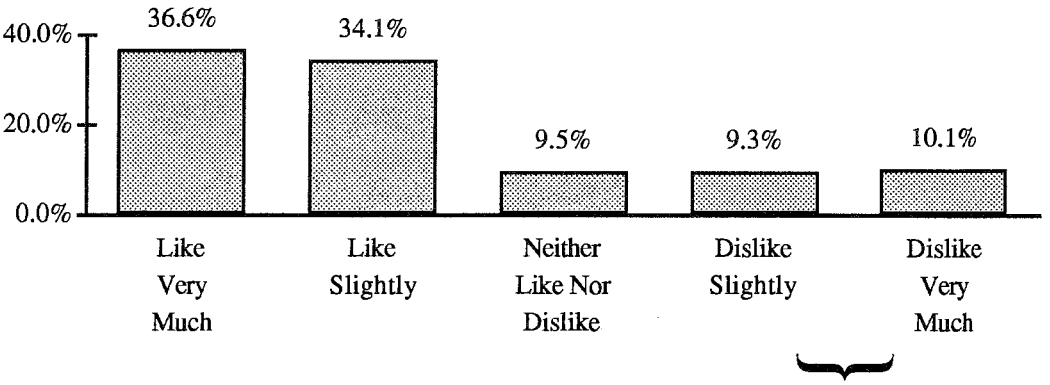


Figure 4.9.4.2 Respondent Attitudes to Pilchards/Sardines

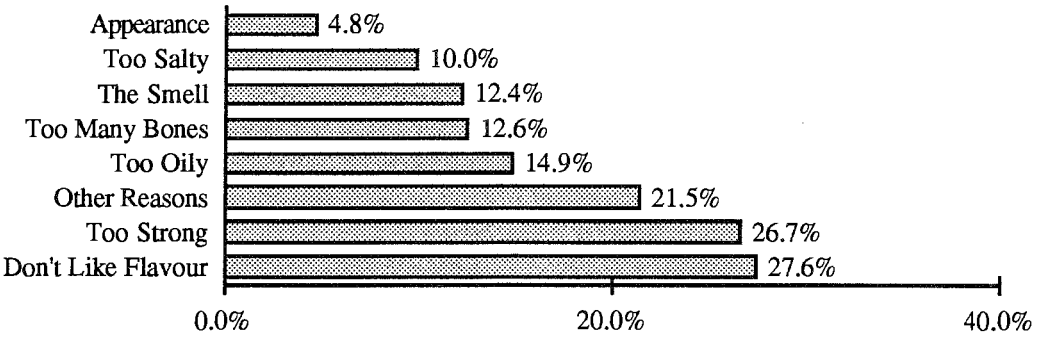
(a) Pilchards/Sardines – Recall, Trial & Dislikes



(b) Responses Of Those Who Have Tried Pilchards/Sardines



(c) Reasons Given For Disliking Pilchards/Sardines



4.9.5 Trial and Attitudes to Australian Herring/Tommy Ruff

Australian herring or Tommy ruff is caught in Victoria, Tasmania, and Western Australia. Supply is all year round and reliable. The fish is budget priced to the in-home consumer.

Figure 4.9.5.1 shows very distinct regional variation in the recall and trial rates of respondents for Australian herring/Tommy ruff that can be attributed largely to where the catch is made.

Table 3.1.5.2 shows that, once tried, Australian herring/Tommy ruff is well liked.

Figure 4.9.5.1: Recall and Trial of Australian Herring/Tommy Ruff: by Region

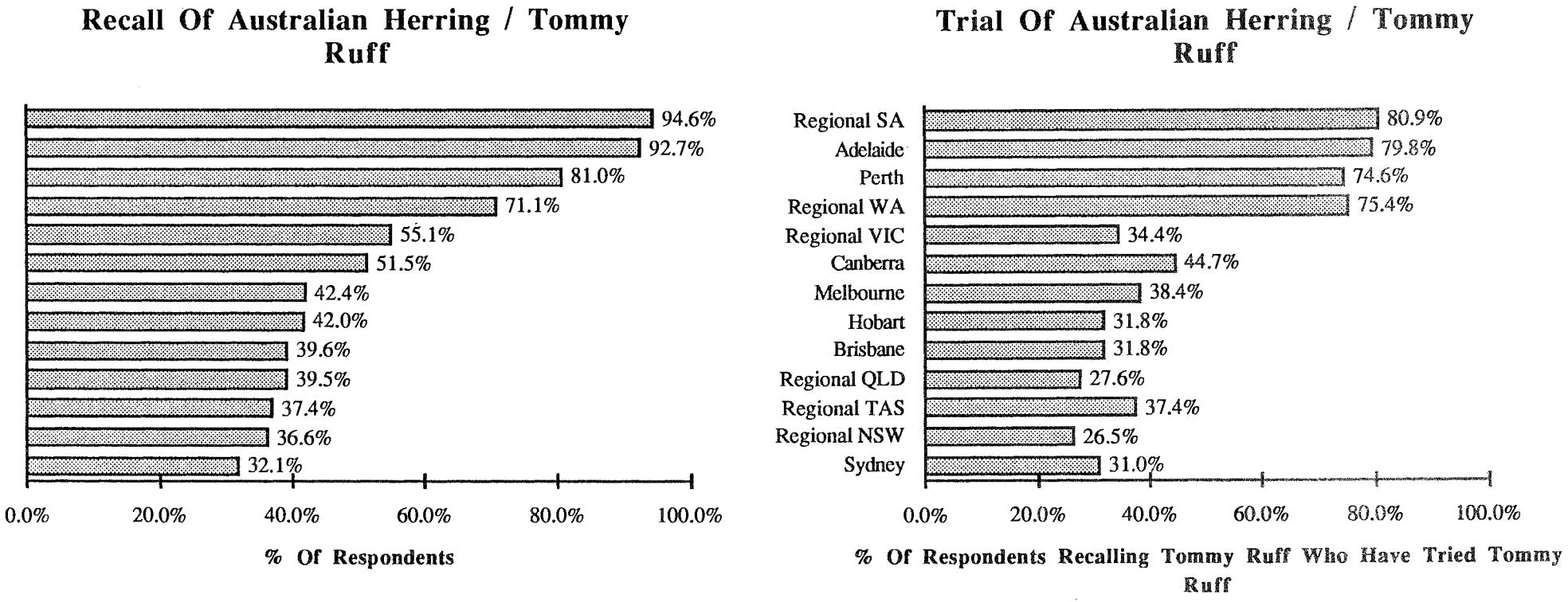
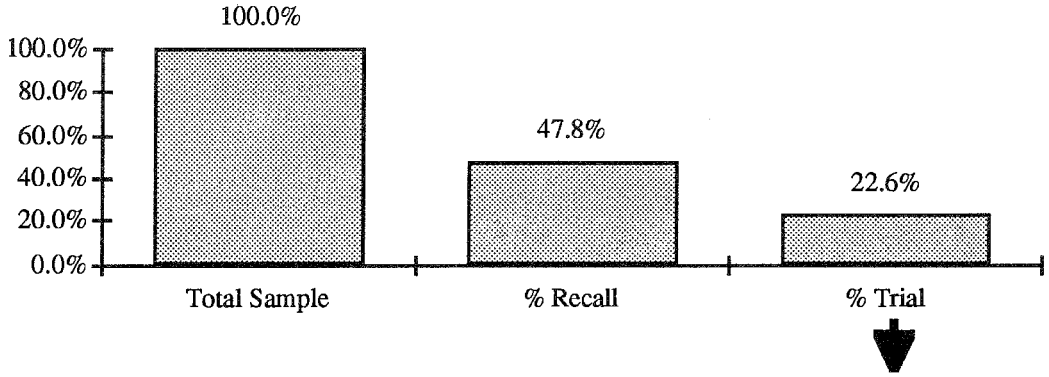
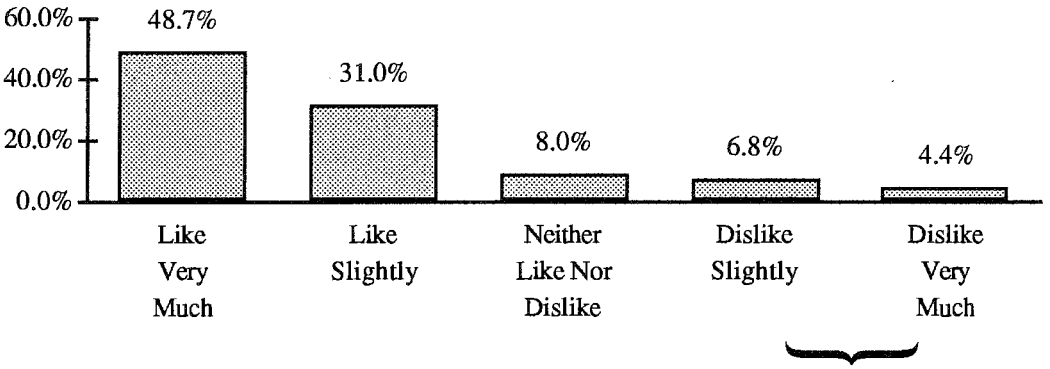


Figure 4.9.5.2: Respondent Attitudes to Australian Herring/Tommy Ruff

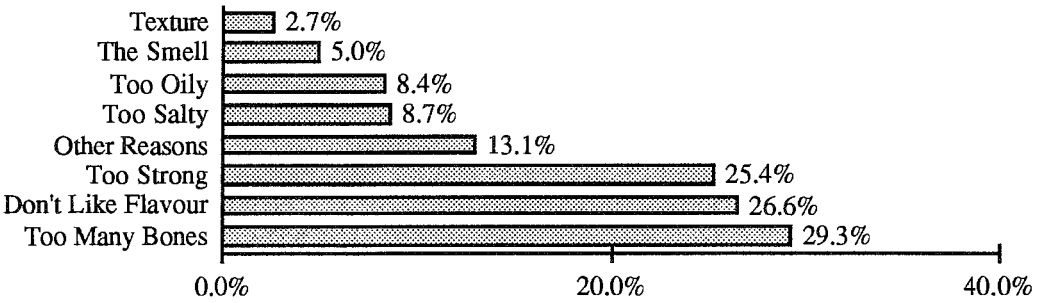
(a) Australian Herring / Tommy Ruff – Recall, Trial & Dislikes



(b) Responses Of Those Who Have Tried Australian Herring / Tommy Ruff



(c) Reasons Given For Disliking Australian Herring / Tommy Ruff



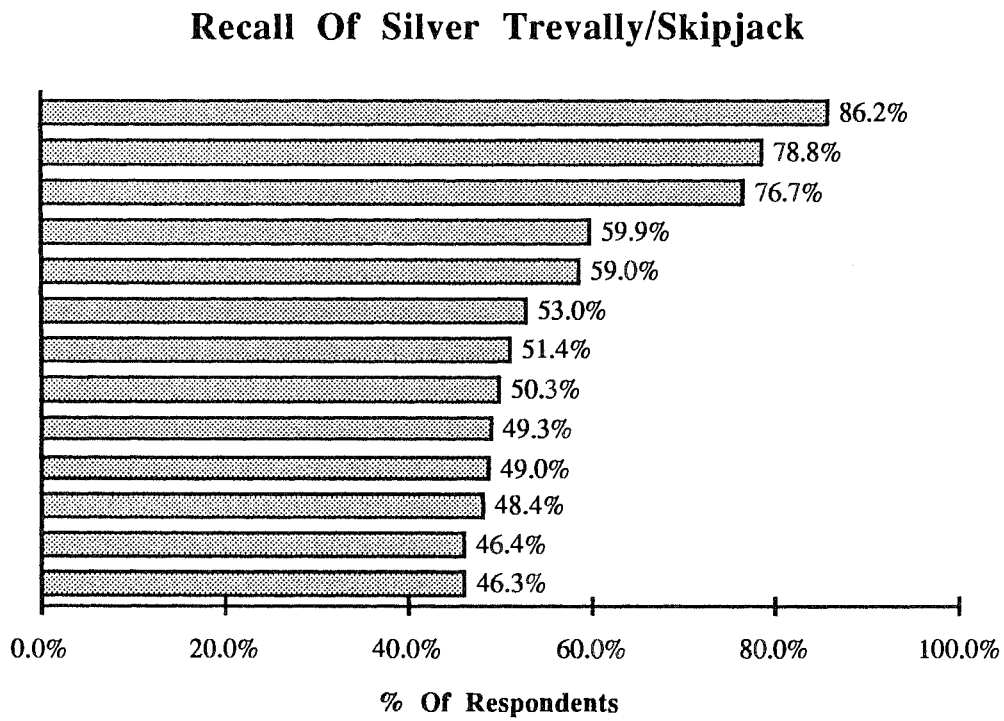
4.9.6 Trial and Attitudes to Silver Trevally/Skipjack

Silver trevally/skipjack is most plentiful in New South Wales' waters but is available at times in Victoria, South Australia, Tasmania and Western Australia. It is a budget priced fish sold largely for in-house use. It is also used in Japanese restaurants as a sashimi fish.

In spite of being most plentiful in New South Wales' waters, respondents from regional Western Australia, regional Tasmania and Perth had the highest awareness and trial of silver trevally/skipjack (Figure 4.9.6.1).

Figure 4.9.6.2 shows that just over half of those who have tried silver trevally/skipjack liked it very much. Only 6% showed any dislike.

Figure 4.9.6.1: Recall and Trial of Silver Trevally/Skipjack: By Region



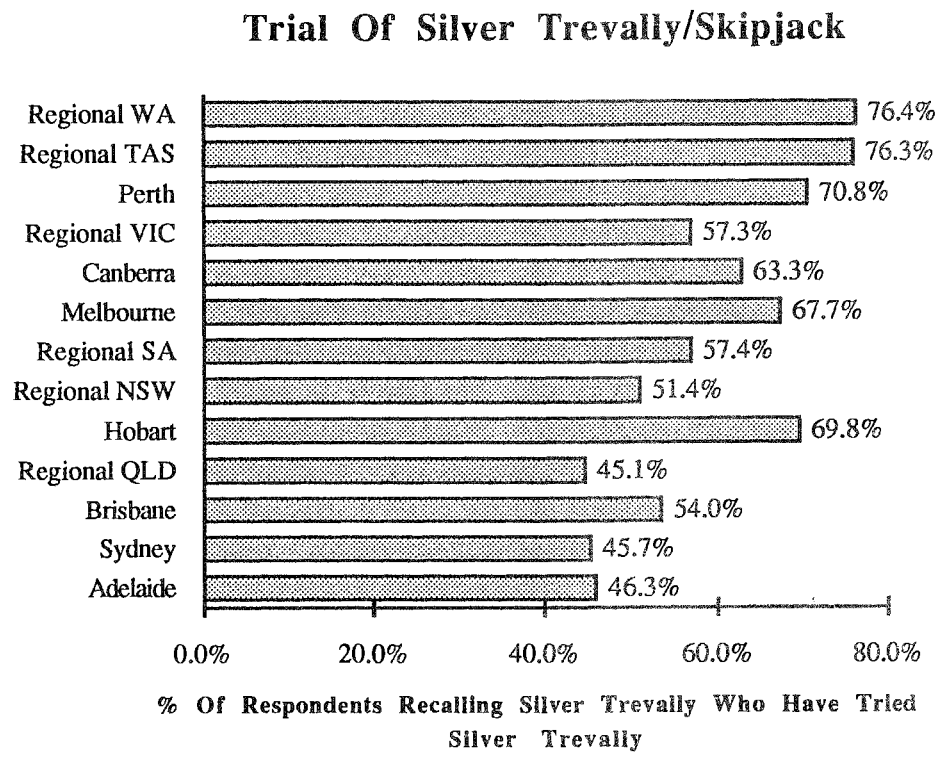
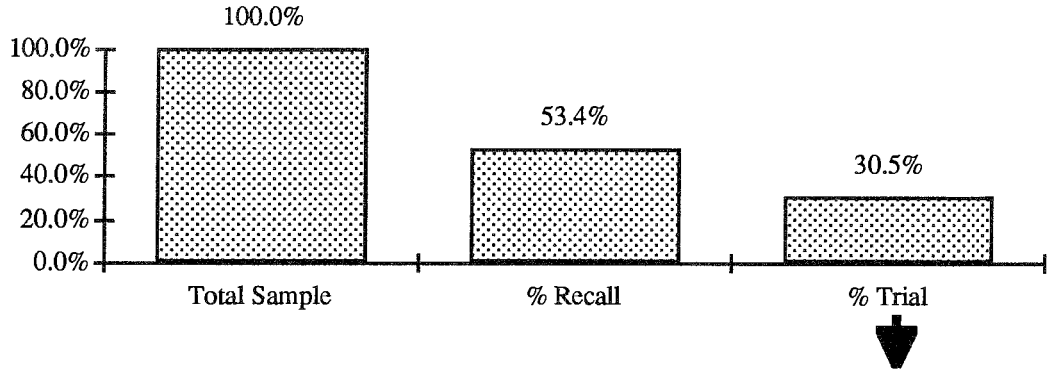
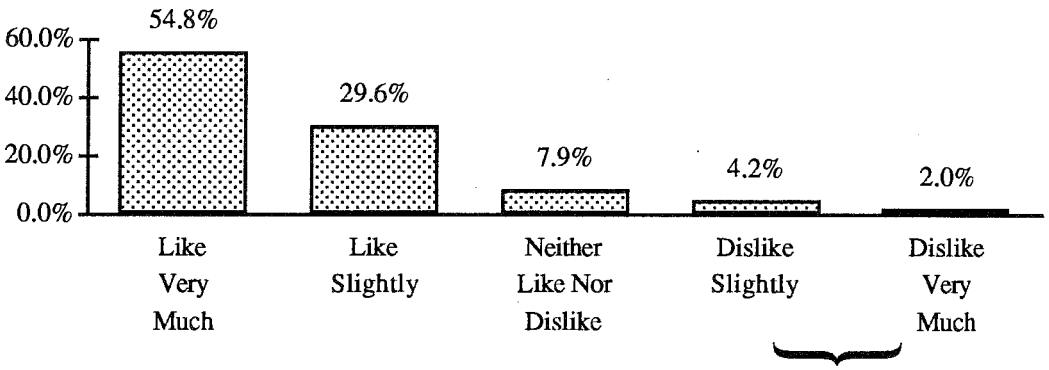


Figure 4.9.6.2: Respondent Attitude to Silver Trevally/ Skipjack

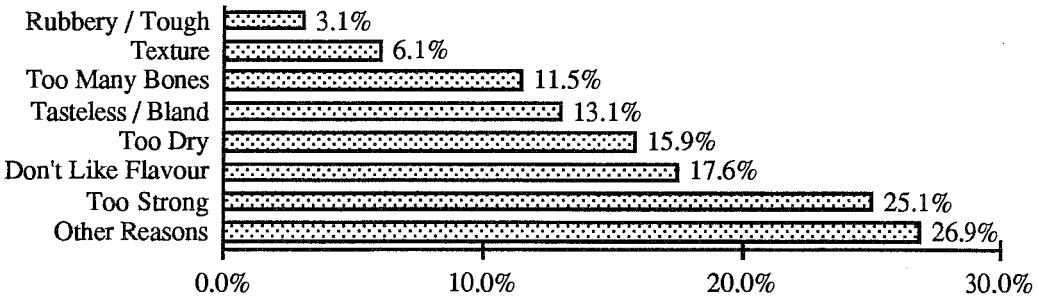
(a) Silver Trevally / Skipjack – Recall, Trial & Dislikes



(b) Responses Of Those Who Have Tried Silver Trevally / Skipjack



(c) Reasons Given For Disliking Silver Trevally / Skipjack



4.10 Recreational Fishing

4.10.1 Seasonal Variation

Figure 4.10.1.1 reveals strongly seasonal patterns in recreational fishing activity, both in terms of the number of people involved, number of households involved and the weight of fish/seafood caught.

The data shown in Figure 4.10.1.1 corresponds to the three months up to the time the respondent was interviewed. Thus, November 1990 data covers recreational fishing activity in September, October and November 1990.

March 1991 therefore covers the traditional holiday season for most Australians and, as such, it is not surprising to see this also represents the peak in recreational fishing activity. September 1991, representing activity in the winter months, records the lowest activity of any of the four quarters surveyed.

Overall, the figures reveal recreational fishing to be a popular activity amongst household members in Australia.

Results in the present study are similar to those found in the 1977 PA study [13] which then only covered the capital cities excluding Darwin. Then it was estimated that over one third of all households included leisure fishing participants.

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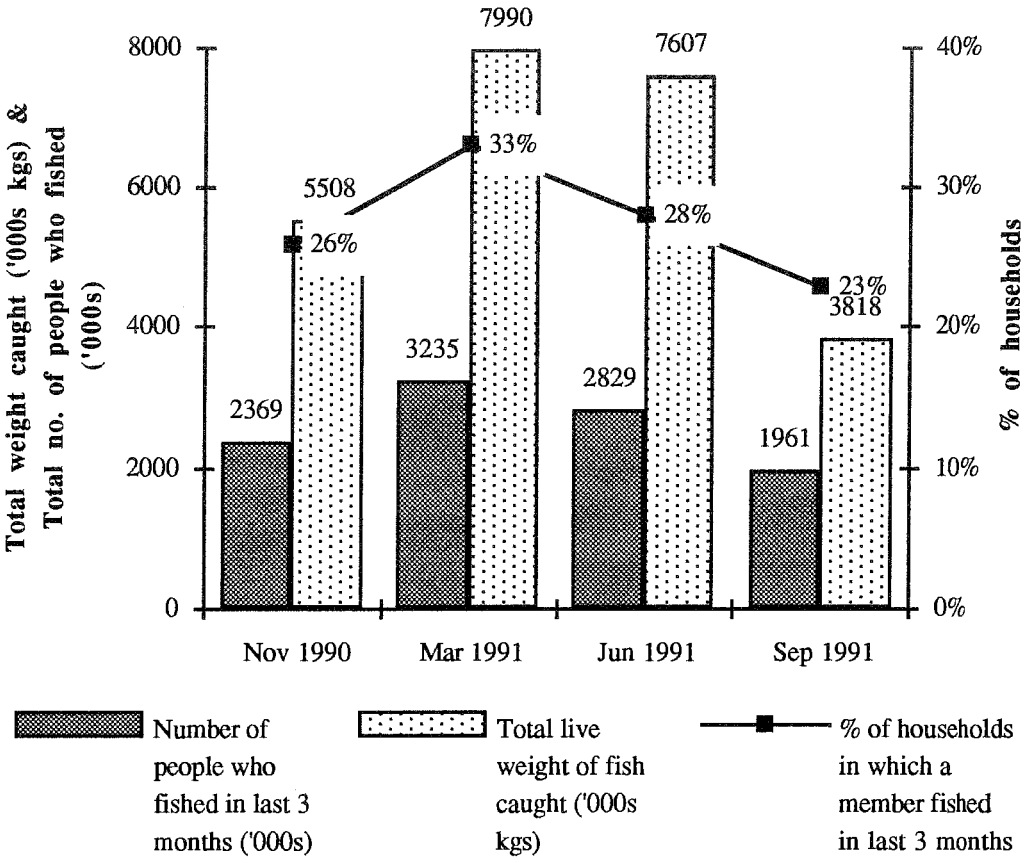
13 "A Report to the Department of Primary Industry on the Consumer Survey of Fish and Seafood Consumption in Australia", 1977, PA Consulting Group, Sections 3.5.1, 3.5.2 and 3.9.6.

Figure 4.10.1.1: Recreational Fishing Activity by Season: All Regions



4.10.2 Regional Variations in Recreational Fishing

Figure 4.10.2.1 presents the proportion of households engaged in recreational fishing for the peak March period and the low September period.

In the holiday season (March) the regions showing the highest proportion of households engaged in recreational fishing were:

- regional South Australia
- regional Western Australia
- regional Tasmania.

Regional households show a greater propensity for involvement in recreational fishing. This may be related to the range of recreational activities available to country versus city residents and access to coastal and/or inland fishing areas.

Regional Queensland is the only area that goes against the trend of high activity in March 1991 and low activity in September 1991.

Canberra and Perth are the two cities with highest household involvement in recreational fishing. This result is the same as the 1977 PA study.[14]

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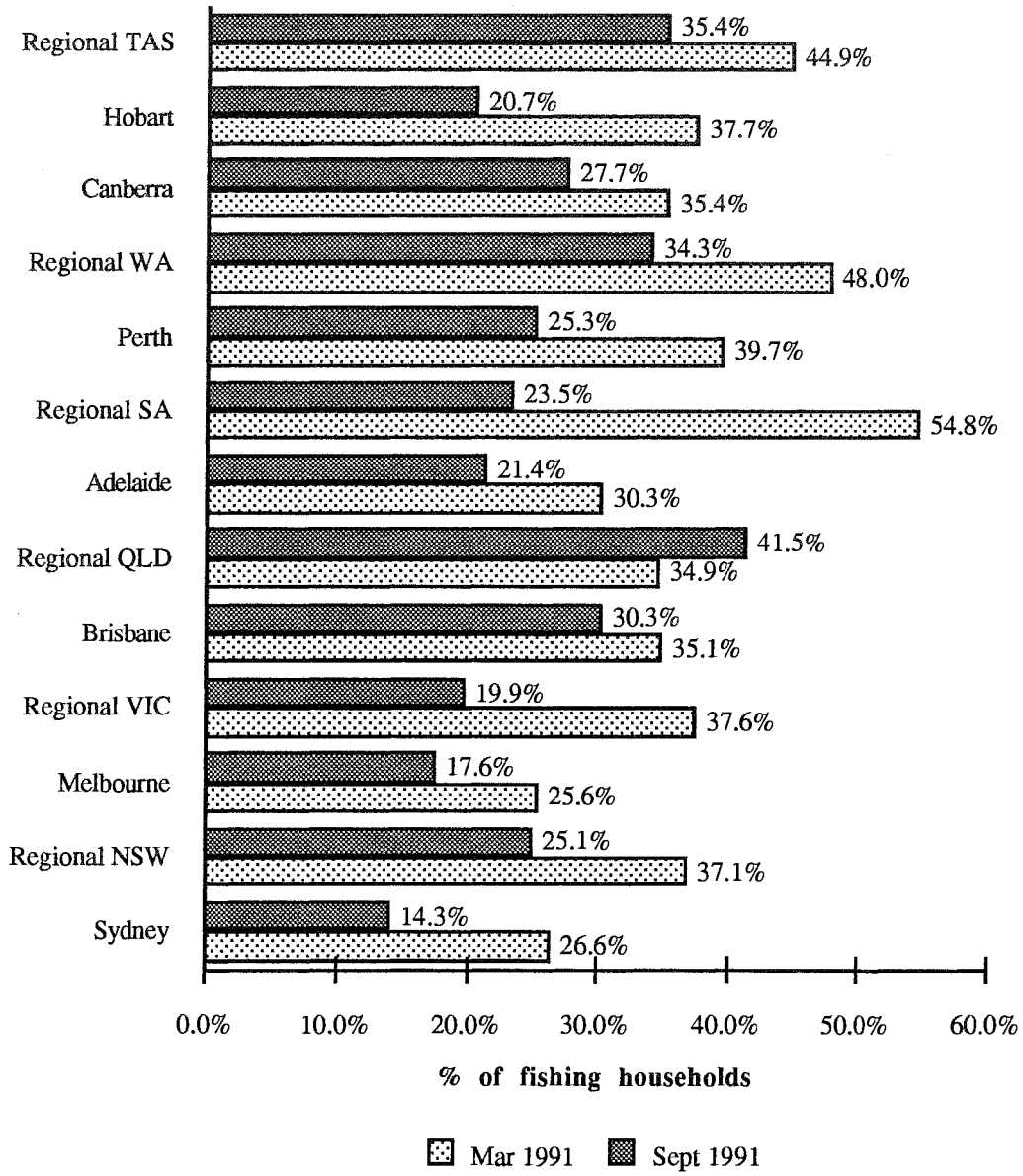
14 "A Report to the Department of Primary Industry on the Consumer Survey of Fish and Seafood Consumption in Australia", 1977, PA Consulting Group, Sections 3.9.6, especially Table 38

Figure 4.10.2.1: Proportion of Households Engaged in Recreational Fishing: By Region



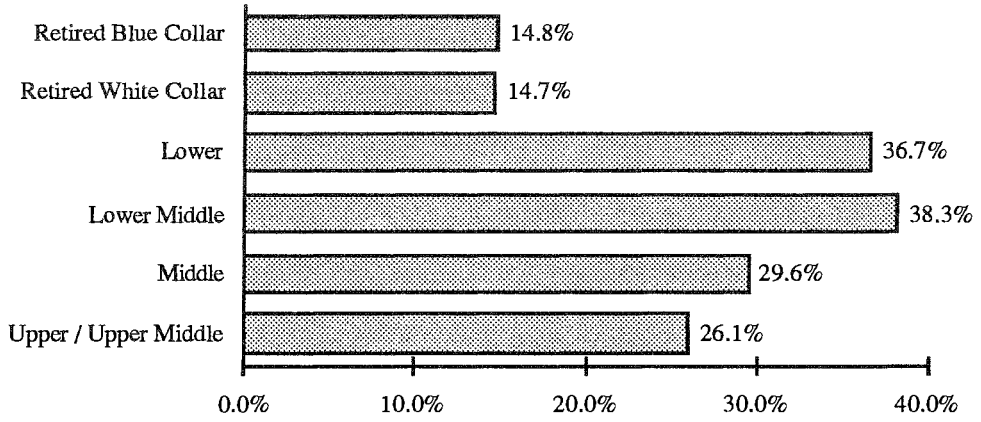
4.10.3 Recreational Fish Demographics - Who Fishes?

Figures 4.10.3.1, 4.10.3.2 and 4.10.3.3 show the proportion of households in which at least one member fished for recreation in the last three months. The proportion shows strong dependence upon the demographic group to which the household belongs.

For example, those households from the lower and lower/middle socio-economic groups have a high propensity to be involved in recreational fishing compared to other groups. Interestingly, households in which the breadwinner had retired were far less likely to be involved in recreational fishing than younger households.

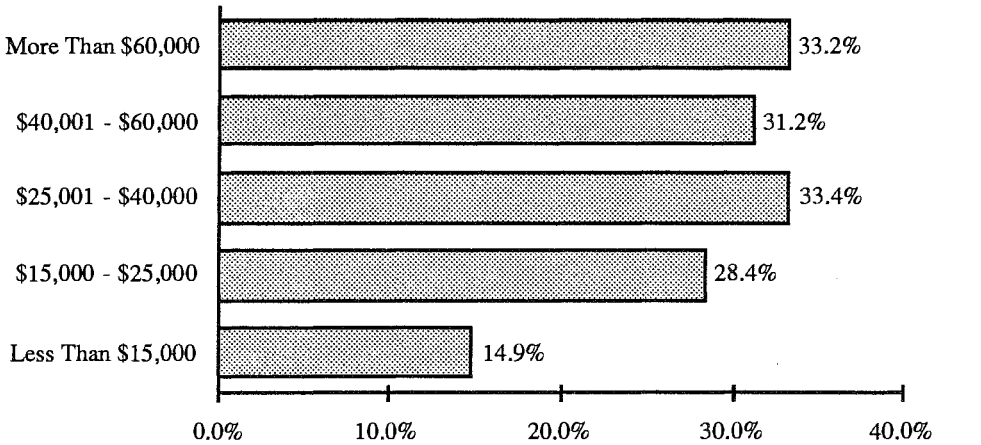
Families with children of any age also have a higher propensity to be involved in recreational fishing.

Figure 4.10.3.1: Proportion of Recreational Fishing Households by Socio-Economic Group



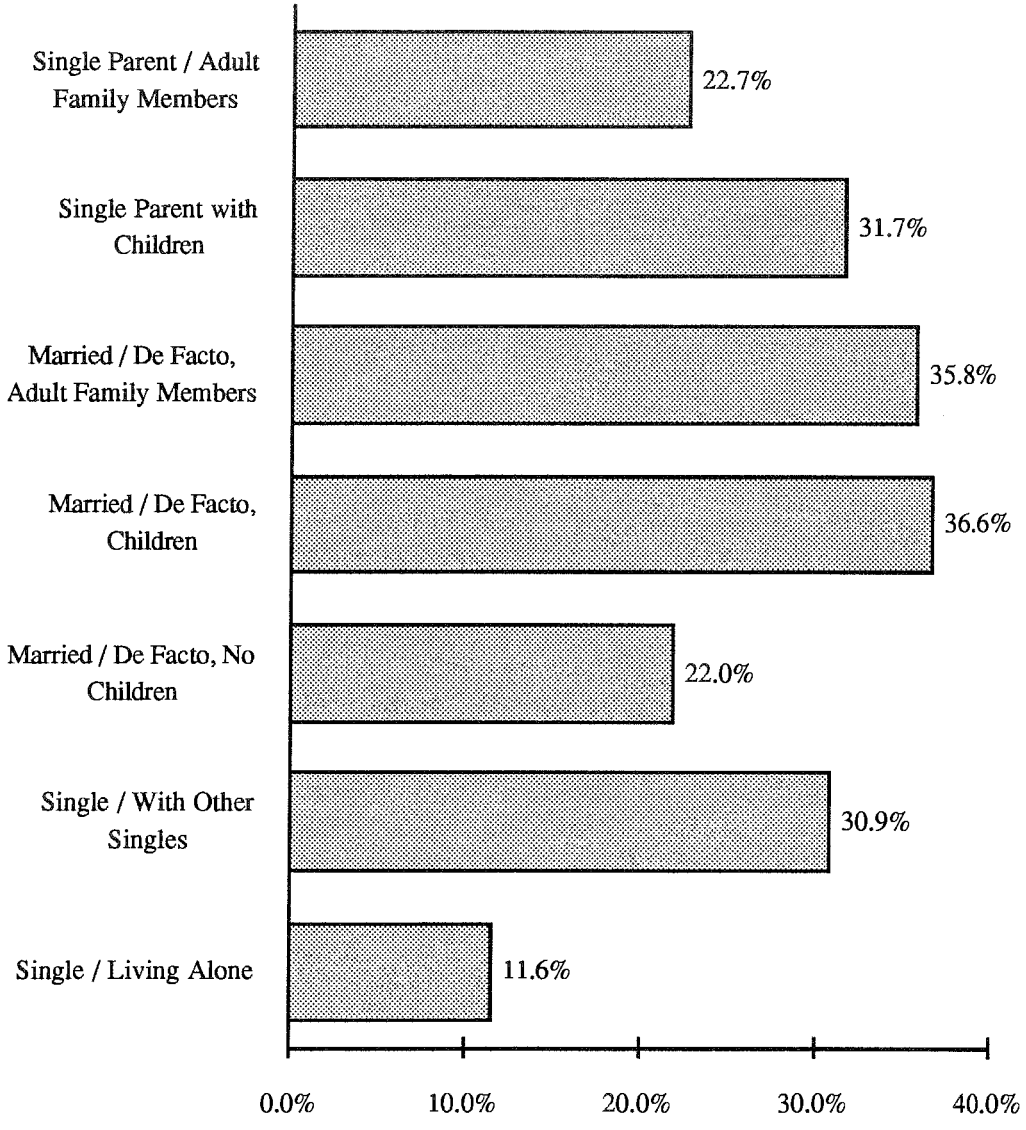
% of households where at least one family member had participated in recreational fishing in the last 3 months

Figure 4.10.3.2: Proportion of Recreational Fishing Households by Household Income



% of households where at least one family member had participated in recreational fishing in the last 3 months

Figure 4.10.3.3: Proportion of Recreational Fishing Households by Household Composition



4.10.4 The Recreational Catch - Weight and Species Caught

Respondents were asked to name the main types of fish/seafood caught by a member of the household and brought home and eaten in the last three months. They were also asked for the total weight of this fish/seafood.

Table 4.10.4.1 ranks the most commonly cited species bought home and eaten. Bream and flathead together represented over half the species cited by all respondents. There was some variation in ranking by region. For example, trout and perch were the two most popular species in regional Victoria.

Of those households who had actually caught fish/seafood in the last three months, an average of 1.8 species were cited as being caught per household. 91% of these households reported a fish species as being caught while 12% of households reported catching a crustacean or mollusc species.

The live weight of fish/seafood caught in the last three months shows wide regional variation (Figure 4.10.4.1). Regional Western Australian households have the highest catch weight by a wide margin at over double the 5kg/household average for all regions.

However, results do show that, on average, 35% of households that had participated in recreational fishing in the last three months had not caught anything, as shown in Figure 4.10.4.2. The catch weight distribution shown in Figure 4.10.4.2 suggests there are two groups of recreational fishing households - those that catch 5kg or less per three month period (72.2% of households) and those that catch from 10kg to 20kg per three month period (10.8% of households).

The relatively large catches of the latter group may be related to:

- the use of boats and other equipment in recreational fishing
- higher catches in some areas

– more frequent participation in recreational fishing.

However, further research would be necessary to provide a definitive answer.

The effect of recreational fishing upon the *per capita* consumption of fish and seafood can be estimated from the total catch weight given by quarter in Figure 4.10.1.1.

In sum a total of 24,392,000 kg live weight of fish and seafood was caught through recreational fishing. To convert to edible weight, a conversion factor of 50% has been used, given industry practice for the major species caught. The final result is that 2.82kg annual *per capita* consumption of fresh and frozen fish/seafood is sourced from recreational fishing. This represents a very significant 23%, by edible weight, of the estimated *per capita* consumption of all forms of fish and seafood of people living in households (12.06kg from Table 3.1.2.1).

Table 4.10.4.1: Species of Fish/Seafood Caught and Bought Home to Eat by Recreational Fishers: Ranked by Number of Citations

Rank	Total	Sydney	Regional NSW	Melbourne	Regional VIC	Brisbane	Regional QLD
1	Bream 27.1%	Bream 47.5%	Bream 36.9%	Flathead 45.5%	Trout 26.3%	Bream 51.8%	Bream 36.2%
2	Flathead 23.6%	Flathead 39.1%	Flathead 21.1%	Trout 25.8%	*Perch 16.7%	Whiting 40.8%	Whiting 19.6%
3	Whiting 18.5%	Whiting 8.9%	Trout 16.7%	Bream 12.5%	Bream 16.6%	Flathead 25.3%	Perch 16.3%
4	Trout 12.3%	Snapper 7.0%	Whiting 14.5%	Whiting 10.4%	Flathead 14.0%	Crab 7.7%	Flathead 14.4%
5	Herring 8.5%	Trout 3.5%	Perch 9.7%	Trevally 8.2%	Whiting 6.9%	**Mackerel 6.5%	**Mackerel 12.1%
Average number of citations per fishing household	1.83	1.69	1.72	1.80	1.46	1.80	2.08

Adelaide	Regional SA	Perth	Regional WA	Canberra	Hobart	Regional TAS
Whiting 38.0%	Whiting 44.1%	Herring 45.0%	Herring 45.4%	Bream 33.9%	Flathead 52.9%	Trout 40.4%
Herring 35.1%	Herring 25.9%	Whiting 26.5%	Trevally 29.1%	Trout 29.9%	Trout 24.4%	Flathead 33.7%
Garfish 13.2%	Mullet 22.9%	Trevally 17.3%	Whiting 23.9%	Flathead 14.4%	Lobster 13.7%	Cod 20.9%
Squid 12.9%	Snapper 10.9%	Snapper 13.1%	Cod 17.0%	Trevally 8.1%	Perch 11.6%	Lobster 7.7%
Mullet 10.7%	Perth 10.5%	Prawns 9.3%	Snapper 15.3%	Whiting 6.0%	Trevally 10.7%	Perch 7.4%
1.66	2.05	2.23	2.25	1.59	2.08	1.59

** freshwater perch (ie not orange roughy)*

*** predominantly Spanish mackerel species.*

Figure 4.10.4.1: Average Annual Recreational Catch per Household

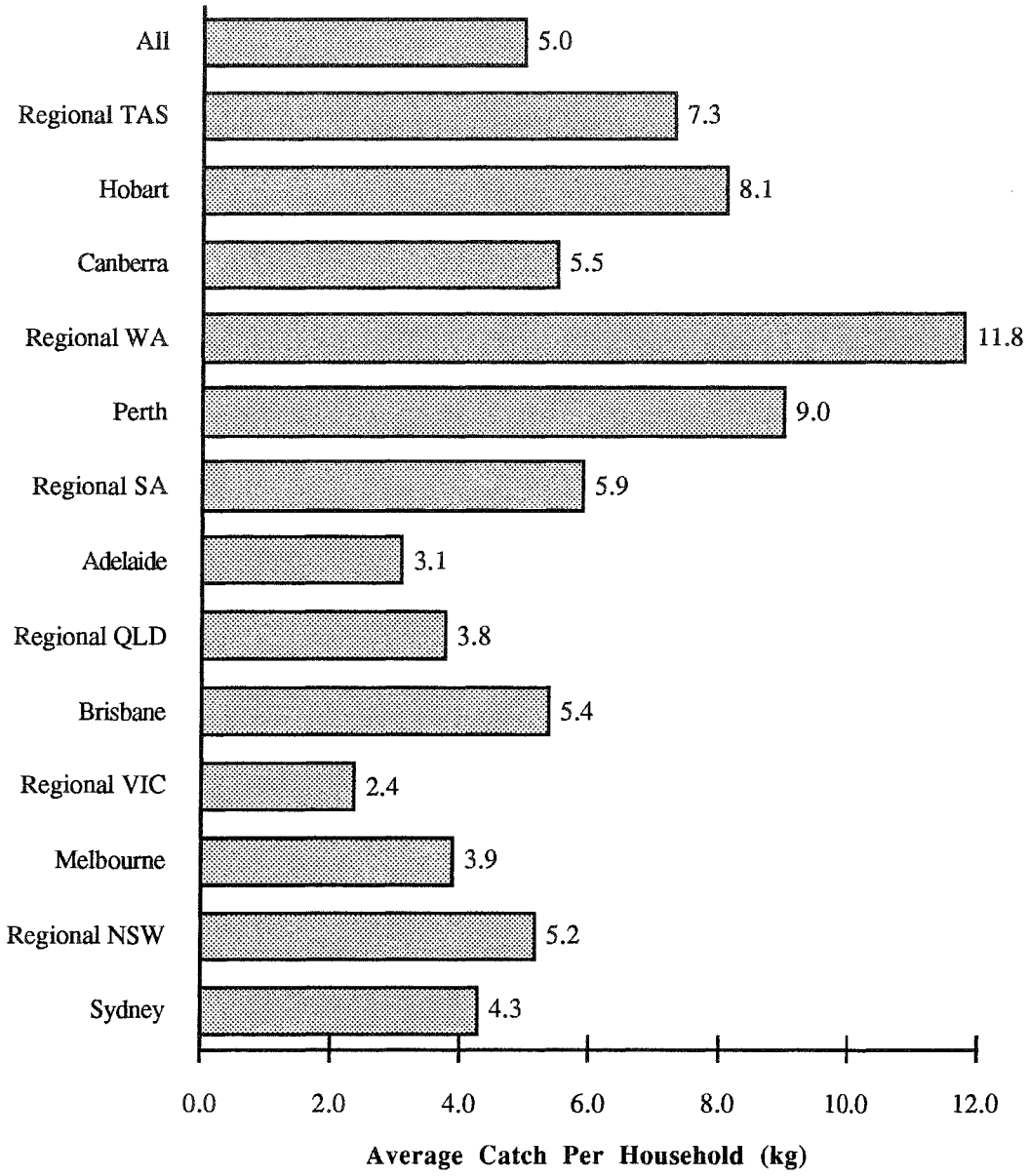
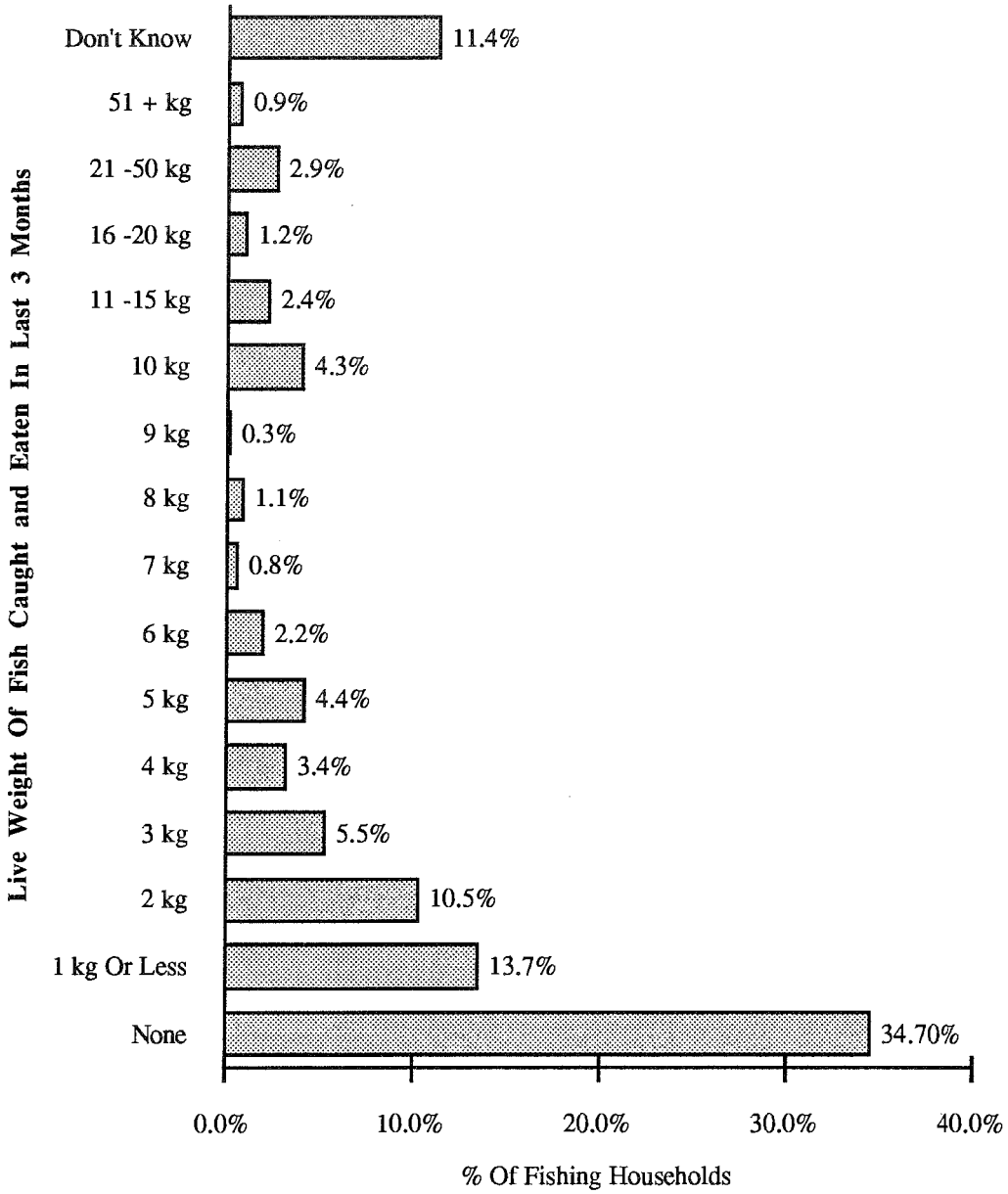


Figure 4.10.4.2: Fish/Seafood Distribution of Live Weight Caught in the Last Three Months by Each Fishing Household



5. Detailed Findings - Out-Of-Home Study

5.1 Fish/Seafood Meals Consumed Out-Of-Home

5.1.1 Proportion of Respondent Out-Of-Home Meals in which Fish or Seafood was Consumed

Table 5.1.1.1 provides details of the results of the survey covering the out-of-home consumption of the main household food purchaser/preparer (grocery buyer) and that of other household members over 15 years of age (non grocery buyers).

The results show a greater tendency for non-grocery buyers to consume their meals out-of-home and also to choose fish/seafood meals when eating out-of-home. On average, each grocery buyer consumes 0.42 out-of-home fish/seafood meals per week and each non grocery buyer 0.75 fish/seafood meals per week.

Refer to Section 3.5.2 for further details on the frequency of out-of-home fish/seafood meal consumption.

Table 5.1.1.1: Out-Of-Home Meals Consumed by Respondents in the Previous Seven Days: Grocery Buyers and Non Grocery Buyers ('000)

	Main food preparer/ purchaser (grocery buyer)			Non-main food preparer/ purchaser(s) (non-grocery buyer)		
	D, L, B Meals	Other Meals (Other Self)	Total Meals	D, L, B Meals	Other Meals (Other Self)	Total Meals
Weighted number of respondents	5,223	5,223	5,223	6,754	6,754	6,754
Weighted number of respondents from fish/seafood consuming households	5,102	5,102	5,102	NA	NA	NA
Total number of meals possible in last 7 days ie D, L, B, other	107,181†	35,714†	142,895†	141,837	47,278	189,115
Meals actually eaten in or out-of-home	101,367† (100%)	1,618†	101,733†	124,187 (100%)	NA	NA
Meals eaten out-of-home	16,627† (16.4%)	366†	16,993†	26,142 (21%)	NA	NA
Fish/seafood meals eaten out-of-home	2,167† (2.1%)	46†	2,213†	4,315 (3.5%)	*764	5,079
Number of fish/seafood meal-type-occasions out-of-home	2,505†	47†	2,552†	4,745	*120	4865
Number of fish/seafood meal-type-occasions out-of-home not including those at friends'/relatives' houses	2,117†	40†	2,157†	4,362	88	4,450

** 120,000 meal-type-occasions were the result of 764,000 meals containing fish/seafood - obviously an incorrect result. There must be at least one meal-type-occasion for each meal of fish/seafood. The 120,000 figure was due to respondents not providing details of "other" fish/seafood meals.*

† meals of grocery buyers from fish/seafood consuming households only.

5.1.2 When Out-Of-Home Meals are Consumed

A far higher proportion of out-of-home dinners include fish/seafood than other meal-occasions as Tables 5.1.2.1 and 5.1.2.2 show. For example, Table 5.1.2.2 shows that 33% of non-grocery buyers out-of-home weekday dinners were fish/seafood meals as compared to only 11% of out-of-home lunches and 2% of out-of-home breakfasts.

However, in terms of the actual number of meals these proportions represent, the number of weekday fish/seafood lunch meals actually exceed the number of weekday fish/seafood dinner meals. The reason for this lies in the far larger number of weekday out-of-home lunches than dinners, due to people consuming meals at their place of work. Of course, at the weekend this is no longer the case and fish/seafood dinners represent about two thirds of all fish/seafood meals. Across all days of the week 51.3% of out-of-home fish/seafood D, L, B meals are consumed at dinner and 47.7% at lunch.

The pattern of out-of-home fish/seafood consumption by day of the week is shown in Figures 5.1.2.1 and 5.1.2.2.

The number of fish/seafood meals peaks on Friday for both grocery buyers and non-grocery buyers. In terms of the proportion of out-of-home meals that were fish/seafood meals, Saturday represents the peak (Figure 5.1.2.1: 18.6% and Figure 5.1.2.2: 23.9%).

Table 5.1.2.1: Proportion of Grocery Buyers Out-Of-Home D, L, B Meals Eaten in Which Fish/Seafood was Eaten: Weekdays and Weekends

	Weekday (M - F)				Weekend (S - S)				
	D	L	B	Total weekday D L B	D	L	B	Total weekend D L B	Total D L B all days
Fish/seafood eaten (%)	24%	9%	1%	12%	25%	11%	1%	16%	13%
('000 meals)	645	822	7	1,474	480	207	6	693	2,167
Fish/seafood not eaten (%)	76%	91%	99%	88%	75%	89%	99%	84%	87%
('000 meals)	2,020	7,954	804	10,779	1,451	1,749	481	3,682	14,461
Total (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%
('000 meals)	2,665	8,776	811	12,252	1,931	1,956	487	4,375	16,627

Table 5.1.2.2: Proportion of Non-Grocery Buyers Out-Of-Home D, L, B Meals Eaten in Which Fish/Seafood was Eaten: Weekdays and Weekends

	Weekday (M - F)				Weekend (S - S)				
	D	L	B	Total weekday D L B	D	L	B	Total weekend D L B	Total D L B all days
Fish/seafood eaten (%)	33%	11%	2%	15%	30%	15%	4%	20%	17%
('000 meals)	1,405	1,571	26	3,002	796	491	26	1,313	4,315
Fish/seafood not eaten (%)	67%	89%	98%	85%	70%	85%	96%	80%	83%
('000 meals)	2,897	12,565	1,103	16,565	1,827	2,821	615	5,262	21,827
Total (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%
('000 meals)	4,302	14,135	1,130	19,567	2,622	3,312	641	6,575	26,142

The number of fish/seafood meals other than D, L, B for the non-grocery buyers are shown in Table 5.1.2.3.

Table 5.1.2.3: "Other" Fish/Seafood Meals Consumed Out-Of-Home by Non-Grocery Buyers by Day of the Week, '000 Meals

	Mon	Tues	Wed	Thurs	Fri	Sat	Sun	Total
AM	62	83	65	49	39	95	46	439
PM	46	32	15	42	104	28	43	309
Both AM and PM	0	0	0	0	16	0	0	16
Total	108	115	80	91	159	123	89	764

The total number of "other" fish/seafood meals at 764,000 is significant when compared to the total number of D, L, B fish/seafood meals (shown in Table 5.1.2.2) consumed out-of-home by non-grocery buyers at 4,315,000. However, most respondents did not provide details of the type of fish/seafood consumed at these "other meals", as already mentioned in the Table 5.1.1.1 footnote.

Figure 5.1.2.1: Grocery Buyers' Out-Of-Home Consumption - Respondents from Fish/Seafood Consuming Households (all D, L, B, "Other Self" meals)

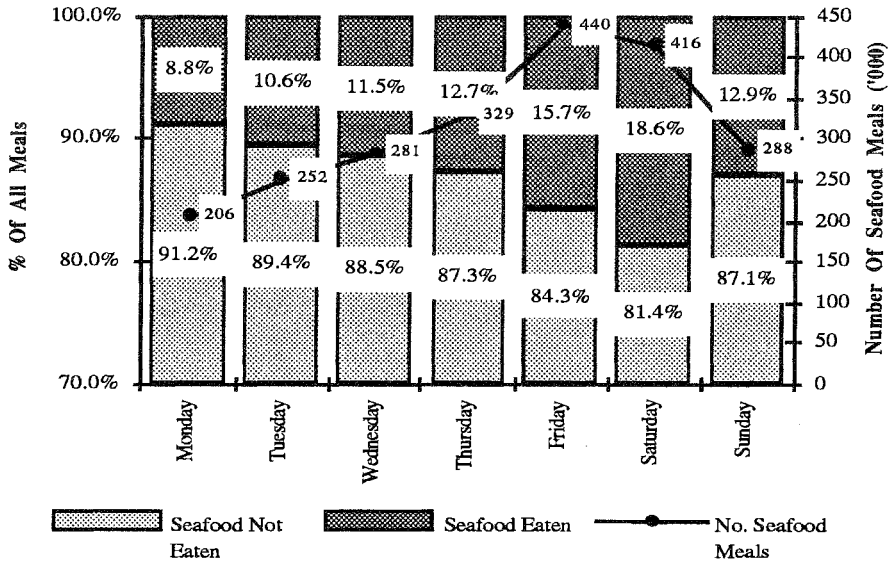
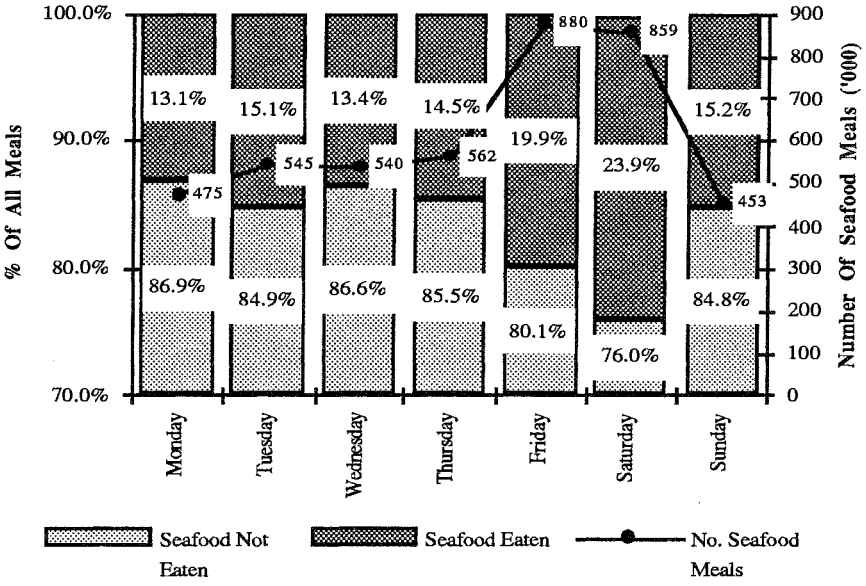


Figure 5.1.2.2: Non-Grocery Buyers' Out-Of-Home Consumption by Day or Week - All Respondents (all D, L, B meals)

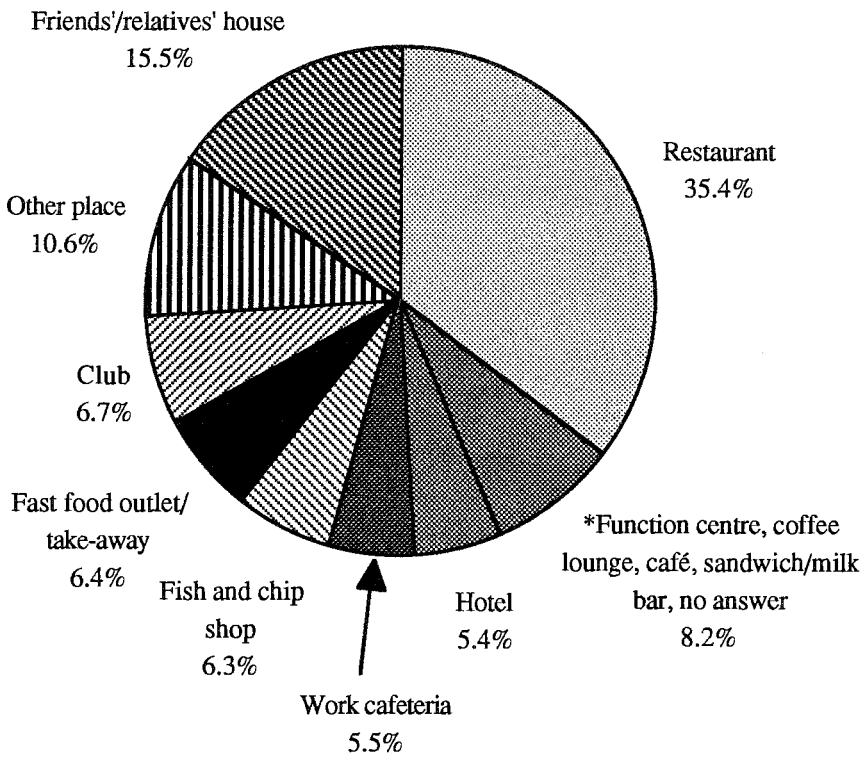


5.1.3 Where Out-Of-Home Fish/Seafood Meals are Purchased/Consumed

Over one third of grocery buyers and out-of-home fish/seafood meal-type-occasions were consumed in restaurants. Consumption at friends' and relatives' houses and "other places" accounted for another quarter of out-of-home meal-type-occasions.

Most of the "other places" were lunches consumed at the place of work. A large proportion of these lunches were of sandwiches containing canned fish that had been prepared at home and taken to work.

Figure 5.1.3.1: Where Fish/Seafood Out-Of-Home Meals are Purchased/Consumed: Proportion of Grocery Buyers Out-Of-Home Meal-Type-Occasions



** made up of function centre 2.2%, coffee lounge/café 2.1%, sandwich/milk bar 3.6%, no answer 0.2%.*

5.2 Species/Type of Fish or Seafood Eaten Out-of-Home by Occasion

As was the case with in-home meals (Section 4.2.1), the type of fish/seafood eaten had some dependence on the meal-occasion.

Fish† and particularly seafood† consumption was higher in terms of their share of fish/seafood meals at dinner than at lunch. A third of grocery buyer out-of-home meal-type-occasions at lunch were of canned fish or canned seafood compared to only 3% at out-of-home dinners (Table 5.2.1). Canned fish, in particular, fills a need for a convenient lunch meal as was also seen in Section 4.2.1 for in-home lunch meals.

Grocery buyers are more likely than non-grocery buyers to eat seafood† out-of-home. Over half of grocery buyers and non-grocery buyers' seafood meal-type-occasions were of whole prawns, as shown in Table 5.2.3.

Overall, out-of-home fish/seafood meals feature a far higher proportion of seafood meal-type-occasions than in-home meals, as a comparison of Table 4.2.2.1 and Table 5.2.1 illustrates. Only 11.7% of in-home fish/seafood meal-type-occasions were seafood† compared to 36% and 32% of out-of-home fish/seafood meal-type-occasions of grocery buyers and non-grocery buyers respectively.

Tables 5.2.2 and 5.2.3 provide further details of fish† and seafood† species that were most popular for out-of-home fish/seafood meals.

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† Only fresh, frozen, smoked or cooked forms of fish or seafood. See Appendix V listing of fish/seafood types.

Table 5.2.1: Type of Fish/Seafood Consumed Out-of-Home by Meal-Occasion for Grocery Buyers and Non-Grocery Buyers: Proportion of Fish/Seafood Meal-Type-Occasions

Type of fish/seafood	Dinner		Lunch		Total*	
	Grocery buyer	Non-grocery buyer	Grocery buyer	Non-grocery buyer	Grocery buyer	Non-grocery buyer
Fish†	28%	38%	24%	28%	25%	33%
Seafood†	46%	36%	25%	27%	36%	32%
Processed products	2%	1%	1%	1%	2%	1%
Catering products	1%	1%	2%	3%	2%	2%
Bottles/plastic pouches/cups	0%	0%	1%	0%	1%	0%
Canned	3%	7%	31%	23%	17%	14%
Other	8%	5%	5%	5%	7%	5%
Don't know	11%	11%	11%	13%	11%	12%
Total (%) ('000 meal-type-occasions)	100% 1119	100% 2157	100% 989	100% 2148	100% 2156	100% 4439

Note: excluding fish/seafood consumption out-of-home at friends'/relatives' houses.

** includes dinner, lunch, breakfast and other meals*

† only fresh, frozen, smoked or cooked forms of fish or seafood. See Appendix V listing of fish/seafood types used above.

Table 5.2.2: Most Popular Fish Species Consumed Out-of-Home (Canned Fish Not Included): by D, L, B, Other Fish/Seafood

Rank	Grocery Buyer	Non-grocery buyer
1	Shark (84)	Shark (437)
2	Barramundi (50)	Whiting (158)
3	Whiting (50)	Barramundi (125)
4	Snapper (39)	*Orange roughy (100)
5	*Perch (38)	Butterfish (74)
6	Bream (32)	Trout (66)
7	*O roughy (27)	Flounder (65)
		*Perch (37)
Total fish ('000 fish meal- type-occasion)	549	1461

Note: figures in brackets are thousands of meal-type-occasions. Does not include those fish/seafood meals consumed at friends'/relatives' houses

** on the basis of catch statistics it is suspected that most perch meal-type-occasions are orange roughy. Hence the ranking of orange roughy is likely to be higher than that shown above.*

Table 5.2.3: Most Popular Seafood Species Consumed Out-of-Home (canned not included): by D, L, B, Other Meal-Type-Occasions

Rank	Grocery Buyer	Non-grocery buyer
1	Prawns (whole) (416)	Prawns (whole) (711)
2	Squid/calamari (96)	Squid/calamari (232)
3	Scallops (59)	Crabs (135)
4	Crabs (50)	Oysters (99)
5	Oysters (46)	Crayfish/lobster (79)
6	Crayfish/lobster (41)	Scallops (58)
Total seafood ('000 meal- type-occasion)	780	1489

Note: figures in brackets are thousands of meal-type-occasion.

5.3 The Type and Method of Preparation of Fish and Seafood by Place of Purchase/Consumption

Tables 5.3.1 through to 5.3.4 study the type, form of preparation, method of preparation and place on the menu of fish and seafood meals by the place of purchase/consumption. Together, they provide a detailed picture of fish/seafood consumption at the range of places listed. They only show the consumption of grocery buyers since the characteristics of non-grocery buyers were found to be very similar.

Reviewing the consumption of fish/seafood at restaurants:

- 54% of fish/seafood meal-type-occasions are seafood versus only 22% fish (Table 5.3.1)
- there are several favoured forms of preparation - fillet, whole, headed/peeled, other and pre-prepared (Table 5.3.2)
- deep frying and grilling were equally the most popular methods of cooking/preparing fish/seafood (Table 5.3.3)
- 76% of fish/seafood meal-type-occasions were as main course dishes with the remainder as entrée dishes (Table 5.3.4).

While these characteristics are atypical of many restaurants, other places of major purchase/consumption show different characteristics:

- almost half of fish/seafood meals at **work cafeterias** consist of canned fish. Most remaining fish/seafood meal-type-occasions are of deep fried or grilled fillets of fish
- **club** fish/seafood meal-type-occasions consist mainly of fish, seafood and canned fish. Most fish mentions were filleted fish. Deep fried plus pan fried meals outnumbered two to one grilled meals

- at least 80% of fish/seafood meal-type-occasions at **hotels** are fish or seafood, little or no canned fish/seafood is used. Much of the fish is in fillets. Deep fried meals outnumber grilled meals two to one

- at least two thirds of fish/seafood meal-type-occasions purchased from **fish and chip shops** are fish fillets. 84% of fish/seafood meals are deep fried and 9% grilled

- there are almost double the number of seafood meals to fish meals purchased at **fast food outlets/take-aways.** Approximately half the fish/seafood meal-type-occasions are deep fried and only 9% are grilled. 17% are as ingredients in pizza, mornay, stir fry, casserole and other dishes

- two thirds of fish/seafood meals purchased/consumed at a **sandwich/milk bar** are canned fish/seafood consumed straight (ie without further cooking).

Detail of the species/types of fish, seafood and canned fish/seafood most commonly consumed at major places of purchase/consumption are shown in Tables 5.3.5, 5.3.6 and 5.3.7 respectively.

Popular species of fish consumed show significant dependence upon the place of purchase/consumption. On the other hand, species of seafood and types of canned fish/seafood show little or no dependence upon place. As was the case for in-home consumption, whole prawns dominate the seafood category, again emphasising the unique market position that prawns hold.

Table 5.3.1: The Type of Fish/Seafood Eaten Out-of-Home by Place of Purchase/Consumption: Proportion of Grocery Buyers' Meal-Type-Occasion

Type of Fish/Seafood Eaten	Totals	Work Cafeteria	Restaurant	Function Centre	Club	Hotel	Coffee Lounge/ Cafe	Fish & Chip Shop	Fast Food Outlet/ Take-Away	Sandwich/ Milk Bar	Friends'/ Relatives' House	Other	No Answer
Fish	27%	27%	22%	19%	35%	41%	21%	67%	22%	1%	33%	10%	0%
Seafood	35%	13%	54%	34%	25%	38%	22%	17%	38%	17%	28%	13%	78%
Processed products	2%	0%	2%	0%	2%	1%	5%	1%	2%	1%	1%	2%	0%
Catering products	2%	0%	1%	8%	1%	0%	3%	1%	3%	3%	2%	3%	3%
Bottles/plastic pouches/cups	1%	0%	0%	0%	1%	0%	0%	0%	0%	0%	2%	3%	0%
Canned	18%	44%	2%	16%	8%	0%	30%	0%	9%	66%	22%	61%	0%
Other fish/seafood	6%	4%	9%	5%	8%	9%	4%	3%	8%	2%	2%	3%	0%
Don't know	11%	12%	9%	16%	20%	10%	14%	10%	17%	10%	10%	6%	18%
Totals (%) ('000 meals-type-occasions)	100% 2552	100% 141	100% 904	100% 57	100% 170	100% 138	100% 53	100% 161	100% 164	100% 92	100% 396	100% 271	100% 6

† fish/seafood types as per listing in Appendix V.

Table 5.3.2: The Form of Preparation of Fish/Seafood Eaten Out by Place of Purchase/Consumption: Proportion of Grocery Buyers' Meal-Type-Occasions

Form of Fish/Seafood Eaten	Totals	Work Cafeteria	Restaurant	Function Centre	Club	Hotel	Coffee Lounge/ Cafe	Fish & Chip Shop	Fast Food Outlet/ Take-Away	Sandwich/ Milk Bar	Friends'/ Relatives' House	Other	No Answer
Whole	15%	5%	22%	14%	13%	19%	1%	6%	8%	2%	16%	9%	0%
Fillet	29%	35%	23%	23%	41%	41%	34%	68%	29%	4%	34%	10%	78%
Cutlet (sliced with backbone)	1%	1%	1%	5%	2%	1%	1%	0%	1%	0%	2%	0%	0%
Headed/peeled	11%	4%	18%	5%	9%	10%	8%	3%	14%	4%	11%	4%	0%
Smoked	1%	0%	1%	8%	0%	0%	2%	0%	1%	2%	1%	2%	3%
Canned	16%	40%	1%	11%	8%	0%	25%	0%	7%	69%	18%	58%	0%
Pre-prepared	13%	12%	13%	21%	14%	14%	9%	16%	25%	19%	7%	7%	27%
Other	11%	3%	15%	4%	12%	12%	20%	4%	12%	0%	10%	8%	0%
Don't know/can't say	2%	0%	3%	5%	1%	2%	0%	1%	2%	0%	1%	1%	0%
No answer	1%	0%	1%	3%	0%	1%	0%	0%	1%	0%	0%	0%	69%
Totals	100% 2552	100% 141	100% 904	100% 57	100% 170	100% 138	100% 53	100% 161	100% 164	100% 92	100% 396	100% 271	100% 6

Table 5.3.3: How Fish/Seafood Eaten Out is Cooked/Prepared, Served by Place of Purchase/Consumption: Proportion of Grocery Buyers' Meal-Type-Occasions

Method of cooking/ preparation	Totals	Work Cafeteria	Restaurant	Function Centre	Club	Hotel	Coffee Lounge/ Cafe	Fish & Chip Shop	Fast Food Outlet/ Take-Away	Sandwich/ Milk Bar	Friends'/ Relatives' House	Other	No Answer
Boil/boiled in bag	5%	2%	6%	6%	2%	4%	4%	0%	4%	2%	7%	4%	0%
Baked/oven	2%	1%	2%	4%	2%	2%	22%	17%	1%	17%	3%	2%	0%
Grilled	12%	11%	17%	12%	19%	18%	6%	9%	6%	0%	11%	2%	0%
Deep fried	24%	23%	18%	25%	37%	38%	33%	84%	46%	8%	11%	4%	0%
Steamed	4%	3%	7%	0%	2%	1%	0%	2%	3%	0%	3%	3%	0%
Microwaved	1%	1%	0%	0%	0%	0%	0%	0%	3%	2%	0%	1%	0%
Raw	2%	0%	3%	9%	1%	1%	0%	0%	0%	0%	1%	1%	0%
Straight	18%	39%	6%	17%	11%	3%	23%	2%	7%	62%	16%	58%	31%
Barbecued	2%		1%	4%	0%	3%	0%	0%	0%	0%	5%	3%	0%
Pan fried	7%	7%	8%	3%	7%	12%	6%	0%	3%	1%	12%	4%	0%
Poached (water in pan)	1%	0%	1%	2%	1%	4%	0%	1%	1%	1%	0%	0%	0%
Pizza topping	1%	0%	1%	0%	0%	0%	0%	0%	6%	0%	1%	0%	0%
Ingredient - mornay	4%	4%	4%	5%	1%	5%	7%	0%	1%	2%	6%	1%	10%
Ingredient - stir fry	3%	0%	7%	1%	1%	0%	0%	0%	6%	1%	2%	1%	41%
Ingredient - casserole	2%	0%	1%	0%	2%	0%	2%	0%	1%	0%	6%	0%	0%
Ingredient - Other	6%	5%	7%	2%	1%	3%	4%	2%	3%	10%	8%	5%	0%
Other	7%	4%	8%	7%	9%	3%	15%	1%	7%	12%	6%	10%	0%
Don't know	1%	0%	2%	3%	1%	1%	0%	0%	1%	0%	1%	2%	0%
No answer	0%	0%	0%	0%	1%	1%	0%	0%	1%	0%	0%	0%	18%
Totals	100% 2552	100% 141	100% 904	100% 57	100% 170	100% 138	100% 53	100% 161	100% 164	100% 92	100% 396	100% 271	100% 6

Table 5.3.4: Proportion of Fish/Seafood Meal-Type-Occasions Which are an Entrée Versus Main Meals by Place of Purchase/Consumption: Grocery Buyers

	Totals	Work Cafeteria	Restaurant	Function Centre	Club	Hotel	Coffee Lounge/ Cafe	Fish & Chip Shop	Fast Food Outlet/ Take-Away	Sandwich/ Milk Bar	Friends'/ Relatives' House	Other	No Answer
Entrée	17%	5%	24%	60%	20%	21%	7%	1%	4%	5%	20%	7%	0%
Main	82%	94%	76%	38%	80%	78%	93%	99%	95%	91%	79%	90%	31%
No answer	1%	1%	0%	1%	1%	1%	0%	1%	1%	4%	1%	3%	69%
Totals	100% 2552	100% 141	100% 904	100% 57	100% 170	100% 138	100% 53	100% 161	100% 164	100% 92	100% 396	100% 271	100% 6

Table 5.3.5: Most Commonly Purchased/Consumed Species of Fish† at Major Outlets: Ranked by Thousands of Meal-Type-Occasions

Rank	Restaurant	Club	Hotel	Fish & Chip Shop	Fast Food/ Take-Away Outlet
1	Barramundi (32)	Whiting (7)	Whiting (12)	Shark (51)	Shark (12)
2	*Perch (25)	Perch (6)	Trout (5)	Snapper (8)	
3	Whiting (19)	Snapper (6)	*Perch (3)	*O roughy (7)	
4	Snapper (15)	Shark (5)	Salmon - other (3)	Whiting (5)	
5	*O roughy (13)		*O roughy (2)	Gemfish (3)	
6	Trout (13)			*Perch (3)	
Total**	201	60	57	108	36

Note: figures in brackets are thousands of meal-type-occasions

** on the basis of catch statistics it is suspected that most of the perch mentions are in fact orange roughy*

*** the figures in brackets do not add up to the total as lowly ranked species are not shown*

† not including canned/processed.

Table 5.3.6: Most Commonly Purchased/Consumed Species of Seafood† at Major Outlets: Ranked by Thousands of Meal-Type-Occasions

Rank	Restaurant	Club	Hotel	Fish & Chip Shop	Fast Food/ Take-Away Outlet
1	Prawns (whole) (252)	Prawns (whole) (29)	Prawns (whole) (22)	Prawns (whole) (10)	Prawns (whole) (41)
2	Squid/ calamari (56)	Crabs (3)	Squid/ calamari (12)	Squid/ calamari (9)	Squid/ calamari (10)
3	Scallops (42)	Prawns (other) (3)	Scallops (5)		Crabs (4)
4	Crayfish/ lobster (31)		Crayfish/ lobster (3)		
5	Crabs (28)				
6	Mussels (20)				
Total **	487	43	53	28	63

Note: figures in brackets are thousands of meal-type-occasions

*** figures in brackets do not add up to total since lowly ranked species are not shown*

† not including canned/processed.

Table 5.3.7: Most Commonly Purchased/Consumed Types of Canned Fish/Seafood at Major Outlets: Ranked by Thousands of Meal-Type-Occasions

Rank	Work cafeteria	Sandwich/milk bar	Other (place)
1	Tuna (34)	Tuna (38)	*Salmon - other (92)
2	*Salmon - other (23)	Salmon - other (20)	Tuna (67)
Total	62	60	164

Note: figures in brackets are thousands of meal-type-occasions

* *salmon - other refers to salmon other than Australian salmon.*

** *figures in brackets do not add to total since lowly ranked types of canned fish/seafood are not shown.*

5.4 Consumer Acceptance of Different Types/Species of Fish/Seafood for Consumption Out-Of-Home

Non-grocery buyers were asked to estimate how often they would personally eat particular species or types of fish/seafood out-of-home. This question was the same as that administered to grocery buyers in the 'In-Home' consumption questionnaire as discussed in Section 4.6.4.

The proportion of non-grocery buyers who did consider themselves to be consumers of each type or species of fish/seafood is shown in Figure 5.4.1.

Fresh fish, fish from a take-away outlet, prawns, shrimps and canned fish were the species with the higher acceptance for out-of-home consumption. All other species had acceptance by only half or less of respondents.

Tables 5.4.1, 5.4.2 and 5.4.3 provide a breakdown of responses by demographics. Consumption of all types of fish/seafood shows heavy dependence on respondent age group and household income. In general, younger and/or highest income respondents are more likely to consume any type of fish/seafood out-of-home than older and/or lower income respondents.

Respondents from non-English speaking countries were less likely to consume any fish type out-of-home than Australians/respondents from English speaking countries. On the other hand, respondents from non-English speaking countries were more likely to consume squid/calamari and mussels out-of-home than the Australians/English speaking country group.

Figure 5.4.1: Non-Grocery Buyers who Consumed Fish/Seafood Types Out-Of-Home: Proportion of Respondents

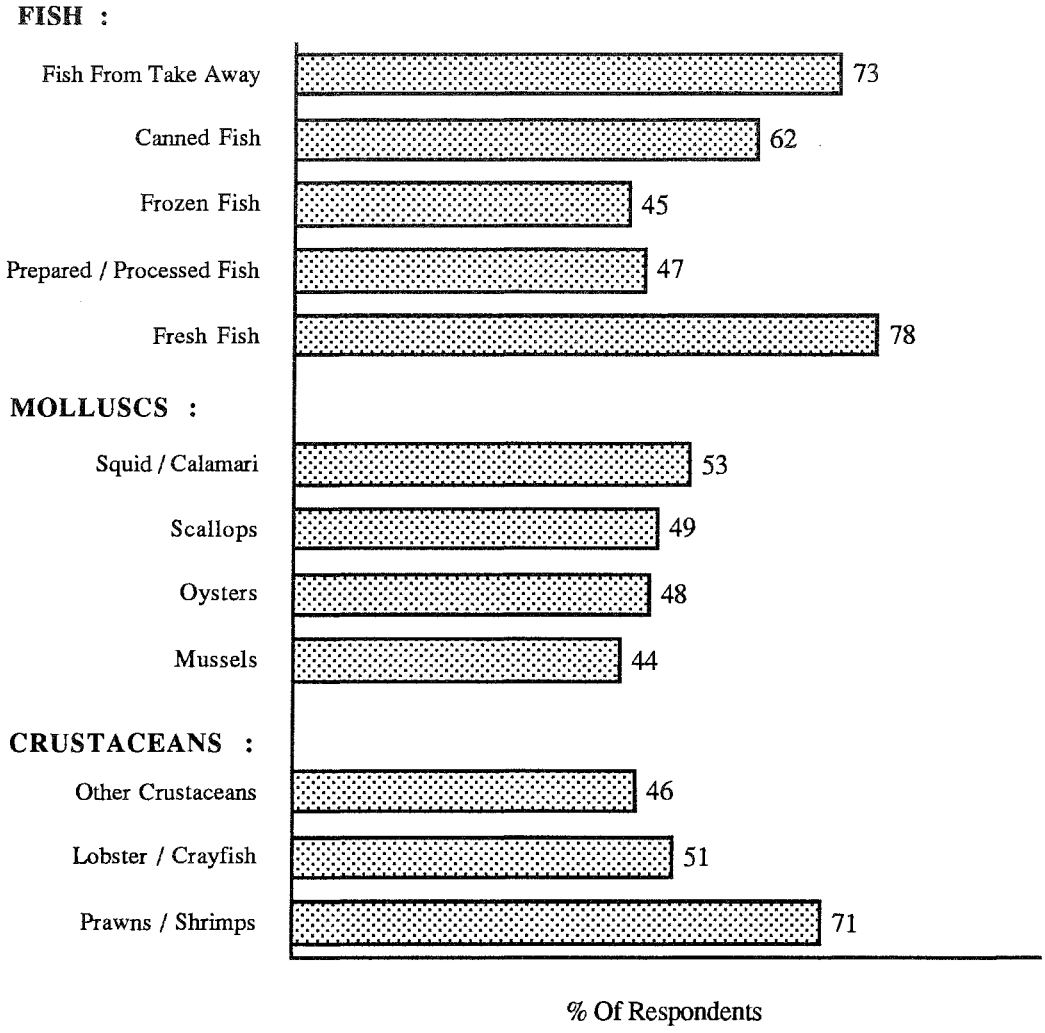


Table 5.4.1: Proportion of Non-Grocery Buyer Respondents Who Consume Fish Types: by Demographics (%)

	Age Group of Respondent			Nationality		Household Income				
Fish Type:	Under 40 years	40-59 years	60+ years	Australian/ English speaking country	Non-English speaking country	Less than $15,000	$15,001 - $25,000	$25,001- $40,000	$40,001- $60,000	Greater than $60,000
Fish from a take-away food outlet	77	77	45	74	62	55	63	75	81	76
Canned fish	63	63	50	63	49	54	48	55	74	68
Frozen fish	49	42	34	66	31	31	36	48	50	50
Prepared/processed fish	54	44	32	47	39	32	46	50	54	52
Fresh fish	77	82	69	77	73	63	71	81	86	88

Table 5.4.2: Proportion of Non-Grocery Buyer Respondents who Consume Mollusc Types: by Demographics (%)

	Age Group of Respondent			Nationality		Household Income				
Mollusc Type:	Under 40 years	40-59 years	60+ years	Australian/ English speaking country	Non-English speaking country	Less than $15,000	$15,001 - $25,000	$25,001- $40,000	$40,001- $60,000	Greater than $60,000
Squid/calamari	59	58	23	53	60	34	36	59	59	67
Scallops	53	54	25	49	47	33	31	53	54	63
Oysters	48	59	33	49	47	33	32	50	56	65
Mussels	35	46	16	34	43	28	23	33	39	47

Table 5.4.3: Non-Grocery Buyer Respondents who Consume Crustacean Types: by Demographics (%)

	Age Group of Respondent			Nationality		Household Income				
Crustacean Type:	Under 40 years	40-59 years	60+ years	Australian/ English speaking country	Non-English speaking country	Less than $15,000	$15,001 - $25,000	$25,001- $40,000	$40,001- $60,000	Greater than $60,000
Other crustaceans	49	51	31	48	45	32	32	50	55	61
Lobster/crayfish	53	57	28	51	49	33	28	55	61	63
Prawns/shrimps	74	75	55	72	69	66	48	75	80	81

5.5 Consumer Attitudes to Places of Purchase/Consumption of Fish

For managers of outlets that cater to out-of-home consumption of fish and seafood, it is important to have an understanding of some of the criteria consumers use to select a place to purchase/consume fish and seafood.

As Figure 5.1.3 showed the five commercial outlets: restaurants; clubs; hotels; fish and chip shops; and fast food outlets/take-aways, account for 60% of grocery buyers out-of-home meal-type-occasions. Most remaining meal-type-occasions consist of those consumed at friends'/relatives' houses, work cafeterias and "other" outlets which are not catering to the general public. Hence these outlets have not been included in the section of the questionnaires dealing with consumer attitudes.

Only those respondents to the 'Out-of-Home' consumption questionnaires whose last out-of-home fish and seafood meal had been within the last seven days and at one of the five above mentioned commercial outlets, were polled for their attitudes. They were asked to score the importance of eight factors in terms of how they affected their decision to order fish/seafood on the menu. Figure 5.5.1 illustrates the scale used as the basis for the survey results shown in Table 5.5.1. This Table provides a listing of the eight factors which were drawn from an analysis of consumer focus group responses and industry leader interviews conducted as part of the current study.

Figure 5.5.1: Scale Used to Score Importance of Factors

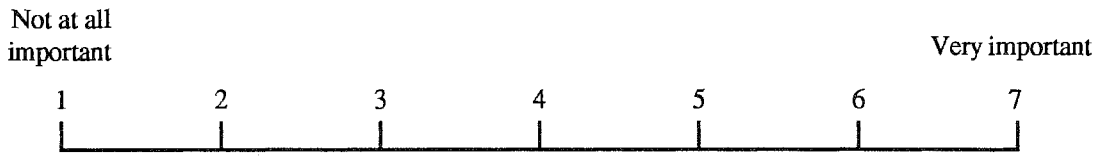


Table 5.5.1 shows that all eight statements were seen as having some importance based upon the averaged scores all above 4.0.

Nonetheless, the range of average responses for each outlet does show respondents placing relatively more importance on some factors. For example, respondents placed far more importance on a restaurant's clean premises than its consistently low prices when deciding on ordering fish/seafood from the menu.

The ranking numbers shown in the Table assist in this comparison. It can be seen that there is little difference in the ranking of statements between each outlet. The top three ranked factors for all outlets are "clean premises", "fresh rather than frozen" and "has a reputation for quality seafood", though not necessarily in this order. It is quite apparent that a proprietor of any one of these premises who wishes to maximise sales of fish/seafood must pay attention to these three factors at the very least. The relatively low ranking of factor "consistently low prices" also indicates that many consumers are willing to pay for cleanliness, fish/seafood freshness and quality.

However, there are differences in relative scores across outlets. For example, low prices are seen as relatively more important to diners at clubs than those at restaurants. The generally lower importance scores for fast food/take-away outlets indicates that customers tend to be less critical of these outlets than of the other types of outlet.

Table 5.5.1: The Importance of Factors in Selecting Fish/Seafood on a Menu: Averaged Score of Grocery Buyers[2]

Importance of:	Place where last purchased/ate seafood in the last seven days				
	Restaurant	Club	Hotel	Fish and Chip Shop	Fast Food/Take-Away Outlet
clean premises	6.7 (1)[1]	6.8 (1)	6.7 (1)	6.7 (1)	6.7 (1)
fresh rather than frozen is used	6.1 (2)	6.0 (2)	5.7 (2)	6.1 (3)	5.4 (3)
has a reputation for quality fish/seafood	5.8 (3)	5.8 (3)	5.6 (3)	6.2 (2)	5.5 (2)
has consistently low prices	4.4 (8)	5.0 (6)	4.7 (8)	5.1 (7)	4.6 (6)
offer Australian fish/seafood	5.1 (5)	5.1 (5)	5.3 (4)	5.6 (5)	4.7 (5)
has informed staff	5.1 (6)	4.9 (7)	4.9 (6)	5.2 (6)	4.3 (8)
offers a wide variety	5.1 (7)	4.6 (8)	4.9 (7)	5.0 (8)	4.4 (7)
can be sure that fresh fish or seafood has not been frozen	5.8 (4)	5.5 (4)	5.2 (5)	5.8 (4)	4.8 (4)

Note: (1) Figures in brackets are the ranking of the statement relative to others for the same outlet

(2) Non-grocery buyers' responses were very similar to those of grocery buyers and hence were not shown.

6. Detailed Findings - Institutional Consumption Study

6.1 Institutional Respondents - Type, Position and Purchasing Responsibility

Estimation of the *per capita* consumption of fish and seafood requires that consideration be given to the proportion of the Australian population which resides in locations other than households, yet still eats fish and seafood. For this reason, seven main types of institutional residences were sampled, so as to gather data on their consumption volumes and patterns. The attitudes of the person responsible for purchasing fish/seafood were also surveyed. Types of institutions sampled were as follows:

- hospitals and nursing homes
- residential schools and colleges
- prisons
- army defence bases
- navy defence bases
- air force defence bases
- welfare and charitable homes.

The composition of the sample comprising institutions is shown in Figure 6.1.1.

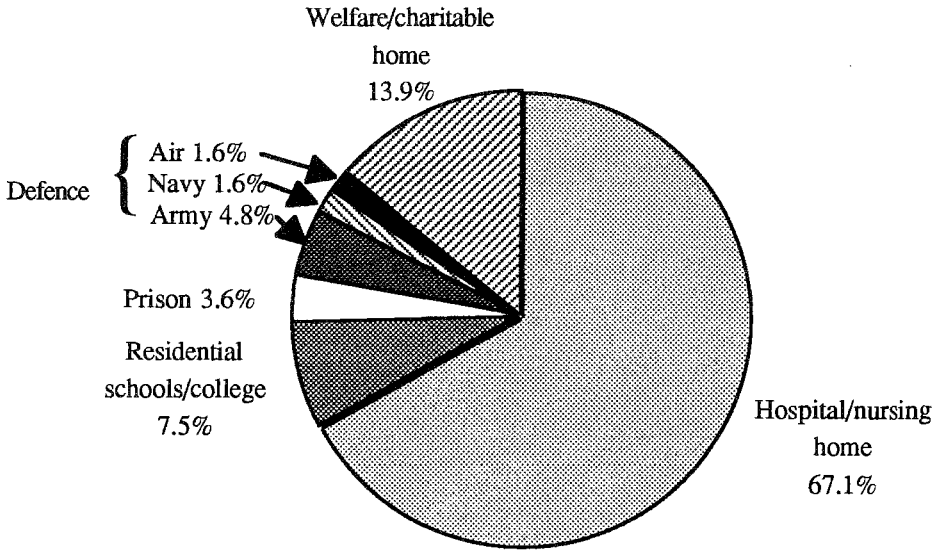
The 252 respondents for the analysis of fish and seafood consumption in "institutions" were drawn from Sydney, Melbourne, Brisbane, Perth and Adelaide. Thus, in contrast to other "trade" sector studies (see Trade/In-Home and Trade/Out-of-Home reports), Hobart was omitted from this sector.

The frequency with which each type of institution was included in the sample and their distribution across the Australian city locations reflect national population demographics.

The positions held by questionnaire respondents in these various institutions were varied (Figure 6.1.2; Question 1a, Appendix IV). The single largest group was that of "catering manager". This situation is understandably different from other trade segment studies, where two groups such as manager/director and owner/partner typically comprised 80 - 90% of the sample base.

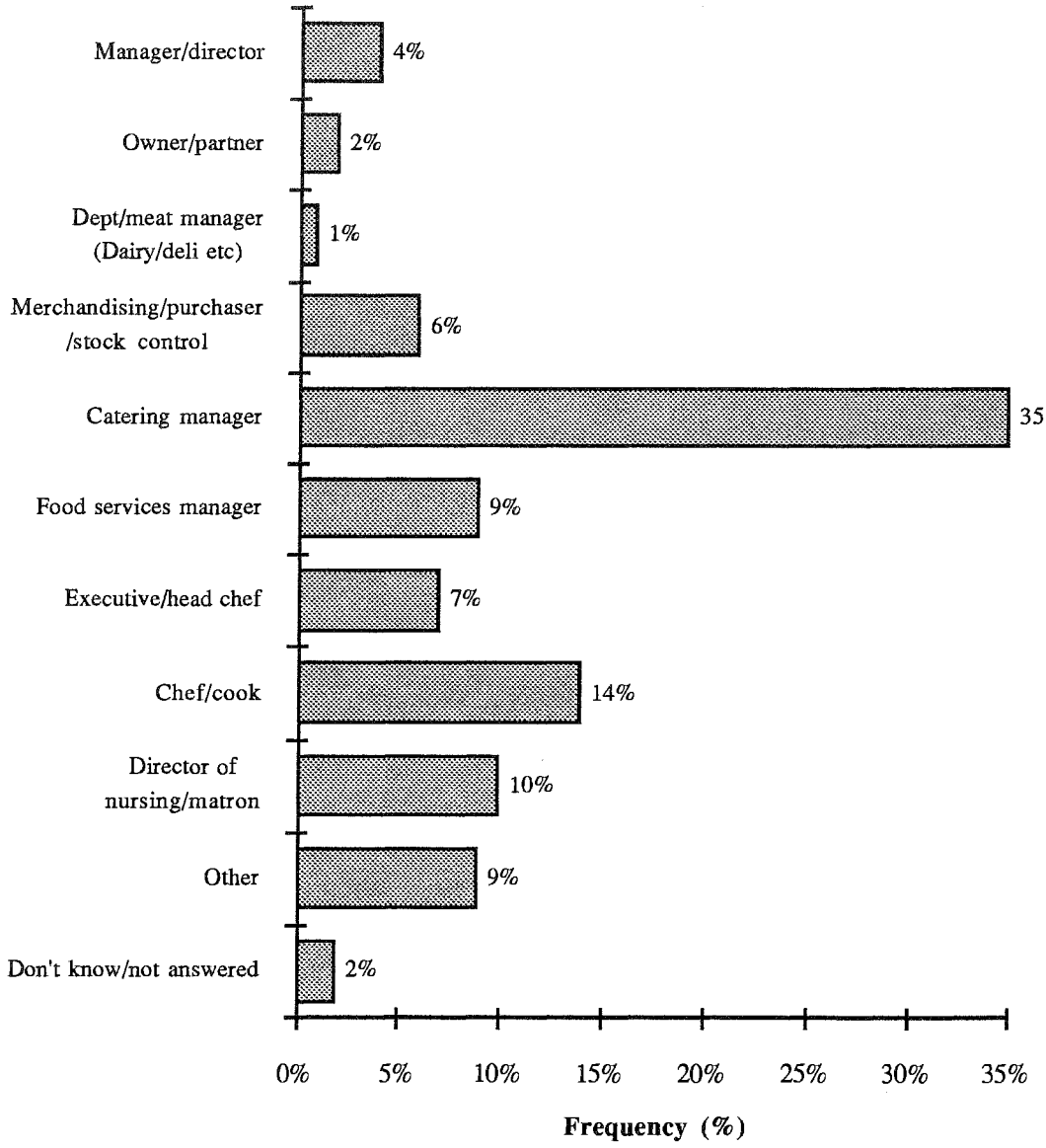
Despite the diversity of nominal positions held by respondents, all were responsible for purchasing decisions on fish and seafood at their institution. The majority (90%) were responsible for buying for that one institution only. Of the remainder, 12 had purchasing responsibility for two organisations, four respondents for three, one respondent for four, three for five organisations, and three for six or more organisations (Questions 1b - e, Appendix IV).

Figure 6.1.1: Types of Institutions Comprising the Survey Base for Institutional Fish and Seafood Consumption



252 respondents were selected from 7 types of institutions across the May 1991 and September 1991 surveys.

Figure 6.1.2: Position of Respondent from Institutions



252 respondents offered 252 responses across the May 1991 and September 1991 surveys (see Question 1a, Appendix IV).

6.2 Type of Supply - Initial Data

The sample of institutional organisations was asked whether they were part of a buying group for meat, fish and seafood, or poultry products (Question 1f, Appendix IV). Most respondents were not part of a buying group (73% of all respondents); 25% of respondents said they were part of a buying group for the three categories of protein sources described, whereas only 2% replied that they were part of a buying group for fish and seafood only.

A higher than average number of respondents who were part of a buying group for all protein sources came from Sydney and a lower then average number from Melbourne (both at 99% confidence limits). For respondents who were not part of a buying group (even for fish or seafood), fewer than average came from Sydney, more than average from Melbourne (both at 95% confidence limits).

The processes used by institutions in deciding which foods to buy and serve is of key significance to the fish and seafood industry (Question 2, Appendix IV). The most commonly reported process was by a regular set menu (weekly or monthly; Figure 6.2.1), with the application of price or budgetary guidelines being the second most frequent determinant. The third most frequently cited process was through consideration of balanced nutritional and dietary requirements.

The majority of institutions (63%) indicated that their menu was planned out well in advance for a specific period of time and was based on past experience (Figure 6.2.2). An above-average number of hospitals and nursing homes gave this response (at 95% confidence limits). The number of Melbourne institutions which adjusted their menus constantly was higher than average, whereas for Sydney's it was lower than average (both at 95% confidence limits). The most frequent basis for deciding between protein sources such as meat, pork, poultry and fish/seafood was on the basis of these food groups rather than the particular cut or style of meal (eg roasts, casseroles, etc) which could be prepared from them (Figure 6.2.3).

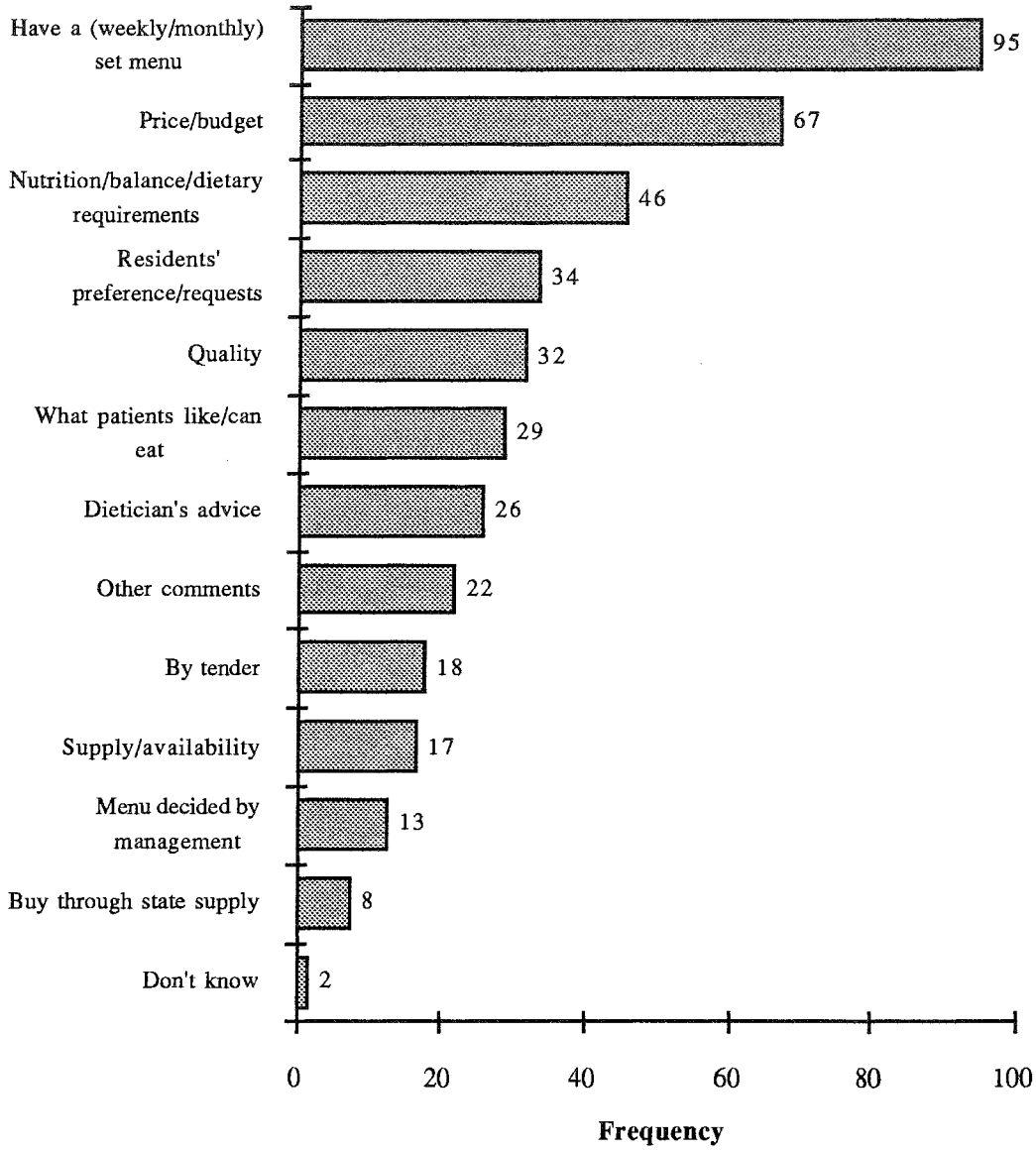
Another aspect to understanding the basis upon which fish and seafood are consumed in institutions is to examine the role which contracts play in the food purchased (Questions 4a - f, Appendix IV). Only 26% of respondents used a tendering process in purchasing their current fish and seafood requirements, while 71% did not. A further 2% did not know. Sydney's institutions were exceptional in that an above-average number did use a tendering process (significant at 99% confidence limits). The number of welfare and charitable institutions nationwide which did use a tendering process was lower that average (95% confidence limits).

The questionnaire explored in greater depth the nature of contracts which were developed through a tendering process. Of the 66 respondents (26% of the sample base) who did purchase through a tendering process, most held only one contract in current operation (Figure 6.2.4). A consistent pattern emerged regarding the duration of contracts held; where one or two contracts were held, the most common duration was a 6 - 12 month contract period (Figures 6.2.5 and 6.2.6). For the nine institutions which held three or more simultaneous contracts, the most common length of the third contract was 1 - 2 years; in the case of the three institutions which held four simultaneous contracts, two were for a 1 - 2 year period and one for a 2 - 3 year interval. A single institution had five simultaneous contracts, the fifth extending over a 1 -2 year period.

On average, those institutions which did buy fish and seafood through a tendering process estimated that they bought 86.2% of these products through contracts (Figure 6.2.7). The most common percentage category in terms of the proportion of fish and seafood purchased by contract was 100%.

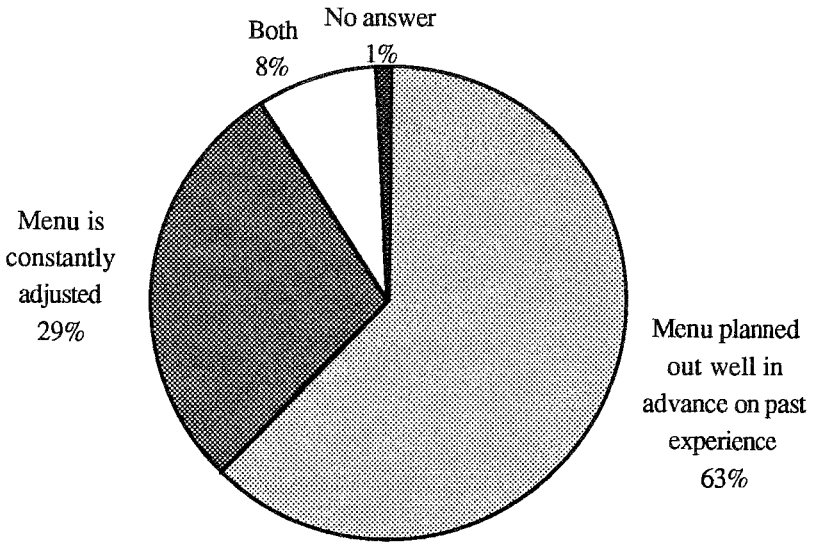
Institutions most frequently cited "quality of product" as the most important factor when awarding a fish or seafood purchase contract (Figure 6.2.8). This quality issue, and the total tender price were of prime importance in contract decision-making (Figure 6.2.9).

Figure 6.2.1: Process by Which Institutions Decide Which Foods to Buy/Serve



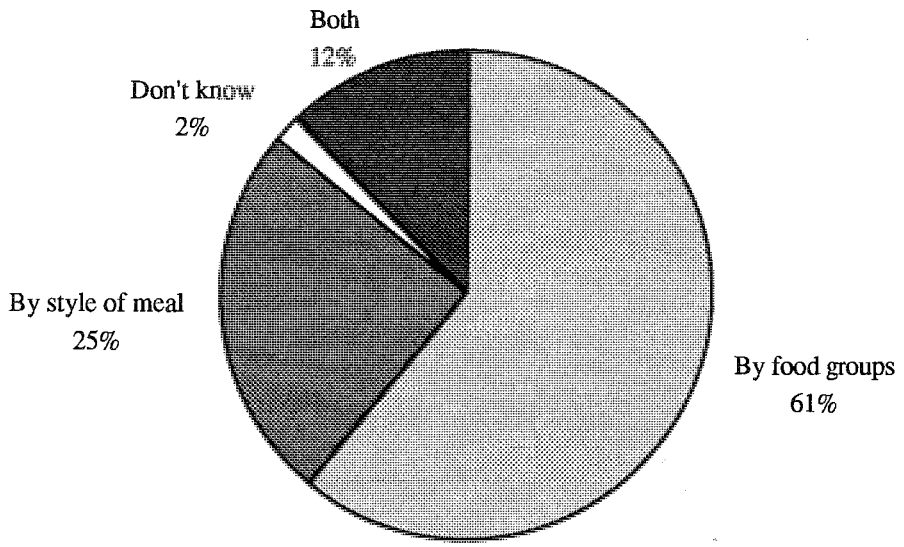
252 respondents offered 409 responses across the May 1991 and September 1991 surveys (see Question 2a, Appendix IV).

Figure 6.2.2: Ways in Which Meals are Planned in Institutions



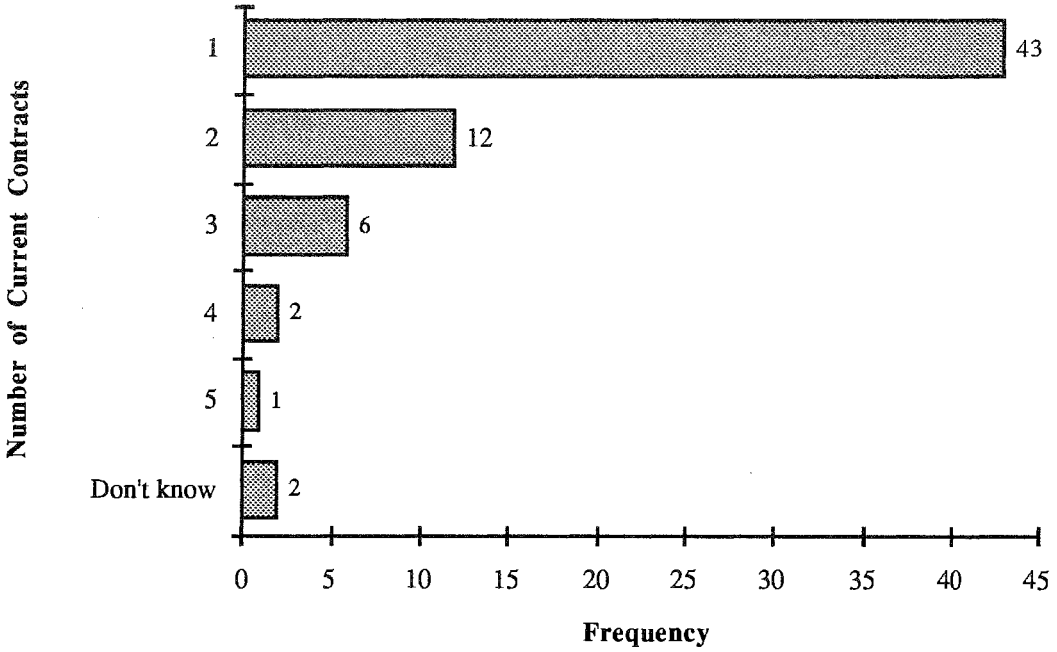
252 respondents offered 252 responses in May 1991 and September 1991 surveys (see Question 2b, Appendix IV).

Figure 6.2.3: Institutions' Use of Food Group or Style of Meal as a Basis for Menu Selection



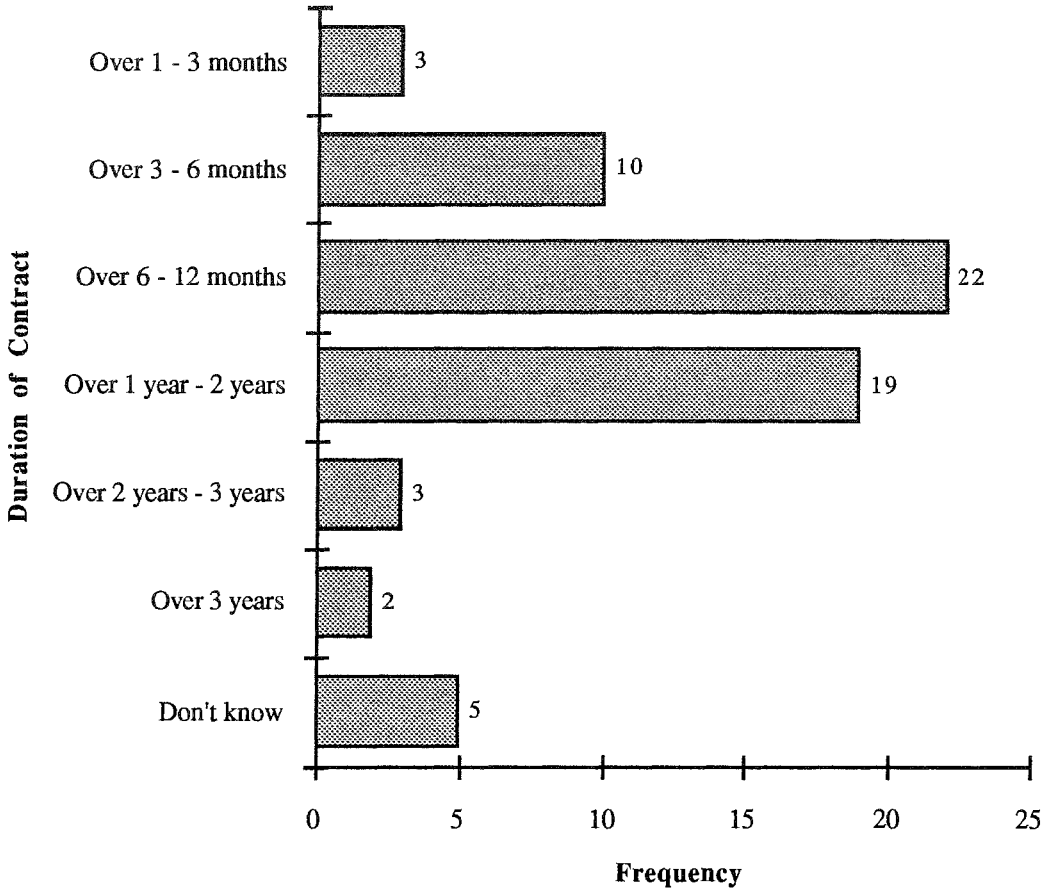
252 respondents offered 252 responses across the May 1991 and September 1991 surveys. One respondent gave no answer (not shown on the figure above; see Question 2c, Appendix IV).

Figure 6.2.4: Number of Contracts Currently in Operation for Fish/Seafood Purchase



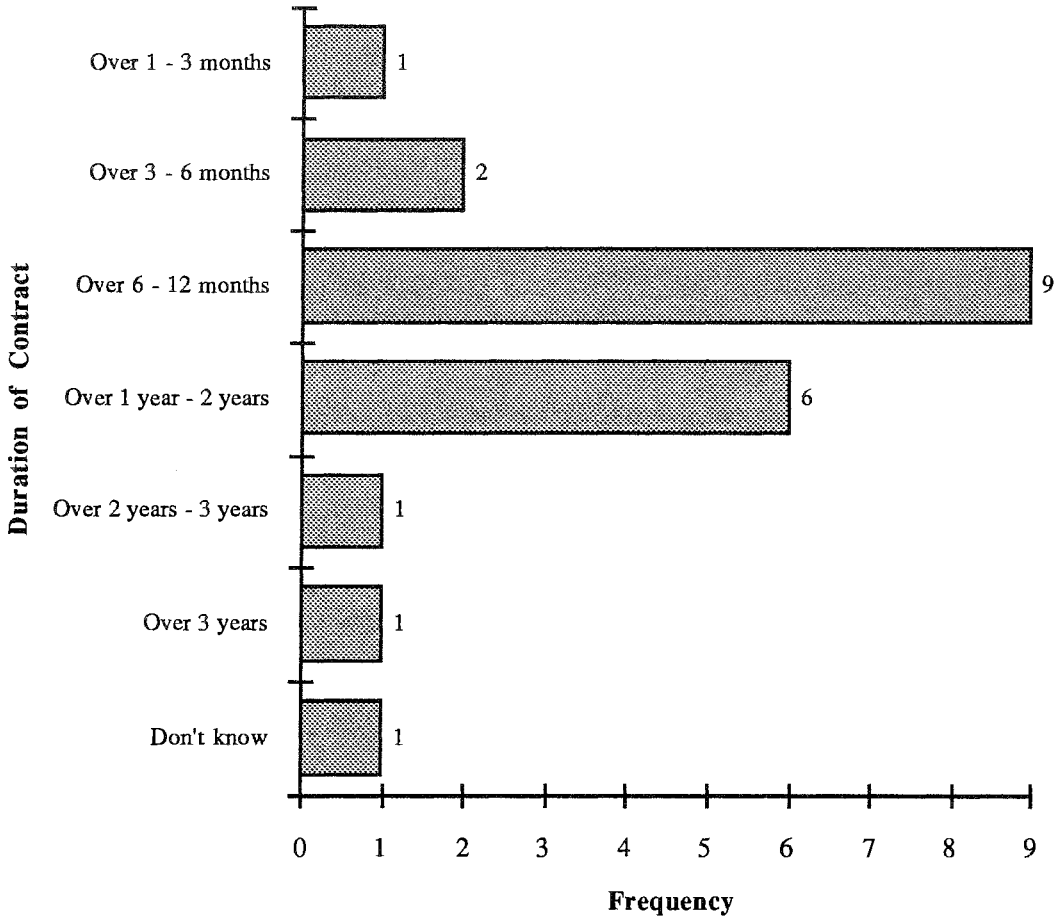
66 respondents offered 66 responses across the May 1991 and September 1991 surveys (see Question 4b, Appendix IV).

Figure 6.2.5: Length of Time for Institutions' Purchase Contract Number 1



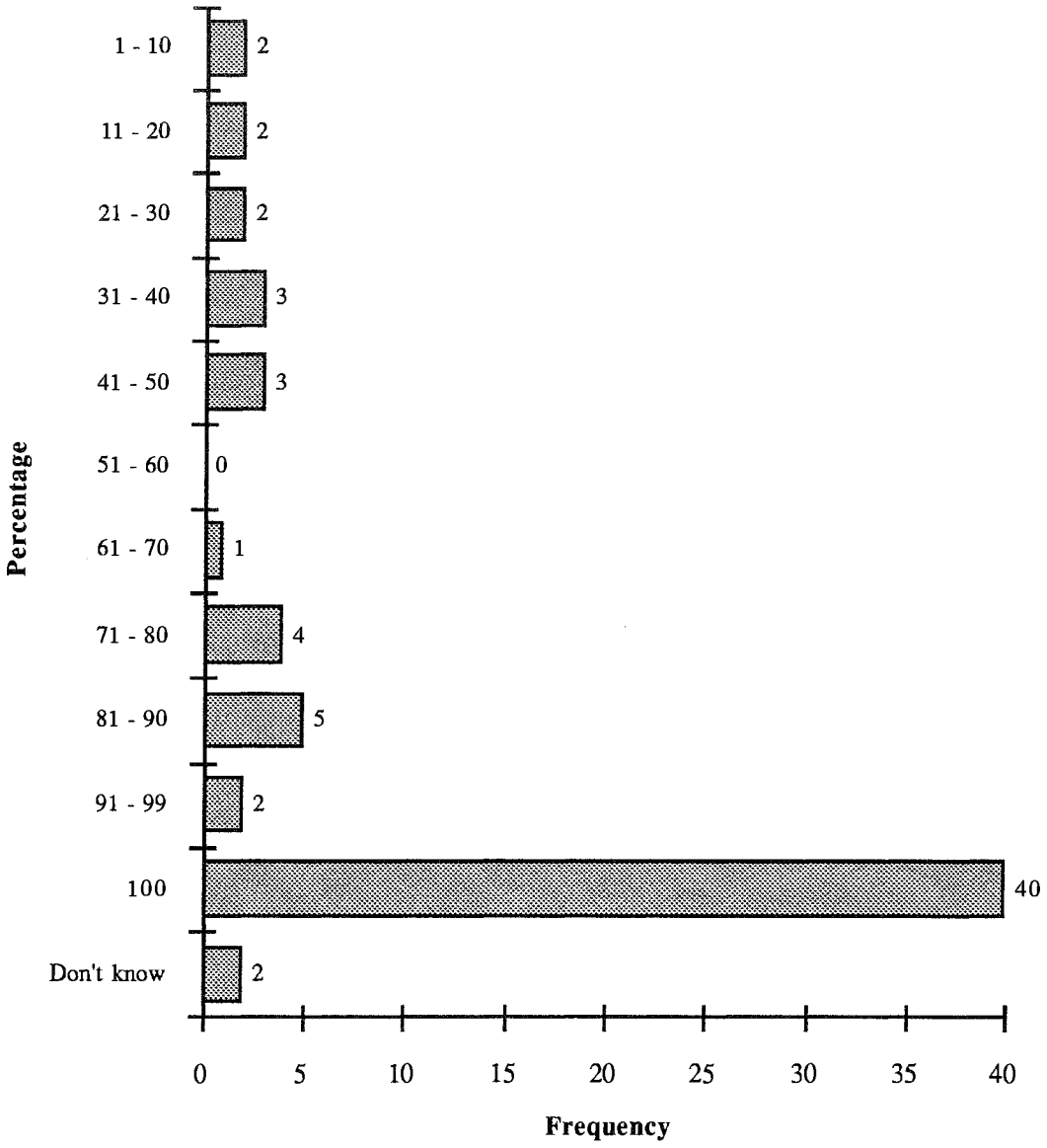
64 respondents offered 64 responses across the May 1991 and September 1991 survey (see Question 4c, Appendix IV).

Figure 6.2.6: Length of Time for Institutions' Purchase Contract Number 2



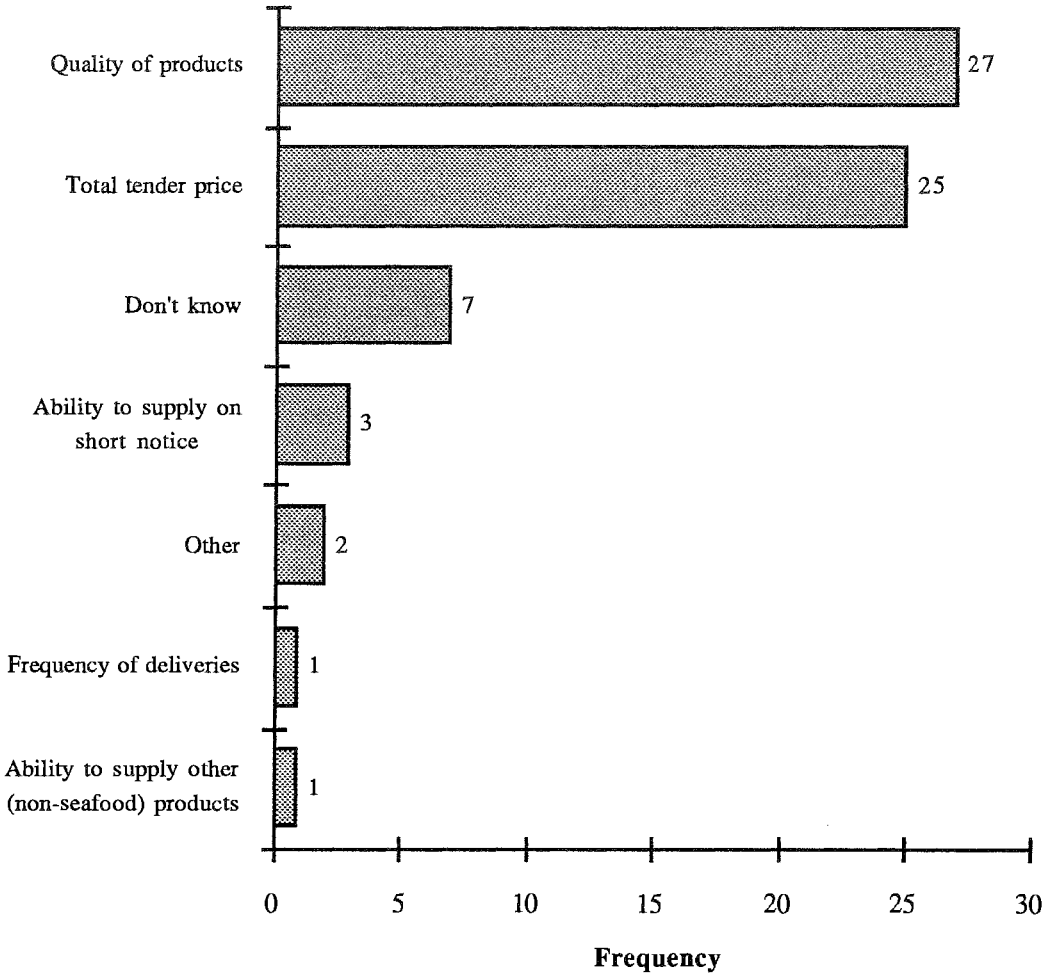
21 respondents offered 21 responses across the May 1991 and September 1991 surveys (see Question 4c, Appendix IV).

Figure 6.2.7: Percentage of Fish/Seafood Purchased via Contracts



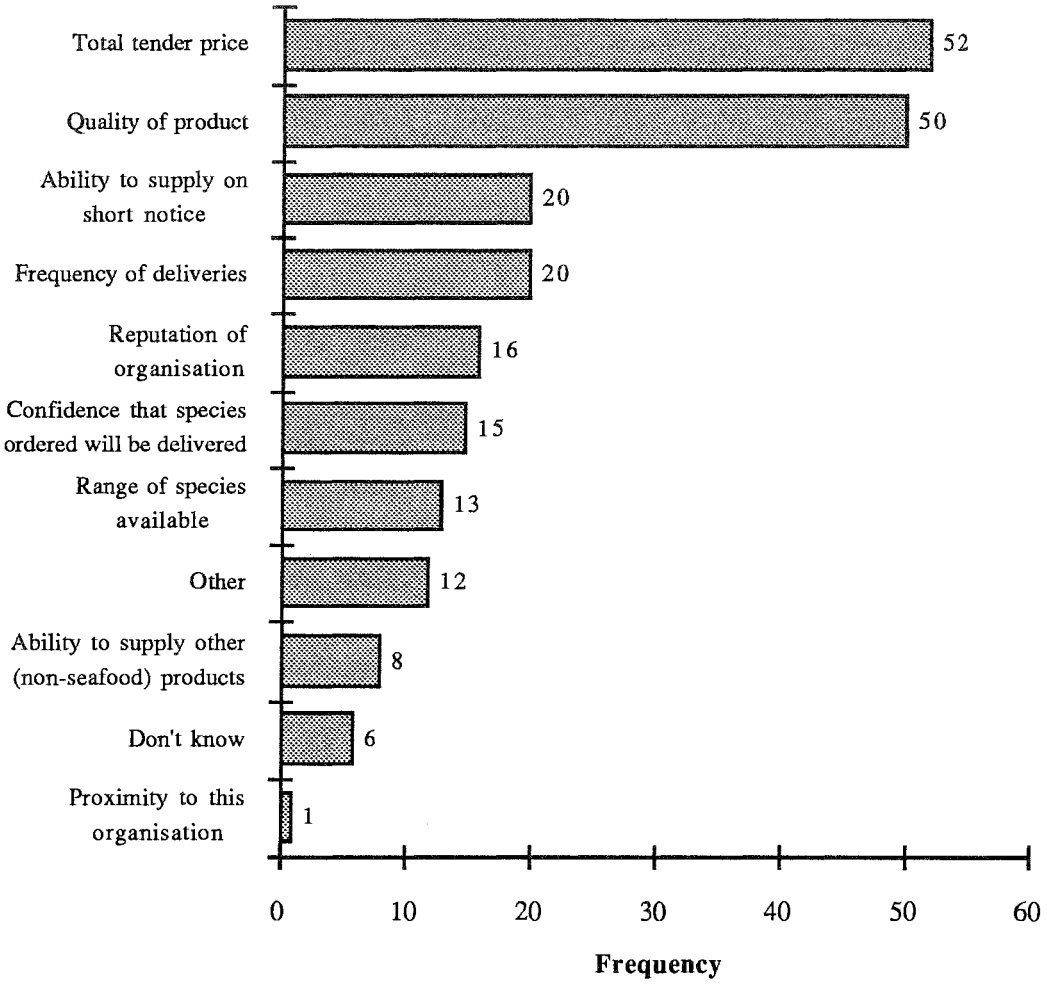
66 respondents offered responses across the May 1991 and September 1991 surveys (see Question 4d, Appendix IV).

Figure 6.2.8: Institutions' Single Most Important Factor When Awarding a Fish/Seafood Purchase Contract



66 respondents offered responses across the May 1991 and September 1991 surveys (see Question 4e, Appendix IV).

Figure 6.2.9: Other Important Factors When Awarding Contracts



66 respondents offered responses across the May 1991 and September 1991 surveys (see Question 4f, Appendix IV).

6.3 Institutions' Perceptions of Protein Sources

This Section of the report relates to the perceptions which personnel with responsibilities for selection of food groups and menu planning in institutions hold about a range of protein sources (Question 2d, Appendix IV). Perceptions relating to six protein sources were investigated, ie:

- meat (beef, lamb, other red meats)
- pork
- poultry
- fresh or frozen fish
- prepared fish products (like fish fingers)
- canned fish and seafood.

Respondents were offered 23 statements or attributes, and asked how well they described these six protein sources. Respondents also had the opportunity to answer that none of the protein sources was described by, or fitted the statement. Survey results are discussed for each of the 23 statements under the subheadings that follow. A summary for each protein source is then made.

Homogeneity of responses

In qualitative terms there was almost no difference between the institutions' responses for the May 1991 and September 1991 surveys.

Supply often cannot be guaranteed

The most frequent perception by far was that this statement applied to none of the protein sources (64% of responses). However, the most frequently cited protein source was fresh or frozen fish (21% of all responses), with others receiving 4% or fewer responses each.

Is often too expensive for the organisation to buy

Again, respondents most frequently associated this statement with none of the protein sources (38% of responses). However, the number of responses which linked this to fresh or frozen fish (23% of responses) was at least double that for any other protein source except canned fish and seafood (16% of responses).

Offers the organisation good value for money

Respondents most frequently linked this attribute with poultry and meat. Fresh or frozen fish ranked third just ahead of pork (14.8% and 14.5% of responses each, respectively).

Is likely to go off and have to be thrown out

This statement was most frequently associated with none of the protein sources (60% of responses). However, fresh or frozen fish was the next most frequent reply (14.9% of responses).

Presents a problem in waste disposal

This was most frequently associated with none of the protein sources (86% of responses), with canned fish and seafood and poultry ranking next (6% and 5% of responses, respectively).

Staff dislike preparing and cooking it

This was most frequently associated with none of the protein sources (81% of responses), with fresh and frozen seafood being the second most frequent association (9% of responses).

Our staff don't have the knowledge to prepare and cook it

Again, this was thought to generally suit none of the protein sources (88% of responses); remaining responses were scattered amongst the six protein sources with fresh or frozen fish receiving more than an even share (4.5% of responses).

It takes up little storage space

Canned fish and seafood was most frequently associated with this attribute (22% of responses), but its low relative share of responses is indicative of the broad spread of responses across the remaining food groups (including "none", with 17% of responses).

It is difficult to buy in the right size portions for presentation on plate

This was most frequently perceived to apply to none of the food groups (74% of responses); nevertheless, fresh or frozen fish was cited more frequently than other protein sources (11% of responses).

Preferred by more of my clients

Poultry and meat were most frequently associated with this statement (27% of responses each), well ahead of any other food groups. Fresh or frozen fish ranked third (15% of responses).

It can be reused later after it has been cooked initially

Respondents most frequently associated this statement with meat (30% of responses). Together, meat, pork and poultry accounted for 67% of responses, with the three marine food groups receiving only 16% of responses.

Our staff don't have the knowledge to buy it confidently

Most frequently it was perceived that this applied to none of the protein sources (84% of responses). Fresh or frozen fish (5% of responses) was associated with this attribute ahead of any other protein source.

Is easily available to buy

Respondents' perceptions were that in broad terms all protein sources were easily available to buy. Meat was the most frequently cited response (17.1%), and prepared fish products the least frequently cited (15.7% of responses).

It is easy to prepare

Again, their was little perceived difference between protein sources regarding this attribute. Meat was the most frequently cited response (17.7% of responses) and prepared fish products the least frequently cited (15.4% of responses).

Suits the menu which we offer

Meat and poultry were most frequently perceived to be associated with this attribute (19% of responses each). Fresh or frozen fish ranked next ahead of pork (17.2% and 16.6% of responses, respectively), while there was still a positive perception of both canned fish and seafood and prepared fish products (14.6% and 12.9% of responses, respectively).

Its quality varies

This negative attribute was most frequently associated with meat (27% of responses). Whilst "none" was the second ranked selection, fresh or frozen fish was the next most frequently selected protein source (21% of responses). Prepared fish products and canned fish and seafood were least frequently associated with this negative attribute.

Prices fluctuate too much

Respondents most frequently associated this with none of the protein sources (39% of responses). However, fresh or frozen fish was the protein source most associated with the statement (22% of responses), ahead of meat (14% of responses).

An essential part of the range we offer

Meat and poultry were more strongly associated with this attribute than the other protein sources (22.6% and 20.7% of responses respectively), followed by fresh or frozen fish and pork (17.3% and 15.9%, respectively). Canned fish and seafood, and prepared fish products were less frequently perceived as being essential elements in the range of foods offered (12.4% and 10.8% of responses, respectively).

Is a filling meal

Meat was most frequently perceived as the filling meal (22.5% of responses). Fresh or frozen fish ranked fourth behind poultry and pork with 15.5% of responses.

Is a healthy meal

Fresh or frozen fish was most frequently perceived as offering a healthy meal (20.7% of responses), followed by poultry and meat.

Does not have a lot of flavour

Respondents most frequently associated this with none of the protein sources (46% of responses). However, of the six protein sources under discussion this attribute was more frequently associated with fresh and frozen fish (15.9% of responses); furthermore the other fish/seafood protein sources were also regarded more negatively on flavour than meat, pork or poultry.

Looks good on the plate

This attribute was fairly equally associated with meat, pork, poultry and fresh and frozen fish. Poultry was marginally favoured ahead of other protein sources (19% of responses), with prepared fish products and canned fish and seafood having the lowest perception regarding presentability on plate (13.6% and 13.5% of responses, respectively).

Suited to microwave cooking

This attribute was most frequently associated with none of the protein sources (28% of responses). Remaining responses were fairly evenly spread across the six protein sources, with responses for poultry, fresh or frozen fish and meat (14.6%, 13.1% and 12.3% respectively) ranking ahead of the other three.

Summary by Protein Source

Poultry is the protein source with the most favourable perception among institutional food buyers. It is most likely to be perceived as offering good value for money, and as being preferred by more clients. Second to **meat**, it is thought easily available to buy, easy to prepare, a healthy meal, and able to be reused later after it has been cooked initially. **Meat** suffers most of all the protein sources from variation in quality, but second to **poultry** is seen to offer good value for money, and to be preferred by more clients. **Poultry and meat are clearly protein sources most strongly preferred by institutional food buyers.**

Fresh or frozen fish is most likely to be considered to be a healthy meal by institutional buyers of food, ranking higher than either **poultry** or **meat**. It is associated with a number of negative perceptions as well. Second to **meat**, its quality is considered to vary, and it is most likely to be considered too expensive for the organisation to buy, to have prices which fluctuate too much, to suffer because supply often cannot be guaranteed, to lack flavour, and to be likely to go off and have to be thrown out. Like **canned fish and seafood** and **prepared fish products** it is thought to take up little storage space, but unlike most of the other protein sources, is generally perceived as being unable to be reused later after it has been cooked initially.

Generally, **prepared fish products** and **canned fish and seafood** have the weakest image of the six protein sources among institutional food buyers. Their strength is that they take up little storage space, but they are not seen as offering the organisation good value for money, nor are they preferred by more clients. They are the least likely protein sources to be seen as offering a healthy meal. **Pork** does not have a strong image with institutional buyers either, though it is seen slightly more positively than **prepared fish products** and **canned fish and seafood.**

6.4 Institutions' Problems in Buying and Preparing Fish and Seafood

The 252 respondents in the institutions' sample base were asked to give their views on the main problems in buying and preparing fish and seafood (Question 3a, Appendix IV). The single most frequent response (coming from almost one in five respondents) was that there were no problems (Figure 6.4.1). The three next most frequently raised problems were:

- price - too expensive/price fluctuations
- availability of fish and seafood/unreliable supply
- freshness/not always fresh.

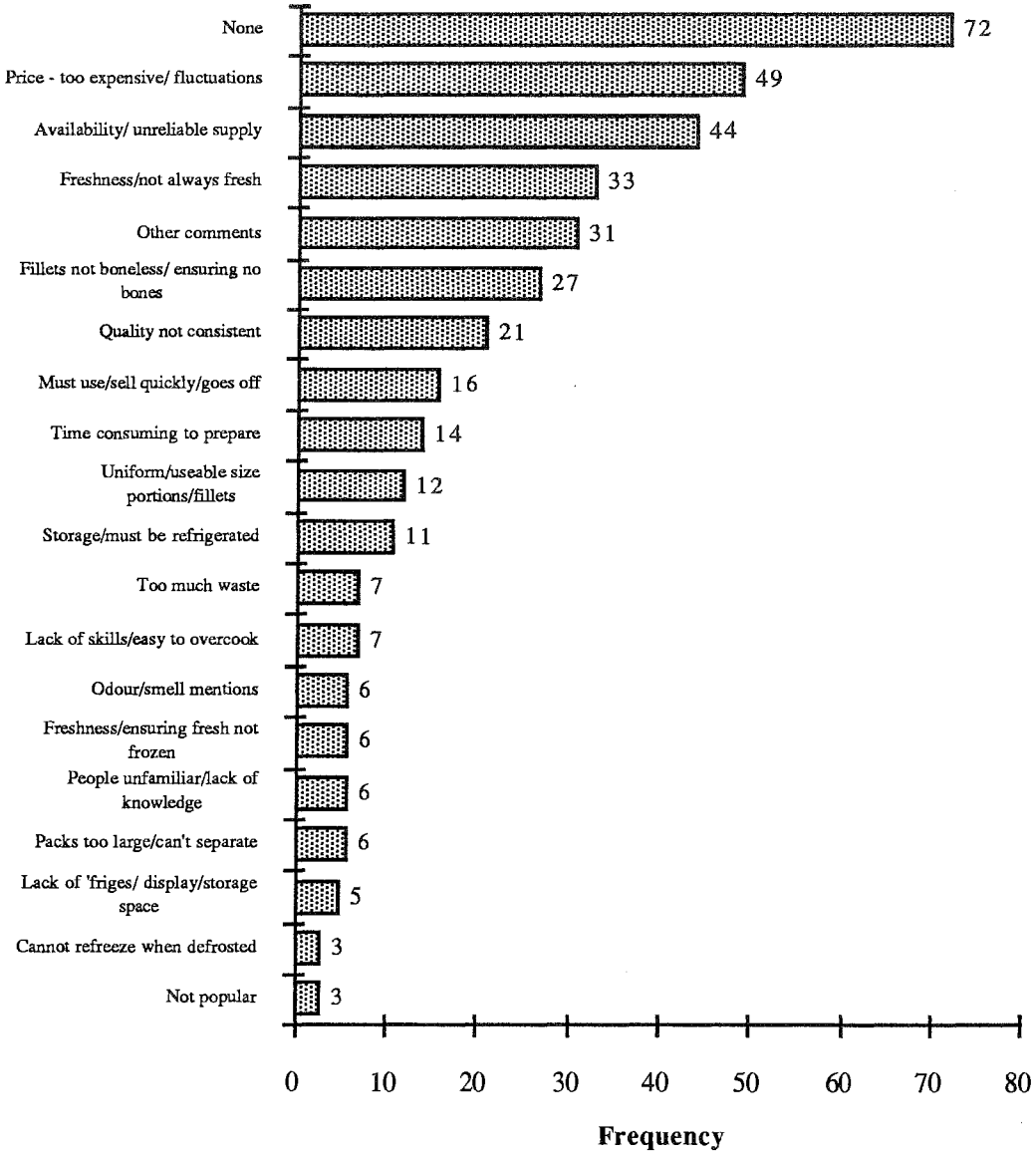
The same issues raised by institutions were those focused on by the five trade segments covered in another part of this study (see the reports Trade Supplies to the Public for In-Home Consumption [Retail, Fishmongers, Wholesalers and Warehouse Withdrawals Data], and Trade Supplies to the Public for Out-Of-Home Consumption [Caterers, 'Restaurants' and 'Take-aways']).

Respondents were then shown a list of 20 problems which other preparers of fish and seafood had encountered. (These problems were identified at the Industry Leader Interview stage of the study.) Respondents were asked to rate quantitatively the significance of problem represented by these issues, on a scale 0 - 3 (Question 3b, Appendix IV). One major point to emerge from the results (Figure 6.4.2) is that no great significance is attached to any of the problems, as indicated by the relatively low aggregate "scores" given them by respondents. Most significance was placed on the views that:

- seafood is too expensive to buy
- clients dislike buying fish because of the bones, and
- the risk of buying fish and seafood "sight unseen".

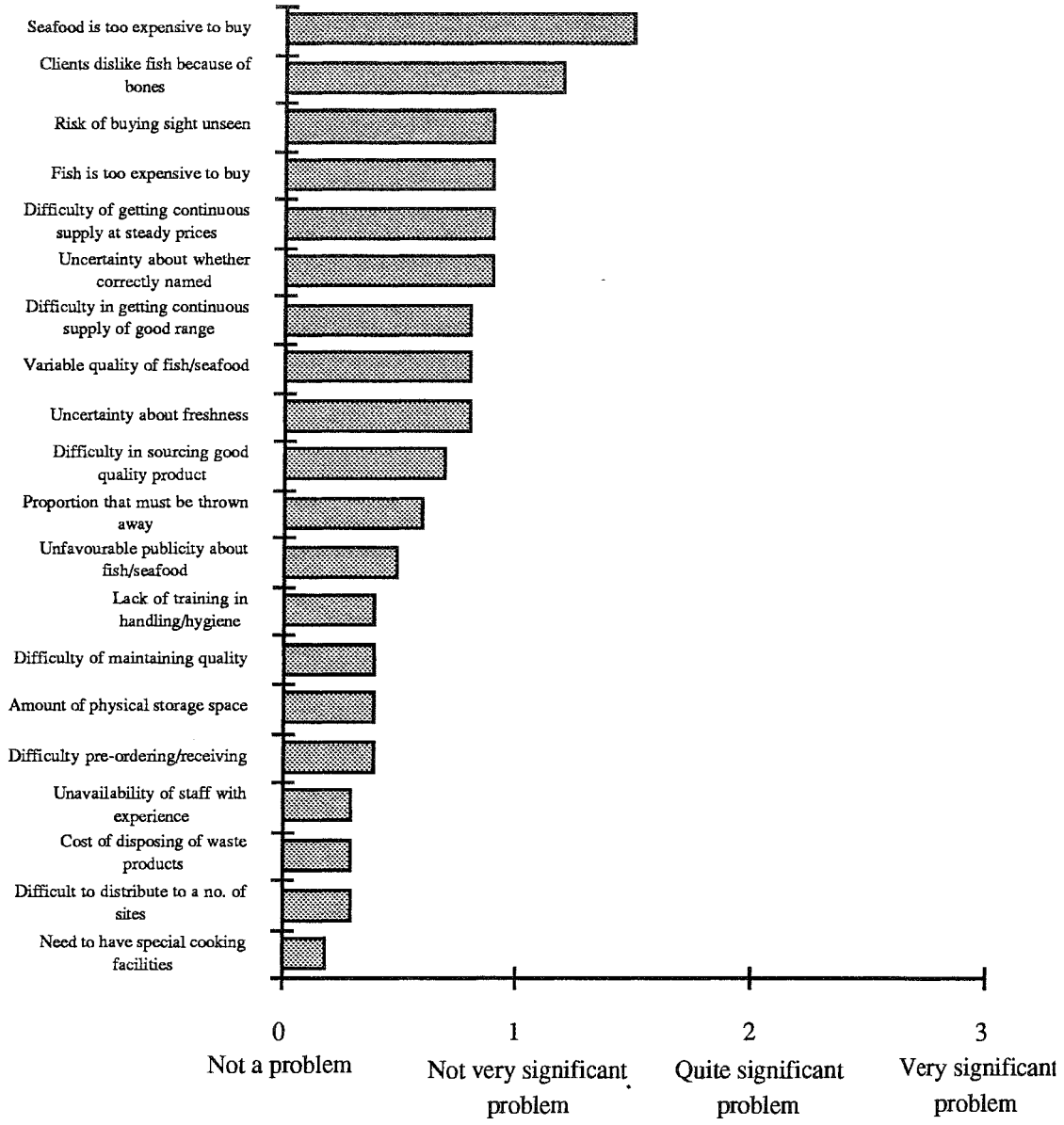
Institutions' preoccupation with the freshness of their fish and seafood purchases and the relevance attached to the risks of buying "sight unseen" suggests some have difficulties in purchasing fresh fish and seafood.

Figure 6.4.1: Institutions' Main Problems in Buying or Preparing Fish/Seafood



252 respondents offered 379 responses across the May 1991 and September 1991 surveys (see Question 3a, Appendix IV).

Figure 6.4.2: Institutions' Views on the Degree of Problem Associated with Preparing Fish/Seafood



252 respondents offered 252 responses to each of 20 statements across the May 1991 and September 1991 surveys (see Question 3b, Appendix IV).

6.5 Fish and Seafood Purchases - Types, Formats, Origins and Volumes

Institutional respondents were asked how many different species of fish they generally buy at the time of year the interview was conducted. As Figure 6.5.1 (page 353) shows, the most common response was just three species (25% of all institutions surveyed).

Welfare and charitable homes made up a higher than average number of those buying just one fish species (significant at 95% confidence limits) and no species at all (99.9% confidence limits).

For seafood purchases the purchase pattern was markedly different than for fish; the most common number of species bought was none, with institution numbers dropping as number of species purchased increased (Figure 6.5.2).

For those institutions which bought no seafood, a higher than average number were again welfare and charitable homes (99.9% confidence limits). Fewer than average of these "no seafood" institutions were located in Sydney (99.9% confidence limits).

Where institutions bought just one species of seafood, a higher than average number of these were Sydney based (99.9% confidence limits).

Questionnaires sought more detailed data on the species/types of fish and seafood bought by institutions, the format in which the food was purchased and its geographic origin (Questions 5b, 6a, 6b, 8, Appendix IV). Table 6.5.1 sets out the number of institutions replying that they bought the main types of fish. Hake emerges as that species purchased by the largest number of institutions. The number of institutions that purchased orange roughy may be understated since this species is also commonly known as sea perch in New South Wales.

Table 6.5.1: Main Types of Finfish Currently Bought by Institutions, Preferred Format and Presumed Origin

Type of finfish	Rank	Number of institutions purchasing(1)	Preferred form bought(2)	Origin - weighted average estimate (% local/ Australian)
Hake	1	115	Frozen fillet	37.3%
Orange roughy	2	48(3)	Frozen fillet	75.6%
Blue grenadier	3	43	Fresh fillet	61.8%
Whiting(4)	4	42	Frozen fillet	82.5%
Smoked cod	5	34	Frozen fillet	28.9%
Shark	6	27	Fresh fillet	91.1%
Barramundi	7	19	Frozen fillet	86.4%
Flounder (unspecified)	7	19	Frozen fillet	70%
Snapper	7	19	Frozen fillet	93.3%

(1) 252 respondents offered 596 responses for May 1991 and September 1991 surveys for a total of 63 fish species/categories
(2) alternative forms considered were: fresh/frozen (live, whole, filleted, cutlet, gutted/peeled, boiled or smoked), prepackaged or prepared, canned, in glass.
(3) orange roughy responses may be understated since this species is commonly known as sea perch in New South Wales. There were 15 responses for perch (unspecified), an above average number of these from Sydney (12 of 15, significant at 99.9% confidence limits)
(4) predominantly "unspecified", but includes one response on sand whiting and one on an additional Australian whiting species.

Institutions also showed a clear preference for buying their fish as fillets, either frozen or fresh. Also of note is that a high proportion of two of the main types of fish bought was said to be imported, ie hake and smoked cod (in fact all of the quantities of these species consumed in Australia are imported, though obviously not all respondents knew of this).

Analysis of the data on the finfish purchases according to location showed several significant differences (Table 6.5.2), reflecting preferences in tastes, proximity to catching grounds, etc. Information on perch (unspecified) purchases have been included to complement the data on orange roughy; sea perch is the commonly used name for orange roughy in New South Wales, where it is quite popular.

Table 6.5.2: Leading Finfish Species/Types Sold by Institutions, According to Location

Leading finfish species/types	Number of Institutions Purchasing: by City				
	Sydney	Melbourne	Brisbane	Adelaide	Perth
Hake	29	29	18	20 (+)	19 (+)
Orange roughy	14	22 (++)	9	1 (-)	2
Blue grenadier	7 (-)	27 (+++)	6	1 (-)	2
Whiting(1)	3 (---)	18 (+)	9	3	7
Smoked cod	7	8	10 (+)	7	2
Shark	2 (--)	21 (+++)	2	1	1
Barramundi	2	8	4	1	4
Flounder (unspecified)	7	7	1	4	0
Snapper	1 (-)	5	6	1	6 (++)
Perch (unspecified)	12 (+++)	1 (-)	2	0	0

(+++), (++), (+) denotes frequencies of responses for a species/type which are significantly greater than would be expected for that location (at 99.9%, 99% and 95% confidence limits, respectively)

(---), (--), (-) denotes frequencies of response for a species/type which are significantly lower than would be expected for that location (at 99.9%, 99% and 95% confidence limits respectively)

An absence of '+' or '-' indicates that numbers are not statistically significantly different for that location in that row.

(1) data for whiting (unspecified) only are shown. Adelaide's response for sand whiting was statistically above average (99% confidence limits). An additional response came from Melbourne for "other Australian whiting species".

The eight types of seafood (all forms) or processed fish most commonly purchased by institutions are shown in Table 6.5.3.

Table 6.5.3: Eight Main Types of Seafood (all forms) or Processed Fish[2] Currently Purchased by Institutions, Preferred Format Bought and Presumed Origin

Type of product	Rank	Number of institutions purchasing[1]	Preferred form bought	Origin - weighted average estimate (% local/ Australian)
Tuna, canned	1	169	Canned	66%
Salmon, canned[3]	2	164	Canned	52%
Prawns	3	88	Frozen, whole	61%
Sardines, canned	4	39	Canned	42.9%
Scallops	5	34	Frozen	54.5%
Squid/calamari	6	26	Frozen, other	61.3%
Oysters	7	24	Fresh	100%
Fish fingers	8	22	Prepackaged	80.8%

[1] 252 respondents offered 807 responses for May 1991 and September 1991 surveys for a total of 59 canned fish or seafood products or species/types
[2] alternative forms considered were: fresh/frozen (live, whole, filleted, cutlet, gutted/peeled, boiled or smoked), prepackaged or prepared, canned, in glass
[3] predominantly unspecified, but includes responses on red salmon, pink salmon and Australian canned salmon (11, 29 and 5 responses respectively).

Other than oysters (100% Australian origin), significant proportion of the other leading seafood and processed fish species was thought to be imported.

Regional data on the types of seafood or processed fish most commonly bought by institutions (Table 6.5.4) show only three points of note, ie the above average purchase of prawns in Sydney (99.9% confidence limits) and below average purchase of prawns in Melbourne and scallops in Brisbane (99.9% and 95% confidence limits, respectively).

Table 6.5.4: Leading Seafood Species/Types (all forms) and Processed Fish Purchased by Institutions, According to Location

	Number of Institutions Purchasing: by City				
Type of product	Sydney	Melbourne	Brisbane	Adelaide	Perth
Tuna, canned	51	52	25	23	18
Salmon, canned	55	46	26	16	21
Prawns	42 (+++)	15 (---)	15	7	9
Sardines, canned	8	16	6	5	4
Scallops	11	15	1 (-)	2	5
Squid/calamari	15	5	2	2	2
Oysters	7	7	6	3	1
Fish fingers	9	6	4	2	1

(+++), (++), (+) denotes frequencies of responses for a species/type which are significantly greater than would be expected for that location (at 99.9%, 99% and 95% confidence limits, respectively)
(---), (--), (-) denotes frequencies of response for a species/type which are significantly lower than would be expected for that location (at 99.9%, 99% and 95% confidence limits respectively)
An absence of '+' or '-' indicates that numbers are not statistically significantly different for that location in that horizontal row.

Thus far we have discussed in this Section the species or types of fish/seafood institutions generally purchased around the time interviews were conducted. Respondents were also asked to provide the total volume of each of these fish/seafood species or types mentioned, purchased in the calendar year 1990. Hence the results will show the 1990 calendar year total volume purchased of those species mentioned as being bought around May 1991 or September 1991.

The responses to this question were aggregated across all institutions sampled in each survey period to provide the finfish and seafood purchase volume data shown in Figures 6.5.3 and 6.5.4 respectively.

Figure 6.5.3 shows that the finfish species generally purchased around the time of the September 1991 survey were most commonly purchased in annual volumes in the ranges 76 - 100kg, 101 - 150kg, 151 - 200kg and 201 - 300kg.

However, around the time of the May 1991 survey more finfish species were purchased in low annual volumes less than 50kg per annum, or very high annual volumes in the 2001 - 5000kg per annum range, than was the case in the September 1991 survey.

Figure 6.5.4 shows far more of the seafood and processed fish species/types mentioned by respondents of both survey periods were purchased in the low annual volume ranges than was the case for finfish. A particularly large number of seafood/processed fish species/types mentioned were purchased in quantities that were not known by the respondent, which is probably indicative of low and infrequent purchasing of these species/types.

Figures 6.5.5. and 6.5.6 reproduce the data shown in Figures 6.5.3 and 6.5.4 respectively by summing (aggregating) the number of fish and seafood or processed fish species/type mentions over the two survey periods. For example, the eight fish species/type mentions from the May 1991 survey and the two fish species/type mentions from the September 1991 survey that were purchased in annual volumes of 1 - 5kg (Figure 6.5.3) are the ten fish species/type mentions of Figure 6.5.5 in the same weight range. In addition to this data, the number of **different** fish species/types within these ten mentions, were nine. These nine are shown in Figure 6.5.5 alongside the ten mentions in the 1 - 5kg weight range.

Figure 6.5.5 shows that a diverse range of fish species made up the purchases in the low annual volume ranges below 50kg per annum. For example, in the 6 - 10kg per annum range, 19 different species/types made up the 20 mentions by institutions in the survey - only two institutions bought the same kind of fish in this weight range. On the other hand, high annual volume fish purchases showed some concentration in the number of different species purchased. In the 101 - 150kg annual purchase volume range, 60 fish species/types mentions by respondents were collapsed into only 19 different types of fish. These 19 different types were made up of all except two of the 18 leading types of fresh or frozen finfish listed in Table 6.5.5. This pattern continues through all of the high annual purchase volume ranges of Figure 6.5.5.

Figure 6.5.6 shows a higher concentration of the leading seafood and processed fish species/types (Table 6.5.6) in all annual volume ranges including the lower volume ranges. There appears to be a more limited range of species/types of seafood and processed fish purchased by institutions than was the case for finfish.

A second way of reviewing the volume (kg) data is to investigate the actual volumes of specific fish and seafood species/products purchased by institutions in the calendar year 1990.

Table 6.5.5 shows the total volumes and average volumes of leading finfish purchased (as fresh or frozen) over the two survey periods. The average has been calculated for each species by dividing the total volume purchased by all institutions surveyed by the number of institutions who made purchases of each species (excluding those who "don't know" the volume they purchased). For example, in the September 1991 survey, nine respondents said they had purchased perch (unspecified) in 1990 and eight of these knew of the volume purchased in 1990. The total amount purchased by all eight was 4,834kg or, on average, 604kg per institution.

The particularly high average purchase volume for flounder (unspecified) in September is due to just two New South Wales hospitals purchasing approximately 10,000kgs of frozen flounder fillets each.

Table 6.5.5: Leading Types of Fresh or Frozen Finfish Purchased by Institutions in the Calendar Year 1990[1]

Species/type of finfish	May 1991 Survey		September 1991 Survey	
	Total volume purchased (kg)	Average volume purchased (kg)	Total volume purchased (kg)	Average volume purchased (kg)
Barramundi	6,410	916	4,254	355
Cod (smoked)	5,033	419	3,117	173
Dory (unspecified)	530	265	3,019	1,006
Emperor, red	4,028	1,007	950	190
Flounder fillets	3,440	1,720	910	228
Flounder[3] (unspecified)	5,838	531	22,904	3,817
Gemfish	3,465	558	4,080	680
Grenadier, blue	27,284	1,091	8,265	435
Hake	44,250	776	45,044	751
Kingclip	2,980	331	2,126	236
Orange roughy	9,890	450	22,767	843
Perch (unspecified)	4,138	690	4,834	604
Redfish	1,200	1,200	2,975	1,488
Shark	9,662	690	2,063	138
Snapper	2,793	350	1,792	163
Trevally	3,311	301	5,144	572
Trout, coral	2,200	1,100	368	92
Whiting (unspecified)	10,612	758	6,082	243
Total[2]	147,064		140,694	

(1) an arbitrary cut off point over 2,000kg total volume reported in either survey period was applied for inclusion in the table

(2) totals represent 93% and 92% respectively of entire volumes of finfish reported in May 1991 and September 1991 survey periods

(3) almost all of the flounder (unspecified) was purchased in frozen fillet form.

For seafood or processed fish, the correspondence between commonly bought species/products (Table 6.5.3) and the volumes purchased (Table 6.5.6) is less direct. Popular items such as canned tuna, canned salmon and prawns were all bought in large volumes across both survey groups. However, canned sardines, which were a commonly bought item, were not purchased in sufficient volumes to warrant inclusion in Table 6.5.6. Numerous processed fish products (fish fingers, crumbed fish fillet and chips, crumbed oven fry fish) and catering products (fish portions, crumbed) were not bought by many institutions, yet were purchased in substantial volumes by those who did.

The total volume of fresh or frozen fish purchased in 1990 by the May 1991 survey sample exceeded that for the September 1991 survey respondents. Total volumes of canned fish or seafood purchased in 1990 by the September 1991 survey exceeded that of the May 1991 survey sample respondents, as shown below:

1990 Volumes Purchased (kg) of Main Species/Types Bought at Time of Survey

	May 1991	September 1991	Total
Fresh or frozen fish	157,793	153,655	311,448
Seafood or processed fish	82,000	91,824	173,824
Don't know		500	500
Total	239,793	245,979	485,772

Table 6.5.6: Leading Types of Seafood or Processed Fish Purchased by Institutions in the Calendar Year 1990[1]

Species/product type	May 1991 Survey		September 1991 Survey	
	Total volume purchased (kg)	Average volume purchased (kg)	Total volume purchased (kg)	Average volume purchased (kg)
Oyster	23	5	1,160	68
Prawns	6,727	164	10,734	203
Scallops	1,477	114	2,545	116
Squid/calamari	551	69	3,343	209
Crumbed fish fillet and chips	4,426	402	160	80
Crumbed oven fry	1,660	553	6,086	609
Fish fingers	5,822	582	2,534	211
Fish cakes	2,355	393	1,000	1,000
Shrimp cooked and peeled	857	86	2,149	239
Other processed products	1,578	316	288	58
Fish portion crumbed	7,262	807	1,582	264
Salmon (smoked pieces)	609	87	1,402	351
Salmon, canned[2]	20,225	293	27,089	343
Tuna, canned	23,411	308	25,684	334
Total[3]	76,983		85,756	

[1] an arbitrary cut off point of over 1,000 kg total volume reported in either survey period was applied for inclusion in the table

[2] includes red, pink, Australian canned, imported canned and unspecified canned salmon

[3] totals represent 94% and 93% respectively, of entire volumes of canned fish and seafood reported in May 1991 and September 1991 survey periods.

As a measure of institutions' preferences for a particular type of supplier (Question 7b, Appendix IV), Table 6.5.7 presents data on the "frequency of use" of a variety of suppliers. The measure "frequency of use" examines the number of times any institution bought any species/type from a particular type of supplier. (It is analogous to the number of items on a shopping list totalled for all shoppers buying at a particular shop type; by comparison, the "number of species" equates to the number of different items taken through check out by all shoppers, without double counting any particular item.) Institutions showed a very strong preference for dealing with a general wholesaler for buying both their fresh/frozen fish and seafood and processed fish species/types. General wholesalers were used at least three times as frequently as any other type of supplier for fresh/frozen fish, and more than six times as frequently for seafood and processed fish.

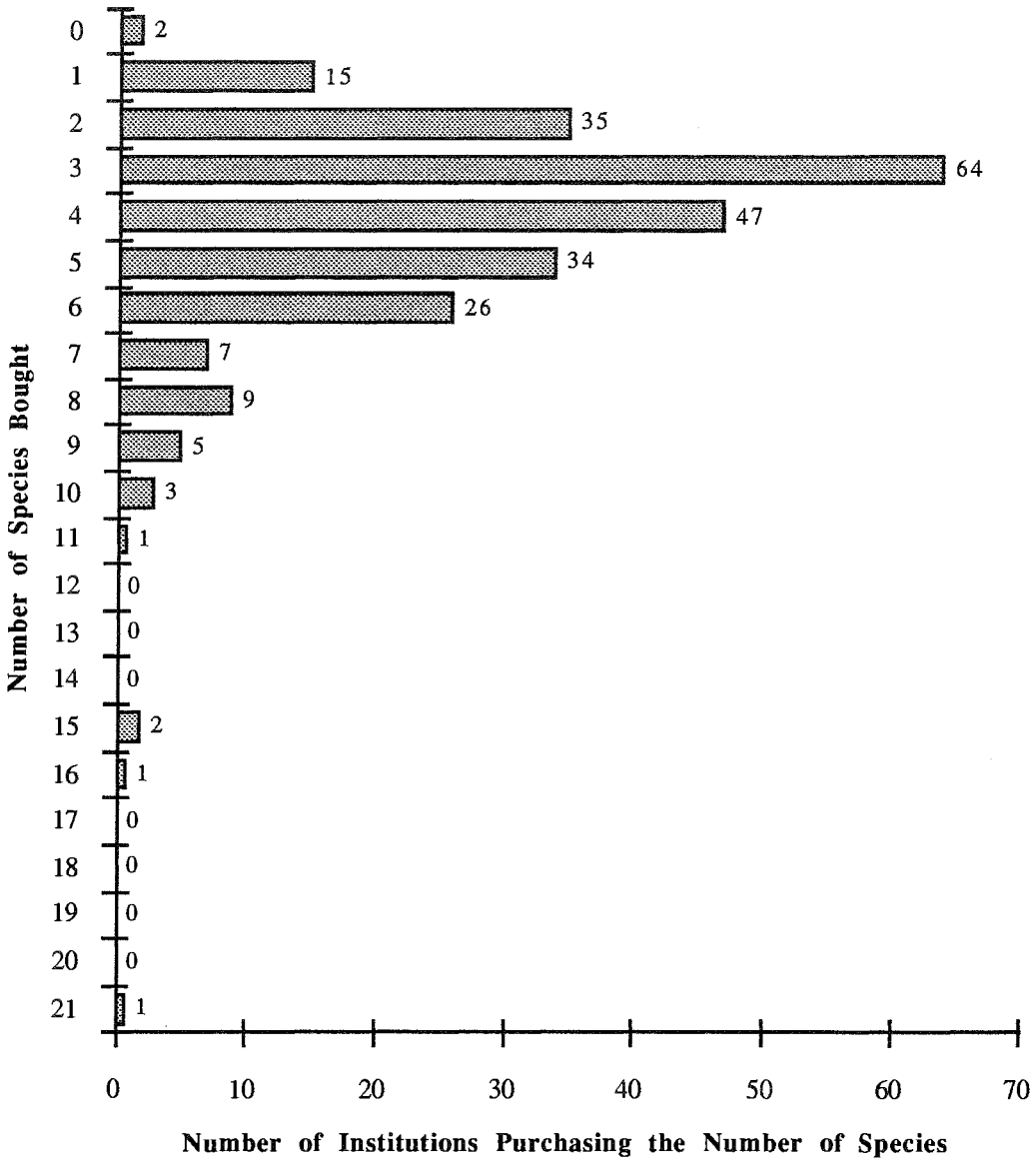
Table 6.5.7: Types of Suppliers of Fresh and Frozen Fish, and Canned Fish and Seafood to Institutions

Type of supplier	Frequency of use (%) for:	
	Fresh or frozen fish[1] (number of species)	Seafood or processed fish[2] (number of species)
Commercial fisherman/ aquaculture farm	0.7% (3)	0.4% (3)
General wholesaler	55.6% (47)	73.8% (52)
Fish/seafood wholesaler/ co-operative	15.0% (31)	10.9% (33)
Wholesaler fish market	11.3% (27)	3.9% (16)
Retailer	10.9% (21)	5.8% (18)
Other	2.5% (11)	1.5% (8)
No answer	4.1% (19)	3.9% (13)
Totals	100%	100%

(1) based on 608 responses

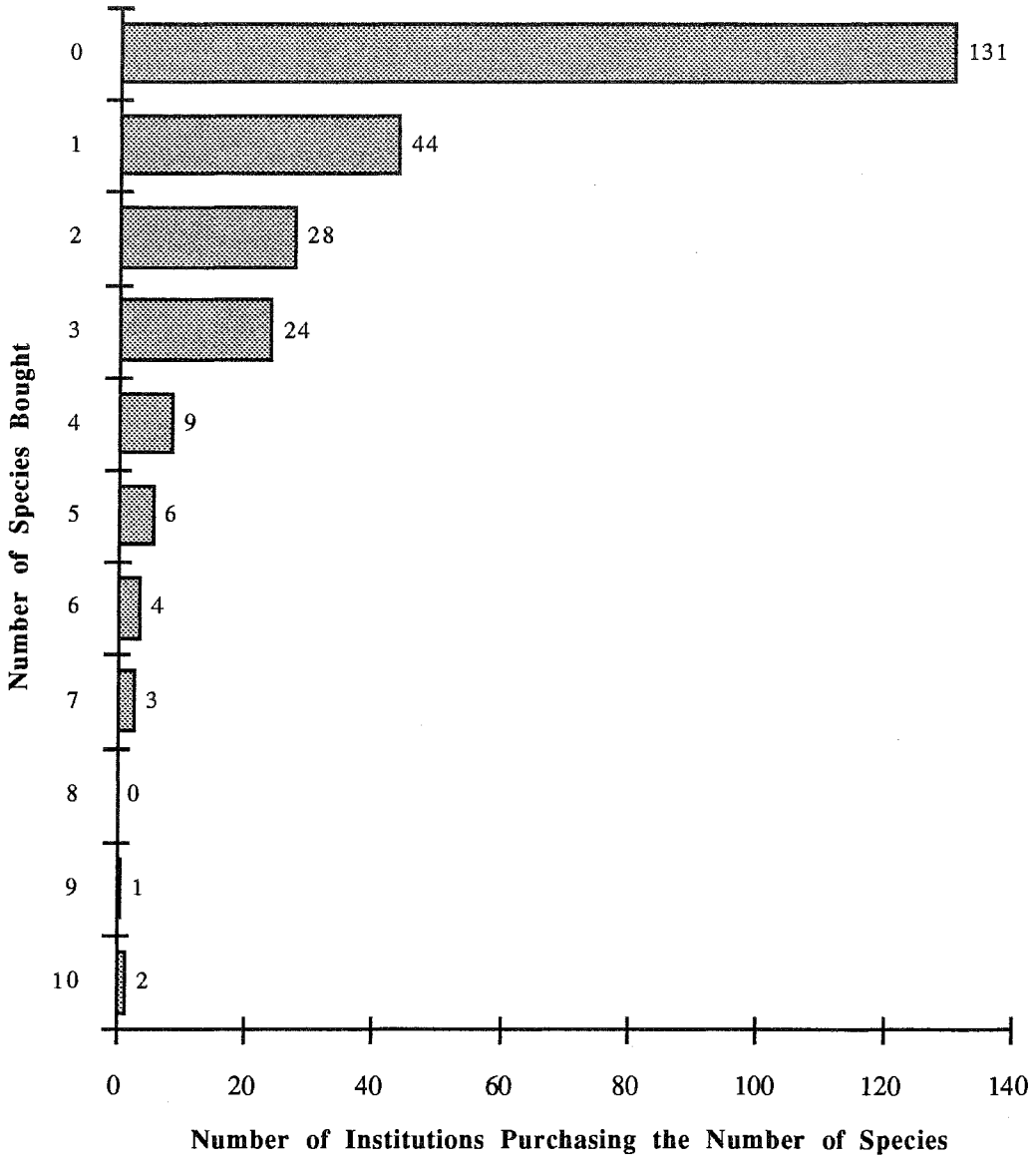
(2) based on 827 responses.

Figure 6.5.1: Number of Fish Species Generally Bought by Institutions at the Time of Survey



252 respondents offered 252 responses across the May 1991 and September 1991 surveys (see Question 5a, Appendix IV).

Figure 6.5.2: Number of Seafood Species Generally Bought by Institutions at the Time of Survey



252 respondents offered 252 responses across the May 1991 and September 1991 surveys (see Question 5a, Appendix IV).

Figure 6.5.3: Total Number of Annual Purchases of Cited Finfish Species/Types Within Certain Weight Ranges: Calendar Year 1990

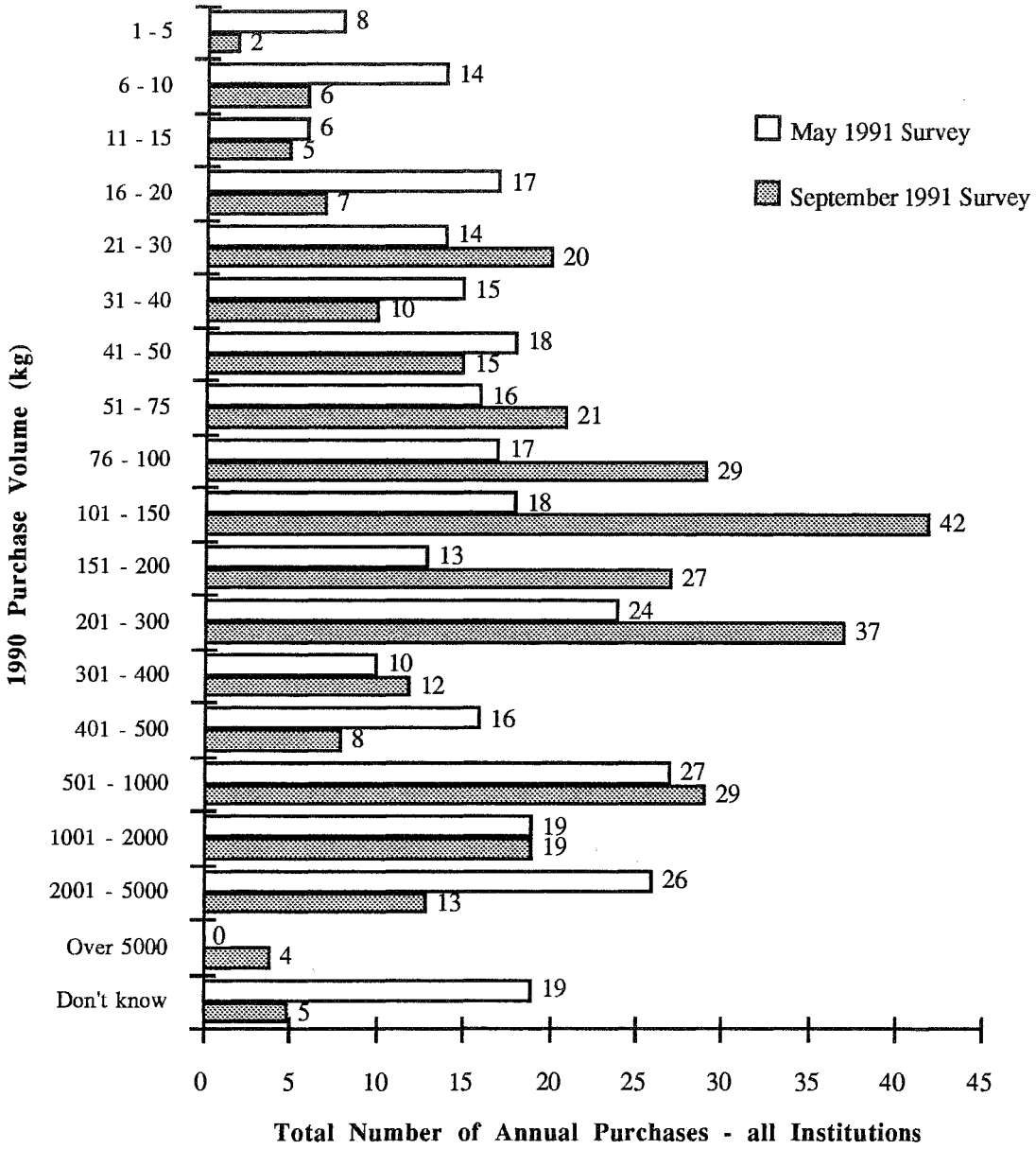


Figure 6.5.4: Total Number of Seafood and Processed Fish Species/Types Mentions Versus Annual Purchase Volume Ranges: Calendar Year 1990

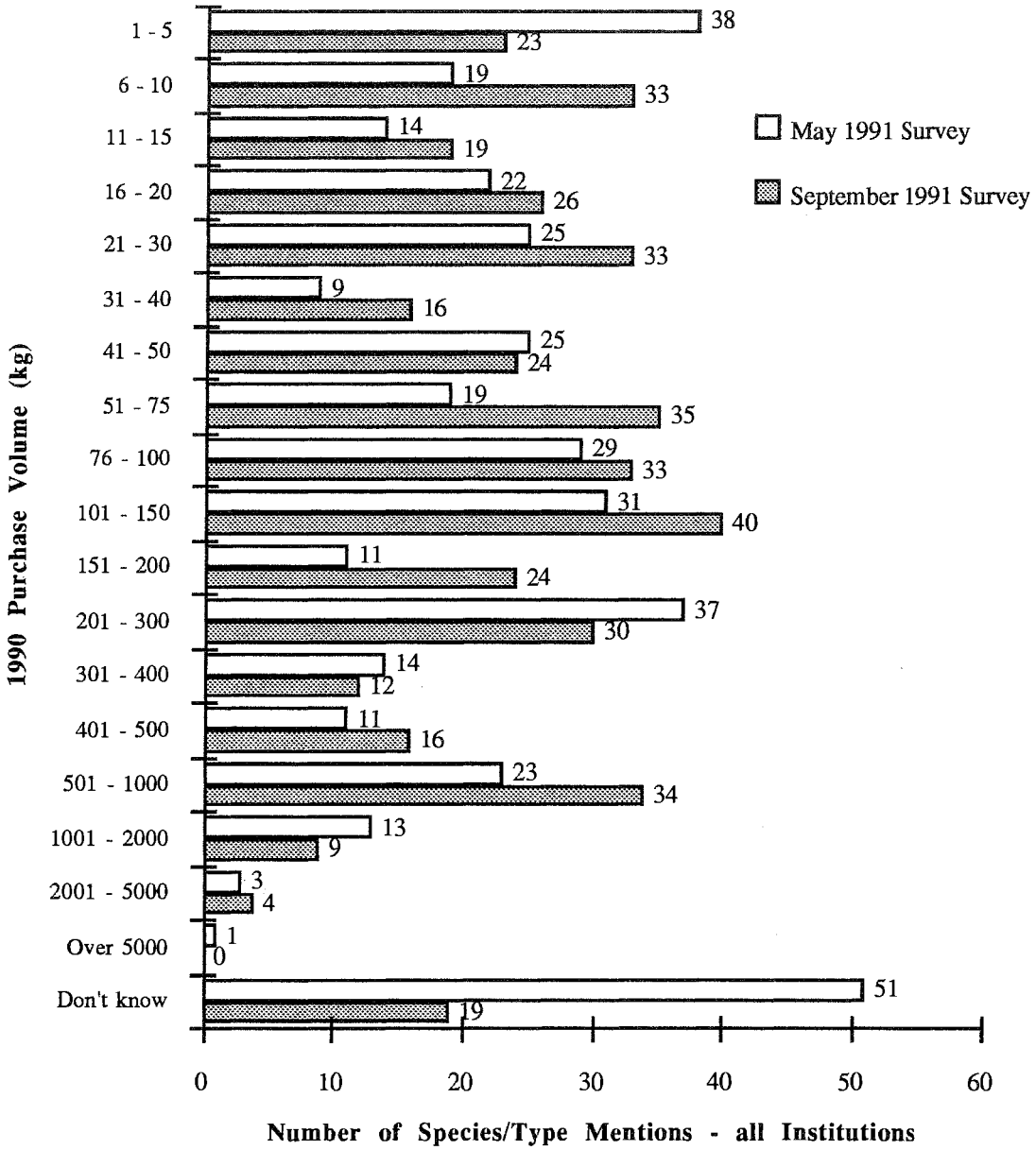
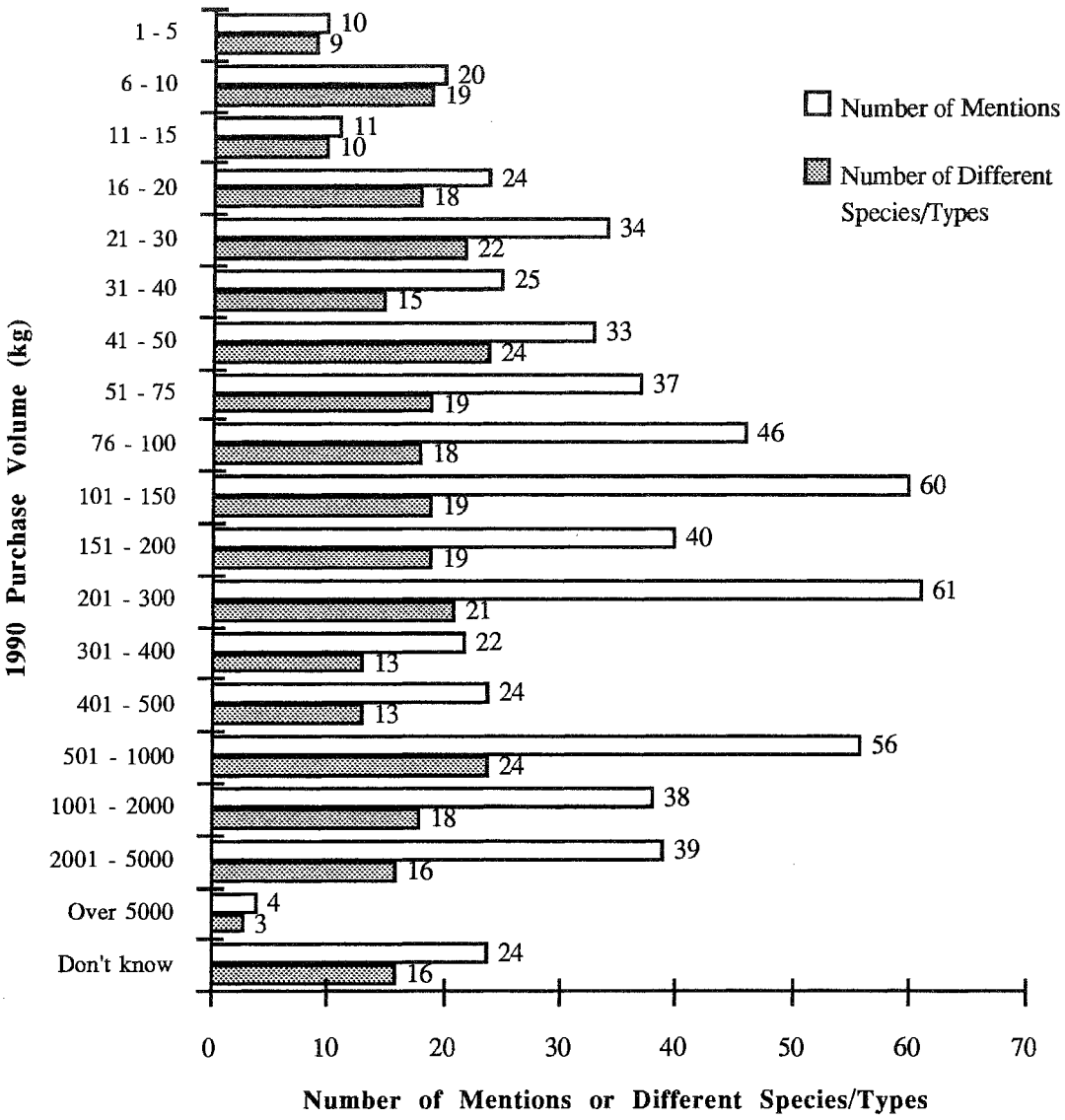
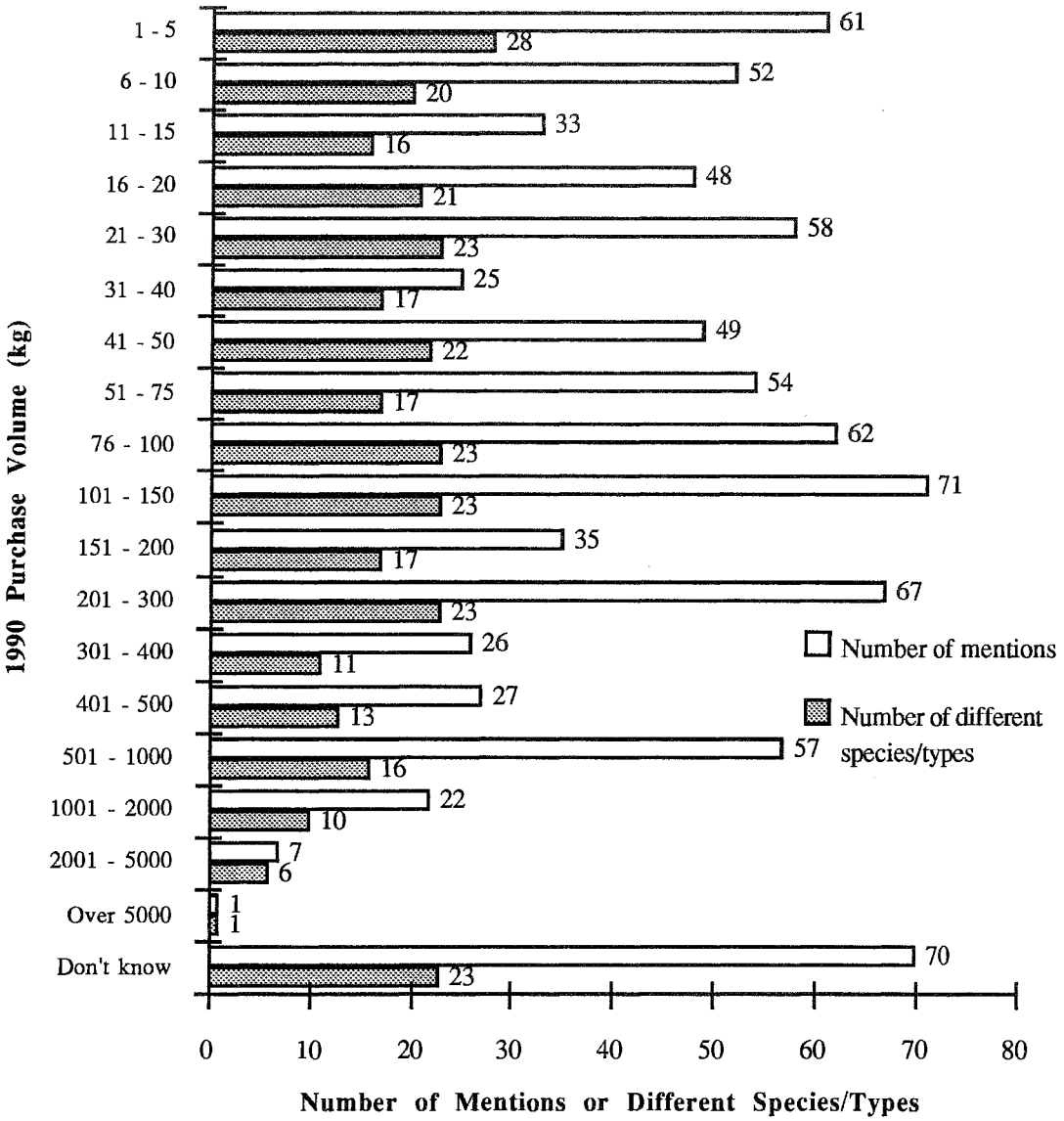


Figure 6.5.5: Total Number of Finfish Species/Type Mentions and the Number of Different Species That Made up These Mentions: Within Annual Purchase Volume Ranges for Calendar Year 1990



252 respondents offered 608 responses on 59 fish species/types for May 1991 and September 1991 surveys (see Question 7a, Appendix IV).

Figure 6.5.6: Total Number of Seafood or Processed Fish Species/Type Mentions and the Number of Different Species That Made up These Mentions: Within Annual Purchase Volume Ranges for Calendar Year 1990



252 respondents offered 825 responses on 62 seafood or processed fish species/types across the May 1991 and September 1991 surveys (see Question 7a, Appendix IV).

6.6 Stock Selection, Supplier Selection and Supplier Rating

Part of the basis on which institutions select their fish species/products has been reported in Section 6.2 and 6.3, which considered aspects such as menu planning and food group preferences. This Section reports more detailed data on reasons for the purchase of particular species/products. Respondents were asked to specify up to six main species/types of finfish they buy and to give specific reasons as to why each species/type was purchased (Q9, Appendix IV). The form of the finfish purchased was not restricted and many respondents included processed (especially canned) finfish in their selection.

Summing all responses, the three principal reasons given by institutions for buying particular fish stocks (Figure 6.6.1) were:

- popular/customers want/prefer it
- boneless/skinless
- good price/cheaper/value for money.

Interestingly, these were the same three key reasons given by fishmongers and 'take-away' fish outlets (see the Trade/In-Home and Trade/Out-Of-Home consumption reports, Sections 6.6 and 5.6 respectively).

Much of the basis for the selection of these reasons can be interpreted by examining the reasons for purchase of the most frequency cited "main species/types purchased" . There were a total of 773 main species/types citations by respondents or an average of 3.1 main species/types per respondent. Many respondents gave the same or similar main species. The seven most commonly cited main species are shown in Table 6.6.1 along with the major reasons respondents gave for purchasing them. Note the correspondence between these species/types of fresh/frozen fish and processed (ie canned) fish previously discussed in Section 6.5

Not surprisingly the three principal reasons for buying particular fish stocks as given in Figure 6.6.1 are in the top six reasons given for selecting the four fresh/frozen fish species in Table 6.6.1 with one exception - orange roughy was not seen as offering "good prices/cheaper/value for money". Orange roughy was also unique in the prominence of the reasons "good or light texture/milder flavour/white" in respondents' answers. Canned fish was more likely to be purchased for use in a particular dish or recipe and for its versatility; reasons not cited for any of the four fresh/frozen fish species shown.

Table 6.6.1: The Major Reasons Respondents Gave for Purchasing the Seven Most Often Cited Main Finfish Species/Types

Main species/type bought	Hake	Canned Tuna (unspecified)	Canned Salmon (unspecified)	Orange Roughy(1)	Blue Grenadier	Whiting (unspecified)	Smoked Cod
Number of respondents citing this species/type (out of total of 252 respondents)	115	89	60	47	39	39	30
Top six reasons given for purchase of species/type shown (proportion of respondents who cited the species and gave reason shown in brackets, %)	Good price/ cheaper/value for money (44%)	For particular dishes/recipes (26%)	For particular dishes/recipes (28%)	Boneless/ skinless (36%)	Boneless/ skinless (44%)	Popular/ customers want/prefer (26%)	Variety/for a change/special function (27%)
	Boneless/ skinless (35%)	Versatile/do different things with it (16%)	Don't know (15%)	Tasty/good flavour 30%)	Good price/ cheaper/value for money (44%)	Good price/ cheaper/value for money (26%)	Popular/ customers want/prefer (23%)
	Good fillet/ portion size (26%)	Popular/ customers want/prefer (13%)	Convenient/ already prepared (13%)	Popular/ customers want/ prefer (23%)	Tasty/good flavour (26%)	Tasty/good flavour (26%)	For particular dishes/recipes (20%)
	Popular/ customers want or prefer (21%)	Don't know (13%)	Versatile/do different things with it (12%)	Good/light texture/milder flavour/white (19%)	Popular/ customers want/prefer (15%)	Good fillet/ portion size (21%)	Good price/ cheaper/value for money (10%)
	Tasty/good flavour (13%)	Good price/ cheaper/value for money (12%)	Popular/ customers want/ prefer (10%)	Easy to cook/ doesn't break up (15%)	Easy to cook/ doesn't break up (15%)	Boneless/ skinless (18%)	Tasty/good flavour (7%)
	Easy to cook/ doesn't break up (13%)	Variety/for a change/special function (12%)	Tasty/good flavour (8%)	Good quality (15%)	Good fillet/ portion size (13%)	Variety/for a change/special function (15%)	
Average number of reasons given for purchase of this species by each respondent(2)	2.0	1.3	1.4	2.0	2.1	1.8	1.2

(1) data for orange roughy may be understated as it is commonly known as sea perch in New South Wales - 16 respondents cited perch (unspecified) as a main species/type purchased

(2) respondents were allowed to give more than one reason for purchasing a species. Hence the proportions given in brackets add to more than 100%.

As shown by Table 6.5.7 of the previous Section, institutions had a very pronounced preference for dealing with a general wholesaler when securing supplies of fish and seafood. Those respondents who did not buy all fish and seafood through a tendering process (212 out of 252) were asked (Question 10a, Appendix IV) to rate the importance to them of 18 factors when making their choice of supplier. Their responses indicate (Figure 6.6.2) that the priority factors are:

- clean outlet
- is honest and fair in doing business
- orders are promptly attended to.

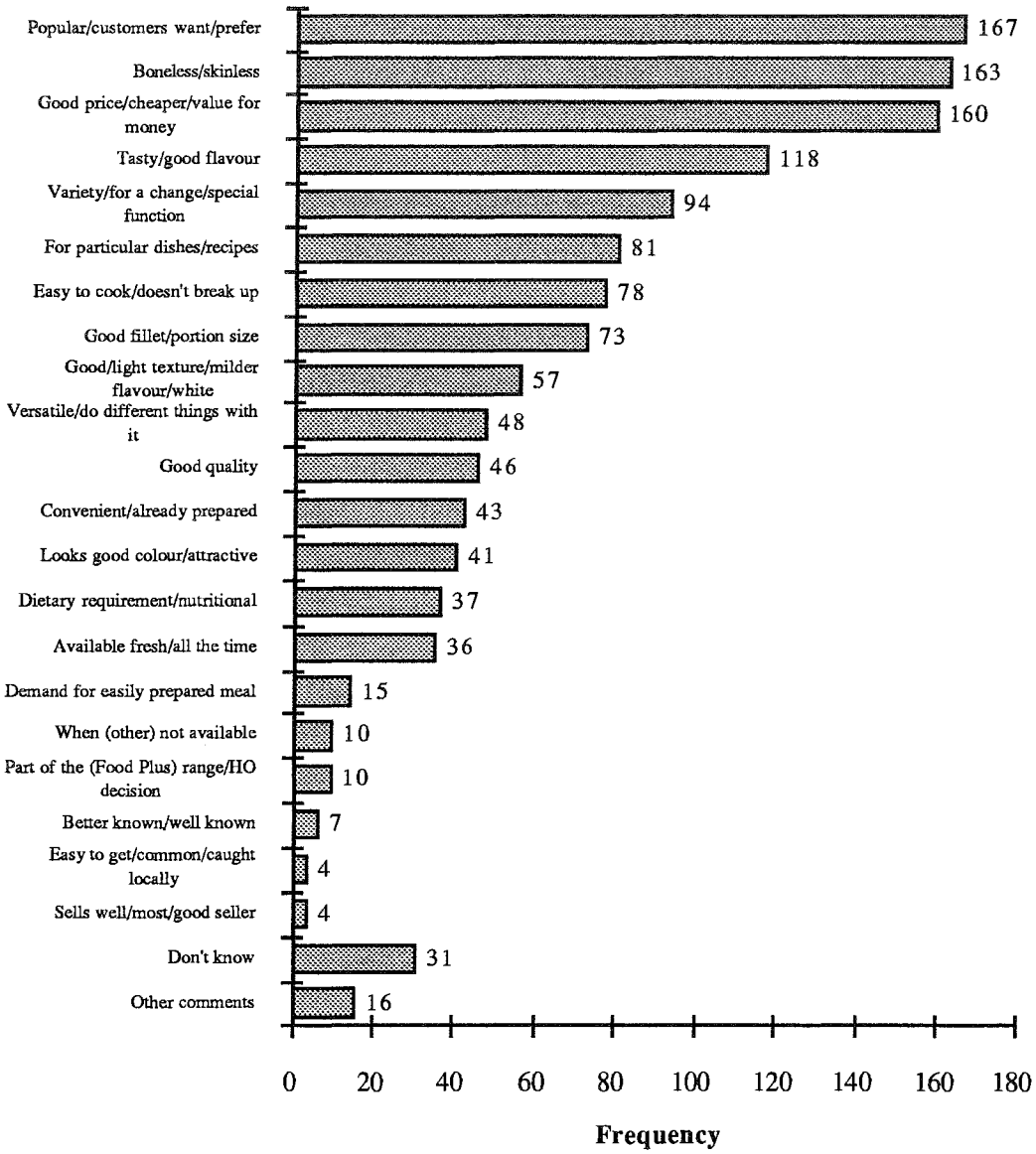
This selection of factors overlaps well with those given priority by other trade participants in the fishing industry value chain (retailers and fishmongers, caterers, 'restaurants' and 'take-away' outlets). However, institutions as a group were unique in attaching top priority to the cleanliness of a potential supplier's outlets.

When asked to rate their main wholesale supplier against these same 18 factors (Question 10b, Appendix IV), a similar pattern emerged as was found in other trade segments. Institutions commended their main suppliers for:

- good temperature control
- providing clear documentation
- honest and fair in doing business (Figure 6.6.3).

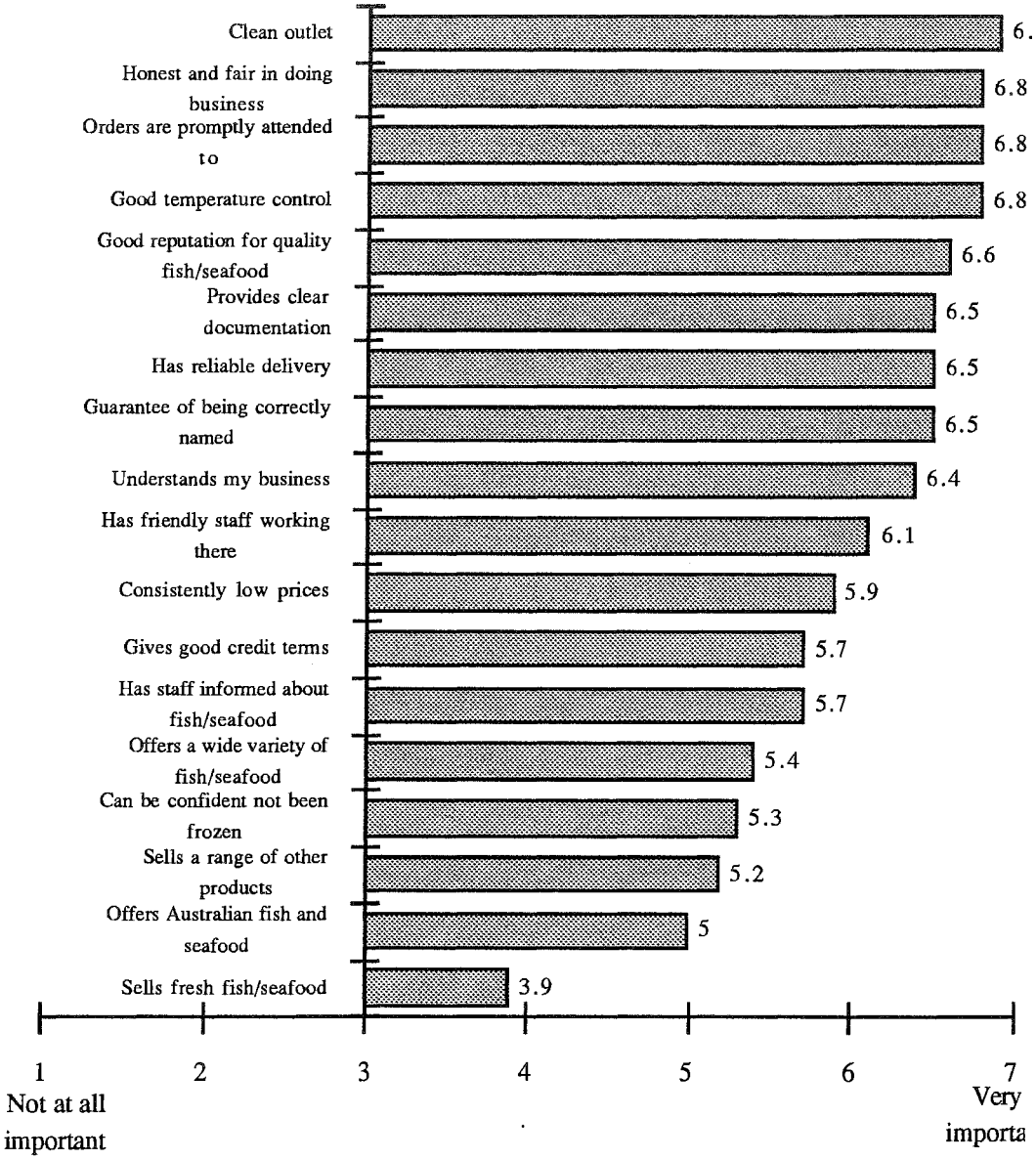
The priority factor ("clean outlet") slipped to sixth ranking as an attribute of the main wholesale supplier, albeit still with a highly favourable average rating of 6.5.

Figure 6.6.1: Institutions' Reasons for Purchase of Finfish



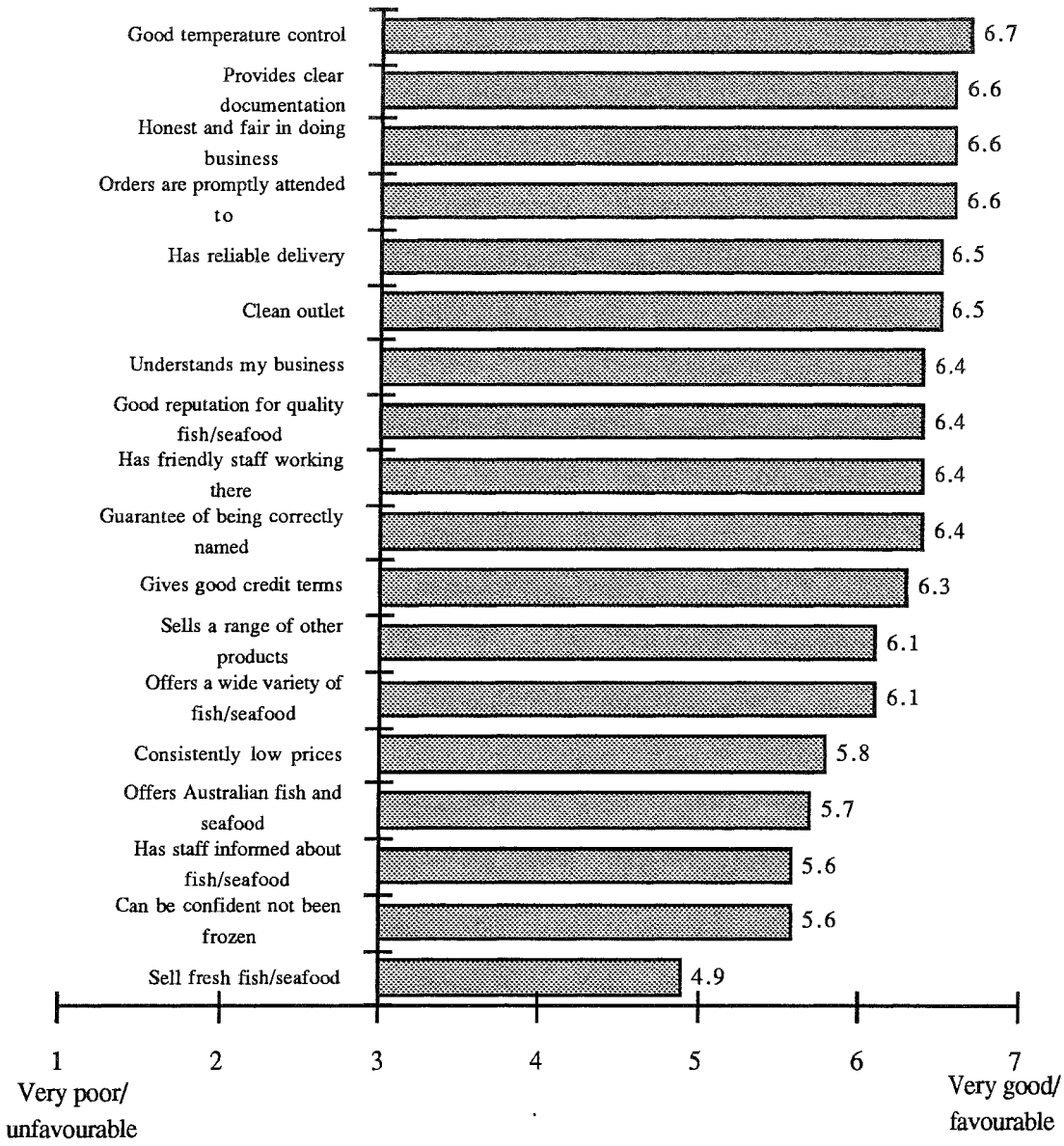
252 respondents offered 1339 responses on 77 fish/species/products across May 1991 and September 1991 surveys (see Question 9, Appendix IV).

Figure 6.6.2: Importance of Factors When Choosing a Supplier of Fish and Seafood to Institutions



212 respondents offered responses on 18 factors across the May 1991 and September 1991 surveys (see Question 10a, Appendix IV).

Figure 6.6.3: Institutions' Ratings of Main Wholesale Supplier Against Factors of Importance



212 respondents offered responses on 18 factors across the May 1991 and September 1991 surveys (see Question 10b, Appendix IV).

6.7 Trends, and Species/Types with Potential for Increased Usage

Institutions were asked (Question 11a, Appendix IV) whether they had noted any of eight possible trends with their customers in the last 12 months.

A majority of respondents felt that they had perceived customer trends towards:

- more concern about their general health
- a desire to eat less fat and saturated oils (Figure 6.7.1).

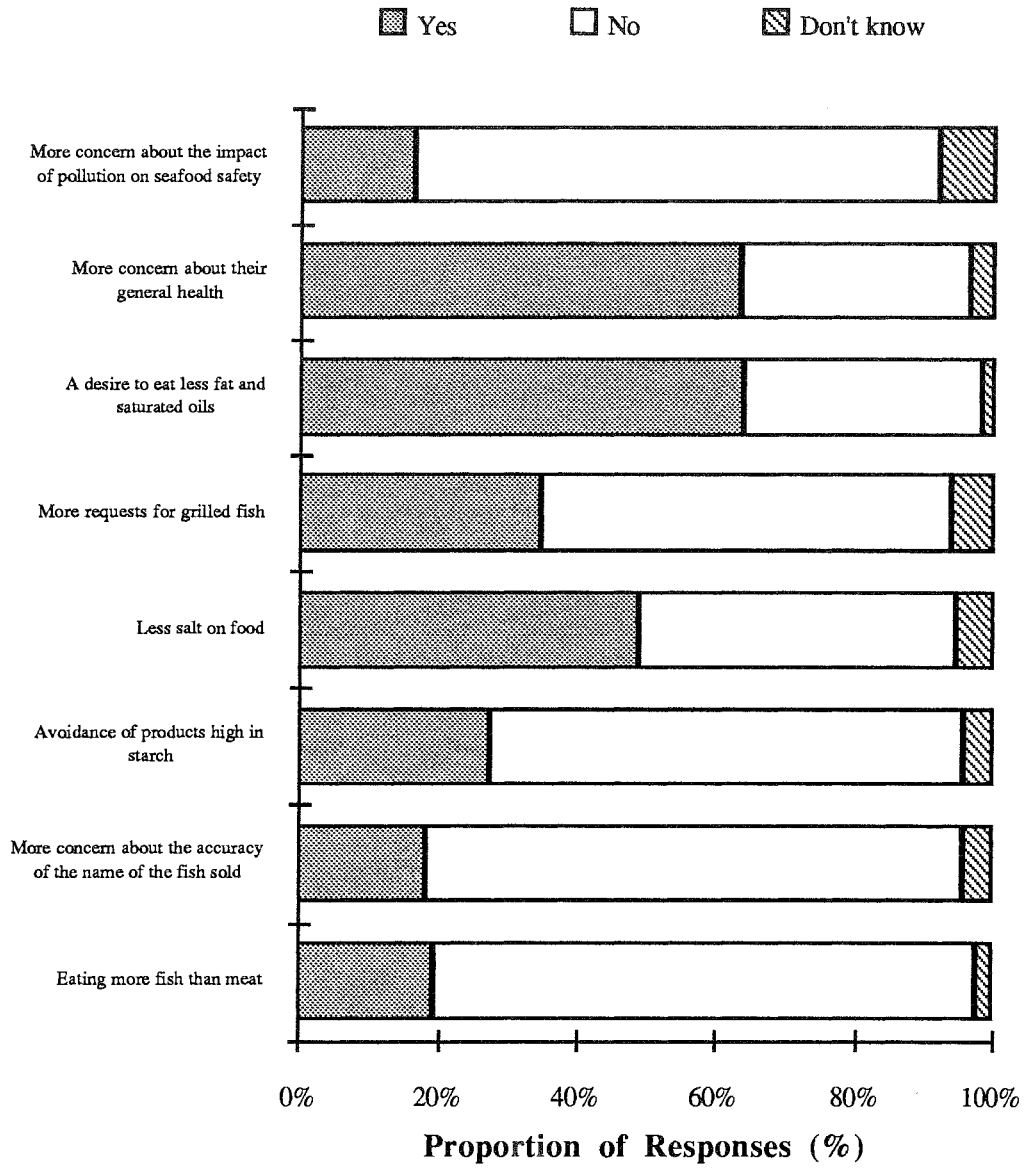
There was ambivalence over any trends towards less salt on food, and most institutional respondents believed that their customers were **not** more concerned about the impact of pollution on seafood safety, were **not** making more requests for grilled rather than fried fish, were **not** avoiding products high in starch or concerned about the accuracy of the name of the fish received, and were **not** tending to eat more fish than meat.

When questioned about any other trends noticed with their clients over the last 12 months (Question 11b, Appendix IV), institutional respondents most frequently maintained that there were no other trends (Figure 6.7.2). Minor additional trends mentioned suggested a move away from meat-based diets towards greater incorporation of vegetarian components (fruit, vegetables, specific vegetarian meals).

Institutions' views on the potential for increased usage of a range of under-utilised fish and seafood species, were very similar to those expressed by retailers (Trade/In-Home Report, Section 3.7) and by 'take-away' outlets (Trade/Out-Of-Home Report, Section 5.7). Like these two trade segments, institutions most frequently held that none of the under-utilised species held potential (Figure 6.7.3). Unlike other trade segments, institutions' respondents also gave the view that silver trevally/skipjack had a potential which exceeds that of most of the other ten species mentioned. Farmed species (barramundi, Atlantic salmon, rainbow trout and prawns) were generally regarded more positively than wild species, although this did not extend to seafood items (oysters and mussels). Strong regional views emerged on Australian herring/tommy ruff. The number of Sydney-based respondents believing in its potential was below average (99% confidence limits), while above average numbers in Adelaide and Perth supported its potential for increased usage (99.9% and 99% confidence limits, respectively). Brisbane-based respondents held below average prospects on the potential for rainbow trout and Atlantic salmon (95% confidence limits). The prospects for farm prawns were regarded with above average optimism by Sydney respondents, but below average by Melbourne and Adelaide respondents (all three groups at 95% confidence limits). Melbourne's institutional respondents held above average optimism for the potential of Jack mackerel (95% confidence limits).

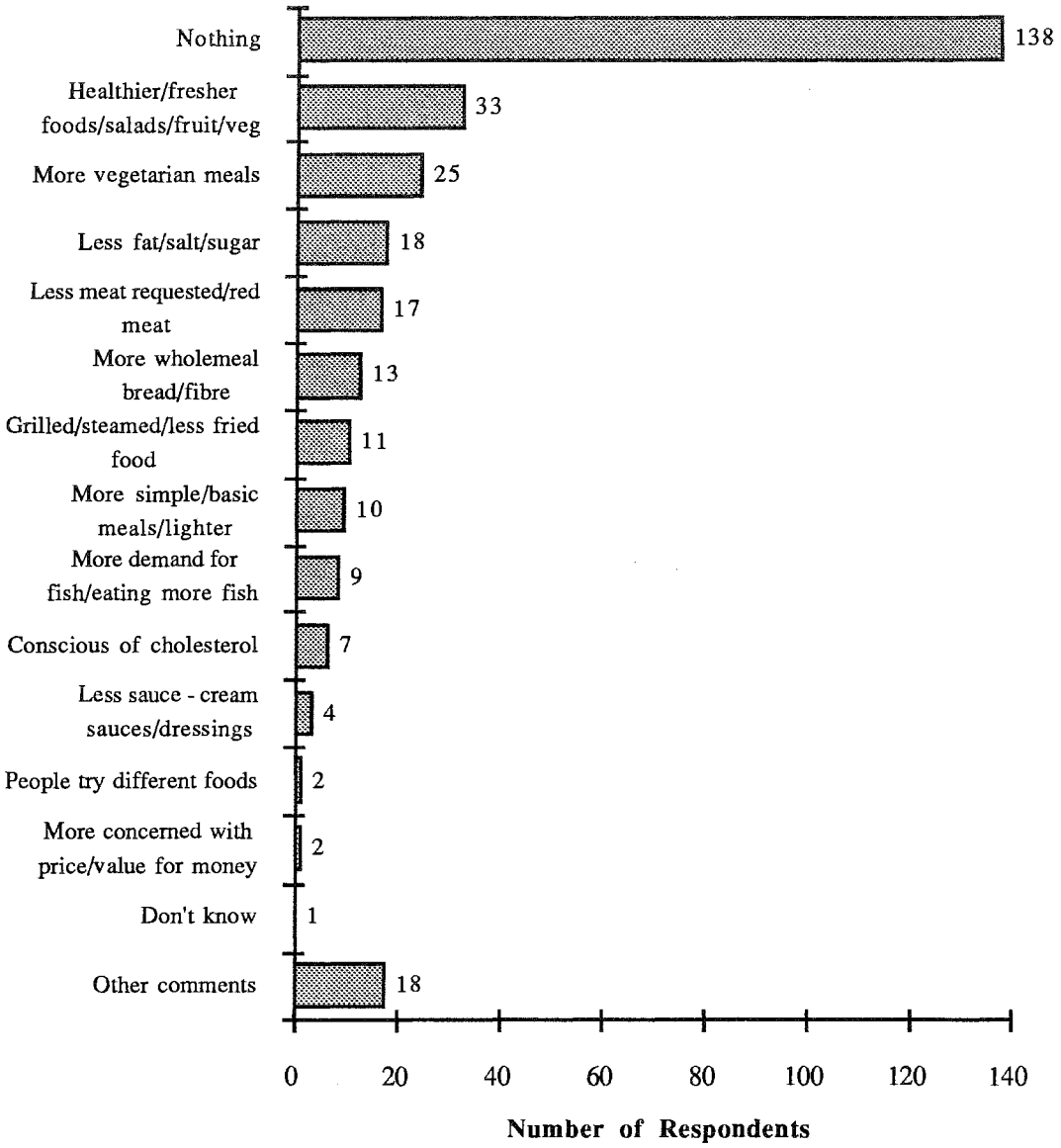
The principal reasons why institutions held these views on the potential of under-utilised species are shown in Figure 6.7.4. The most favoured under-utilised species, farm barramundi and silver trevally/skipjack accounted for 28% and 27% each, respectively, of all responses relating to "good flavoured fish". There was no strong species emphasis for the reason "different/for variety/a change". However, farm barramundi, Atlantic salmon and squid drew 30%, 19% and 19% respectively, of the comment "popular fish/in demand". "If the price came down" was more often linked to farm barramundi than any other species (23% of responses), as was "would be cheaper if farmed" (37% of responses). Silver trevally/skipjack was the under-utilised species most frequently regarded as having potential because it is "easy to prepare/cook/handle" (30% of these responses). Jack mackerel was the only species specifically associated with health benefits.

Figure 6.7.1: Institutions' Perceptions of Specified Trends with Their Customers Over the Last 12 Months



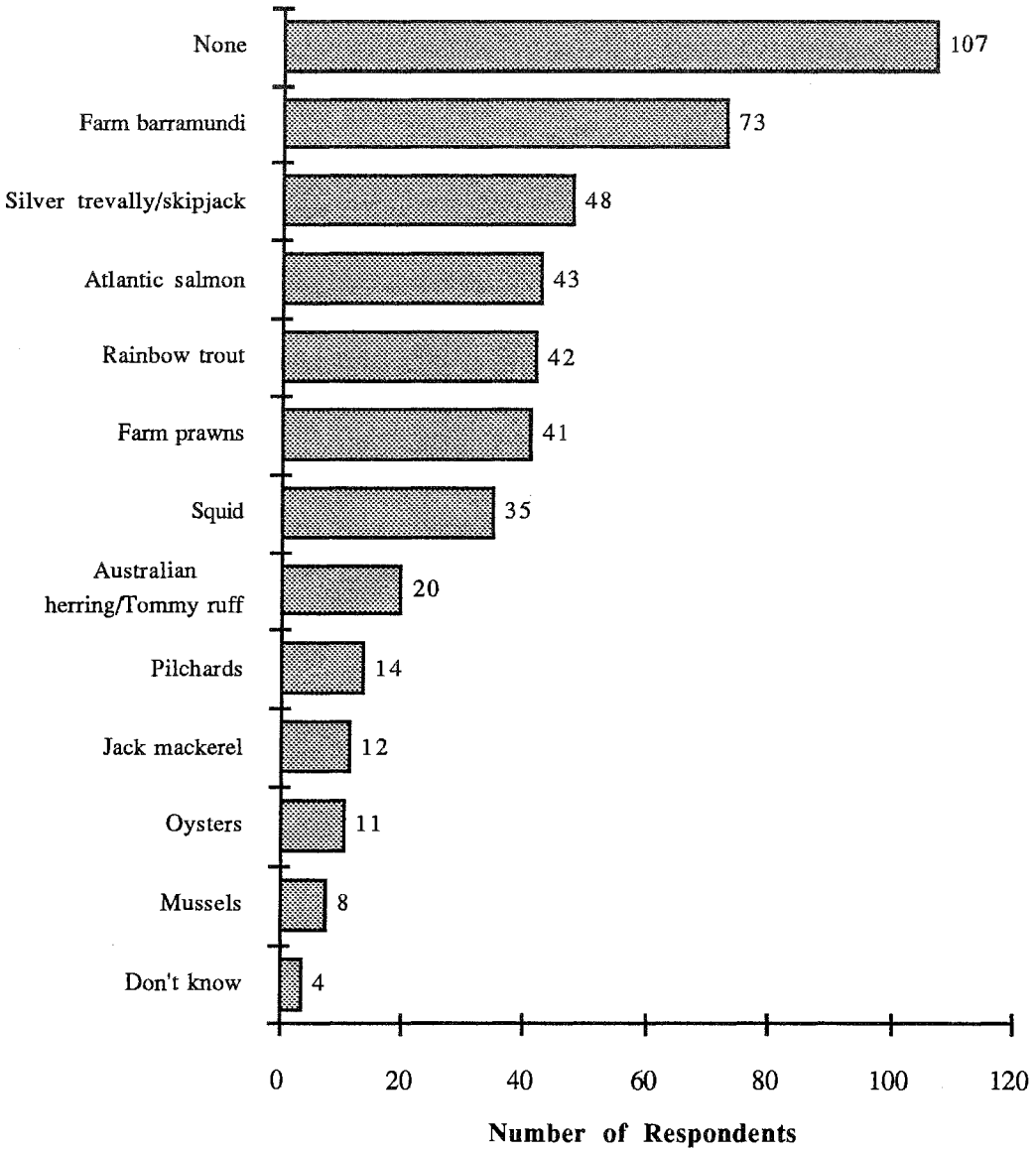
252 respondents offered 252 responses across the May 1991 and September 1991 survey (see Question 11a, Appendix IV).

Figure 6.7.2: Other Trends in Customers' Food Preferences in Last 12 Months



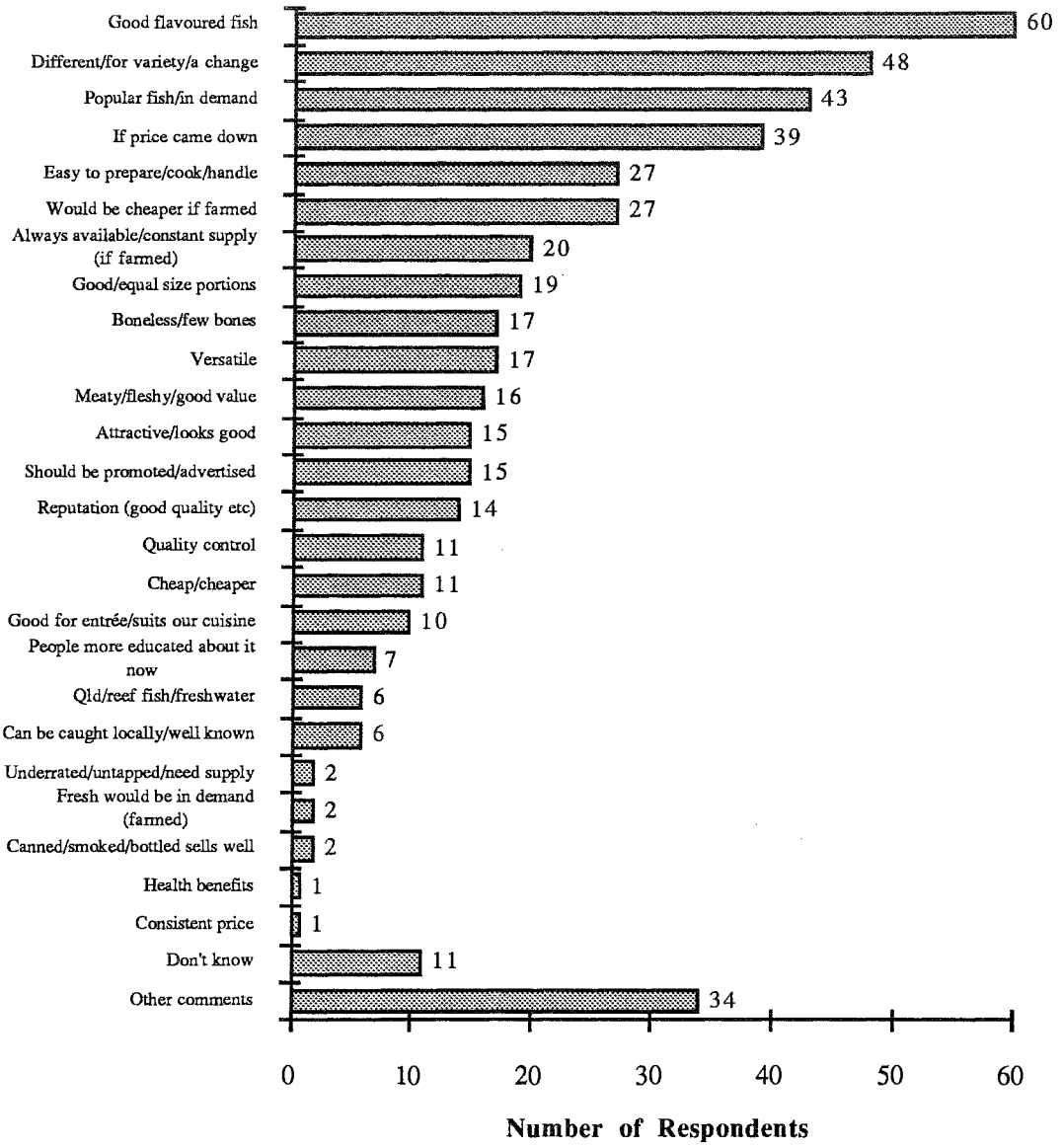
252 respondents offered 308 responses across the May 1991 and September 1991 surveys (see Question 11b, Appendix IV).

Figure 6.7.3: Institutions' Views on Species with Potential for Increased Usage



252 respondents offered 458 responses across the May 1991 and September 1991 surveys (see Question 14a, Appendix IV).

Figure 6.7.4: Reasons Given by Institutions for Views on the Potential of Under-utilised Species



252 respondents offered 481 responses across the May 1991 and September 1991 surveys (see Question 14b, Appendix IV).

6.8 Institution and Industry Initiatives to Promote Greater Fish and Seafood Consumption

Institutions had earlier suggested (Section 6.4) that generally they saw no problems in dealing with fish and seafood. When asked what actions need to be taken for their organisation to buy more fish and seafood products it was not surprising to see "none" emerge as the most frequent response (Figure 6.8.1). The number of Melbourne-based respondents which gave this reply was above average (99.9% confidence limits). Other frequently cited responses were:

- lower/more reasonable prices/specials
- change menu/increase fish meals
- more customer demand.

The first issue of price was of concern to an above average number of respondents from welfare institutions, and from Adelaide respondents (99% and 95% confidence limits, respectively). Conversely, a lower than average number of hospitals and Brisbane respondents perceived this price focus as an issue (99% and 95% confidence limits, respectively).

As regards changing menus to increase the frequency of fish meals, Brisbane and Sydney respondents, and respondents from hospitals and nursing homes saw this as more of an issue than other respondents (99.9%, 95% and 99% confidence limits, respectively). A below average number of respondents from Melbourne and from welfare or charitable homes saw this as a necessary action (99.9% and 95% confidence limits, respectively).

Welfare/charitable homes were unique in their call for:

- freezer space/increased freezer space/'frige
- need a fryer, grill, etc

– more staff,

(all at 99.9% confidence limits). Conversely, a below average number of hospitals and nursing homes saw these three areas as needing action (all at 95% confidence limits). Similarly a below average number of hospitals and nursing homes perceived a requirement for action to "ensure good quality" (95% confidence limits).

In broad agreement with previous views, when institutions were asked what specific actions need to be taken **by the fishing industry** in general for more fish and seafood to be bought by their organisation (Question 12b, Appendix IV), the most frequent response was "nothing" (Figure 6.8.2). An above average number of respondents in Melbourne held this view, while a below average number in Adelaide supported it (99% and 95% confidence limits, respectively).

"Cheaper/reduced prices/less fluctuation" emerged as the most frequently cited specific action which the fishing industry should address. An above average number of Adelaide respondents held this view (99% confidence limits).

"More advertising/promotion/information" was seen as the second most frequent addressable action, again supported by an above average number of Adelaide respondents (95% confidence limits).

A significant number of welfare and charitable homes thought that the industry should pursue "correct labelling/naming of fish" (99% confidence limits), and an above average number of Perth respondents called for action towards "less controls/restructure the industry" (99.9% confidence limits). The unique calls by hospitals and nursing homes in Brisbane and Perth to "get fish to market quicker/fresher/good condition" and introduce "more farming of fish" were significant (95% and 99% confidence limits, respectively).

A previous stage of this study (Industry Leader Interviews) had identified a group of ten prospective actions considered likely to increase the purchases of fish and seafood by institutions. Respondents were asked (Question 13, Appendix IV) to assess in quantitative terms the likelihood that these actions would increase their own organisation's fish and seafood purchases (Figure 6.8.3).

The actions considered most likely to enhance institutions' purchases were:

- guarantee of consistent supply
- portion controls to ensure standard size pieces
- greater supply and variety of Australian fish.

It is relevant to note that none of these figured prominently when institutions were asked what actions might be taken by themselves, their suppliers, or the industry in general to increase sales.

The survey also investigated the way in which institutions changed the proportion of major protein sources (meat, pork, poultry, fish, seafood, other) which contributed to main daily meals (Question 15, Appendix IV). It established the percentage contributions which these protein sources **currently** made, and explored any mid-summer or mid-winter deviations from this pattern. The results (Figures 6.8.4, 6.8.5 and 6.8.6) show that meat accounts for the major proportion of main daily meals, that fish most frequently makes up either 1 - 10% or 11 - 20% of meals, and that seafood most frequently is absent from meals. Furthermore, the average proportions of the six categories changed little from that currently used in mid-summer or mid-winter catering (Table 6.8.1).

Table 6.8.1 Impact of Seasons on the Average Proportions of Main Daily Meals Which Are Accounted for by Six Food Categories (%)

	Meat	Fish	Seafood	Pork	Poultry	Other
Current	45.4%	14.8%	2.4%	8.9%	20.8%	7.7%
Mid-summer meals	44.1%	15.2%	2.6%	8.5%	21.1%	8.5%
Mid-winter meals	45.7%	14.4%	2.2%	9.2%	20.6%	7.8%

In effect, seasonal adjustments in menus themselves would appear to offer little by way of scope for initiatives for the fishing industry to sell more fish and seafood to institutions. The only significant change in consumption pattern identified was for Perth respondents, with a shift towards above average seafood usage when comparing its mid-summer *versus* current usage (95% confidence limits).

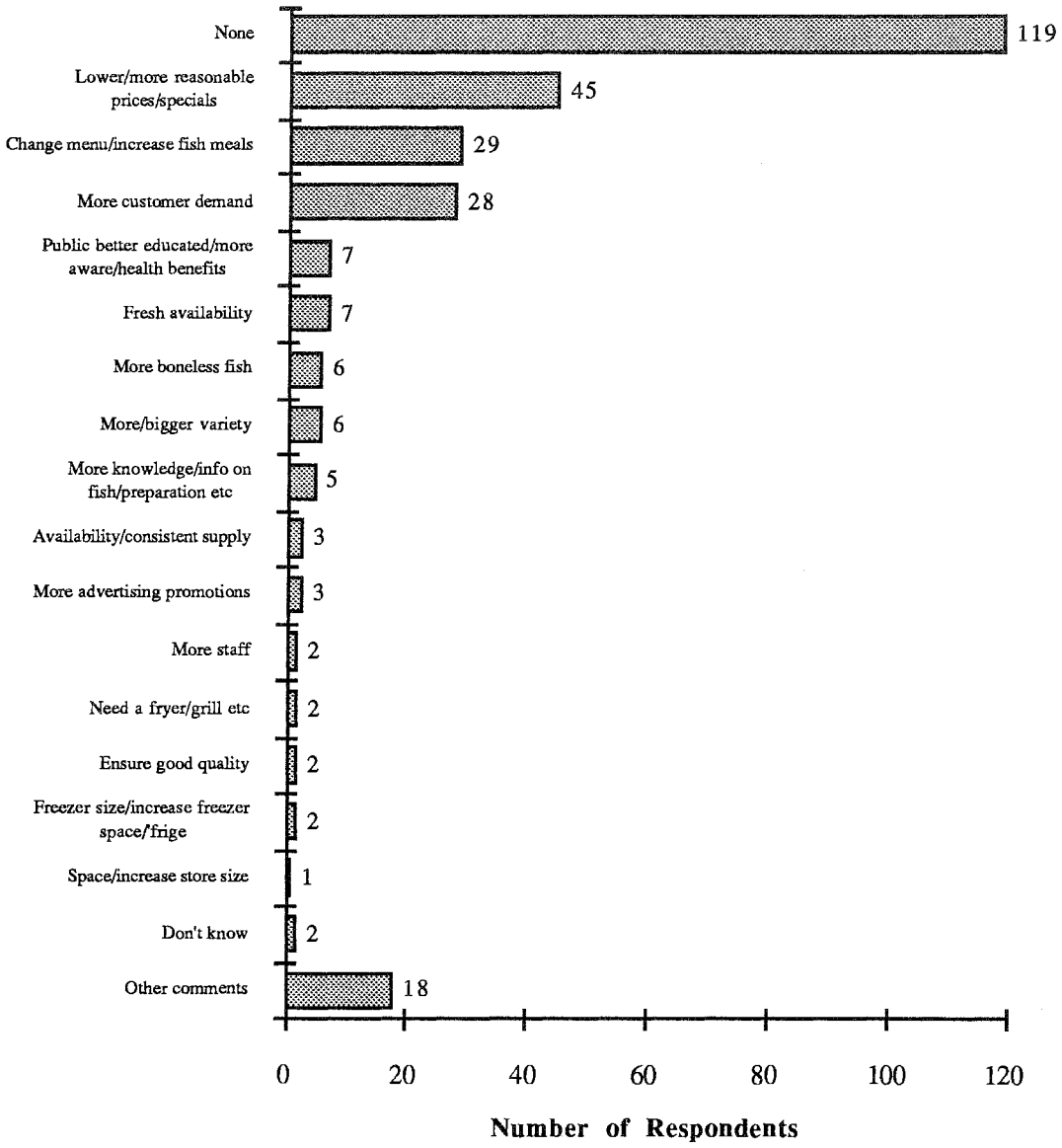
Institutions most frequently held the opinion (Question 16a, Appendix IV) that their expenditure on fish and seafood products would remain the same over the next five years (Figure 6.8.7). Only 42% of respondents held the view that purchases would increase. The number of hospitals and nursing homes which held that fish and seafood purchases would increase was above average, while a below average number thought that purchases would remain the same (both at 95% confidence limits).

Regarding institutions' reasons for their opinions on the sales prospects of fish and seafood over the next five years (Question 16b, Appendix IV), that there "has not been a change in (5- 10) years", was the most frequently held view, driving the conclusion that sales prospects would remain the same (Figure 6.8.8) Likewise, the issue of "limited demand in area/small ... residence, etc" was another major reason behind sales remaining static.

The chief reasons underlying optimism over expenditure growth were:

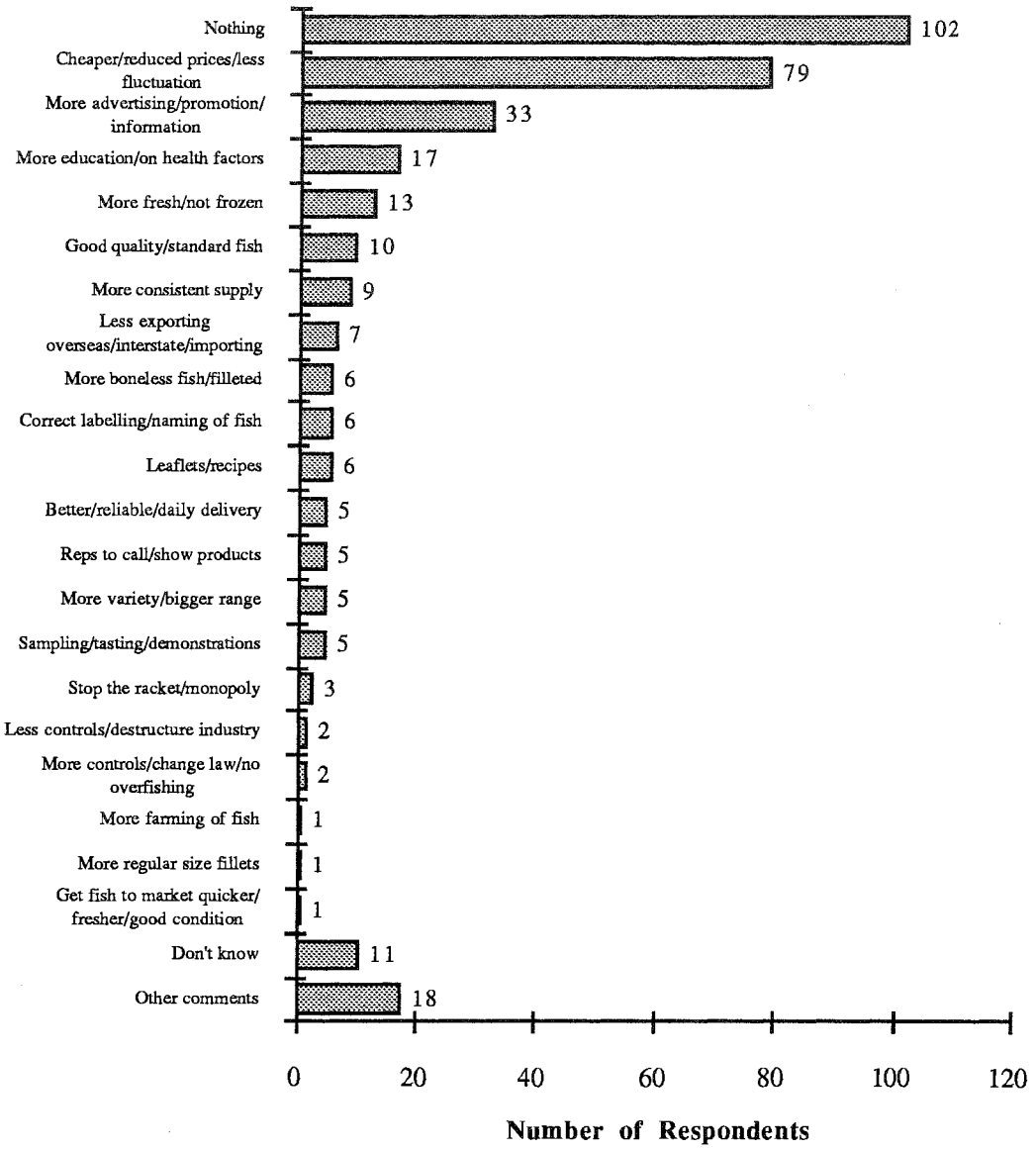
- people becoming more health conscious
- no/low cholesterol/fish is health food
- prices will increase, therefore spend more
- extension planned/going to extend (store, menu).

Figure 6.8.1: Actions Required for Institution to Buy More Fish/Seafood



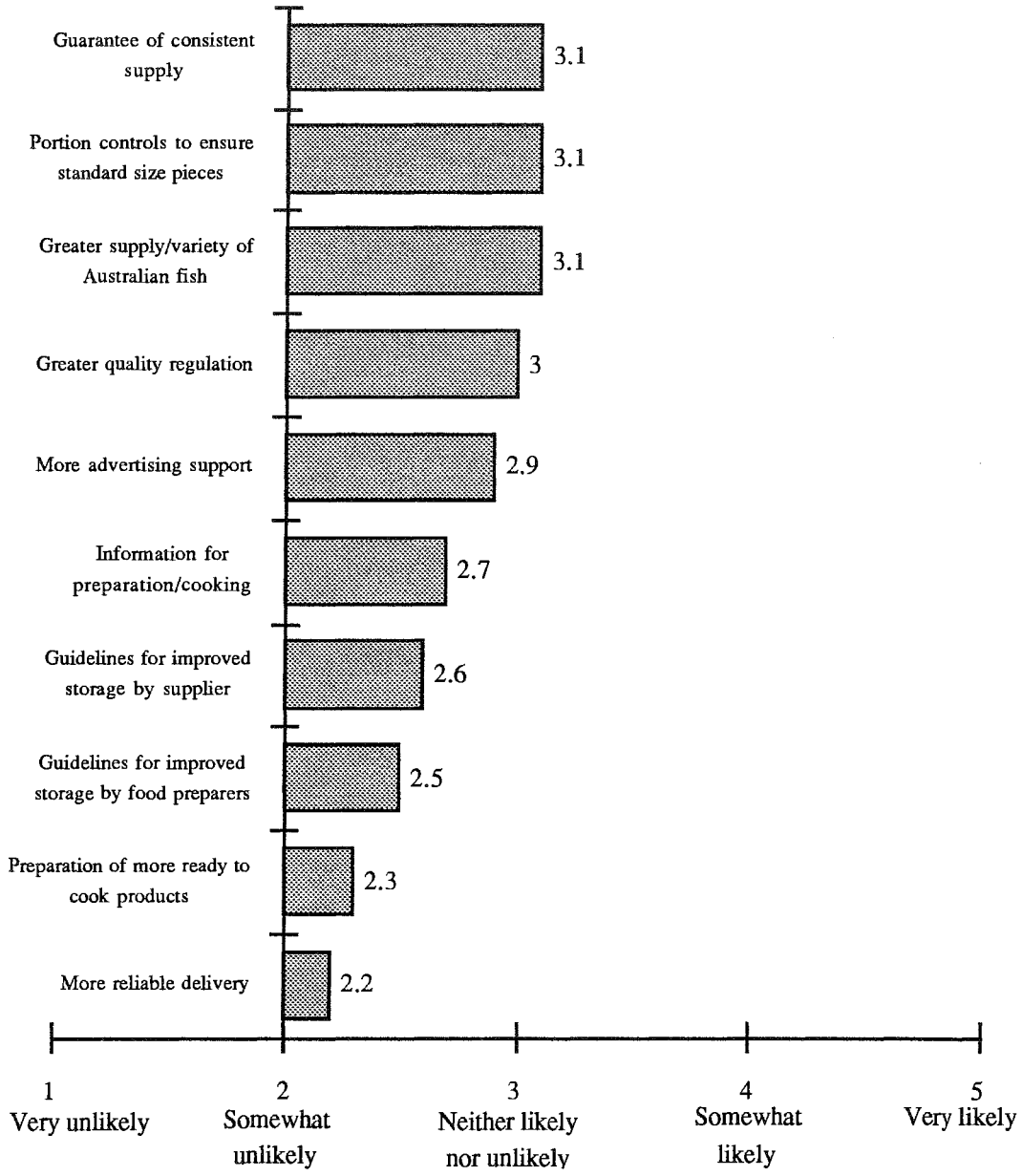
252 respondents offered 287 responses across the May 1991 and September 1991 surveys (see Question 12a, Appendix IV).

Figure 6.8.2: Actions Required by Fishing Industry for Institution to Buy More Fish/Seafood



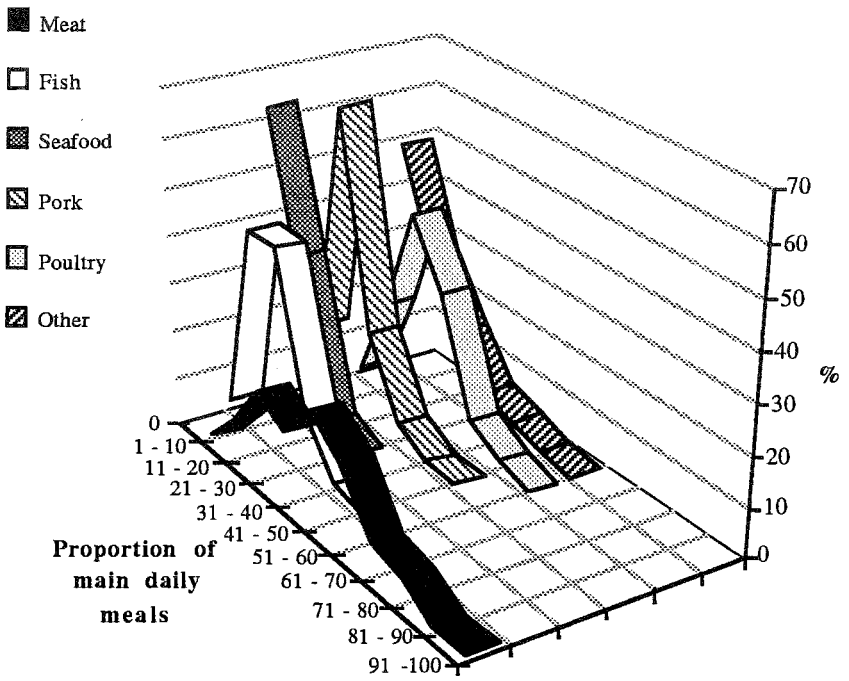
252 respondents offered 347 responses across the May 1991 and September 1991 surveys (see Question 12b, Appendix IV).

Figure 6.8.3: Institutions' Opinions on the Likelihood That Particular Actions Would Increase Sales of Fish/Seafood: Averaged Response



252 respondents offered responses on 10 possible actions across the May 1991 and September 1991 surveys (see Question 13, Appendix IV).

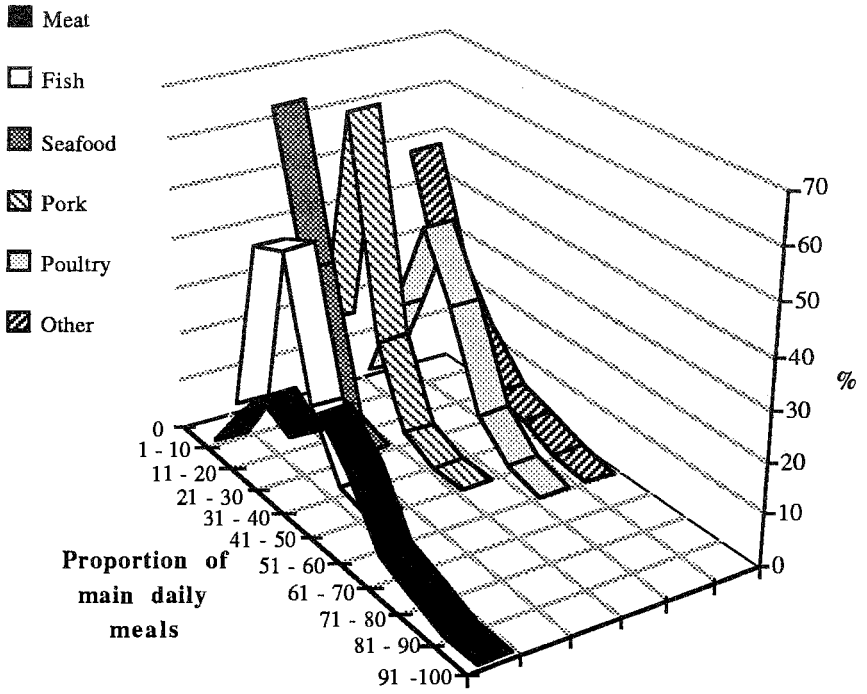
Figure 6.8.4: Proportion of Institutions' Main Daily Meals Currently Accounted for by Six Food Categories



Proportion of main daily meals	Proportion of Responses (%)[1]					
	Meat	Fish	Seafood	Pork	Poultry	Other
0%		2	62	13	1	48
1 - 10%	1	42	34	63	19	27
11 - 20%	9	42	3	19	42	15
21 - 30%	19	12	0	4	29	5
31 - 40%	15	1		0	6	3
41 - 50%	24	0			2	1
51 - 60%	18				0	0
61 - 70%	7					
71 - 80%	5					
81 - 90%	1					
91 - 100%	1					
Don't know	0					

(1) responses may not total 100%, due to rounding. 252 respondents offered 252 responses on each of the food type options across the May 1991 and September 1991 surveys (see Question 15a, Appendix IV).

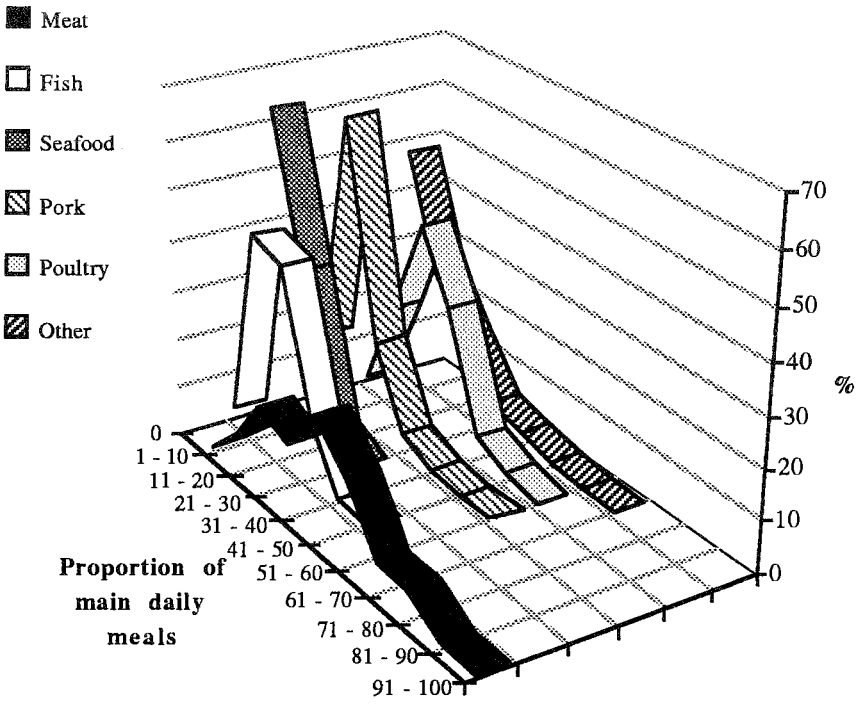
Figure 6.8.5: Proportion of Institutions' Main Daily Meals Accounted for in Mid-Summer by Six Food Categories



Proportion of main daily meals	Proportion of responses (%)[1]					
	Meat	Fish	Seafood	Pork	Poultry	Other
0%		2	62	15	1	47
1 - 10%	1	39	32	62	19	25
11 - 20%	11	42	3	18	40	15
21 - 30%	19	14	1	3	27	6
31 - 40%	15	2	0	0	8	4
41 - 50%	24	0			2	1
51 - 60%	17				0	0
61 - 70%	6					
71 - 80%	4					
81 - 90%	1					
91 - 100%	1					
Don't know	0					

(1) responses may not total 100%, due to rounding. 252 respondents offered 252 responses on each of the food type options across the May 1991 and September 1991 surveys (see Question 15b, Appendix IV).

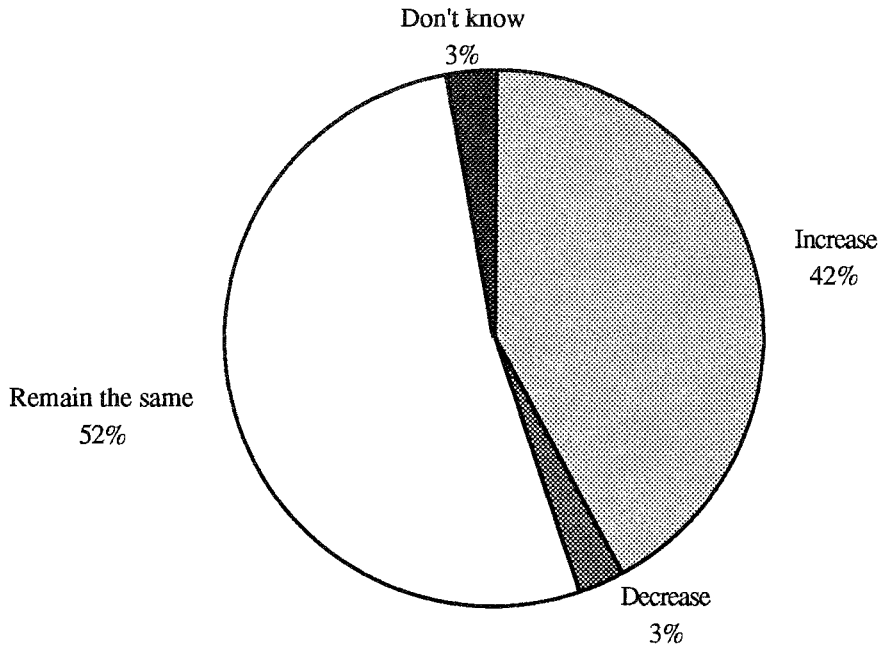
Figure 6.8.6: Proportion of Institutions' Main Daily Meals Accounted for in Mid-Winter by Six Food Categories



Proportion of main daily meals	Proportion of Responses (%)[1]					
	Meat	Fish	Seafood	Pork	Poultry	Other
0%		2	62	13	1	47
1 - 10%	1	42	33	61	20	26
11 - 20%	8	40	3	19	41	15
21 - 30%	18	12	0	4	28	5
31 - 40%	15	1		1	5	8
41 - 50%	25	0		0	2	1
51 - 60%	17				0	0
61 - 70%	6					
71 - 80%	6					
81 - 90%	1					
91 -100%	1					
Don't know	2					

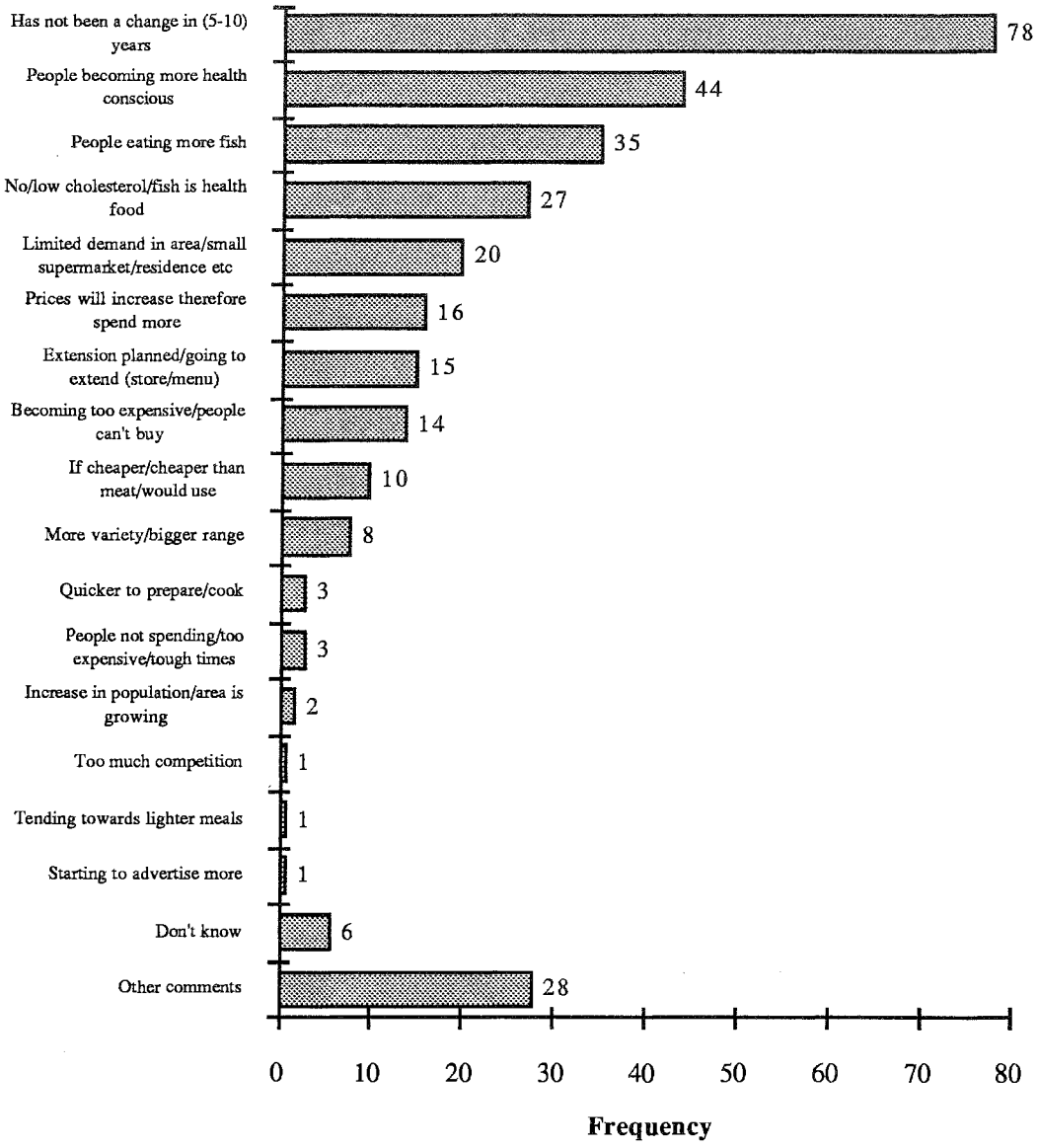
(1) responses may not total 100%, due to rounding. 252 respondents offered 252 responses on each of the food type options across the May 1991 and September 1991 surveys (see Question 15c, Appendix IV).

Figure 6.8.7: Institutions' Opinions of Sales Prospects for Fish/Seafood Over the Next 5 Years: Proportion of all Respondents Giving Response Shown (%)



252 respondents offered responses across the May 1991 and September 1991 surveys (see Question 16a, Appendix IV).

Figure 6.8.8: Institutions' Reasons for Opinion of Fish and Seafood Sales Over Next 5 Years



253 respondents offered 312 responses across the May 1991 and September 1991 surveys (see Question 16b, Appendix IV.

6.9 Details of Institutions - Food Expenditure, Staffing, Meals, Capacity

The study gathered a considerable amount of data on the characteristic of institutions potentially relevant to those businesses considering how best to market their services to meet the needs of institutions. These data are compiled in the database, and reported briefly here.

The majority of institutions had an average weekly expenditure of under $5,000 on all types of food (Figure 6.9.1). Numerous institutions did spend more than this and their nett effect was to raise average weekly expenditure to $7,214. The average expenditure in Adelaide ($4,216) was only half that of Sydney institutions ($9,190). Air Force defence establishments had the highest average weekly expenditure of any type in the sample base ($23,875), whereas welfare and charitable homes had the lowest ($1,684).

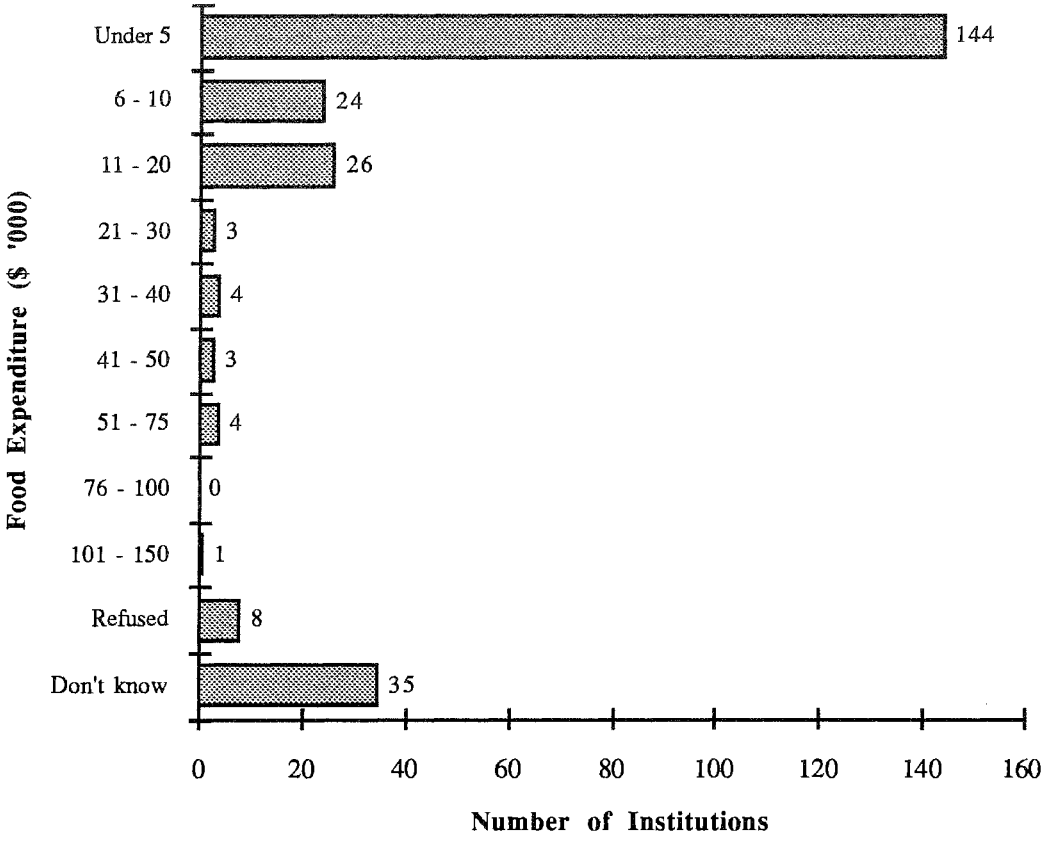
Institutions most frequently employed in the range 6 - 10 full time staff, although many were also in the categories of 21 - 50 and over 100 (Figure 6.9.2). Part time or casual staff were most frequently present in the range of 21 - 50 per institution, although many institutions reported having no part time staff (Figure 6.9.2).

When asked what proportion of the meals you prepare would be for **full time** residents including staff and students (Question 19, Appendix IV), institutions most frequently replied 100% (Figure 6.9.3). Data on the number of beds available in hospitals and nursing homes indicated an average capacity of 146.4 beds across this type of institution in the sample.

Of the residential schools and colleges, 16 of the 19 had over 100 students enroled, with 13 of these 16 reporting that same number living "on campus".

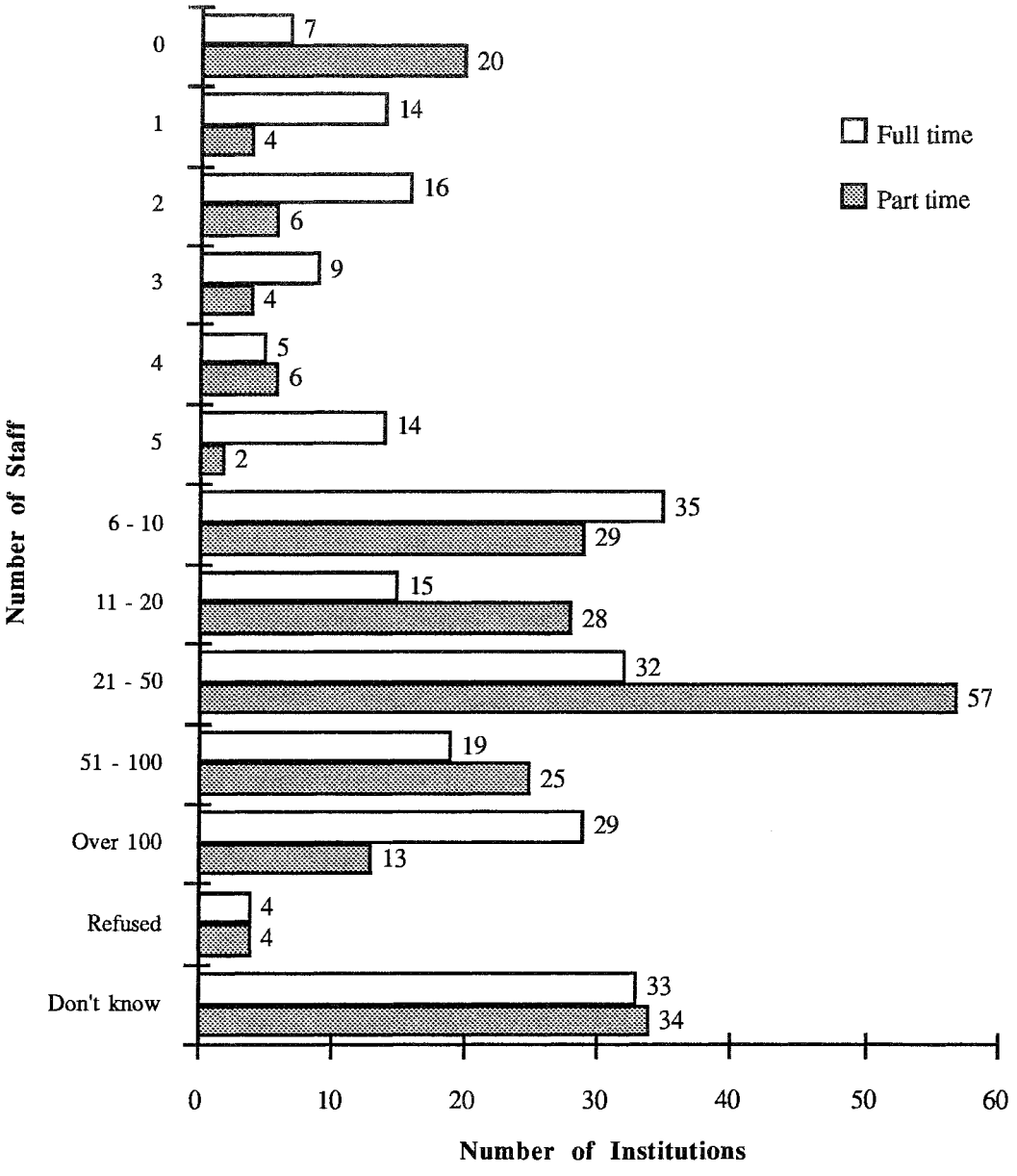
For the 64 institutions which were prisons, defence establishments or welfare and charitable homes, the majority (33) reported catering for over 100 people. The average number of people catered for was 225.7.

Figure 6.9.1: Institutions' Average Weekly Expenditure on Food (Rounded to Nearest $1000)



252 respondents offered responses across the May 1991 and September 1991 surveys (see Question 17, Appendix IV).

Figure 6.9.2: Number of Staff Employed by Institutions

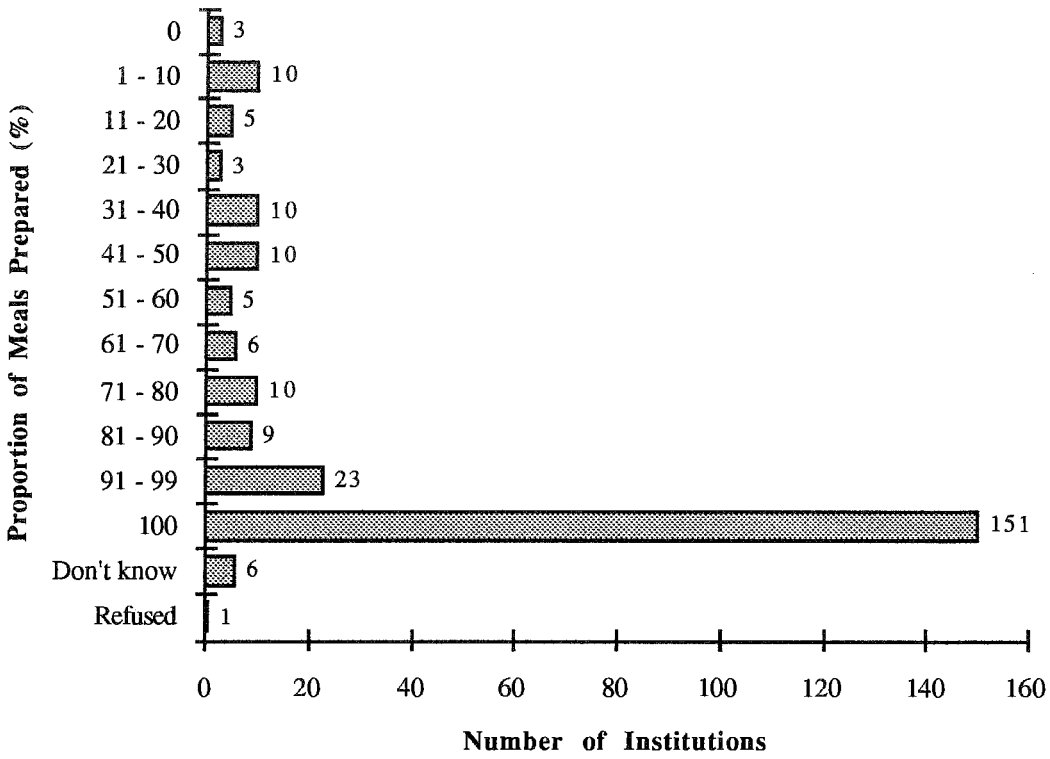


252 respondents offered responses across the May 1991 and September 1991 surveys (see Question 18, Appendix IV).

Appendix I

In-Home Questionnaire

Figure 6.9.3: Percentage of Meals Prepared by Institutions For Full Time Residents



252 respondents offered responses across the May 1991 and September 1991 surveys (see Question 19, Appendix IV).

Submitted for

PA Consulting Group

R G Logie-Smith
General Manager -
Process & Extractive Industries

P J Kitson
Consultant

YANN CAMPBELL HOARE WHEELER
MARKET RESEARCH
11 PRINCES STREET
ST KILDA VIC 3182
PHONE: 537 2255

JOB NO.: 6754/4: IN-HOME

WAVE 4

TIME:

START: _____

FINISH: _____

COASTAL/NEAR TO COAST	1	SYDNEY 01
		MELBOURNE 03
		BRISBANE 05
		ADELAIDE 07
		PERTH 09
		HOBART 12
		REGIONAL NSW 02
		REGIONAL VIC 04
		REGIONAL QLD 06
		REGIONAL SA 08
		REGIONAL WA 10
INLAND - 50 KM FROM COAST	2	CANBERRA 11
		REGIONAL TAS 13

QUESTIONNAIRE NUMBER: _____

NOT * HOUSEHOLD ON CALL SHEET 9

* HOUSEHOLD ON CALL SHEET
NUMBER OF 6754B QUESTIONNAIRES LEFT 0
1
2
3
4
5
6

FISH AND SEAFOOD CONSUMPTION STUDY

Good morning/afternoon/evening. My name is ..... from Yann Campbell Hoare Wheeler Market Research. Today we are conducting a study on Food Consumption in Australia and would appreciate your help. The results of the study will be used in planning the supply and marketing of various food products in Australia in the 1990's. At the end of the interview I can tell you for whom the study is being conducted. Could I please speak to the person who is mainly responsible for food purchase and preparation in this household.

IF ANOTHER RESPONDENT IS RESPONSIBLE FOR FOOD PREPARATION ASK TO SPEAK TO THAT PERSON AND REPEAT INTRODUCTION. IF THE APPROPRIATE RESPONDENT IS UNAVAILABLE, MAKE A CONVENIENT CALL BACK TIME.

RESPONDENT NAME:

CALL BACK 1 DATE/TIME: _____

CALL BACK 2 DATE/TIME: _____

CALL BACK 3 DATE/TIME: _____

Q.1 **Do you buy and prepare food only for yourself or is food purchased and prepared for the household?** IF THE RESPONDENT LIVES ALONE THIS SHOULD BE CODED AS BUY/PREPARE FOR HOUSEHOLD (CODE 2)

BUY/PREPARE ONLY FOR SELF 1

BUY/PREPARE FOR HOUSEHOLD 2

SHOW CARD A

Q.2 **I would like to ask you about what types of meals you would select for a specific meal occasion, but before we can do this I need to know what is your household composition?**

SELECT ONE MEAL OCCASION, APPROPRIATE TO THIS HOUSEHOLD COMPOSITION AT THIS ADDRESS. RECORD BY CIRCLING BELOW. ROTATE THROUGH MEAL OCCASIONS IN CLUSTER WORKING FROM LEFT TO RIGHT AND THEN RIGHT TO LEFT.

		MEAL OCCASION FOR Q.3 AND Q.4 - TO CIRCLE					
	Q.2	EVENING MEAL BY SELF	HOUSEHOLD EVENING MEAL	WEEKEND HOUSEHOLD MEAL - LUNCH	ENTERTAIN -ING : ENTREE	ENTERTAIN - ING : MAIN	CHILDREN'S EVENING MEAL
SINGLE/LIVING ALONE	01	X			X	X	
SINGLE/LIVING WITH OTHER SINGLES - RELATIVES	02	X	X	X	X	X	
SINGLE/LIVING WITH OTHER SINGLES - NOT RELATIVES	03	X	X	X	X	X	
SINGLE/LIVING WITH PARENTS	04	X	X	X	X	X	
MARRIED/DE FACTO - NO CHILDREN	05	X	X	X	X	X	
MARRIED/DE FACTO - DEPENDENT CHILDREN	06	X	X	X	X	X	X
MARRIED/DE FACTO - ADULT FAMILY MEMBERS	07	X	X	X	X	X	
SINGLE PARENT - DEPENDENT CHILDREN	08	X	X	X	X	X	X
SINGLE PARENT - ADULT FAMILY MEMBERS	09	X	X	X	X	X	
REFUSED	10	X	X	X	X	X	X

SHOW CARD B

Q.3 **Which of the following meals would you be most likely to consider to prepare for** (READ OUT MEAL OCCASION & CIRCLE). **You can select as many as six?** RECORD UP TO SIX MEALS FOR THE ONE SELECTED OCCASION (Q.2).

	MEAL OCCASION					
	EVENING MEAL BY SELF	HOUSEHOLD EVENING MEAL	WEEKEND HOUSEHOLD MEAL - LUNCH	ENTERTAIN -ING : ENTREE	ENTERTAIN - ING : MAIN	CHILDREN'S EVENING MEAL
	1	2	3	4	5	6
MEAT						
SAUSAGES	01	01	01	01	01	01
LAMB CHOPS	02	02	02	02	02	02
STEAK	03	03	03	03	03	03
MINCE/RISSOLES	04	04	04	04	04	04
CASSEROLE OR CURRY	05	05	05	05	05	05
LAMB FOR ROAST	06	06	06	06	06	06
BEEF SHORT CUTS/PIECES	07	07	07	07	07	07
VEAL	08	08	08	08	08	08
PORK						
PORK CHOPS	09	09	09	09	09	09
PORK FOR ROAST	10	10	10	10	10	10
POULTRY						
WHOLE CHICKEN	11	11	11	11	11	11
CHICKEN FILLET/PIECE	12	12	12	12	12	12
FISH/SEAFOOD						
CANNED FISH	13	13	13	13	13	13
WHOLE FISH	14	14	14	14	14	14
FISH FILLET	15	15	15	15	15	15
SMOKED COD	16	16	16	16	16	16
FISH FINGERS	17	17	17	17	17	17
SALMON (NOT CANNED)	18	18	18	18	18	18
PRAWNS (NOT CANNED)	19	19	19	19	19	19
SCALLOPS	20	20	20	20	20	20
OTHER						
PASTA DISH	21	21	21	21	21	21
VEGETARIAN	22	22	22	22	22	22
SANDWICH/BREAD	23	23	23	23	23	23
PIES/PASTIES	24	24	24	24	24	24
CANNED VEGETABLES/MEAT	25	25	25	25	25	25
SOUP	26	26	26	26	26	26

SHOW CARD FOR Q.4

CIRCLE APPROPRIATE MEAL OCCASION (FROM ABOVE) C1 C2 C3 C4 C5 C6

SHOW CARD C FOR APPROPRIATE MEAL OCCASION AND TICK MEAL BOX

Q.4 **In other research people have made a number of statements about various foods for** (READ OUT MEAL OCCASION). **I'm going to read out some statements and would like you to tell me to which, if any, each statement applies. You may nominate none, one or as many as you like. There are no right or wrong answers, we are just interested in your opinion.** ROTATE TO ASTERISK.

The first statement is .... (READ OUT FIRST STATEMENT). **From the card which foods does this statement apply to for** (READ OUT MEAL OCCASION)?

SHOW CARD	TICK BOX FOR MEAL										
		EVENING MEAL BY SELF									
C1	☐	CANNED FISH	PASTA DISH	SAUSAGES	LAMB CHOPS	FISH FILLET	FISH FINGERS	VEGETAR -IAN	PIE/ PASTIE	NONE	DON'T KNOW
		HOUSEHOLD EVENING MEAL									
C2	☐	CANNED FISH	PASTA DISH	SAUSAGES	STEAK	PORK CHOPS	FISH FILLET	WHOLE CHICKEN	LAMB FOR ROAST	NONE	DON'T KNOW
		WEEKEND HOUSEHOLD MEAL - LUNCH									
C3	☐	CANNED FISH	PASTA DISH	STEAK	WHOLE FISH	WHOLE CHICKEN	LAMB FOR ROAST	PIE/ PASTIE	PRAWNS (NOT CANNED)	NONE	DON'T KNOW
		ENTERTAINING - ENTREE									
C4	☐	PASTA DISH	FISH FILLET	VEGETAR -IAN	BEEF SHORT CUT - PIECES	SALMON (NOT CANNED	PRAWNS (NOT CANNED	SCALL -OPS	SOUP	NONE	DON'T KNOW
		ENTERTAINING - MAIN									
C5	☐	PASTA DISH	STEAK	WHOLE FISH	FISH FILLET	CHICKEN FILLET/ PIECES	PORK FOR ROAST	VEAL	PRAWNS (NOT CANNED)	NONE	DON'T KNOW
		CHILDREN'S EVENING MEAL									
C6	☐	CANNED FISH	PASTA DISH	SAUSAGES	MINCE/ RISSOLES	FISH FILLET	FISH FINGERS	PIE/ PASTIE	CANNED VEGET -ABLES/ MEAT	NONE	DON'T KNOW

1.	IS TOO EXPENSIVE FOR THE MEAL	01	02	03	04	05	06	07	08	09	10
2.	PRESENTS A PROBLEM IN WASTE DISPOSAL	01	02	03	04	05	06	07	08	09	10
3.	I DON'T MIND COOKING IT	01	02	03	04	05	06	07	08	09	10
4.	I NEED MORE INFORMATION ABOUT ITS COOKING	01	02	03	04	05	06	07	08	09	10
5.	IS READILY AVAILABLE TO BUY	01	02	03	04	05	06	07	08	09	10
6.	I DON'T HAVE THE KNOWLEDGE TO BUY IT CONFIDENTLY	01	02	03	04	05	06	07	08	09	10
7.	IT ISN'T EASY TO PREPARE FOR COOKING	01	02	03	04	05	06	07	08	09	10
8.	IS NOT A FILLING MEAL	01	02	03	04	05	06	07	08	09	10
9.	HAS A TASTE THAT IS DISLIKED	01	02	03	04	05	06	07	08	09	10
10.	CONTAINS LITTLE FAT	01	02	03	04	05	06	07	08	09	10
11.	SOMETHING I WOULD BUY ONLY ON SPECIAL	01	02	03	04	05	06	07	08	09	10
12.	THERE IS WASTAGE AS A LOT OF WHAT YOU BUY CAN'T BE EATEN	01	02	03	04	05	06	07	08	09	10
13.	I CAN COOK IT IN THE MICROWAVE	01	02	03	04	05	06	07	08	09	10
14.	ITS QUALITY IS TOO VARIABLE	01	02	03	04	05	06	07	08	09	10
15	IS A HEALTHY MEAL	01	02	03	04	05	06	07	08	09	10
16.	IS POPULAR WITH THE PEOPLE WHO WILL BE EATING THE MEAL	01	02	03	04	05	06	07	08	09	10

Now I'd like to ask some specific questions about your household.

SHOW CARD D

Q.5 **Could you please tell me the members of your household who live in your home, and their sex and age.** RECORD BELOW

Now we shall talk about fish and seafood consumption, by that I mean, all species of fish and other seafood like, prawns, lobster, scallops and oysters. I want you to think of any type of fish or seafood. By that I mean fresh, frozen, prepackaged, canned or bottled and fish or seafood used as an ingredient in for example, pizza, casseroles or sandwiches.

FOR EACH HOUSEHOLD MEMBER ASK Q.6

Q.6 **Which members of this household have eaten fish or seafood in the last year? And who have not eaten fish or seafood in the last year?** RECORD BELOW

PLEASE RECORD DETAILS OF RESPONDENT FIRST			RELATIONSHIP/NAME OF MEMBER OF HOUSEHOLD								
			RESPONDENT								
HOUSEHOLD MEMBER CODE			1	2	3	4	5	6	7	8	9
Q.5	SEX	- MALE	1	1	1	1	1	1	1	1	1
		- FEMALE	2	2	2	2	2	2	2	2	2
Q.5	AGE	- 0-2 YEARS	1	1	1	1	1	1	1	1	1
		3-9 YEARS	2	2	2	2	2	2	2	2	2
		10-14 YEARS	3	3	3	3	3	3	3	3	3
		15-19 YEARS	8	8	8	8	8	8	8	8	8
		20-39 YEARS	4	4	4	4	4	4	4	4	4
		40-59 YEARS	5	5	5	5	5	5	5	5	5
		60 YEARS OR MORE	6	6	6	6	6	6	6	6	6
		REFUSED	7	7	7	7	7	7	7	7	7
Q.6	EATEN FISH/SEAFOOD IN LAST YEAR		1	1	1	1	1	1	1	1	1
	NOT EATEN FISH/SEAFOOD IN LAST YEAR		2	2	2	2	2	2	2	2	2
	DON'T KNOW		3	3	3	3	3	3	3	3	3

IF RESPONDENT SAYS NO ONE EATS FISH OR SEAFOOD, CHECK FOR, FOR EXAMPLE CANNED FISH (TUNA AND SALMON), FISH FROM A TAKE-AWAY SHOP, FISH PASTE, FROZEN FISH/ SEAFOOD MEALS PREPARED READY TO COOK

EAT FISH/SEAFOOD	1 - CONTINUE
DON'T EAT FISH/ SEAFOOD	2 - GO TO Q.27(A)

IF NO-ONE EATS FISH OR SEAFOOD GO TO Q.27a

MEALS EATEN IN LAST SEVEN DAYS

YESTERDAY _____ MEAL CODE	Q.7 AT HOME	Q.7 OUT OF HOME	Q.7 NOT EAT	Q.8 SEAFOOD EATEN	Q.8 SEAFOOD NOT EATEN	Q.9a HOUSEHOLD MEMBER CODE	Q.9b VISITORS IF NONE CIRCLE "0"
11. DINNER	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
21. LUNCH	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
31. BREAKFAST	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
Q.10 41. OTHER (SELF) _____	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
Q.11 51. OTHER PERSON _____	1	N/A	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
DAY _____							
12. DINNER	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
22. LUNCH	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
32. BREAKFAST	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
Q.10 42. OTHER (SELF) _____	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
Q.11 52. OTHER PERSON _____	1	N/A	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
DAY _____							
13. DINNER	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
23. LUNCH	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
33. BREAKFAST	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
Q.10 43. OTHER (SELF) _____	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
Q.11 53. OTHER PERSON _____	1	N/A	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
DAY _____							
14. DINNER	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
24. LUNCH	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
34. BREAKFAST	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
Q.10 44. OTHER (SELF) _____	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
Q.11 54. OTHER PERSON _____	1	N/A	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
DAY _____							
15. DINNER	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
25. LUNCH	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
35. BREAKFAST	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
Q.10 45. OTHER (SELF) _____	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
Q.11 55. OTHER PERSON _____	1	N/A	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
DAY _____							
16. DINNER	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
26. LUNCH	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
36. BREAKFAST	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
Q.10 46. OTHER (SELF) _____	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
Q.11 56. OTHER PERSON _____	1	N/A	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
DAY _____							
17. DINNER	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
27. LUNCH	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
37. BREAKFAST	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
Q.10 47. OTHER (SELF) _____	1	2	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6
Q.11 57. OTHER PERSON _____	1	N/A	3	1	2	1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6

From this point on, when we discuss seafood we are referring to fish and other types of seafood.

Now I would like you to think about all the meals or snacks that you have had in the last seven days. Starting from dinner last night.

Q.7 **Did you eat** (READ OUT MEAL OCCASION AND DAY OF WEEK) **at home, out of home or did you miss this meal?** RECORD OPPOSITE.

IF ATE (Q.7 CODE 1 OR 2) ASK Q.8; OTHERWISE GO TO Q.7 FOR NEXT MEAL

Q.8 **Was any type of seafood (fish or other seafood) consumed at this meal. It may have been the main part of the meal or an ingredient (for example, canned fish, marinara mix, prawns or anchovies on pizza, fish paste or fillings in sandwiches or a casserole). And it may have been prepared by you or someone else, or it may have been bought?** RECORD OPPOSITE.

IF SEAFOOD EATEN AT HOME (Q.7 CODE 1 AND Q.8 CODE 1) ASK Q.9; OTHERWISE GO TO Q.7 FOR NEXT MEAL OCCASION. IF UP TO 'OTHER' MEAL GO TO Q.10 AND Q.11

Q.9a **Which household members (including yourself), ate some of this fish or seafood meal?** RECORD HOUSEHOLD MEMBER CODE (FROM Q.5 PAGE 5)

Q.9b **Did you have any visitors (non-household members) to this meal? If so, how many?** RECORD OPPOSITE.

GO TO Q.7

"OTHER" MEALS

OTHER SELF

Q.10 **Did you eat any type of seafood (fish or other seafood) at any other time during** (READ OUT DAY OF WEEK?) **IF NO:** RECORD Q.7 CODE 3 WITH OTHER(SELF) **IF YES: Ask for time of day or meal occasion?** WRITE IN AND RECORD Q.8 CODE 1 THEN ASK Q.7; AND ASK Q.9 IF ATE AT HOME

OTHER PERSON

Q.11 **Did anyone else eat any type of seafood (fish or other seafood) at home during** (READ OUT DAY OF WEEK). **An example of this maybe a meal prepared especially for a child? IF NO:** RECORD Q.7 CODE 3 WITH OTHER PERSON. **IF YES: Ask for time of day or meal occasion?** WRITE IN AND RECORD Q.7 AND Q.8 CODE 1. THEN ASK Q.9.

REPEAT Q.7 TO Q.11 FOR EACH MEAL OCCASION IN THE LAST SEVEN DAYS

IF SEAFOOD EATEN AT HOME IN THE LAST SEVEN DAYS GO TO Q.12a

IF SEAFOOD EATEN OUTSIDE HOME (BY RESPONDENT) IN THE LAST SEVEN DAYS GO TO Q.19

IF SEAFOOD NOT EATEN IN THE LAST SEVEN DAYS GO TO Q.26

SEAFOOD AT HOME	1 -	GO TO AT HOME SECTION (P.9)
SEAFOOD OUT OF HOME	2 -	GO TO OUT OF HOME SECTION (P.13)
SEAFOOD NOT EATEN IN LAST WEEK	3 -	GO TO Q.26 (P.15)

IN HOME CONSUMPTION OF FISH AND SEAFOOD

	1ST OCCASION	2ND OCCASION	3RD OCCASION	4TH OCCASION	5TH OCCASION	6TH OCCASION
WRITE IN DAY AND MEAL						
RECORD MEAL CODE						
Q.12a COOKED & SERVED	1	1	1	1	1	1
BOUGHT TO EAT IN HOME	2	2	2	2	2	2
Q.12b COMMERCIAL FISHERMAN	01	01	01	01	01	01
OTHER FISHERMEN ($ PAID)	02	02	02	02	02	02
WHOLESALER/CO-OP	03	03	03	03	03	03
FISH OR GENERAL MARKET	04	04	04	04	04	04
RETAIL FISH SHOP (UNCOOKED)	05	05	05	05	05	05
FISH AND CHIP SHOP/TAKE-AWAY	06	06	06	06	06	06
SUPERMARKET/FOOD STORE	07	07	07	07	07	07
CONVENIENCE STORE LATE TRADE	08	08	08	08	08	08
DELICATESSEN	09	09	09	09	09	09
CAUGHT BY HOUSEHOLD MEMBER	10	10	10	10	10	10
GIFT BY NON-HOUSEHOLD MEMBER	11	11	11	11	11	11
OTHER	12	12	12	12	12	12
(SPECIFY)						
DON'T KNOW/CAN'T SAY	13	13	13	13	13	13
Q.13 TYPE OF FISH/SEAFOOD						
WRITE IN						
DON'T KNOW	01	01	01	01	01	01
Q.14 FORM BOUGHT						
FRESH WHOLE	01	01	01	01	01	01
FRESH FILLET	02	02	02	02	02	02
FRESH CUTLET	03	03	03	03	03	03
FRESH HEADED & GUTTED/PEELED	04	04	04	04	04	04
FROZEN WHOLE	05	05	05	05	05	05
FROZEN FILLET	06	06	06	06	06	06
FROZEN CUTLET	07	07	07	07	07	07
FROZEN HEADED & GUTTED/PEELED	08	08	08	08	08	08
FRESH PREPARED READY TO COOK (EG. SHASLIKS)	09	09	09	09	09	09
FROZEN PACKAGED READY TO COOK (EG. FISH FINGERS, CRUMBED PORTIONS)	10	10	10	10	10	10
SMOKED	11	11	11	11	11	11
CANNED	12	12	12	12	12	12
GLASS BOTTLE	13	13	13	13	13	13
COOKED FILLET	14	14	14	14	14	14
OTHER	15	15	15	15	15	15
(SPECIFY)						
DON'T KNOW	16	16	16	16	16	16
Q.15a WEIGHT OF SEAFOOD	___ G	___ G	___ G	___ G	___ G	___ G
PIECES/SIZE/CANS						
Q.15b PRICE	$ ___	$ ___	$ ___	$ ___	$ ___	$ ___
DON'T KNOW/CAN'T SAY	9999	9999	9999	9999	9999	9999
Q.16 HOW FISH & SEAFOOD IS COOKED/PREPARED/SERVED						
BOIL/BOILED IN BAG	01	01	01	01	01	01
BAKED/OVEN	02	02	02	02	02	02
GRILLED	03	03	03	03	03	03
DEEP FRIED-AT HOME	04	04	04	04	04	04
DEEP FRIED-BOUGHT OUT OF HOME	05	05	05	05	05	05
STEAMED	06	06	06	06	06	06
MICROWAVED	07	07	07	07	07	07
RAW	08	08	08	08	08	08
STRAIGHT	09	09	09	09	09	09
BARBEQUED	10	10	10	10	10	10
PAN FRIED	11	11	11	11	11	11
POACHED (WATER IN PAN)	12	12	12	12	12	12
PIZZA TOPPING	13	13	13	13	13	13
INGREDIENT - MORNAY	14	14	14	14	14	14
INGREDIENT - STIR FRY	15	15	15	15	15	15
INGREDIENT - CASSEROLE	16	16	16	16	16	16
INGREDIENT - OTHER	17	17	17	17	17	17
OTHER	18	18	18	18	18	18
(SPECIFY)						
DON'T KNOW	19	19	19	19	19	19
Q.17 RECIPE						
YES	1	1	1	1	1	1
NO	2	2	2	2	2	2

IN HOME CONSUMPTION OF FISH AND SEAFOOD

WRITE IN DAY AND MEAL OCCASION THAT HAD SEAFOOD IN HOME IN THE LAST SEVEN DAYS. STARTING WITH THE MOST RECENT ASK Q.12a TO Q.17. REPEAT FOR EACH FISH OR SEAFOOD MEAL IN HOME.

Q.12a **Was the meal cooked and served by you (or someone else in your household), or did you (or someone else) buy cooked fish or seafood to eat in the home?** RECORD OPPOSITE

SHOW CARD E

Q.12b **Where did you (or someone else in your household) buy or obtain this fish/seafood?** RECORD OPPOSITE.

Q.13 **What type (species) of fish/seafood was that?** WRITE IN AS MANY DETAILS AS POSSIBLE OPPOSITE.

SHOW CARD F

Q.14 **In what form was the fish/seafood bought?** RECORD OPPOSITE

Q.15a **What was the total weight of ...** (READ OUT TYPE) **served at this meal?** RECORD GRAMS. PROBE FOR WEIGHT USING INTERVIEWER AIDES. IF UNCERTAIN PROBE FOR SIZE, NUMBER OF PIECES OR CAN(S). RECORD OPPOSITE.

Q.15b **And how much did you pay for that in total?** RECORD OPPOSITE

SHOW CARD G

Q.16 **How was this fish/seafood cooked or prepared?** RECORD OPPOSITE

Q.17 **Was a recipe from a cookbook or leaflet used for this meal?** RECORD OPPOSITE

CHECK Q.7 AND Q.8 PAGE 6 THAT THE NUMBER OF OCCASIONS FOR WHICH SEAFOOD EATEN IN-HOME IN THE LAST SEVEN DAYS TALLIES

IF Q.14 CODES 1 TO 8
AND ON SAME OCCASION BOUGHT FROM ...
Q.12b CODES 4 TO 7 ASK Q.18a;

OTHERWISE GO TO Q.18d

Q.18a SHOW CARD H

VERY IMPORTANT ... NOT AT ALL IMPORTANT

1 2 3 4 5 6 7

You mentioned that you last bought fresh or frozen fish/seafood from a (READ OUT OUTLET Q.12b CODES 4 TO 7 FOR LAST OCCASION). On a scale of 1 to 7, how important is (READ OUT FIRST ROTATED STATEMENT), when you buy fresh or frozen fish or seafood from that type of outlet? THEN ASK Q.18b FOR THAT STATEMENT. REPEAT Q.18a AND Q.18b FOR EACH STATEMENT.

SHOW CARD I

Q.18b **And which outlets from this card does this apply. You may nominate none, one or as many as you like. There are no right or wrong answers we are only interested in your opinion.**

	Q.18a	Q.18b										
RECORD OUTLET FROM Q.12b	IMPORT. RATING	COMM-ERCIAL FISHER-MEN	OTHER FISHER-MEN	WHOLE-SALER CO-OP	FISH OR GEN. MARKET	RETAIL FISH SHOP	FISH & CHIP SHOP/ TAKE-AWAY	SUPER-MARKET/ FOOD STORE	CONVEN-IENCE STORE	DELICAT-ESSAN	NONE	DON'T KNOW
CLEAN OUTLET/STORE	____	01	02	03	04	05	06	07	08	09	10	11
IT SELLS FRESH FISH & SEAFOOD (IE NOT FROZEN)	____	01	02	03	04	05	06	07	08	09	10	11
HAS ATTRACTIVELY DISPLAYED FISH & SEAFOOD	____	01	02	03	04	05	06	07	08	09	10	11
HAS CONSISTENTLY LOW PRICES FOR FISH & SEAFOOD	____	01	02	03	04	05	06	07	08	09	10	11
I FREQUENTLY SHOP THERE	____	01	02	03	04	05	06	07	08	09	10	11
OFFERS AUSTRALIAN FISH & SEAFOOD	____	01	02	03	04	05	06	07	08	09	10	11
OFFERS FISH & SEAFOOD SPECIALS	____	01	02	03	04	05	06	07	08	09	10	11
HAS STAFF INFORMED ABOUT FISH & SEAFOOD	____	01	02	03	04	05	06	07	08	09	10	11
HAS CONSISTENTLY LOW PRICES FOR SHOPPING IN GENERAL	____	01	02	03	04	05	06	07	08	09	10	11
IS EASILY ACCESSIBLE TO ME	____	01	02	03	04	05	06	07	08	09	10	11
IT OFFERS ADVERTISED SPECIALS REGULARLY	____	01	02	03	04	05	06	07	08	09	10	11
YOU CAN BUY MANY DIFFERENT TYPES OF FOOD THERE	____	01	02	03	04	05	06	07	08	09	10	11
OFFERS A WIDE VARIETY OF FISH & SEAFOOD PRODUCTS	____	01	02	03	04	05	06	07	08	09	10	11
HAS FRIENDLY STAFF WORKING THERE	____	01	02	03	04	05	06	07	08	09	10	11
HAS A GOOD REPUTATION FOR QUALITY FISH & SEAFOOD	____	01	02	03	04	05	06	07	08	09	10	11
I CAN BE CONFIDENT THAT FRESH FISH OR SEAFOOD HAS NOT BEEN FROZEN	____	01	02	03	04	05	06	07	08	09	10	11

IN HOME

SHOW CARD H

VERY IMPORTANT — NOT AT ALL IMPORTANT

1 2 3 4 5 6 7

Q.18c **Now I would like you to think about when you are actually selecting a specific type of fresh (or frozen) fish for a meal at home. Again on a scale of 1 to 7, how important are each of the following factors.** READ OUT

		Q.18c
1.	THE FISH IS THE SPECIES I WANT	
2.	FISH HAS BEEN CUT AND FILLETED	
3.	HAS A WHITE OR LIGHT COLOURED FLESH	
4.	HAS A STRONG FLAVOUR	
5.	I CAN BE SURE THAT IT DOESN'T HAVE BONES	
6.	IT IS A DEEP SEA SPECIES	
7.	I CAN BE SURE THAT THE FISH IS CORRECTLY LABELLED	
8.	IT IS A FAMILIAR TYPE OF FISH	
9.	IS A RELATIVELY LOW PRICE	
10.	IS ATTRACTIVELY PRESENTED TYPE OF FISH	
11.	IT IS FRESH RATHER THAN FROZEN	
12.	HAS A LIGHT FLAVOUR	
13.	RECOMMENDED BY THE RETAILER	

ALL IN-HOME RESPONDENTS

Q.18d **If the fish/seafood that you ate in home on** (READ AT LAST MEAL OCCASION WHEN ATE FISH - SEE PAGE 8) **was not available, what would you have eaten instead?** READ OUT

ANOTHER TYPE OF FISH/SEAFOOD	1
ANOTHER TYPE OF FOOD	2
DO NOT READ — DON'T KNOW/ CAN'T SAY	3

OUT OF HOME CONSUMPTION OF FISH AND SEAFOOD

	1ST OCCASION	2ND OCCASION	3RD OCCASION	4TH OCCASION	5TH OCCASION	6TH OCCASION
WRITE IN DAY AND MEAL						
RECORD MEAL CODE						
Q.19a PLACE WHERE BOUGHT/ATE SEAFOOD						
WORK CAFETERIA	01	01	01	01	01	01
RESTAURANT	02	02	02	02	02	02
FUNCTION CENTRE	03	03	03	03	03	03
CLUB	04	04	04	04	04	04
HOTEL	05	05	05	05	05	05
COFFEE LOUNGE/CAFE	06	06	06	06	06	06
FISH & CHIP SHOP	07	07	07	07	07	07
FAST FOOD OUTLET/TAKE-AWAY	08	08	08	08	08	08
SANDWICH/MILK BAR	09	09	09	09	09	09
FRIENDS/RELATIVES HOUSE	10	10	10	10	10	10
OTHER	11	11	11	11	11	11
(SPECIFY)						
Q.19b ENTREE	1	1	1	1	1	1
MAIN	2	2	2	2	2	2
Q.19c NUMBER OF CHILDREN						
Q.20 TYPE OF FISH/SEAFOOD						
WRITE IN						
DON'T KNOW	01	01	01	01	01	01
Q.21 FORM OF PREPARATION						
WHOLE	01	01	01	01	01	01
FILLET	02	02	02	02	02	02
CUTLET (SLICED WITH BACKBONE)	03	03	03	03	03	03
HEADED/PEELED	04	04	04	04	04	04
SMOKED	05	05	05	05	05	05
CANNED	06	06	06	06	06	06
PRE-PREPARED	07	07	07	07	07	07
OTHER	08	08	08	08	08	08
(SPECIFY)						
DON'T KNOW/CAN'T SAY	09	09	09	09	09	09
Q.22 WEIGHT	____ G	____ G	____ G	____ G	____ G	____ G
PIECES/SIZE						
Q.23 HOW FISH/SEAFOOD COOKED/PREPARED/SERVED						
BOIL/BOILED IN BAG	01	01	01	01	01	01
BAKED/OVEN	02	02	02	02	02	02
GRILLED	03	03	03	03	03	03
DEEP FRIED	05	05	05	05	05	05
STEAMED	06	06	06	06	06	06
MICROWAVED	07	07	07	07	07	07
RAW	08	08	08	08	08	08
STRAIGHT	09	09	09	09	09	09
BARBEQUED	10	10	10	10	10	10
PAN FRIED	11	11	11	11	11	11
POACHED (WATER IN PAN)	12	12	12	12	12	12
PIZZA TOPPING	13	13	13	13	13	13
INGREDIENT - MORNAY	14	14	14	14	14	14
INGREDIENT - STIR FRY	15	15	15	15	15	15
INGREDIENT - CASSEROLE	16	16	16	16	16	16
INGREDIENT - OTHER	17	17	17	17	17	17
OTHER	18	18	18	18	18	18
(SPECIFY)						
DON'T KNOW	19	19	19	19	19	19

OUT OF HOME CONSUMPTION OF FISH AND SEAFOOD

WRITE IN DAY AND MEAL OCCASION THAT THE RESPONDENT HAD FISH OR SEAFOOD OUT OF HOME IN THE LAST SEVEN DAYS. STARTING WITH THE MOST RECENT ASK Q.19a TO Q.23. REPEAT FOR EACH FISH OR SEAFOOD MEAL OUT OF HOME.

Q.19a **Where did you purchase or eat fish/seafood for ..** (READ OUT MEAL OCCASION AND DAY OF WEEK)? RECORD OPPOSITE.

Q.19b **Was this for an entree or main meal?** RECORD OPPOSITE

Q.19c **For how many children under fifteen years of age, did you personally buy fish or seafood at this meal?**
RECORD NUMBER OPPOSITE. IF NONE RECORD 0.

Q.20 **What type (species) of fish/seafood was that?** WRITE IN OPPOSITE.

SHOW CARD J

Q.21 **In what form was this** (READ OUT TYPE) **prepared?** RECORD OPPOSITE.

Q.22 **What was the total weight of** (READ OUT TYPE) **eaten at this meal?**
RECORD GRAMS. PROBE FOR WEIGHT USING INTERVIEWER AIDES. IF UNCERTAIN PROBE FOR SIZE, NUMBER OF PIECES OR CAN(S).

SHOW CARD G

Q.23 **How was this fish/seafood cooked or prepared?** RECORD OPPOSITE.

CHECK Q.7 AND Q.8 PAGE 6 THAT THE NUMBER OF OCCASIONS FOR WHICH SEAFOOD EATEN OUT OF HOME IN THE LAST SEVEN DAYS TALLIES

IF ATE AT RESTAURANT (Q.19a CODE 2) ASK Q.24;
OTHERWISE GO TO Q.25

Q.24 **Did you select that restaurant because of its reputation for fish and seafood?**

YES	1
NO	2
DON'T KNOW/CAN'T SAY	3

GO TO Q.25

OUT OF HOME

IF EATEN AT RESTAURANT, CLUB, HOTEL, FISH AND CHIP SHOP OR FAST FOOD OUTLET IN LAST WEEK (Q.19a BOLD CODES) ASK Q.25;
OTHERWISE GO TO Q.26

SHOW CARD H

Q.25

VERY IMPORTANT						NOT AT ALL IMPORTANT
1	2	3	4	5	6	7

On a scale of 1 to 7 how important are each of the following factors in deciding whether you select fish or seafood from the menu at a ...
(READ OUT LAST OCCASION OUTLET FROM Q.19a BOLD CODE ON PAGE 12) **when eating out of home?**

READ OUT ROTATING TO ASTERISK.

RECORD ONLY FOR LAST OCCASION OUTLET - IE. ONE OUTLET

	OUTLET				
	RESTAURANT	CLUB	HOTEL	FISH & CHIP SHOP	FAST FOOD OUTLET/ TAKE-AWAY
	1	2	3	4	5
1. CLEAN PREMISES					
2. FRESH RATHER THAN FROZEN FISH OR SEAFOOD IS USED					
3. HAS A REPUTATION FOR QUALITY FISH OR SEAFOOD					
4. HAS CONSISTENTLY LOW PRICES FOR FISH AND SEAFOOD					
5. OFFERS AUSTRALIAN FISH AND SEAFOOD					
6. HAS INFORMED STAFF ABOUT FISH AND SEAFOOD MEALS					
7. OFFERS A WIDE VARIETY OF FISH AND SEAFOOD MEALS					
8. I CAN BE SURE THAT FRESH FISH OR SEAFOOD HAS NOT BEEN FROZEN					

DO NOT ASK Q.26 IN HOUSEHOLDS WHERE FISH/SEAFOOD NEVER EATEN IN LAST YEAR - SEE PAGE 5, Q.6

ALL FISH/SEAFOOD EATING HOUSEHOLDS

SHOW CARD K

Q.26 **In general, how often would** (READ OUT EACH TYPE OF SEAFOOD ONE AT A TIME) **be served at home?** SINGLE RESPONSE ONLY

	CRUSTACEANS			MOLLUSCS				FISH				
	PRAWNS/ SHRIMPS	LOBSTER/ CRAYFISH	OTHER CRUST-ACEANS EG. CRABS, BUGS	MUSSELS	OYSTERS	SCALLOPS	SQUID/ CALAMARI	FRESH FISH	FISH PRE -PARED OR PROC -ESSED FISH (LIKE FISH FINGERS)	FROZEN FISH	CANNED FISH	FISH FROM A TAKE-AWAY FOOD OUTLET
NEVER	01	01	01	01	01	01	01	01	01	01	01	01
MORE THAN ONCE A WEEK	02	02	02	02	02	02	02	02	02	02	02	02
ONCE A WEEK	03	03	03	03	03	03	03	03	03	03	03	03
ONCE A FORTNIGHT	04	04	04	04	04	04	04	04	04	04	04	04
ONCE A MONTH	05	05	05	05	05	05	05	05	05	05	05	05
SIX TIMES A YEAR (ONCE EVERY TWO MONTHS)	06	06	06	06	06	06	06	06	06	06	06	06
FOUR TIMES A YEAR (ONCE EVERY THREE MONTHS)	07	07	07	07	07	07	07	07	07	07	07	07
THREE TIMES A YEAR (ONCE EVERY FOUR MONTHS)	08	08	08	08	08	08	08	08	08	08	08	08
TWICE A YEAR (EVERY SIX MONTHS)	09	09	09	09	09	09	09	09	09	09	09	09
ONCE A YEAR	10	10	10	10	10	10	10	10	10	10	10	10
LESS OFTEN THAN ONCE A YEAR	11	11	11	11	11	11	11	11	11	11	11	11
DON'T KNOW/ CAN'T SAY	12	12	12	12	12	12	12	12	12	12	12	12

ALL RESPONDENTS

Q.27a Did you personally buy any type of fish/seafood, in the last week, which was eaten out of home only by children, under fifteen years, (that is not by yourself as well)? FILL IN ALL DETAILS BELOW

ANSWER Q.27a ——— YES 1

GO TO Q.27b ——— NO 2

DAY	MEAL	TYPE OF FISH/ SEAFOOD	GIVE NUMBER/ PIECES/SIZE - ALL DETAILS	NUMBER OF CHILDREN	OFFICE USE ONLY WEIGHT

SHOW CARD L

Q.27b **I am going to read out some statements that various people have made about seafood (fish or other seafood). As I read them out, I'd like you to tell me whether you agree, disagree or neither agree nor disagree with the statement.** READ OUT STATEMENTS ROTATING TO ASTERISK. IF DON'T KNOW RECORD THIS AS CODE 6.

		AGREE STRONGLY	AGREE SOMEWHAT	NEITHER AGREE NOR DISAGREE	DISAGREE SOMEWHAT	DISAGREE STRONGLY	DON'T KNOW
1.	I PREFER AUSTRALIAN FISH AND SEAFOOD TO IMPORTED PRODUCTS	1	2	3	4	5	6
2.	THE TASTE OF FROZEN FISH IS AS GOOD AS FRESH FISH	1	2	3	4	5	6
3.	I WOULD EAT MORE FISH/SEAFOOD IF IT WAS EASIER TO OBTAIN	1	2	3	4	5	6
4.	FISH COSTS SO MUCH THAT I EAT IT RARELY	1	2	3	4	5	6
5.	I EAT FISH/SEAFOOD BECAUSE IT IS BETTER FOR MY HEALTH THAN RED MEAT	1	2	3	4	5	6
6.	I LIKE PREPARING FISH AND SEAFOOD	1	2	3	4	5	6
7.	THERE ARE ENOUGH RECIPES FOR SEAFOOD	1	2	3	4	5	6
8.	IF I KNEW OF MORE WAYS TO COOK FISH/ SEAFOOD I WOULD EAT MORE	1	2	3	4	5	6
9.	QUALITY FISH/SEAFOOD CAN BE BOUGHT ONLY FROM A SPECIALISED FISH OUTLET	1	2	3	4	5	6
10.	I AVOID FREEZING FISH IF I CAN	1	2	3	4	5	6
11.	I FIND FISH/SEAFOOD TO BE LESS FILLING THAN CHICKEN	1	2	3	4	5	6
* 12.	I DISLIKE FISH WITH BONES	1	2	3	4	5	6
13.	I LIKE TO BUY FAMILIAR TYPES OF FISH/SEAFOOD	1	2	3	4	5	6
14.	I LIKE TO TRY DIFFERENT TYPES OF FISH/SEAFOOD	1	2	3	4	5	6
15.	I AM CONCERNED ABOUT THE IMPACT OF POLLUTION ON FISH/SEAFOOD SAFETY	1	2	3	4	5	6
16.	YOU CAN'T BE SURE ABOUT THE QUALITY OF FROZEN FISH/SEAFOOD	1	2	3	4	5	6
17.	FISH/SEAFOOD IS GOOD FOR A LIGHT MEAL	1	2	3	4	5	6
18.	I FIND FISH EASY TO COOK	1	2	3	4	5	6
19.	I'M NOT ALWAYS SURE THAT FRESH FISH I BUY HASN'T BEEN FROZEN	1	2	3	4	5	6
20.	FISH IS FOR SPECIAL OCCASIONS	1	2	3	4	5	6

Q.28a **Some species of fish come from their natural habitat, others are farmed. Does this make any difference when you purchase fish or seafood?**

YES 1
NO 2
DON'T KNOW/CAN'T SAY 3

Q.28b **Why do you say that?**

OFFICE

Now I would like to talk about specific types of seafood.

Q.29a **Have you heard of the following types of fish or seafood?** READ OUT FULL DESCRIPTION AND RECORD.

Q.29b **Have you ever tried ...** (READ OUT THOSE THAT HEARD OF IN Q.29a)

SHOW CARD M

Q.30 **Could you indicate your own personal "like" or "dislike" of the fish or seafood you have tried?** READ OUT SEAFOOD TRIED IN Q.29b - CODE 1

	Q.29a	Q.29b			Q.30					
	HEARD OF	TRIED	NOT TRIED	DON'T KNOW	LIKE VERY MUCH	SLIGHT. LIKE	NEITHER LIKE NOR DISLIKE	SLIGHT. DIS-LIKE	DISLIKE VERY MUCH	DON'T KNOW
WILD SPECIES										
JACK MACKEREL (NOT JUST MACKEREL OR ANY OF THE OTHER TYPES)	01	1	2	3	1	2	3	4	5	6
SQUID (OR CALAMARI)	02	1	2	3	1	2	3	4	5	6
PILCHARDS OR SARDINES (NOT CANNED)	03	1	2	3	1	2	3	4	5	6
AUSTRALIAN HERRING/ TOMMY RUFF	04	1	2	3	1	2	3	4	5	6
SILVER TREVALLY/ SKIPPY (NOT JUST TREVALLY)	05	1	2	3	1	2	3	4	5	6
"FARMED" SPECIES										
FARM PRAWNS (NOT JUST PRAWNS)	06	1	2	3	1	2	3	4	5	6
RAINBOW TROUT (FRESHWATER)	07	1	2	3	1	2	3	4	5	6
ATLANTIC SALMON (FRESH NOT SMOKED)	08	1	2	3	1	2	3	4	5	6
MUSSELS	09	1	2	3	1	2	3	4	5	6
OYSTERS	10	1	2	3	1	2	3	4	5	6
FARM BARRAMUNDI	11	1	2	3	1	2	3	4	5	6
NONE - GO TO Q.32	12									

IF DISLIKED AT LEAST ONE TYPE (Q.30 CODE 4 OR 5) ASK Q.31: OTHERWISE GO TO Q.32

Q.31 **What did you dislike about** (READ OUT TYPE DISLIKED)?

TYPE DISLIKED (Q.30)	REASON DISLIKED
_____ :	_____
_____ :	_____
_____ :	_____
_____ :	_____
_____ :	_____

Q.32 **What actions need to be taken by the fishing industry for more fish and seafood to be bought and eaten by your household?**

OFFICE

Q.33a **Over the last three months how many members of your household have been fishing, on at least one trip, for recreation or leisure?**

WRITE IN: _____

GO TO Q.34 _____ NONE 0

Q.33b **Over the last three months approximately what weight of fish was caught by all members of this household and brought home to eat?** RECORD IN GRAMS

WRITE IN: _____ GRAMS DON'T KNOW 9998

GO TO Q.34 _____ NONE 9999

Q.33c **Of this catch over the last three months, what were the main types of fish brought home and eaten?**

CLASSIFICATION

Q.34 **Sex:** (INTERVIEWER TO RECORD)

MALE 1
FEMALE 2

Q.35 **Which age group do you fall in?**

15 - 19 1
20 - 39 2
40 - 59 3
60 YEARS OR MORE 4

Q.36 **Would you mind telling me your marital status?**

SINGLE	1
MARRIED/DE FACTO	2
DIVORCED/SEPARATED/WIDOWED	3
REFUSED	4

Q.37a **Were you born in Australia or another country?**

GO TO Q.38	AUSTRALIA	1
GO TO Q.37b	ANOTHER COUNTRY	2

Q.37b **Did you migrate to Australia before or after you were 5 years old?**

GO TO Q.38	BEFORE 5 YEARS OLD	1
GO TO Q.37c	AFTER 5 YEARS OLD	2

Q.37c **In which country were you born?**

UNITED KINGDOM/SCOTLAND/IRELAND/WALES	01
NEW ZEALAND	02
ITALY	03
GREECE	04
YUGOSLAVIA	05
VIETNAM	06
NETHERLANDS	07
MALTA	08
OTHER EUROPEAN	10
MIDDLE EASTERN	11
OTHER ASIAN	12
OTHER (SPECIFY) _____	09

SHOW CARD N

Q.38 **Do you belong to any of these religious groups?**

ANGLICAN/CHURCH OF ENGLAND	01
BAPTIST	02
UNITING/PRESBYTERIAN/METHODIST/CONGREGATIONAL	03
ROMAN CATHOLIC	04
GREEK ORTHODOX	05
JEWISH	06
LUTHERAN	07
OTHER CHRISTIAN	09
MUSLIM	13
OTHER (SPECIFY) _____	10
ATHEIST/NONE	11
REFUSED	12

Q.39a **How many adult income (wage) earners in total are there in your household?**

THOSE ON ANY PENSION OR WHO ARE RETIRED DO NOT COUNT AS AN INCOME EARNER.

NONE	0
ONE	1
TWO	2
THREE OR MORE (SPECIFY) _____	3
REFUSED/DON'T KNOW	9

Q.39b **Do you work full time, part time or not at all?**

FULL TIME 1
PART TIME 2
NOT AT ALL 3

Q.39c **What is the occupation of the main income earner in your household?** (IF UNEMPLOYED OR RETIRED ASK USUAL OR MOST RECENT OCCUPATION)

OCCUPATION: _____

INDUSTRY: _____

Q.39d **Are you yourself the main income earner in your household or is someone else the main income earner?**

SELF 1
SOMEONE ELSE 2
DON'T KNOW/CAN'T SAY 3

IF SOMEONE ELSE MAIN INCOME EARNER (Q.39d CODE 2) AND RESPONDENT WORKS (Q.39b CODE 1 OR 2) ASK Q.39e

Q.39e **What is your occupation?**

OCCUPATION: _____

INDUSTRY: _____

SHOWCARD O

Q.39f **What is the total yearly gross (before tax) family income for all household members?**

LESS THAN $15,000 1
$15,000 - $25,000 2
$25,001 - $40,000 3
$40,001 - $60,000 4
MORE THAN $60,000 5
REFUSED/DON'T KNOW 6

THANK YOU VERY MUCH FOR YOUR HELP AS I SAID, I AM FROM YANN CAMPBELL HOARE WHEELER MARKET RESEARCH. IF YOU WISH I WILL GIVE YOU OUR TELEPHONE NUMBER IF YOU WOULD LIKE TO CHECK ANYTHING. IF YOU WOULD LIKE TO CHECK THE BONA FIDES OF THIS COMPANY, PLEASE CALL THE MARKET RESEARCH LINE ON 008 023642 AND GIVE THE COMPANY NAME: YANN CAMPBELL HOARE WHEELER. CALLS TO THIS NUMBER ARE FREE.

THE STUDY IS BEING CONDUCTED FOR THE FISHING INDUSTRY RESEARCH AND DEVELOPMENT COUNCIL TO HELP IN PLANNING THE SUPPLY AND MARKETING OF FISH AND SEAFOOD IN AUSTRALIA IN THE 1990'S.

NAME: _____

ADDRESS: _____

SUBURB: _____ PHONE: _____

I hereby certify that this is a true, accurate and complete interview.

SIGNED: ..... (Interviewer)

DATE: .....

IF LEAVING SELF COMPLETION QUESTIONNAIRE, MAKE SURE YOU RECORD QUESTIONNAIRE NUMBER ON FRONT PAGE OF 6754/2 - OUT OF HOME - AND WRITE IN LAST DAYS AND RECORD ON THE FRONT PAGE OF 6754/2 (THIS QUESTIONNAIRE) THE NUMBER OF SELF COMPLETIONS LEFT.

Appendix II

Out-Of-Home Self Completion Questionnaire

Now think about all the meals or snacks that you have had in the last seven days. Starting from dinner yesterday, did you eat dinner at your home, out of home or didn't you eat this meal?
PLEASE EXCLUDE ANY MEALS THAT WERE BOUGHT OUT OF HOME AND THEN TAKEN HOME TO EAT.
CIRCLE CODE THAT APPLIES BELOW. ANSWER FOR ALL MEALS AND ALL DAYS.

FOR OUT OF HOME MEALS ONLY
Was any type of fish or seafood eaten at this meal?

Did you eat any type of fish or seafood out of home at any other time during (THINK OF DAY)?
IF YES: WRITE IN TIME OF DAY (AM/PM)

			WHERE MEAL EATEN					OTHER FISH/SEAFOOD MEAL OUT OF HOME	
			AT HOME	OUT OF HOME	NOT EAT	FISH/ SEAFOOD EATEN	FISH/ SEAFOOD NOT EATEN	YES	NO
YESTERDAY	11.	DINNER	1	2	3	1	2		
_____	21.	LUNCH	1	2	3	1	2		
	31.	BREAKFAST	1	2	3	1	2		
	41.	OTHER _____						1	2
DAY	12.	DINNER	1	2	3	1	2		
_____	22.	LUNCH	1	2	3	1	2		
	32.	BREAKFAST	1	2	3	1	2		
	42.	OTHER _____						1	2
DAY	13.	DINNER	1	2	3	1	2		
_____	23.	LUNCH	1	2	3	1	2		
	33.	BREAKFAST	1	2	3	1	2		
	43.	OTHER _____						1	2
DAY	14.	DINNER	1	2	3	1	2		
_____	24.	LUNCH	1	2	3	1	2		
	34.	BREAKFAST	1	2	3	1	2		
	44.	OTHER _____						1	2
DAY	15.	DINNER	1	2	3	1	2		
_____	25.	LUNCH	1	2	3	1	2		
	35.	BREAKFAST	1	2	3	1	2		
	45.	OTHER _____						1	2
DAY	16.	DINNER	1	2	3	1	2		
_____	26.	LUNCH	1	2	3	1	2		
	36.	BREAKFAST	1	2	3	1	2		
	46.	OTHER _____						1	2
DAY	17.	DINNER	1	2	3	1	2		
_____	27.	LUNCH	1	2	3	1	2		
	37.	BREAKFAST	1	2	3	1	2		
	47.	OTHER _____						1	2

YANN CAMPBELL HOARE WHEELER
MARKET RESEARCH
11 PRINCES STREET
ST KILDA VIC 3182
PHONE: 537 2255

JOB NO.: 6754/4: OUT OF HOME SELF COMPLETION

TIME:

START: _____

FINISH: _____

COASTAL/NEAR TO COAST 1

INLAND - 50 KM FROM COAST 2

SYDNEY	01
MELBOURNE	03
BRISBANE	05
ADELAIDE	07
PERTH	09
HOBART	12
REGIONAL NSW	02
REGIONAL VIC	04
REGIONAL QLD	06
REGIONAL SA	08
REGIONAL WA	10
CANBERRA	11
REGIONAL TAS	13

QUESTIONNAIRE NUMBER A: _____

FISH AND SEAFOOD CONSUMPTION STUDY OUT OF HOME

This is a study which is being conducted for the Fishing Industry Research & Development Council on Fish and Seafood Consumption in Australia. The results of the study will be used in planning the supply and marketing of fish in Australia in the 1990's. We would appreciate your help by completing this questionnaire on your eating habits out of the home. The person who is mainly responsible for food purchase and preparation has already been asked similar questions about in-home consumption.

In filling out this questionnaire, you will generally need to **record your answer by circling a number** (or code):

eg. **Are you ...?** MALE 1

FEMALE (2)

or by writing in the space provided _____

In some instances, you must give only one answer (SINGLE RESPONSE ONLY) _____

and

in others you may give a number of answers (MULTIPLE RESPONSE ALLOWED).

When fish or seafood is mentioned it may have been the main part of the meal or an ingredient (like marinara mix, seafood cocktail, prawns or anchovies on pizza, fish paste or fillings in sandwiches or in a casserole or a fillet of fish at McDonalds. It may have been for nibbles, a snack, entree or main meal.

THINK OF ANY TYPE OF FISH OR SEAFOOD.

PLEASE READ ALL INSTRUCTIONS CAREFULLY. INSTRUCTIONS APPEAR IN CAPITAL LETTERS

FISH OR SEAFOOD MEANS

ANY fish or seafood that may have been the main part of a meal or an ingredient (like marinara mix, seafood cocktail, prawns or anchovies on pizza, fish paste or fillings in sandwiches or in a casserole) or even like a fillet of fish at McDonalds. It may have been for nibbles, a snack, entree or main meal.

NOW GO TO PAGE 4

OUT OF HOME CONSUMPTION OF FISH AND SEAFOOD

	1ST OCCASION	2ND OCCASION	3RD OCCASION	4TH OCCASION	5TH OCCASION	6TH OCCASION	7TH OCCASION
WRITE IN DAY AND MEAL	_____	_____	_____	_____	_____	_____	_____
Q.4 PLACE WHERE BOUGHT/ATE FISH OR SEAFOOD							
WORK CAFETERIA	01	01	01	01	01	01	01
RESTAURANT	02	02	02	02	02	02	02
FUNCTION CENTRE	03	03	03	03	03	03	03
CLUB	04	04	04	04	04	04	04
HOTEL	05	05	05	05	05	05	05
COFFEE LOUNGE/CAFE	06	06	06	06	06	06	06
FISH & CHIP SHOP	07	07	07	07	07	07	07
FAST FOOD OUTLET/TAKE-AWAY	08	08	08	08	08	08	08
SANDWICH/MILK BAR	09	09	09	09	09	09	09
FRIENDS/RELATIVES HOUSE	10	10	10	10	10	10	10
OTHER	11	11	11	11	11	11	11
(SPECIFY)	_____	_____	_____	_____	_____	_____	_____
Q.5 ENTREE	1	1	1	1	1	1	1
MAIN	2	2	2	2	2	2	2
Q.6 NUMBER OF CHILDREN	_____	_____	_____	_____	_____	_____	_____
Q.7 TYPE OF FISH/SEAFOOD							
WRITE IN	_____	_____	_____	_____	_____	_____	_____
DON'T KNOW	01	01	01	01	01	01	01
Q.8 FORM OF PREPARATION							
WHOLE	01	01	01	01	01	01	01
FILLET	02	02	02	02	02	02	02
CUTLET (SLICED WITH BACKBONE)	03	03	03	03	03	03	03
HEADED/PEELED	04	04	04	04	04	04	04
SMOKED	05	05	05	05	05	05	05
CANNED	06	06	06	06	06	06	06
PRE-PREPARED (LIKE FISH FINGERS, FISH CAKES)	07	07	07	07	07	07	07
OTHER	08	08	08	08	08	08	08
(SPECIFY)	_____	_____	_____	_____	_____	_____	_____
DON'T KNOW/CAN'T SAY	09	09	09	09	09	09	09
Q.9 WEIGHT	____ G	____ G	____ G	____ G	____ G	____ G	____ G
PIECES/SIZE	_____	_____	_____	_____	_____	_____	_____
Q.10 HOW SEAFOOD COOKED/PREPARED/SERVED							
BOIL/BOILED IN BAG	01	01	01	01	01	01	01
BAKED/OVEN	02	02	02	02	02	02	02
GRILLED	03	03	03	03	03	03	03
DEEP FRIED	05	05	05	05	05	05	05
STEAMED	06	06	06	06	06	06	06
MICROWAVED	07	07	07	07	07	07	07
RAW	08	08	08	08	08	08	08
STRAIGHT	09	09	09	09	09	09	09
BARBEQUED	10	10	10	10	10	10	10
PAN FRIED	11	11	11	11	11	11	11
POACHED (WATER IN PAN)	12	12	12	12	12	12	12
PIZZA TOPPING	13	13	13	13	13	13	13
INGREDIENT - MORNAY	14	14	14	14	14	14	14
INGREDIENT - STIR FRY	15	15	15	15	15	15	15
INGREDIENT - CASSEROLE	16	16	16	16	16	16	16
INGREDIENT - OTHER	17	17	17	17	17	17	17
OTHER	18	18	18	18	18	18	18
(SPECIFY)	_____	_____	_____	_____	_____	_____	_____
DON'T KNOW	19	19	19	19	19	19	19

Q.11 Did you personally buy any type of fish/seafood, in the last week, which was eaten out of home only by children, under fifteen years, (that is not by yourself as well)?
PLEASE FILL IN DETAILS BELOW

ANSWER Q.11 ——— YES 1

MOVE TO Q.12 ——— NO 2

DAY	MEAL	TYPE OF FISH/ SEAFOOD	GIVE NUMBER/ PIECES/SIZE - ALL DETAILS	NUMBER OF CHILDREN	OFFICE USE ONLY WEIGHT

PLEASE ANSWER Q.12 FOR EACH OUTLET BELOW

Q.12 How important are each of the following statements (listed below) in deciding whether you select fish or seafood from the menu at a (THINK OF EACH OUTLET BELOW) when eating out of home? WRITE IN NUMBER (IE. 1,2,3,4,5, 6 OR 7 FROM THE SCALE BELOW. RECORD A NUMBER FOR EVERY STATEMENT AND OUTLET.

VERY IMPORTANT — NOT AT ALL IMPORTANT

1 2 3 4 5 6 7

	RESTAURANT 1	CLUB 2	HOTEL 3	FISH & CHIP SHOP 4	FAST FOOD OUTLET/ TAKE-AWAY 5
1. CLEAN PREMISES					
2. FRESH RATHER THAN FROZEN FISH OR SEAFOOD IS USED					
3. HAS A REPUTATION FOR QUALITY FISH OR SEAFOOD					
4. HAS CONSISTENTLY LOW PRICES FOR FISH AND SEAFOOD					
5. OFFERS AUSTRALIAN FISH AND SEAFOOD					
6. HAS INFORMED STAFF ABOUT FISH AND SEAFOOD MEALS					
7. OFFERS A WIDE VARIETY OF FISH AND SEAFOOD MEALS					
8. I CAN BE SURE THAT FRESH FISH OR SEAFOOD HAS NOT BEEN FROZEN					

NOW CHECK ON WHICH DAYS YOU HAD FISH/SEAFOOD OUT OF HOME (SEE PAGE 2) AND WRITE IN THE DAY AND MEAL(S) ACROSS THE TOP OF THE SHEET OPPOSITE.

INSTRUCTIONS FOR Q.4 TO Q.10

Q.4 **Where did you eat or purchase seafood for ...?** (THINK OF THE DAY AND MEAL OCCASION). CIRCLE CODE ON SHEET OPPOSITE. SINGLE RESPONSE ONLY.

Q.5 **Was this for an entree or main meal?** RECORD OPPOSITE

Q.6 **For how many children under fifteen years of age, did you personally buy (pay for) fish or seafood at this meal?** WRITE IN NUMBER ON SHEET OPPOSITE. IF NONE WRITE 0.

Q.7 **What type (SPECIES) of fish or seafood was that?** WRITE IN SPACE ON SHEET OPPOSITE.

Q.8 **In what form was this** (THINK OF TYPE OF FISH OR SEAFOOD) **prepared?** CIRCLE CODE ON SHEET OPPOSITE.

Q.9 **What was the total weight of** (THINK OF TYPE OF FISH OR SEAFOOD) **eaten at this meal?** WRITE IN GRAMS AND OTHER DETAILS LIKE THE NUMBER OF PIECES AND SIZE.

Q.10 **How was this** (THINK OF TYPE OF FISH OR SEAFOOD) **cooked?** CIRCLE CODE ON SHEET OPPOSITE.

REPEAT ANSWERING Q.4 TO Q.10 FOR ALL THE OCCASIONS ACROSS THE TOP OF THE SHEET OPPOSITE

PLEASE ANSWER Q.14

Q.14 **Listed below are some statements that various people have made about fish and seafood eaten outside the home. Circle if you agree, disagree or neither agree nor disagree with the statement.**

CIRCLE ONE CODE ONLY FOR EACH STATEMENT.

		AGREE STRONGLY	AGREE SOMEWHAT	NEITHER AGREE NOR DISAGREE	DISAGREE SOMEWHAT	DISAGREE STRONGLY	DON'T KNOW
1.	I PREFER AUSTRALIAN FISH AND SEAFOOD TO IMPORTED PRODUCTS	1	2	3	4	5	6
2.	THE TASTE OF FROZEN FISH IS AS GOOD AS FRESH FISH	1	2	3	4	5	6
3.	I WOULD EAT MORE FISH/SEAFOOD IF IT WAS EASIER TO OBTAIN	1	2	3	4	5	6
4.	FISH COSTS SO MUCH THAT I EAT IT RARELY	1	2	3	4	5	6
5.	I EAT FISH/SEAFOOD BECAUSE IT IS BETTER FOR MY HEALTH THAN RED MEAT	1	2	3	4	5	6
6.	I WOULD EAT THE SAME AMOUNT OF FISH/SEAFOOD NO MATTER WHAT THE PRICE WAS	1	2	3	4	5	6
7.	I REGULARLY EAT FISH OUT OF HOME	1	2	3	4	5	6
8.	SEAFOOD COSTS SO MUCH THAT I EAT IT RARELY	1	2	3	4	5	6
9.	I EAT FISH/SEAFOOD ONLY AS AN ENTREE	1	2	3	4	5	6
10.	QUALITY FISH/SEAFOOD CAN BE BOUGHT ONLY FROM A SPECIALISED FISH OUTLET	1	2	3	4	5	6
11.	I FIND FISH/SEAFOOD TO BE LESS FILLING THAN CHICKEN	1	2	3	4	5	6
12.	I REGULARLY EAT SEAFOOD OUT OF HOME	1	2	3	4	5	6
13.	I PREFER A FILLET TO A WHOLE FISH	1	2	3	4	5	6
14.	I DISLIKE FISH WITH BONES	1	2	3	4	5	6
15.	I NEVER EAT FISH/SEAFOOD BECAUSE OF ITS SMELL	1	2	3	4	5	6
16.	I LIKE TO BUY FAMILIAR TYPES OF FISH/SEAFOOD	1	2	3	4	5	6
17.	I LIKE TO TRY DIFFERENT TYPES OF FISH/SEAFOOD	1	2	3	4	5	6
18.	SEAFOOD IS FOR SPECIAL OCCASIONS	1	2	3	4	5	6
19.	I AM CONCERNED ABOUT THE IMPACT OF POLLUTION ON FISH/SEAFOOD SAFETY	1	2	3	4	5	6
20.	FISH/SEAFOOD IS GOOD FOR A LIGHT MEAL	1	2	3	4	5	6
21.	PROTEIN FROM FISH/SEAFOOD IS AN IMPORTANT SOURCE OF PROTEIN FOR ME	1	2	3	4	5	6
22.	FISH IS FOR SPECIAL OCCASIONS	1	2	3	4	5	6
23.	I EAT FISH/SEAFOOD AS A CHANGE FROM MY USUAL EATING PATTERN	1	2	3	4	5	6

PLEASE ANSWER Q.13

Q.13 **Thinking about eating out of your own home, in general, how often would you personally eat (prawns) out of your own home? Would it be ...** (LOOK AT FREQUENCY DOWN LEFT HAND SIDE OF PAGE).

ANSWER FOR EACH TYPE OF FISH OR SEAFOOD ACROSS THE TOP OF THE PAGE.
IF NEVER CIRCLE 01

	CRUSTACEANS			MOLLUSCS				FISH				
	PRAWNS/ SHRIMPS	LOBSTER/ CRAYFISH	OTHER CRUST-ACEANS EG. CRABS BUGS	MUSSELS	OYSTERS	SCALLOPS	SQUID/ CALAMARI	FRESH FISH	FISH PRE -PARED OR PROC -ESSED FISH (LIKE FISH FINGERS)	FROZEN FISH	CANNED FISH	FISH FROM A TAKE-AWAY FOOD OUTLET
NEVER	01	01	01	01	01	01	01	01	01	01	01	01
MORE THAN ONCE A WEEK	02	02	02	02	02	02	02	02	02	02	02	02
ONCE A WEEK	03	03	03	03	03	03	03	03	03	03	03	03
ONCE A FORTNIGHT	04	04	04	04	04	04	04	04	04	04	04	04
ONCE A MONTH	05	05	05	05	05	05	05	05	05	05	05	05
SIX TIMES A YEAR (ONCE EVERY TWO MONTHS)	06	06	06	06	06	06	06	06	06	06	06	06
FOUR TIMES A YEAR (ONCE EVERY THREE MONTHS)	07	07	07	07	07	07	07	07	07	07	07	07
THREE TIMES A YEAR (ONCE EVERY FOUR MONTHS)	08	08	08	08	08	08	08	08	08	08	08	08
TWICE A YEAR (EVERY SIX MONTHS)	09	09	09	09	09	09	09	09	09	09	09	09
ONCE A YEAR	10	10	10	10	10	10	10	10	10	10	10	10
LESS OFTEN THAN ONCE A YEAR	11	11	11	11	11	11	11	11	11	11	11	11
DON'T KNOW/ CAN'T SAY	12	12	12	12	12	12	12	12	12	12	12	12

Q.19 Do you belong to any of these religious groups?

ANGLICAN/CHURCH OF ENGLAND	01
BAPTIST	02
UNITING/PRESBYTERIAN/METHODIST/ CONGREGATIONAL	03
ROMAN CATHOLIC	04
GREEK ORTHODOX	05
JEWISH	06
LUTHERAN	07
OTHER CHRISTIAN	09
MUSLIM	13
OTHER (SPECIFY) _____	10
NONE	11

Q.20 Do you work full time, part time or not at all? GO TO Q.21

FULL TIME	1
PART TIME	2
NOT AT ALL	3

Q.21 What is your occupation and in which industry do you work?

OCCUPATION: _____

INDUSTRY: _____

THANK YOU VERY MUCH FOR YOUR HELP. THIS RESEARCH IS BEING CONDUCTED BY YANN CAMPBELL HOARE WHEELER MARKET RESEARCH. IF YOU WOULD LIKE TO CHECK THE BONA FIDES OF THIS COMPANY, PLEASE CALL THE MARKET RESEARCH LINE ON 008 023642 AND GIVE THE COMPANY NAME: YANN CAMPBELL HOARE WHEELER. CALLS TO THIS NUMBER ARE FREE.

NAME: _____

ADDRESS: _____

SUBURB: _____ PHONE: _____

DATE: _____

FOR OFFICE USE ONLY

SIGNED: ..... (Interviewer)

PLEASE ANSWER Q.15 TO Q.21

CIRCLE THE CODE WHICH APPLIES TO YOU

Q.15 **Are you ...?**

MALE	1
FEMALE	2

Q.16 **Which age group do you fall in?**

15 - 19	1
20 - 39	2
40 - 59	3
60 YEARS OR MORE	4

Q.17 **Would you mind telling me your marital status?**

SINGLE	1
MARRIED/DE FACTO	2
DIVORCED/SEPARATED/WIDOWED	3

Q.18a **Were you born in Australia or another country?**

GO TO Q.19	AUSTRALIA	1
GO TO Q.18b	ANOTHER COUNTRY	2

Q.18b **Did you migrate to Australia before or after you were 5 years old?**

GO TO Q.19	BEFORE 5 YEARS OLD	1
GO TO Q.18c	AFTER 5 YEARS OLD	2

Q.18c **In which country were you born?**

UNITED KINGDOM/IRELAND	01
NEW ZEALAND	02
ITALY	03
GREECE	04
YUGOSLAVIA	05
VIETNAM	06
NETHERLANDS	07
MALTA	08
OTHER EUROPEAN	10
MIDDLE EASTERN	11
OTHER ASIAN	12
OTHER (SPECIFY) _____	09

Appendix III

In-Home/Out-Of-Home Sample Design

PA/YCHW employed a stratified random sampling technique using SAMSYS (Sampling System) which is a computerised approach to the selection of area based stratified random samples. SAMSYS processes the Census Collectors District (CCD) and for each area defined, the program forms appropriate strata to reflect areas with similar socio-economic characteristics. Within each stratum, SAMSYS generates the appropriate number of sample selections (CCD's) on the basis of probability proportionate to size. Once a CCD is selected a quadrant is designated - the area in which the start point is to fall - and the start point (corner of two streets) is then manually identified.

Based on the length of the questionnaire and the number of interviews which could be completed within an interviewer day, a cluster of five households was deemed appropriate for each start point. In addition, conducting five interviews rather than ten (as originally proposed) from a start point offered greater geographic survey coverage. The number of complete interviews (and start points) is shown in Tables 1 and 2.

Interviewers attempted to complete an interview at every third house from the designated start point. If the potential respondent was unavailable at any five of the nominated dwellings (from a start point), where possible an alternative interview time was arranged. Otherwise, a substitute interview was attempted with dwellings either side of the five originally selected dwellings before proceeding any further from the start point.

In three out of every ten complete interviews, a supplementary questionnaire, relating to Out-Of-Home Consumption of fish and seafood, was left with all other household members 15 years of age or more. If this respondent was home at the time of the In-Home Consumption interview being conducted, the interviewer explained to the 'Out-Of-Home' respondent how to complete the questionnaire placed.

In total, over the four quarters, 2,159 Out-Of-Home questionnaires were placed with other household members aged 15 years or more and 507 were returned. This equates to a response rate of 23%. Academic literature indicates that a response rate of between 15% and 25% would be expected for this survey methodology.

Table 1: National Seafood Consumption Study Sampling

	Total Interviews		Quarter 1		Quarter 2		Quarter 3		Quarter 4	
		Start Points		Start Points		Start Points		Start Points		Start Points
Sydney	1150	230	290	58	285	57	290	58	285	57
Regional NSW	570	114	140	28	145	29	140	28	145	29
Melbourne	1030	206	255	51	260	52	255	51	260	52
Regional VIC	360	72	90	18	90	18	90	18	90	18
Brisbane	520	104	130	26	130	26	130	26	130	26
Regional QLD	360	72	90	18	90	18	90	18	90	18
Adelaide	520	104	130	26	130	26	130	26	130	26
Regional SA	150	30	35	7	40	8	35	7	40	8
Perth	460	92	115	23	115	23	115	23	115	23
Regional WA	150	30	40	8	35	7	40	8	35	7
Canberra	330	66	80	16	85	17	80	16	85	17
Hobart	250	50	65	13	60	12	65	13	60	12
Regional TAS	150	30	40	8	35	7	40	8	35	7
Total	6000	1200	1500	300	1500	300	1500	300	1500	300

Table 2: Regional Areas for National Seafood Consumption Study

Regional VIC		Regional NSW		Regional QLD		Regional SA		Regional WA		Regional TAS	
Geelong	(3)*	Newcastle	(7)	Gold Coast	(3)	Mt Gambier	(1)	Albany	(2)	Launceston	(4)
Ballarat	(2)	Woolongong	(5)	Maroochydore	(2)	Whyalla	(1)	Geraldton	(1)	Devonport	(2)
Bendigo	(1)	Armidale	(3)	Toowoomba	(2)	Loxton	(1)	Esperance	(1)	Georgetown	(1)
Pakenham	(1)	Goulbourne	(2)	Cairns	(2)	Port Pirie	(1)	Kalgoorlie	(1)	Burnie	(1)
Echuca	(1)	Grafton	(2)	Townsville	(2)	Gawler	(1)	Bunbury	(1)		
Hamilton	(1)	Orange	(2)	Rockhampton	(2)	Kadina	(1)	Northam	(1)		
Morwell	(1)	Wagga	(2)	Mackay	(1)	Port Lincoln	(1)	Karratha	(1)		
Mildura	(1)	Ballina	(1)	Bundaberg	(1)						
Maffra	(1)	Dubbo	(1)	Gympie	(1)						
Shepparton	(1)	Coffs Harbour	(1)	Longreach	(1)						
Stawell	(1)	Lismore	(1)	Mt Isa	(1)						
Tongala	(1)	Albury	(1)								
Warnambool	(1)										
Warragul	(1)										
Wodonga	(1)										
Total Start Points	18		28		18		7		8		8

* *indicates the number of start points per area*

Note: slight adjustments were made in each quarter to match the quota for that regional area

Appendix IV

Institutional Questionnaire

YANN CAMPBELL HOARE WHEELER
MARKET RESEARCH
11 PRINCES STREET
ST KILDA VIC 3182
PHONE: 537 2255

TIME:
START _____

FINISH: _____

SYDNEY	1
MELBOURNE	2
BRISBANE	3
ADELAIDE	4
PERTH	5

JOB NO.: 6754G2 INSTITUTIONAL

FISH AND SEAFOOD CONSUMPTION STUDY
WAVE 2

HOSPITAL/NURSING HOME	1
RESIDENTIAL SCHOOLS/COLLEGES	2
PRISON	3
DEFENCE/ARMY	4
DEFENCE/NAVY	5
DEFENCE/AIR FORCE	6
WELFARE/CHARITABLE HOME	7

INTRODUCTION

Thank you for agreeing to participate in the National Food Consumption Study. The information collected from every respondent will be treated in the strictest confidence, added to the other data obtained and used for statistical purposes only. The results will be used in planning the supply and marketing of important Australian food items in the 1990's.

Q.1a **First of all would you mind telling me your exact position in this organisation.**

POSITION OF RESPONDENT: _____

Q.1b **Are you yourself, responsible for the purchase of the meat, fish, seafood and poultry that is bought by this organisation?** IF DOUBT ASK ABOUT PURCHASING OF FISH

CONTINUE TO Q.1c	YES	1
ASK TO SPEAK TO PERSON RESPONSIBLE FOR THESE ITEMS AND RECOMMENCE INTERVIEW	NO	2
TERMINATE - ALL CONTRACT CATERED (SPECIFY COMPANY) _____	NO	3

Q.1c **Are you responsible for purchasing these items for this organisation or centre only, or for other organisations or centres as well?**

GO TO Q.1e	ONE ORGANISATION ONLY	1
GO TO Q.1d	OTHER ORGANISATION	2

Q.1d **And how many organisations do you purchase meat, fish, seafood and poultry for?** IF RESPONDENT INDICATES A DIFFERENT NUMBER OF ORGANISATIONS FOR EACH PRODUCT ASK: **How many outlets do you purchase fish and seafood for?**

TWO	2
THREE	3
FOUR	4
FIVE	5
SIX OR MORE (WRITE IN)	___

Q.1e **Is this organisation part of a buying group for meat, fish and seafood or poultry products?**

YES - ALL 1

YES - ONLY FISH/ SEAFOOD 2

NOT FISH/ SEAFOOD/NO 3

Q.2a **What is the process by which you decide which foods you buy and serve?** PROBE

OFFICE

Q.2b **Which of these two statements best describes the planning for meals in this organisation?** READ OUT

THE MENU IS PLANNED OUT WELL IN ADVANCE FOR A SPECIFIC PERIOD OF TIME AND IS BASED ON PAST EXPERIENCE 1

THE MENU IS CONSTANTLY ADJUSTED TO MEET SPECIFIC CLIENT REQUIREMENTS 2

Q.2c **When planning particular meals, do you make the decision between food groups, such as, meat, pork, poultry and fish or on the basis of particular styles of meal like roasts, casseroles, etc.?**

FOOD GROUPS 1

STYLE OF MEAL 2

DON'T KNOW 3

SHOW CARD A

Q.2d **In other research other organisations have made a number of statements about the bases for their meals, such as, meat, pork, poultry, fresh or frozen fish, prepared fish products (like fish fingers) and canned fish and seafood products. I am going to read out some statements and would like you to tell me to which, if any, each statement applies. You may nominate none, one, or as many as you like. There are no right or wrong answers, we are just interested in your opinion.** ROTATE TO ASTERISK

The first statement is ... (READ OUT FIRST STATEMENT). **From Card A to which products does this statement apply?**

		MEAT	PORK	POULTRY	FRESH OR FROZEN FISH	PREP-ARED FISH PRODUCTS	CANNED FISH & SEAFOOD	NONE	DON'T KNOW
1.	SUPPLY OFTEN CANNOT BE GUARANTEED	1	2	3	4	5	6	7	8
2.	IS OFTEN TOO EXPENSIVE FOR THE ORGANISATION TO BUY	1	2	3	4	5	6	7	8
3.	OFFERS THE ORGANISATION GOOD VALUE FOR MONEY	1	2	3	4	5	6	7	8
4.	IS LIKELY TO GO OFF AND HAVE TO BE THROWN OUT	1	2	3	4	5	6	7	8
5.	PRESENTS A PROBLEM IN WASTE DISPOSAL	1	2	3	4	5	6	7	8
6.	STAFF DISLIKE PREPARING AND COOKING IT	1	2	3	4	5	6	7	8
7.	OUR STAFF DON'T HAVE THE KNOWLEDGE TO PREPARE AND COOK IT	1	2	3	4	5	6	7	8
8.	IT TAKES UP LITTLE STORAGE SPACE	1	2	3	4	5	6	7	8
9.	IT IS DIFFICULT TO BUY IN THE RIGHT SIZE PORTIONS FOR PRESENTATION ON PLATES	1	2	3	4	5	6	7	8
10.	PREFERRED BY MORE OF MY CLIENTS	1	2	3	4	5	6	7	8
11.	IT CAN BE REUSED LATER AFTER IT HAS BEEN COOKED INITIALLY	1	2	3	4	5	6	7	8
12.	OUR STAFF DON'T HAVE THE KNOWLEDGE TO BUY IT CONFIDENTLY	1	2	3	4	5	6	7	8
13.	IS EASILY AVAILABLE TO BUY	1	2	3	4	5	6	7	8
14.	IT IS EASY TO PREPARE	1	2	3	4	5	6	7	8
15.	SUITS THE MENU WHICH WE OFFER	1	2	3	4	5	6	7	8
16.	ITS QUALITY VARIES	1	2	3	4	5	6	7	8
17.	PRICES FLUCTUATE TOO MUCH	1	2	3	4	5	6	7	8
18.	AN ESSENTIAL PART OF THE RANGE WE OFFER	1	2	3	4	5	6	7	8
19.	IS A FILLING MEAL	1	2	3	4	5	6	7	8
20.	IS A HEALTHY MEAL	1	2	3	4	5	6	7	8
21.	DOES NOT HAVE A LOT OF FLAVOUR	1	2	3	4	5	6	7	8
22.	LOOKS GOOD ON THE PLATE	1	2	3	4	5	6	7	8
23.	SUITED TO MICROWAVE COOKING	1	2	3	4	5	6	7	8

ALL THE REMAINING QUESTIONS CONCERN FISH AND SEAFOOD PRODUCTS AS PART OF THE NATIONAL SEAFOOD CONSUMPTION STUDY

Q.3a What do you believe are the main problems in buying and preparing fish and seafood?

NO PROBLEMS/NONE 01

OFFICE

Q.3b SHOW CARD G
Research conducted with other organisations dealing with fish and seafood has uncovered a number of problems that preparers of fresh and frozen fish and seafood products have encountered. Using the following scale (SHOW CARD G), how significant do you consider each of the following problems? READ OUT.

ROTATE TO ASTERISK

		VERY SIGNI-FICANT PROBLEM	QUITE SIGNI-FICANT PROBLEM	NOT VERY SIGNI-FICANT PROBLEM	NOT A PROBLEM	DON'T KNOW
* 1.	THE VARIABLE QUALITY OF THE FISH AND SEAFOOD AVAILABLE	1	2	3	4	5
2.	THE PROPORTION OF THE FISH AND SEAFOOD PURCHASED WHICH IS NOT EATEN AND MUST BE THROWN AWAY	1	2	3	4	5
3.	THE COST OF DISPOSING OF WASTE PRODUCT	1	2	3	4	5
4.	THE UNAVAILABILITY OF STAFF WITH EXPERIENCE IN PREPARING AND COOKING FISH AND SEAFOOD PRODUCTS	1	2	3	4	5
5.	THE AMOUNT OF PHYSICAL STORAGE SPACE REQUIRED FOR FISH AND SEAFOOD PRODUCTS	1	2	3	4	5
6.	THE NEED TO HAVE SPECIAL COOKING FACILITIES SUCH AS DEEP FRYING UNITS	1	2	3	4	5
7.	UNCERTAINTY ABOUT THE FRESHNESS OF FISH AND SEAFOOD AVAILABLE	1	2	3	4	5
8.	UNCERTAINTY ABOUT WHETHER THE FISH BOUGHT ARE CORRECTLY NAMED	1	2	3	4	5
9.	THE RISK OF BUYING FISH AND SEAFOOD "SIGHT UNSEEN"	1	2	3	4	5
10.	UNFAVOURABLE PUBLICITY ABOUT FISH & SEAFOOD	1	2	3	4	5
11.	CLIENTS DISLIKE FISH BECAUSE OF THE BONES	1	2	3	4	5
12.	IT IS DIFFICULT TO DISTRIBUTE TO A NUMBER OF DIFFERENT SITES	1	2	3	4	5
13.	FISH IS TOO EXPENSIVE TO BUY	1	2	3	4	5
14.	SEAFOOD IS TOO EXPENSIVE TO BUY	1	2	3	4	5
15.	DIFFICULTY PRE-ORDERING AND RECEIVING FISH AND SEAFOOD PRODUCTS	1	2	3	4	5
16.	DIFFICULTY OF MAINTAINING THE QUALITY OF FISH AND SEAFOOD PREPARED AND DISTRIBUTED TO DIFFERENT SITES	1	2	3	4	5
17.	DIFFICULTY IN OBTAINING GOOD QUALITY PRODUCT	1	2	3	4	5
18.	DIFFICULTY OF GETTING CONTINUOUS SUPPLY AT STEADY PRICES	1	2	3	4	5
19.	A LACK OF TRAINING IN FISH HANDLING AND HYGIENE	1	2	3	4	5
20.	DIFFICULTY GETTING CONTINUOUS SUPPLY OF A GOOD RANGE OF FISH	1	2	3	4	5

Q.4a **Is any of the fish and seafood currently used by this organisation purchased through a tendering process?**

GO TO Q.4b	YES	1
GO TO Q.5	NO	2
	DON'T KNOW/CAN'T SAY	3

Q.4b **How many contracts for fish and seafood are currently in operation?**

ONE	01
TWO	02
THREE	03
FOUR	04
FIVE	05
MORE THAN FIVE (WRITE IN)	___
DON'T KNOW	99

IF PURCHASED THROUGH TENDER (Q.4a CODE 1)

Q.4c **Over what period does the contract for fish and seafood apply?** REPEAT FOR EACH CURRENT CONTRACT MATCHING NUMBER IN Q.4b

	CONTRACT 1	CONTRACT 2	CONTRACT 3	CONTRACT 4	CONTRACT 5
1 MONTH OR LESS	01	01	01	01	01
OVER 1-3 MONTHS	02	02	02	02	02
OVER 3-6 MONTHS	03	03	03	03	03
OVER 6-12 MONTHS	04	04	04	04	04
OVER 1 YEAR - 2 YEARS	05	05	05	05	05
OVER 2 YEARS - 3 YEARS	06	06	06	06	06
OVER 3 YEARS	07	07	07	07	07
DON'T KNOW	08	08	08	08	08

Q.4d **What is your best estimate of the proportion of fish and seafood products purchased through this/these contract(s) to the total value of fish and seafood products purchased?** VALUE OF CONTRACTS DIVIDED BY TOTAL VALUE OF PURCHASES

WRITE IN: _____%

Q.4e **What is the single must important factor in awarding a contract?** SINGLE RESPONSE ONLY. RECORD BELOW

Q.4f **And what other factors are taken into account?** MULTIPLE RESPONSE ALLOWED. RECORD BELOW

	Q.4e	Q.4f
TOTAL TENDER PRICE	01	01
PROXIMITY TO THIS ORGANISATION	02	02
ABILITY TO SUPPLY ON SHORT NOTICE	03	03
FREQUENCY OF DELIVERIES	04	04
RANGE OF SPECIES AVAILABLE	05	05
QUALITY OF PRODUCT	06	06
ABILITY TO SUPPLY OTHER (NON-SEAFOOD) PRODUCTS	07	07
REPUTATION OF ORGANISATION	08	08
CONFIDENCE THAT THE SPECIES ORDERED WILL BE DELIVERED	09	09
OTHER (SPECIFY) _____	10	10
DON'T KNOW	11	11

Q.5b
SPECIES CURRENTLY BOUGHT
RECORD ALL SPECIES - TO TALLY WITH Q.5a

Q.5a **How many species of fish and seafood do you generally buy at this time of year? By seafood I mean all forms of shellfish, squid, and prawns, lobsters, crabs etc. Please think of fresh, frozen, prepackaged (or prepared), canned or bottled products.** RECORD NUMBER FOR FISH AND SEAFOOD

FISH _____ SEAFOOD _____

Q.5b **Could you name which types of fish and seafood are bought by this particular organisation at this time of the year, it may be fresh, frozen, prepackaged (or prepared), canned or bottled?** WRITE ON SHEET OPPOSITE AND TRANSFER SPECIES ON TO SEPARATE SHEET WHEN ASK Q.6a.

Are there any other types of fish or seafood that you buy at this time of the year? WRITE ON SHEET OPPOSITE.

FOR EACH SPECIES CURRENTLY BOUGHT ASK Q.6a TO Q.8. REPEAT FOR EACH SPECIES CURRENTLY BOUGHT

I will now ask you a number of questions about each type or species which you purchase at this time of the year.

Q.6a **Is** (READ OUT FIRST SPECIES) **bought fresh, frozen, prepackaged or prepared, in a can or in a glass bottle?** MULTIPLE RESPONSE ALLOWED. BUT RECORD EACH CODE ON A SEPARATE LINE. WRITE IN TYPE UNDER Q.5b

IF FRESH OR FROZEN FISH BOUGHT (Q.6a CODE 1 OR 2) ASK Q.6b; OTHERWISE GO TO Q.7a

SHOW CARD B

Q.6b **Is that bought live, whole, filleted, cutlet, headed and gutted, smoked or in some other form?** MULTIPLE RESPONSE ALLOWED

Q.7a **In the 1990 calendar year, how many kilograms of** (READ OUT TYPE AND FORM) **were bought for this organisation?** PROBE FOR BEST ESTIMATE. IF BOUGHT IN MORE THAN ONE FORM (Q.6a) ASK FOR EACH. WHERE POSSIBLE DO NOT ACCEPT DON'T KNOW - PROBE FOR ANY DETAIL.

SHOW CARD D

Q.7b **Who do you generally purchase this from and what type** (SHOW CARD D) **of supplier is that?** RECORD NAME OF SUPPLIER AND APPROPRIATE CODE(S). IF BOUGHT IN MORE THAN ONE FORM (Q.6a) ASK FOR EACH.

Q.8 **And what proportion of** (READ OUT TYPE) **that were bought last year was imported and what proportion was caught in Australian waters?** RECORD OPPOSITE. ENSURE THAT TOTAL IS 100%. IF BOUGHT IN MORE THAN ONE FORM (Q.6a) ASK FOR EACH.

Q.9 **What are the six (up to) main fin fish that you buy? And what are the specific reasons for buying** (READ OUT FIRST TYPE OF FIN FISH). REPEAT FOR EACH TYPE

RECORD TYPE	REASON
( )	_____
( )	_____
( )	_____
( )	_____
( )	_____
( )	_____

IF IN Q.4d, 100% BOUGHT THROUGH TENDER GO TO Q.11a

SHOW CARD E

Q.10a

VERY IMPORTANT						NOT AT ALL IMPORTANT	DON'T KNOW
1	2	3	4	5	6	7	8

On a scale of 1 to 7 how important are each of the following factors in choosing from which supplier to buy fish or seafood, that is, fresh or frozen that is sold unpackaged? READ OUT FIRST ROTATED STATEMENT. RECORD BELOW THEN ASK Q.10b FOR THAT STATEMENT. REPEAT Q.10a AND Q.10b FOR EACH STATEMENT.

SHOW CARD F

Q.10b

VERY GOOD/FAVOURABLE						VERY POOR/ UNFAVOURABLE	DON'T KNOW
1	2	3	4	5	6	7	8

On a scale of 1 to 7 how would you rate your main wholesale supplier for ... READ OUT. RECORD BELOW.

		Q.10a IMPORT. RATING	Q.10b WHOLESALE SUPPLIER RATING
1.	CLEAN OUTLET	_____	_____
2.	IT SELLS FRESH FISH & SEAFOOD (IE. NOT FROZEN)	_____	_____
3.	HAS CONSISTENTLY LOW PRICES FOR FISH & SEAFOOD	_____	_____
4.	GOOD TEMPERATURE CONTROL	_____	_____
5.	OFFERS AUSTRALIAN FISH & SEAFOOD	_____	_____
6.	HAS STAFF INFORMED ABOUT FISH & SEAFOOD	_____	_____
7.	HAS RELIABLE DELIVERY	_____	_____
8.	UNDERSTANDS MY BUSINESS	_____	_____
9.	OFFERS A WIDE VARIETY OF FISH & SEAFOOD	_____	_____
10.	HAS FRIENDLY STAFF WORKING THERE	_____	_____
11.	HAS A GOOD REPUTATION FOR QUALITY FISH & SEAFOOD	_____	_____
12.	I CAN BE CONFIDENT THAT FRESH FISH OR SEAFOOD HAS NOT BEEN FROZEN	_____	_____
13.	ORDERS ARE PROMPTLY ATTENDED TO	_____	_____
14.	GUARANTEE OF THE FISH OR SEAFOOD SOLD BEING CORRECTLY NAMED	_____	_____
15.	IT ALSO SELLS A RANGE OF OTHER PRODUCTS I NEED	_____	_____
16.	IS HONEST AND FAIR IN DOING BUSINESS	_____	_____
17.	GIVES GOOD CREDIT TERMS	_____	_____
18.	PROVIDES CLEAR DOCUMENTATION AND PAPERWORK	_____	_____

Q.11a **Have you noticed any of the following trends with <u>your clients</u> in the last twelve months?** READ OUT

		YES	NO	DON'T KNOW/ CAN'T SAY
1.	MORE CONCERN ABOUT THE IMPACT OF POLLUTION ON SEAFOOD SAFETY	1	2	3
2.	MORE CONCERN ABOUT THEIR GENERAL HEALTH	1	2	3
3.	A DESIRE TO EAT LESS FAT & SATURATED OILS	1	2	3
4.	MORE REQUESTS FOR GRILLED RATHER THAN FRIED FISH	1	2	3
5.	LESS SALT ON FOOD	1	2	3
6.	AVOIDANCE OF PRODUCTS HIGH IN STARCH	1	2	3
7.	MORE CONCERN ABOUT THE ACCURACY OF THE NAME OF THE FISH SOLD	1	2	3
8.	EATING MORE FISH THAN MEAT	1	2	3

Q.11b **And have you noticed any other trends in food preferences with your clients in the last twelve months?** PROBE

NO/NOTHING 01

OFFICE

Q.12a **What actions need to be taken for <u>your organisation</u> to buy more fish and seafood products?** PROBE

OIFFICE

Q.12b **What actions need to be taken by the fishing industry in general for more fish and seafood to be bought by your organisation?**

OFFICE

SHOW CARD L

Q.13 **I am going to read out a number of actions that other food preparers have identified to be likely to increase their purchase of fish and seafood products. For each action, how likely is it to lead to an increase in your purchase of fish and seafood products?** ROTATE TO ASTERISK.

The first action is ... (READ OUT FIRST ACTION). **From Card L how likely is this to increase your purchase of fish and seafood.**

		VERY LIKELY	SOMEWHAT LIKELY	NEITHER LIKELY NOR UNLIKELY	SOMEWHAT UNLIKELY	VERY UNLIKELY	DON'T KNOW
1.	INFORMATION TO HELP IN PREPARING AND COOKING SPECIFIC TYPES OF FISH AND SEAFOOD	1	2	3	4	5	6
2.	PORTION CONTROLS TO ENSURE STANDARD SIZE PIECES	1	2	3	4	5	6
3.	GUARANTEE OF CONSISTENT SUPPLY	1	2	3	4	5	6
4.	GUIDELINES FOR YOUR SUPPLIER FOR IMPROVED STORAGE TO INCREASE THE "LIFE" OF FISH AND SEAFOOD	1	2	3	4	5	6
5.	GUIDELINES FOR FOOD PREPARERS FOR IMPROVED STORAGE TO INCREASE THE "LIFE" OF FISH AND SEAFOOD	1	2	3	4	5	6
6.	GREATER SUPPLY AND VARIETY OF AUSTRALIAN FISH	1	2	3	4	5	6
7.	MORE ADVERTISING SUPPORT FOR FISH AND SEAFOOD	1	2	3	4	5	6
8.	MORE RELIABLE DELIVERY	1	2	3	4	5	6
9.	PREPARATION OF MORE FISH AND SEAFOOD PRODUCTS IN A READY TO COOK FORM (IE. CRUMBED, SMOKED, PIE, SHASLIK)	1	2	3	4	5	6
10.	GREATER QUALITY REGULATION TO MINIMISE FOOD POISONING	1	2	3	4	5	6

Now I would like to talk about specific types of fish and seafood.

SHOW CARD M

Q.14a **Listed are various species of fish and seafood which have been identified by the fishing industry as being under utilised. For organisations like this, which types do you consider to have the greatest potential for increased purchase?** RECORD BELOW

FOR THOSE IDENTIFIED AS HAVING POTENTIAL (Q.14a CODES 1 TO 11) ASK Q.14b

Q.14b **And what are the main reasons for believing that the potential lies with** (READ OUT EACH TYPE MENTIONED IN Q.14a)?

	Q.14a	Q.14b REASON
WILD SPECIES		
JACK MACKEREL (NOT JUST MACKEREL OR ANY OF THE OTHER TYPES)	01	
SQUID (OR CALAMARI)	02	
PILCHARDS OR SARDINES (NOT CANNED)	03	
AUSTRALIAN HERRING/ TOMMY RUFF	04	
SILVER TREVALLY/SKIPPY (NOT JUST TREVALLY)	05	
"FARMED" SPECIES		
FARM PRAWNS (NOT JUST PRAWNS)	06	
RAINBOW TROUT (FRESHWATER)	07	
ATLANTIC SALMON (FRESH NOT SMOKED)	08	
MUSSELS	09	
OYSTERS	10	
FARM BARRAMUNDI	11	
NONE	12	> GO TO Q.15a
DON'T KNOW	13	

Q.15a **Over the last month approximately what proportion of main daily meals would be accounted for by .....?** READ OUT ALL TYPES OF FOOD THEN RECORD PROPORTION BELOW

Q.15b **And what would the proportion break-down be in mid-summer?** RECORD BELOW

Q.15c **And what would the proportion break-down be in mid-winter?** RECORD BELOW

	Q.15a CURRENT	Q.15b MID SUMMER	Q.15c MID WINTER
MEAT	_____ %	_____ %	_____ %
PORK	_____ %	_____ %	_____ %
POULTRY	_____ %	_____ %	_____ %
FISH	_____ %	_____ %	_____ %
SEAFOOD	_____ %	_____ %	_____ %
OTHER	_____ %	_____ %	_____ %
	_____	_____	_____
TOTAL	**100%**	**100%**	**100%**

OFFICE USE ONLY

FISH

Change	**1**	**2**
Not change	**2**	**2**

SEAFOOD

Change	**1**	**1**
Not Change	**2**	**2**

Q.16a **Thinking in the next five years, do you consider that the sale/expenditure of fish and seafood products will increase, decrease or remain the same in this organisation?**

INCREASE	1
DECREASE	2
REMAIN THE SAME	3
DON'T KNOW	4

Q.16b **And why do you say that?**

_____ OFFICE

_____

_____

_____

CLASSIFICATION

For classification purposes only could you please tell me ....

Q.17 The average weekly expenditure on food by this organisation? WRITE IN $ _____

IF DEFENCE (CODE 4, 5 OR 6) DO NOT ASK Q.18; GO TO Q.19

Q.18 How many full time and part time/casual workers are employed by this organisation? FULL TIME: _____

PART TIME/CASUAL: _____

Q.19 What proportion of the meals you prepare would be for full-time residents including staff and (IF CODE 2) students? WRITE IN: _____ %

CRITICAL THAT THE FOLLOWING QUESTIONS ARE COMPLETED FOR APPROPRIATE ORGANISATION (SEE FRONT PAGE)

Q.20 HOSPITAL/NURSING HOMES (CODE 1):

How many beds are available in this hospital/nursing home?

WRITE IN: _____

Q.21 RESIDENTIAL COLLEGES/SCHOOL (CODE 2):

How many students are currently enrolled at this college/school?

WRITE IN: _____

How many students live in this college/at this school?

WRITE IN: _____

Q.22 PRISON/DEFENCE/WELFARE AND CHARITABLE HOMES (CODE 3,4,5,6 OR 7):

How many people/residents are catered for by this organisation (or centre)?
IF DEFENCE REFER TO THE NUMBER CATERED FOR IN THE INFORMATION SUPPLIED

WRITE IN: _____

THANK YOU VERY MUCH FOR YOUR HELP AS I SAID, I AM FROM YANN CAMPBELL HOARE WHEELER MARKET RESEARCH. I WILL GIVE YOU OUR TELEPHONE NUMBER IF YOU WOULD LIKE TO CHECK THE BONA FIDES OF THIS COMPANY. PLEASE CALL THE COMPANY NUMBER - 537 2255.

COMPANY NAME: _____

RESPONDENT NAME: _____

ADDRESS: _____

SUBURB: _____ PHONE: _____

I certify this is a true, accurate and complete interview, conducted to the best of my ability and in accordance with my instructions. I also agree to hold in confidence and not disclose to any other person the content of this questionnaire or any other information relating to this project.

INTERVIEWER SIGNATURE: .....

DATE: ..... INTERVIEWER NO.: .....

Appendix V

List of Species/Types of Fish and Seafood: Comprehensive and Collapsed List

The following table shows various species/types of fish and seafood broken down into seven categories:

- fish
- seafood
- processed products
- catering products
- bottles, plastic pouches, cups
- canned
- miscellaneous.

These categories are based on a combination of species and form of purchase distinction. Hence the "fish" and "seafood" categories "catch" all forms of fish and seafood with the exception of the processed catering product, bottle, plastic pouch, cup, canned and miscellaneous product forms.

The forms of fish "caught" in the "fish" category are:

- fresh whole, fillet, cutlet, headed and gutted and fresh prepared ready to cook
- frozen whole, fillet, cutlet, headed and gutted/peeled
- frozen packaged ready to cook
- smoked
- cooked fillet.

The forms of seafood "caught" in the "seafood" category are:

- fresh whole, headed and gutted/peeled and fresh prepared/ready to cook
- frozen whole, headed and gutted/peeled and frozen packaged ready to cook

– cooked.

This "fish" category and "seafood" category should be distinguished from the overall fish and seafood distinction (shown in the right hand column of the following table), which was used to determine *per capita* consumption and frequency of consumption figures.

Note also that, unless otherwise specified, all species referred to in the report are based on the collapsed fish/seafood names given in the table.

Comprehensive Fish/Seafood Listing	Collapsed Fish/Seafood Listing*	Fish or Seafood? (F or S?)
Fish:		
Barramundi	Barramundi	F
Bream, black	Bream	F
Bream, sea		F
Bream, silver/yellowfin		F
Bream, unspecified		F
Butterfish	Butterfish	F
Grenadier, blue	Blue grenadier	F
Cod	Cod	F
Cod, blue		F
Cod, coral		F
Cod, red		F
Cod, rock		F
Cod, unspecified		F
Cod, smoked	Smoked cod	
Dhufish	Dhufish	F
Dory, John	Dory	F
Dory, mirror		F
Dory, smooth		F
Dory, unspecified		F
Flathead, rock	Flathead	F
Flathead, unspecified		F
Flounder, whole	Flounder	F
Flounder, fillets		F
Flounder, unspecified		F
Garfish	Garfish	F
Gemfish	Gemfish	F
Hake	Hake	F
Herring, imported	Herring	F
Herring, Australian		F
Herring, unspecified		F
Mackerel, Spanish	Mackerel	F
Mackerel, spotted		F
Mackerel, unspecified		F
Mullet, red	Mullet	F
Mullet, other		F
Mullet, unspecified		F
Orange, roughy	Orange roughy	F
Perch, golden	Perch	F
Perch, ocean/coral		F
Perch, pearl		F
Perch, unspecified		F
Pilchard	Pilchard/sardine	F
Salmon, Australian	Salmon	F
Salmon, Atlantic		F
Salmon, imported		F
Salmon, unspecified		F

... cont

** the collapsed list of fish/seafood species/types have been used throughout the report unless otherwise specified.*

Comprehensive Fish/Seafood Listing	Collapsed Fish/Seafood Listing*	Fish or Seafood? (F or S?)
Shark, gummy	Shark	F
Shark, other		F
Snapper	Snapper	F
Snapper, unspecified		F
Trevally, silver	Trevally	F
Trevally, unspecified		F
Trout, coral	Trout	F
Trout, rainbow		F
Trout, ocean		F
Trout, **smoked**		F
Trout, unspecified		F
Whiting, grass	Whiting	F
Whiting, King George		F
Whiting, English		F
Whiting, sand		F
Whiting, unspecified		F
Albacore	Other fish	F
Anchovy	" "	F
Barracouta	" "	F
Blackfish	" "	F
Blue eye	" "	F
Boarfish	" "	F
Carp	" "	F
Catfish, forktailed	" "	F
Cobbler	" "	F
Dolphin fish	" "	F
Eel	" "	F
Emperor, red	" "	F
Emperor, sweet lip	" "	F
Groper, bald chin	" "	F
Gurnard	" "	F
Haddock	" "	F
Hairtail	" "	F
Jewfish	" "	F
Kingclip	" "	F
Kingfish, yellowtail	" "	F
Kingfish, unspecified	" "	F
Leatherjackets	" "	F
Plaice	" "	F
Queenfish	" "	F
Redfin	" "	F
Redfish	" "	F
Ribbonfish	" "	F
Sole, local	" "	F
Sole, lemon	" "	F
Sole, unspecified	" "	F

... cont

** the collapsed list of fish/seafood species/types have been used throughout the report unless otherwise specified.*

Comprehensive Fish/Seafood Listing	Collapsed Fish/Seafood Listing*	Fish or Seafood? (F or S?)
Sweep	" "	F
Sweetlip, painted	" "	F
Tailor	" "	F
Teraglin	" "	F
Threadfin	" "	F
Trumpeter, striped	" "	F
Trumpeter, unspecified	" "	F
Tuna, striped	" "	F
Tuna, other	" "	F
Tuna, unspecified	" "	F
Whitebait/sandy sprat	" "	F
Whitebait, unspecified	" "	F
Yellowtail	" "	F
Others	" "	F
Other, headed/gutted	" "	F
Seafood:		
Bugs, Balmain	Bugs	S
Bugs, Moreton Bay		S
Bugs, unspecified		S
Calamari	Squid/calamari	S
Squid tubes		S
Squid rings, crumbed		S
Squid, unspecified		S
Crabs, mud	Crabs	S
Crabs, spanner		S
Crab meat, Australian		S
Crab, unspecified		S
Crayfish, freshwater yabbie	Crayfish	S
Crayfish, unspecified		S
Marinara mix	Marinara	S
Mussels, meat	Mussels	S
Mussels, unspecified		S
Octopus, unspecified	Octopus	S
Oysters, other	Oysters	S
Prawns, king	Prawns, whole	S
Prawns, tiger		S
Prawns, other species Australian		S
Prawns, unspecified		S
Prawn meat, raw, imported	Prawns (other)	S
Prawn cutlets, crumbed, Australian		S
Prawn cutlets, crumbed, imported		S
Prawn, other		S
Scallop, TAS/VIC	Scallops	S
Scallop, unspecified		S
Seafood extender	Seafood extender	S
Abalone	Other seafood	S
Clam meat		S
Seafood sticks		S

... cont

** the collapsed list of fish/seafood species/types have been used throughout the report unless otherwise specified.*

Comprehensive Fish/Seafood Listing	Collapsed Fish/Seafood Listing*	Fish or Seafood? (F or S?)
Processed Products:		
Fish fingers	Fish fingers	F
Crumbed fish fillet and chips	Other	F
Crumbed oven fry		F
Fish fillets in sauce		F
Fish cakes		F
Prawn cakes		S
Sea cakes		S
Seafood marinara		S
Shrimp, cooked and peeled		S
Other processed products		S
Catering Products:		
Fish portions, crumbed	Catering products	F
Salmon, smoked, pieces		F
Seafood bites		S
Seafood platters		S
Terrine, seafood		S
Other catering products		
Bottles, Plastic Pouches, Cups:		
Pâté, specified	Pâté	S
Pâté, other		S
Fish paste	Fish paste	F
Anchovies, rolled fillets	Other	F
Caviar		F
Herring in bottles		F
Mussels, specified in bottles		S
Mussels, other in bottles		S
Oyster, fresh in water		S
Roll mops		F
Taramosalata		F
Other in bottles/plastic/cups		S
Canned:		
Anchovies, canned	Anchovies	F
Salmon, red, canned	Salmon, other	F
Salmon, pink, canned		F
Salmon, imported, canned		F
Salmon, unspecified, canned		F
Salmon, Australian, canned	Salmon, Australian	F
Sardine, canned	Sardines	F
Tuna, Australian, canned	Tuna	F
Tuna, imported, canned		F
Tuna, unspecified, canned		F
Herring fillets, canned	Other, canned	F

... cont

** the collapsed list of fish/seafood species/types have been used throughout the report unless otherwise specified.*

Comprehensive Fish/Seafood Listing	Collapsed Fish/Seafood Listing*	Fish or Seafood? (F or S?)
Kipper, canned	" "	F
Mackerel, canned	" "	F
Pâté, Pacific salmon	" "	F
Pilchards	" "	F
Roe, cod - soft	" "	F
Crab meat, canned	" "	S
Mussels, canned	" "	S
Oysters, canned	" "	S
Prawns, canned	" "	S
Seafood cocktail, canned	" "	S
Seafood marinara, canned	" "	S
Other, canned	" "	S
Miscellaneous:		
Take-away fish & chip, unspecified	Other fish	F
Seafood platter - fisherman's basket	" "	S
Seafood quiche	" "	S
Pizza	" "	S

* *the collapsed list of fish/seafood species/types have been used throughout the report unless otherwise specified.*

Appendix VI

Total Weight to Edible Weight Conversion

Most volume or weight data in the report are edible weight. However, in Section 6, which provides details of the Institutional Survey, purchased weights/volumes are used except where noted.

The conversion factors used in converting the weights of various forms of fish and seafood into edible portion weight are given in this Appendix.

	Fresh* %			
	Whole	Fillet	Cutlet	Headed and Gutted
Anchovy	66	100	NA	80
Barracouta	70	100	85	85
Barramundi	55	100	85	80
Blackfish	35	100	NA	80
Blue eye	55	100	85	80
Bream, silver, yellow fin	50	100	NA	80
Bream, unspecified	50	100	NA	80
Butterfish	60	100	NA	80
Carp	55	100	85	80
Catfish	50	100	85	80
Cod	50	100	85	80
Cod unspecified	50	100	85	80
Cod, blue	50	100	NA	80
Cod, coral	50	100	85	80
Cod, red	55	100	85	80
Dhufish	35	100	85	80
Dolphin fish	50	100	80	75
Dory, John	35	100	NA	70
Dory, smooth	35	100	NA	70
Dory, unspecified	35	100	NA	70
Eel	66	100	90	85
Emperor, red	50	100	85	80

... cont

* The same conversion factor is used for fresh and frozen fish/seafood

	Fresh*			
	Whole	Fillet	Cutlet	Headed and Gutted
Flathead, unspecified	55	100	NA	85
Flounder, unspecified	50	100	NA	80
Garfish	60	100	NA	85
Gemfish	50	100	90	85
Grenadier, blue	50	100	90	85
Groper	50	100	90	85
Haddock	NA	100	NA	NA
Hake	55	100	85	80
Herring, Australian	50	100	NA	80
Herring, unspecified	50	100	NA	80
Jewfish	50	100	85	80
Kingclip	60	100	90	85
Kingfish, unspecified	55	100	90	85
Kingfish, yellowtail	55	100	90	85
Latchet	35	100	NA	85
Leatherjackets	40	100	NA	80
Mackerel, Spanish	65	100	90	85
Mackerel, spotted	65	100	90	85
Mackerel, unspecified	60	100	90	85
Mullet, other	45	100	90	85
Mullet, unspecified	45	100	90	85
Orange roughy	35	100	NA	80
Perch, ocean/coral	35	100	NA	80
Perch, unspecified	35	100	85	80
Pilchard	55	100	NA	NA
Plaice	50	100	NA	80
Redfin	50	100	NA	80
Redfish	35	100	NA	80

... cont

* The same conversion factor is used for fresh and frozen fish/seafood

	Fresh* %			
	Whole	Fillet	Cutlet	Headed and Gutted
Salmon, Atlantic	60	100	85	80
Salmon, Australian	60	100	90	85
Salmon, unspecified	60	100	85	80
Snapper	50	100	90	85
Snapper, unspecified	50	100	90	85
Shark, other	60	100	85	80
Smoked cod	NA	100	NA	NA
Sole, lemon	55	100	NA	75
Sole, unspecified	55	100	NA	75
Tailor	50	100	NA	80
Trevally, unspecified	40	100	85	80
Trout, coral	50	100	85	80
Trout, ocean	55	100	85	80
Trout, rainbow	55	NA	85	80
Trout, unspecified	55	100	85	80
Trumpeter	50	100	NA	80
Tuna, other	50	100	85	80
Tuna, striped	50	100	85	80
Whiting, English	55	100	NA	80
Whiting, grass	50	100	NA	80
Whiting, King George	50	100	NA	80
Whiting, sand	50	100	NA	80
Whiting, unspecified	50	100	NA	80
Yellowtail	55	100	NA	80
Others	50	100	85	80
Abalone	33	NA	NA	NA
Bugs, Moreton Bay	30	NA	NA	85

... cont

* The same conversion factor is used for fresh and frozen fish/seafood

	Fresh* %			
	Whole	Fillet	Cutlet	Headed and Gutted
Bugs, unspecified	30	NA	NA	85
Crab, unspecified	25	NA	NA	NA
Crayfish, unspecified	40	NA	NA	85
Mussels, unspecified	20	40**	NA	NA
Octopus, unspecified	85	NA	NA	NA
Oysters, other	20***	NA	NA	NA
Prawn cutlet, crumbs	100	NA	NA	NA
Prawn, other	45	NA	NA	NA
Prawnmeat	100	NA	NA	NA
Prawns, unspecified	45	NA	NA	NA
Scallops, unspecified	20	NA	NA	NA
Seafood extender	100	100	100	100
Seafood sticks	100	100	100	100
Squid/calamari	80	NA	NA	90

NA indicates this form of fish/seafood is not applicable to the particular species shown in the left hand column.

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* The same conversion factor is used for fresh and frozen fish/seafood

** Assumes half-shell presentation

*** Assumes approximately 8grammes meat each