

W H I T E F I S H A U T H O R I T Y

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TECHNICAL REPORT 147

Development of a breaded seafood  
product - seafood platter

March, 1977

## SUMMARY

This is the second in a series of reports covering product development and marketing work carried out by the White Fish Authority as part of its overall programme for expanding the market for under-utilised shellfish species.

The work was carried out under a joint contract by a well known shellfish processing company in order to develop a range of sophisticated and up-market products based on cockles and mussels.

A wide range of products was developed, a small number of which were extensively researched and consumer tested, and this report is concerned with the first of these products, a frozen breaded mixture of various shellfish and pieces of white fish called "Seafood Platter".

Publication of this report is now authorised under the terms of the development contract which allowed a certain time lapse in order for the shellfish processing company to proceed with its own further test market trials.

## 1. Introduction

In recognition of the need to expand the market for under-utilised shellfish species, particularly cockles and mussels, the White Fish Authority (WFA) and Severnside Foods Limited (SFL) entered into a development contract\* in the latter part of 1971, which led to the establishment of a Development Unit at the company's Bristol factory (Ref. 1). A qualified food technologist was engaged from January 1972 to continue product development work that had initially been carried out at Leeds University by staff of the WFA's Market Development Unit (Ref. 2). By April 1972, recipe development work had reached the stage when there were half a dozen or so products that were thought sufficiently promising for further evaluation. Accordingly, proposals for a fairly extensive test market programme covering six products were drawn up by SFL's marketing consultants, David Elliott & Associates, and submitted to the WFA (summarised in Appendix I). The products under consideration were both potentially catering and retail products, most of which were quick frozen, but others were autoclavable jar lines. On cost and production grounds, however, it was decided that the proposed annual marketing programme should be split into more easily manageable individual projects.

The first product to be developed beyond the recipe stage and consumer tested was Breaded Mussels, a product that had once previously been launched by SFL but withdrawn through lack of sales. Consumer tests conducted on the WFA's and SFL's behalf with an improved version of the product again demonstrated very limited likely acceptance and it was consequently dropped in favour of a mixed breaded product in which breaded mussels formed a substantial proportion of the mixture. This product, Seafood Platter, met a more favourable reception.

## 2. Breaded Mussels

It was considered that with the success of breaded scampi, this method of presentation could well be successful in popularising an unfamiliar species of shellfish, particularly in the catering market.

### 2.1. Product Development

Initial samples for assessment by SFL employees were prepared by dipping IQF mussel meats in a simple flour, salt and water batter mix, blowing off the excess batter and rolling the coated meats in a proprietary brand of breadcrumbs. The breaded mussel meats were then placed on trays and individually blast frozen at  $-40^{\circ}\text{C}$  for 20 minutes.

\*Under this agreement, products which were developed would fall into two categories, those the company wished to market or evaluate further, and those in which it had no more interest. The latter were reported in Ref. 1. This report deals with the first of those products considered more fully by SFL: subsequently other reports will give the results of the remaining products.

Although the product concept met with a favourable response there were criticisms of lack of flavour in the batter and the dark orange colour of the crumb after cooking. It was decided therefore to carry out further development work on the product and tests were conducted with different bread-crumbs dressings supplied by T. Lucas & Co. Ltd., of Bristol. Final samples of breaded mussels produced by hand with a Lucas batter mix (2263) and crumb dressing (GHDM) were considered suitable for machine trials and IQF Irish mussels were passed through a Greer 22" Vibrawhirl batter and breading machine.

The trial was not a success due to inadequate cover of the mussel meats with batter and crumb. A new batter mix (SFL batter mix No. 1) was developed by Lucas technical staff which, when used in conjunction with a finer grade of crumb (GHDMF) and a double breading process, produced a satisfactory cover. More seasoning in the batter mix was deemed necessary by the SFL taste panel and a vinegar flavoured batter (SFL batter mix No. 2) was developed. The resultant product from the Greer machine was considered acceptable for consumer testing and sample packs were produced in 4 oz foil containers for housewives and 5 lb polythene bags for caterers.

## 2.2. Consumer Testing

The agreed research design (summarised in Appendix II) included placing the product in 80 catering outlets of various types including fish friers, and the setting up of a consumer panel of housewives who would each be given a portion of breaded mussels together with a questionnaire to fill in, for which an interviewer would call back by appointment.

The results of this test (summarised in Appendix III), which were presented in September 1972, showed that members of the consumer panel, which it had been difficult to set up for a mussel product, were reasonably enthusiastic amongst the small proportion of those who were used to eating mussels, but that they were, and would remain, a minority market. The principal criticism from those who were generally well disposed to the product was that the thickness of the batter and crumb coating was thought to be excessive.

Among caterers contacted as potential users - most of whom served scampi - the recruiting of a suitable number was again found to be difficult and sales expectations were found to be low, with public houses emerging as the most likely type of outlet. In this test a major problem was encountered with the flavour of the batter.

Both the WFA and SFL agreed that the results of this reasonably extensive test showed that the market for the product was limited, but that there was real potential in the somewhat narrow market segment that had been defined.

### 3. Seafood Platter

It was agreed that the very limited acceptance of mussels in terms of numbers of those people who currently might buy them called for the exploring of products that included a worthwhile proportion of mussels, but contained other fish or shellfish in addition. The first of these was a product consisting of breaded shellfish and pieces of white fish including a fairly high percentage of breaded mussels.

#### 3.1. Product Development

Various mixes involving different species of fish and shellfish were developed and assessed, and in order to achieve a more satisfactory coating, further work was carried out by Lucas technical staff which resulted in the development of SFL batter mix No. 3.

At the same time that development work was being carried out on a breaded product, an investigation was conducted into the possibilities of producing Seafood Platter with a Tempura batter covering and in this connection a visit was made to the Aylesbury factory of DCA Industries Ltd. Trials were conducted with IQF mussel meats resulting in a product that was considered satisfactory in terms of flavour and texture, but again there was the problem of achieving adequate cover. This problem was solved by dusting the mussel meats in powdered batter mix prior to dipping them in made up batter. The final preparation procedure using Tempura batter mix No. 94 was to dust the mussel meats with dry batter mix, dip into made up batter, drain and then flash fry at 190°C for 40 seconds prior to freezing at -40°C for 20 minutes.

Samples of breaded and battered Seafood Platter with the following composition were prepared and approved by the SFL taste panel and WFA staff:-

	%
Cod pieces (15mm cube)	43
Mussels	33
Scampi	10
Prawns	8 (200-300/1b)
Queen scallops	6 (120/1b)

It was decided to hall test both cover variations of the Platter and in order to determine whether the adverse criticism of the flavour of the batter and the thickness of the batter and crumb coating of the breaded mussels tested earlier had been the dominating factors in the rejection of the product, a revised version with a non-flavoured batter and thinner crumb coating, and a battered mussel product were also included in the test design.

Sufficient quantities of products required for the test were produced on the Greer Breeding Unit used for the breaded mussels and on a Doughnut Frier hired from DCA Industries Ltd.

### 3.2. Consumer Testing

The two paired hall tests were conducted over a period of three days during November/December 1972 in Bristol. Female respondents were selected for the tests on the basis of their having served fish in the home at any time during the two months prior to the tests; male respondents were selected on the criteria of their having eaten a meal/snack in a pub and fish in the home at any time during the same period. A total of 400 respondents participated in the tests and SFL provided their home economist to deep-fry the products individually for each interviewee.

The report of the two paired hall tests was presented in January 1973 (summarised in Appendix IV) and showed that 50% of the respondents participating in the exercise rated the idea of a mixed seafood product favourably (as against less than 20% of those who rated the idea of breaded mussels favourably) and it was quite apparent from the detailed results that a Seafood Platter was measurably more acceptable than a simple mussel product. It was concluded on the results of the exercise that a commercially viable market might exist for a mixed Seafood Platter, while a Breaded Mussel product was likely to fail. Although there was no apparent preference for either the breadcrumb or Tempura batter cover, it was decided for ease of manufacture to proceed with the breaded version for further consumer testing. A test market plan was therefore presented by David Elliott & Associates in January 1973 (summarised in Appendix V) in which it was suggested that the market potential of the product be assessed in:

- (a) appropriate catering outlets such as pubs and restaurants,
- (b) freezer centres - both catering and retail,

during a 26 week period. For retail outlets a 10 oz pack was suggested and for catering outlets a 1 kg polythene bag.

### 3.3. Further Development and Test Marketing

The weight of product to be sold in the retail pack was reduced from 10 oz to 8 oz and a white polystyrene thermoformed pack with a polystyrene clip-on lid, manufactured by Robinson Thermoforming of Yate, near Bristol, was selected. A 4-colour label was designed for the lid and the same illustration was also used for the point of sale and back up material in the form of 4" x 6" tent cards with adhesive strips attached at the base. Although the packs were found to be satisfactory in standard travel tests, problems were encountered with the lids becoming detached and the containers cracking when being handled at the point of sale. There were 12 x 8 oz packs per cardboard outer.

White 200 gauge polythene 7" x 9" bags printed with a dark blue label were used for the catering packs and 5 x 1 kg bags were packed per cardboard outer.

Further formulation work on the product was deemed necessary, particularly to lower its cost; the make up of the product was thus altered as follows:-

	%
Mussels	33
Scampi	7
Prawns	11
Queen scallops	4
Cod threshings	25
Coley	20

This composition gave rise to the following price structure:-

	8 oz retail pack (p)	1 kg catering pack (£)
Cost to wholesaler	24	1.00
Cost to retailer	30	1.25
Cost to consumer	37½	

For the manufacture of the product SFL ordered a Greer 12" combination battering and breading machine on which trials had been conducted the previous autumn.

Seafood Platter was launched in June 1973, the selling in operation being handled by SFL. Initial reaction to the product was favourable with particular interest being shown in the catering pack by breweries, and large processors to sell under their own labels. In early 1974, 70,000 coloured leaflets advertising Seafood Platter and other SFL products (Appendix VI) were distributed through the trade press.

During the first year that the product was on the market, adverse criticism of the mussel content led to reductions in its proportion from 33% to 30% and later to 22% being made, giving a final product composition:-

	%
Mussels	22
Scampi	7
Prawns	16
Queen scallops	5
Cod	25
Coley	25

It was still proving difficult to achieve a satisfactory cover and therefore a double coating operation utilising a thinner batter mix was later employed. After a storage period of three months, it was discovered that marked darkening occurred on frying the product and there was also a deleterious effect due to the lack of uniformity of particle size - some pieces in the mixture required more time to cook than others. (A further disadvantage caused by this lack of uniformity, was the variation in product mix between servings, particularly in the catering pack where the smaller pieces worked lower down the bag.) It was thought that the darkening effect on frying could have been caused by a reaction between acid and polysaccharide constituents of the batter mix and more research was required to solve this problem. With regard to the lack of uniformity in particle size, one possible solution suggested was the use of re-formed pieces of shellfish "waste" and reclaimed fish flesh produced from a bone separator such as the Baader 694.

After persevering with the development for twelve months, SFL decided that their efforts would be more usefully directed into other, more promising, products which had been consumer researched in hall tests. The breaded Seafood Platter was therefore withdrawn in 1974.

#### References

1. WFA Technical Report No. 133 - Recipe Development of Six Cockle and Mussel Dishes.
2. WFA Technical Report No. 104 - Specifications for the Freezing and Packaging of Oyster Meats and Oyster Products.



It was still proving difficult to achieve a satisfactory cover and therefore a double coating operation utilizing a thinner pattern mix was later employed. After a storage period of three months, it was discovered that marked darkening occurred on drying the product and there was also a deleterious effect due to the lack of uniformity of particle size - some pieces in the mixture required more time to cook than others. A further disadvantage caused by this lack of uniformity, was the variation in product mix between servings, particularly in the centering pack where the smaller pieces worked lower down the pack. It was thought that the darkening effect on drying could have been caused by a reaction between acid and polyacetaldehyde constituents of the pattern mix and more research was required to solve this problem. With regard to the lack of uniformity in particle size, one possible solution suggested was the use of re-formed pieces of shellfish "waste" and reclaimed fish trim produced from a bone separator such as the Mason 801.

After persevering with the development for twelve months, it was decided that their efforts would be more usefully directed into other, more promising, projects which had been commenced in parallel tests. The product development project was therefore withdrawn in 1971.

References

1. WPA Technical Report No. 123 - Recipe Development of Fish Cocktail and Mussel Mixture.
2. WPA Technical Report No. 124 - Specifications for the Processing and Packaging of Frozen Fish and Oyster Products.

APPENDIX I

PROPOSALS FOR AN ANNUAL  
RESEARCH PROGRAMME  
in to CATERING & CONSUMER ACCEPTANCE of  
COCKLES & MUSSELS  
in various developed recipes and packs

prepared by  
David Elliott & Associates  
Marketing Consultants  
on behalf of  
THE WHITE FISH AUTHORITY  
and  
SEVERNSIDE FOODS LIMITED

April 1972

1. BACKGROUND:

The White Fish Authority's important new R & D establishment at Severnside Foods Limited is now becoming fully operational. A programme of usage/recipe development, with the objective of expanding rapidly the acceptance of minor shellfish, has been agreed for the coming six months, (in addition to development work on maintaining quality in vinegar bottled shellfish).

There is very little history of usage and acceptance of cockles and mussels in the United Kingdom amongst what might be termed the "middle class" market, quite contrary to the position in various European Continental markets, e.g. France and Spain. In the United Kingdom consumption of cockles and mussels seems to polarise between the "working class" markets of quite sharply delineated geographic areas, and the upper middle class consumers who enjoy mussels (seldom cockles) mainly in the shell, in such small minority usages as moules mariniere.

It is probable that much of the acceptance amongst the latter group stems from acquaintance through restaurants, and holiday visits to the Continent. To extend acceptance of minor shellfish in to the major middle class markets there is, in fact, a major education/PR task to be undertaken. Clearly this effort, and the marketing programme should be based on the usages of greatest potential acceptance.

There is a need to encourage catering use as a matter of regular availability on menus; and a need to stimulate home usage in new recipe uses and prepared foods.

It is on judgement most probable that caterers and housewives will have different attitudes to recipes and usages developed by the WFA/Severnside facility. It is also quite possible that some of the recipes developed will be acceptable as recipes but not as prepared meals; i.e. that the programme will devise attractive usages for minor shellfish that will have a direct bearing on the total demand for cockles and mussels without actually providing a "new product" in conventional marketing terms.

This, in turn, demands that the market research programme/test marketing programme must be extremely flexible, and will involve a good deal of prior judgement in selecting the appropriate marketing approach to be measured. Sometimes the requirement will be to measure potential markets and at other times to establish comparative consumer or catering acceptance versus substitute or competitive prepared products. In the same way, it will sometimes be appropriate to determine the optimum product on judgement and measure its potential; in other instances it will be necessary to establish acceptability of an actual recipe.

Thus, making an annual estimate in advance of the technical/recipe development work calls for some fairly broad conceptual judgements. What we have endeavoured to do is provide a mixed, balanced programme based on the probable requirements of the development programme currently agreed, and to assume that the actual scale of testing will involve eight such exercises in one calendar year from today.

## 2. DETAILED CONSIDERATIONS:

WFA/Severnside are developing a range of new products and recipes based on mussels and cockles.

The marketing plans for these products are orientated both to the catering trade and the retail consumer market.

Some of the products are quick frozen. Other products in the range are canned or in jars.

The first six developments are scheduled as follows:

1. Breaded Mussels, quick frozen  
Catering trade  
Packed in 20 lb. cartons, each with four bags. Each bag contains 20 4 ox. servings (5 lb.) Price approximately 40-50p per lb. (10-12½p per serving).
2. Seafood Cocktail Mix  
Catering trade and consumer  
Packed in 5 oz. jars for consumer, 20 oz. packs for the catering trade.
3. Seafood Platter, quick frozen  
Catering trade
4. Chowder  
Catering trade and consumer  
Packed in cans.
5. Soup  
Catering trade and consumer  
Packed in cans.
6. Fish Pie Filling and/or Fish Pies  
Catering trade and consumer  
Packed in cans or quick frozen.

The research plan is based on two assumptions:

1. That the products will be of optimum quality. That is, that the test is not designed solely to test one recipe against another with more or less of a given ingredient (although paired tests are not ruled out). The test kitchen is designed to maximise product quality. The research will test total reactions to the product as a whole and not to minor variations.
2. That the decision to be made is whether to go ahead to test market or not. It is assumed that the test market will be used to obtain information relevant to forecasting offtake and that the research is required to test out whether specific outlets or people will find the products acceptable or not: that is, we would find out whether they would re-buy it once tried, and why they would or would not buy it. We would measure enthusiasm but not project actual off-take.

Hence the sampling frame for the catering outlets is not designed to be representative, in terms of numbers of specific types of outlets. The sampling frame is designed to cover a minimum number of each type of outlet likely to use the products (for instance outlets now selling deep fried or fried breaded scampi would be selected to test breaded mussels), so that acceptability in five basic types of outlets can be judged.

The sampling frame for consumer tests would also be based on a minimum number of people in each of several types of usage groups, or demographic-geographic groups.

### 3. BASIC METHOD:

#### a) Consumer

200 housewives, under the age of 60 and in the appropriate class groups, would be given a "family" serve or "dinner" serve to use by an interviewer. The interviewer would also give the housewives questionnaires and explain them. The housewives would use the products, fill in the questionnaire and then post in the replies in a stamped addressed envelope supplied.

The questions would cover:

- i) overall reactions
- ii) competitive position
- iii) general likes
- iv) general dislikes
- v) ratings in product attribute scales
- vi) buying intention, under different pricing conditions
- vii) perceived usage, when it would be used
- viii) advantages and disadvantages compared with competitive products,

by area, age and other demographics, number in household, who tried, etc. This method, based on postal reply and thus reducing the cost by eliminating interviewer call-backs, has generally proved to produce up to 90% responses. It is equally suitable for single product tests and paired comparison tests.

#### b) Catering (single outlets)

We feel that a minimum number of outlets to be covered would be about 80, covering five basic sub-groups of outlets and four geographic areas.

As not all outlets will accept the product, the initial call rate will be greater than 80. We plan to have interviewers go out to line up outlets for trial tests in an area close to a cold store which would be used as a depot. Once placement has been arranged, the products would have to be delivered to the outlet (this is outside the research quote cost) within a day or two. The interviewer would go back on an agreed day, checking first whether the product had been used.

In the initial contact the interviewer would find out whether the product would be given a trial at a sell in price of e.g. 40p per lb. This would give an indication of initial reaction. Regardless of reaction to the price, the product would be offered free for trial. The interviewer would leave a brief list of subjects she will cover at the call-back interview so that the manager would know what to expect.

The results of the research would be used to answer four basic questions:

Is the product acceptable to managers,  
how enthusiastic are they

Is it acceptable to consumers

Is any one type of outlet more enthusiastic  
than others

Are outlets in one city more enthusiastic  
than others

20 outlets would be in London, out of a recommended sample of 80, with a further 20 in Birmingham, 20 in Manchester (or Newcastle) and 20 in Bristol.



## c) Catering (chains)

There is the further area of great marketing potential and importance, the chain caterers such as Berni, Chef & Brewer, Angus Steak Houses, London Steak Houses: to arrange tests and assess potential it is necessary to contact these companies at the head offices in Bristol, Cadby Hall and so on. Only a proportion of the WFA/Severnside developments are likely to be appropriate to this style of outlet. Where they are potentially appropriate we would couple the single outlet sampling with 20 interviews with top level central buyers and wholesalers in the catering trade, after the test results are known. These interviews would be conducted in depth and by appointment, and it is of prime importance to select products of real potential in this class of outlet.

4. BASIC PROGRAMME:

We have considered the likely requirements for testing the six agreed developments, and have made provision for a further two;

	Catering Test	Chains	Consumer
1. Breaded Mussels	*	*	
2. Seafood Cocktail Mix	*	*	*
3. Seafood Platter	*	*	*
4. Chowder	*		*
5. Soup	*		*
6. Fish Pie Filling	*		*
7/8. (to be selected)	2	*	2
	8	4	7

This programme is of necessity a flexible outline of probable requirements rather than a firm listing, but it appears to be realistic in the light of known development and marketing plans.

APPENDIX II

PROPOSAL FOR  
CATERING AND CONSUMER RESEARCH  
in to the acceptance of  
BREADED MUSSELS

Prepared for  
THE WHITE FISH AUTHORITY  
and  
SEVERNSIDE FOODS LIMITED

by  
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June 1972

SCOPE OF TEST PROGRAMME:

After detailed discussion with the White Fish Authority it is agreed that the range of research and market testing is broad since potential exists among

- a) independent caterers including fish and chip shops
- b) chain caterers of the Angus/Berni/Forte type
- c) consumers

This test programme is particularly important because BREADED MUSSELS represent a basic usage for extending the market, and could be of great importance in the educational sense of getting wider trial for mussels, outside the traditional markets.

Therefore the test will embrace

- a) independent caterers; placement test with pre and recall questionnaires
- b) a modified form of the above for specific use with fish friers
- c) chain caterers; managerial interviews, placements and call back
- d) consumer panel; blind product placement and call back.

So far as the consumer market is concerned, a blind placement will establish only basic acceptance and it will be necessary to undertake branded market tests; indeed, this is the more important activity. However, following examination of the problem with the White Fish Authority it is quite plain that a single product market test will not produce results, and that it will be much more satisfactory to put breaded mussels in to an in-store situation alongside other products e.g. seafood cocktail now being developed by the WFA/Severnside R & D unit. The time that will be needed to finalise products and set up test stores would cause unnecessary delays in the catering tests. Therefore, although this is an essential feature of the test procedure, this proposal deals only with the catering and consumer placements, and the detailed planning of an in-store market test will be the subject of an additional proposal and budget request.

BASIC METHOD:a) Catering (single outlets)

We feel that a minimum number of outlets to be covered would be about 80, covering five basic sub-groups of outlets and four geographic areas.

As not all outlets will accept the product, the initial call rate will be greater than 80. We plan to have interviewers go out to line up outlets for trial tests in an area close to a cold store which would be used as a depot. Once placement has been arranged, the products would have to be delivered to the outlet (this is outside the research quote cost) within a day or two. The interviewer would go back on an agreed day, checking first whether the product had been used.

In the initial contact the interviewer would find out whether the product would be given a trial at a sell in price of e.g. 40p per lb. This would give an indication of initial reaction. Regardless of reaction to the price, the product would be offered free for trial. The interviewer would leave a brief list of subjects she will cover at the call-back interview so that the manager would know what to expect.

The results of the research would be used to answer four basic questions:

Is the product acceptable to managers,  
how enthusiastic are they

Is it acceptable to consumers

Is any one type of outlet more enthusiastic  
than others

Are outlets in one city more enthusiastic  
than others

20 outlets would be in London, out of a recommended sample of 80, with a further 20 in Birmingham, 20 in Manchester (or Newcastle) and 20 in Bristol.

b) Catering (chains)

Breaded Mussels are considered to be a product suitable for that further area of great marketing potential and importance, the chain caterers such as Berni, Chef & Brewer, Angus Steak Houses, London Steak Houses: to arrange tests and assess potential it is necessary to contact these companies at the head offices in Bristol, Cadby Hall and so on. Only a proportion of the WFA/Severnside developments are likely to be appropriate to this style of outlet

We would couple the single outlet sampling with 5-10 interviews with top level central buyers and 10-15 wholesalers in the catering trade, after the independent test results are known. These interviews would be conducted in depth and by appointment.

c) Consumer

100 housewives, under the age of 60 and in the appropriate class groups, will be given a "family" serve or "dinner" serve to use by an interviewer. The interviewer will also give the housewives questionnaires and explain them. The housewives will use the products, fill in the questionnaire and the interviewer will call back by appointment and go over the replies with the housewife.

The questions will cover:

- i) overall reactions
- ii) competitive position
- iii) general likes
- iv) general dislikes
- v) ratings in product attribute scales
- vi) buying intention, under different pricing conditions
- vii) perceived usage, when it would be used
- viii) advantages and disadvantages compared with competitive products

by age and other demographics, number in household, who tried, etc.

CATERERPLACEMENT TEST FORBREADED MUSSELS

Call in to outlet and either make appointment to see Manager to explain survey or if it is convenient for him interview him/her.

Good morning/afternoon. I am from Mass Observation. We are doing a survey for the White Fish Authority on the acceptability to caterers of individually frozen mussels in breadcrumbs.

These breaded mussels have been developed at the White Fish Authorities' test kitchen at Bristol. They can be used as a hot snack, as a starter course, as a main course or in a mixed seafood dish. They require only deep frying or frying. They are considered to have the same sort of versatility and appeal as deep fried or fried scampi.

They are packed in 5 lb. packs. Each outer or case consists of four of these 5 lb. packs. A 5 lb. pack would normally cost £2.00 to £2.50. (A case £8.00 to £10.00).

We are placing 20 lb. cases in different types of catering establishments in Bristol, London, Birmingham and Manchester. It is very important that we have coverage of all types of outlets near ( ) depot, so that we can estimate what other depots might sell. We also need to test them in all sorts of catering establishments to see which are the most likely buyers in a normal situation, and what type of catering establishments will not sell them much.

We would be grateful if you took part in the survey and tested out the breaded mussels in your (pub. restaurant, shop cafe) over the next couple of weeks. We can deliver within a few days, starting with one case and then if you need another over the test period, because they are on the menu, you can ring for another.

## CHECK ACCEPTABILITY

The man to contact at the depot is \_\_\_\_\_  
 at \_\_\_\_\_ store. The phone number is \_\_\_\_\_

## 1. CODE OUTLET TYPE:

Fish and chip shop	1
Pub. serving hot snack meals including scampi	2
Cafe (rump steak up to 65p)	3
Licenced restaurant (rump steak under 90p)	4
Licenced restaurant (rump steak over 90p)	5
Hotel restaurant (rump steak under 90p)	6
Hotel restaurant (rump steak over 90p)	7

2. What do you think of the idea of deep-fried or fried breaded mussels on your menu? (ALLOW FREE RESPONSE AND CIRCLE APPROPRIATE CODE, CHECK RESPONSE AGAINST CODE RESPONSES IF NECESSARY)

a very good idea	1
a quite good idea	2
only fair/average	3
not much of an idea	4
normally, wouldn't be interested	5

b) Do you think you would use them (READ OUT AND CIRCLE APPROPRIATE CODE/S)

as hot snacks	6
as a starter course	7
as a main meal course	8
as part of a mixed seafood dish	9

Is there any other information you want?

(RECORD ON QUERY SHEET)

I will ring for an appointment in about 10 days so that we can discuss how the mussels sold and could be used on your menu. I can come any time of the day that suits you in about two weeks from now.

Date Interviewer

Name of Manager Phone No.

Outlet name and address

**NOTE:** RECORD ON YOUR DEPOT ADMINISTRATIVE LIST YOUR OWN QUOTA LIST AND DATE LIST



CALL BACK QUESTIONNAIRE

3. How well did the mussels sell? (ALLOW FREE RESPONSE AND CIRCLE APPROPRIATE CODE, CHECK RESPONSE AGAINST CODE RESPONSES IF NECESSARY)
- |               |   |
|---------------|---|
| very well     | 1 |
| quite well    | 2 |
| only fair     | 3 |
| not very well | 4 |
| poorly        | 5 |
4. a) How did you serve them? (READ OUT AND CIRCLE APPROPRIATE CODES)
- |                                 |   |
|---------------------------------|---|
| as a hot snack                  | 1 |
| as a starter                    | 2 |
| as a main course                | 3 |
| as part of a mixed seafood dish | 4 |
- b) IF SERVED THAT WAY ASK: What other food, sauce, salad or vegetable did you serve with the mussels?
- as a starter
- as a main course
- as a mixed seafood dish
5. Were there any problems in preparing or handling them? (PROBE)
- smells
- cooking method
- breaking up
- breading
- wastage
- mussel size
- dishing them
- other
6. a) What would you call them on your menu?
- b) How did you add them to your menu - card, blackboard, recommendation?
7. a) How did your customers first react, did they (READ OUT AND CIRCLE APPROPRIATE CODE)
- |                          |   |
|--------------------------|---|
| ignore them              | 1 |
| ask the staff about them | 2 |
| or just order them       | 3 |
- b) (PROBE ANY COMMENTS ON CUSTOMER AND STAFF REACTIONS AND COMMENTS:

8. a) Compared to fried scampi, do you think the price of fried breaded mussels on YOUR MENU would be (READ OUT AND CIRCLE ONE CODE OF EACH LINE)
- as a starter course, snack
- |          |   |
|----------|---|
| higher   | 1 |
| the same | 2 |
| or lower | 3 |
- as a main course
- |          |   |
|----------|---|
| higher   | 4 |
| the same | 5 |
| or lower | 6 |
- b) What do you think of their potential compared with scampi?
9. a) Now that you have tried the breaded mussels, how good an idea do you think they are for YOUR MENU (ALLOW FREE RESPONSE AND CIRCLE APPROPRIATE CODE, CHECK RESPONSE AGAINST CODE RESPONSE IF NECESSARY)
- |                        |                |
|------------------------|----------------|
| a very good idea       | 1              |
| quite a good idea      | 2              |
| only fair              | 3              |
| not much of an idea    | 4              |
| wouldn't be interested | 5 (go to Q.12) |
- b) Would you serve them (READ OUT AND CIRCLE CODE)
- |                                     |   |
|-------------------------------------|---|
| as an occasional special of the day | 6 |
| or as part of the regular menu      | 7 |
- (WRITE IN ANY OTHER COMMENTS)
- c) Would you serve them as (READ OUT AND CIRCLE CODES)
- |                                 |   |
|---------------------------------|---|
| as a hot snack                  | 8 |
| as a starter course             | 9 |
| as a main course                | 0 |
| as part of a mixed seafood dish | X |
10. How often do you think you would serve breaded mussels? (ALLOW FREE RESPONSE AND CIRCLE APPROPRIATE CODE, CHECK RESPONSE AGAINST RESPONSE CODE IF NECESSARY)
- |                               |   |
|-------------------------------|---|
| daily                         | 1 |
| 2 to 3 times a week           | 2 |
| once a week, once a fortnight | 3 |
| once a month                  | 4 |
| once in 3 months              | 5 |

10. continued...

less often	6
rarely	7
never	8 (go to Q.12)

11. How many 20 lb. cases do you think you would sell in an average month? As a rough guess?  
(WRITE IN) \_\_\_\_\_

12. What, if any, do you think are the disadvantages of these breaded mussels (WRITE IN)

13. What is good about them? (WRITE IN)

14. What sort of catering establishments would you expect these breaded mussels to sell in? (WRITE IN)

(PROBE) type of outlet

price level

menu type

15. Would you expect to buy them ... (READ OUT AND CIRCLE)

direct from the manufacturer 1

or from a cash and carry, freezer centre 2

or through a wholesaler 3

or through a central buying office 4

(IF OTHER WRITE IN)

16. How many cases did you use? (WRITE IN) \_\_\_\_\_

Thank you very much for your help, was there anything else you wanted to say?

Interviewer

Date

Name and address of outlet

Tel. No.

BREADED MUSSEL TEST  
PLACEMENT QUESTIONNAIRE

10.

Good morning, afternoon. I am from Mass Observation. We are doing a survey on breaded mussels. Do you serve fish or shellfish, other than fish fingers, to your family? (IF NO DISCONTINUE)

How often would the family have fish or shellfish?  
(IF LESS THAN ONCE A FORTNIGHT DISCONTINUE)

The WHITE FISH AUTHORITY has a test kitchen here in Bristol, and they are developing new fish dishes. We are forming a panel of about 100 families who eat fish dishes regularly to test out their new dishes. We will be delivering a family serving now and then for people to test out. They are guaranteed as in good condition for people to eat. Would you like to be on the testing panel? (IF NO DISCONTINUE)

Do you have a freezer or freezer compartment in your fridge? (IF NO DISCONTINUE)

Our first product is quick frozen mussels in breadcrumbs. All that you have to do is put them in your freezer now, and then when you want to serve them to your family you should take them out of the freezer and put them in the refrigerator for 2 hours or so to thaw. Then take them out of the outer pack and put them in a frying pan in which you have melted butter or warmed some cooking oil. Do them in the usual way you would serve fish in breadcrumbs. (IF HOUSEWIFE WILLING TO TEST FILL IN PANEL CARD)

I'll call back next ( ) and fill in this questionnaire together with you. I'll leave it with you so you can start answering the questions when you serve them. I'll just go over them with you when I call back.

The packets are in 4-5 oz. portions, how many packets do you want for a family meal (Fill in )

IF THE HOUSEWIFE IS UNWILLING, DO NOT PLACE BECAUSE WE WANT TO PLACE WITH PEOPLE WHO WILL REALLY GIVE THEM A TRY.

1. If you saw them in the supermarket or fish shop, how much would you expect them to cost for a 4-5 oz. packet like this?

2. a) If they cost 18p a packet would you (READ OUT AND CIRCLE)

- |  |   |
|--|---|
| Definitely try them for the family     | 1 |
| Probably try them for the family       | 2 |
| Probably not try them for the family   | 3 |
| Definitely not try them for the family | 4 |

2. continued...

11.

b) Would you buy them for visitors (CIRCLE)

Yes, probably 5

Probably not, no 6

3. a) At 18p a packet would you buy them (READ OUT AND CIRCLE)

Once a week 1

Once a fortnight 2

Once a month 3

Only occasionally 4

Never 5 (go to Q.4)

b) How many packets would you buy each time? (CIRCLE)

One 6

Two 7

Three 8

Four 9

Five 0

Six X

Over six V

4. FILL IN FROM PANEL DATA (CIRCLE)

Age:	Under 25	1	Social Class	AB	5
	25-34	2		C1	6
	35-44	3		C2	7
	45-55	4		DE	8

Name

Tel. No.

Address

Recall Day

Interviewer

EXPLAIN CALL BACK QUESTIONNAIRE AND HOW TO FILL IT IN.

ALSO EXPLAIN THAT we want honest opinions to help develop appropriate fish dishes and that if they do not like the mussels they should say so. They will still be on the panel no matter what they say, it is no use pretending they are going to like them if they really don't because no one else will like them. To be helpful they must be honest.

BREADED MUSSELS

CALL BACK QUESTIONNAIRE

12.

5. What did you and your family think of the Mussels overall? (CIRCLE NUMBER)

Excellent	1
Very good	2
Quite good	3
Only fair	4
Not very good	5
Poor	6

6. Did you and the family think the TASTE of the mussels was (CIRCLE NUMBER)

Too strong	1
Just right	2
Not strong enough	3

ANY COMMENTS?

7. When you ate them did you think the texture was (CIRCLE NUMBER)

Too firm	1
Just right	2
Too soft	3

ANY COMMENTS?

8. a) Was the breadcrumb coating ...

Too thick	1
Just right	2
Too thin	3

- b) Did the breadcrumb coating ...

Stay on the mussels	4
or come away in cooking	5

- c) Was the colour of the mussels and breadcrumbs ...

Too dull when cooked	6
Just right	7
Too bright when cooked	8

- d) Did the mussels ...

Break up in cooking	9
Stay whole	0

9. a) Would you like the mussels to be ...
- |                          |   |
|--------------------------|---|
| Larger and fewer per oz. | 1 |
| Just as they were        | 2 |
| Smaller and more per oz. | 3 |
- b) How would you serve them to the family ... with
- |                       |   |
|-----------------------|---|
| Chips                 | 4 |
| Vegetables            | 5 |
| Salad                 | 6 |
| Mixed fried fish dish | 7 |
10. a) At 18p a 4 oz. carton, do you consider them to be ...
- |                            |   |
|----------------------------|---|
| Very good value for money  | 1 |
| Quite good value for money | 2 |
| Only fair                  | 3 |
| Not very good value        | 4 |
| Poor value                 | 5 |
- b) Now that you have tried them, would you, thinking of the family
- |                         |   |
|-------------------------|---|
| Definitely buy them     | 6 |
| Probably buy them       | 7 |
| Probably not buy them   | 8 |
| Definitely not buy them | 9 |
- c) And would you buy them for visitors?
- |              |   |
|--------------|---|
| Probably yes | 0 |
| Probably not | X |
11. How often do you think you would buy them at 18p per packet?
- |                  |   |
|------------------|---|
| Once a week      | 1 |
| Once a fortnight | 2 |
| Once a month     | 3 |
| Less often       | 4 |
| Never            | 5 |
12. How many packets would you buy at a time?
- |   |   |   |   |   |   |   |   |   |     |
|---|---|---|---|---|---|---|---|---|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10+ |
|---|---|---|---|---|---|---|---|---|-----|
13. What did you like about them?

14. How could they be improved?

15. When would you use them?

16. If you were out, would you and/or the family buy them ...

In fish and chip shops	1
In pubs	2
In cafes	3
In restaurants	4
Other	Y
Nowhere	X



**COSTING:**

David Elliott & Associates have obtained quotations for the major catering study from three research companies; Research Bureau Limited, National Opinion Polls/MORI and an independent consultancy, The Research Manager.

The WFA/Severnside R & D facility have provided the cost of product.

The three research companies quotations, based on the questionnaire format and method outlined previously were as follows:

NOP/MORI:	40-50 interviews at all levels of the catering trade at a total cost of	£625.00
	(cost per interview approx: £14.00)	
RBL:	50 interviews at all levels of the catering trade at a total cost of	£675.00
	(cost per interview £13.50)	
RESEARCH MANAGER:	80 independent caterers of all classes	£550.00
	15-20 chain catering buyers at	£170.00
	(cost per interview approx: £7.20)	

The written proposals from all 3 companies are appended.

It will be seen that NOP are suggesting a sample size which is in our opinion too small to provide sufficiently detailed breakdowns, and they underestimate the problems of getting reactions from chain caterers. They are also proposing only 2 area splits. Their approach is product rather than market orientated.

RBL have also taken no note of the separate and important chain catering market in making their proposals. They do however take a marketing approach. They also propose only two centres for sampling, and when the cost of a chain caterer enquiry is added to their quotation, it is seen to be the most expensive of the three.

The Research Manager, who developed the questionnaires with David Elliott & Associates in the light of the White Fish Authority's requirements, base their costs on fieldwork by Mass Observation.

Both on cost per interview and other criteria, which include 4 sampling areas for the catering test, the Research Manager's proposal is more attractive, and we recommend it.

A NOTE ON MARKET TESTING:

After discussion with the White Fish Authority and Severnside, it has been decided that when the catering and consumer acceptance tests are under way, plans should be drawn up for in-store testing, in branded packs, of breaded mussels.

However, it is recognised that to achieve a reasonable facsimile of in-store selling conditions more than one item has to be offered.

The WFA/Severnside team are at present developing a considerable range of minor shellfish lines, including a seafood cocktail, curry and fish pie fillings among others. Clearly it would be wasteful as well as impracticable to set up an in-store test for one line; to include some other lines developed in the R & D unit would be worthwhile and practicable.

The proposal in outline is to test, say, 3 new products including breaded mussels in a total brand context alongside IQF cockles and mussel meats in consumer packaging. The White Fish Authority's considerable contacts with such chain retail outlets as MacFish would be employed to obtain permission to set up a small freezer in, say, 10 test stores in total. Permission would be sought to audit sales (a similar operation to the WFA's Fishchips test). A reasonable quantity of leaflets giving recipe and usage suggestions would be available at point of sale.

APPENDIX III

A STUDY IN TO THE ACCEPTANCE OF  
BREADED MUSSELS  
BY CATERERS & HOUSEWIVES

on behalf of the  
WHITE FISH AUTHORITY &  
SEVERNSIDE FOODS LIMITED

prepared by  
David Ellicott & Associates  
1&2 Berners Street,  
London W1P 3AG  
01-580 8210

September 1972

The detailed report prepared is available on request.

SUMMARY OF RESULTS

## HOUSEWIFE TEST:

- i 161 housewives were approached in order to achieve 100 respondents; a rather higher than usual figure.
- ii Their price expectation, median 18-19 p, was very close to the price selected for the test: 18 p for 4 oz.
- iii After test, 47% thought them still quite good value, 53% at 18 p. Younger housewives were more satisfied on price.
- iv Breaded Mussels are not a family dish; rather an adult food. They were not envisaged for serving to visitors.
- v They were mainly a snack/light evening meal/supper dish, served with chips (58%) and salad (54%) primarily (or of course both). With vegetables 13%. There was a class difference with the ADCIs less favouring chips.
- vi Asked where they would expect they might eat Breaded Mussels outside the home, restaurants and pubs accounted for almost half the responses.
- vii A 4 oz and an 8 oz pack size would be needed in the consumer market.
- viii The initial (pre-test) reaction to the idea was 'quite good' in the greater number of cases, rather than 'excellent' or 'very good'. This suggests a minority product.
- ix The product disappointed a substantial number of 'quite good' respondents, leading to maintained enthusiasm among the most enthusiastic and an increase in the unenthusiastic.
- x Examined in terms of those initial enthusiasts who dropped away, it would appear that the product failed to live up to expectations. (This may be a fault in the expectation as much as in the product).
- xi "Buying intention" fell similarly. "Intended frequency" suggests that around one-sixth of housewives might purchase reasonably regularly: this is in line with known experience/frequency of purchase of mussels in vinegar and suggests the same educational vacuum.

- xii The product likes and dislikes overall were not too discouraging: again, it appears to be mussels per se rather than the product as presented which predominantly influences reactions. However, some fairly strong and explicit dislikes call for product improvements.
- xiii The principal dislike is the coating which is considered to be much too thick. The vinegar flavour is controversial.
- xiv More, smaller mussels are called for.
- xv On balance, the product is reasonably well regarded by a minority who will remain a minority.

#### CATERING TEST:

- i 105 contacts were made to achieve 75 participants: a further 16 dropped out between receiving the product and re-call.
- ii The quotas were well maintained in percentage terms.
- iii 95% of respondents served scampi.
- iv The rating of the 'idea' again exceeded the rating after test. The major fall back was in the more expensive outlets, who were clearly unfavourably disposed to the product. Also, the unenthusiastic remained so.
- v The class of outlet has a marked effect on most scales. Fish and Chip shops, and Pubs, were the least committal before hand (and the most willing to 'give it time' after).
- vi The most ready acceptance was in cheaper licensed restaurants and cafes: pubs were rather divided.
- vii Sales expectations were low, as was actual offtake (56% used only one 5 lb bag or less). 'Intention to serve' is of course related to the outlet's appreciation of the sales achieved and their pre- and post- rating of the product. It is however interesting to note that outlets expressing an 'intention to serve' see it as a daily or frequent menu item: there is very little 'occasionally'!
- viii Looked at in terms of 'intention', pubs emerge as the biggest single prospect.

- ix Menu positioning naturally varied. In better restaurants it was seen as a starter. Pubs saw it as a snack but shifted towards a pub meal. Cheap restaurants saw it as a possible main dish. Hotel restaurants relegated it to the bar. They were generally too filling as a starter, but this relates to the product improvements that must be made.
- x Pubs saw it as suitable for pubs. Almost all other classes of outlet thought it even more suitable for some one other than themselves.
- xi The major product problem was the coating and the vinegar flavour raised only one favourable comment.
- xii Most outlets agreed on the educational need. Few outlets saw much customer interest despite the menu cards and individual promotion.
- xiii 46% of all outlets thought they "might catch on". 19% even thought they had potential equal to scampi. "Breaded Mussels" was thought to be an unfortunate name; since this was not the description used (it was 'Fried Mussels in Breadcrumbs') the problem may reside in the mere mention of mussels.
- xiv As a starter, they were served with lemon and tartare sauce, sometimes with lettuce/cress. As a pub snack with chips and tartare sauce. As a main course with chips and vegetables.
- xv Pub prices were around 30p a portion. It was seen as cheaper than scampi.
- xvi Expected usage was not high. Many outlets pointed to the need for longer trial than is practicable or affordable in this type of test.
- xvii Most outlets expected to buy direct from manufacturer or freezer centre. Expensive outlets favoured the frozen food wholesaler.

## SOME CONSIDERATIONS &amp; INDICATIONS FOR FUTURE ACTION

1. The three research studies reported in these pages show that the market for Cockles and Mussels is confined to a small minority. It is clear that it will not be easy to increase dramatically either numbers of consumers or their rate of consumption; nor would it be economic to attempt to do so. Nevertheless, the market for mussels is currently worth of the order of £2,000,000, and though the core of the market is numerically small, it is not one to ignore or despair of. The figures show that there are many more "accepters" than purchasers, and the basic problem is to extend their usage through an acceptable product or products that are inherently appealing, despite what is measurably a great apathy to mussels. There is little likelihood of converting the prejudiced.
2. The Breaded Mussels tests both illustrate the degree of prejudice (measured as refusals to participate), and the degree of apathy; but on the other hand, that there is a reasonable level of acceptance amongst a small potential. If one were considering jam or baked beans, obviously this level of potential would be quite unacceptable; but the shellfish market was never large and it would be unreasonable to expect wholesale conversion to mussels simply from dipping them in batter.
3. It is also apparent that the product can be improved. A detailed appraisal of indicated improvements has been sent to the test kitchen for development work. It must therefore be said that the results of the test represent a minimum situation, provided that careful targetting selects the major potential and the product is adjusted to their needs.
4. The housewife acceptance was relatively uncritical, but as pointed out in the commentary, they have few 'normal' criteria by which to judge Breaded Mussels. Nor is it easy to imagine the housewife taking to mussels without strong promotional assistance, and in terms of marketing expenditure, the most viable market appears to be in minor catering, particularly in pubs and cheaper licensed restaurants. The test product was most successful in these outlets.
5. How many pub-goers eat mussels now? It is suggested by the N.O.P. study that less than one-third of 3% are in any way regular consumers. Despite this, the pub occasion and style of catering is ideally suited to the breaded/battered type of product. The problem to overcome is not that of product so much as of prejudice: if a minority food is presented in a mass context, however inherently suitable is that context logically or potentially, it will fail. The same applies to consumer retail outlets, and to cafes or to fish and chip shops.



- 6. The alternative to heavy promotion at unaffordable levels appears to be to overcome prejudice by education, association with very acceptable foods, and experience. With this in mind, it is clear that prepared foods containing a reasonable proportion of mussels (and cockles) alongside scampi, prawns, white fish etc. are much more likely to succeed than dishes labelled mussels and cockles. It can be further argued that prepared foods containing a proportion of minced (and thus unidentifiable) mussels can increase usage considerably, although it cannot be held that this is in anyway improving the solo potential of mussels.
  
- 7. David Elliott & Associates therefore express their own conviction that the immediate indicated action is to produce mussel (and cockle) prepared recipe foods that associate mussels with other, favoured, shellfish and fish rather than attempt the immensely costly educational task of making minor shellfish per se acceptable to a wide public. By increasing the UK industry's sales in this way, promotional monies may perhaps be liberated for the educational task, which would then be, at least in part, self-financing.
  
- 8. The WFA/Severnside development facility have already produced a breaded sea-food platter recipe of, on judgement, great potential; it employs a reasonable proportion of mussels and cockles in a satisfactory and appealing way. We recommend that WFA/Severnside press ahead with this, for which the present tests appear to provide a complete specification of desirable characteristics and necessary improvements to the coating.
  
- 9. The indicated needs are
  - i) a lighter batter
  - ii) an alternative (Guinness) batter or 'bubbly' batter.

These should be applied both to mussels and the mixed seafood platter.

- 10. We believe that these 4 recipes should be then tested for public acceptance by both men and women who might use pubs. The preferred test products should then be test-marketed in attractive packs and with literature through pub outlets and freezer centres and caterer and public attitudes monitored; the test market situation seems essential for long-usage measures. This we feel should take the place of the planned expenditure on research with chain head offices, and the results would provide sales ammunition for an approach to these outlets which appear to be next in line of potential after pubs.

Housewives with freezers would have the opportunity to buy through the freezer centres, and the offtake in these outlets should be monitored.

11. If, as seems on judgement likely, the seafood platter is preferred to the mussels recipes, then a way has been found of introducing at least a proportion of cockles and mussels to a wider public. And if the dish is seen to prove its potential, it will be relatively much easier for a solo mussels recipe to take its place in a range of products alongside the platter. Further recipes at this stage should include, but not consist solely of, cockles and mussels.
12. In summary, we believe that the WFA should develop, and Severnside put quickly in to market tests (having first and always carried out product tests to ensure acceptability)
  - i Seafood platter, backed by
  - ii breaded mussels, together with
  - iii Seafood cocktail, and
  - iv fish pie containing mussels and possibly cockles

With a prime target market of snack caterers (particularly pubs and cheaper restaurants) and distributed through freezer centres and cash and carry. Freezer centres will allow the products to be available to household consumption as well as catering.

APPENDIX IV

REPORT ON HALL TESTS  
of  
TWO SEAFOOD PLATTERS, IN BATTER & CRUMB  
and  
TWO IMPROVED MUSSELS PRODUCTS, IN BATTER & CRUMB

prepared for  
THE WHITE FISH AUTHORITY  
and  
SEVERNSIDE FOODS LIMITED

by  
David Elliott & Associates  
1 & 2 Berners Street  
London W.1.

January 1973

The detailed report is available on request.

**OBJECTIVES OF THE STUDY:**

- i to establish the acceptability of a mixed seafood platter to fish eaters
- ii to establish which of two coatings is preferred, both for a seafood platter and mussels
- iii to rate the acceptance of mussels and mixed seafood platter in the preferred coating comparatively.

**METHOD:**

The products were hall-tested over a period of 3 days during November/December 1972 in Bristol. Women were selected on a quota on the basis of their having served fish in the home any time in the past 2 months; men were selected on the criteria of their having eaten a meal/snack in a pub at any time in the past two months, and fish in the home.

Bristol was chosen on the grounds of administrative convenience, and is assumed to be in no way atypical.

The product was individually deep-fried for respondents. In order to facilitate the even flow of respondents and allow for unhurried questioning a team of 6 interviewers and a supervisor was used. Severnside provided their Home Economist to cook the test products to ensure their correct presentation.

## QUOTA:

The quota was set as follows; figures in brackets were the sample achieved

	Men		Women	
	(100)	(103)	(100)	(97)
Under 35	50	(58)	50	(50)
35-54	50	(45)	50	(47)
ABC <sub>1</sub>	50	(56)	50	(54)
C <sub>2</sub> DE	50	(47)	50	(43)

The order of product trial was rotated for each interview. The sample rotated was obtained as follows:

	Batter first	Breadcrumb first
Total Male	53	50
Total Female	47	50
Total ABC <sub>1</sub>	57	53
Total C <sub>2</sub> DE	43	47

## SUMMARY OF RESULTS

## PART ONE: THE IDEA OF MIXED SEAFOODS IN BATTER AND BREADCRUMB COATINGS

1. More than half rated the concept of fried mixed seafood excellent or very good: another one-third thought it quite good.
2. Younger women were the more enthusiastic of all groupings.
3. There is little class bias.
4. By comparison, less than one-fifth of respondents rated the idea of mussels in batter or breadcrumbs excellent or very good.
5. Although most, if not all, of those rating the mussels concept highly also rated the platter concept highly, by no means did it necessarily work the other way. A high concept rating for the platter did not automatically result in a high rating of mussels.
6. In the actual test, after trial, the platter was preferred in the ratio of 5:1.

## PART TWO: SEAFOOD PLATTER IN BATTER AND CRUMB - PRODUCT RATING

7. After trial, 47% preferred the battered coating and 51% the breaded coating, an insignificant margin.
8. By comparison with their initial rating of the idea, the products were equally accepted.
9. A high degree of 'first taste bias' underlines the extremely close result.
10. Nor does a study of the expectations and judgement of the individual coatings by those preferring them show any internal evidence of inherently significantly greater acceptance for one or other version. This, together with the perfect 'first taste bias', argues against marketing two versions, since the market would tend to split equally and reduce the potential for each by half.

11. There is a marginal age difference in initial acceptance, immediately after tasting. The battered product had a slight edge with younger respondents, the crumbed product by a slim margin a slightly older appeal. The differences are extremely small.
12. Although the fish content of the mixes was not quite identical, the coatings were of course the most apparent difference: three questions probed the difference in some detail.
13. In thickness, the batter product was discernably less acceptable than the breadcrumb.
- X 14. In colour, the batter was preferred. The breadcrumbs were (again) too dark, as in the in-home mussels test.
15. In flavour (that is the coating flavour specifically; the fish flavour is explored elsewhere) the breadcrumb coating was slightly preferred.
16. As stated above (7) the overall preference between the coatings was only marginally in favour of the breadcrumbing. Women in fact slightly leaned towards the batter, men to the crumb. In class terms, the overall preference for breadcrumbing in the total was accounted for by a rather confusing grouping of preferences among young ABC<sub>1</sub>s and older C<sub>2</sub>DEs.
- X 17. The texture of the mixed fish under the coating was distinctly better in the battered product than the crumbed, which was rated 'too chewy'.
18. The fish flavour or fishiness relative to coating was broadly approved equally for both products, and appears to be most acceptable to the greatest number.
19. Open ended 'principal likes' comments showed the products very similarly rated in almost all characteristics, and reveals for the first time that the perceived 'greasiness/oiliness' of the batter coating is the principal factor in according preferences to the breaded coating. But batter scores over breading in crispness and melt-in-the-mouth qualities.
20. In the open ended questions, only half the respondents found anything to dislike: the most considerable again being the thickness of the batter, followed by the chewiness of the crumbed fish, and overall rather too strong a flavour in the battered platter.

21. Of individual ingredients, mussels attracted the greatest number of dislikes, but only from 8% of respondents, followed by shellfish (unqualified). They do not seem to have been an outstanding deterrent.
22. Pricing perception was disappointingly low, but respondents experienced some difficulty in visualising the 6 oz. portion pack they were asked to price, despite help. It is possible that there was some conflict between their conception of 6 oz. and the optimum pack size or portion size. About 25-30% had a realistic view of the expected price: the median was 20p.
23. Frequency of purchasing intention, a benchmark measurement, indicated a high degree of enthusiasm at one pole and a high degree of apathy at the other: a perfect U-curve, postulating a fairly small market of heavy users, rather than a broad mass acceptance.

#### PART THREE: MUSSELS IN BATTER AND BREADCRUMBS

24. 34% of respondents refused the test (compared with 37% in the recent in-home tests). Among those who would try, the products were rated close to or even better than expectations, which were low.
25. The breaded product out-rated the battered by a significant margin, although a greater number thought the battered mussels better than expected.
26. The actual product ratings were similar to the in-home test, but the concept ratings initially were lower. Thus there was a greater degree of shift than in the in-home test which probably reflects acceptance of the product improvements made.
27. In line with known consumption, men were slightly more enthusiastic, particularly younger ABC<sub>1</sub> males.
28. The flavour of the coating dominates the flavour of the mussels in the view of a substantial number.
29. Nevertheless, chewiness is again the greatest single dislike, and suggests that a really satisfactory product has yet to be found. No doubt a better mussel would improve the product ratings all round.



## CONCLUSIONS

David Elliott & Associates recommend these conclusions to the White Fish Authority and Severnside Foods Limited for further discussion before proceeding to the second part of the test marketing phase outlined in proposals prepared in November 1972, and broadly agreed in principle: The Study, by using the previous in-home breaded mussels test as a benchmark and relating their acceptance to the acceptance of the seafood platter concept, shows clearly that the mixed seafood is considerably, even dramatically, more acceptable than the breaded mussels. Although the 'frequency of purchase' indicator suggests a hard-core of enthusiasts rather than a broad-scale moderate level of acceptance, those enthusiasts are drawn from a wide spectrum of age, class and both sexes rather than an inaccessible minority. The products both stand a reasonable chance in the market.

However, so even is the balance between the battered and breaded coatings that only one should be ultimately marketed (which does not preclude a comparative test in separate distribution).

If for practical reasons a choice must be made at this stage, it will not be entirely easy, but on balance appears to favour the crumbed product. Batter coating has a certain 'modernity' in the frozen food market and is popular with the trade at present. On the other hand, Birds Eye and Findus appear to have had great initial success with battered fish fingers followed by a recovery in the breadcrumb product.

The only significant dislike of the battered platter was thickness of its coating and this is remediable. The battered fish was preferred. Because the mixtures were not quite identical (e.g. whitebait in the battered version) and the battered version may have been marginally preferable in ingredients, it is hard to be specific about the significance of any possible changes, other than the thickness of the coating.

There is one limiting factor with the battered product: it was tested under ideal cooking conditions and while deep-frying may not be technically essential it is highly desirable. Deep-frying households are limited in number and on judgement down-scale socially and older (ABC<sub>1</sub>s eat their deep-fried food out more frequently: fish and chip shops have some down-market associations). 16% of respondents in the test actually expressed a dislike of deep-frying/ deep-fried foods.

It may be the richness (or greasiness to the critics) of the battered product that gave a lower purchase frequency intention in total to the battered product (a pattern repeated amongst those preferring the battered product compared with those preferring the breaded).

Neither those preferring A or B is more realistic than the other group in the matter of price.

In production terms, the crumbed product is favoured. Marketing cost favours a single product. The breaded product is marginally the better accepted. We therefore conclude that it will be best to proceed to market test with the breadcrumb product.

If this is so decided, the product requires improvements. The crumb is too dark, at least when deep-fried. It must be pan (shallow) fried and compared with a deep fried sample of the same coloured crumb. If the shallow fried sample is paler it may suffice; or the crumb must be changed.

The reasons why the breadcrumb mixture was significantly less preferred, mainly for 'chewiness', must be sought and corrected. There was clearly a detectable difference.

While this is being done, the test plan should be prepared for early execution, and optimum pack size and packaging further investigated.

#### Mussels:

We believe that this test has shown with finality that mussels can be used in mixtures without arousing a deterrent degree of rejection, but that on their own they bring insuperable short-term problems. It would seem that a considerable measure of the problem lies in the processing of a pre-cooked, over-large mussel, quick freezing it, coating it and re-cooking it, and there is a strong suggestion that a better product will produce better acceptance despite the overall reaction that the word 'mussel' provokes.

On these grounds, because success must rest on greater awareness and acceptance of mussels (excluding shell mussels from this opinion) and from the very similar reactions in two tests, we believe that the crumbed fried mussel will not at this stage become a viable product on its own; though it may very well acquire later acceptance as part of a range under a recognised and accepted brand name.

APPENDIX V

**TEST MARKET OUTLINE PLAN**  
**for the testing of**  
**MIXED SEAFOOD PLATTER IN BREADCRUMBS**

prepared for  
**THE WHITE FISH AUTHORITY**  
and  
**SEVERNSIDE FOODS LIMITED**

by  
**David Elliott & Associates**  
**1 & 2 Berners Street**  
**London W.1.**

**January 1973**

## 1. Product and Background:

A series of hall-tests in Bristol of two versions of a mixed seafood platter, and of two versions of fried mussels, has shown that both the crumbed and battered products are of broadly equal acceptance; and that they are both preferred about 5:1 over breaded mussels.

It is considered that the mixed platters show a consumer acceptance that justifies their immediate test-marketing to establish the level of sale that can be achieved in the light of established acceptability of product. This is of course dependent on distribution, pricing, packaging, presentation, competition etc. as well as on product.

The overall closeness of the results of the two versions of the platter and a strong internal consistency of the findings in respect of individual factors such as the filling, the expected price etc. suggest that a choice must be made; otherwise, the availability of an alternative will severely hamper the chances of definitive success of the other and reduce the rate of sale of both.

There are certain manufacturing considerations that point to the breadcrumb product, and in terms of consumer preference it is possible that the re-purchase rate will be greater with the crumbed product. It is therefore considered that this is the version that should be marketed.

David Elliott & Associates prepared, on behalf of the White Fish Authority and Severnside Foods Limited in November 1972, a test market plan in outline; part of a programme of which the recently completed hall tests are also part. This memorandum brings up to date the plan and costings which have been further investigated.

**2. Market Test Objectives:**

The test design will be capable of assessing the market potential for seafood platter

- a) in appropriate catering outlets
- b) in freezer centres - catering and retail.

On judgement, and in the light of similar indications from product tests on breaded mussels in catering outlets of all types, the appropriate catering markets are pubs and smaller licensed restaurants. The distribution method appropriate to these outlets are, in practical and cost-effective terms:

- pubs: direct and freezer centres
- licensed restaurants: freezer centres.

The freezer centres, of course, represent the further potential of 400,000 freezer homes and a considerable number of refrigerator household purchasers.

It is therefore necessary, to meet the test objectives, to set up

- a) test distribution (say 10) pub outlets serving hot bar food
- b) broad-scale freezer centre distribution.

It is further essential that this distribution can be monitored in terms of sales statistics.

**3. Outline Test Plan:**

1) The test design that is both immediately feasible and meets the objectives, and can be monitored is

a) Severnside's Midlands and S. Wales frozen food operation, which would be responsible for selling to

i) a selected test pub outlets offering hot food

ii) independent freezer centres in their area, plus,

iii) the Bejam freezer centres in their area which they serve already

b) a negotiated control panel of Bejam stores outside the Severnside Midlands and S. Wales area.

ii) Since the outline proposal was prepared in November 1972, Severnside and David Elliott & Associates have secured Bejam's agreement to co-operate in the programme: they have also undertaken to supply David Elliott & Associates with relevant sales figures during the period of the test.

iii) Severnside are calling on 50 + freezer centres and 2 cash and carry outlets in their area, which provides a very satisfactory test universe. They are prepared to add a test panel of 10 pub outlets to complete the test.

iv) The chosen test period is 26 weeks. During this period the product will be offered free to Bejam (only) in return for their co-operation with monitoring and statistics: otherwise the test will be under normal commercial conditions in the market place.

v) Point of sale material will be prepared.

#### 4. Packaging and Pricing:

Research has shown that consumers have a price perception somewhat on the low side, but a) that there are a sufficient number of realists - about one-quarter to one-third to justify the expectation that others will not be unduly disturbed by price, and b) that the price point will be less than scampi (particularly in relation to pub meals) but not so low as to be unacceptable.

It is thought that the publican will be able to obtain 37½p without difficulties for a 6 oz. serving + chips. The optimum consumer price would be around 35-37½p for a 10 oz. pack.

The point is of importance because it is likely that a 10 oz. pack could be devised using existing RWP moulds for ½ litre ice cream packaging with clip over lid, at a therefore much more affordable cost than other packs inferior in appearance but requiring new and costly moulds.

So far as catering outlets, and possibly some freezer centres are concerned, a 3 lb. bag giving 6-8 servings appears to be a realistic aim, and this is possible with a gusseted heavy duty polybag, heat sealed at the head, which can be labelled with the same size label (apart from weight information) as the ½ litre rigid pack.

The realistic product retail costing is in the region of 60p a lb. A 10 oz. pack would therefore cost the consumer approx. 37½p which is precisely the price suggested as acceptable to consumer who are fairly/very interested in the product.

The two recommended pack sizes are therefore 10 oz. and 3 lbs; the smaller pack is thus possible in standard packaging from RWP without either mould charges or special machinery (other than any necessary labelling equipment) being required.

**5. Packaging Design:**

A design has been prepared by David Elliott & Associates which is conceived in such a way that all the 4-colour work is common to both sizes and the only detail which alters, the weight, is on a separate working. A self-adhesive label can be applied equally to the snap lid closure of the retail pack and the suggested gusseted 3 lb. bag for the catering pack. In this way the same design, and virtually the same plates, can be employed for 2 sizes, at considerable saving.

**6. Point of Sale:**

The pack label design is such that the same 4-colour artwork could be used as a 'tent' card with a magnet base for freezer centres (to sit on the freezer cabinet or as a counter card for the pub. Therefore the label design can again be used to provide colourful and effective point of sale material without greatly increasing the cost of the test.



## 7. Estimated Rate of Sale:

The most important single objective of the test must be to establish rate of sale under normal commercial conditions; so far only the likely degree of acceptance amongst those trying the product is known.

Two measurable factors contribute to an estimate of this potential:

- i) the number of those rating the product highly excellent/very good
- ii) their projected rate of purchase.

There were 56% of respondents who rated the product excellent/very good. Their tendency was to estimate their rate of purchase high.

56% would not be a particularly high figure for a mundane product, but may well be an excellent result - certainly it is a very satisfactory result - for a 'new' fish product. Not surprisingly, the rate of sale indications are for a fairly limited, relatively high usage, market.

On judgement, a realistic expectation of purchase would be 25% of triers x 2 repurchases p.a. This leaves the question of initial trial rate. Trial is a factor which is influenced by presentation, merchandising, point of sale and advertising.

The test programme does not call for advertising which might in practical terms prove unaffordable: therefore, it is wise to project rates of trial below the product's ultimate potential but in line with the likely practical situation in the market place.

On these grounds, it is assumed that although more than half of respondents were most enthusiastic about the product having tried, not more than one tenth of these might actually try without the artificial situation created by a product test.

The maximum national universe is therefore assumed to be a potential 5% of households x 3 purchases p.a. = 750,000 households x 3 = 2,250,000 packs p.a.

This national potential must be reduced by a) the geographical area covered by the test and b) the proportion of frozen food sales in the area covered by the distribution involved. Thus, the whole potential in the area is of the approximate magnitude of 2,250,000 packs x 12% = 270,000 ÷ the proportion of frozen foods which are sold through freezer centres, say 10% = 27,000 ÷ 2 = 13,400 in 6 months.

Approximately 1,000 dozens x 10 oz. packs in 26 weeks represents a weekly rate of sale of 20.76 packs per week per outlet. (27,000 ÷ 50 ÷ 26 = 20.76). By inspection, 4 packs per day per outlet is not a very unlikely figure to achieve, even without major advertising support.

The rate of 21 packs per week per outlet is therefore suggested as a feasible planning base.

**8. Evaluation:**

The test, to be realistic, must be monitored. Severnside can provide figures by pack size for the outlets they cover (together with a record of outlets approached who do not stock so that a total picture can be maintained of purchase and repurchase over 26 weeks).

Bejam have undertaken to supply figures by size and location for their outlets.

The two sets of figures must be processed and analysed, and a small allowance has been made in the costings.



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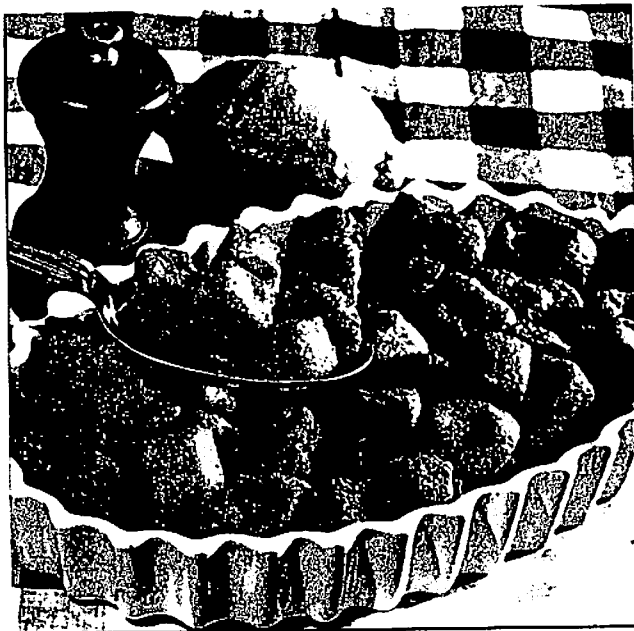


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