

**Operation of the Advisory
Inspection Service
and Analysis of Results
June 1983 - March 1984**

**Technical Report No.244
April 1984**

SEA FISH INDUSTRY AUTHORITY
Industrial Development Unit

OPERATION OF THE ADVISORY INSPECTION SERVICE
AND ANALYSIS OF RESULTS
JUNE 1983 - MARCH 1984

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D. Harrison

OPERATION OF THE ADVISORY/INSPECTION SERVICE
AND ANALYSIS OF RESULTS
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SUMMARY

The Advisory/Inspection Service of the Sea Fish Industry Authority has now completed its sixth successive year of operation under contract to the Department of Health and Social Security.

A total of 7 visits were made, covering all 14 hospital regions in England. In an attempt to make the service more cost effective, the team travelled on a Sunday and returned the following Saturday. In this way it was possible to cover two regions per 5 day sampling period.

A total of 479 samples were collected from 240 hospitals and assessed according to the criteria outlined in the WFA/Torry Purchase Specifications.

19 samples were found to be outside the recommended minimum quality standards. This represents a failure rate of 4.0% which is a vast improvement on the 10% failure rate of 1982/83, and is the best result in the 6 years that the AIS has been under contract to the D.H.S.S.

A seven day visit was made to Scotland (5 sampling days) where 51 samples were collected from 31 hospitals. Only 1 sample was found to be outside the specified limits. This represents a failure rate of only 2%, which again shows much improvement over the 8.3% failure rate recorded in the year 1982/83.

The Welsh Health Technical Services did not request a visit this year, but samples were submitted for assessment against an agreed fee.

Nine batches of fish were examined on behalf of the Northern Ireland Central Services Agency. Samples were collected from Humberside Airport following despatch from Belfast and fees levied according to the amount of SFIA staff time involved.

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1 INTRODUCTION

The Advisory/Inspection Service of the Sea Fish Industry Authority has now completed its sixth successive year of operation under contract to the Department of Health and Social Security. Estimates by the D.H.S.S. indicate that their annual expenditure on fish amounts to some £5 - 7.5 million.

All the hospital regions in England were visited and fish from selected hospitals examined. The fish quality is assessed against standards laid down in the WFA/Torry Purchase Specifications. These Specifications are currently under revision and will be reprinted this year.

A visit was also made to Scotland on behalf of the Scottish Home and Health Department, when two of the largest hospital regions were covered.

The Advisory/Inspection Service also examined samples in the Hull Laboratory on behalf of the Welsh Health Technical Services Organisation and the Northern Ireland Central Services Agency. Fees levied for samples examined in Hull were dependent upon quantities of fish, and SFIA staff time involved.

Fees paid were:

England	-	£18975	(inc. VAT at 15%)
Scotland	-	£ 3105	(inc. VAT at 15%)
Wales	-	£ 189.25	(inc. VAT at 15%)
Northern Ireland	-	£ 857.80	(inc. VAT at 15%)

TOTAL	-	£23127.05	(inc. VAT at 15%)

With the exception of the Welsh and Northern Ireland results, reports on the findings were submitted to the D.H.S.S. and the regional supplies officer. Each supplier was provided with a copy of the data concerning his particular fish. A copy was also sent to the Supplies Department of the West Midlands Regional Health Authority who liaised with the SFIA and the various regions to establish the 1983/84 programme of visits.

As the samples examined on behalf of Wales and Northern Ireland were submitted on the basis of tender applications, no outside agencies were provided with copies of the results.

RESULTS

TABLE 1
ADVISORY/INSPECTION SERVICE RESULTS
YEAR 1983/84

REPORT NO.	DATE	R.H.A.	HOSPITALS	SAMPLES	FAILURES	% FAILURES
6002	June 83	E. Anglia	13	36 (1)	0 (0)	0 (0)
6003	June 83	NE Thames	15	25 (14)	2 (1)	8.0 (7.1)
6007	Sept 83	S Western	15	34 (15)	0 (0)	0 (0)
6008	Sept 83	Wessex	7	16 (8)	0 (2)	0 (25)
6009	Oct 83	Trent	13	21 (20)	1 (0)	4.8 (0)
6010	Oct 83	N Western	22	40 (6)	1 (0)	2.5 (0)
6012	Oct 83	SE Thames	17	34 (3)	2 (1)	5.9 (33.3)
6013	Oct 83	SW Thames	20	57 (12)	4 (1)	7.0 (8.3)
6017	Dec 83	Oxford	20	42 (8)	2 (0)	4.8 0
6018	Dec 83	NW Thames	13	31 (2)	1 (0)	3.2 0
6019	Jan 84	Northern	20	29 (20)	1 (1)	3.4 5.0
6020	Jan 84	Yorkshire	27	45 (10)	3 (0)	6.7 0
6021	Feb 84	W Midlands	14	21 (19)	1 (1)	4.8 5.3
6022	Feb 84	Mersey	24	48 (13)	1 (0)	2.1 0
TOTALS			240	479 (151)	19 (7)	4.0 4.6
<u>SCOTLAND</u>						
6004	June 83	Gtr Glasgow	14	23 (2)	1 (0)	4.3 (0)
6005	June 83	Lanarkshire/ Lothian/Forth Valley	17	28 (2)	0 (0)	0 (0)
TOTALS			31	51 (4)	1 (0)	2.0 (0)

N.B. Figures in brackets refer to samples assessed more than one week subsequent to delivery.

TABLE 2

OVERALL SAMPLE FAILURE RATE ON A REGIONAL BASIS

REGION	1983/84		% FAILURE RATE						
	No of Samples Assessed	No of Samples Out of Spec	83/84	82/83	81/82	80/81	79/80		
East Anglia	36(1)	0(0)	0 (0)	3.8 (23.1)	14.8 (16.9)	2.1	2.9		
S. Western	34(15)	0(0)	0 (0)	10.0 (5.0)	8.5 (11.8)	-	14.6		
Wessex	16(8)	0(2)	0 (25)	12.8 (0)	5.5 (7.3)	25.0	0		
Mersey	48(13)	1(0)	2.1 (0)	5.7 (0)	0 (1.8)	15.4	17.4		
N. Western	40(6)	1(0)	2.5 (0)	9.3 (33.3)	3.2 (2.7)	21.1	6.9		
N.W. Thames	31(2)	1(0)	3.2 (0)	8.9 (15.4)	0 (4.0)	7.3	6.5		
Northern	29(20)	1(1)	3.4 (5.0)	9.5 (16.0)	10.2 (5.1)	12.0	15.0		
Oxford	42(8)	2(0)	4.8 (0)	7.3 (11.1)	12.1 (14.1)	6.3	10.5		
Trent	21(20)	1(0)	4.8 (0)	16.0 (11.1)	3.2 (5.4)	6.0	12.1		
W. Midlands	21(19)	1(1)	4.8 (5.3)	11.5 (9.5)	3.7 (3.8)	16.1	13.6		
S.E. Thames	34(3)	2(1)	5.9 (33.3)	15.2 (21.4)	12.5 (15.2)	1.7	32.4		
Yorkshire	45(10)	3(0)	6.7 (0)	17.1 (17.6)	17.3 (18.3)	8.5	9.8		
S.W. Thames	57(12)	4(1)	7.0 (8.3)	0 (2.3)	4.3 (5.8)	5.7	1.5		
N.E. Thames	25(14)	2(1)	8.0 (7.1)	8.5 (14.3)	6.1 (5.9)	10.2	13.9		
	479(151)	19(7)	4.0 (4.6)	10.0 (12.0)	8.0 (9.1)	10.8	10.6		

N.B. Figure in brackets refer to samples assessed more than one week subsequent to delivery

TABLE 3c Continued/....

SUPPLIER	AIS YEAR	NO. OF SAMPLES ASSESSED	NO. OF SAMPLES OUT OF SPEC	% OUT OF SPEC	NO. OF REGIONS SUPPLIED	REGIONS SUPPLIED 1983/84
Wm Bennett	1983/84	1	0	*	1	Yorkshire
	1982/83	2	0	*	2	
	1981/82	2	0	*	2	
Blue Crest	1983/84	1	0	*	1	Northern
Country Fare	1983/84	1	0	*	1	Northern
Scotia	1983/84	1	0	*	1	Lanarkshire Lothian and Forth Valley
TOTALS	1983/84	67	4	6.0		
(Minor	1982/83	56	4	7.1		
Suppliers)	1981/82	46	3	6.5		
	1980/80	131	11	8.4		
	1979/80	61	5	8.2		
COMBINED	1983/83	530	20	3.8		
GROUPS	1982/83	850	81	9.5		
A,B & C	1981/82	758	61	8.0		
	1980/81	707	78	11.0		
	1979/80	499	46	9.2		

* Insufficient samples for significance

3. DISCUSSION OF RESULTS

The following comments are based on information gathered by the AIS during the 1983/84 contract period.

It must be stressed that these observations and any conclusions derived from them relate to samples collected at random from a large number of hospitals. They must therefore be regarded as an indication of the situation at a particular hospital at a specific point in time. The fact that samples are collected throughout the country however does provide a very good picture of the overall situation in the United Kingdom.

The number of samples assessed from each region varied and thus the smaller the sample size, the greater the effect, percentage wise, for each individual failure. Similarly, where a merchant is supplying a small number of samples, failures have a considerable effect in percentage terms.

3.1 Sample Failure Rate

The failure rate of samples assessed from the English regions in 1983/84 had fallen considerably from 10.0% to 4.0%. In Scotland the failure rate had also fallen from last year, the 1983/84 figure being 2.0% compared with 8.3% in 1982/83.

None of the regions had a failure rate greater than 10% compared with 5 in the 1982/83 year.

3.2 Regional Variation in Sample Failure Rate

Ten regions recorded failure rates of less than 5% and of these, three regions, East Anglia, South Western and Wessex did not register a single failure between them.

It is interesting to note that the failure rate for the N.E. Thames region at 8.0% was virtually the same as for the 1982/83 year when 8.5% of the samples assessed were outside the

specifications. The overall standard this year was so high however than an 8.0% failure rate relegated N.E. Thames to the foot of the table whereas in 1982/83 it was in fifth position.

The results from Scotland also showed a marked improvement with only one sample from a total of 51 being outside the specification - a failure rate of 2.0% compared with 8.3% in 1982/83.

3.3 Suppliers

These have been divided into three groups:-

- A. Those from whom more than 50 samples were assessed
- B. Those with between 10 and 50 samples assessed
- C. Those with less than 10 samples assessed

Because of the small number of samples obtained from suppliers in Group C, the percentage failure rate is not recorded, being of little value.

3.3.1 Major Suppliers (Group A)

All the major suppliers showed improvement over the 1982/83 figures. Youngs maintained its position at the top of the table with a failure rate of 2.3% compared to 3.6% in 1982/83.

The Lion Fishing Company has returned to the league of major suppliers under the name Boston Fleet Fish. This firm recorded the highest percentage of failures at 6.7%.

The overall failure rate for the group was 3.8% which compares with 8.3% in 1982/83.

3.3.2 Intermediate Suppliers (Group B)

Care should be taken when examining the results from suppliers in this section, as a difference of one failure can be significant when viewed on a percentage basis.

The return of Case to the role of intermediate supplier saw an improvement in performance with a zero failure rate compared to 13.0% in 1982/83.

J. Marrs' results were consistent with last years, with no failures recorded. McPhee and Chaldur also showed marked improvement, with no samples from either firm being outside the specification. This compares with a failure rate of 14.3% and 12.9% respectively in 1982/83.

Charles Naylor was again the worst performer in this group with a 20% failure rate (25% 1982/83).

3.3.3 Minor Suppliers (Group C9)

Insufficient samples were encountered from companies in this group for percentage failure rates to be meaningful. Four samples from 3 of the 16 firms were found to be outside the specifications.

4. GENERAL OBSERVATIONS

There has been a marked improvement in the quality of fish assessed compared to previous years. The failure rate of 4% is less than half that of the 1982/83 year and the lowest recorded figure in the 6 years that the DHSS/AIS contract has been operating.

Although this improvement is probably due to a number of factors, e.g. improved quality control in countries of origin for the frozen fish, much of the credit must rest with the catering staff themselves.

It has become obvious from visiting many hospitals that there is a growing tendency to keep freezer stocks to a minimum. In addition to the financial benefits in improving cash flow, this has the effect of reducing the risk of quality deterioration due to long term cold storage - often at too high a temperature. One anomaly here however is the number of occasions when kippers

or smoked fish were discovered which had obviously been in the cold store for many months. Whilst it is recognised that a back-up supply of frozen fish may provide a useful meal in an emergency, the storage life of kippers is shorter than that of white fish and any fish stored for either emergency or future use, should be rotated and used on a regular basis.

Again cases were discovered where whiting had been substituted for cod or haddock. As has been pointed out in previous years, whiting is often cheaper than cod or haddock and invoices should be checked carefully to ensure that the hospital is not being overcharged. In some cases, e.g. where short supply means that the species ordered is not available, then substitution of whiting is acceptable. Where this happens, the hospitals must be informed and where applicable a price reduction made accordingly. The species delivered should be clearly labelled and any description of whiting as "baby cod" or "baby haddock" is in direct contravention of the 1980 Labelling Regulations.

Caterers should be discouraged from buying outside a contract. In one such case, a catering officer was found to be purchasing fish from a local firm at more than double the contract price. The sample examined, whilst within specifications was found to be of inferior quality to fish supplied, on contract, to other hospitals in the group. There is also less chance of recompense from small local traders than there is from a large contractor who is supplying his product against agreed specifications.

More hospitals were found to be using whiting (not always intentionally!!) but cod and haddock remain the mainstay of fish orders. It has been said by some caterers that some people find the darker colour of the flesh of coley somewhat "off putting". It should be remembered that this colour can be disguised and that nutritionally coley is just as good as cod or haddock. As coley is usually cheaper than cod or haddock, the financial benefits resulting from its utilisation can be considerable.

4.1 Operation of the AIS

In previous years the team had travelled to a region on a Monday, sampled fish on a Tuesday, Wednesday and Thursday and returned to their base in Hull on a Friday, i.e. 3 sampling days per visit. This year saw a change in the modus operandi in that a base was selected such that two regions per visit could be covered. The team travelled to the site on a Sunday, sampled and assessed fish Monday to Friday and returned to their base in Hull on the following Saturday, i.e. 5 sampling days per visit.

The selection of sites for the visits was obviously extremely important in terms of geographical location, and thanks must be expressed to the West Midlands Regional Health Authority and the various Regional Officers for their help in this respect. The utilisation of one base to cover two regions obviously increases the distances to be covered over a 5 day period and necessitated a slight reduction in the total number of hospitals visited.

The accuracy of delivery dates becomes of paramount importance under such circumstances.

It is worth pointing out that such delivery dates are intended to be used as a guide by the AIS team. Whereas every effort is made to visit a hospital on the day of fish delivery, with the number of hospitals involved and the distances to be covered, this is not always possible. It would be appreciated therefore if caterers could be made aware that they may be visited at any time during the week in which the AIS team is in the Region.

The letters of introduction requested at the commencement of the year have proved most useful, although some catering officers stated that they had no prior notification of our impending visit. Whilst no preparation is required of the samples to be

taken, it would help in our relationship with the catering officers if they were aware of the intentions of the AIS team to visit their premises and withdraw fish.

The provision of a contact name at the hospital has been shown to result in a smoother operation in siting the mobile laboratory and connection of services - once again thanks must be expressed to the West Midlands Regional Health Authority and the Regional Supplies Officers involved.

5. CONCLUSIONS FOR 1982/83

5.1 The decline in the failure rate is most encouraging with credit due to both hospitals and suppliers.

5.2 Hospitals are becoming more aware of the special attention that must be given to fish and the care taken is reflected in the lowest number of samples outside the specified limit for the past 6 years. There is no room for complacency however and efforts must be made to maintain or even improve on the high standards achieved in 1983/84.

5.3 The coverage of two regions per 5 day sampling period was achieved at the cost of a slight reduction in the number of hospitals visited. It is hoped that this in no way reduced the value of the Advisory/Inspection Service, as, where a hospital was noted as having specific problems every effort was made to ensure that such an establishment was visited.

5.4 Supplies officers may like to consider alternating the hospitals on the lists provided so that the same establishments are not visited every year and a greater regional coverage is achieved over a period of time.

5.5 Unless a hospital is experiencing problems, it is suggested that the geographical location of each establishment is taken into consideration when drawing up lists. It is better to collect a variety of samples from a large general hospital say,

than a restricted number from a 20 bed maternity unit "out in the sticks".

5.6 The provision of a letter of authority plus the name of a contact at the site for the mobile laboratory were seen to be of benefit to the AIS team, and it is requested that similar information is provided for the 1984/85 term.

5.7 Some catering officers claimed to be unaware of the proposed AIS visit and in a few isolated cases showed slight hostility at an "unannounced" visit. It would help therefore if catering officers were notified in writing by the supplies department when their hospital had been selected for inspection.

D. Harrison

TABLE 2

OVERALL SAMPLE FAILURE RATE ON A REGIONAL BASIS

REGION	1983/84		% FAILURE RATE						
	No of Samples Assessed	No of Samples Out of Spec	83/84	82/83	81/82	80/81	79/80		
East Anglia	36(1)	0(0)	0 (0)	3.8 (23.1)	14.8 (16.9)	2.1	2.9		
S. Western	34(15)	0(0)	0 (0)	10.0 (5.0)	8.5 (11.8)	-	14.6		
Wessex	16(8)	0(2)	0 (25)	12.8 (0)	5.5 (7.3)	25.0	0		
Mersey	48(13)	1(0)	2.1 (0)	5.7 (0)	0 (1.8)	15.4	17.4		
N. Western	40(6)	1(0)	2.5 (0)	9.3 (33.3)	3.2 (2.7)	21.1	6.9		
N.W. Thames	31(2)	1(0)	3.2 (0)	8.9 (15.4)	0 (4.0)	7.3	6.5		
Northern	29(20)	1(1)	3.4 (5.0)	9.5 (16.0)	10.2 (5.1)	12.0	15.0		
Oxford	42(8)	2(0)	4.8 (0)	7.3 (11.1)	12.1 (14.1)	6.3	10.5		
Trent	21(20)	1(0)	4.8 (0)	16.0 (11.1)	3.2 (5.4)	6.0	12.1		
W. Midlands	21(19)	1(1)	4.8 (5.3)	11.5 (9.5)	3.7 (3.8)	16.1	13.6		
S.E. Thames	34(3)	2(1)	5.9 (33.3)	15.2 (21.4)	12.5 (15.2)	1.7	32.4		
Yorkshire	45(10)	3(0)	6.7 (0)	17.1 (17.6)	17.3 (18.3)	8.5	9.8		
S.W. Thames	57(12)	4(1)	7.0 (8.3)	0 (2.3)	4.3 (5.8)	5.7	1.5		
N.E. Thames	25(14)	2(1)	8.0 (7.1)	8.5 (14.3)	6.1 (5.9)	10.2	13.9		
	479(151)	19(7)	4.0 (4.6)	10.0 (12.0)	8.0 (9.1)	10.8	10.6		

N.B. Figure in brackets refer to samples assessed more than one week subsequent to delivery

TABLE 3(a)

BREAKDOWN OF RESULTS - SUPPLIERS 1983/84

A. MAJOR SUPPLIERS (Over 50 samples from each supplier assessed 1983/84)

SUPPLIER	AIS YEAR	NO. OF SAMPLES ASSESSED	NO. OF SAMPLES OUT OF SPEC	% SAMPLES OUT OF SPEC	NO. OF REGIONS SUPPLIED	REGIONS SUPPLIED 1983/84
Youngs	1983/84	131	3	2.3	8	E. Anglia
	1982/83	195	7	3.6	8	N.E. Thames
	1981/82	113	6	5.3	4	S. Western
	1980/81	19	1	5.3	3	Trent
	1979/80	68	1	1.5	1	S.W. Thames Oxford Northern W. Midlands
Boston Fleet Fish (Lion)	1983/84	90	6	6.7	2	S.E. Thames
	1982/83	43	6	14.0	3	S.W. Thames
	1981/82	163	10	6.1	7	
	1980/81	120	10	8.3	4	
	1979/80	140	21	15.0	7	
Kiltie	1983/84	98	3	3.1	4	N. Western
	1982/83	69	7	10.1	3	N.W. Thames
	1981/82	65	1	1.5	3	W. Midlands
	1980/81	95	14	14.7	3	Mersey
	1979/80	21	3	14.3	3	
TOTALS (Major Suppliers)	1983/84	319	12	3.8		
	1982/83	527	44	8.3		
	1981/82	538	48	8.9		
	1980/81	379	37	9.8		
	1979/80	298	28	9.4		

TABLE 3(b)

B. INTERMEDIATE SUPPLIERS (Between 10 and 50 samples from each supplier assessed 1982/83)

SUPPLIER	AIS YEAR	NO. OF SAMPLES ASSESSED	NO. OF SAMPLES OUT OF SPEC	% OUT OF SPEC	NO. OF REGIONS SUPPLIED	REGIONS SUPPLIED
Case	1983/84	42	0	0	5	N.E. Thames
	1982/83	207	27	13.0	7	S. Western
	1981/82	23	1	4.3	2	Wessex
	1980/81	110	15	13.6	4	Oxford
	1979/80	22	0	0	2	W. Midlands
Ross	1983/84	28	1	3.6	3	Oxford
	1982/83	56	3	5.4	6	Yorkshire
	1981/82	116	13	11.2	5	Lanarkshire
	1980/81	105	10	9.5	6	Lothian &
	1979/80	41	0	0	4	Forth Valley
J. McPhee	1983/84	20	0	0	2	Greater
	1982/83	14	2	14.3	2	Glasgow
	1981/82	-	-	-	-	Lanarkshire
	1980/81	-	-	-	-	Lothian
	1979/80	-	-	-	-	and Forth Valley
J. Marr	1983/84	16	0	0	2	N. Western
	1982/83	11	0	0	2	Northern
	1981/82	17	0	0	2	
	1980/81	24	7	29.0	2	
	1979/80	45	6	13.3	4	
Chaldur	1983/84	14	0	0	1	Northern
	1982/83	31	4	12.9	1	
	1981/82	31	4	12.9	2	
	1980/81	24	4	16.7	1	
	1979/80	27	4	14.8	2	
Corrigan	1983/84	14	1	7.1	2	Gtr Glasgow
	1982/83	18	3	12.5	2	Lanarkshire Lothian and Forth Valley
Charles Taylor	1983/84	10	2	20.0	1	Yorkshire
	1982/83	24	6	25.0	1	
	1981/82	81	18	22.5	1	
	1980/81	40	2	5.0	1	
	1979/80	28	3	10.7	1	
TOTALS (Intermediate Suppliers)	1983/84	144	4	2.8		
	1982/83	267	33	12.4		
	1981/82	174	10	5.7		
	1980/81	197	30	15.2		
	1979/80	140	13	9.2		

TABLE 3c

C. MINOR SUPPLIERS (Less than 10 samples from each supplier assessed 1983/84)

SUPPLIER	AIS YEAR	NO. OF SAMPLES ASSESSED	NO. OF SAMPLES OUT OF SPEC	% OUT OF SPEC	NO. OF REGIONS SUPPLIED	REGIONS SUPPLIED 1983/84
Sykes	1983/84	9	1	*	1	N. Western
	1982/83	22	2	*	1	
	1981/82	19	1	*	1	
	1980/81	17	0	*	1	
	1979/80	21	0	*	1	
Caterfrost	1983/84	8	0	*	2	Gtr Glasgow Lanarkshire Lothian & Forth Valley
	1982/83	6	0	*	1	
Dales	1983/84	8	0	*	1	Mersey
	1982/83	2	0	*	1	
	1981/82	8	0	*	1	
W. Sproston	1983/84	8	2	*	2	N.E. Thames N.W. Thames
	1982/83	13	0	*	1	
	1981/82	17	1	*	2	
	1980/81	15	3	*	2	
	1979/80	22	3	*	2	
Brake Bros.	1983/84	7	0	*	1	Oxford
	1982/83	2	1	*	2	
	1981/82	5	0	*	2	
	1980/81	2	0	*	1	
Polar Foods	1983/84	7	0	*	1	Lanarkshire Lothian and Forth Valley
	1982/83	6	0	*	1	
F. Smales	1983/84	5	0	*	1	Yorkshire
	1982/83	11	1	*	1	
	1981/82	11	0	*	1	
	1980/81	4	1	*	1	
Regal Seafoods	1983/84	4	1	*	1	Northern
	1982/83	1	0	*	1	
	1981/82	5	0	*	1	
T.F.C.	1983/84	3	0	*	1	Yorkshire
Bayliss	1983/84	2	0	*	1	N.E. Thames
Aldens	1983/84	1	0	*	1	Oxford
Ashford	1983/84	1	0	*	1	W. Midlands

TABLE 3c Continued/....

SUPPLIER	AIS YEAR	NO. OF SAMPLES ASSESSED	NO. OF SAMPLES OUT OF SPEC	% OUT OF SPEC	NO. OF REGIONS SUPPLIED	REGIONS SUPPLIED 1983/84
Wm Bennett	1983/84	1	0	*	1	Yorkshire
	1982/83	2	0	*	2	
	1981/82	2	0	*	2	
Blue Crest	1983/84	1	0	*	1	Northern
Country Fare	1983/84	1	0	*	1	Northern
Scotia	1983/84	1	0	*	1	Lanarkshire Lothian and Forth Valley
TOTALS	1983/84	67	4	6.0		
(Minor Suppliers)	1982/83	56	4	7.1		
	1981/82	46	3	6.5		
	1980/80	131	11	8.4		
	1979/80	61	5	8.2		
COMBINED GROUPS	1983/83	530	20	3.8		
A, B & C	1982/83	850	81	9.5		
	1981/82	758	61	8.0		
	1980/81	707	78	11.0		
	1979/80	499	46	9.2		

* Insufficient samples for significance