

for a fisherman to obtain used equipment or modify gear used in other fishing operations.

Long-haul fishing with "swiper nets" is becoming more popular in certain North Carolina areas. This method has almost completely re-

placed the traditional long-haul method in portions of Pamlico Sound but no "swiper" nets are presently known to be used in the Harkers Island area. We do not have any knowledge of the comparative cost-return ratio for the two methods but suspect

that it varies among different types of areas.

LITERATURE CITED

Taylor, H. F. 1951. Survey of marine fisheries of North Carolina. Univ. N.C. Press, Chapel Hill, 555 p.

MFR Paper 1024. From Marine Fisheries Review, Vol. 35, No. 12, December, 1973. Copies of this paper, in limited numbers, are available from D83, Technical Information Division, Environmental Science Information Center, NOAA, Washington, DC 20235.

MFR PAPER 1025

Midwest retailers report dieters are having a pronounced positive effect on fish sales.

LEONARD J. KONOPA

Marketing Practices of Retailers Handling Fish in the Akron and Cleveland Areas

In the September 1973 number of *Marine Fisheries Review* (Vol. 35, No. 9, p. 31-37), the results of an exploratory survey concerning the marketing practices of wholesalers located in Akron and Cleveland, Ohio, were reported. Interviews were also conducted with retailers in the channel of distribution at the same time (spring and summer, 1971). These findings are summarized in this article.¹

SURVEY METHODOLOGY

All of the general line and specialty line retail grocery establishments listed

in the yellow pages of the *Akron and Vicinity Telephone Directory* (Summit County, Ohio) and the *Cleveland Metropolitan Area Telephone Directory* (Cuyahoga County, Ohio) were contacted by telephone to determine whether or not they sold fish; and, if so, the form of fish (fresh, frozen, or canned) they handled. A random sample of nonchain retailers was then selected from the list of retailers who carried any form of fish. Chain store retail outlets (centrally owned and centrally directed units) were selected similarly at random, but fewer stores were chosen because the retail outlets of a given chain ordinarily operate in the same manner. Comparisons of replies of store managers within the same chains, for example, reveal identical policies, attitudes, and methods of operation.

The interviewers arranged appointments by telephone with the randomly selected retailers to conduct personal interviews at the convenience of the store managers. When a store manager was unable to keep his appointment, a followup interview was conducted by telephone. A pretested, structured questionnaire was utilized in all interviews.

Overall, 115 retail outlets were selected in the random sample. Usable replies were received from 110 store managers. After the replies were edited, they were tabulated by means of a Cobal program written for this purpose.

DESCRIPTION AND CLASSIFICATION OF STORES

General Line Food Stores and Specialty Fish or Meat Markets

Retailers handling fish are divided into two major categories in Table 1. Category A contains the general line grocery stores offering fish; Category

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¹ For the complete survey results, write to the author for a copy of the monograph "Survey of Selected Retail Food Stores Handling Fish in Cuyahoga and Summit Counties, Ohio," College of Business Administration, Kent State University, Kent, OH, 44242. The survey was sponsored by NOAA Office of Sea Grant, Department of Commerce, under Grant No. 2-35364.

Table 1.—Type of stores grouped by annual sales.

TYPE OF STORE	ANNUAL SALES GROUPS				Total
	Group 1 Sales to \$99,999	Group 2 \$100,000 to \$499,999	Group 3 \$500,000 to \$999,999	Group 4 \$1,000,000 and over	
A. General Line Food Stores					
Independent Stores	24	12	11	1	48
Affiliated Stores	5	14	7	7	33
Chain Stores	0	0	0	17	17
Subtotal	29	26	18	25	98
B. Specialty Fish or Meat Markets					
Independent Stores	8	4	0	0	12
Affiliated Stores	0	0	0	0	0
Chain Stores	0	0	0	0	0
Subtotal	8	4	0	0	12
Grand Total	37	30	18	25	110

Source: Survey Results

B represents the specialty fish or meat markets handling fish. The fish markets, of course, specialize in the sale of fish, while the meat markets sell fish either as a major offering or as an accommodation for customers who desire fish.

Grouping by Annual Sales, Form of Ownership, and Operation

The retailers are further grouped in Table 1 by annual sales as well as by form of store ownership and operation. Classification of stores by amount of annual sales is self-evident. The ownership and operating characteristics by which various types of stores are differentiated, however, must be explained. *Independent* stores are individually owned and operated by their proprietors. They are not members of any wholesaling group or comparable association. *Affiliated* stores are also independently owned and operated, but they are members of either retailer- or wholesaler-sponsored voluntary groups. Such groups perform the wholesaling function for their members and typically provide marketing services which may range from advertising in local newspapers to the prepricing of products. *Chain* stores, as indicated heretofore, are centrally owned and operated by their managers in keeping with corporate policies and procedures.

Analyses of Types of Retail Stores

A review of Table 1 shows all 12 of the specialty fish or meat markets in the sample are independent stores while 48 of the 98 general line food stores are also independent. The grouping by annual sales further indicates that the independent stores are typically smaller establishments. Affiliated stores, on the other hand, are generally larger than the independents. As a matter of fact, seven of the 33 affiliated stores report sales of \$1 million or more per annum. Lastly, the large size of the 17 chain stores is evinced by the fact none has annual sales under \$1 million.

FORMS OF FISH HANDLED BY SIZE OF STORE

Forms of Fish Handled by General Line Grocers

The data in Table 2 show canned fish is carried by 98 percent of the general line grocery retailers. The second most popular product is prepared frozen fin- and shellfish with nearly 80 percent of the general line grocery stores offering prepared frozen finfish and approximately 70 percent stocking prepared frozen shellfish. The general line grocers' preference for frozen fish is further reflect-

ed by the fact 57 percent handled whole or processed frozen finfish while 47 percent sold whole or processed frozen shellfish. Whole or processed fresh finfish is found in 34 percent of the general line food stores. Whole or processed fresh shellfish is a scarcer commodity handled by 13 percent of the establishments. Similarly, only 5 percent offered prepared fresh finfish while one store (1 percent) handled prepared fresh shellfish.

Forms of Fish Handled by Specialty Markets

Among the specialty fish or meat markets, whole or processed fresh finfish is the most popular item with 83 percent (ten of twelve stores) handling fresh finfish. Only 33 percent, however, also stock whole or processed fresh shellfish. Interestingly, none of the specialty stores sell prepared fresh finfish or shellfish, although prepared frozen finfish is found in 42 percent and prepared frozen shellfish in 17 percent of the specialty stores. Whole or processed frozen shellfish are handled by more specialty markets than whole or processed frozen finfish (25 percent versus 17 percent). Finally, only 17 percent of the specialty stores stocked canned fish.

PERCENTAGE OF SALES BY FORM OF FISH HANDLED

General Line Stores

Analyses of each store's sales by forms of fish carried reveals four distinct trends among general line retail grocers. First, it is again evident that canned fish is the predominant form of fish carried by general line grocers. All but two of the 98 general line retail grocers stock canned fish. As a matter of fact, 12 of the 29 smallest groceries handle only canned fish. Among the 98 stores offering it, sales of canned fish represent 28 to 100 percent of their particular store's

fish sales. Second, the next most popular form of fish is prepared frozen fish. Sixty-seven of the 69 general line grocers with sales of \$100,000 or more per annum offer prepared frozen fish to their customers, whereas 17 of the 29 smallest grocers (sales under \$100,000) handle frozen fish as well as canned fish. Prepared frozen shellfish is offered by fewer stores than prepared frozen finfish, although there is a tendency to handle both as the stores become larger. Third, the retail unit is more likely to carry whole or processed frozen fish as the size of the store increases, until everyone does so among the group 4 stores (sales of \$1 million or more per year). Here, too, fewer stores handle whole or processed frozen shellfish than frozen finfish, but there is a tendency to offer both whole or processed frozen finfish and shellfish as one progresses from the smallest to largest groups of stores. Fourth, there is a direct relationship between the size of general line grocery store and the sale of fresh fish. No one in group 1 (sales under \$100,000) sells fresh fish; 19 percent offer fresh fish in group 2 (sales from \$100,000 to \$499,999); 50 percent handle fresh fish in group 3 (sales of \$500,000 to \$999,999); while 76 percent in group 4 (sales of \$1 million or more) provide fresh fish.

Another way of utilizing the sales data is to construct a composite or typical profile of fish sales of all general line stores. Such a composite reveals that 53.5 percent of a typical store's full line fish sales would be canned fish; all forms of frozen fish would account for an additional 39 percent of its sales, while fresh fish would represent 7.5 percent of the store's fish sales.

Specialty Line

Unlike the general line retailers, group 1 (sales under \$100,000) specialty fish or meat markets emphasize fresh fish. Five of the eight markets, for example, handle nothing but fresh finfish and/or fresh shellfish. The three other specialty shops in group 1

Table 2.—Forms of fish handled by size and type of store.

Type of Store and Size	Form of Fish Handled								
	Whole or Processed				Prepared				Canned
	Fresh		Frozen		Fresh		Frozen		
Fin	Shell	Fin	Shell	Fin	Shell	Fin	Shell		
A. General Line									
1. Sales under \$99,000 [29]	0	0	7	3	0	0	14	7	28
2. \$100,000 to \$499,999 [26]	4	1	14	12	0	0	26	22	26
3. \$500,000 to \$999,999 [18]	9	4	12	9	1	0	14	15	17
4. \$1,000,000 & over [25]	19	8	24	22	4	1	25	23	25
Subtotal	32	13	57	46	5	1	79	67	96
B. Specialty Line									
1. Sales under \$99,999 [8]	8	4	0	1	0	0	2	1	1
2. \$100,000 to \$499,999 [4]	2	0	2	2	0	0	3	1	1
Subtotal	10	4	2	3	0	0	5	2	2
Grand Total	43	17	58	47	5	1	84	69	98

Source: Survey Results.

carry some form of prepared or processed frozen fish in addition to fresh fish.

In contrast with group 1 specialty markets, each of the four markets in group 2 (\$100,000 to \$499,999 annual sales) carries some form of prepared or processed frozen fish while only two of the four markets handle fresh finfish. Group 2 specialty markets, consequently, resemble group 3 general line retailers more closely than group 1 specialty markets. Both groups of specialty markets differ from general line retailers, however, in terms of canned fish. Among both group 1 and group 2 specialty markets, only one market in each group distributes canned fish.

RETAILERS' MARKUP

Problems Relating to Markup Data

Several problems were encountered in gathering markup information. To begin with, some retailers did not know their initial markup on canned and/or frozen fish. In addition, others refused to disclose this information. Different employees, moreover, were responsible for fresh versus frozen versus canned fish in some of the stores. When interviewers were unable to talk with each of these individuals, the other interviewee(s) estimated the markups for the alternate forms of fish handled. Lastly, managers often gave markups purportedly based on

the cost of goods, although markup on retail price was sought. In order to confirm the markup base used, several wholesalers as well as chain store warehouses were contacted. Wholesalers typically list the cost as well as suggested retail price on their forms. The markups given by retailers were not based on cost, but generally on the suggested retail price. The chain store warehouses which were contacted also reported their markups were on the retail price base for financial control purposes. Some of the markup data, consequently, had to be adjusted to the retail price base when it was evident that a discrepancy existed.

Summary of Markup Practices

Because of the problems encountered in obtaining markup information, it is difficult to generalize from these data. It is intriguing, nonetheless, to find so many stores utilizing a uniform markup policy. Seventy-five percent of the smallest general line retailers handling both canned and frozen fish, for example, mark up all forms of fish the same proportional amount. Fifty percent of the group 2 general line retailers also mark up all of the fish they sell the same proportional amount. Among the group 3 stores, only 17 percent determine retail price on the basis of a uniform percentage markup for fresh, frozen, and canned fish. The number of stores adopting a uniform markup on all forms of fish sold continues to decline

as the size of store increases until merely 5 percent of the retailers in group 4 employ a uniform markup policy. Despite the fact few retail managers in groups 3 and 4 implement a uniform markup policy on every form of fish handled, 60 percent mark up all fresh and frozen finfish and shellfish the same proportion of retail price while marking up canned fish a lesser amount. The markup policies of specialty line markets tend to parallel those observed among general line grocery stores. That is to say, two-thirds of the specialty outlets have identical percentage markups on retail price on all forms of fish carried in their respective stores. A uniform markup policy is simple to apply, but entrepreneurs fail to capitalize on the fact that higher value products like fresh shrimp or finfish are ordinarily capable of bearing higher percentage markups on their resale price than frozen shrimp or finfish.

Another intriguing observation is the fact that the average markups among the different groups of stores are quite similar despite the fact these are differences in the percentage markups adopted by individual stores in each group. The composite markups are given in Table 3. Other than the composite markup on fresh finfish, the average markups of specialty markets are not shown in Table 3 since there are so few specialty markets of-

fering either frozen prepared or canned fish.

SOURCES OF SUPPLY

The 110 retailers in this study obtain their fish from 24 different wholesale sources, ranging from specialized fish distributors to general line grocery wholesalers, or from their own central chain store warehouses and other retailers. Two very small grocers, for example, purchase their canned tuna from larger retailers when the latter run specials because the minimum order quantity exceeds the inventory they want to carry. All but two of the 24 wholesale sources are situated within the state of Ohio.

The chain stores ordinarily secure canned, frozen, and fresh fish from their company's warehouse. Some of the chains' warehouses, however, do not handle fresh fish. If a meat manager insists on carrying fresh fish under these circumstances, he must obtain it from an independent supplier. Affiliated retailers usually operate in the same manner, that is, they typically get their canned and frozen fish from their sponsor's warehouse and their fresh fish from a nonaffiliated independent wholesaler. Nonaffiliated independent retailers procure canned fish from general line grocery wholesalers and their fresh fish from specialized distributors. Frozen fish may

come from either the general line wholesaler or the specialty house. Once the liaison is established with a source of supply, however, few independent retailers will buy fresh or frozen finfish and shellfish from different wholesalers simultaneously.

TRENDS IN RETAILERS' FISH SALES 1966-1971

Retailers were asked if their fresh, frozen, and canned fish sales had increased, remained the same, or declined since 1966. They were also asked why they thought these trends had occurred.

Trends in Fresh Fish Sales

Examination of the replies reveals that more retailers reported declines in sales of fresh, frozen, and canned fish than those who reported there was either no change or an increase in sales. In contrast to frozen and canned fish, however, fresh fish was the only type of fish for which over half of the interviewees (57 percent) indicated sales were down. Among the remaining stores handling fresh fish, 27 percent said sales were stable while 16 percent thought their sales had increased. The reasons related by retailers for the increase in fresh fish sales were:

- (1) fresh fish is cheaper than beef;
- (2) the store expanded its offerings of fresh fish;
- (3) more dieters;
- (4) change in community's ethnic structure.

Retailers with no change in fresh fish sales had no explanation as to why sales were stable. Combinations of reasons were given by those whose sales had declined. Seventy-six percent, for example, pointed to pollution scares, 36 percent mentioned higher price, while 28 percent cited the change in the dietary requirements of the Catholic Church.

Trends in Frozen Fish Sales

Forty percent of the merchants

Table 3.—Average percentage markups on retail selling price by type of store and form of fish handled.

Type of Store	Whole or Processed		Prepared		Canned
	Fresh	Frozen	Fresh	Frozen	
	Fin Shell	Fin Shell	Fin Shell	Fin Shell	
A. General Line Group					
1. (Sales to \$99,999)		23.0 22.3		21.5 22.8	20.8
2. (\$100,000 to \$499,999)	26.2 30.0	26.1 23.7		23.7 23.9	21.0
3. (\$500,000 to \$999,999)	25.6 23.3	26.0 25.0	25.0	24.4 25.0	21.5
4. (\$1,000,000 and over)	25.6 24.1	25.1 25.1	25.6 25.0	25.1 25.1	17.5
B. Specialty Line Group					
1. (Sales to \$99,999)	27.1				
2. (\$100,000 to \$499,999)					

with frozen fish reported sales declines. Thirty percent said sales were the same while the remaining 30 percent said frozen fish sales were up. The increase in frozen fish sales was attributed primarily to:

- (1) enlarged offerings (45 percent of stores);
- (2) cheaper than beef (18 percent);
- (3) cheaper than fresh fish (7 percent);
- (4) safer than fresh fish (7 percent);
- (5) convenient meal (7 percent);
- (6) more dieters (7 percent).

Stores whose sales had remained the same offered little or no explanation as to why sales had not changed, with the exception of a few managers who thought pollution scares dampened any potential increase in frozen fish sales. Those reporting sales declines mentioned the same kind of combinations of reasons given for the drop in sales of fresh fish, that is:

- (1) pollution scares (70 percent);
- (2) higher price (28 percent);
- (3) changes in the dietary requirements of the Catholic Church (33 percent).

Trends in Canned Fish Sales

Since the United States had experienced a substantial recall of contaminated tuna at the time the survey was conducted, it is not surprising to learn that 44 percent of the retailers reported a drop in canned fish sales. Thirty-six percent, on the other hand, said sales had not changed while 20 percent indicated their canned fish sales had increased. The increment in sales was attributed to:

- (1) expanded canned fish offerings by the store;
- (2) the increase in number of dieters;
- (3) the fact canned fish is a nutritious, inexpensive meal.

Pollution was given as the reason why canned fish sales had neither increased nor decreased. That is to say, consumers either were reluctant to eat more canned fish or sales of canned fish had returned to their normal plateau after the initial impact of a pollution warning. Lastly, the same combinations of factors emerge as

explanations for the decline in sales:

- (1) pollution scares (63 percent);
- (2) higher price (30 percent);
- (3) changes in the dietary requirements of the Catholic Church (26 percent).

Summary of Sales Trends

In summary, when all forms of fish are considered as a unit, the three factors to which increments in sales are attributed most often are:

- (1) the expanded offerings of that form of fish by the store;
- (2) the fact that fish is cheaper than beef;
- (3) the growth in number of dieters.

Conversely, declines in sales are mostly attributed to:

- (1) apprehension by consumers of the effects of pollution;
- (2) the consistent increase in retail price;
- (3) the change in dietary requirements of the Catholic Church.

Few retailers offered an explanation for stable sales. Those who did, however, mentioned pollution scares. These respondents felt consumers were either reluctant to eat larger quantities of fish or had just returned to their regular consumption patterns after a pollution alert.

RETAILERS' PREFERENCES IN HANDLING FRESH VERSUS FROZEN FISH

Preferences

After relating their sales trends for fresh, frozen and canned fish, retailers

were next asked whether they preferred handling fresh or frozen fish. Tabulation of the responses in Table 4 shows a strong preference for frozen fish. Surprisingly, only 40 percent of the specialty markets preferred fresh fish while 60 percent were either indifferent or preferred handling frozen fish.

Reasons Why

Retailers who rated the handling of fresh fish above frozen fish did so because they thought consumers generally preferred fresh fish. This reason was given by 12 respondents. Similarly, six respondents specifically referred to the fact consumers preferred fresh fish because it tasted better or represented better quality. Two retailers preferred fresh fish to frozen fish because it was more profitable. Lastly, one respondent also said fresh was easier to handle than frozen fish. Recasting these responses in terms of supplier versus buyer preferences, 14 percent of the reasons were associated with profitability to retailers or ease of handling whereas 86 percent were attributed to consumer preference, taste, and quality.

The situation is reversed for frozen fish. Seventy-one percent of the responses were essentially ease of handling responses. For example, "easier to handle in store" was specifically mentioned 28 times. "No facilities for fresh fish" and "less spoilage or waste" were each mentioned 14 times. Similarly, such reasons as "no odor," "more dependable supply" and "more profitable" are also retailers' preferences rather than consumers' preferences. From the consumers' point of

Table 4.—Retailers' preference in handling fresh vs. frozen fish.

Form of Fish	Preferences				Total
	General	Line	Groups	Specialty	
Fresh	1	2	7	5	20
Frozen	16	23	10	17	69
No Preference	12*	1	1	3	21

*Handled canned only

view, "consumers prefer frozen" was mentioned nine times; "cheaper than fresh," ten times; "a better quality product," five times; and "people want convenience," was mentioned once.

There is an intriguing duplication among retailers' preferences of fresh versus frozen fish. For instance, the responses "better quality," "more profitable," "easier to handle," and "consumers' preference" appear on both lists of reasons why retailers prefer handling either fresh or frozen fish. Retailers evidently have not resolved such issues as (a) which form of fish is better in quality, (b) easier to handle, or (c) more profitable. On this latter point, moreover, two specialty markets specifically said there was no profit in fresh fish although they sold it because customers preferred fresh fish.

BRANDING

Because no published information was found concerning types of brands associated with the merchandising of fish, several questions in the exploratory survey probed in this area. Basically, there are two types of brands. Processors' brands are the brand names attached to the product by the processing companies. Processors' brands are also known as national brands. Store or private brands, on the other hand, are brand names sponsored by resellers.

Fresh Fish Brands

Fresh fish is unique due to the absence of brand names. Some stores sell fresh fish from trays while others offer it on a prepacked, prepriced basis. Managers selling prepacked, prepriced fresh fish occasionally insisted their fresh fish carried a store brand because the store's reputation was behind the product and the price labels contained the store's name as well as species. Since these labels are designed to convey primarily the price of the product

or to identify the species rather than promote it, they clearly are not store brands.

Frozen and Canned Fish Brands

Frozen and canned fish, in contrast to fresh fish, are heavily branded products. Turning to frozen fish, processors' brands are more prevalent than stores' brands. Moreover, where stores' brands are carried, they usually are offered along with national brands. With the exception of the small group 1 general line retailers and the specialty markets, for example, 35 to 45 percent of the stores in groups 2, 3, and 4 handle their own brands as well as processors' brands.

The patterns for canned fish are very similar to frozen fish. No specialty markets and only two small group 1 general line retailers, for example, offer stores' brands. All group 2, 3, and 4 grocery retailers with their own brands of canned fish dual them with processors' brands. The distinct difference in branding practices between frozen and canned fish is the fact unbranded frozen fish was found in some group 3 and 4 stores, whereas no one handled unbranded canned fish.

Customers' Brand Preference

When asked which brand they thought their customers preferred, some store managers reported their customers might prefer recognized processors' brands of fresh fish. A lesser number who insisted their stores' reputation and price labels were really store brands, thought their customers preferred this practice. A majority of the respondents, nonetheless, said customers had no labeling or brand preference as far as fresh fish was concerned.

Comments about customers' brand preferences for frozen and canned fish, however, approached unanimity. No one said customers preferred their

store's brands of canned fish to processors' brands, and only two thought their customers preferred their own brand of frozen fish to processors' brands, despite the fact no fewer than 30 percent of these stores in groups 2, 3, and 4 offered some variety of frozen or canned fish under their own labels.

Finally, most respondents are of the opinion that additional branding would have no impact on the sale of fish. Among the minority who believe additional branding would increase sales, there is the opinion that the impact on sales of fresh fish would be greater than on frozen or canned fish. Respondents who view additional branding in a positive manner are predominantly managers of the largest group 4 general line stores.

PROMOTIONAL PRACTICES

Promotional practices of retailers were explored on the basis of: (a) external promotion designed to attract customers to the store for fish and, (b) internal promotion designed to stimulate fish sales at point of purchase, that is, the store.

External Promotion

The promotional medium utilized to bring people to the store is essentially the newspaper. Most of the newspaper advertisements, as a matter of fact, are sponsored by affiliated groups or chain stores. In descending order, the other media mentioned are handbills, home mailers, radio, and TV. With one exception, only the general line grocers with sales of \$1 million or more per annum resort to radio or TV. On a category-by-category basis, 80 percent of the specialty fish or meat markets as well as the general line grocers with annual sales under \$100,000 engage in no external advertising of fish. Neither do 60 percent of the general line stores with sales in the \$500,000 to \$999,999 range. Among the smaller general line grocers with annual sales of \$100,000 to

\$499,999, however, only 50 percent indicate they do not promote fish externally. Although one would assume all general line grocery outlets with \$1 million or more in annual sales would advertise fish, 5 percent report no advertising of fish. Finally, the secondary role of fresh fish is highlighted again by the fact the relative number of general line retailers in each sales category who advertise fresh fish is less than the proportion who advertise frozen or canned fish.

Instore Promotion

The instore promotional activities for fish follow closely the patterns found for external promotion. First, method—stock display—to stimulate fish sales. The other promotional devices used in conjunction with merchandise displays by some of the stores, however, are special price promotions, interior store signs, and window posters. All of the specialty fish or meat markets as well as over 90 percent of the smallest general line grocers identified stock displays exclusively as their point of purchase promotional activity. Sixty percent of the group 2 and group 3 general line grocers also did so. Once again, the largest retailers were the ones who utilized a variety of instore promotional techniques. Merely 8 percent of the stores in group 4, for example, said they depended on stock displays only. Similarly, the same relative emphasis on promoting frozen or canned fish rather than fresh fish is evident internally as it was externally.

RETAILERS' OPINIONS

Purchasers of fresh fish are described by retailers as:

- (1) older families;
- (2) either of higher or lower but not middle income;
- (3) Catholics;
- (4) Blacks, Jews, or ethnic groups;
- (5) dieting, health-conscious families;

(6) people who grew up near water where they had access to fresh fish. Retailers believe these people prefer fresh fish because the purchasers think fresh fish either tastes better or is better in quality.

Frozen fish buyers, on the other hand, are described by retailers as:

- (1) younger families;
- (2) larger size families;
- (3) middle to low income families;
- (4) families whose wives work and/or desire convenience.

Frozen fish purchasers are also identified as "all types of families" more often than by religious or racial background. Retailers think consumers who prefer frozen fish to fresh fish do so because:

- (1) frozen fish is more convenient to use, that is, ready to cook or heat;
- (2) it is an inexpensive meal;
- (3) frozen fish is easy to store and use any time during the week;
- (4) a large variety and selection is always available at stores;
- (5) some consumers consider taste of frozen fish as better than that of fresh fish.

Terms used by retailers to describe canned fish customers are similar to those associated with frozen fish buyers. For example, typical customers are identified as:

- (1) younger families;
- (2) larger size families;
- (3) low income or welfare families;
- (4) families whose wives work.

A preponderant number of retailers, however, view canned fish as a standard grocery item purchased by all types of families because it is convenient to use and ready to eat. Many retailers further mentioned that this is the only way to obtain species such as tuna, sardines, salmon, and mackerel. Finally, several retailers commented that people who dislike fish (fresh or frozen) purchase canned varieties because they do not identify canned species as fish.

FRESH FISH PROCUREMENT PRACTICES

Ordering Fresh Fish

Three out of four retailers selling fresh fish either contact the wholesaler directly whenever they need fresh fish or they place their orders with the wholesalers' salesmen who call regularly at their stores. Along with the independents and affiliated stores, many supermarkets also procure their fresh fish this way since less than one-half of chain stores' warehouses handle fresh fish. These chains say fresh fish is too perishable, too inconvenient, and too small in sales volume to handle. They prefer that their units offering fresh fish buy it directly from local wholesalers.

Delivery

Sixty percent of the retailers take delivery of fresh fish once a week, generally at midweek for the weekend trade, whereas 40 percent offer fresh fish daily and stock as needed. Over 60 percent report wholesalers make delivery within 24 hours. Ten of the 16 stores without 24-hour delivery service are chain store units that obtain fresh fish from their company's warehouses, usually on a weekly delivery basis. It is not surprising, therefore, to find that only four of the 42 stores selling fresh fish express any interest in a 24-hour delivery time proposal.

Species Handled

The species of fresh fish carried by 20 percent or more of the stores (in descending order) are: perch (73 percent); haddock (50 percent); pike (30 percent); sole (26 percent); whiting (21 percent); oysters (21 percent); and bass (20 percent). Thirty-three of the 42 retailers select the species carried according to customers' preference or sales experience. Similarly, two retailers report they try additional

species each month to provide greater variety and gauge sales experience. Three retailers handle whatever their chain warehouse or supplier have available. Three additional firms rely on their meat managers to decide what to carry (presumably customers' preference or sales experience) while the last retailer uses resale price as his guide line. It is further evident from the interviews that a majority of the retailers envision no effect on sales if they could order particular species from wholesalers.

Underutilized Species

A list of 13 underutilized species, developed with the assistance of several executives from the Office of Sea Grant, was presented to retailers handling fresh fish to ascertain if they could profitably sell those species. Of the 13 species listed, 50 percent or more of the retailers thought they might profitably handle four—silver hake, mackerel, Pacific cod, and catfish. Mackerel was the most widely recognized species on the list. Seventeen of the 27 retailers who said they could handle mackerel profitably, however, viewed it as a canned product. Nearly all of the favorable respondents considered Pacific cod a frozen product, while 55 percent believed silver hake would sell better in frozen form and catfish in fresh form.

The "No" respondents consisted of retailers who believed they could not handle the species profitably plus those who were unfamiliar with the species. Some respondents, for example, said they knew little or nothing about pollock. Others considered pollock a prepared frozen fish used in

fish sandwiches by drive-ins or by schools for lunch programs. Northern shrimp was unprofitable because it was "too expensive" or "too small." Tanner crab was "too expensive," lacking in "eye appeal," or "spoiled too fast." Those who reacted negatively to Pacific cod did so because "the taste is too strong." A substantial number of interviewees had never heard of "blue" mussels or "calico" scallops. Nevertheless, the basic reason why most retailers would not handle these species was expressed in terms of "no demand." Until consumers were familiar with these species and knew how to prepare them, these retailers asserted they would not handle them.

PROBLEMS OF RETAILERS HANDLING FRESH FISH

Surprisingly only 13 of the 110 retailers asserted they had any problems handling fish. Furthermore, only 10 of the 42 retailers selling fresh fish mentioned spoilage as a particular problem. Similarly, despite the fact 92 of the 110 retailers stocked some form of frozen fish, merely two retailers put forth problems associated with frozen fish, namely, freezer burn and thawing. Lastly, foreign material in canned fish was given by one retailer as a problem he had with canned fish.

Due to the perishability of fresh fish, the retailers who reported spoilage problems said they ordered minimum quantities as needed and attempted to sell their inventory in two or three days. As a matter of fact, two retailers commented it was better to have too little than too much fresh

fish on hand. Two retailers noted that they kept fresh fish heavily iced to reduce spoilage, while a couple more retailers used lemon to kill the smell.

As a group, they further proposed that fresh fish move to the store faster for longer shelf life. Several also suggested wholesalers either permit smaller orders or refrigerate fresh fish better. Rinsing fresh fish after two days; freezing left-over fish; ceasing the use of cardboard and plastic that dry out fish; and stop handling fresh fish were also given as means of preventing spoilage.

Although 14 of the 42 retailers had no problems in selling fresh fish versus fresh meat, four of the 14 "no problem" retailers were specialty fish markets handling fish only. Aside from this group, the problems described by retailers selling both fresh fish and meat fall into two categories. The first category represents handling problems such as the fact fresh fish leaks or smells and must be separated from fresh meat, especially chicken. Similarly, fresh fish must be sold faster than meat; keeping fish iced is messy; it is more difficult than meat to display attractively; lights dry out fresh fish faster than meat; and leftover meat can be sold as hamburger if necessary, whereas fresh fish can only be frozen. The second group of problems is essentially sales volume oriented. Fear of pollution and consumer ignorance of nutritional value, for example, tend to depress sales of fresh fish. Fresh fish, moreover, sells generally on Thursday or Friday, whereas meat sells every day. Lastly, the uncertain supply of fresh fish in contrast with the availability of meat tends to reduce fresh fish sales.

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