SEAFOOD RETAILING

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CHAPTER I
SELLING THE SEAFOOD CONCEPT

Introduction

The basic purpose of this manual is to help you more profitably satisfy the consumer. Notice the emphasis is on consumer. Your rewards should come naturally if the consumer is pleased with the total bundle of product and services you provide.

To satisfy the customer more profitably, this manual stresses that you sell not "fish" but seafood. Moreover, this manual emphasizes that you inventory, promote, sell and merchandise the "seafood concept". Just what do we mean, "sell the seafood concept"? Initially, it may be easier to explain what this phrase does not mean. Calling the market a "fish market" is **not** selling the seafood concept. You merchandise much more than fish. You offer a wide assortment of fresh and frozen finfish and shellfish (freshwater and saltwater) from all parts of the world: cod from the North Atlantic; red snapper from the Gulf; mountain trout from the Rockies; squid from California; salmon from the Northwest and catfish from the heart of America. When you name your shop "Joe's Fish Market" or put a FISH sign above the seafood section in the supermarket, you have hurt both yourself and your customer.

The customer suffers because you fail to provide the greater allure of a seafood product assortment rather than a fish product assortment. You suffer financially because he/she isn't satisfied. By promoting fish rather than seafood you naturally limit the set of images which come into the customer's mind. Think about it. Don't you visualize a more inviting market interior (display case, interior design, posters, etc.) if someone names his market Fulton's Pier, Newport Wharf, Pier 21, or Neptune's Galley, rather than Joe's Fish Market?

Throughout this manual there is no reference to a fish market. The manual refers to a seafood market. Hopefully you, too, will visualize your business as a seafood operation. Fish is only one part of the seafood market. The product, seafood, is another part of the seafood concept, just as the market's name is a part of this concept.

The **seafood concept**, then, is the total set of visual cues (symbols, colors, signs, interior design posters, recipes, price markers, display case, work area, personnel, advertisements, market name, and other items) that make up what the consumer sees, hears, and smells that, tells the customer: "Here is where I buy my seafood." The seafood concept is a total set of merchandising skills that tells the customer this seafood product is fresh, sanitary, top quality, fun to prepare, and a joy to eat. By selling the complete seafood concept, and not just fish, your customer is not disappointed. Nor should you be disappointed at the end of the month when you look at the bottom line of your profit-and-loss statement.

FUNDAMENTALS IN MARKETING THE SEAFOOD CONCEPT

How do you sell the seafood concept? This manual shows you. Before reading the details in the following chapters you will need to master a few fundamental principles – the "Trinity of Marketing Decisions". These principles, when applied to marketing seafood, help you become a more successful businessman.

The Trinity of Marketing Decisions.

The seafood retailer has three major decisions to consider: 1) to whom am I trying to market my product? 2) what should my product mix include to satisfy profitably this selected customer target market? 3) what various marketing tools and strategies do I have at my disposal to persuade my customer to start coming and to return repeatedly to my store for seafood requirements?

Chart I-1

The diagram in Chart I-1 illustrates these three fundamental decisions. Notice that the arrows point in both directions. This implies not only that the customer target market dictates the specific types of seafood you might carry, but also that your product mix has an impact upon customers. The same holds true with the nature of marketing strategies you apply to ensure that your target market continues to do business with you.

Customer Target Market.

When making decisions about the target market, a market owner hopes to identify his customers and their locale. Chapter II treats this problem.

Product Mix Strategies.

Product mix decisions are critical. You must determine the product assortment that will attract target customers to your store. You will be concerned not only with the number of seafood species to carry (the width of the product line—flounder, shrimp, oysters, rockfish, etc.), but also with the various forms of each seafood to offer your customers (the depth of the product line). For example, both frozen and fresh shrimp; in the case of fresh shrimp, you may carry headless, peeled and deveined, boiled, breaded, three or four sizes, and one or two sub-species (white, pink, or brown). In the case of fresh rockfish, you may carry this species for sale in the round, filleted, steaked, breaded, or ready-for-pan-frying forms. Needless to say, since it is possible to carry a limited amount of the species assortment, it is important to choose carefully the width and depth of your product mix.

The width and depth of your product mix decision leads to a third decision: consistency of the product mix. How closely related is the total product assortment to seafood products in general? For example, the decision to sell fishing licenses dilutes the seafood market to a "bait-house" image. Likewise, selling knick-knacks and trinkets in your market is not in line with the seafood concept. However, offering complementary items such as breadings, sauces and spices, garnishes, seafood cooking utensils, recipe books, smoking grills, wines, and gourmet foods all seem to reinforce the seashore image you are trying to convey. Chapter VI helps you determine your product mix.

Marketing Strategies.

The marketing strategies you choose must be tailored to present the product effectively to your customer. These strategies include: an effective retail price that assures a fair return on your capital and personal investment; creative and motivating tools of PROMOTION (including properly selected and trained personnel) to attract customers to your store; reliable sources of SUPPLY to ensure adequate product assortments; and provision of numerous CUSTOMER SERVICES that range from a strong image of sanitation, to free filleting, and store hours to match your target market's purchasing habits. Chapters III, IV, V, and VII are aids in resolving these decision problems.

MONITORING YOUR BUSINESS PLANS

Naturally you want to keep track of the success of your plans. Chapter IX (Accounting) and Chapter X (Financing) are designed, in part to help establish a set of basic tools for determining the

achievement of your plans. Business records and financial tools which help analyze your performance are more than necessary evils. They help to analyze how well you have "played the game" once the Profit and Loss Statement and Balance Sheet has been completed for that month or planning period.

As you use this manual, keep the "Trinity of Marketing Decisions" in mind. You will find it a helpful reference point from which to begin developing your marketing effort. A well-defined and effectively implemented marketing effort (Product Mix, Pricing Strategies, Promotion Decisions, Supply Sources, and Customer Services) helps to attain your marketing goal. "Selling the Seafood Concept" is the marketing effort that accomplishes the goal stated in this chapter—satisfying the consumer profitably.

PROFIT POTENTIAL OF THE SEAFOOD CONCEPT

At the outset, let it be made clear that there are profits in seafood, fresh and frozen. Studies of meat departments in food stores grossing approximately $25,000 weekly sales reveal that seafoods rank second only to variety meats in profitability.[1] Additionally, seafood is a high gross-margin item. In a similar study of food stores, seafood maintained an average margin of 27.5% on selling price; almost every store studied revealed that the gross margin on fish was higher than on meat.[2]

Seafood products offer today's food retailers an opportunity to increase sales volume at a gross margin substantially above average for all grocery items in the firm's product assortment. Clearly, any food item that can offer this potential reward needs special consideration.

Seafood can also be a high turnover item that lends itself to efficient use of investment dollars. Generally, a supermarket manager can expect a once-a-week turnover of his meat inventory dollar investment. Turnover of fresh seafood in a display case, in a well-managed store, can be as short as one day. Through skillful use of proven merchandising practices, consumer demand can be increased. With inventory control, this increased demand will result in 1) maximum turnover of seafood products inventory, and 2) higher return on inventory investment, two commonly used measures of efficient financial management.

The profitability of frozen seafood products has been demonstrated in an eleven-year study of the frozen food departments at King's Super Markets in New Jersey. This study showed that, although frozen fish occupied only 7.2% of the display space, it contributed 10.4% to the frozen food department's gross profit.[3]

The fresh seafood counter in a supermarket can be a profit-making center when management recognizes its potential and adopts a store policy to reap these profits by planning, implementing and supervising aggressive merchandising strategies. The key to unlocking these potential profits pivots on management's attitude toward seafood.

Some merchandisers ignore seafood completely and declare that limited demand, special handling difficulties, and employee resistance raise barriers too costly to overcome. Some merchants carry fresh seafood, but view it only as a necessary item and not as a particularly favorable meat item among store clientele because its physical properties are radically different from red meat and poultry products.

A few food merchants have viewed fresh seafood not as an impediment, but as an additional meat alternative for the consumer and as a money-making opportunity. These merchants have learned that a positive and innovative approach to food marketing has resulted in enchancing the store's total volume and profit performance.

These far-sighted merchandisers perceive fresh seafood as a product that dramtically improves the store's "potency of assortment". The fresh seafood counter may not be the high-profit contributor as are some other sections of the store, but because the management does offer fresh seafood, customers are attracted who might otherwise market with competitors. This increased

store traffic adds dollar gross margin to a relatively high fixed-cost operation that would not be available without the seafood counter. Where store management enthusiasm for fresh seafood is strong, this profit contribution can be substantial.

The overall profitability of both fresh and frozen seafoods makes them well worth promoting. Thus, the marketing objective for improved profits with seafoods is to have high quality products attractively presented through modern merchandising methods that will produce high sales volume and profits.[4] Additionally, the modern retailer must use these skills to improve inventory turnover and to gain the most efficient use of his dollar investment.

In general, profit in the individual seafood market or seafood section is determined by physical set-up, procedures and promotions.

POLICIES include financing, accounting and general operations.
PHYSICAL set-up is simply the merchandising of seafood, including product assortment and display techniques.
PROCEDURES refer to buying of fish from quality sources and to the care of fish once it arrives at the retail store or supermarket.
PROMOTION includes in-store appeal, well-trained personnel, handout materials, and advertising.

When knowledge and utilization of the modern consumer's buying habits and attitudes are added to these major areas of profit determination, the retailer has at his disposal effective tools for a successful seafood department or store. The major portion of this manual is directed toward describing these tools and how they may be profitably employed. Of particular value is Chapter XI—"Summary." Be sure you read it, for it attempts to provide a perspective on what is contained in the previous chapters and to aid you in answering three major business questions that are central to your goal of a profitable seafood market.

CHAPTER II

CONSUMERS ATTITUDES AND BUYING HABITS[1]

It was mentioned in Chapter I that one of the "Trinity of Marketing Decisions" is to select a target market. If a firm intends to put together a product assortment which would come close to meeting the wants and preferences of its customers, the firm must first have an understanding about the basic characteristics of its market, and how consumers go through the purchase decision process that leads them to purchase the food items they do. This chapter is designed to help you understand, more fully, consumers' attitudes toward seafood and how you might use this information to improve upon your retailing strategies.

CONSUMER ATTITUDES TOWARD SEAFOOD CONSUMPTION PATTERNS

In a recent study household consumers were asked: "How often they prepared the selected meat items?" They responded with the following:

TABLE 1: **Current Consumption Patterns of Meat Items**

"About how often do you prepare each of the following?"

	Percent Preparing 2–3 times per month
Beef	97%
Poultry	88%
Pork	67%
Canned Seafood	45%
Finfish	31%
Shellfish	16%

They were also asked; "On your **next** visit to the store how likely is it that you will buy each of the following foods?"

TABLE 2

Meat Item	**Percent responding they would "definitely" or "likely to buy"**
Beef	94%
Poultry	92%
Canned Seafood	66%
Finfish	34%
Shellfish	21%

Add to these observations the following:

TABLE 3: **Per Capita Consumption of Meat Items***

Meat Item	**Annual Per Capita Consumption**
Red Meat (Beef, Veal, etc.)	189 pounds
Beef	116 pounds
Poultry	52 pounds
Seafood	12 pounds

*Source — **Food Consumption, Prices, and Expenditures**, Economic Research Services, U.S.D.A., Washington, D.C., 1973.

From this we can see that seafood is not as popular food among the general public as other meat items. A partial answer to this is probably cultural. Americans are red meat oriented. The

ubiquitous hamburger, hot dog, and pizza are symbolic of our culture. However, if we multiply 12 pounds of seafood per capital times the population of the United States (211 million) you are still talking about a very big seafood market for this exceeds 2.5 billion pounds of seafood consumed annually!

Let's go further in our investigation about seafood consumption patterns. When the housewife is shopping at the supermarket for meat items she probably makes her decision on whether or not to purchase based on four factors: "Is it nutritious?' Is it economical?' Can I prepare it relatively easy?' and Will my family like it?". Consumers were asked these questions about selected meat items and they reported the following:

TABLE 4: **Consumer Perception of Benefits of Meat Items**

It's Nutritious	%	**It's Economical**	%
Beef	95	Beef	43
Pork	65	Pork	40
Poultry	91	Poultry	65
*Fish	94	*Fish	61
*Shellfish	87	*Shellfish	30
It's Easy to Prepare	%	**My Family Likes It**	%
Beef	86	Beef	94
Pork	78	Pork	76
Poultry	76	Poultry	86
*Fish	66	*Fish	66
*Shellfish	72	*Shellfish	65

Now we get some interesting insights about fish and shellfish which might explain, in part, why per capita consumption of seafood is as low as it is. Notice that fish and shellfish are perceived to be **very nutritious**. And fish, compared to beef, pork, and shellfish, is believed to be a **very good buy**. However, also notice that when it comes to the factors of preparation ease and family taste **seafood (and particularly fish) rates least** among the five meat items. Even though a food item is a good buy and good for you it may not be bought for other reasons. What we might conclude is that, in general, the American Consumer has a limited "use experience" with seafood products. Unfamiliarity with seafood can breed a purchase risk in the consumer's mind to the extent that she would not wish to spend her grocery dollars on meat items, if she felt she could not prepare them well or her family would not like them.

The Consumer Purchase Decision Process

Before discussing additional consumer consumption patterns and perception of seafood, you should be familiar with the purchase decision process consumers go through when buying seafood (or any item for that matter). The process has five major sequential steps. The process may take a short period of time because it has been repeated often and therefore very routine or it may be an extended process which requires much deliberation at each step of the process. The five steps are:

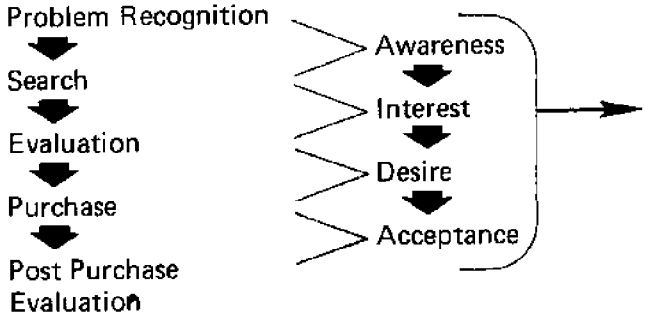
1. Problem Recognition: Becoming aware of the problem of what to serve at some future meal.
2. Search: Looking for alternative meats and recipes for some future meal.
3. Evaluation: Using some set of criteria or standards to determine which alternative meats and recipes to use.
4. Purchase: After evaluating various meat choices deciding on which to buy.
5. Post-Purchase Evaluation: After consumption determining if meat will be purchased again.

Since the retailer isn't sure which stages the consumer is in at any one time, you can see that a smart strategy for him is to have information available for each stage of the purchase decision process. This information may be in many forms; recipe suggestions, price markers, species identifying tags, tags telling if the product has been previously frozen, or conversation, advice, suggestions, and encouragement from the man behind the counter.

From a marketing perspective it is the retailer's chore to take the customer from one stage of the process to the purchase stage. This task can be called AIDA, meaning:

Awareness:	Making the customer aware that seafood is good meat choice for her family dinner.
Interest:	Develop an interest in seafood or some specific seafood item by demostrating its benefits such as price, nutrition, ease of preparation, taste, uniqueness, or variety.
Desire:	Gain customer confidence that this seafood item is a good choice such that she will buy it and try it.
Acceptance:	Customer liked the product and wants to buy it again repeatedly.

Notice the parallel between the purchase decision process and the AIDA process the retailer must follow:



The point to be made is that the retailer must provide different kinds of information along each stage of the process so that the customer will purchase and then repurchase on a routine basis.

The post-purchase evaluation that consumers go through should not be taken lightly. Often the purchaser is not sure a right choice has been made. You should take special care to reinforce her choice by assuring her the product will be easy to prepare, that it is a good buy, or that her family will like it prepared the way you suggested. And when she returns to your store, you should inquire about the purchase and reassure her she made the right choice. If she was unhappy with the outcome don't be afraid to ask why, for it may be something she did for which you can provide a solution or it can help you decide on whether or not you might want to make changes in your product assortment or other merchandising strategies.

Enough is said here to make it clear to you that you must help the consumer solve her dinner problems. How well you do this is reflected in how well you recognize the kind of problem she has and how well you develop product and merchandising strategies to resolve them.

Much of the discussion in the rest of the chapter focuses on explaining why consumers hold these thoughts about seafood. The source for this discussion is a study of seafood consumption patterns and perception among 600 households. Keep in mind that the findings are generalization over a wide range of consumer life style and that for your particular consumer market some of the generalization won't fit your market. In most instances, however, these consumer purchase and consumption patterns are held by the majority of U.S. consumers. Thus, the information can be helpful to you to determine the kind of information a customer needs to help her in her purchase decision.

Consumer Perception of Seafood Benefits

Consumers were asked to respond to a series of statements on seafood by indicating on a five-point rating scale how strongly they agree or disagree with the statement. These statements, reported in Table 5, are divided into three categories: Health Fears, Price/Costs, and Taste. For purpose of simplification, response percentages are collapsed to: agree, neutral, and disagree.

TABLE 5: **Percentages of Responses to Statements Related to Seafood Benefits**

	Percentages		
	Agree	Neutral	Disagree
Taste:			
"The taste of fish is too strong"	13	13	74
Price/Cost:			
"The price of fresh fish is usually higher than other meats"	23	31	46
Health Fears:			
"Seafood like other meats, is federally inspected"	41	43	16
"Fresh fish keeps as long as most other meats"	23	19	58
"It is difficult to tell if fresh fish is really not spoiled"	23	25	52
"There are heath dangers in eating fish or seafood"	34	24	42
"Shellfish is better for you than finfish"	7	58	35
"I do not like to buy fish that have bones"	65	14	21
"Fish do not look very good to eat"	26	13	61

From the responses to statements in Table 5 several observations are worth mentioning.

1. Although the previous analysis indicates that families as a whole find the taste of seafood less appealing than other meats, almost three-fourths of the individuals respondents indicated the taste of finfish is not disagreeable.

2. The price statement response reinforces the findings in Table 4 on consumer price beliefs.

3. Consumers believe that seafood is federally inspected. However, there is no legislation requiring seafood to be federally inspected as is required of red meat and poultry. Although there are provisions for federal inspection of seafood processing plants, this is provided on a voluntary basis.

4. Apparently, many consumers remember the mercury scare of tuna and swordfish, as they indicate some health hazard concern toward seafood, even though they regard seafood as highly nutritious.

5. Responses to statements about appearance, spoilage, and bones are consistent with expectations.

Consumer Consumption Patterns of Seafood

This section centers on various dimensions of purchasing and consuming seafood products. A brief discussion of the findings for each question is provided.

TABLE 6: **Current Consumption of Finfish & Shellfish at Home**

"How often do you prepare finfish and shellfish for the evening meal in your home?"

	At least once a week	2-3 times a month	About once a month	A few times a year	Seldom or never
	%				
Finfish	11	20	21	25	23
				69%	
Shellfish	5	11	17	31	36
				84%	

Seventy percent of the respondents consume seafood at home less than once a month. Only a small segment of the sample can be considered moderate to heavy users of seafood.

TABLE 7: **Current Consumption of Seafood Away from Home**

"Whenever your family goes to a restaurant for the evening meal, about how often does at least one family member order fish or seafood?"

Almost Always	25%	56%
Often	31%	
Every now and then	34%	
Seldom or never	10%	

The combined value for categories "Almost Always" and "Often" is 56%, indicating that consumers tend to eat seafood away from home more frequently than they do at home.

A reason for this is suggested after additional findings are reported below.

TABLE 8: **Past Consumption of Seafood**

"When you were growing up, how often would you say your family ate fish or seafood?"

quite often	every now and then	hardly
31%	55%	14%

Table 8, compared to Tables 6 and 7, indicates that respondents apparently consumed more seafood in the past than they do today.

TABLE 9: **Future Consumption of Seafood Relative to Other Meats**

"On your next visit to the store how likely is it that you will buy each of the following kinds of foods?"

	% Defintely Will Buy	% Likely to Buy	% Unlikely to Buy	% Definitely Will Not Buy
Beef	73	21	4	2
Poultry	52	40	6	2
Canned Seafood	22	44	24	10
Finfish	7	27	40	26
Shellfish	4	17	44	35

Except for canned seafood, there is strong evidence that only a relatively small segment of the sample "definitely will buy" or is "likely to buy" finfish (34%) or shellfish (21%). This is consistent with the current consumption patterns of respondents shown in Table 5. Notice how the consumption of seafood dramatically differs from beef (94%) and poultry (92%).

Social Dimensions of Seafood

In an effort to learn of the social acceptability of seafood, consumers were asked if they would serve seafood as a main dish to their guests. Table 10 reports the findings.

Because seafood is not consumed frequently in the home, it was expected that respondents might indicate seafood was not a meat item which they would care to serve to guests. The results did not support this suspicion since nearly two-thirds did not agree with the statement. However, had the word "finfish" been inserted rather than the more general term "seafood" the results might have been somewhat different.

TABLE 10: **Social Acceptability of Seafood As A Main Meat Item For Guests**

Statement	Percentage Agree	Neutral	Disagree
"Seafood is not the kind of main dish to serve guests."	20	15	65

Consumer Preparation Patterns of Seafood

TABLE 11: **Sources of Seafood**

"Whenever you prepare fish or seafood at home, is it usually bought from the store or is it caught by a family member or friend or about half the time for each?"

usually bought from the store	49%
usually caught by family or friend	22%
about half the time for each	29%

TABLE 12: **Product Availability**

"Does the store at which you buy your seafood sell only frozen, or fresh **and** frozen seafood?"

only frozen	31%
both fresh and frozen	69%

"To the best of your knowledge is fresh seafood or fish sold in any food store or market within a convenient shopping distance from your home?"

yes	69%	no	31%

TABLE 13: **Consumer Perception of Purchasing Seafood**

Statement	Percentage Agree	Neutral	Disagree
"I would have no trouble finding a store that sells fresh fish."	65	8	27
"Stores selling fresh fish do not have a big variety to choose from."	53	24	23
"Fresh fish markets are not an enjoyable place to shop."	44	26	32

Consumers apparently have no trouble obtaining fresh fish (Table 11, 12, 13) but perceive the fresh seafood market as providing neither a wide product assortment from which to choose nor a very pleasant shopping experience (Table 13, statements 2 and 3).

TABLE 14: **Manner of Preparation of Seafood**

"In your preparation of fish or seafood at home, about how often do you prepare it in each of the following ways?"

	"almost always" or "often"	"every now and then" or "seldom/never"
Fried	77%	23%
Broiled	39%	61%
Baked	31%	69%
Casserole	14%	86%
Fish sticks, patties	24%	76%
Chowder, soup, stew	8%	92%

TABLE 15: **Consumer Perceptions of Seafood Preparation**

Statement	Percentage Agree	Neutral	Disagree
"I do not mind cleaning whole fresh fish."	26	5	69
"Cooking fish does not smell up the house any more than other meats."	28	7	65

Table 14 shows that consumers, overwhelmingly, prepare their seafood fried, compared to other preparation modes.

Consumers have a distaste for "gill and gutting", scaling, and eviscerating whole fish (Table 15). They also feel that the odor of cooked fish smells up their home. These two statements may be very strong evidence for explaining relatively low-level consumption of seafood and fresh fish, particularly where fresh seafood markets neither make a conscious effort to display fresh fish in dressed or fillet form nor offer to prepare the fresh fish to the customer's liking.

TABLE 16: **Consumer Seafood Recipe Variety**

Statement	Percentage Agree	Neutral	Disagree
"I know many different recipes prepare a meal with fish."	26	24	23

The findings in Table 14, which indicate that most seafood is fried, appears inconsistent with the response from Table 16 regarding seafood recipe variety. However, consumers may have knowledge of a variety of recipes but seldom use them. It is interesting to learn that the cookbook is the prime source for new recipe ideas; especially when the seafood industry places heavy emphasis on newspaper food sections for promotion of its seafood (Table 17).

TABLE 17: "Which of the following places do you use most for recipe ideas?"

Cookbooks	68%
Magazines	13%
Food Packages	13%
Newspapers	5%
Store Recipe Racks	1%

TABLE 18: **Product Form Preference: Frozen vs. Fresh**

"When you buy fish or seafood at the store, do you prefer to buy it frozen or fresh?"

Frozen	49%	Fresh	51%

TABLE 19: **Consumer Attitudes Toward Frozen vs. Fresh Seafood**

Statement	Percentage Agree	Neutral	Disagree
"Fresh fish is more difficult to prepare than frozen fish."	21	15	64
"Fresh fish has a better taste than frozen fish."	83	9	8
"Frozen fish is a good buy for your money."	46	38	16

TABLE 20: **Product Form Preference: Breaded vs. Unbreaded**

"When you buy fish or seafood at the store, do you generally prefer to buy it breaded or unbreaded?"

Breaded	22%
Unbreaded	78%

TABLE 21: **Product Form Preference: Whole, Dressed, Filleted**

"When you buy fresh finfish at the store, do you generally prefer to buy it whole, dressed, or filleted?"

Whole	9%
Dressed	21%
Filleted	70%

TABLE 22: **Consumer Attitude Toward Price of Whole vs. Filleted Fish**

Statement	Percentage Agree	Neutral	Disagree
"Whole fish is a better buy than filleted fish."	36	33	31

The purpose of the questions in Tables 18 through 21 was to learn of consumer preferences and attitudes toward various product forms of seafood. It is interesting that consumers are split in terms of their preference of fresh or frozen fish purchases. One might suspect that fresh fish would have preference over frozen; however, the earlier statement found in Table 4 which indicates most consumers do not believe fish keep as long as other meats suggest this may dampen the preference for fresh fish. Consumers tend to believe fresh fish tastes better than frozen and is easier to prepare. However, fresh fish tends to be perceived as more expensive than frozen fish. As one might expect consumers prefer unbreaded over breaded (however, the convenience of breaded portions may offset, in part, a taste or psychological preference for unbreaded) and prefer filleted over dressed and whole fish.

The finding that consumers prefer filleted fish is not surprising. However, the response in Table 22 that consumers lack consensus agreement as to the best buy between whole, dressed and filleted fish might explain why many fresh seafood markets continue to display fresh finfish in the round or only gill and gutted form. Retailers are able to price whole fish much less per pound than filleted fish since the consumer is purchasing the head, fins, and frame. Then the consumer requests that the retailer fillet the fish for her so that she will not have to discard them at home.

Consumer Perceptions of High-Volume Users of Seafood

Respondents were asked to select from among 72 adjectives those which they felt might describe a person who ate seafood often. The purpose of this question was to learn if there existed any preconceived idea in the consumer's mind of a person who was known to be a heavy user of seafood. The adjectives selected for inclusion in this question involved both derogatory (failure, sickly, sloppy) and laudable (intellectual, alert, healthy) terms. Table 23 below lists those adjectives which were recorded by 25% or more of the respondents.

TABLE 23: **"Listed below are several words that might be used to describe what someone might look like or how someone might live who eats seafood often. Check those words which you feel fit that person."**

Response Rate	Descriptor Term		
25–35%	Thin	Efficient	Successful
	City People	Independent	Family-minded
	Religious	Intellectual	Sociable
	Conservative	Country People	Thrifty
35.01–55%	Alert	Energetic	Slender
	Intelligent	Catholic	
	Wide Interest	Active	
55.01–over	Outdoorman	Healthy	
	Nutrition-minded		

Apparent in the findings in Table 23 is a strong positive association with heavy seafood users, particularly nutrition-related descriptor terms such as "nutrition-minded" or "healthy". This is consistent with the findings in Table 3 which also reported that consumers perceive seafood as a relatively highly nutritious meat item.

Conclusion: Consumers Attitude Toward Seafood

The findings from this study suggest that although consumers do not consume seafood in the volume which they do red meats and poultry they do perceive it as a nutritious and relatively economical meat item. It should not be argued that more seafood, particularly fresh seafood (which is preferred over frozen), would be consumed if it were more readily available. Most consumers reported that they could easily patronize stores that carried fresh or frozen seafood. What appeared to be the largest obstacle impeding more frequent purchase of seafood was the consumers' negative reaction to preparation and purchase. Part of this might be due to the merchant offering a limited product assortment in terms of species and product form as well as displaying the merchandise so poorly that the consumer reacts negatively to the environment in which the product is sold (odor, lighting, cleanliness, atmosphere). The important observations that the consumer (a) feels seafood "smells up" the house, (b) doesn't care to bother with whole fish, and (c) has a limited use experience with different methods of preparing seafood (even though she "knows" many different seafood recipes), can contribute much to explaining relatively infrequent seafood consumption. This is partially substantiated by the contrast between "in-home" and "restaurant" seafood consumption patterns (Table 7).

SOCIOECONOMIC DIMENSIONS OF SEAFOOD CONSUMPTION

This section of the paper approaches consumer behavior toward seafood in the more traditional manner of reporting those socioeconomic variables for which significant deviations in seafood consumption patterns exist. Six socioeconomic variables were utilized: family size, proximity to coast while growing up, age, education, occupation, and income. Four consumption variables were analyzed: seafood consumption in restaurants and in-home consumption of finfish, shellfish, and canned seafood.

Table 24 indicated for each consumption variable those socioeconomic variables for which significant deviations in consumption were reported (p .05). Comprehensive tables for each socioeconomic consumption variable combination are provided in the appendices.

TABLE 24: **Significant Socioeconomic Variable**

Variable	Restaurant	Canned Seafood	Shellfish	Finfish
Family Size	X	X		
Geographic	X		X	X
Age			X	
Education	X	X	X	
Occupation				
Income		X	X	

Further analyses of response distributions for each socioeconomic variable reveal the following deviations in consumption:

1. The larger the family the less likely seafood would be ordered in a restaurant by at least one member of the family;

2. People living near (within 50 miles) a seacoast while growing up consume seafood in the home more frequently than those who did not;

3. Older people (56 and above) consume shellfish more frequently in the home than other age groups;

4. People with more education and income consume shellfish and canned seafood in the home and seafood at restaurants more often than households with lower educations and income;

5. People in blue-collar jobs consume less seafood in restaurants than people in professional or executive positions.

Two major observations can be made from the information presented above. **First**, man is a product of his environment, particularly in his formative years. If during this time an individual, because of proximity to a coastal area, develops favorable attitudes toward seafood, his consumption patterns in later life remain favorable to seafood.

Second, as an individual improves his status in life, acquires more education, secures a better job and increased income, more favorable behavior toward seafood occurs. Greater restaurant consumption of seafood occurs as well as increased consumption of shellfish in the home. It seems that the more generalized variable of **social class** is operating here. Individuals occupying positions in higher social classes are the primary consumers of shellfish in the home and all seafood in restaurants.

These observations offer the marketer some important benchmarks on how to approach his marketing strategy in terms of the status of his product in various socioeconomic market segments.

What Now?

How important are these findings about consumers to your own local market? The findings don't say that people don't like fish and shellfish. Quite the contrary! In a similar study it was learned that over 80% of those interviewed like fish and shellfish. However, the study says that they tend to eat it away from home more than in the home. Why? In part it is because the housewife has a limited experience with seafood. A perceptive and aggressive merchandiser would turn this problem to his advantage by offering the customer information on **various ways to prepare** seafood as well as offer him/her **many** species to chose from as well as many product forms such as pan dressed, fillets, portioned, steaks, and gilled and gutted fish. By encouraging the housewife to try different types of seafood as well as simple to preapre gumbos, soups, chowders, casseroles, etc., you strengthen her confidence in working with a meat item which she has been unfamiliar with. Also, by suggesting seafood in casseroles, soups, and gumbos you demonstrate that like beef, fish can be used as an extender food. Thus, she can provide a high nutrition food at a very reasonable cost.

The study on consumers probably cannot help you learn too much about your specific customers. Each city and often within each city there are market segments which behave differently in the market place. As we have seen, the income level, education, childhood experiences in the family, and family life cycle all contribute to patterning consumer behavior. You, the retailer, must take it on yourself to learn about the unique characteristics of your market.

Remember, in learning about potential customers, you are interested in answering three basic questions: (1) Who are they?—this can easily be determined through various city, county, and census data; (2) Why do they behave toward food, meats, particularly seafoods, the way they do?—this is much more difficult to measure accurately; but the early sections of this chapter are designed to help analyze your potential market; and (3) Why do they prefer shopping at a given food store? Particularly a given seafood store or department?—this we have come to label consumer patronage motives. These facts are not too difficult to come by if you are inquisitive and willing to ask many of the consumers in your potential market why they like certain food stores more than others. If you can determine these who's and why's, then this important market information can be used wisely to guide seafood merchandising activities.

One final point. People enjoy shopping for seafood because of the limited experience they have with it. Consequently a clean, cheerful and friendly atmosphere; a knowledgeable store staff, a wise assortment of free, easy to prepare recipes, and a good variety of fresh, frozen, smoked, and canned seafood can reinforce this shopping experience to the point where you have cultivated a patronage loyalty that means repeat business week after week. Just as people identify with certain groups of people or ways of life they also identify with certain types of retail stores. If you make her successful at the dinner table she will make you successful at the bottom line of the profit and loss statement!

CHAPTER III
RETAIL FACILITY DESIGN

This chapter focuses on how a retailer might design his merchandising area and work space to maximize total revenue and to minimize operating costs. Here you will find a variety of approaches to a retailer's concern about facility and equipment floor plan, product flow configuration from receiving dock to display case, lighting, and odor control. All these concepts and innovations can be applied to new or remodeled facilities, to supermarket fresh seafood display counters, and to traditional, independent seafood markets.

HISTORY

If you have investigated how fresh seafood is merchandised at the retail level in the United States, you would be nearly correct in concluding that retail methods have changed little in the last seventy-five years. It is not grossly exaggerated to state that the retail fresh seafood industry has yet to enter the twentieth century. That is a pretty provocative statement when you consider we are rapidly approaching the twenty-first century! You can travel to almost any community in the United States and find that, with the exception of a small handful of retailers, fresh seafood is poorly processed, handled, stored, displayed and promoted. Surprisingly, most retailers are successful. Despite inadequate merchandising efforts, seafood retailing is profitable.

Most supermarkets, if they ever carried fresh seafood, have now removed this item from their product assortment. In some instances consumer demand has not warranted the investment required to market this product category adequately. In other cases, and these seem to be the more prevalent, there was insufficient management interest–at both corporate and store management levels–in fresh seafood. Interest is a prerequisite to any business venture! Apathy among meat cutters toward handling fresh seafood, the need for separate workroom facilities, special equipment investment requirements, strict handling and processing procedures to assure product quality and sanitation, and unique merchandising techniques seemed to be formidable obstacles for management to overcome only for the sake of providing an item that showed a consumer consumption level of less than one-tenth that of red meat and poultry. (In 1972, U.S. per capita consumption of red meat–beef, veal, pork, and lamb– was 116 lbs.; poultry–chicken and turkey–was 52 lbs.)

Recently, however, a few supermarkets, particularly on the West Coast and in the Great Lakes area, have returned to marketing fresh seafood. In the process seafood departments were set up as distinct units, separate from the red meat department; each was provided with its own "shop identity"–separate market management and corporate level supervision. A major force for this revitalized interest lay at the core of competing through the marketing strategy of the "shop concept". Following the shop concept, a supermarket comprises a variety of shops–the bakery, deli, and wine shops, for example. These shops are the result of efforts on the part of supermarket managers to differentiate their facility from competitive establishments. The uniqueness attained affords a firm more drawing power that, in turn, leads to greater customer loyalty, revenue, and hopefully profits. The establishment of a seafood counter has been a natural move toward firm differentiation. With the reintroduction of the seafood shop also came the seafood concept.

EXISTING FACILITIES

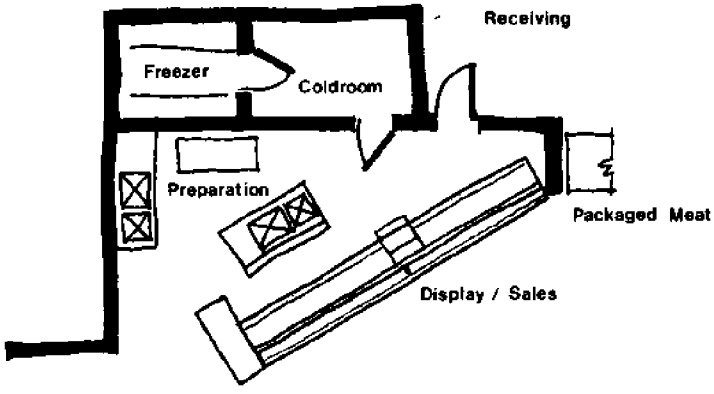
Fresh seafood facilities vary greatly in size, configuration, types of services provided, and product assortment offered.

The following examples depict a variety of retail fresh seafood facilities in operation in supermarkets, independent retail markets, and market combination businesses in the United States.

Supermarkets

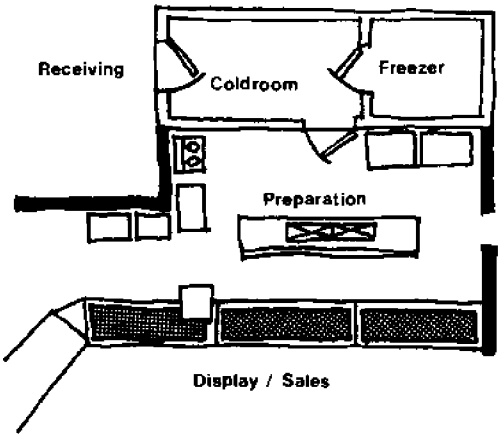
Fresh seafood centers in supermarkets vary in size from small refrigerated cases to high volume operations that are virtually large enough to stand alone as independent seafood markets.

Some supermarket firms are trying self-service counters for fresh seafood. These installations require the product to be placed in containers, overwrapped, weighed, priced, and placed inside the self-service case. The customer benefits by being able to personally select his purchase, while the firm benefits by being able to serve more customers with less personnel and reduced labor costs.



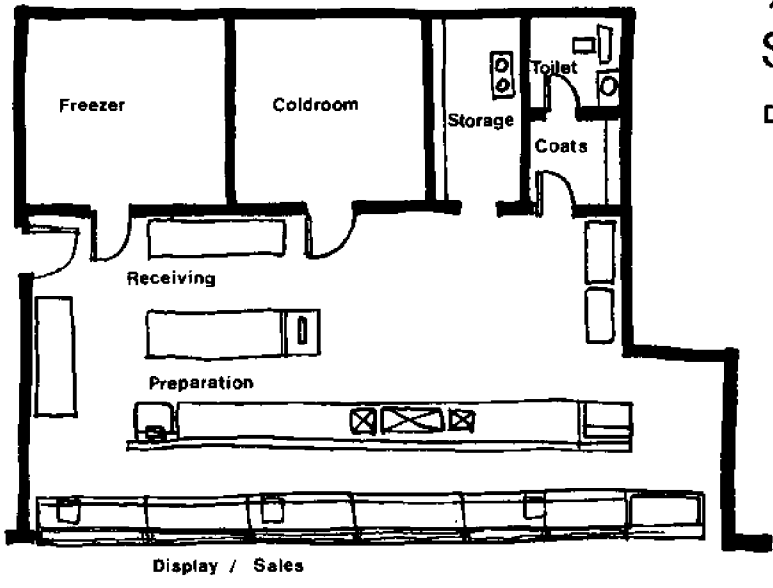
Supermarket

Design for Corner



Supermarket

Design for Wall Section

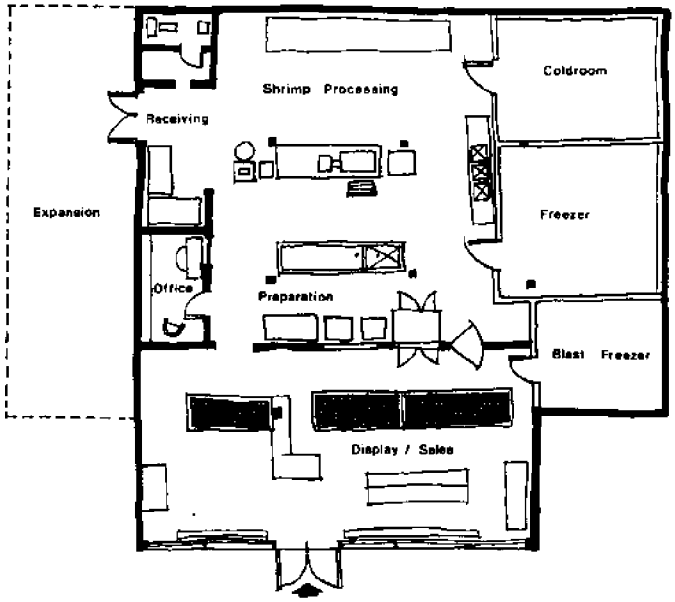


Supermarket

Design for Full Wall

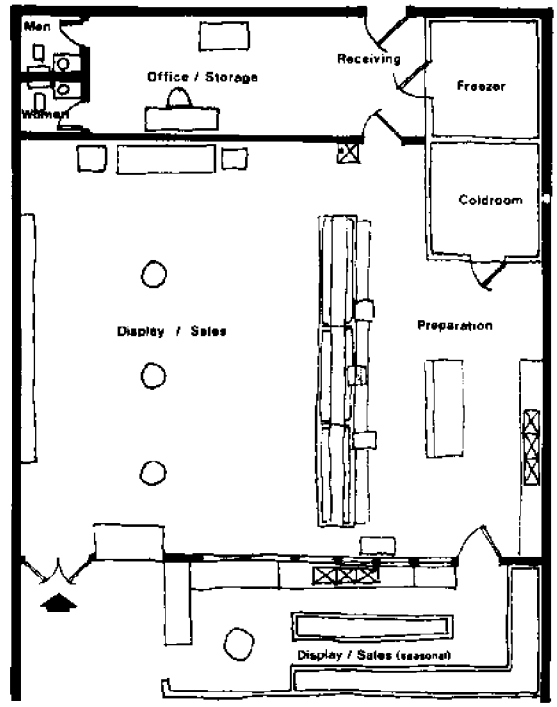
Independent Retail Market

The independent retail market typically provides a relatively limited product assortment that consists of species available locally. It normally provides few complementary items and little promotional support to enhance its potency of assortment. This merchandising approach severely limits a merchant's market potential and often inhibits his chances to make a handsome rather than marginal profit. The illustrations provided show retail markets that have become very profitable as a result of (a) developing a high volume shrimp wholesale/retail service; (b) expanding the product assortment to appeal to a wide customer market; and (c) offering a wholesale/retail seafood market plus a fast food and gourmet department. In all these situations the merchant relied on more than the basic fresh seafood retail market to generate revenue.



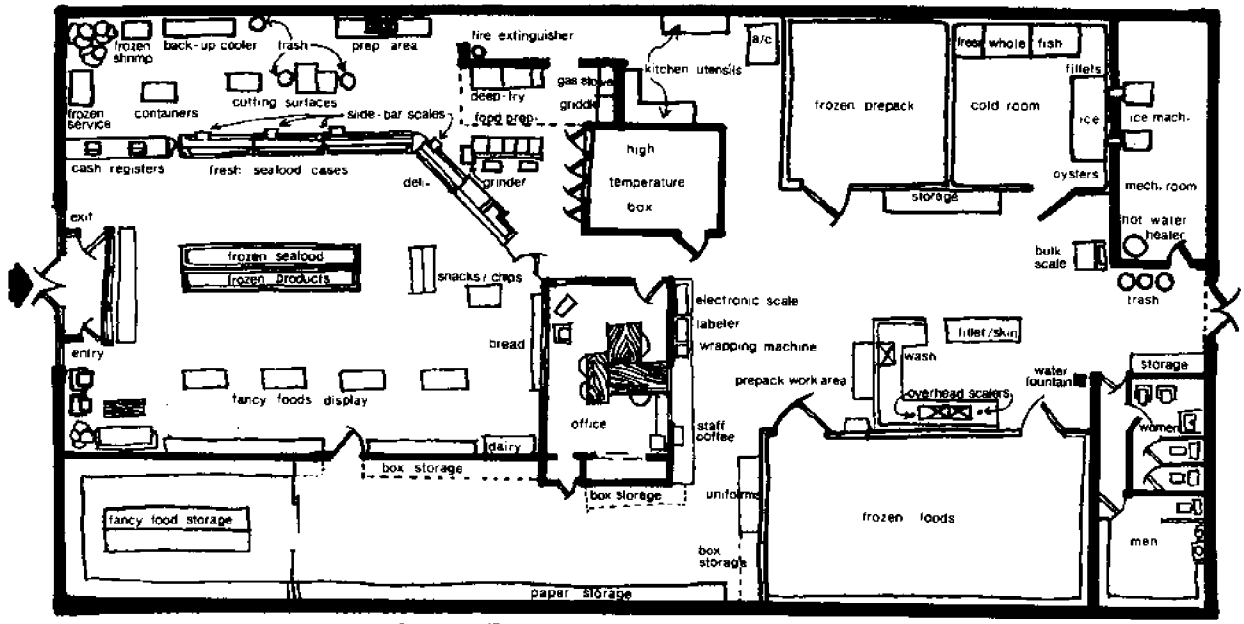
Independent Seafood Market

Market with High Volume Shrimp Wholesale-Retail Service *(a)*



Independent Seafood Market

Market with Expanded Product Assortment *(b)*

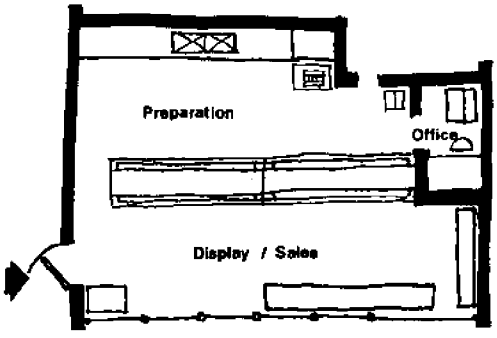


Independent Seafood Market 0 10

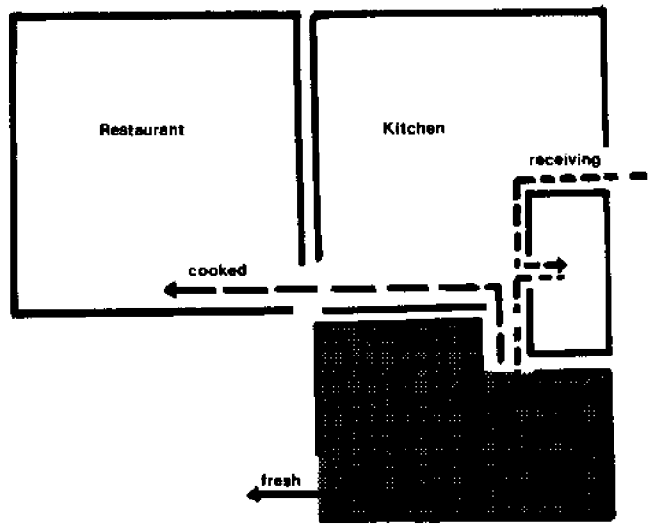
Market with Fast Food and Gourmet Department *(c)*

Market Combination Business

In some situations fresh seafood markets have been developed in conjunction with restaurant and short order establishments. The seafood market illustrated below retails fresh seafood over the counter. Also, the restaurant facility below prepares its menu selections by drawing from the fresh seafood market. This procedure ensures fresh products for the restaurant customer as well as for the market customer. Work duplication is avoided because seafood market personnel prepare the fresh product both for the kitchen and for retail customers. There is investment saving because the cold room, freezer compartment, and processing areas are shared.



Seafood Market Design

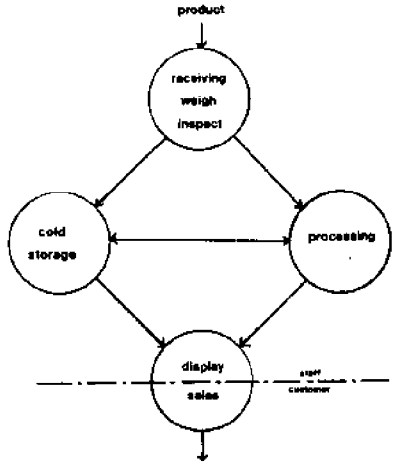


Restaurant Design

FUNCTIONAL LAYOUT

In a fresh seafood market, the arrangement of the various work components should maximize labor efficiency. This arrangement should minimize product flow conflicts that may arise as the fresh product proceeds from entry at the receiving docks to the final state of being wrapped at the consumer counter.

Functional layout refers to the planned and/or implemented arrangement of work components used to carry out a given task. A functional layout should determine logical work stations that will minimize handling procedures, thereby allowing seafood marketing personnel more time to directly serve the customer.



Schematic layout of work components

MODEL SUPERMARKET LAYOUT

The optimum location for a supermarket seafood market seems to be at a corner. A corner location provides access from two aisle directions and allows stocking from the rear.

The market facility located at a corner is oriented for visual awareness from both aisles. This allows graphics to be displayed "marquee-style" and to be visible the length of both main aisles.

By extending the ceiling of the seafood market over the aisle space and lowering it to an eight-foot height, problems of reflection from the general lighting of the supermarket are eliminated.

Proper lighting is achieved by recessed down lighting over work stations in the processing area. This system places light on working surfaces where it is needed. Accent lighting for graphics is provided by wall washers and adjustable spots. The product is illuminated by the refrigerated case lights.

Surface areas not used for storage provide additional opportunities for secondary graphics such as advertising specials, customer services, etc.

Designing the work area so that the customer can see the merchant processing his seafood purchase is a desirable feature which few markets implement. This benefit is provided in the model plan on page 20 by the unique location of the work area. In this plan the merchant takes the product into the preparation area and faces the customer while processing the food.

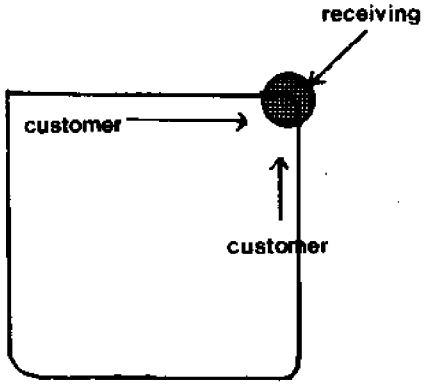
In facility design, opportunities for customers to observe seafood processing should be encouraged. Consumers enjoy seeing "artists" at work since for most buyers seafood preparation is a unique experience. Customer observation will generate an attitude of "keep it clean" among personnel at the processing stations.

The graphics of the facility should be uniform, from wrapping paper to the printed advertisements used in the daily newspaper. The graphic image may focus on a theme or name such as "TODAY'S CATCH" in order to imply freshness and methods of obtaining the desired product.

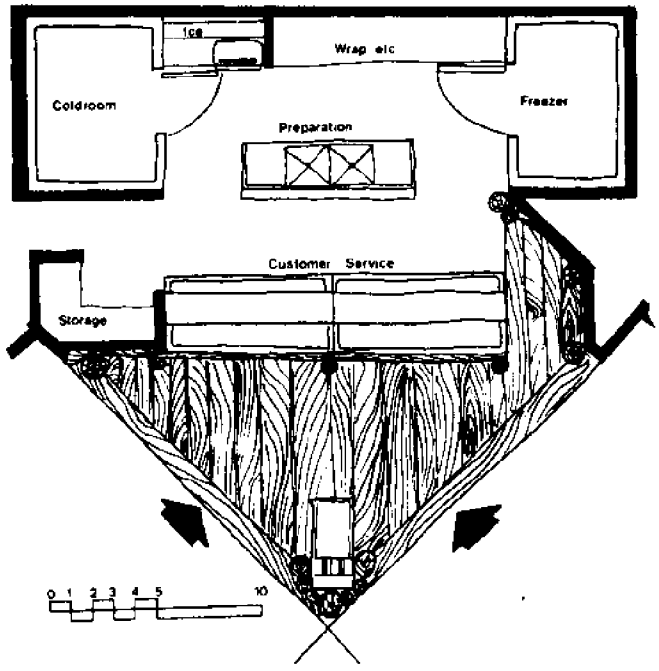
Notice that with this model plan, wood planking is placed on the floor to remind the customer of "walking on a pier". The floor material is another attempt to relate the consumer to a marine environment.

Support items such as recipes and handouts are encouraged to expand customer knowledge of how seafood may be prepared. These items must be considered during the design stages in order to determine where they belong and how they should be displayed.

These data charts indicate quantity and cost of equipment used in this model study of a supermarket.



Corner Location for Maximum Access



Floor plan for supermarket model study

These data charts indicate quantity and cost of equipment used in this model study of a supermarket.

Estimated equipment cost for supermarket model study

EQUIPMENT COST

ITEM	QUANTITY	UNIT COST	TOTAL
6' x 8' Walk-in Cooler	1	$3,000.00	$3,000.00
6' x 8' Walk-in Freezer	1	3,000.00	3,000.00
Ice Machine - 1300 lb/24 hour	1	1,560.00	1,560.00
Refrigerated Cases — 8' Length w/Solid Ends	2	2,185.00	4,370.00
Wall Mounted Sanitizing Sprayer	1	81.00	81.00
Heavy Duty Mobil Sprayer (600 psi, 200 GPM)	1	480.00	480.00
Stainless Steel Sink & Counter Unit — 8'.	1	600.00	600.00
Electronic Scale	1	2,000.00	2,000.00
Meat Lug Dolly w/lug (300 lb. Capacity)	1	65.00	65.00
Misc. Items	1	500.00	500.00
TOTAL			$15,656.00

Estimated construction costs for supermarket model study

FACILITY CONSTRUCTION COST

ITEM	QUANTITY	UNIT COST	TOTAL
Ceiling			
Baked Enamel Metal Panels	494 sq. ft.	1.85/sq. ft.	913.90
Air Curtain	20 1. ft.	145.00/1. ft.	2,900.00
Sprinkler System	4 heads	50.00/head	200.00
Lights			
Recessed Cans	9	22.00/each	198.00

Estimated construction costs for supermarket model study -- continued

ITEM	QUANTITY	UNIT COST	TOTAL
Fluorescent Wall Washer	9	89.00/each	267.00
SUBTOTAL			$4,478.90
Walls			
Baked Enamel Metal Panels	648 sq. ft.	1.85 sq. ft.	1,198.80
Shelves			
Stainless Steel	15 1.f.	12.00/1.f.	180.00
Plastic Clad	21 1.f.	1.00/1.f.	21.00
Stainless Steel Counter top/Base	8 1.f.	67.00/1.f.	536.00
SUBTOTAL			$1,935.80
Floors			
Concrete	5.5 c.y.	1200/00 c.y.	660.00
Finished (Hardened w/Integral Topping)	332 sq. ft.	.42/sq. ft.	139.44
Wood Decking	162 sq. ft.	1.25 sq. ft.	202.50
Floor Drain	1	95.00/each	95.00
Coved Concrete Bases	81 1.f.	3.00/1.f.	243.00
Plumbing Fixtures			
Wall Hung Lavatory	1	250.00/each	250.00
Rough in for Equipment	3	100.00/each	100.00
SUBTOTAL			$1,889.94
Miscellaneous (10%)			830.50
TOTAL			$9,135.14

MODEL INDEPENDENT RETAIL LAYOUT

Although any number of layouts can be devised for a retail business, there appears to be a strong preference among newer seafood retailers for floor plans in the shape of a rectangle. Typically the short dimensions—or the ends of the rectangle—comprise the front and back of the retail facility.

A major reason for the "narrow front" design is the high cost of "front footage" commanded by prime commerical real estate—particularly suburban shopping center locations which parallel major boulevards. A second factor is that a minimum number of corners in a structure mean less dollar outlay for construction.

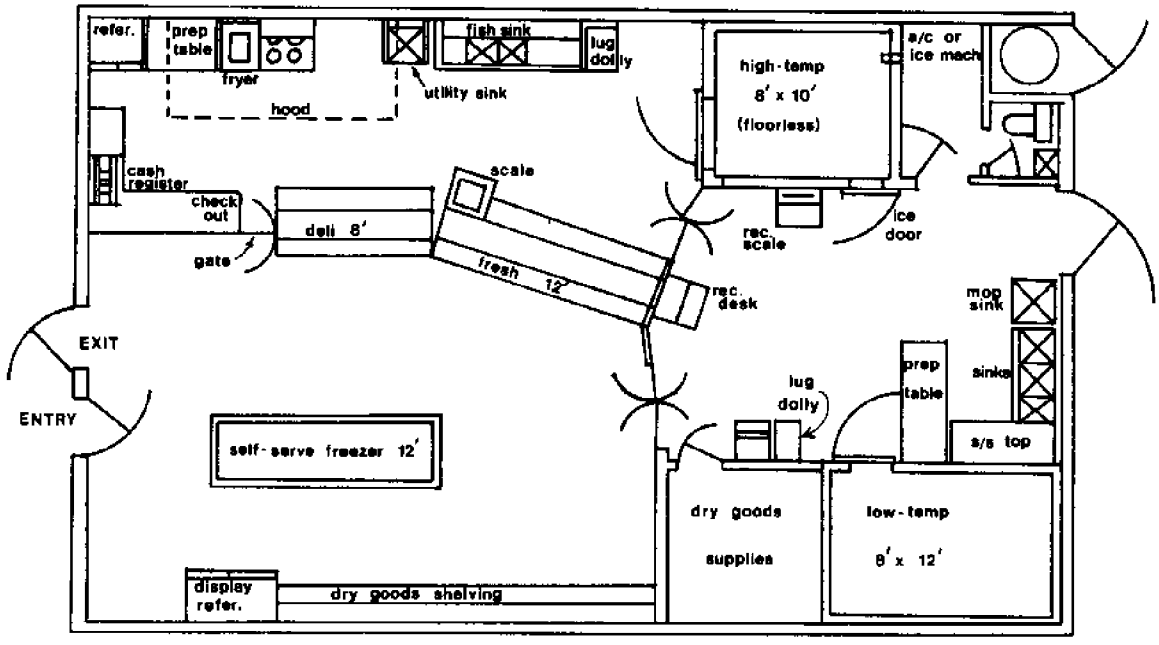
The model floor plan presented here is typical of a frontage-type location in a shopping center. In formulating the model floor plan, a primary objective was to determine the **minimum** amount of floor space required for an efficient, **full-service*** seafood retail business. Escalating utility and lease rates make such "minimum space planning" an important factor and the prospective seafood retailer is well advised to carefully combine efficiency and compactness when planning his store layout. A retailer should be mindful also, that a 55 cent per square foot monthly rent applies the same to the floor in the back closet as it does to the floor in front of the display case. It makes good sense, then, to allow as much floor space as possible for the productive selling area—generally about 2/3 of the total space.

Despite the relatively small dimensions of the model floor plan, up to 400 retail customers a day could be serviced properly by 4 employees. The floor plan anticipates an equipment and construction investment of $50,000 (1975 costs), including $35,000 for equipment, $15,000 for construction and decorating costs (above construction allowables granted by the lessor). Add to this $7,500 for beginning inventory, and another $7,500 for anticipated operating capital, permits and fees, initial advertising expense, and other misc. start-up expenses. This brings the total initial investment to $65,000.

Assuming gross margin of 37½% on selling price, the 1,500 square foot model would require approximately $15,000 in monthly sales to break even. This level of sales could sustain 1 manager and 3 full-time employees, cover all operating expenses, and yield approximately 10% return on the $65,000 investment** Maximum monthly sales which could be handled comfortably by a staff of 4 are estimated to be $30,000, or roughly $7,000 per week.

*Full-service refers to a retail product offering consisting of live, fresh, frozen, and canned seafoods; as well as cooked ready-to-eat seafood delicatessen items, and prepared seafood speciality goods (sauces, heat-and-eat gumbo, stuffed crabs, shrimp egg rolls, etc.)

**Analysis based on locating seafood business in a major city with a population of 250,000, investment requirements and breakeven sales could be higher in some states, and can vary between cities.



A minimum floor-space layout for a seafood speciality shop

Major Equipment List for a Minimum Floor-Space Full-Service Retail Seafood Speciality Shop

Preparation/Storage Area

Fixed Equipment:

Hi-Temp Walk-in Cooler, floorless, 8' x 10', complete
Lo-Temp Walk-in Freezer, (-10), 8' x 12', complete
Ice Maker, 1,000 lbs./24 hrs., flake type ice
Sink, triple, 14 ga. SS with counter, NSF
Sink, SS mop
Heater, Water, 80 gallon gas
Desk, Receiving, wall mounted

Portable Equipment:

Table, Boning, 4' x 2½', NSF (2)
Overwrap Machine, 3-roll console
Scale, Provision, 100/lbs. x 4 oz.
Fish Scaler, electric, hanging type
Shelving, Dry Goods, metal, 48W x 85H x 24D (2)
Dunnage Rack, Freezer, 30W x 48L x 12H (2)
Shelving, Frozen Goods, GS 4-tier 48L x 24D (2)
Chill Tank (ice bin), fiberglass, 42W x 48L x 34H
Runner-Type Lug Cart, 60 lug, NSF
Shelf-Type Cart, 8-shelf, NSF
Lug Dolley, 2-lug, NSF
Shovel, Ice, SS, NSF

Optional Equipment:

Chicken Dolley, with handle
Air Curtain, Freezer Door
Air Curtain, Rear Door
Hi-Pressure Sanitizer
Time Clock

Selling Area

Fixed Equipment:

Service Display Case, refrigerated, 12', complete
Service Display Case, refrigerated, 8', complete
Self-Service Display Freezer, coffin type, 12' complete
Fish Sink, 96 inch, 2 station, complete, NSF
Utility Sink, 24" x 24", S/S NSF

Portable Equipment:

Lug Dolley, 2-lug, NSF
Scale, Electronic
Cash Register, Electronic, minimum function
Paper Cutter, 18" (2)
Deep Fat Fryer, 2-basket, commerical
Preparation Table, 4' x 2½', NSF
Duplex Refer/Freezer, 36"
Range, 30", NSF, commerical
Display Refrigerator

Optional Equipment:

Lobster Tank
Retractable Hose Reel and Spray
Steamer, commercial
Floor Safe
Take-A-Turn
Printer for 1 Scale
2nd Electronic Scale
2nd Self-Service Display Freezer, coffin type, 12'
Ice Maker, Cuber, 200 lbs./24 hrs.
5 h.p. Disposer
Micro-wave Range, 24"

EQUIPMENT

The types of equipment used in a fresh seafood market depend primarily upon the kinds of processing activities to be performed. For instance, if a seafood market buys all its products in fillet form and does not provide custom processing of whole fish, all that would be required would be a cold room and freezer space, a refrigerated display case, and a minimal wrapping area with a sink.

The more customer service a firm provides, the more equipment is needed. In addition, space requirements for storing the equipment and for processing facilities will increase as customer service grows.

Minimum Seafood Market Facility

The minimum seafood market facility is defined as the smallest set of seafood equipment, work space, and support items necessary to retail seafood products. This facility is designed for relatively low volume operation.

Self-Service Facility

A self-service facility has a configuration similar to the minimum facility. The consumer, however, must serve himself by selecting overwrapped seafood products placed in an open display case similar to that found in the meat market section of food stores. This facility has a closed processing area equipped with wrapping and labeling machines or, in the case of some food chain stores, is supplied from a central processing facility.

Optimum Seafood Market Facility

The optimum seafood market facility is defined as that configuration of equipment, work space, and support items that will handle efficiently a relatively large retail volume by supermarkets and independents. For independent business, this facility is designed to incorporate ancillary operations such as restaurant or wholesale businesses. The minimum facility is not designed to encompass large volume sales nor ancillary business.

ATMOSPHERE RECOMMENDATION

Graphics

The primary emphasis of the seafood market is on retailing fresh seafood. Store graphics must reinforce this emphasis.

Graphics used by a seafood market should be clearly visible long before the product itself is visible to the customer. The initial graphic should be visually appealing—it should stimulate thinking or create questions in the mind of the customer.

When the shopper gets close enough to the seafood department to identify it separately from adjacent departments, the initial graphic loses its impact and a secondary set of graphics becomes important. This set of graphics should impart specific information about the seafood department:

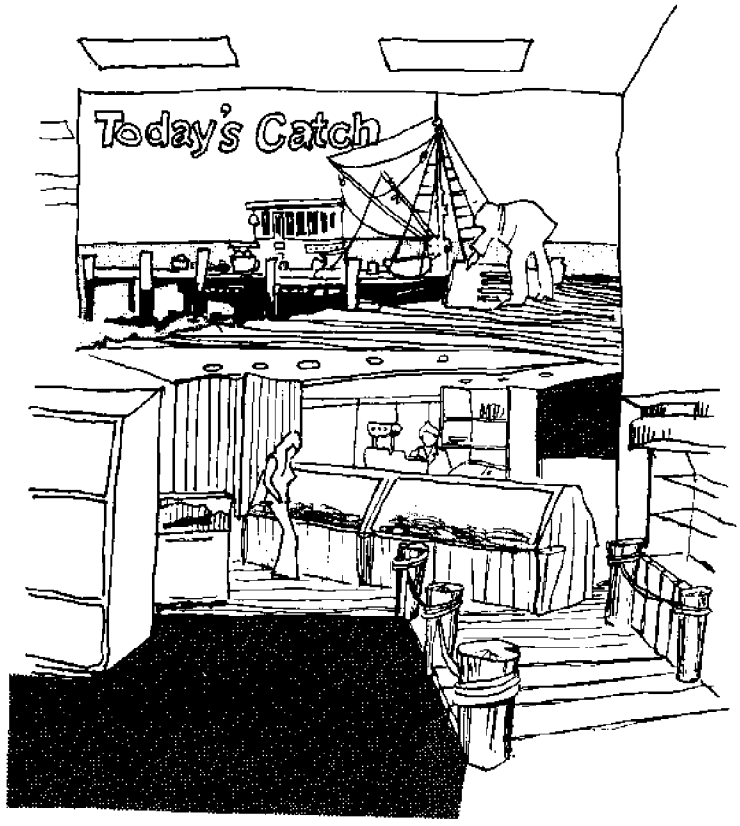
Advertised specials
Customer services offered
Hours open for service
Product support information

By now the consumer has had a chance to think about fresh seafood and to develop a desire

Component Requirements by Facility Type and Size

	Supermarket				Independent				Task Area							
	Minimum	Optimum	Super	Self Serv.	Minimum	Optimum	Specialty	Self Serv	Prep.	Sales	Cook	Ancillary	Electrical Requirements	Plumbing Requirements	Height	Length	Depth
Walk-in Cooler (48 sq.ft.)		*		*					*				115 V in Box 230 V Compressor	Runoff from Condenser	7'6"	6'0"	8'0"
Walk-in Cooler (60 sq.ft.)			*										115 V in Box 230 V Compressor	and 4" Floor Drain	7'6"	6'0"	10'0"
Walk-in Cooler (100 sq.ft.)						*	*		*				115 V in Box 230 V Compressor	Runoff from Condenser	7'6"	10'0"	10'0"
Walk-in Freezer (48 sq.ft.)		*		*					*				115 V in Box 230 V Compressor	and 4" Floor Drain	7'6"	6'0"	8'0"
Walk-in Freezer (60 sq.ft.)			*						*				115 V in Box 230 V Compressor	Runoff from Condenser	7'6"	6'0"	10'0"
Walk-in Freezer (100 sq.ft.)						*	*		*				115 V in Box 230 V Compressor	and 4" Floor Drain	7'6"	10'0"	10'0"
Frozen Case Back-up Freezer	*									*			115 V 15 Amp		7'0"	3'0"	3'0"
Refrigerated Back-up Cooler	*									*			115 V 15 Amp		7'0"	5'0"	3'6"
Flash Freezer							*		*				115 V in Box 230 V Compressor	Runoff from Condenser	7'6"	6'0"	8'0"
Hi-Temperature Box							*				*		115 V in Box 230 V Compressor	and 4" Floor Drain	7'6"	6'0"	8'0"
Refrigerated Display Case(Lin.ft.)	5	16	24	8		24	24+			*			115 V in Case 230 V Compressor	1" Drain 1/4" Supply	4'6"	8'6"	3'6"
Frozen Display Case (Lin.ft.)	4	8	8	4		8	8+			*			115 V in Case 230 V Compressor	1" Drain	7'0"	8'6"	3'6"
Lobster Tanks		1	2			2	2			*			115 outlet	Hose to Fill/Floor Drain	6'0"	6'0"	2'6"
Ice Maker (1200 lb/24hr.)		*							*			*	230 V 9.3 Amps	1/4" Supply 3/8" Drain	5'0"	5'0"	2'6"
Ice Maker (1800 lb/24hr.)			*						*			*	230 V 15.1 Amps	1/4" Supply 5/8" Drain	6'0"	3'0"	2'6"
Ice Maker (2400 lb/24hr.)						*	*		*			*	230 V 20.0 Amps	1/4" Supply 5/8" Drain	6'0"	3'0"	3'0"
Dry Goods Display (sq.ft.)		8	8			30	30+			*					7'0"	8'0"	1'0"+
Dry Goods Storage (sq.ft.)						200	200+					*					
Filleting Table							*		*						3'0"	8'0"	2'6"
Sealing Table							*		*						3'0"	8'0"	2'6"
Stainless-steel Work Top(Lin.ft.)	4	4	6	4		6	6+		*	*					8'0"	8'0"	2'0"
Sinks	1	2	3	1		3	3+		*	*	*			1/2" hot & cold supply 2" drain	3'0"	2'0"	2'0"
Disposal Units	1	1	1			1	1+		*	*			115 V	3/4" Supply 2" Drain	20" dia. opening		
Trash Receptacles	1	2	3	1		4	4+		*	*	*				30" 20"&24" dia.		
Overhead Scalers			1			1	2+		*				115 V				
Automated Scaler							*		*				230 V 15 Amps	3/4" Supply 2" Drain	4'0"	3'0"	3'0"
Bulk Weighing Scale						*	*		*			*			3'0"	3'0"	3'0"
Dollys/Carts		2	2			2	2+		*						5'0"	2'6"	2'0"
Shrimp Sorter							*		*				115 V	1/2" Supply 1" Drain	7'6"	17'0"	3'0"
Shrimp Processor							*		*				230 V 3 Amps	3/4" Supply 2" Drain	3'6"	3'6"	2'6"
Electronic Scales	1	1	2	1		2	2+		*	*			115 V		2'0"	2'0"	2'0"
Labeler		1	1	1		1	1		*	*			115 V		1/6"	1'0"	1'0"
Automatic Wrapper		1	1	1		1	1		*	*			115 V		2'6"	2'0"	2'6"
Paper Outer-wrap Dispenser	1	2	3			3	3		*	*					14"	24/30"	10"
Paper Towel Dispenser	1	1	2	1		4	4+		*	*	*	*			1'6"	1'6"	6-1/2"
Grinder						*	*		*		*		115 V		2'0"	2'6"	1'6"
Fire Extinguisher	*	*	*	*		*	*		*		*				3'0"	9" Dia.	
Stove Burners						2	2+				*			Gas Connection	1'0" square ea.		
Deep Fat Fryers							*				*		230 V		1'0"	2'0"	2'0"
Cook Area Work Top (Lin.ft.)						8'	8'+				*				3'0"	6'0"	2'0"
Band Saw							*		*				115 V		3'0"	2'6"	2'0"
Overhead Hand Sprayers	1	2	2	1		3	3+		*					1/2" Supply	mount on ceil.		
Wash-down Sanitizing Sprayer	*	*	*	*		*	*		*			*	115 V	1/2" Supply	2'0"	2'0"	1'6"
Air Curtain		*	*			*	*			*			230 V		as required.		
Exhaust Grille	*			*					*	*					as required.		
Sales Counter with Storage(Lin.ft)						6	6+			*					3'0"	5'0"	2'0"
Cash Registers		1	1			1	1+			*			115 V		2'0"	2'0"	2'0"
Telephones		1	1			2	2+			*		*	Telephone Connection		wall or desk		
Desk		1	1			1	1					*	115 V duplex outlet		2'6"	5'0"	2'6"
Chairs						2	2+					*			3'0"	2'0"	2'0"
File Drawers						4	4+					*			1'0"	1'6"	2'6"
Coffee Area						*	*					*	115 duplex outlet		3'6"	4'0"	2'0"
Water Fountain						*	*			*		*	115 V	1/2" Supply 1" Drain	3'6"	1'6"	1'6"
Employee Lockers						*	*					*			6'0"	1'0"	1'0"

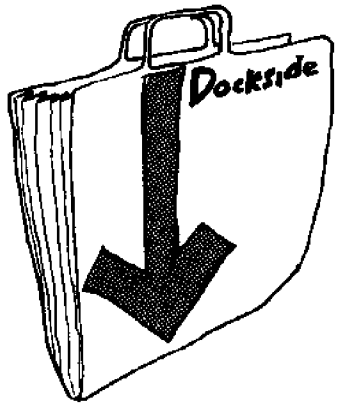
Seafood market component requirements



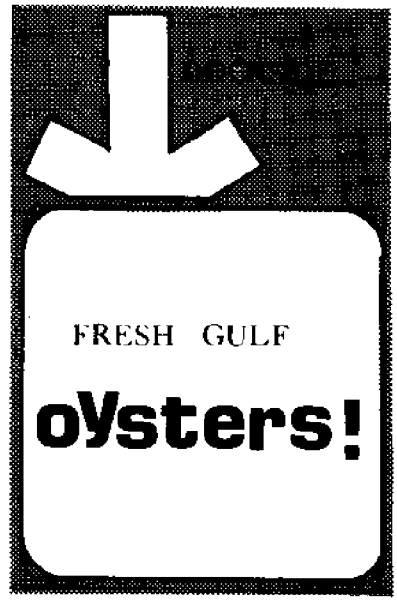
for it. He stands in front of the display counter and focuses primarily on the product displayed in the case.

Techniques used to reinforce a total graphics image could include:

Card hangers placed on aisle shelves in other food sections to remind the shopper of the fresh seafood market.
Seafood wrapping paper and containers coordinated with the overall graphic scheme.
Distinctive wearing apparel for employees operating the seafood market.



Shopping Bag



In-store point-of-sale poster

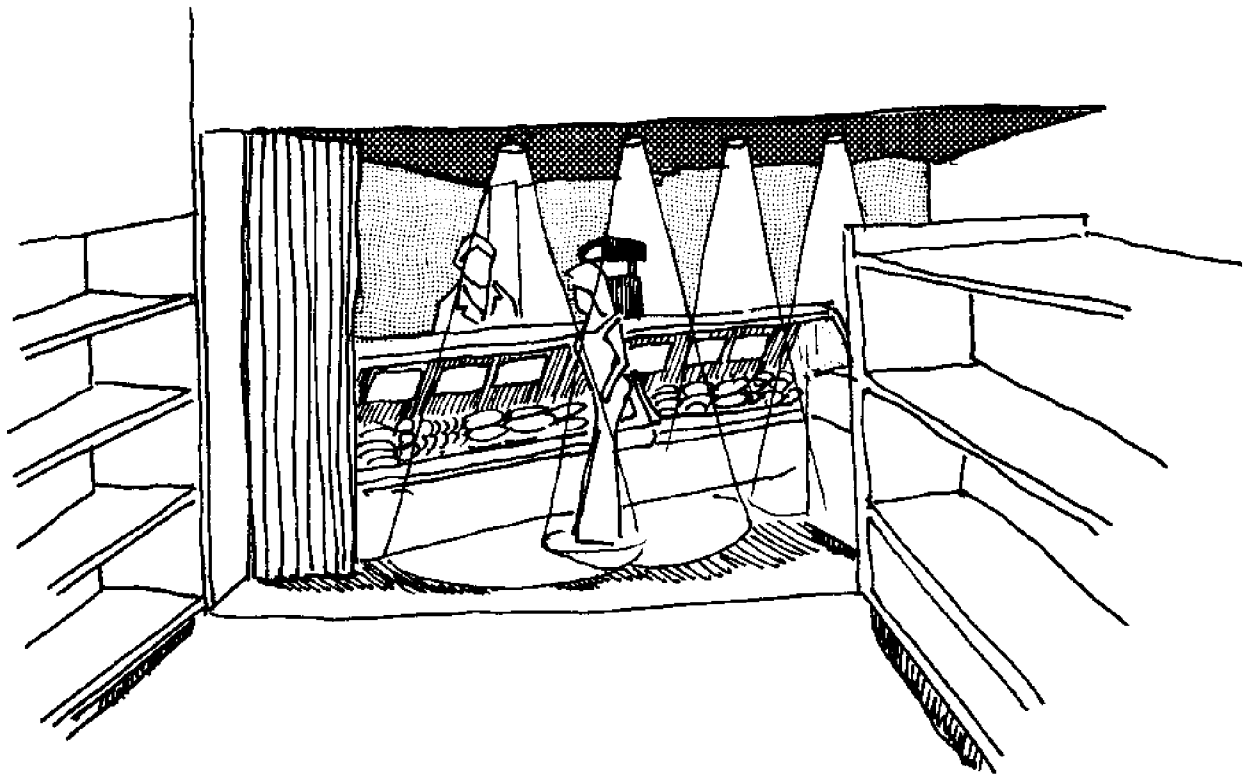
Lighting

Reflection problems can be avoided by analyzing carefully light source, quantity, and type. In most cases reflection is caused by improper positioning of general illumination.

To overcome this problem, a baffle may be installed to block the path of problem lights. In new stores the use of canopies or extended low ceilings with controlled downlights has been proven effective in eliminating glare and reflection.

Controlled downlights illuminate suggested customer traffic patterns. Refrigerated case lights not only highlight the product but also focus customer attention on the seafood in the display case. Daylight type lighting rather than cool white or other illuminate colors tends to give display product the best color enhancement. Other colors tend to "wash-out" the natural color of the product.

Lighting systems properly designed for merchandising contribute greatly to product attractiveness. Light emphasis directs the consumer's attention to specific areas.



Spotlights highlight product display area

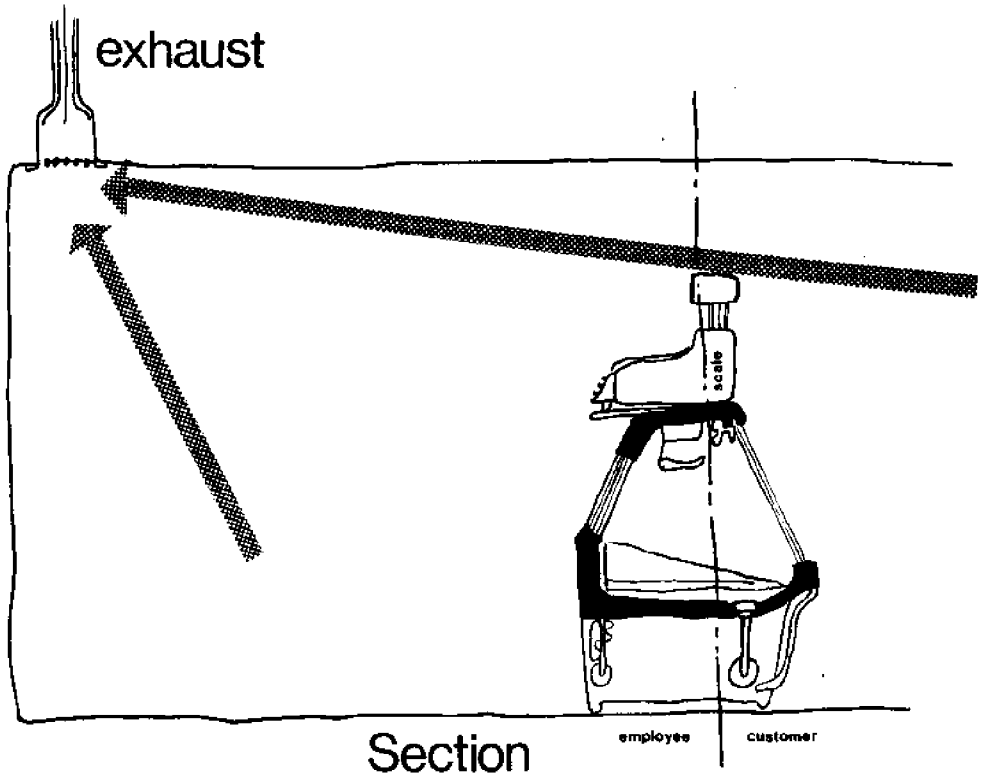
Odor

Two methods of air handling that have proven very effective in the removal of undesirable odors are:

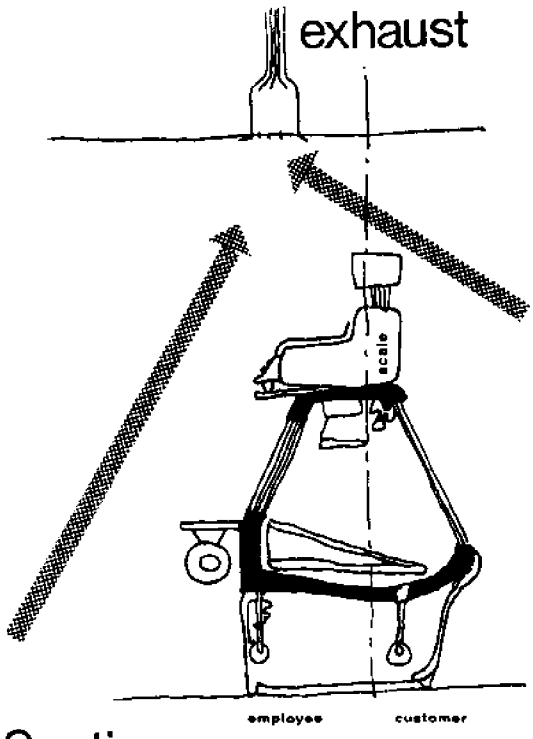
Exhausts at the line of the case in the ceiling above refrigerated counter.
An air curtain located at the line above the refrigerated counter.

Other locations have been employed for exhaust outlets, such as the rear ceiling of the work area. From the viewpoint of sanitation, however, that location is not desirable.

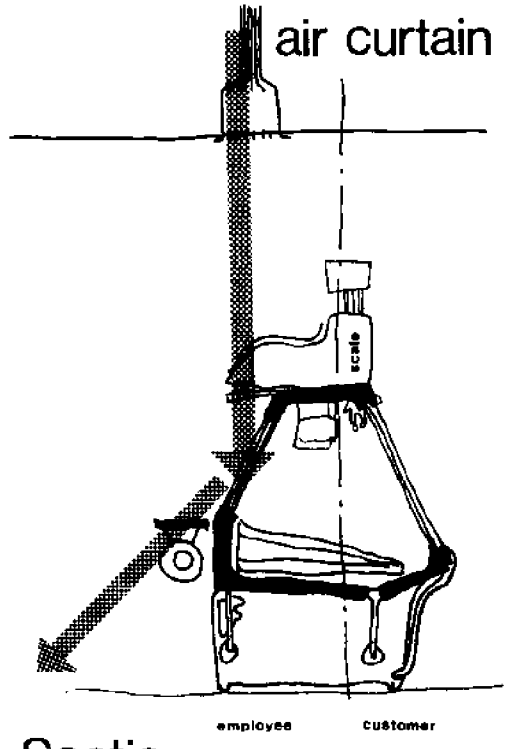
An air curtain has the added advantage of maintaining a lower temperature on the processing side of the seafood market.



Exhaust in market work area



Exhaust above refrigerator counter



Air curtain for odor control

CHAPTER IV
HOW TO BUY AND CARE FOR FISH AND SHELLFISH

Most seafood arrives at the retail store after moving from harvester boat to processor, to wholesaler or agent, and then to retailer. It is essential that quality be maintained all along this distribution chain if the retailer is to receive a top quality seafood product for sale to the consumer. Quality is one of the key elements that results in increased sales, for it is remembered long after the price is forgotten. Therefore, there is one basic rule to follow: ALWAYS BUY FROM A HIGH QUALITY SOURCE. In addition, remember that the average consumer depends on his retailer for proper selection and quality assurance.

Once delivered, fish that have been checked and accepted, should be placed immediately in low temperature storage to retain seafood moisture and freshness. Preserve fresh fish by covering with ice, preferably soft crushed or thin flakes.

The ideal storage temperature for fresh fish is 31°F. Frozen fish should be kept at zero or below. Freezer storage life can be extended several months if the temperature is minus 10-15°F.[1]

RECOGNIZING QUALITY

The successful seafood retailer must familiarize himself with signs of quality so that seafood not meeting high standards can be rejected. Quality of fresh fish and shellfish can be determined by observing their appearance, texture, and odor.

Fresh Whole Fish:

Eyes: Bright, clear, and full. As fish become stale, the eyes become cloudy and sunken.

Gills: Red and free from slime. The color of the gills fades with age to pink, to gray, and finally to brown or dark green.

Odor: Fresh and mild. With increasing age a strong offensive odor develops.

Skin: Shiny, with bright colors. As fish lose freshness, skin colors fade and become less pronounced.

Flesh: Firm, elastic, and not separating from the bones. As fish age, the flesh changes color and takes on a dried out appearance.

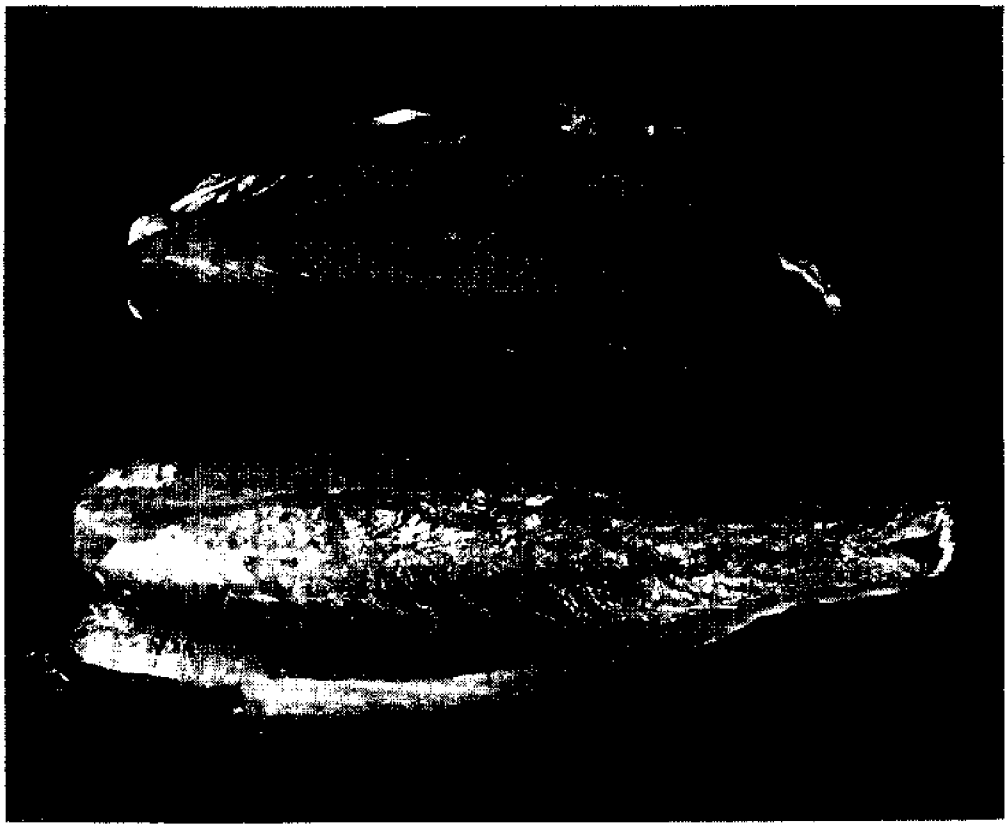
Fillets and Steaks:

Flesh: Fresh-cut in appearance and firm in texture. There should be no traces of browning or drying out. If fresh or frozen fillets are packaged, the wrapping should be moistureproof and vaporproof. There should be little or no air space between fish and wrapping.

Odor: Fresh and mild.

Live Shellfish:

Lobster and Crabs: Heavy for their size and show leg movement. The tail of a live lobster curls under the body and does not hang down when the lobster is picked up.



Fresh fillets should always appear moist and freshly cut, as does the bottom fillet in the picture above. The fillet on top has been thawed out after one year in cold storage.

Oysters and Clams: Hard, well-cupped shells. A gaping shell which does not close tightly when tapped indicates that the shellfish is dead and no longer edible. Canadian Atlantic oysters come graded according to shape of shell. The grades are fancy, choice, standard, and commerical.

Frozen Fish Products:

Flesh: Solidly frozen. If cut surfaces are visible, they should have a glossy appearance. There should be no abnormally white or dark spots, papery edges, discoloration, or other signs of drying.

Covering: A moisture and vaporproof wrapping that fits tightly.

Indicators of Poor Quality:

The retailer should also familiarize himself with the following signs of poor quality:

Voids: Hollow places in fish flesh are considered faults. Voids are unsightly and if filled with ice cause incorrect net weights.

Dehydration: White cottony signs of "dehydration" are caused by prolonged exposure of unwrapped flesh to mechanical refrigeration. A good test of frozen fillet quality is to thaw a package and inspect it for signs of deterioration and dehydration. For example, if part of the belly-cavity lining is still in the filleted flesh, this piece of lining will cause rapid deterioration.

Discoloration: Most often caused by bruising and accumulation of blood. Reddish-brown steaks are the result of discoloration. Careful handling and thorough rinsing of fish can prevent this.

Rancidity: The chemical breakdown or oxidation of the fat in fish, caused by prolonged storage or thawing. The higher the fat content of the fish, the more likely rancidity is to occur. This defect is indicated by appearance of an orange color.

Coating Defects: Occur in breaded seafood products. A customer may not be able to detect faults until she opens the package at home, so sample your incoming shipments for such faults.

Deterioration in Shrimp: When shrimp deteriorate, bacterial action causes the color to darken and the flesh to become soft and mushy.

Black Spot: The cause of black spot has not been identified but these spots become more numerous as shrimp age. USDC inspectors consider black spot a defect.

"Black spot" is beginning to appear on the shrimp tail at right. Although the shrimp is still edible, black spot is a sign of age and is considered a defect by Federal inspectors.

MARKET FORMS OF FISH

Fillets are only one form in which seafoods are marketed. Other major forms include the following:

A. **Whole** or **Round** fish is sold just as it comes from the water. It must be dressed before cooking.

B. **Drawn** fish have had entrails removed. Since entrails cause rapid spoilage, drawn fish have longer storage life.

C. **Headed** and **gutted** fish have head, tail, fins, and viscera removed before sale.

D. **Dressed** or "pan-ready" fish are completely cleaned and ready to prepare when purchased.

E. **Steaks** are larger slices of dressed fish and yield an edible portion of about 86 to 92%. They are ready for cooking. Salmon, halibut, swordfish, and other large fish are commonly processed and sold as steaks.

F. **Fillets** are sides of the fish cut away from the backbone. Ready for cooking, and 100% edible without any waste, fillets are usually the housewife's best buy; despite their seemingly higher cost.

G. **Chunks** are cross sections of large dressed fish, having a cross section of backbone as the only bone. They are similar to a beef or pork roast and are ready for cooking.

H. **Fish Sticks** are pieces of fish flesh cut into uniform width and length, usually 3" x 1", and coated with a breading.

I. **Fish Portions** are larger than fish sticks but uniform in size and weight. One portion is usually enough for a single serving.

DRESSING FRESH FISH

Rather than buying fish already filleted, many people prefer to have fish dressed at the time of purchase. This process is expensive since cost economies in filleting normally accompany batch-processing. Nevertheless, many consumers want this service, and the retailer should provide it at no additional charge. In fact, consumers should be encouraged to have their whole fish processed in order to avoid the unpleasant problems associated with fish cutting and waste disposal at home.

Following are basic procedures for processing whole fish:

Scaling fish: Remove scales with a sharp knife or mechanical scaler and run clean tap water over the fish to remove the loosened slime. The head and tail may or may not be removed.

Removing fins: A cut is made along each side of the dorsal fin (the large fin on the back of the fish). The fin is then pulled out with pliers, removing the fin bones. Unless the fish is to be filleted, the dorsal fin should not be cut off because this leaves small pieces of fin bones in the flesh.

Belly Cavity: Be sure all organs are removed since they later cause spoilage. This cleaning operation should be done under running tap water.[2]

Filleting Fish: Experience and practice will dictate the best method for different individuals since there is more than one way filleting can be accomplished. The following description is an example:

With an extremely sharp filleting knife, cut immediately behind the head, down to the backbone. Turning the knife flat, cut along the backbone, from head to tail. Then cut the flesh away from the backbone and upper ribs. Now, cut the fillet away from the lower ribs, from head to tail. The operation for the other side of the fish is practically the same, except that the second cut along the backbone is made in reverse, from tail to head.

If the customer wants the fillet skinned, lay the fish on the cutting board skin side down. Hold the tail with your fingers and cut through to the skin about ½ inch from the end of the fillet. Flatten the knife and cut the flesh away from the skin, pushing the knife forward, while holding the free end of the skin firmly.[3]

SEASONAL SUPPLY OF SPECIES

Seasonal availability of most seafood species is not a serious problem. Nearly all species can be purchased fresh or frozen year-round. For example, some state laws close public oyster reefs to commercial fishing from about the first of May to November, however oysters are available year-round from other states so that the retailer's supply of oysters need not suffer. Oysters are particularly popular during the Thanksgiving and Christmas seasons for use in dressings and gravies.

A key to solving supply problems is to develop good relationships with suppliers. Ideally, the retailer wants to purchase only the quantity needed for one or two days, but rarely is this possible. However, if the retailer builds good relationships with his suppliers, they will most likely provide him with the fish he needs to meet expected and unexpected demands. The retailer, in turn, should aid the supplier by purchasing excess quantities of fish that the supplier will have from time to time.

By working together in this way, each link in the distribution chain contributes toward maximum efficiency of the total marketing channel. A sound business relationship among all members of the marketing channel, from fisherman to consumer, is a vital marketing activity that is too often ignored. Naturally, there seems little one can do to improve business relationships with firms several stages of distribution away from one's firm. But keep in mind that each of you must depend upon one another if the consumer is to be completely satisfied. **A satisfied customer means a successful retailer.**

There is a moral to this discussion of good channel relationships. A seller becomes "rich" by making his customers "rich." It all begins or ends with Mrs. Consumer. If you make her a success at the dinner table, she will make you a success in your market.

CARE OF FRESH SEAFOOD

Fresh Fish

Fresh fish spoil mainly because of bacterial activity. When a fish dies, bacteria on the skin, on the gills, and in the intestines continue to grow and feed upon the fish flesh.

The speed with which bacteria grow on fish flesh depends upon temperature and cleansing action from melting ice. For example, if cod are taken out of the sea, gutted, immediately buried in ice, and kept at 32°F., they will remain edible for 15-16 days. If the fish are stored at 42°F., they will keep for only five and one-half days. Therefore, the first essential in handling fresh seafood is to keep it always as close to 32°F. as possible.[4] The bacterial count on fresh seafood can also be reduced by washing the catch with water and by keeping enough ice on top of the product. The melting ice will continually wash the product where bacteria are likely to form. Storing fish head down in a vertical position in ice makes this washing phenomenon more efficient, thus prolonging storage life.

Of course, the retailer does not receive his merchandise straight from the sea. Because of the time-lapse between landing and delivery to the retail shop, it is best to hold fresh seafood stocks no longer than four days; which means fast turnover and frequent deliveries.

The following list offers suggestions for proper handling and care of fresh seafood:

1. Upon delivery, open containers of seafood and inspect for condition and quality. Reject any fish that show signs of spoilage.

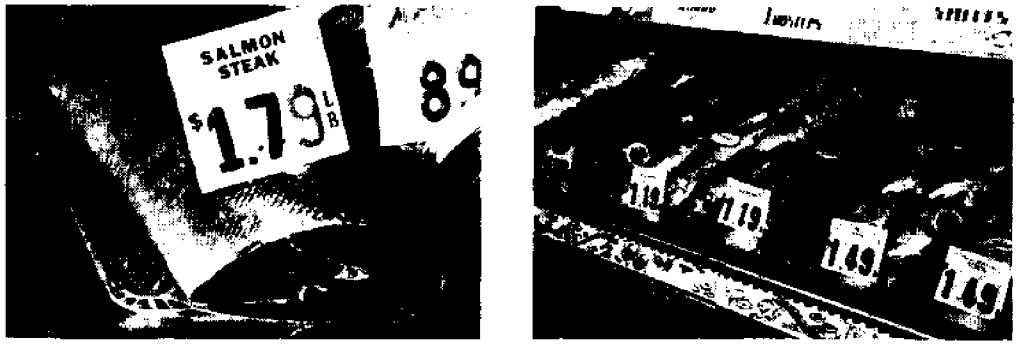
2. Fish that will not be immediately processed and displayed should be washed with 100 ppm chlorine, packed into a clean box or tray with plenty of flaked or crushed ice, and quickly placed in a cooler. Positioning the whole fish vertically or with head lower than tail allows better drainage of melting ice and bacteria through the abdominal cavity.

3. Avoid rough handling, since bruises and flesh punctures hasten spoilage.

4. Keep fresh and cooked, unfrozen fish products under refrigeration at all times. Temperature should be checked several times a day, preferably in two places. Best refrigeration practice is to maintain temperature constant at 32°F. Do not allow uncooked products to come in contact with cooked products because this can cause spoilage and contamination that may be dangerous.

5. See that whole fish in the storage cooler are well iced. Mechanical refrigeration draws moisture from seafood. Ice prevents this dehydration and rinses the fish as it melts. Surround fillets and steaks with ice, but keep them from direct contact with the ice to prevent loss of soluble food elements. This separation can be accomplished by placing butcher wrap or similar material between layers of fillets.

6. Rinse each whole fish with ice water before putting it into the case and surrounding it with ice. Rinse fresh fillets and steaks before placing them on trays and embedding them in ice. **Do not stick spike tages in fish. Spike holes allow easy access for bacteria.**



Sticking spiked tags into raw flesh is not only poor merchandising, it's highly unsanitary and damaging to the product. Lemons or artificial fruit are much cleaner and have more eye appeal.

7. If you must prepackage fresh fish for self-service, do not package more than one day ahead of sales.

Live Lobsters and Crabs

Keep live lobsters cool and moist by storing them in their shipping containers or in tanks of aerated saltwater. They will not live in fresh water. By checking lobsters once a day and by using the weakest specimen first, some can be kept on hand for a week or longer.

Oysters-in-the-Shell

Store oysters-in-the-shell in a cool, damp atmosphere at about 35°F. Do not allow them to come in contact with fresh water because this will kill them. Properly refrigerated, they will stay alive for a week or more. Freshly shucked oysters will keep for 7-10 days. Frozen oysters that are received in good condition can be kept successfully for as long as four months with proper storage.

Stock Rotation

Adhere to a strict rotating system on all seafood products to guarantee first-in, first-out sales. Fresh fish and shellfish retain good quality for only a limited period of time with even the best care. Although the sale of poor quality products may add to current profits, it will discourage repeat sales.

Overnight Care

At night, see that fresh fish are removed from the display case, iced down, and stored in the cooler.

Before closing shop for the weekend, discard any fish of border-line quality. Wash left-over fish of good quality in 100 ppm chlorine, re-ice, and store in the cooler. Carefully inspect the fish again before beginning business the next week. Note that effective ordering will ensure a minimum carryover into a subsequent week.[5]

CARE OF SMOKED, SALTED, AND MARINATED FISH

Keep unfrozen, smoked fish products under refrigeration, but avoid direct contact with ice. The smoking process which involves drying the fish and treating it with salt and smoke preserves fish against spoilage. However, since most consumers prefer their fish lightly smoked and dried, today's products do not remain edible for very long. Smoked fish, therefore, should not be kept in the shop for more than three or four days. It is better to order small quantities more frequently. If not properly protected, smoked fish may develop molds readily, especially during warm and humid weather. Therefore, stock should be examined every day. Because smoked fish warms quickly, a minimum quantity should be displayed and the rest should be placed in cold storage at 31°.

Prevent direct contact of **salted fish** products with ice. Hard, dried, salted products need not be refrigerated, but do need to be protected from high humidity.

Keep **marinated fish** products and all other prepared fish products that have not been frozen or heat-sterilized under refrigeration.

CARE OF FROZEN SEAFOOD

Although it is true that freezing halts the aging process and retards rapid spoilage, chemical and physical changes which can cause a loss in product quality occur during frozen storage. It should be noted cold water fish, such as cod, or haddock, lose quality faster than frozen warmer-water fish such as red snapper. A gradual toughening and drying out of fish takes place, and the characteristic flavor that marks each species gradually disappears, leaving the fish somewhat flavorless. Rancidity, evidenced by a strong fish flavor, may occur in any species. All changes that result in the deterioration of frozen seafood products are accelerated by raising the temperature above 0°F for brief time periods. These temperature changes have a permanent **damaging** effect on quality.

The same care in inspecting fresh fish deliveries for quality also applies to frozen fish deliveries. Be sure to reject any thawed or partially thawed products.

Other suggestions for the proper care of frozen seafood include:

1. Transport frozen products directly from the delivery truck to frozen storage. Never allow frozen fish to stand at room temperature since thawing will begin. If thawing should occur, do not refreeze the thawed product, but sell as "defrosted fish". Refrozen seafood is still edible; however, the taste and texture of the product is significantly inferior.

2. Frozen packages should be marked and put into the delivery case as soon as they are brought from storage. If they are allowed to stand at room temperature, moisture released from the product due to thawing is trapped inside the package. After the product is refrozen in the freezer case, this moisture forms ice crystals on the inside of the package. These crystals are a tip-off to harmful thawing/freezing.[6]

3. Store all frozen fish at very low temperatures, preferably minus 10-15°F or lower. Check the temperature of both storage and display facilities several times a day.

Preventing Dryness

Protect frozen seafood in storage from drying with undamaged moisture-and-vaporproof wrapping or by an unbroken ice glaze. "Glazing" is simply freezing a fish and then spraying it with water to form a protective icy glaze over the flesh. Reglazing may be necessary if storage is longer than thirty days. After processing, the approximate frozen storage life for fat fish is about three months; for lean fish, six months; and for shellfish, two to six months.

Proceed with speed and clear purpose in stocking frozen fish cases. Unnecessary delays in transferring merchandise from one storage location to another are the most frequent cause of temperature damage. When restocking cabinets, place new merchandise under or behind old merchandise. Aim for weekly turnover of all packages.

Display of Frozen Packages

Place packages close together in the display cabinet, but not so tightly that they are difficult to remove. A snug arrangement prevents air spaces, thereby reducing the chance of thawing. Dividers in cabinets are valuable in maintaining an orderly display. Do not allow frozen seafood display cabinets to become jumbled since the lack of neatness and order will be unappealing to customers and may result in lost sales.

Locate cabinets where they receive a minimum air flow because draughts dissipate the cold air upon which efficient functioning of the cabinet depends.

Always stack frozen packages below the load-limit line in display cabinets. Thawed or fresh products should never be placed in a display freezer.

Stack cartons of frozen seafood products away from walls and ceilings, and off the floors in frozen food storage rooms. This practice favors circulation of cold air, thus increasing cooling efficiency.

Defrost non-self-defrosting freezer cabinets at regular intervals and have facilities serviced according to a regular schedule to maintain a constant temperature.[7]

Customer Service: Thawing and Cooking for Better Quality

Advise customers that frozen seafoods should be thawed under cold, running water or in the refrigerator in the original wrapper. Thawing at room temperature is not recommended because thinner parts thaw faster than thicker parts and quality is lost.

Frozen fish portions such as sticks, fillets, and steaks can be cooked without thawing if additional cooking time is allowed. Advise customers to read cooking instructions on the package for best results.[8]

POPULAR FISH AND SHELLFISH PRODUCTS

When buying fish and shellfish for sale in retail stores, it is desirable to have some idea of the popularity of the wide varieties. The following list identifies some of the most popular fish and shellfish products sold fresh and frozen:

Saltwater Finfish

1. Albacore: The tuna with the whitest meat. Usually canned but also available fresh (July-November) or smoked. Most are 10 to 20 pounds.

2. Butterfish: Also known as sablefish or blackcod. Inexpensive fillets. Large sablefish are often smoked. A small (4 to 6 inches) West Coast pampano is sometimes sold with the market name of butterfish.

3. Cod: A highly popular fish which supplies much of our fish sticks and boneless portions. It is also processed in a variety of other ways; dried, salted, shredded, or flaked.

4. Finnan Haddie: Smoked haddock. Known and served internationally as whole split fish.

5. Flounder: A flat fish belonging to the flounder and sole families. There are several species ranging in size from 1-2 pounds to an average of about 12 pounds. Species most often marketed are: Pacific Halibut, Dover, Petrale, English and Rex Sole from the West Coast; Fluke, Yellowtail, Winter Flounder and Sanddab from the East Coast; and Southern or "Texas Flounder" from the Gulf of Mexico.

6. Haddock: This popular fish is marketed across the country in various forms. The main product is frozen fillets.

7. Halibut: A large fish which can weight up to 125 pounds. It is available in most retail stores. It freezes well and is usually sold as steaks. Large pieces of halibut, called "fleches", are used in restaurants.

8. Mahi-mahi: Also known as dolphinfish. It is a fish—not a mammal. Captured in tropical waters throughout the world and imported to the United States. Marketed as fillets.

9. Ocean Perch: Also called rosefish, redfish and red perch on the East Coast. Most often marketed as frozen fillets.

10. Pacific Red Snapper: Also known as rockfish or rockcod. About 15 species of rockfish are sold under the market name of Pacific Red Snapper. This fish is usually marketed whole or as fillets.

11. Salmon: Marketed in a variety of forms, each with characteristic flavor. King or Chinook may be large, 20-100 pounds. Silver or coho, up to 20 pounds, is usually sold as steaks. Pink or sockeye is usually canned. The bright orange-red flesh color of salmon is a distinguishing characteristic.

12. Shark: Often marketed as greyfish fillets. Soupfin, thresher and leopard shark are the most popular. Inexpensive.

13. Smelt: Freshwater and saltwater fish; sea smelt are larger. Smelt are abundant, inexpensive, and delicious; the choicest of pan fish.

14. Swordfish: A large billfish averaging about 250 pounds in size. Marketed as chunks or steaks. Captured by harpoon and longline.

Freshwater Fish

1. Blackfish: Harvested mainly in California and often marketed live in Oriental markets.

2. Buffalo: Also called winter carp: Another popular, freshwater fish. Resembles carp superficially. Can be baked, broiled, fried or smoked.

3. Carp: One of the more widely distributed freshwater fish. Has lean and firm flesh of good flavor. Available in a variety of forms. Often smoked.

4. Channel Catfish: Sometimes called Spotted Catfish. Range from 1-4 pounds; most popular market size 3/4 to 1 pound. Channel Catfish are raised commercially on fish farms in south central states and California.

5. Rainbow trout: Raised artificially in ponds or raceways. Usually 8-12 inches in size.

6. Yellow Perch: Always a good sales item, sold whole or filleted. Perch are found in nearly all Midwest retail stores and served in most Midwest restaurants.

Shellfish

1. Abalone: Marketed as fresh or frozen pounded steaks. Comes from a large marine snail captured by divers in Southern California and Mexico.

2. Canned Oysters: Sold on basis of size, i.e., the number of meats per gallon with counts generally ranging from 160 to 500. Olympia oysters from the Pacific Northwest may run as high as 2400 to a gallon.

3. Clams and Oysters: Should be alive when purchased with shells tightly closed. "Gapers" (open shells) indicate mollusk is dead or dying; should be discarded.

4. Cooked Crab and Lobster Tails: Bright red in color. No objectionable odor; white meat.

5. Crab and Lobster: Available in the shell, fresh or frozen, and in crab and lobster meat products.

6. Crabs: Many varieties: Dungeness crab from Pacific Coast. Available live, cooked whole or as picked meat (fresh or frozen). Meat also available canned and frozen.

   King and Snow crabs from Alaska: The meat is taken mostly from the legs. Frozen, cooked legs often marketed.

   Red rock crab from Southern California.

   Blue crab from East and Gulf Coasts. Annually shed old hard shells and are marketed as "soft" shelled crabs.

7. East Coast Shucked Oysters: Should be plump and when canned should have a creamy color with clear liquid. More than 10 percent liquid indicates inferior product that is improperly handled.

8. Scallops: Scallop meat is the muscle that closes the shell. Live scallops are not available; they die soon after leaving the water. Scallops are shucked aboard ships and packed in ice. The meat is boneless, sweet and tender. Sea scallops run 110-170 per gallon. Bay scallops (½"-3/4" in diameter) run 500-850 per gallon.

9. Shrimp: Broad variety of forms. Most popular of all seafoods in the United States. Counts range from less than 15 per pound to as many as 275 per pound for the tiny sweet Alaskan pink shrimp, sometimes called "cocktail shrimp". Shrimp are classified by size. The descriptive term "jumbo" generally means 15 or less headless shrimp per pound. "Large" shrimp may range from 16 to 25, "medium" from 26 to 35, and 36 or more may be described as "small".

10. Spiny Lobster and Maine Lobster: The term "lobster" is used for many species. Maine lobster has large meat-filled claws. Live lobsters should have claws pegged, and tail should curl under and not hang down when picked up. Rock lobsters are marketed as frozen tails. Frozen lobsters should be hard frozen, no odor.

11. Squid: Captured near Monterey, Los Angeles, and San Diego. Economically priced. Prepared fried, sauteed and baked.

12. West Coast Oysters: Show a dark mantle in the shucked form.

U.S. GOVERNMENT INSPECTED PRODUCTS

The United States Department of Commerce provides official inspection service for fishery products. Buyers and sellers who wish to establish the quality of their seafood may request this service. Only fresh and frozen products that are processed in government-registered plants and that meet high quality standards at the time of inspection may be identified with government inspection symbols. If the seafood products you handle are government inspected, you should feature this fact in your advertising.

The "continuous protection" shield indicates that United States Department of Commerce (USDC) inspectors were assigned to the process plant at all times during operation to check the quality of materials, plant conditions, and the processing and packaging of the product.

Grade "A" means top quality. The processor who voluntarily pays for USDC inspection uses this label to assure the buyer that he receives quality products. However, inspection by government agencies is only part of the answer to maintaining high quality. After the seafood has arrived in good condition, the best way to ensure continuous top quality is regular in-store quality control.

Quality at the retail level begins by knowing how the seafood was handled in transit, and whether properly packed and adequately refrigerated. Examine the product carefully before accepting delivery. If you doubt its freshness or quality, reject the order.

Order seafood in amounts and varieties that will give the consumer a broad selection and yet maintain a quality product. Normally, fresh fish should be ordered for not more than a four-day period. If the freshest quality is to be maintained, it should not be carried over into the next week. Keeping accurate records on the movement of all seafood products will eliminate over-stocking and carry-over. Frequent deliveries eliminate excessive in-store handling of fresh and frozen products. Daily delivery of fresh fish is the ideal arrangement. However, this may be difficult to achieve; hence, adequate storage facilities, including proper refrigeration, should be used.

CHAPTER V
TEMPERATURE CONTROL AND SANITATION

LIFE BEGINS AT 40°F: TEMPERATURE CONTROL

Fresh seafood handling

Proper handling and temperature control are essential from the time seafood is caught to the time it is prepared, to minimize changes that lower its quality or make it unusable as a food. To a large extent, handling procedures and the length of time seafoods are handled and stored determine to what extent flavor, odor, and texture will change. At best, low temperatures only slow or retard microbial growth and chemical and enzymatic reactions, all of which cause deterioration and spoilage. Of these three types of deterioration, microbial growth is the most important.

The flesh portion of freshly caught seafood is virtually sterile. *However, bacterial contamination of the flesh is inevitable as the product is handled, eviscerated, and filleted.* These bacteria may die, remain dormant, or grow—depending on their type and the conditions under which the product is stored. Although there is a variety of bacteria that exist on these products, lower temperatures markedly reduce the rates at which they reproduce. Good sanitary practices in handling, processing, and storage also help preserve the quality by minimizing the products' level of contamination.

In addition to lowering the quality, improper storage or handling of seafoods can permit the growth of food-poisoning organisms. As temperatures increase above 4°C (40°F), these organisms start to grow at an increasing rate. If storage temperatures are high enough and storage time is sufficient to allow for substantial growth, they can pose a problem serious enough to warrant investigation by public health officials.

Fresh seafoods are also subject to chemical and enzymatic changes during storage; these cause off-flavors, off-odors, and loss of texture. Such unwanted changes, which are minimized by reducing storage temperatures, affect the proteins and oils of the seafood.

Factors that influence the kind and rate of spoilage

Kind of seafood. Different seafoods and even different species of the same seafood may differ considerably in their acceptability to consumers or in their perishability. Characteristics of the animal, its chemical composition, and even its size, may affect the ultimate quality and reduce the storage life of the product.

Condition. The condition of the seafood at the time of harvest has a decided effect on the acceptability and shelf life of the final product. The quality of water from which it was taken, the type and amount of feed it had been eating, its phase in the life cycle (molting or reproductive), and even the method of harvesting (trap, net, or line) influence either the product's ultimate quality or its storage life, or both.

Handling after the harvest. Seafoods must be promptly and properly handled aboard ship and throughout processing if the quality of the product is to be maintained. Conditions that lead to crushing, bruising, or any damage to the skin or mucous membranes will reduce the final product's storage life.

Temperature. For all seafoods, the most important agent in preservation is refrigeration,—1° to 4°C (30° to 40°F), which at best only provides limited product life. Refrigeration merely retards deterioration—it cannot prevent it; thus, it must be accompanied by prompt and careful handling from harvest to consumption.

Keep it cold; keep it clean; keep it moving!

SEAFOOD-HANDLER'S THERMOMETER

Cleaning Water Temperatures
82°C (180°F) or above
Water for cleaning equipment, floors, walls, etc., *must* be a minimum of (180°F) 82°C at point of contact.

Danger Zone
(40° to 140°F) 4° to 60°C
Within this range, food-spoilage and food-poisoning bacteria grow rapidly. Temperatures *above* (140°F) 60°C kill most bacteria; temperatures *below* (140°F) 4°C retard the growth of food-poisoning microorganisms. *Therefore, foods should pass through the Danger Zone as rapidly as possible.*

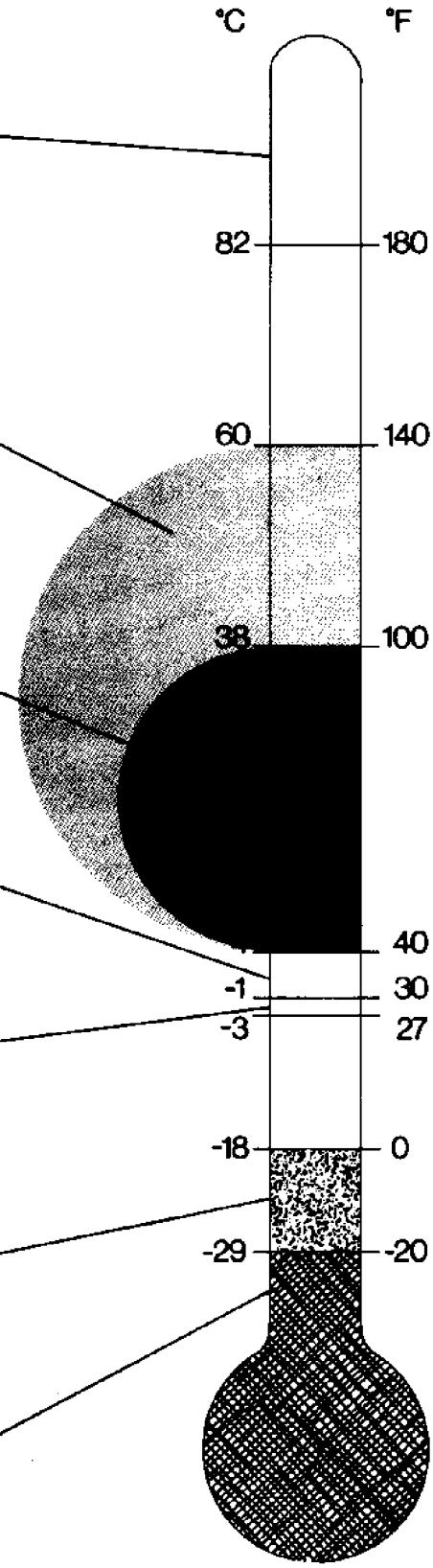
Critical Zone
(40° to 100°F) 4° to 38°C
This is the growth range of most food-poisoning bacteria.

Fresh Storage Zone
(30° to 40°F) −1° to 4°C
These temperatures minimize the rate of food spoilage. Rule of thumb: for every (10°F) 6°C rise in storage temperature, shelf life is reduced by half.

Freezing Temperatures
(27° to 30°F) −1° to −3°C
At these temperatures, seafoods freeze, and most of the water is converted into ice.

Frozen Storage Temperatures
(0° to −20°F) −18° to −29°C
To maintain quality, frozen seafoods should be stored within this temperature range. Storage life doubles for every (10°F) 6°C decrease in temperature.

Quick Frozen
(−20°F) −29°C or lower
This term denotes the use of low temperatures and rapid freezing rates.



KEEP IT COLD! KEEP IT CLEAN! KEEP IT MOVING!

Freezing seafoods

Freezing is one of the simplest and most economical methods of seafood preservation. In itself, the process of freezing has no effect on the palatability or nutritional value of seafoods; however, even under the best conditions, freezer storage results in a gradual decrease in the acceptability of the product. Seafoods in frozen storage undergo changes in flavor, odor, texture, and even color. The rate at which these changes occur and the ultimate quality of the product depend on the kind and composition of the fresh product, on the way it was handled in all the steps *before* freezing, on the type and method of packaging, the manner of freezing, the frozen-storage temperature, and the stability of the storage temperature.

Kind and composition of seafood. Not all seafoods are equally suited to freezing and freezer storage. Structural, compositional, and physiological differences between and within species may influence the texture, flavor, and acceptability of the frozen product. Such changes are usually related to the proteins and oils of the product; generally, seafoods with high oil content and those going through certain physiological changes (reproductive, molting, etc.) have less satisfactory freezing qualities.

Handling before freezing. The ultimate quality of any frozen product depends on the quality of the fresh product. Freezing is only a method of preservation and will not improve inferior or improperly handled products. Deleterious changes already present in the fresh product are often intensified by freezer storage. Consequently, seafoods that are to be frozen must be properly and promptly handled under sanitary conditions and at reduced temperatures.

Packaging. The primary function of packaging is to protect the product from chemical and physical damage. Frozen seafood products lose quality when they are exposed to air (rancidity) or are allowed to lose moisture (freezer burn). To minimize these changes, the products must be wrapped in specially designed materials that will minimize moisture loss, retard oxygen transmission, and resist oil absorption.

To minimize air spaces and voids, the proper packaging material must be tightly wrapped around the product. When products are loosely wrapped or have air spaces in the package, they lose quality because of reactions with the oxygen in this surrounding air and the loss of product moisture to the inside of the package (frost).

A water glaze may be used; it provides some protection from dehydration and the development of off-flavors (oxidation). In most cases, it should be used *in addition to* a packaging material. Areas where the glaze is not present or is cracked are subject to dehydration and the development of off-flavors.

Rate of freezing. Within reasonable limits, the rate at which seafoods are frozen is not a major factor in determining their ultimate quality in the frozen state. Although rapid freezing improves quality, this is a minor factor compared to the effects of storage temperature and packaging materials. The rate at which a product freezes depends on the temperature and on the size, shape, and the exposure of the product.

Precaution should be taken not to overload freezers or to pack the unfrozen product too tightly. Either of these practices can greatly extend the freezing rate of the product and reduce quality.

Storage temperature. Storage temperature is another important factor that influences both storage life and the quality of frozen seafood products. Chemical and enzymatic changes that occur during storage are highly temperature-dependent and are markedly reduced as the storage temperature is lowered. Oil content, again, is significant: the higher it is, the greater the need for consistent low temperature. When possible, the setting for seafoods should be no higher than −18°C (0°F) throughout the storage period.

Stability of storage temperature. The storage temperature of the product should be held as constant as possible. Wide temperature fluctuations cause enzymatic and physical damage, which in turn causes textural and flavor changes.

Keep it cold; keep it clean; keep it moving!

BASIC KNOWLEDGE OF BACTERIA FOR RETAIL FOOD INDUSTRY PERSONNEL[2]

The food industry is fundamentally based on the control of bacteria. All the basic processes used in preparing food today originated for this purpose back in antiquity but, however, at that time without the knowledge of "why". All of these basic processes in one way or another control microbial growth and hence preserve the food item:

Salt
Spices
Smoking
Drying
Curing
Freeze-chilling

During production and marketing today, we also control the shape, size, color, etc., but always under conditions and in such a manner which also control bacterial growth. Therefore, all individuals in this industry must become familiar with the terminology and the fundamental aspects of bacteriology. Not as bacteriologists, but as professional food handlers.

We must know the importance of bacteria from two standpoints: economic and public health.

Characteristics of Microorganisms

Microorganisms are everywhere—in and on everything. The term "microorganisms" includes bacteria, yeast, molds, virus, protozoa, etc. However, we shall consider bacteria, yeast, and molds collectively in our discussion.

Remember, though, we are concerned primarily with bacteria.

1. Size of Bacteria

   One of the most important characteristics of bacteria is the size, which is measured in micrometers which is 1/25,000th of one inch. We can illustrate this size by saying that a trillion bacteria would occupy one cubic inch and 400 million bacteria would occupy the space the size of one grain of sugar.

2. What Temperatures Do Bacteria Like?

   Important to you, also, is the temperature of growth for bacteria. There are generally three groups or classifications of organisms in regard to their desired temperatures. There are those that love high temperatures and grow best when the temperature is a torrid 130°F. or 140°F. Some organisms in this group have been known to grow in temperatures as high as 185°F.

   And there is the middle group that includes all those that invade the human body. These grow best between 86°F. and 100°F., but they may also grow somewhat slower at 60°F. up to 110°F.

   Important to us in the food industry, also, are those cold-loving bacteria that will grow at and below 32°F.

3. Types of Environment Favorable to Bacteria

Most bacteria, of course, require air to grow, but curiously and, very importantly, there are some bacteria that will grow only where there is no air. This is an important fact to you because one of the most deadly microorganism in the food industry is one that grows under these conditions. Airless conditions occur inside a mass of meat or vegetable material, in the bottom of a pot of warm stew and in other areas which are excluded from contact with air.

Also of significance to you as professional food handlers is that some bacteria, when their living conditions become intolerable—that is, too hot or too cold, or not enough air or too much air, or not enough food—can form themselves into a "cocoon-like" spore and "hibernate" until conditions are right again when they again begin to live. In this spore state, they may be extremely resistant to being destroyed. There is one organism that causes a deadly food poisoning that may survive six hours of boiling water.

Now, let us put together some of these characteristics we have been discussing. Let us look at a real trouble-maker—an organism that is heat-loving, grows in absence of air and forms a highly resistant cocoon or spore. This characterizes one of the organisms with which we have to deal.

4. What Bacteria Eat

Something more that you should know about bacteria is what they eat. Generally, they do not need what you would call a balanced diet. Their requirements are simple—just meat, cooked or raw. They will live on just vegetable or fruit material.

Some can live and grow in dirt. More important, some can and do live and grow on such things as rust on a pipe, in the salt deposits on aerator screens in faucets, in the recesses of drains and grease traps, in sawdust, in salt, in vinegar, etc. They can and do grow in grease-soaked wood, in droplets of condensed water on a cooler ceiling, on a speck of meat on a wall, in vegetable debris in the bottom of a display case, on a dirty cloth, etc.

5. How Bacteria Multiply—Reproduction

Under ideal conditions, bacteria can double in numbers every 15 to 20 minutes. Let us take 15 minutes per generation, as an example, to see what this means. Let us start at 9:00 a.m. with one bacterium:

> At 9:15 we would have two; at 9:30 we would have four; at 9:45 we would have eight; at 10:00 there would be 16 bacteria; at 11:00, or two hours later, there would be 256 bacteria; at 12:00 there would be 4,096, and at 1:00 in the afternoon there would be 65,000 bacteria!

Remember how small these bacteria are? You may easily place 1,000 bacteria on, let us say, a piece of ham from your thumb. So, instead of starting with one at 9:00 we start with 1,000 and, therefore, in four hours, or at 1:00 p.m. we would have 65,000,000 bacteria instead of 65,000.

We are not being theoretical about this. This tremendous growth is exactly what is happening in and on the products in your stores today if they have been contaminated and then mishandled by being left at the wrong temperature. All of these millions upon millions of bacteria are living and excreting on the food you are hoping to sell.

If you place bacteria in a new environment—from your thumb, for example, to the surface of food—they must become used to the new environment before they can start to grow rapidly. This is called the lag phase of bacterial growth. Many factors cause this lag phase to vary in time from 1½ hours to 18 hours, or many days in some cases. **In the food industry we use four hours as the average lag phase of bacteria with which we are concerned.** This 4-hour lag phase

before growth occurs is very important to you. We will use this fact later in the control of bacteria in your stores.

6. How Bacteria Travel

One more important thing about bacteria, is that they have no legs. They may wiggle a little bit but they cannot get around from place to place like we can. They must hitchhike—via a cough, sneeze, rat, mouse, roach, fly, fingers, clothing, splash droplets, or by direct contact—from place to place and from food to food.

Types of Bacteria

There are literally thousands of various types of bacteria, but those which are important to us can be placed into two general categories—**the food poisoners and the food spoilage bacteria.**

1. Food Poisoning Bacteria

Let us consider first the food poisoning bacteria—those organisms of public health significance. We are primarily concerned with only four. Let's name them and learn a little bit more about them:

a. **Salmonella**: These are a large group of related organisms, all of which infect the intestinal tract of man and warm-blooded animals such as cattle, sheep, swine, dogs, cats, birds, horses, mice, rats, etc. They are first cousins to typhoid fever. They may enter man's intestinal tract via food and there they grow and produce severe illness which may result in the death of children, the elderly, or the weakened individual. Since this organism must grow in the intestines to produce illness, it is possible that one single salmonella on a ready-to-eat food item may cause this illness.

The salmonella also may live in the intestinal tract of man and animals for long periods of time without causing noticeable symptoms. Therefore, the prime source from which salmonella enters into the food we eat is contamination by feces—direct or indirect.

Salmonella are easily killed by disinfectant solutions, such as chlorine. They are also easily killed at temperatures of 161°F. for 16 seconds, or at 145°F. for 30 minutes. The main sources of contamination of cooked product in your store would be:

1) Unwashed hands of personnel.

2) Raw pork, beef, lamb, veal, etc., which probably was unavoidably contaminated with fecal material during slaughter and dressing.

3) All raw poultry.

4) Unclean footwear.

5) Rodents and insects.

6) Bird excreta.

7) Uncleaned barrels from rendering plants.

It should be understood that we may always expect salmonella contamination on raw meats of all types. We have to minimize this hazard, although we may not completely eliminate it. Federal public health officials expect us to do no less.

b. **Staphylococci**—This is a group of organisms which most often cause infections of

wounds, boils, pimples, sore throats. It quite commonly is found normally present on the skin of man. It is also the cause of untold misery from the "food-poisoning" outbreaks you read about in newspapers which result in the prostration of many persons shortly after a banquet, picnic, family gathering, etc. You certainly have had at least once the unpleasant "two-bucket" symptoms after eating some particular food.

This organism when it grows on food, particularly cooked products, produces a poison like a snake. We may then even heat or cook the food to kill the staphylococci, but the toxin remains unchanged and causes food poisoning symptoms shortly after eating.

Staph may grow to enormous numbers on meat without producing noticeable changes in color, odor, or taste of the product. The staphylococci cannot compete with the usual spoilage organisms found on fresh meat. The growth of spoilage organisms prolongs the lag phase of the staphylococci. Therefore, food poisoning usually occurs when already cooked ready-to-eat food (spoilage bacteria killed) is recontaminated with staphylococci and then held between 45°F. and 140°F.

Again, this organism is easily killed by disinfectants and heat. **The main sources of contamination in your store would be:**

1) Unwashed hands of personnel.

2) Infected cuts and scratches, boils, pimples and nasal or oral discharges of personnel.

3) Raw poultry.

c. **Clostridium Botulinum**—This bacteria has a long name and may not be recognized. However, you certainly are familiar with the deadly disease of botulism that it produces. This microorganism, like the staphylococci, produces a poison or toxin during its growth. There are, however, some vital differences from staphylococci which are:

1) Unlike staph, the botulinum organism is extremely difficult to kill. It forms a spore. Remember, we discussed how resistant these spores are to killing. You cannot kill the spore of this organism with the strongest antiseptic that you can use in a food plant, or even with boiling.

2) The toxin it produces may be easily destroyed by boiling for 30 minutes. This is contrary to staph toxin which is most difficult to destroy by heat.

3) The toxin does not produce a gastrointestinal upset like the staphylococci, but instead attacks the nerves and most of the time causes creeping paralysis that leads to death.

The botulinum organism is found in most soils (dirt).

Therefore, prevention of dirt contamination of your product helps. Fish are a prime source of this organism, therefore, fish should not be handled in conjunction with other meats.

Soil from farm produce would be another source and should not be tracked throughout your store, especially in the delicatessen area.

One of the worst things about the botulinum organism is that it will grow only in the absence of air. From this you may expect to find this organism growing and producing toxin in the bottom of unclean tubs, inside a mistreated mass of meat, in hidden meat crevices, in the bottom of warm pots of stew, etc.

d. **Clostridium Perfringens**—This bacterium has been recognized only recently as being an important food poisoner. This organism also may produce heat resistant spores. It grows at temperatures between 44°F. up to 124°F. and may double in numbers as often as every 18 to 30 minutes. It produces a toxin which causes a severe gastric upset similar to the staphylococci.

This bacterium is of great importance in the delicatessen area of stores. Heat resistant spores will not be killed in cooking and, subsequently, may grow to enormous numbers when the food temperature is dropped to below 126°F. Further, and more important, if contamination of the chilled, cooked food occurs during holding time and the food is again heated, this heating stimulates the spores into rapid growth.

This organism is widespread in nature and impossible to keep out of your store. The main sources for contamination of your delicatessen items would be:

1) Soil or dirt from the produce department.

2) Fresh meat, poultry and fish.

3) Spices.

4) Unwashed employees' hands.

5) Soiled employees' clothing.

2. Food Spoilage Bacteria

Of the many types of bacteria that contribute to food spoilage, the group known as pseudomonads are the major concern of the market operator.

a. **Pseudomonads**—This family of bacteria is a primary cause of food spoilage and discoloration. They are present in the air, in water, and in the soil; despite the wide practice of chlorination, the pseudomonads are commonly present in municipal water supplies.

Many strains of pseudomonads survive and actively grow at low temperatures. Introduced by careless handling into a retail package of meat, poultry, fish or produce, the pseudomonads can induce spoilage at a rapid rate. The control over the cost associated with food spoilage and discoloration largely lie with a market's ability to control the frequency with which foods are contaminated with pseudomonads while being packaged for retail display cases.

Because of the prevalence of these bacteria and their hardiness, their control depends upon tight measures of sanitation.

b. Large numbers of yeast and molds and bacteria from other families also contribute to food spoilage. Like the pseudomonads, these organisms grow well at cold temperatures.

Cold-loving spoilage bacteria (those that cause slime and off odors) will grow on damp cooler surfaces, in grease-soaked wood and in uncleaned equipment. These organisms then contaminate all meat entering the cooler and shorten its keeping time by many hours and days.

For example, a beef quarter entering a cooler with only 1,000 bacteria per square inch on the surface may easily have its surface count increased to 100,000 per square inch by contamination from the millions and billions of spoilage bacteria living on uncleaned cooler surfaces.

Fish are a primary source of both putrefying and slime forming spoilage organisms that grow at cooler temperatures.

The economic loss from meat spoilage varies greatly from store to store. However, whether it is great or small, it can be prevented by ordinary sanitation procedures aimed at eliminating the sources of the responsible bacteria in coolers.

Control of Bacteria—3 Important Rules

A short review like we have had above on the characteristics of bacteria and their sources brings up the obvious question—how in the world may we control such creatures? Really, the answer is rather simple. **If three general rules** are put into effect and all of their ramifications by you as a food handler, your product will enjoy less spoilage, a longer shelf life, will give you more economic return with little chance of causing human illness. These rules are based on what you have learned above.

1. Minimize the entry of bacteria into the store.

   a. Clean materials and supplies from reliable sources are required.

   b. Delivery vehicles must be clean and sanitized and refrigerated.

   c. Clean employees entering the store.

   d. Control of personnel traffic into the sensitive cooked food delicatessen area.

2. Prevent growth within the store of those bacteria that inevitably will enter.

   a. That is, make the store environment hostile to bacteria. Good food handling conditions make bad bacterial growth conditions.

   b. Hold product below 45°F., or above 140°F. Remember that these are minimum temperature recommendations.

   c. Handle products fast that must be handled in the range of temperatures between 45°F. up to 140°F. Fast, means product must not be in this temperature range for more than four hours. Remember the lag phase in growth of bacteria on which this statement is based.

      If it takes one hour to chill warm or hot product to below 45°F., you must take this into account in the 4-hour interval.

3. Prevent contamination of product from sources of bacteria within the store. This rule covers a whole host of do's and don'ts. For example:

   a. Clean up food particles and grease wherever they are before bacteria can grow.

   b. Sanitize with disinfectant to kill bacteria that may be growing. The equipment held at room temperature will allow bacteria to grow, so we must wash and sanitize it every four hours.

   c. Personnel should wear clean clothes.

   d. Personnel should wash hands, especially after handling contaminated surfaces or handling raw meats, and before handling ready-to-eat cooked meats.

   e. Prevent rodents and insects from entering the store.

f. Do not allow cross-contamination, direct or indirect, from raw products to cooked products.

g. Control incidental contamination from the water supply by cleaning and disinfecting "aerator" screens on a regular basis.

Above all, remember that food poisoning and food spoilage bacteria are transmitted by both direct and indirect contact. A few examples that violate the reasons and rules above are:

1. Fresh meat contacting soiled or slimy cooler surfaces.

2. Fresh produce seeded with spores from mold growing on ceiling and walls of coolers.

3. Cooked ready-to-eat product being cut with saws or knives that have not been cleaned and sanitized after use on raw meat or poultry.

4. Cooked delicatessen items handled on table surfaces or cutting boards that were not cleaned and sanitized after use with raw meat.

5. Cooked delicatessen items contaminated with dirt from product supplies being carried through delicatessen area.

6. Personnel handling raw meat, raw fish, or produce and then handling cooked ready-to-eat products without washing and sanitizing hands and changing aprons.

7. Storage of ready-to-eat product in contact with or exposed to raw materials.

Summary

The above rules which are founded on the basic bacteriological concepts we have learned must be expanded into specific guidelines and detailed procedures. However, you can see that we no longer are concerned only with visible or surface cleanliness. The emphasis today is on procedures and their relation to sources and routes of contamination. We must be concerned with operations involving personnel, equipment, cleanability, handling practices and time-temperature relationships. We must critically observe many details we have never thought of before.

PERSONNEL—HYGIENE AND PERSONAL HABITS

Washing and Sanitizing of Hands

1. When and How

   a. All personnel handling ready-to-eat products or contacting equipment handling ready-to-eat products must wash their hands with soap, preferably antiseptic or germicidal, from a dispenser (preferably foot or remotely operated) and then dip them in a 50 ppm chlorine or any other suitable sanitizing solution when:

      1) Starting to work in the morning.

      2) After break time.

      3) After Lunch.

      4) After leaving and then returning to work station.

      5) After touching the floor or dirty area.

6) After handling uncooked product, etc.

b. It is preferable not to wipe the hands after using a chlorine dip.

c. Disposable plastic gloves may be used in lieu of hand washing and sanitizing in the department. Gloves must be discarded for new ones at the same intervals as indicated above for hand washing.

d. All other personnel handling any perishable product must follow the hand washing and sanitizing instructions above.

2. Drying

a. Paper towels should be used instead of cloth to prevent contamination.

b. Hands should never be wiped or dried on aprons.

Clothing

1. Clothing—General

a. Personnel handling any food products, raw or cooked, must wear clean outer clothing. This means daily laundering.

This includes maintenance personnel working in the food departments on equipment contacting any final product, cooked or raw.

Also, outer or street clothing such as jackets, sweaters, galoshes, etc. are not to be worn as outer garments in any edible food department.

b. All other personnel in store must wear **obviously** clean clothing.

2. Gloves—Guards

a. Gloves and other guards required for handling products, cooked or raw, must be laundered or washed on a daily basis or however more often the job requires changing of gloves.

b. Only white gloves may be used (unless disposable are used).

c. Leather products, such as wrist guards and aprons must be replaced with plastic or other material that can be washed with hot detergent and sanitized daily.

d. Where aprons are referred to later, either washable rubber or plastic or disposable aprons are recommended.

3. Head Coverings

All personnel present in departments where product is exposed and/or handled must wear head coverings to prevent hair falling into product.

4. Laundering Instructions

a. One or two quarts of hypochlorite bleach, containing 1% of available chlorine, must be added per 100 lbs. of fabric during the bleach operation.

b. At least one rinse must employ a temperature of at least 170°F. for a minimum of three minutes.

Use of Tobacco

Personnel must not use tobacco in any form while in food processing, food storage or equipment and utensil washing areas. (Dry grocery warehouse areas are not included in this requirement.)

Disease

No person affected by disease in a communicable form, or while a carrier of such disease, or while affected with boils, sores, severe acne, infected wounds, sore throats, colds, diarrhea or other abnormal sources of bacterial contamination should be permitted to work in an area where food, cooked or raw, is exposed.

Personal Habits

1. Spitting

   Spitting on the floor is prohibited. The mouth must not be used to temporarily hold tags, pins, cards, etc.

2. Coughing, sneezing, etc.

   Insanitary practices, such as placing the fingers in the mouth or nose, uncovered sneezing or coughing, scratching the head, etc. must be controlled.

3. Eating

   Employees must not be allowed to eat, drink or taste any products while working unless hands are immediately thereafter washed and sanitized.

   a. Lunches must be eaten only in a designated area away from food-handling areas.

   b. Employees must not store or hold their lunches or drinks in the coolers, refrigerators or ice chests with product that is to be sold. A specific cooler shelf or area, used for nothing else may be designated by the management for this purpose.

Summary

The area of personal cleanliness is a most difficult field in which to obtain effective action. Bad habits of long standing must be eliminated and rigid rules of personal hygiene and practice must be instituted. It is the responsibility of store management to set standards at the highest level.

The above personnel requirements must be required of all "outside" visitors, such as management people, salesmen, service men, fire inspectors, health inspectors, demonstrators, etc. that enter foodhandling areas.

In these cases it may be advisable for management to provide extra white frocks and disposable head covering for these people.

TECHNIQUES, EQUIPMENT AND AGENTS FOR CLEANING AND SANITIZING

Selecting Appropriate Techniques and Products

To "sanitize" means the adequate bactericidal treatment of cleaned surfaces by a process that

is effective in destroying bacteria. The key phrase in this definition is **"cleaned surfaces"** since bactericidal agents as used here are ineffective in the presence of grease, soil or product debris.

An effective sanitation program must include the proper use of cleaning and sanitizing agents, together with adequate cleaning and sanitizing procedures. To be truly effective, the sanitation program should provide procedures for cleaning which quickly remove greasy soils and solid waste materials from the food preparation process and also provide adequate controls of bacterial contamination. Unfortunately, many people involved in these programs still confuse ordinary soaps and cleansers with disinfectants and sanitizers. Detergents clean greasy soils and remove some bacteria, but they do not destroy bacteria.

"Sanitizers" are the agents most commonly used in combination with alkaline detergents. It should be noted again, however, that sanitizers are not cleansers. They have no detergent power. As previously mentioned, "sanitizers" show very little effectiveness against bacteria when applied in the presence of grease, soap residues and in combination with many ordinary detergents.

There are also today alternative ways of cleaning and sanitizing that will save up to 50% of the time needed to clean and sanitize under the standard procedure.

This is accomplished with the use of germicidal detergents which combine the cleaning and sanitizing operation. Combining these operations means that the destroying of bacteria is taking place while the cleaning is being accomplished. This "one-step" procedure, however, has to be tailor-made for specific needs. Consult equipment manufacturer's recommendations and USDA list of approved cleaning compounds.

Therefore, the steps involved that will be discussed in further detail are as follows for each method:

Standard Procedure

1. Rough clean—broom, brush, etc.
2. Alkaline detergent cleaning
3. Rinse
4. Sanitize
5. Rinse (if needed)
6. Air Dry

One-Step Cleaning-Sanitizing Procedure

1. Rough clean
2. Germicidal detergent cleaning and sanitizing
3. Rinse (if needed)
4. Air dry

Important—Special Note

It should be noted here that there is some disagreement between supporters of the two methods listed above. Confronted with a choice, there might be some confusion as to which method to use.

The supporters of the **Standard or Traditional Procedures** say that the cleaning and sanitizing steps must be separated for maximum effect in the reduction of bacterial levels, hence there is no acceptable short cut to good sanitation.

The supporters of the **One-Step Cleaning-Sanitizing Method** claim that the new modern germicidal detergents combine the operations with equal effectiveness in destroying bacteria and also save up to 50% in labor.

Whichever one prefers, either will do the job effectively for the supermarket, if combined with correct procedures for cleaning and sanitizing. Documented savings are available using either program. **Both are approved.**

It is always wise to consult a USDA list of accepted materials before deciding on a product.

A breakdown of the above two cleaning and sanitizing procedures is described in detail in the following sections.

Standard Procedures

1. Rough Cleaning

   This is the preliminary step to all cleaning-sanitizing procedures. The elimination of the bulk of food materials aids in subsequent cleaning and prevents floor-drain clogging.

   a. Without use of water, use hands, brushes, brooms, squeegees or scrapers as applicable to collect and dispose of all large debris.

   b. Where blood is a problem, such as on beef-cooler floors, hose down with cold water to finish rough cleaning.

   c. For equipment and all other floors, flush with warm (125—130°F.) water to complete rough cleaning, if drains are available.

2. Alkaline Detergent Cleaning

   Prepare and apply detergent with hot (155—160°F.) water. This step may be accomplished by:

   a. Using mechanical pressure equipment.

   b. By hand, in a sink, tank or tub in which case scrubbing by brush is required.

   c. By bucket and brush.

   d. By bucket and mop.

3. Acid Detergent Cleaning

   In case of very hard water for metal surfaces acid detergent or acid cleaning:

   a. Follow alkaline detergent cleaning instructions.

   b. Flood equipment with warm acid cleaner and allow to stand 5 to 15 minutes.

   c. Using a stiff fiber or nylon brush, scrub away the softened deposit. If there is a heavy deposit, more than one application may be required.

4. Rinse

   a. Rinse with hot (155—160°F.) water. Check thoroughly that all grease and particulate matter have been removed. If not, wash again.

   b. Remove excess water by clean squeegee, disposable paper toweling or power vacuum and allow to air dry.

   c. Portable equipment must be placed on cleaned racks, pegs, hooks or drain boards to dry.

5. Sanitize

   a. After cleaning and rinsing, apply 200 ppm sanitizing solution:

      On some equipment it may be necessary to remove excess water before applying sanitizer.

      Apply by spray, flooding cleaned area with buckets of sanitizer or by immersion of equipment in solution.

   b. Allow sanitizer to remain a minimum of 5 minutes and a maximum of 15 minutes on metal.

6. Rinse

   Rinse (not necessary on floors and walls) after applying sanitizing solution.

7. Air Dry

One-Step Cleaning-Sanitizing Procedures

1. Rough Clean

   Follow steps under Standard Procedures.

2. Cleaning and Sanitizing

   Prepare and apply germicidal detergent with hot (155–160°F.) water:

   a. Using mechanical pressure equipment.

   b. By hand, in a sink, tank or tub in which case scrubbing by brush is required.

   c. By bucket and brush.

   d. By bucket and mop.

3. Rinse

   a. Rinse with hot (155–160°F.) water. Check thoroughly that all grease and particulate matter have been removed. If not, wash again.

   b. Remove excess water by cleaned squeegee, disposable paper toweling or power vacuum and allow to air dry.

   c. Portable equipment must be placed on cleaned racks, pegs, hooks or drain boards to dry.

4. Air Dry

Special Instructions for Specific Areas, Equipment and Products

1. Cooked and Ready-to-Eat Products—Equipment and Areas

   a. If area temperature is above 45°F. the sanitation schedule must be as follows:

1) Prior to start in morning, wet all surfaces and equipment with 200 ppm sanitizing solution for 5 minutes, rinse and remove excess water.

2) Every 4 hours that equipment is used, clean and sanitize.

3) At end of working day, follow the standard procedures for cleaning and disinfecting.

b. If area temperature is 45°F. or below, follow the standard procedures for cleaning and disinfecting at end of each working day.

Prior to start in morning, flood surfaces and equipment with 200 ppm sanitizer for 5 minutes, rinse and remove excess water.

c. Equipment, such as slicer and saw, must be disassembled as far as possible when cleaning and sanitizing.

d. Cutting boards of plexiglass, or other synthetic materials in good condition may be cleaned and sanitized as above, but wooden cutting boards in good condition must undergo the following procedure.

Daily, at the end of day after cleaning as above, immerse the boards in 500 ppm chlorine or other suitable sanitizing agent for 30 minutes. Stand on edge to dry overnight without rinsing. In morning, put board through the regular 200 ppm sanitizing and rinse procedure.

e. Knives with twine-wrapped handles are uncleanable and are not to be used for cooking equipment.

f. Plastic or rubber matting and plastic ornaments for the display counters must be cleaned daily following the standard instructions for cleaning and disinfecting.

g. Cleaning and sanitizing of all cooked product equipment should be done in a separate area from raw product washing area.

2. Raw Products—Equipment and Areas

a. If area temperature is 50°F. or below, the sanitation schedule must be:

Daily, at end of shift, follow instructions for cleaning and disinfecting.

b. If area temperature is above 50°F., the sanitation must be:

1) Follow at noon or mid-shift, the standard instructions for cleaning and disinfecting.

2) Follow at end of shift the standard instructions for cleaning and disinfecting.

c. **All equipment** must be disassembled completely for cleaning and disinfecting.

d. **Fish-handling equipment** should be cleaned in an area separate from other cleaning procedures. In addition to cleaning and disinfecting, all surfaces should be final rinsed with 200 ppm sanitizer before start of operations in the morning.

3. Coolers—Floors and Walls

a. **Rough-clean floors without water daily**, with these exceptions:

In fish coolers and in areas where poultry is held after rough-cleaning, flush floors daily with warm (125–130°F.) water followed by applying 200 ppm sanitizing solution.

Following cleaning, the floor, walls and ceilings must be wet down with sanitizing solution which is left on.

b. Treatment of mold.

1) Scrub with detergents.

2) Rinse.

3) Spray with 500 ppm chlorine solution.

c. Special alternative instructions for floors and walls.

Realizing that there are stores within companies that are not equipped with floor drains or the latest in wall and floor materials that make for easy cleaning and sanitizing, this section is devoted to alternate ways of getting the job done with satisfactory results.

1) Wood floors should be treated after finishing or refinishing with a waterproof non-porous sealer.

a) Clean and sanitize with hot water, using mop or similar floor-scrubbing appliance, a bucket on wheels with preferably two compartments.

b) Soak up excess water on floor and air dry.

2) Concrete or Cement (without drains)

a) Clean and sanitize with hot water, using a mop or floor scrubbing machine if available.

b) Rinse with warm water.

c) Air dry after removing excess water; use water vacuum if available.

3) Linoleum or Asphalt Tile Floors (without drains)

Follow instructions above for concrete and cement floors. Special caution should be taken here not to use so much water as to loosen floor tile.

4) Floors with Drains

Clean and sanitize according to general instructions and ideally, using a mechanical high-pressure spray machine; if steam and condensation are not a problem, floor drying may be aided by using very hot water as a final rinse.

5) Dry-Storage Areas

Dry rough-clean daily. Weekly, follow instructions for cleaning and sanitizing. At least every two weeks, move all skids and racks so the entire floor may be cleaned.

6) Miscellaneous Cleaning Instructions

a. Barrels or containers for waste, scrap or rendering materials must be cleaned after each emptying and at least weekly by following the standard instructions for cleaning and sanitizing.

b. Small equipment, such as knives, mesh gloves, small pans, strainers, etc. may be

sprayed with or immersed in 180°F. water after cleaning and sanitizing procedures.

c. Can openers must be cleaned and sanitized daily. A small stiff-bristled brush is required for cleaning crevices.

d. Ice manufacturing machines must be cleaned-sanitized.

1) Turn off water and power; empty and drain.

2) Clean thoroughly inside, using cleaning sanitizing instructions, including circulating the cleaning solution through the machine.

3) After sanitizing, rinse thoroughly.

e. Conveyor Belts. Perishable product processing area.

After cleaning and sanitizing, if belts are to be unused for 4 hours or more, supply facilities so that the belt is held up so drying of under surface may occur.

f. Roller conveyors are extremely difficult to clean, but there are three ways this may be accomplished.

1) Divide them into small enough sections so they may be taken to a sink for washing.

2) Use power washing equipment in place.

3) Take long sections to a cleaning area sufficiently large to handle them.

g. Heavy plastic or smooth rubber aprons (if disposables are not used) may be cleaned according to the standard instructions for cleaning and sanitizing by repeated dipping into and out of fairly large containers of germicidal detergent, followed by a rinse in water.

Air returns and grills

h. Air returns and grills in display counters and on refrigeration units must be cleaned weekly with a vacuum hose.

i. Hand-sanitizing solutions may be placed in small stainless steel pans near hand washing sinks. There are sinks available with small containers attached alongside the wash basin. Also, dispenser with antibacterial soap is strongly recommended.

j. Rest rooms, lunch rooms

These rooms, and equipment within them, must be cleaned daily according to the instructions for cleaning and sanitizing.

k. Vehicles should be rough-cleaned daily and cleaned and sanitized on a weekly basis.

1) Vehicles that are used for perishables must be cleaned and sanitized daily.

2) All racks, flats, pallets and skids must receive the same cleaning procedure and frequency as does the floor in the area they are used.

Water Temperatures for Cleaning and Sanitizing

The following temperatures should apply as used in the preceding text:

Cold Water	cold tap water only
Warm Water	125–130°F.
Hot Water	155–160°F.
Very Hot Water	170–180°F.
Boiling	212°F.

Temperatures of the water as used is highly important and cleaning personnel must be trained to use thermometers to control water temperatures as used.

The problems involved are these: water above 130°F. is too hot for hand immersion, water below 140°F. will not cut fat and grease film effectively, water much above 160°F. will "cook" protein material to surfaces and also precipitate water hardness onto equipment, water in the 170°F. and above range produces too much steam and condensate in refrigerated areas and even 200°F. water is an ineffective sanitizing agent for large pieces of equipment.

Compounds for Cleaning and Sanitizing

There are many basic types of chemicals available for use in cleaning, disinfecting and sanitizing. Under any given circumstance, as the type of surface or soil, one type may be the more effective and more economical to use.

There are hundreds of manufacturers producing thousands of bulk-quantity compounds for use in commercial establishments. For concerns using large quantities, it will be economical to either purchase the specific job-oriented compounds in drum quantities or take advantage of the disposable self-dispensing ½ gallon and gallon containers in which specialty manufacturers often package their products.

In order to make sure that the correct compound is used, it is suggested that a commercial firm be contacted for specific recommendations rather than using items from the grocery shelves that may not do the job and turn out to be much more expensive to use.

Any product under consideration should be checked against the USDA list of approved general and germicidal detergents or sanitizers before being adopted for use.

1. General Purpose Detergents

   a. Alkaline

      The most widely used are the alkaline types containing 15% wetting agent, 30% glassy phosphates (hexameta and/or polyphosphates), 30% anhydrous sodium metasilicate and 25% soda ash. Such compounds are available as powders; they find wide application as cleaners in areas handling cooked or processed food and for processing glassware, silver and general food handling equipment which must be treated with a sanitizing rinse following cleaning so as to conform with local public health regulations.

   b. Acid

      Acid detergents also find use in specialty applications where hard waters, cooked foods and protein materials tend to form deposits on metal equipment. Acid cleaner should be used with caution as they may be corrosive to equipment. The household type acid cleaner should be avoided as they often contain materials that cannot legally be approved

for use in food establishments.

Procedures using acid detergents are usually applied on a weekly basis as follows:

1) Remove gross soil by hand.

2) Apply the standard procedure for cleaning and sanitizing.

3) Rinse

4) Flood equipment with warm acid cleaner and allow to stand 5-15 minutes.

5) Scrub away softened deposits with a stiff fiber or nylon brush.

6) Rinse.

NOTE: Heavy deposits may require more than one application of acid cleaner.

2. Germicidal Detergents—One Step Cleaner/Sanitizers

There are several types of these products readily available on the commerical market. Those which include two or more synthetic phenols as degerming agents are the most likely to be equally effective for cleaning and degerming. These products are generally liquids and are often packed in inexpensive self-dispensing disposable containers. They are good cleaners and are available with either soap or synthetic detergents as the cleaning agent. They are easily formulated to contain water softening compounds which insure that the germicidal detergent will give good performance independently of the quality of a local water supply.

3. Sanitizing Agents

There are a great many sanitizing agents available. Only a few are acceptable in food handling establishments.

It must be emphasized that many of the household sanitizers sold in the grocery stores should not be used in commerical food preparation due to their toxicity or strong odor or ineffectiveness or high cost. There are available from the USDA lists of acceptable and non-acceptable sanitizers. Usually the most inexpensive and effective of agents will be one of two types.

a. Chlorine Sanitizers—solutions of the common household bleaches such as "Clorox" or "Linco". Any of these sodium hypochlorite bleaches that contain approximately 5.25% available chlorine may be used as follows:

NOTE: Most sanitizer solutions are calculated in "parts-per-million". One measure of a chemical to one million measures of water equals 1 ppm. A 1% solution of chemical equals 10,000 ppm. NEVER USE MORE THAN THE RECOMMENDED AMOUNT.

1) Hand Sanitizing

a) A 50 ppm chlorine—for hand sanitizing. Wash hands with soap, rinse, dip and rinse hands in 50 ppm chlorine. Hands need not be dried or rinsed in water afterwards.

b) One half teaspoon "bleach" per gallon of tapwater or one measure of 200 ppm chlorine to three equal measures of tapwater will give approximately 50 ppm chlorine.

2) Equipment and Working Surfaces

a) 200 ppm chlorine—for all equipment or product-contact surfaces.

b) Two teaspoons of "bleach" to one gallon of water gives approximately 200 ppm chlorine.

3) Treatment of Mold

a) 500 ppm chlorine—for treatment of mold on cooler surfaces or other special uses only.

b) Five teaspoons of bleach to one gallon of water gives approximately 500 ppm chlorine.

c) Bulk quantities of sodium hypochlorite stock solutions containing 4 to 16% chlorine are available.

The three concentrations recommended above may be made from these bulk quantities according to label directions. Since chlorine in strong stock solution is readily lost, not more than a 30-day supply should be on hand and then kept only in a cooler. The 50, 200 and 500 ppm solutions above should not be kept more than 4 hours and must be discarded whenever the solution becomes soiled with food materials. Food such as grease, meat and vegetable materials rapidly inactivate chlorine. Therefore, surfaces must be clean before using this sanitizing agent. Chlorine solutions should not be left on metal surfaces longer than 15 minutes, otherwise corrosion will commence.

b. **Quaternary Ammonium Compounds**—These compounds are not effective against cold-loving spoilage bacteria. Their antibacterial properties are often diminished by contact with the mineral salts of hard waters and they are neutralized by contact with the more commonly used cleaners and germicidal detergents.

There are a great many commerical products on the market which are solutions of a number of different compounds of this type. Alkyl dimethyl benzyl ammonium chloride and dimethyl ethyl benzyl ammonium chloride are examples of "quanternary ammonium compounds". They are quite often mixed with other chemicals with long names such as tetrasodium pyrophosphate or ethylene diamine tetra-acetate. In all cases the container should state that the use-dilutions recommended will result in so many ppm of quaternary ammonium compound.

1) Walls and Ceilings

The quaternary ammonium compounds have a long-lasting effect and are recommended here for use on walls and ceilings of coolers for mold control although the compounds may be used the same as chlorine and at the same ppm level as chlorine noted above.

2) Hand Sanitizing

For 50 ppm hand sanitizing solution and the 200 ppm equipment sanitizing solution, these compounds must be made up according to the manufacturer's label directions since they come in many concentrations. No more than 50 ppm for hands and 200 ppm for equipment or product-contact surfaces may be used.

3) Walls and Ceilings

For walls and ceilings of coolers, these compounds may be used in concentration of

500 to 800 ppm.

It is very important when using these compounds above 50 ppm that the food-contact surfaces be thoroughly rinsed before use, since quaternary ammonium will impart a bitter flavor to foods.

NOTE: Ordinary household ammonia is not a sanitizing agent.

Cleaning Equipment and Aids

1. Brushes should be designed for the use intended. Soft-fibered or uncleanable brushes (such as whisk brooms) should not be used. Brushes of white nylon or abrasive fibers are typical of the types that can be used effectively.

2. Scouring Pads of the "Chore-Boy" or "Scouring Cloth" type may be used where absolutely necessary on bright stainless steel only. Nylon web scouring pads are preferable. Steel wool and wire brushes must not be used for cleaning.

3. Cloths and towels should not be permitted as an aid in cleaning equipment or wiping. Cloth towels or rags are too often held and reused to the extent that bacterial contamination occurs. High wet strength disposable paper towels should always be used.

4. Squeegees are an invaluable aid for removing water from large equipment surfaces. Squeegees, brushes and other aids for cleaning equipment, boards, tables, etc. must never be allowed to contact floors.

5. Hoses for use in food preparation areas should be white and always hung between uses on a wall rack.

6. Mechanical pressure cleaning equipment is available in many sizes and complexities. High pressure for washing may be developed by use of: built-in electric pump, separate compressed air source (80-100 lbs.), separate steam source (90-100 lbs) or built-in steam source. Nozzles will produce anything from a small single jet to a wide sweeping pattern. The type of detergent used should follow manufacturer's recommendations.

   The temperature of the water coming from the unit should follow recommendations in this document. Minimum requirement for a high-pressure washer should be a nozzle pressure of at least 250 lbs. per sq. inch and at least 1½ to 2½ gallons per minute.

7. For application of sanitizing solutions to walls, ceilings and equipment a hand sprayer is recommended.

8. Stiff, floor scrub brushes and floor brooms for wet sweeping are excellent aids.

9. Most floors will at least initially require the use of a floor scraper.

10. Consult trade journals for supplier sources.

CHAPTER VI
MERCHANDISING

Earlier chapters of this manual focused on the customer target market of a retail seafood business and on the purchase and care of various seafood products. This chapter emphasizes the importance of properly presenting the product to the customer, or MERCHANDISING. In addition, there are suggestions for choosing which seafood products to carry, how they should be priced, and where to locate the display equipment necessary to merchandise them. Hopefully, the suggestions given will contribute toward more fully satisfying your customer's needs and improving your firm's sales and profits.

MERCHANDISING THE FRESH PRODUCT ASSORTMENT

"As the heart is to the body, the service-display case, properly stocked with fresh seafoods, is central to the vitality of a service retail seafood market. From a physical standpoint it is the heart of the business and should, therefore, be viewed as the focal point around which other business matters revolve. Neglect it and the business immediately becomes anemic, to eventually wither and die."

The foregoing statement was made by a highly successful retailer of long standing and serves to articulate the importance of fresh merchandise display to the overall health of the service seafood market. Unfortunately, too few retailers have a proper appreciation of this concept and the dramatic influence that a good display can have on sales--particularly impulse sales.

Maintaining a full display case and offering a wide variety are key principles to successful seafood merchandising.

To maximize the effectiveness of the product display a retailer must constantly be mindful of the 2 cardinal principles of seafood display—KEEP THE DISPLAY CASE FULL OF MERCHANDISE and OFFER AS WIDE A VARIETY OF SEAFOOD AS POSSIBLE.

A customer does not like to see a display case half empty because it gives her the feeling she is

getting the "tail end" of the merchandise. A customer is much more likely to respond to a display case with the look of abundance.

The second principle—offer a wide variety—is often referred to as POTENCY OF ASSORTMENT, and offers the following benefits to the customer and to you: (1) Customers receive the impression that you are dedicated to offering them a host of seafood varieties; (2) A wide product assortment appeals to a wider market segment and presents a greater opportunity for you to increase volume; (3) Wider variety increases frequency of purchase and amount of purchase by individual consumers. In short, if the principle of "potency of assortment" is properly applied, greater sales volume can be expected, producing greater profits.

In addition to these basic principles, however, there are numerous techniques and details that should be employed to better enable the product selection to "communicate" positively with the customer. What it should say is "take me, I'm irresistable". Such a romance between customer and merchandise is the very essence of effective retail display.

THE DISPLAY ENVIRONMENT

Equipment

A good seafood display begins with the right display case. There are several opinions as to what type of case is best for fresh seafood but, generally, there are 2 main considerations: The case should have (1) a gravity-flow refrigeration coil (no fans) and (2) an integral, insulated stainless steel "wet pan" capable of holding 8 or more inches of bed ice at the center. Preferably, the unit should have enough refrigeration capacity to deliver up to 280 btu's per hour at 100° Ambient temperature, per running foot of case. This would mean approximately a 1/3 h.p. refrigeration unit for an 8-foot case, and ½ h.p. for a 12-foot case.

If the case is not so equipped, it should be modified to house 2 rows of fluorescent lighting. Most standard cases come with only 1 row of lights and ordinarily do not provide sufficient lighting for maximum visual impact of seafood products. The shade of fluorescent lighting should be a natural white, not "cool white," which tends to give fillets and other light colored seafoods a dried out or "bleached" appearance. When specifying a fluorescent shade, "soft white natural" is an excellent choice for lighting a fresh seafood display.

Lighting

A display problem which is consistently overlooked is the glare on the front glass of the service case. Typically, this glare is a result of ceiling lights (usually fluorescent fixtures) that reflect off the glass and obscure the product display from clear view.

When building a new facility or remodeling an existing one, this problem can be eliminated by constructing an overhang or fur down to extend out and over the display case. The overhang shadows the display case from ceiling lights the same way the bill on a baseball cap shades the wearer's eyes from the sun.

In existing retail shops, glare problems can usually be decreased simply by reducing the level of lighting in the customer area. Incandescent spots or recessed fixtures which can be adjusted to direct lighting onto desired areas are also helpful. Use of indirect side wall lighting instead of ceiling lights is another possible way to solve the problem.

Whichever method or technique is used, the main idea is to make the fresh seafood display the center attraction—the brightest, most visable feature in the store. Good light engineering and layout planning are crucial to the accomplishment of this goal.

Dressing Down the Case

Ice is the foundation of any good fresh seafood display, so naturally it is important to keep plenty of it on hand at all times. Some seafood merchants argue that ice is not necessary when the display case is refrigerated to 35 degrees or less. However, displaying fresh seafood without ice is not recommended. Ice, or ice in combination with mechanical refrigeration, is the quickest and best way to lower the temperature of fresh seafood and **maintain that temperature at a constant 33 degrees**. Also, unlike refrigeration obtained strictly from mechanical sources, ice keeps seafoods moist. Furthermore, the melting action of ice continually washes surface bacteria from whole fish which are in direct contact with it.

Ideally, a retailer should have access to 2 types of ice—flake and cube. Flake ice is easy to manufacture in large volume and very simple to handle and shape. Consequently, this type of ice is best suited for building the ice bed upon which seafoods are presented. Because flake ice is relatively soft, products in contact with it retain their natural shapes and are easily nested or imbedded in it. However, in spite of its excellent handling qualities, flake ice has very little natural eye appeal and, therfore, does little to enhance the visual impact of the product presentation.

To remedy this deficiency, aggressive merchandisers have discovered that small, clear ice cubes sprinkled sparingly on top of and around seafoods greatly enhance the appearance of the overall display. This is because cube ice has a "sparkle" or jewel-like quality which tends to "bring the product selection to life".

Now that the environment is ready to accept the product selection, the following techniques should be employed to help maintain highest saleability, product quality, and handling efficiency when serving the customer.

MERCHANDISING TIPS WHICH HELP CREATE AN EFFECTIVE PRODUCT DISPLAY

1. **Display for greater "see-ability".** Bank seafoods in cases on slanted beds of ice for maximum visibility.

2. **Display merchandise in narrow verticle rows or "ribbons" running from front to back of the display case.** The width of each ribbon is determined by the number of products you wish to display in a given length of case.

3. **Always place the freshest merchandise at the front of the ribbon and older merchandise toward the back.** Merchandise should always be pulled from the back of the ribbon whenever possible.

4. **Place ribbons consisting of fast moving merchandise in the most accessible positions relative to case doors and scales.**

5. **Do not build high displays or piles of merchandise.** The ice bed should be completely covered, but in most cases, products should be not more than 1 layer deep (2 layers for fillets). Otherwise products on "top of the heap" will become warmer than those on the bottom which are next to the ice.

6. **Arrange ribbons to contrast with one another.** For example 2 items of the same color should not be displayed side by side unless they are presented in such a way as to distinguish them from each other—one ribbon could consist of rolled fillets, while the next one might consist of fillets displayed flat. With whole or drawn fish, contrast could be achieved by displaying one species vertically and the next species horizontally.

7. **Display merchandise by "commodity".** Place all fillets in one section of the case, all whole fish in another section, all cooked seafoods together, etc. This allows the customer who is shopping

for a certain market form to see all the varieties available. Minor exceptions to this policy are acceptable, however, in order to maintain sufficient contrast between products.

8. **Do not display fillets and steaks directly on the ice bed but rather on waxed butcher paper or flat metal trays.** The melting action of the ice has a tendency to leach out various water soluble flavor nutrients from exposed meat leaving them with a somewhat "flat" taste. Shallow trays used to display fish or shellfish should be free of water and seafood juices. This can easily be accomplished by placing the product on trays which have been turned upside down.

9. **Drill small holes in deeper metal pans and trays used to display green shrimp and other raw products to allow drainage.**

10. **Display live clams and oysters at that end of the display case that is farthest removed from cooked and filleted products.** These particular mollusks have a sandy nature about them and, if this sand is transferred to other items, considerable customer dissatisfaction may result.

11. **Garnish your display with fresh lemons, parsley, case borders, plastic price markers and greenery strips.** Cooked king crab legs make an excellent garnish, as does an occasional live Maine lobster snugly enthroned on the natural seaweed utilized in its transport. Sliced lemons and limes should not be allowed to contact fillets or steaks, since they can alter the natural flavor of the flesh. Make sure all garnish materials—especially plastic price markers and greens—are kept clean and bright. Nothing turns customers away faster than dirty garnishing.

12. **Never stick plastic price markers into a product since the resulting spike holes damage flesh and allow bacteria to enter and thrive.** Instead place the spike tag in a lemon or lime and place it in front of the ribbon. In some display cases, it is possible to suspend the price markers from the metal light fixture or cooling coil by using magnetic clips. Price markers should be sanitized at least twice a week.

13. **Display both randomly sized fillets and portioned weight.** Most of the time a customer wants a variety of sizes and weights to choose from. However, some seafood customers do not know how many fillets to buy. For those customers, suggesting individual portions is best. Tail and odd sized pieces are typically utilized in "heat-and-eat" items such as gumbo. They can also be cut into bite-sized pieces and merchandised as "fondue fish cubes" or "fish nuggets".

14. **Display salmon and other large fish used for "steaking" with head and collar removed, and with the tail facing toward the rear of the display case.** This gives the customer a cross-section view of what the steak will look like.

15. **Do not merchandise smoked fishery products in the same case with raw products** unless separated by a full-length, plastic partition. Furthermore, smoked and other cooked seafoods should never come into direct contact with ice.

16. **Each hour spray fresh fillets and whole fish with ice water from an atomizer bottle to retain the "fresh bloom" appearance of the display.**

17. **When setting up a fresh seafood display, always evaluate your progress by viewing the display from the customer's perspective—in front of the case!**

MERCHANDISING TIPS WHICH SUPPORT DISPLAY SALES

1. **Offer a true boneless fillet.** A very real barrier to increased per capita consumption of fish in the United States is the consumer's fear of bones. Although a little more labor is required to cut and process a boneless fillet, repeat sales and increased customer confidence and satisfaction more than make the additional effort worthwhile.

2. **Always handle fillets carefully with both hands.** Not only does such meticulous care impress the customer, it also prevents breaking of tender fibers which can cause an unsightly appearance.

3. **When wrapping fillets, do not roll them or wad them up into a small package.** A wider, flatter package gives the appearance of greater value and also allows for better cooling of the product while in the refrigerator.

4. **If supply is "long" on a specific fresh item, increase the size of the display for that item and "talk it up" with customers.** Stretching the width of the ribbon and placing a "talking card" on the item calls the customer's attention to the long suit. Ingenuity and good salesmanship are called for in an overstocked situation.

5. **Scale whole fish under a cold-water shower.** This is a highly desirable practice if whole fish are to be scaled in view of the customer. It not only prevents scales from flying but also simultaneously washes surface bacteria from the product.

6. **"Straighten the fur" after scaling a fish.** Run the scaler or a knife from the head to the tail to lay the skin back in its natural position. Grooming of a fish in this manner makes it much more appealing to the customer.

7. **If a sale involves several items, identify each package with dri-mark, or another suitable marking pen.** This prevents the customer from having to unwrap each package at home in order to identify the contents. Make the customer's seafood experience as pleasant as possible from service counter to dinner table.

8. **Consider merchandising your product selection by geographic region—Gulf of Mexico, Pacific Ocean, North Atlantic, Great Lakes, etc.** This type of merchandising is particularly effective in large metropolitan markets where a large portion of the population consists of immigrants from other states.

9. **Offer free cooked samples of new products to interested customers.** This is a very effective way to develop demand for an under-utilized seafood such as shark or rock shrimp. By using a microwave oven, a bite-size sample can be prepared in seconds.

MERCHANDISING TIPS WHICH INCREASE PROFIT MARGIN

1. **Sell all the fish you paid for.** It may be surprising to some that throats, frames, and even fish heads are usually marketable, though at a relatively low cost. If display space or volume does not allow selling of these items directly from the service case, they may be bulk packed and frozen in 5-pound cartons for sale by special request, or by lot sale to a more appropriate outlet. Most fish roe is also highly marketable, and can usually command a price equivalent to that of whole fish.

2. **Fillet the "fat" fish, but sell the thin ones whole.** When pre-filleting whole fish for counter display, yield is all important to profit margin. Since fat fish generally produce a greater yield of filleted meat, it only makes good sense to select these fish for processing.

3. **Weigh each can of fresh crabmeat.** If offering fresh-cooked crabmeat both in the original container and piecemeal or loose from a secondary container in the display case, it is ordinarily worthwhile to weigh each can of crabmeat when received. If scales are sensitive enough—as are electronic scales—overweight containers can easily be separated and emptied for use in piecemeal sales. With this technique, a retailer actually recovers slightly more saleable weight than he paid for. At $5 or $6 a pound, the fractional ounces involved can generate a sizeable "bonus profit" over a long span of time. This technique is not applicable to all retail firms, however, due to some city ordinances which forbid repackaging of cooked crabmeat or other ready-to-eat shellfish.

4. **Display whole fresh fish with scale on.** Not only does this practice deliver more saleable weight, it also provides greater protection to the fish and enhance its natural eye appeal. Of course, once the whole fish has been weighed for sale, it should be scaled or skinned and processed according to the customer's order.

5. **When preparing cooked shrimp for sale, cool it as quickly as possible after cooking.** Cooked-weight yields as high as 80 percent (PDQ) are possible when shrimp are cooked rapidly, and then immediately and thoroughly rinsed under cold running water. If they are left in their cooking vessel to cool, 10 percent or more of their weight will be lost in the form of steam. To put it another way—60 to 70 cents per pound will go up in "smoke".

6. **Sell shell-on, cooked "creole shrimp" for 100 percent shrimp-weight recovery.** This is possible because of the other ingredients which are cooked and sold along with the shrimp. Typically, 20 percent of creole shrimp consists of lemon slices, celery, onions, and possibly other vegetables.

7. **If city ordinances allow, offer fresh crabmeat and oysters from an open container.** Many times a customer is unwilling to buy or does not need a full pound of crabmeat, but will readily purchase a lesser amount of it given the opportunity. Oysters dipped from a stainless steel bucket have much strong consumer appeal than do those sold in sealed glass jars.

8. **Offer prebreaded fillets and shellfish in the fresh service case.** There are at least 2 good reasons for doing this. First, such a product is ideal for those customers interested in convenience; and secondly, breaded products generally yield better profit margins due to a high percentage by weight of low-cost breading.

MERCHANDISING TIPS WHICH CONTROL FRESHNESS

1. **Always sell the oldest product first—first-in, first out** (FIFO). This is extremely important when dealing with fresh seafood due to its high degree of perishability. One shipment should **never** be mixed with another shipment, and each container in a shipment should be clearly identified as to date and time of delivery. Platter paper makes excellent sign material for this purpose.

2. **FIFO should also be practiced when selling from the display case.** Generally, the oldest products should be positioned toward the rear of the display case and tendered first to the customer. If two shipments of the same fillets are put on display at the same time, they should be layered and separated by parchment paper so as not to become mixed. In the case of whole fish, cut off a small piece of tail from each fish on display prior to adding fish from a more recent shipment. This is called "bobtailing" and distinguishes the wholefish from the oldest shipment.

3. **Store fresh whole fish to allow drainage of the belly cavity at all times.** If moisture collects in the belly cavity, rapid deterioration of the fish results due to the high numbers of bacteria in this area. Reportedly, some Japanese firms have recently begun packing fresh whole fish in ice in a vertical position, with heads pointing down. Not only does this allow for excellent drainage, but it also prevents the contaminated drainage melt from ever contacting the more valuable parts of the fish.

4. **Store fresh canned and jarred oysters in slush ice.** Slight changes in temperature cause accelerated deterioration of fresh oysters. Keeping their containers packed in an ice slush (ice and water) assures a constant 33 degree holding temperature, maintaining peak quality.

5. **Keep a record of all products that must be discarded and the total dollar sales lost as a result.** This will help identify weaknesses in quality control procedures and keep personnel frequently reminded of the importance of freshness control.

6. **Freeze trimmings and heads prior to their disposal.** This is highly important in the control of "fishy odor". By using a relatively small waste receptical lined with a plastic bag, personnel will be "forced" to dispose of odor-causing wastes several times each day. Wastes should always be sealed in plastic bags prior to being placed in the storage freezer, and should be held only until the next garbage pickup.

A Model Stock of Assorted Seafood Products

A. Shellfish

1. Clams, fresh

2. Crabs

   a. Blue crab
      (1) Lump crabmeat (lump grade)
      (2) White crabmeat (special grade)
      (3) Claw crabmeat

   b. Alaskan King Crab Meat

3. Oysters

   a. 12 oz. jars, fresh
   b. ½ pint, pint, and quart paper cartons

4. Scallops, fresh or defrosted

5. Shrimp

   a. Jumbo/with shell, fresh or defrosted (size 15-25)
   b. Medium/with shell, fresh or defrosted (size 25-35)
   c. Cooked (cocktail)
   d. Marinated
   e. Rockshrimp

6. Squid, fresh or defrosted

B. Finfish

1. Fresh-water catfish

   a. Fillets
   b. Drawn or dressed (skinless)

2. Black Drum

   a. Fillets
   b. Steaks
   c. Drawn or dressed

3. Golden Croaker, pan dressed

4. Texas flounder, dressed

5. Pompano, fresh dressed

6. Redfish

    a. Fillets
    b. Steaks
    c. Drawn or dressed

7. Red Snapper

    a. Fillets
    b. Steaks
    c. Throats
    d. Drawn or dressed

8. Salmon steaks, fresh or defrosted

9. Shark

    a. Fillets
    b. Steaks

10. Sole fillets, fresh or defrosted

11. Gulf Trout

    a. Fillets
    b. Drawn or dressed

12. Whiting, fresh dressed

Frozen seafood

1. Dungeness Crab
2. King Crab meat
3. Stuffed crabs
4. Fish'n Chips
5. Fish sticks
6. Fillets of flounder, ocean perch, catfish, sole and cod
7. Stuffed flounder
8. Fried fish fillets
9. Halibut steaks
10. Hush puppies
11. Lobster tails
12. Octopus
13. Breaded oysters
14. Salmon

15. Scallops

16. Breaded shrimp

17. Cooked shrimp, salad pieces

18. PDQ shrimp (peeled, deveined and individually quick frozen)

19. Squid

20. Smelts

D. Canned Seafoods (partial list)

1. Mackerel

2. Salmon

    a. Pink
    b. Red Coho
    c. Silver

3. Sardines

    a. Green chile pack
    b. Mustard pack
    c. Olive oil pack
    d. Tomato pack

4. Shrimp (cooked)

5. Tuna

    a. albacore
    b. dark
    c. water pack
    d. white

6. Specialty or Gourmet Items

    a. Kippered Herring
    b. Shad roe
    c. Smoked clams
    d. Finnan Haddie
    e. Smoked oysters
    f. Smoked salmon (lox)
    g. Smoked Spanish mackerel
    h. Sprats
    i. Stuffed squid
    j. Boiled shrimp
    k. Creole shrimp
    l. Pickled shrimp
    m. Smoked mullet
    n. Marinated herring
    o. Kippered hering

The retailer may wish to prepare some of the items for the frozen fish case himself. If so,

special care should be given to packaging, weighing, and marking the contents. However, most items are available from frozen food wholesale sources in prepackaged form.

Along with the basic product assortment of fresh and frozen seafood, the retailer should stock complementary items such as tartar sauce, lemons, breadings, cocktail sauces, seasonings and shrimp peelers. Although of secondary importance in product assortment decisions, these items can add substantially to sales volume over a period of time, generally at a good gross margin mark-up.

PRICING CONSIDERATIONS

Although the procedure for dressing fish remains basically the same for most species, differences in costs involved in the operation can be very important when pricing your product lines. The following example may help to illustrate this point. Assume that, for a given retailer, the following statements are true:

Species Information	Specie A	Specie B
Cost per pound	$ .57	$ .57
Delivery cost per pound	.03	.03
LANDED COST PER POUND	$ .60	$ .60
Dress-out (percentage salable meat)	66 2/3%	40%
Filleting time (No. of fish/hour)	32	16
Labor costs per hour	$ 3	$ 3

Suppose further that a shipment of 1,000 pounds of each species arrives and that the average weight of the fish is 4 pounds. How should the fillet price per pound be determined? As you know, cost often serves as an indicator of the lowest price to charge, allowing the seller to break even. The question is which costs to include and how to determine them? For example:

Dressing Out	Specie A	Specie B
Dress-out factor	66 2/3%	40%
Amount purchased (lbs. of fish)	1,000	1,000
Amount available for sale (lbs.)	667	400
Original purchase price (1,000 lbs. at $.60)	$ 600	$ 600
Price per pound available for sale	$ .90 ($600/667)	$ 1.50 ($600/400)

Filleting Cost	Specie A	Specie B
Fish Filleted per hour	32	16
Number of fish (1,000 lbs/4lbs. per fish)	250	250
Hours of labor required (250/number of fish per hour)	8	15.6
Labor cost at $3.00 per hour	$24.00	$94.50

Labor cost per pound of salable product (Labor cost per hr./ pounds available for sale)	$ .035	$ .117
Cost per pound of salable meat	.90	1.50
Filleting cost per pound of salable meat	.035	.117
Total coast per pound of salable meat	.94	1.62
Profit to attain 40% margin on selling price	.63	1.08
Selling price per pound	$ 1.57	$ 2.70

Notice that all the costs are necessarily based on some marketable weight, not on the original pounds purchased. Remember that you can only get return on the pounds you sell, and not on the ones you have thrown away. While this example is exaggerated, it illustrates that cost differences of whole fish that are similarly priced can become very great after processing. For profitable filleting, a merchant should be aware of the various yields that he can expect from different fish.

When pricing seafood, a retailer can be too conscious about his customer's reaction to the cost of the product. Marketing studies reveal that consumers have relatively limited information on prices. Typically, the consumer designates a store as "relatively low priced" when the items she most frequently purchases are competitive with other stores. In reality the store may be priced higher on its product assortment except for these popular items. However, because of this "price image" in the customer's mind, she continues to shop at the store.

It follows that a "selective" pricing strategy rather than a "blanket" pricing strategy is more intelligent and appropriate. Hence, it would be wise for a retailer to price competitively on more popular seafood items and enjoy higher margins on items which sell more slowly. The key to selective pricing is to equate tonnage movement with gross margin for each product. Low pricing on fast movers may lead to such low gross margin that profits are negligible; a relatively high price on slow-moving items will give you high unit markup but volume of the item contributes little toward total gross profits. By sitting down with pencil and paper and estimating various dollar sales at different prices for the products in your inventory, you can estimate the gross margin you will need to cover cost of doing business and to provide a necessary profit level. What prices actually generate the necessary profit level for a firm are determined ultimately in the market place.

What is the optimum average markup at retail selling price in your seafood business? A conservative estimate is to attempt to maintain a 40 percent markup on selling price. That is, for every dollar you receive from the sale of seafood items, you should retain, an average of forty cents over and above the landed cost of the product; "landed cost" equals the amount the retailer pays for the product plus transportation costs. If sales volume is relatively high, you may lower average prices or employ weekend price promotions to pass lower prices to the customer.

Pricing as a competitive ploy can be dangerous. No one wants to get into a price war. If you wish to use price as a traffic-generating tool, use low-price tactics on special occasions or scatter low prices among various seafoods at different times during the year.

Keeping in mind that a sound pricing policy is just as important as sound purchasing and product assortment policies. The retailer is wise to formulate a price policy; through experience and experimentations, he can refine this policy until it becomes a proven strategic tool.

IN-STORE LOCATION OF SEAFOOD CASE IN SUPERMARKETS

The position of the seafood case in a supermarket may depend to a large extent on whether management views its seafood customers largely as impulse buyers or as nonimpulse buyers. The management of a Dallas supermarket for example, views its customers as impulse buyers of fresh seafood. Consequently, the fish display case is the first station in the "traffic flow" design of the seafood and meat department. On the other hand, a supermarket in Houston views its seafood customers as nonimpulse buyers; as a result, its seafood case is last in line in the seafood-meat department. Initially, the same Dallas supermarket that placed its seafood case at the head of customer traffic flow grossed nearly $8,000 in sales from the seafood counter during the first week of operation.

There are many decisions which the retailer must make concerning his merchandising methods. He must decide upon the "best" arrangement of the seafood counter or counters to accomodate customer traffic flow. He must be familiar with the various forms in which seafoods may be displayed. Even more important, the retailer must maintain a wide product assortment tailored to his particular customers, and then display this assortment in a clean, attractive manner.

Another good merchandising practice is to group related products in a central location. A smart seafood merchant (particularly a supermarket merchandiser) should locate all seafood products-fresh, frozen, and canned-at one focal point within the store. Such grouping increases the impact of the seafood section on the consumer.

Additionally, the consumer will develop the attitude that seafood is a main meal item if the counter is positioned closer to the red-meat counter than to the cold-cut or delicatessen display. This is not meant to suggest, however, that seafood operations be an appendage to the red-meat section. Indeed, for good merchandising management and sanitation practices, experience has shown that red-meat and seafood operations perform best when kept separate, both physically and managerially.

CHAPTER VII
PROMOTING SEAFOOD SALES

Despite its potency, sales promotion is often viewed by the small retailer with considerable skepticism, or at best as a strategy to boost sales when times are bad. This is indeed an unfortunate attitude, since a well-planned promotion program can contribute handsomely to store profits by increasing sales volume. Promotion is also a service to the customer, since it helps one to make buying decisions by providing useful information about products. In the long run, promotion tends to lower prices by helping to expand markets.

WHAT IS PROMOTION?

When taken in a broad sense, promotion means any activity designed and implemented for the purpose of increasing sales. Using this definition, it can easily be understood that promotion is something the retailer should view with favor. Promotional activities do not always require large outlays of dollars—although such outlays should be viewed not as costs but as tax-free investments.

Running an in-store "special" is, therefore, a form of promotion if the objective of the special is to increase sales. Likewise, newspaper advertising is a form of promotion if the main objective is to increase sales.

All seafood retail firms, regardless of size, should have a promotion program, including a sales goal, and a plan to obtain that goal. A retailer can expect some business without any promotional effort, but his financial interests may not be furthered if he continues to operate without purposeful (planned) activity to increase sales. For the most part, the size of a promotion program depends on how ambitiously a firm sets its sales goal. If a market which averages $1,500 a week in sales with little or no promotional effort wishes to increase sales to $1,600, a minimum-cost promotional program will probably do the job. On the other hand, if the goal is to double sales volume to $3,000 per week, a substantial and aggressive promotional program is needed. The point to be made is that every retailer, large or small, should use promotional tools which are tailored to accomplish predetermined sales objectives.

THE TOOLS OF PROMOTION

According to our previous definition, any activity designed and implemented to increase sales can be considered promotional. Therefore, it can readily be seen that good in-shop business practices are included in the arena of promotion, since such practices contribute to the overall level of business. A clean, odorless shop; consistent high-quality products; rigorous sanitation policies; and adherence to business hours are part of and prerequisite to an effective promotional program. There are, however, some specific tools available to promote a firm's product assortment.

1. **Promotion through personal selling**—The man behind the counter is a key figure in a good sales promotion program. His attitude is all-important and can "make or break" a sale. Therefore, begin your promotion program by encouraging counter personnel to become good salesmen as well as good butchers. Customers should always be greeted in a warm, friendly manner to let them know that their business is appreciated. Service to the customer is of utmost importance in building good will and in securing repeat sales. Customer service should not be compromised by practices such as charging extra for dressing whole fish. Remember that the customer views the man behind the counter as being a seafood authority; what the counter salesman does or says has great bearing on purchasing decisions. If a woman looks over a seafood display hesitantly, ask her, "Have you seen our fresh flounder today"? This has much more salesmanship than "May I help you", and gives the customer more information than "What kind of fish would you like"? When a customer is uncertain, such a general question may turn her away.[1]

The man behind the counter is the key figure to a good sales promotion program, since his attitude can often make or break a sale. He should be a good salesman--not just an order-taker.

After the customer decides on a seafood item, find out how many people are to be served and suggest to her the quantity needed, perhaps mentioning another item to complement her first choice. If whole fish are chosen from the counter display, offer to dress or fillet the fish free of charge. If encouraged to accept your offer, the customer may avoid an unpleasant experience at home that might turn her away from fresh seafoods completely.

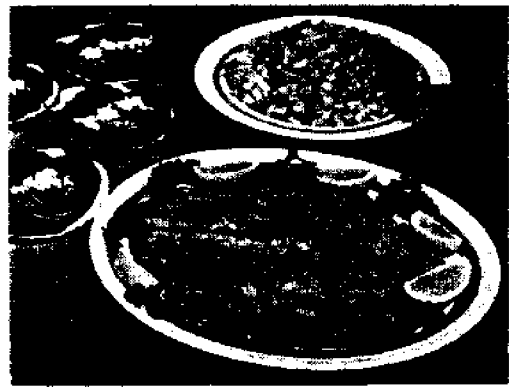
At this point, you may be asked for serving suggestions or recipes. Be prepared to deliver them both verbally and in printed recipe form. Remember that **if you make her a success at the dinner table, she will make you a success in your business.**

The most desirable promotion is **favorable** "word-of-mouth" advertising—satisfied customers telling their friends and neighbors about your friendly market. The most important way, indeed the only way to accomplish this is with competent and friendly personnel who can meet the public pleasantly, maintain an attractively displayed product assortment, and service their trade.

2. **Promotion through collateral materials**—Sales can be influenced positively by liberal use of tasteful literature and display materials. Literature and displays do cost money, but it is important that this "cost" be measured in terms of results rather than production charges. Many fine promotional materials, free of charge, can be obtained through various government agencies and fisheries trade associations. Following is a list of in-store collateral materials which the seafood retailer might wish to consider:

    a. **Recipes.** No retail seafood market should be without recipe materials. Generally, American consumers do not know how to prepare seafoods, and any help you can provide will make them better seafood users. In addition, a "recipe of the week" or featured recipe contributes to impulse sales. Recipe materials are available in many forms—cards, brochures, booklets, tear sheets, etc.—and many of these can be obtained free of charge. At the end of this section are 60 proven seafood recipes. Qualified Texas seafood retailers may obtain these on color-illustrated, 3 x 5 cards from the Texas Parks and Wildlife Department in Austin for free public distribution. Supply is subject to availability.

In addition, at the end of this chapter is a list of government and industry trade groups that may supply recipes, as well as other display materials.



MENU

— Hearty fried fish — Always delicious —

GOLDEN FRIED TURBOT

Cottage Fried Potatoes

Tomato and Onion Slices

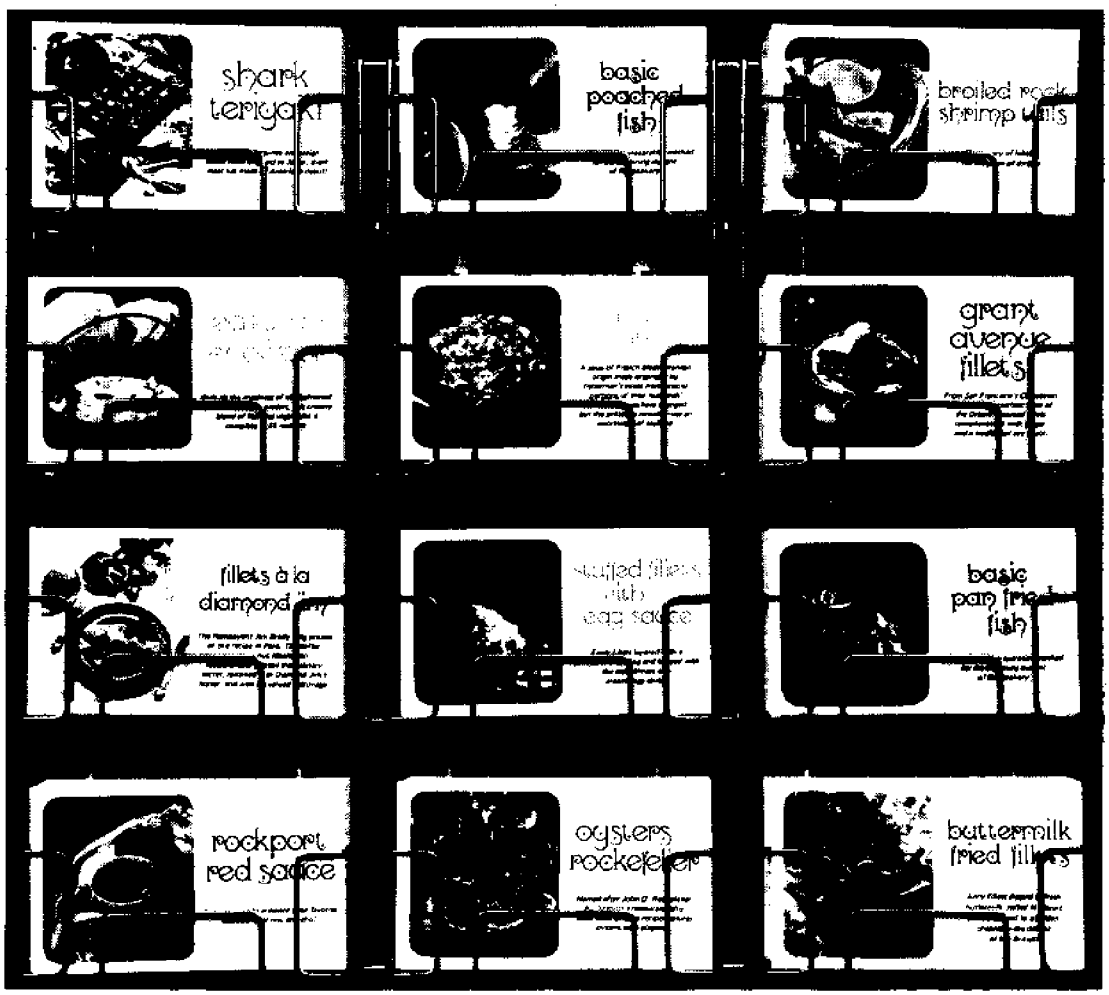
Vons Rye Bread

Vons Strawberry — Rhubarb Pie or Vons Square Cake

Wine Suggestion: Wente Brothers Blanc De Blanc

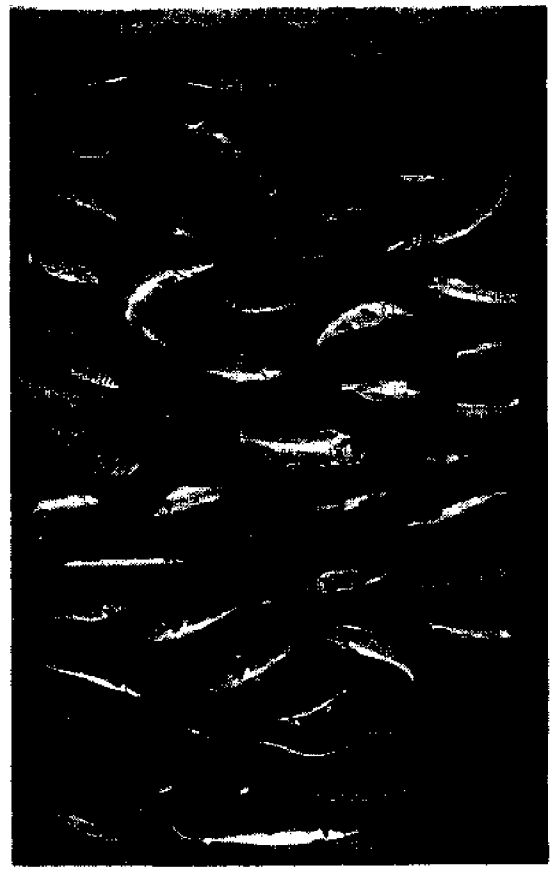
Preparation Time: About 30 minutes

VONS Best food Values in town VONS



Providing good seafood recipes to customers will help make them better seafood users.

b. **Charts and Posters.** These items add color and interest to your market and often provide helpful information to consumers. A series of colorful species identification charts are available from the National Marine Fisheries Service.



c. **Window and store displays.** An ad in the front display window is an effective way to attract the attention of potential customers. You may then wish to use posters, signs, or secondary displays that invite the shopper into your market. In-store displays are highly effective and widely used in supermarkets. The purpose is to draw attention to a particular item or product in plentiful supply. During a recent merchandising study conducted in Bryan, Texas, sales of fresh oysters were tripled simply by creating a makeshift display from which shoppers could readily pick up "jarred" oysters.

d. **Freezer strips and shelf talkers.** These materials are generally used to offer serving suggestions and to focus attention on a particular item. They may also provide information to shoppers on handling and preparing techniques. For example, one such display might read "Thaw Frozen Seafood Under Cold Running Water". Freezer strips vary in dimensions, but generally are 4 x 24 inches. They customarily have a self-adhesive backing and are displayed horizontally on freezer and display cases. Shelf talkers are small square or rectangular signs that are attached to shelves and draw attention to products thereon. Talkers are most commonly used along supermarket aisles, but are equally appropriate for display on shelves in independent seafood shops.

e. **Business Cards.** This promotional tool is often overlooked. Nevertheless, business cards can help sales when they are distributed to customers. Customers refer to them when placing phone orders and when recommending the shop to friends.

f. **In-Counter items.** In terms of eye appeal, seafoods and ice alone leave much to be

desired. It is important, therefore, that additional color and warm lighting be introduced to your product display. The more eye-appealing your display, the more sales it will generate.

1) **Price Markers**—Essential to effective product merchandising, these signs should be easy to read, constructed of plastic, and designed so that prices can be changed readily. Such markers are available from butcher supply shops. It is important to keep markers clean and displayed in front of the product. Do not mount "spear type" markers in the flesh of the product. The puncture holes resulting from this practice promote bacterial growths and cause foul odors. Price markers can be mounted in real or artificial citrus in front of the product. Not only is this technique superior from a sanitation viewpoint, but the colorful fruit also makes your display more appealing.

2) **Product Labels**—Proper identification of each item in your product assortment lets the customer know exactly what is being purchased. At the same time labels increase consumer knowledge and confidence about fresh seafoods. The most common method of identification is to place the name of the specie directly on to the price marker. Differentiate fresh products from those thawed for display in the fresh seafood case by placing small paper signs which read "Fresh" directly on top of those species that have not been frozen. Such a practice builds consumer confidence and loyalty and emphasizes the desirability of fresh seafoods over frozen. Counter personnel should encourage shoppers to prepare fresh seafoods as soon as possible—rather than first freezing them—for maximum eating enjoyment.

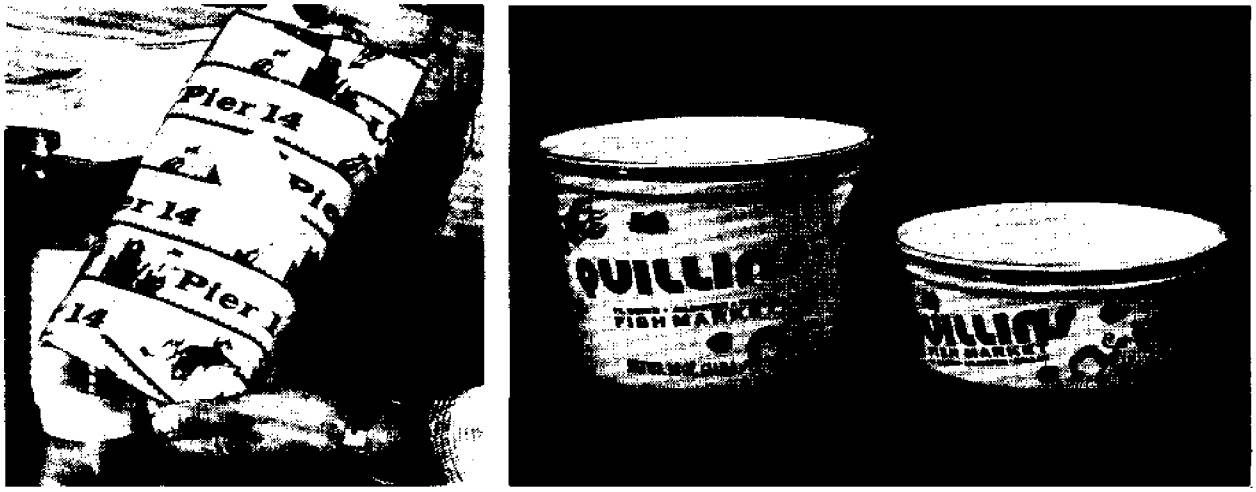
3) **Display "Greens"**—Your counter display should be garnished to provide color and eye-catching liveliness. Lemon slices and parsley are excellent complements for your product display, but other items work equally well. Plastic greenery strips can be used to divide various products as well as to add color and liveliness to your display.

4) **Case borders**—Case borders are adhesive strips approximately 6 to 8 inches wide that affix to the top and/or bottom of the glass display window. Borders run the length of the counter. Their primary function, like greens, is to add color and liveliness to your product display. However, they can also identify products. Lettering the product name on the case border, then displaying that particular product directly behind or below is very effective for identifying components of a product mix. Case borders placed along the bottom edge of the display window can also indicate depth and level of the ice bed inside the case.

5) **Warm Lighting**—It is best to illuminate your seafood display with warm lighting as opposed to "cold" white fluorescent lighting. Warm lighting makes white fish flesh appear more appetizing. If using fluorescent fixtures, you should specify "soft white natural" when purchasing tubes.

g. **Custom wrap and packaging.** Promoting your shop's name in the "outside" world can make mental impressions that will contribute to your business in the long run. An easy, inexpensive way to circulate your firm's name is to use custom wrap and packaging. Little additional cost is involved between buying printed wrapping paper rather than unprinted paper. When your company name or trade mark is printed on shopping bags, the customer "carries" your company name or trade mark with her for others to see. Your company image is also reinforced when packages are unwrapped just prior to preparation.

h. **Sack stuffers.** Stuffers are placed in the shopping sack at check-out time. Recipe brochures are excellent sack stuffers but other information can also be distributed in this



Custom-printed wrap and cartons carry your firm's image directly into a customer's kitchen.

way. A soon-to-open shop, a new line of merchandise, or new business hours can be effectively announced with sack stuffers.

i. **Mailers and Leaflets.** Direct mail advertising is an excellent way to reach potential customers. Distribution can be accomplished by U.S. postal service, by private postal service (not available in all communities) or by individuals hired to deliver your communications from door to door. With direct mail you can be highly selective in distribution. Although placing your message at a prospect's front door is more expensive than handing materials to customers over the counter, remember that only a small percentage of potential customers visit your shop regularly. Direct mail is similar to sack stuffers because it often announces a new business, a new merchandise line, or price specials. However, direct mail attempts to enlist new customers, whereas stuffers attempt to maintain the regulars.

j. **Coupons and Premiums.** Price coupons can also effectively increase sales. Because they are "spent" like money (psychologically this is much more potent than a "reduced price special" that is available to anyone), price coupons are used principally to attract new customers. Therefore, price coupons should be distributed outside your premises to prospective customers. This is often accomplished by direct mail or through newspaper ads from which coupons are clipped. Perhaps the most effective price coupon does not specify any particular product, but does allow a face value reduction on a minimum purchase—for example, a coupon worth 50 cents on any purchase of 2 or more dollars. More often, price coupons encourage current and prospective customers to buy a specific product, in which case it basically becomes a sampling device. Price coupons can also aid the retailer in systematically obtaining names and address of customers, both new and old, who are responsive to coupon ads. This can be accomplished by requiring customers to write their name and address on the coupon at the time it is presented for redemption. The retailer then has an excellent list to which additional advertising may be directed. In addition to price coupons, "premium coupons" are another strategy. Premium coupons date back as far as 1851 when Raleighs cigarettes were first packed with a coupon "good for premiums" as an inducement for purchasers to continue using Raleighs until they were "hooked". Unlike the price coupon, the premium coupon is available on the premises at the time of sale. After accumulating a predetermined number of coupons, the customer can then redeem them for certain premiums or perhaps a fixed amount of credit.

k. **Uniforms.** Properly uniformed personnel can help a retailer convey a consistent, quality image. For this reason, attempt to provide some type of uniform dress for employees. By paying for employees' uniforms, the retailer will find it easier to control the overall cleanliness and appearance of his crew. A "uniform" may not include an entire set of

clothes. Disposable utility "jackets" and personalized service caps can provide an impressive appearance at minimum cost. One firm discovered that by hand-lettering employees names on their caps, customers are inclined to be friendlier and to communicate more openly with service personnel on a first-name basis. This type of relationship builds good will, and "repeat" business.

All personnel should be provided with uniforms or other custom utility garments to help convey a clean, consistent, and quality image.

I. **Samples.** One sure way to move a product is to give it away. This may not be as obvious as it sounds, since giving by one party requires "taking" by another. Unfortunately, many people who profess dislike for seafood, may actually love it. However, these people have never experienced good seafood that was properly prepared.

A sampling promotion can and should provide them with a pleasant experience. The sampling promotion may be high-keyed or low-keyed, involving neither additional help nor the hiring of a professional home economist. Remember that you are trying to introduce customers to a new product or recipe which eventually will be reflected on cash register receipts. In a recent merchandising study conducted at a Texas supermarket, fresh seafood sales reached a record high for a single day when the sampling technique was employed. In fact, the market sold out of fresh fish, despite having an unusually large reserve inventory in anticipation of increased sales.

RECIPES AVAILABLE FOR LIMITED DISTRIBUTION

RED SNAPPER EN PAPILLOTE

2 *pounds red snapper fillets, or other fresh fillets*
1 *medium green pepper, sliced into rings*
1 *medium onion, sliced into rings*
¼ *cup melted butter or margarine*
2 *tablespoons lemon juice*
2 *teaspoons salt*
1 *teaspoon paprika*
Dash pepper

Brush fillets with half the melted butter and sprinkle with seasonings. Position plastic cooking bag onto a baking pan and insert remaining butter, lemon juice, green pepper, and onion. Place fillets in bag on top of vegetables. Close bag and puncture a few small holes according to instructions with bag. Bake for 20 to 25 minutes at 375 degrees. Slit bag and serve directly, or arrange fillets on serving dish and garnish with cooked vegetables and fresh lemon wedges. Makes 4 to 6 servings.

SMOKED FISH

Start fire in a hooded outdoor cooker using fewer briquets than usual to maintain a low cooking temperature. Place a handful of hickory chips in water and allow to soak. Dissolve 1 cup salt in 1 gallon of water. Marinate fish in brine according to table. Spread coals in cooker and add wet hickory chips. Grease grill well. Place fish on grill and baste with vegetable oil. Close hood and smoke according to table. Baste fish occasionally.

Size 'n shape	*How much to serve 6*	*How long to marinate in brine*	*Cook at*	*How long*
Fillets or steaks (½ inch thick)	*2 pounds*	*30 minutes*	*150-175* *200* *250*	*1 hr. + 30* *45 minutes* *30 minutes*
Fillets or steaks (1 inch thick)	*2 pounds*	*45 minutes*	*150-175* *200* *250*	*1 hr. + 45* *30-45 min.* *30 minutes*
Whole dressed fish (1½ to 2½ pounds)	*3-4 pounds*	*30-45 minutes*	*150-175* *200* *250*	*2 hours* *1 hr. + 15* *45-50 min.*

FESTIVE MULLET

2 pounds skinned mullet fillets, or other fresh fillets
½ cup French dressing
1½ cups cheese crackers, crushed
2 tablespoons cooking oil
Paprika

Cut fillets into serving size portions. Dip portions in dressing and roll in cracker crumbs. Place portions in a well-greased baking pan and drizzle with oil. Bake at 500 degrees for 10 to 12 minutes, or until fish flakes easily when tested with a fork. Makes 4 to 6 servings.

FLOUNDER WITH CHEESE STUFFING

4 small Gulf flounder, cleaned and dressed for stuffing (ask your seafood butcher to prepare your flounder for stuffing)
½ cup butter or margarine, melted
2 teaspoons salt
½ teaspoon pepper

Stuffing Ingredients
1 cup onion, chopped
¼ cup butter or margarine, melted
2 cups dry bread crumbs
1 cup natural Cheddar cheese, grated
2 tablespoons parsley, chopped
2 teaspoons powdered mustard
½ teaspoon salt
Dash pepper

Wash flounder and brush inside and out with butter or margarine. Sprinkle with salt and pepper, and place in a single layer in a well-greased baking pan. Saute onion in ¼ cup butter until soft. Add butter and onion to remaining stuffing ingredients and mix thoroughly. Fill flounder with stuffing. Bake at 350 degrees for 25 to 30 minutes, or until fish flakes easily when tested with a fork. Makes 4 to 6 servings.

SUNSHINE FILLETS

2 pounds fresh fish fillets
3 tablespoons oil or melted fat
2 tablespoons fresh orange juice
2 teaspoons grated orange rind
1 teaspoon salt
Dash pepper
Dash nutmeg

Cut fillets into serving-size portions. Place portions in a single layer, skin side down, in a well-greased baking dish. Combine remaining ingredients and pour over fish. Bake in a moderate oven, 350 degrees, for 25 to 30 minutes or until fish flakes easily when tested with a fork. Makes 4 to 6 servings.

CHIPPER TROUT

2 pounds Gulf trout fillets, or other fresh fillets
½ cup Caesar salad dressing
1 cup crushed potato chips
½ cup shredded sharp Cheddar cheese

Dip fillets in salad dressing and place in a single layer, skin side down, in a baking dish. Combine crushed chips and cheese and sprinkle over fillets. Bake at 500 degrees for 10 to 15 minutes or until fish flakes easily when tested with a fork. Makes 4 to 6 servings.

SAVORY BAKED FILLETS

2 pounds black drum fillets, or other fresh fillets
2 teaspoons lemon juice
Dash pepper
6 slices bacon
1 medium onion, thinly sliced
½ cup soft bread crumbs
2 tablespoons chopped parsley

Place fillets in a single layer in a greased baking dish. Sprinkle with lemon juice and pepper. Fry bacon until crisp, remove from fat and crumble. Cook onion rings in bacon fat until tender then arrange evenly over fillets. Combine bacon, bread crumbs, and parsley. Sprinkle mixture over fillets and onion. Bake at 350 degrees for 25 to 30 minutes or until fillets flake easily when tested with a fork. Makes 4 to 6 servings.

TROUT AMANDINE

2 pounds Gulf trout fillets, or other fresh fillets
¼ cup flour
1 teaspoon seasoned salt
1 teaspoon paprika
¼ cup melted butter or margarine
½ cup sliced almonds
2 tablespoons lemon juice
4 to 5 drops liquid hot pepper sauce
1 tablespoon chopped parsley

Cut fillets into 6 portions. Combine flour, seasoned salt, and paprika. Roll portions in flour mixture and place in a single layer, skin side down, in a well-greased baking dish. Drizzle 2 tablespoons melted butter over portions. Broil about 4 inches from source of heat for 10 to 15 minutes or until fish flakes easily when tested with a fork. While fish is broiling, saute' almonds in remaining butter until golden brown, stirring constantly. Remove from heat and mix in lemon juice, hot pepper sauce, and parsley. Pour over portions and serve at once. Makes 4 to 6 servings.

BASIC BAKED FISH

3 to 4 pound fish dressed for baking
¼ cup melted margarine or butter
Salt
Pepper

Place fish in a well-greased baking dish and brush with melted margarine. Sprinkle inside and outside of fish with salt and pepper. Bake at 350 degrees for 40 to 60 minutes, depending on thickness of fish. Fish will be done when the thickest part flakes easily when tested with a fork. Baste once or twice with drippings of melted margarine. Garnish, and serve with lemon wedges. Makes 4 to 6 servings.

FILLETS A LA DIAMOND JIM

2 pounds fresh skinned fillets, cut in serving size portions
1 teaspoon salt
¼ teaspoon pepper
1 cup fish stock or water
18 oysters
18 shrimp
Marguery Sauce
Paprika

Sprinkle portions with salt and pepper and place in a well-greased baking dish. Pour 1 cup fish stock or water over fillets. Bake at 350 degrees for 15 minutes or until fish flakes easily when tested with a fork. Remove fish carefully and place on a broiler tray, reserving juices. Simmer oysters and shrimp in water for 3 minutes. Arrange 3 poached oysters and 3 poached shrimp on top of each fish portion. Cover with Marguery sauce.

MARGUERY SAUCE

In small saucepan, combine juices from baked fish and water to equal 1 cup liquid. Cook until volume of liquid is reduced to ½ cup. Add 1 cup margarine and heat until melted. Stir in ¼ cup of the hot liquid to 8 beaten egg yolks. Gradually beat yolks into remaining hot liquid with a wire whisk. Continue heating and beating until sauce thickens. Stir in ¼ cup dry white wine and 2 tablespoons lemon juice.

STUFFED FILLETS WITH EGG SAUCE

2 pounds fresh fish fillets
4 cups fresh bread crumbs
½ cup melted margarine
¼ cup milk
¼ cup finely chopped onion
2 teaspoons dill weed
2 teaspoons chopped parsley
1 teaspoon thyme
2 eggs, beaten
½ teaspoon salt
Dash pepper
2 tablespoons melted margarine
Egg Sauce
Sliced egg for garnish

Sprinkle fillets with salt and pepper. Place half the fillets in a well-greased baking dish. In large mixing bowl, combine bread crumbs, ½ cup melted margarine, milk, onion, dill weed, parsley, thyme, beaten eggs, salt and pepper. Spread stuffing on top of fillets in baking dish. Place remaining fillets on top of stuffing. Baste with 2 tablespoons melted margarine. Bake at 350 degrees for 30 to 35 minutes or until fish flakes easily when tested with a fork. Cover fish with egg sauce. Makes 4 to 6 servings.

EGG SAUCE

In small saucepan over low heat, melt ¼ cup margarine and blend in ¼ cup flour. Add 1 teaspoon dry mustard, 1 teaspoon salt and ⅛ teaspoon white pepper. Gradually blend in 2 cups half-and-half cream. Stir constantly until thick, but do not boil. Stir in ¼ teaspoon liquid hot pepper sauce, 3 coarsely grated, hard-cooked eggs and 2 tablespoons chopped parsley. Pour sauce over fish. Garnish with egg slices.

BROILED FILLETS MEXICALI

2 pounds sheepshead fillets, or other fresh fillets
2 tablespoons cooking oil
2 tablespoons soy sauce
2 tablespoons Worcestershire sauce
1 teaspoon paprika
½ teaspoon chili powder
½ teaspoon garlic powder
Dash liquid hot pepper sauce

Cut fillets into serving size portions and place in a single layer, skin side down, in a well-greased baking dish. Combine remaining ingredients and pour sauce over fillets. Broil approximately 4 inches from source of heat for 10 to 15 minutes, or until fish flakes easily when tested with a fork. Baste once with natural juices during broiling. Serve with lemon wedges. Makes 4 to 6 servings.

BROILED FILLETS SOUTHWEST

2 pounds drumfish fillets, or other fresh fillets
⅓ cup hickory flavored barbeque sauce
¼ teaspoon salt
2 tablespoons frozen pineapple juice concentrate, thawed
1 tablespoon lemon juice
1 tablespoon instant minced onion
3 tablespoons salad oil

Place fillets in a single layer in a well-greased baking dish. Combine remaining ingredients and brush fillets liberally with sauce. Reserve small amount of sauce for basting. Broil about 4 inches from source of heat for 10 to 15 minutes, or until fish flakes easily when tested with a fork. Baste once during broiling. Makes 4 to 6 servings.

BROILED FLOUNDER

4 small Gulf flounder, cleaned and dressed
¼ cup butter or margarine, melted
¼ cup lemon juice
3/4 teaspoon paprika
1½ teaspoons salt
Dash pepper

Place flounder on individual pieces of aluminum foil. Combine remaining ingredients and brush flounder inside and out with sauce. Preheat oven and broil about 4 inches from source of heat for 12 to 15 minutes, or until fish flakes easily when tested with a fork. Baste flounder once during broiling, but do not turn. Makes 4 to 6 servings.

BROILED TROUT CHEESY

2 pounds skinless Gulf trout fillets, or other fresh fillets
2 tablespoons onion, grated
1½ teaspoons salt
⅛ teaspoon pepper
2 large tomatoes, cut into small pieces
¼ cup butter or margarine, melted
1 cup Swiss cheese, shredded

Place fillets in a single layer on a well-greased bake-and-serve platter. Sprinkle with onion, salt and pepper, and cover with tomato pieces. Pour butter over fillets and broil about 4 inches from source of heat for 10 minutes, or until fish flakes easily when tested with a fork. Sprinkle fish with cheese and broil 2 to 3 minutes longer, or until cheese melts. Makes 4 to 6 servings.

BASIC BROILED FISH

2 pounds fresh fish fillets or steaks
2 lemons
¼ cup melted margarine
Salt
Pepper

Cover broiler pan with aluminum foil. Slice 1 lemon into ¼ inch slices and place on foil. Baste fillets with melted margarine and juice from 1 lemon. Sprinkle both sides of fillets with salt and pepper. Place fish in broiler pan on top of lemon slices. Broil fish about 4 inches from source of heat for 8 to 14 minutes, depending on thickness of fish. Fish will be done when it flakes easily when tested with a fork. Baste once during broiling, but do not turn. If desired, sauté assorted vegetables and place on top of fish before serving. Makes 4 to 6 servings.

SHARK TERIYAKI

2 pounds fresh shark fillets, cut in 1 inch chunks
1 can (16 ounces) pineapple chunks
½ cup soy sauce
¼ cup sherry (optional)
2 tablespoons brown sugar
1 teaspoon ground ginger
1 teaspoon dry mustard
1 clove garlic, crushed
1 green pepper, cut in 1 inch squares
Cherry tomatoes, mushrooms, onions (optional)
Bamboo or metal skewers

Drain pineapple chunks reserving ¼ cup of juice. Make marinade by combining pineapple juice, soy sauce, sherry, brown sugar, ginger, mustard and garlic. Pour marinade over fish chunks. Cover and refrigerate fish for at least 1 hour. Drain fish and reserve marinade. Thread fish chunks, pineapple chunks and green pepper squares alternately on skewers. Include cherry tomatoes, fresh mushrooms and onion wedges if desired. Cook over hot coals or under broiler about 4 inches from source of heat for 5 minutes. Baste with marinade. Turn and cook for 5 minutes more or until fish flakes easily when tested with a fork. Serve as a main dish on a bed of rice or alone as an hors d'oeuvre. Makes 6 entree servings or 18 to 20 hors d'oeuvres.

FISH FONDUE

Enough fresh fish, oysters, and raw Gulf shrimp to allow ⅓ to ½ pound of seafood per person.
7 or 8 slices of bacon
1 quart cooking oil
1 teaspoon salt

Clean and peel shrimp, leaving on last shell segment and tail section. Cut fish into strips or bite-size pieces. Drain oysters well, roll in flour, and wrap each in ½ slice of bacon. Secure with a wooden pick. Half fill fondue pot with cooking oil. Add salt and heat oil to approximately 375 degrees. Spear seafoods with fondue fork and fry in hot oil until lightly browned. Shrimp require a minute or less to cook. Fish need a bit more time, depending on size of piece. Provide sauces as desired.

SPICY PAN FRIED CROAKER

3 pounds pan-dressed golden croaker (approximately 12 fish), or other fresh pan-dressed fish
1 cup yellow cornmeal
1 teaspoon salt
½ teaspoon pepper
1½ teaspoons paprika
½ teaspoon celery salt
¼ teaspoon dry mustard
¼ teaspoon onion powder
Oil for frying
Lemon wedges

Clean, wash and dry fish. Combine dry ingredients then roll fish in the mixture. Fry fish in shallow oil in a large fry pan over moderate heat for 4 to 5 minutes. Turn carefully and fry 4 to 5 minutes longer, or until fish flakes easily when tested with a fork. Drain on absorbent paper and serve with lemon wedges. Makes 6 to 8 servings.

BUTTERMILK FRIED FILLETS

2 pounds skinless redfish fillets, or other fresh fillets
1 cup buttermilk
1 cup biscuit mix
2 teaspoons salt

Cut fillets into serving-size portions. Place portions in a single layer in a shallow dish. Pour buttermilk over portions and let stand for 30 minutes, turning once. Combine biscuit mix and salt. Remove portions from buttermilk and roll in bisuit mix. Fry in moderately hot cooking oil for 4 to 5 minutes or until brown. Turn carefully and fry 4 to 5 minutes longer or until fish is brown and flakes easily when tested with a fork. Drain on absorbent paper. Serve with lemon wedges or malt vinegar. Makes 4 to 6 servings.

BASIC OVEN FRIED FISH

2 pounds fresh fish fillets
1 tablespoon salt
1 cup milk
1 cup dry bread crumbs or cracker crumbs
¼ cup butter or other fat, melted

Cut fillets into serving-size portions. Combine salt and milk. Dip portions in milk then roll them in dry crumbs. Place portions in a well-greased baking dish and drizzle with melted butter. Place baking dish on top shelf of preheated 500 degree oven and bake 10 to 12 minutes, or until portions flake easily when tested with a fork. Makes 4 to 6 servings.

BASIC PAN FRIED FISH

2 pounds fresh fish fillets, steaks or pan-dressed whole fish
Salt
Pepper
1 egg
1 tablespoon milk or water
1 cup dry bread crumbs, cracker crumbs, cornmeal, or flour

Cut fillets into serving-size portions. Sprinkle both sides with salt and pepper. Beat egg slightly and blend in milk. Dip portions in the egg mixture then roll them in crumbs. Place fish in a heavy frying pan with about ¼-inch melted fat, hot but not smoking. Fry at a moderate heat until fish is brown on one side. Turn carefully and brown the other side. Cooking time is approximately 10 minutes depending on the thickness of the fish. Drain on absorbent paper and serve with lemon wedges or sauce. Makes 4 to 6 servings.

GOLDEN CROAKER IN CORAL SAUCE

2 pounds pan-dressed golden croaker (approximately 8 fish)
¼ cup butter or margarine, melted
2 tablespoons lemon juice
1 teaspoon grated onion or
⅓ teaspoon onion flakes
1 teaspoon paprika
1 teaspoon salt
Dash pepper

Add water to pressure cooker then place fish on steam rack. Combine remaining ingredients well. Pour sauce over fish. Cook for 35 minutes under 15 pounds pressure. Bones will be tender and completely edible. Makes 4 to 6 servings.

BASIC POACHED FISH

1 pound fresh fish fillets or steaks
1 quart water
1½ tablespoons salt

Lower fish into salted, boiling water and simmer for 10 minutes, or until fish flakes easily when tested with a fork. Do not allow water to boil. Remove fish carefully and serve hot with a sauce, or flake after cooling for use in other recipes.

FILETS VERONIQUE

2 pounds fresh fish fillets
2 tablespoons lemon juice
2 teaspoons salt
1 cup dry white wine
1 cup (¼ pound) Thompson seedless grapes
¼ teaspoon fines herbes
3 tablespoons margarine or butter
2 tablespoons flour

Sprinkle fillets with lemon juice and salt and arrange in a well-greased skillet in one or two layers. Combine wine, grapes and fines herbes. Pour mixture over fish and heat to simmering. Cover and poach for 5 minutes or until fish flakes easily when tested with a fork. Carefully transfer fish to oven-proof platter. Reserve liquid and grapes. In a small saucepan over medium heat, melt margarine and blend in flour. Add reserved liquid gradually and cook until smooth, but not thick, stirring constantly. Pour sauce over fish and garnish with reserved grapes. Fish may be heated under the broiler until lightly browned. Makes 4 to 6 servings. Note: Recipe is best prepared with fresh grapes, but canned grapes may be used out of season. Do not poach canned grapes.

GRANT AVENUE FILLETS

2 pounds fresh fish fillets
1 teaspoon ground ginger or 1 tablespoon peeled, grated ginger root
2 teaspoons salt
4 whole green onions
⅓ cup salad oil, heated
⅓ cup soy sauce
½ cup diagonally sliced green onions including tops for garnish

Sprinkle fillets with ginger and salt and arrange on trivet or rack. Place whole green onions on top of fish. Place trivet or rack inside a steamer or large roaster containing 1 quart water. Do not submerge fish in water. Cover and steam for 8 to 10 minutes or until fish flakes easily when tested with a fork. Transfer fish to heated serving platter. Combine hot oil and soy sauce and pour over fish. Garnish with diagonally sliced green onions. Makes 4 to 6 servings.

CEVICHE

1 pound fresh fish fillets, skinned
1 bottle (8 ounces) lime juice or juice from 20-30 fresh limes
1 large onion, finely chopped
2 medium tomatoes, chopped
1 small Jalapeno pepper, chopped
30 pitted Spanish green olives
⅛ teaspoon comino
20 capers
¼ cup olive oil
Salt, to taste
Pepper, to taste
1 tablespoon parsley, chopped
teaspoon oregano

Dice fillets into dime-size pieces and place in a glass bowl. Cover pieces with lime juice and marinate for 4 to 5 hours at room temperature. Drain pieces and blot off excess lime juice. Combine pieces with remaining ingredients and mix well in a glass bowl. Cover and refrigerate mixture until cold, then serve as a salad or hors d'oeuvre.

HOT FISH POTATO SALAD

1 pound fresh fish fillets, cut in 1 inch chunks
6 slices cooked bacon, crumbled
Reserved bacon fat
½ cup sliced celery
½ cup chopped onion
3 tablespoons sugar
1 tablespoon flour
½ teaspoon paprika
¼ teaspoon salt
¼ teaspoon celery seed
½ cup wine vinegar
1 cup water
3 cups sliced cooked potatoes
Chopped parsley

Sauté celery and onion in bacon fat until tender. Combine sugar, flour, paprika, salt and celery seed. Stir mixture into sautéed vegetables. Add vinegar and water gradually. Cook until thickened, stirring constantly. Add potatoes, bacon and fish and mix lightly. Cover and cook over low heat for 10 minutes or until fish flakes easily when tested with a fork. Sprinkle with parsley. Makes 6 servings.

SEAFOOD SALAD SANDWICH

1 pound fresh fish fillets, or cooked, leftover fillets
1 quart water
1 tablespoon salt
3 hard-boiled eggs, chopped
¾ cup olives, chopped
⅓ cup mayonnaise or salad dressing
1 tablespoon horseradish
Dash pepper

Place fillets in a pan of salted, boiling water. Cover and return to a boil. Reduce heat and simmer for 10 minutes, or until fish flakes easily when tested with a fork. Drain fillets and remove skin. Flake fillets and combine thoroughly with eggs, olives, mayonnaise, horseradish and pepper. Add salt to taste and chill. Use mixture as a sandwich spread or serve on lettuce leaves as a salad. Makes approximately 6 sandwiches.

SEASIDE AMBROSIA

1 pound fresh fillets, cut in 1 inch cubes
½ cup mayonnaise or salad dressing
1 tablespoon lemon juice
4 teaspoons grated orange rind
2 teaspoons sugar
1 cup thinly sliced celery
1 cup mandarine orange slices or fresh orange slices
½ cup sliced ripe olives
¼ cup sliced green onions including tops
¼ cup shredded coconut (optional)

Simmer fish cubes in 1 quart of salted water for 5 minutes or until fish flakes easily when tested with a fork. Drain cubes on absorbent paper and chill. To make dressing, mix mayonnaise, lemon juice, orange rind and sugar. In large mixing bowl, combine chilled fish with remaining ingredients. Add dressing and toss lightly. Serve on lettuce leaves, avocado halves or in a hollowed, lengthwise-cut pineapple. Makes 4 to 6 servings.

SWEET AND SOUR REDFISH

2 pounds redfish fillets, or other fresh fillets
3 tablespoons cooking oil
1 can (1 lb. 4 oz.) pineapple chunks
1¼ cups liquid (pineapple syrup and water)
¼ cup cider vinegar
¼ cup brown sugar, packed
3 tablespoons cornstarch
1 tablespoon soy sauce
1½ teaspoons salt
½ teaspoon garlic salt
1 can (6 oz.) water chestnuts, drained and sliced
1 medium green pepper, cut into 1 inch squares
1 medium tomato, cut into thin wedges
1½ cups cooked rice

Cut fillets into 1 inch cubes. Drain pineapple chunks, reserving syrup. Add water to syrup to measure 1¼ cups liquid. Combine liquid, vinegar, brown sugar, cornstarch, soy sauce and salts, and blend well. Saute fish in oil for 10 minutes, or until fish is firm and has a white appearance. Add liquid mixture and cook, stirring constantly, for about 5 minutes or until sauce is thick and clear. Add remaining ingredients and cook until vegetables are heated and fish flakes easily when tested with a fork. Serve over rice. Makes 4 to 6 servings.

BOUILLABAISSE

1 *pound fresh fish fillets or steaks*
½ *pint fresh oysters*
½ *pound fresh rock shrimp or regular shrimp, peeled and deveined*
¼ *cup butter or margarine, melted*
½ *cup onion, chopped*
½ *cup celery, chopped*
1 *clove garlic, finely chopped*
1¼ *teaspoons salt*
Dash pepper
1 *bay leaf, crushed*
¼ *teaspoon thyme*
1 *can (1 pound, 4 ounces) tomatoes*
1 *cup fish stock or water*
¼ *teaspoon saffron (optional)*

Remove skin from fish and cut into ½-inch cubes. Saute onion, celery and garlic in butter until tender. Add fish and all other ingredients except shrimp and oysters. Bring mixture to a boil and simmer for 10 minutes. Add shrimp and oysters and simmer for 10 more minutes. Serve with French bread and Parmesan cheese. Makes 6 to 8 servings.

CAJUN SEAFOOD GUMBO

1 *pound fresh fish fillets, cut into ½-inch cubes*
½ *pound fresh shrimp, shelled and deveined, cut into ½-inch pieces*
¼ *pint oysters, drained*
½ *cup fresh blue crab meat (optional)*
2 *tablespoons butter or margarine*
2 *tablespoons flour*
¼ *cup butter or margarine*
1 *cup green pepper, cut into ½-inch pieces*
1 *cup onion, chopped*
1 *cup celery, cut into ½-inch pieces*
1 *can (10 ounces) tomatoes, chopped with juice*
4 *cups fish stock or chicken bouillon*
½ *teaspoon salt*
½ *teaspoon pepper*
1 *clove garlic, minced*
1 *teaspoon gumbo file*
Cooked Rice (optional)

Prepare roux by melting 2 tablespoons butter or margarine in small saucepan. Stir in flour over medium heat and continue stirring until smooth and dark. Set roux aside. Add ¼-cup butter to 4-quart pot and saute' green pepper, onion, and celery until tender. Add tomatoes, stock, salt, pepper and garlic, and bring to boil. Gradually add roux to vegetable mixture, stirring until blended. Simmer for 15 minutes. Add seafood and file and simmer 15 more minutes. Serve over cooked rice. Makes 6 to 8 servings.

BASIC FISH STOCK

1½ *pounds fresh fish trimmings— heads, tails, bones, etc. (heads should be split)*
1 *quart water*
½ *cup onions, coarsely chopped*
¼ *cup celery including leaves, coarsely chopped*
1 *bay leaf*
½ *teaspoon salt*
¼ *teaspoon thyme*
5 *black peppercorns or ¼ teaspoon pepper*

Place fish in a 3 to 4 quart saucepan and add water. Bring slowly to a boil over moderate heat and cook 5 minutes. Add remaining ingredients and reduce heat to low. Partially cover and simmer for 30 minutes. Remove pan from heat and strain the stock into a deep bowl. Fresh stock will keep up to 3 days in a refrigerator or may be frozen for prolonged storage. Makes approximately 1 quart.

CIOPPINO

1½ pounds fresh fish fillets
½ pound rock shrimp, or regular shrimp, split and cleaned
12 squid, peeled and cleaned
12 hardshell clams (optional)
¼ cup olive oil
1 medium green pepper, chopped
1 medium onion, chopped
1 clove garlic, chopped
4 ounces fresh mushrooms, or one small can mushroom slices
1 can (1 pound, 12 ounces) stewed tomatoes
2 cans (8 ounces each) tomato sauce
1½ teaspoons seasoned salt
¼ teaspoon pepper
2 cups water
1 cup dry white wine (optional)

Cut fillets and squid into 1-inch cubes. Cook green pepper, onion, garlic, and mushroom slices in olive oil until tender. Add canned tomatoes with liquid, tomato sauce, seasoned salt, pepper and water. Bring mixture to a boil, then reduce heat and simmer for 30 minutes, stirring occasionally. Add fish, shrimp, squid, clams and wine. Cover and simmer for 15 minutes, stirring occasionally. Serve in large soup bowls with chunks of heated French bread. Makes 8-10 servings.

SEAFOOD CREOLE

1 pound fresh fish fillets
¼ cup vegetable oil or melted fat
¼ cup flour
1 cup hot water
½ cup green onions including tops, chopped
¼ cup green pepper, chopped
½ cup parsley, chopped
4 cloves garlic, finely chopped
1½ teaspoons salt
Dash cayenne pepper
½ teaspoon thyme
2 whole bay leaves
1 lemon slice
1 can (8 ounces) tomato sauce
Cooked Rice

Cut fillets into small cubes. Prepare roux by heating oil in large skillet and blending in flour over medium heat, stirring constantly until brown. Add water gradually and cook until thick and smooth, stirring constantly. Add remaining ingredients except rice. Cover and simmer for 20 minutes. Remove bay leaves and serve over cooked rice. Makes 4 to 6 servings.

EASY-DO CHOWDER

2 pounds fresh fish fillets, cut in 1½ inch chunks
1 sliced medium onion
¼ cup margarine or cooking oil
1 cup water
1 cup half-and-half cream
1 can (10½ ounces) condensed cream of celery soup
1 can (16 ounces) sliced carrots, drained
1 can (16 ounces) whole Irish potatoes, drained and cubed
1½ teaspoon salt
½ teaspoon dill weed

In large saucepan or Dutch oven, saute onion in margarine until tender. Add remaining ingredients except fish. Mix thoroughly and heat, but do not boil, as cream will form a film with excessive heat. Add fish and simmer about 10 minutes or until fish flakes easily when tested with a fork. Serve with sea toast or buttered bread slices. Makes 4 to 6 servings.

CREOLE BOUILLABAISSE

1 *pound fresh fish fillets, cut in 1½ inch chunks*
½ *pint fresh oysters*
½ *pound fresh rock shrimp or other shrimp, peeled*
2 *tablespoons margarine or butter*
2 *tablespoons olive oil*
¼ *cup flour*
1 *cup chopped onion*
½ *cup chopped celery*
1 *clove garlic, minced*
4 *cups fish stock or water*
1 *large can (1 pound, 12 ounces) tomatoes, undrained, cut up*
½ *cup dry white wine*
2 *tablespoons chopped parsley*
1 *tablespoon lemon juice*
1 *bay leaf*
½ *teaspoon salt*
¼ *teaspoon cayenne pepper*
¼ *teaspoon saffron (optional)*

In large boiler pot over medium heat, melt margarine and add olive oil. Prepare roux by slowly blending in flour, stirring constantly until mixture is light brown. Add onion, celery and garlic and continue stirring until vegetables are tender. Gradually stir in fish stock or water. Add remaining ingredients except seafood. Bring to a boil, then simmer for 10 minutes. Add fish and simmer 10 minutes more. Add shrimp and oysters and cook for 5 minutes more or until all seafood is done. Makes 8 servings.

ORIENTAL FISH SUPREME

2 *pounds fresh fish fillets*
1 *cup sliced celery*
4 *ounces sliced onions*
1 *cup sliced raw mushrooms*
1 *clove garlic, minced*
1 *cup frozen snow peas, partially defrosted*
¼ *cup chicken bouillon*
1 *tablespoon sherry extract*
1 *tablespoon soy sauce*
1½ *teaspoons salt*
¼ *teaspoon powdered ginger*

Place fillets on non-stick baking pan and bake at 350 degrees for 15 minutes or until fish flakes easily when tested with a fork. Break fillets into bite-size pieces and set aside. In a large saucepan or wok, simmer celery, onions, mushrooms and garlic in 1 cup water. Cook until vegetables are tender, stirring occasionally. Pour off excess water, add snow peas and mix thoroughly. Blend in remaining ingredients except fish and simmer for 5 minutes. Add fish pieces and heat thoroughly. Carefully divide mixture into 4 portions and serve each over ½ cup enriched rice (optional).

Each serving is equivalent to:
6 ounces fish
1 ounce # 4 vegetable
¼ cup #3B vegetable (cooked)
¾ teaspoon extract
½ cup rice (choice group)

PICKLED SHRIMP

2 pounds raw Gulf shrimp, peeled and cleaned
2 medium onions, sliced into rings
1½ cups vegetable oil
1½ cups white vinegar
½ cup sugar
1½ teaspoons salt
1½ teaspoons celery seed
4 tablespoons capers with juice

Place thawed shrimp in boiling salted water for 3 to 5 minutes or until pink and tender. Drain and rinse with cold water, then chill. Make alternate layers of shrimp and onion rings in a sealable container. Mix remaining ingredients and pour over shrimp and onions. Seal and place in refrigerator for 6 hours or more, shaking or inverting occasionally. Remove shrimp from marinade and serve.

SHRIMP CHRISTMAS TREE

3 pounds raw Gulf Shrimp, unpeeled
2 quarts water
½ cup salt
4 large bunches curly endive
1 plastic foam cone, 2½ feet high
1 plastic foam square, 12 x 12 x 1 inch
1 small box round toothpicks
Cocktail sauce

Place thawed shrimp in boiling salted water. Cover and simmer about 5 minutes or until shrimp are pink and tender. Drain. Peel shrimp, leaving the last section of shell on. Remove sand veins and wash. Chill. Separate and wash endive. Chill. Place cone on center of the plastic foam square and draw a circle around the base. Cut out the circle and insert the cone. Cover base and cone with overlapping leaves of endive. Fasten endive to plastic cone with toothpick halves. Start at the outside edge of the base and work up. Cover fully with greens to resemble Christmas tree. Attach shrimp to tree with toothpicks. Provide cocktail sauce for dunking.

SHRIMP GUMBO

1 pound raw Gulf shrimp, peeled and cleaned (other seafoods such as blue crab meat or fresh finfish can be combined with, or substituted for shrimp)
2 cups fresh okra, sliced, or 1 package (10 ounces) frozen okra, sliced
⅓ cup shortening
⅔ cup sliced onion, including tops
3 cloves garlic, finely chopped
1½ teaspoons salt
½ teaspoon pepper
2 cups hot water
1 cup canned tomatoes
2 whole bay leaves
6 drops liquid hot pepper sauce
1½ cups cooked rice

Sauté okra in shortening for 10 minutes or until okra appears dry, stirring constantly. Add onion, garlic, salt, pepper, and shrimp. Cook for 5 minutes. Add water, tomatoes, and bay leaves. Cover and simmer for 20 minutes. Remove bay leaves and add liquid hot pepper sauce. Serve over rice. Makes 4 to 6 servings.

SHRIMP VICTORIA

1 pound raw Gulf shrimp, peeled and cleaned
1 cup sour cream
1 small onion, finely chopped
¼ cup butter or margarine
1 can (6 ounces) mushrooms
1 tablespoon flour
¼ teaspoon salt
Dash cayenne pepper
1½ cups cooked rice

Sauté shrimp and onion in butter or margarine for 10 minutes or until shrimp are tender. Add mushrooms and cook for 5 minutes more. Sprinkle in flour, salt, and pepper. Stir in sour cream and cook gently for 10 minutes, not allowing mixture to boil. Serve over rice. Makes 4 to 6 servings.

CANTONESE SHRIMP AND BEANS

1½ pounds raw Gulf shrimp, peeled and deveined
1½ teaspoons chicken stock base, or 2 chicken bouillon cubes
1 tablespoon salad oil
¼ cup green onion, thinly sliced
1 clove garlic, crushed
1 teaspoon salt
Dash pepper
½ teaspoon ginger
1 package (9 ounces) frozen cut green beans
1 tablespoon cornstarch

Dissolve chicken stock base in 1 cup of boiling water. Sauté shrimp, onion, and garlic in oil for approximately 3 minutes. If necessary, add a little chicken broth to prevent sticking. Stir in salt, pepper, ginger, green beans, and chicken broth. Cover and simmer 5 to 7 minutes, or until beans are lightly cooked. Combine cornstarch with 1 tablespoon cold water and add to shrimp mixture. Cook until thick and clear, stirring constantly. Makes 4 to 6 servings.

SEAFOOD BISQUE

½ pound raw Gulf shrimp, peeled and cleaned
½ pint oysters, fresh
½ pound blue crab meat, fresh
2 tablespoons green pepper, minced
3 tablespoons green onion including tops, minced
3 tablespoons celery, minced
½ cup butter or margarine, melted
1 can (10½ ounces) condensed cream of shrimp soup
1 can (13 ounces) evaporated milk
½ cup milk
½ teaspoon salt
⅛ teaspoon pepper
½ teaspoon Italian seasoning
2 tablespoons dry sherry (optional)

Cut shrimp and oysters into ¼-inch pieces. Remove any remaining shell or cartilage from crab meat. Cook green pepper, onion and celery in butter until tender, but not brown. Add shrimp, oysters, and crab meat. Cook over low heat until shrimp turn pink and oysters curl at the edges. Add remaining ingredients and heat to a near boil. Serve immediately. Makes 4 to 6 servings.

PEPPERED SHRIMP AND EGG

- ½ *pound raw Gulf shrimp, peeled and cleaned*
- 3 *slices bacon*
- ½ *cup onion, chopped*
- ¾ *cup green pepper, chopped*
- ½ *teaspoon salt*
- ¼ *teaspoon cayenne pepper*
- 6 *eggs, beaten*
- ¼ *cup half-and-half*
- ½ *teaspoon Worcestershire sauce*

Place thawed shrimp in boiling, salted water for 3 to 5 minutes, then drain. Fry bacon until crisp, then drain and crumble. Sauté onion and green pepper in bacon fat until tender. Add seasonings and shrimp, and heat. Combine eggs, cream, Worcestershire sauce and bacon. Add to shrimp mixture and cook until eggs are firm, stirring occasionally. Makes 4 to 6 servings.

GOLDEN FRIED SHRIMP

- 1½ *pounds raw Gulf shrimp, with shell-on*
- 2 *eggs, beaten*
- 1 *teaspoon salt*
- ½ *cup flour*
- ½ *cup dry bread crumbs or yellow corn meal*

Peel shrimp, leaving the last section of the shell on. Cut shrimp lengthwise along back to expose the sand vein, then wash under cold running water. Combine eggs and salt. Dip each shrimp in egg mixture, then roll in flour-and-crumb mixture. Fry in moderately hot oil for 2 to 3 minutes, or until golden brown. Drain on absorbent paper. Makes 4 to 6 servings.

SHRIMP HURRY CURRY

- 1½ *pounds small raw Gulf shrimp, peeled and cleaned*
- 2 *tablespoons butter or margarine*
- 1 *can (10½ ounces) condensed cream of shrimp soup*
- 1 *can (10½ ounces) condensed cream of mushroom soup*
- ¾ *cup sour cream*
- 1½ *teaspoons curry powder*
- 2 *tablespoons parsley, chopped*
- *Rice, toast points, or pastry shells*

Sauté shrimp in butter for 3 to 5 minutes over low heat, stirring frequently. Add soups and stir until thoroughly blended. Stir in sour cream, curry powder, and parsley. Continue stirring until mixture is piping hot, then serve immediately on fluffy rice, toast points, or in pastry shells. Makes 4 to 6 servings.

SHRIMP TACOS

- 2 *packages (10 ounces) frozen small breaded shrimp*
- 12 *taco shells*
- 2 *cups lettuce, shredded*
- ⅔ *cup onion, chopped*
- 1 *medium tomato, chopped*
- 2 *jars or cans (8 ounces) taco sauce*
- 1 *cup Cheddar cheese, shredded*
- *Sour cream (optional)*
- *Sliced avocado (optional)*

Heat shrimp and taco shells in oven as directed on packages. Portion lettuce, onion, tomato, and shrimp in taco shells and cover with sauce. Sprinkle with cheese. If desired, top with sour cream, an avocado slice, or both. Makes 4 to 6 servings.

BROILED ROCK SHRIMP TAILS

1½ pounds rock shrimp tails, split and cleaned
cup butter or margarine, melted
1½ teaspoons garlic salt
Paprika

To split and clean rock shrimp, hold tail in hand with belly-side up and the tail-end pointed away from you. Insert lower blade of scissors or kitchen shears into the exposed vein for the full length of the tail and snip meat in half. Spread severed tail open to fully expose the sand vein, then rinse thoroughly under cold running water until vein is flushed out. Place cleaned tails in a broiler pan, shell-side down. Combine butter and garlic salt, and drizzle over shrimp. Sprinkle with paprika and broil about 4 inches from source of heat for 3 to 4 minutes. Makes 4 to 6 servings or approximately 45 hors d'oeuvres.

CRAB AU GRATIN

1 pound fresh blue crab meat, lump grade
3 tablespoons butter or margarine
3 tablespoons flour
¼ teaspoon paprika
½ teaspoon salt
⅛ teaspoon pepper
1½ cups thin cream
1 cup Cheddar cheese, grated
1 tablespoon Worcestershire sauce
⅓ cup bread crumbs

Remove any remaining shell or cartilage from crab meat. Melt butter in skillet and stir in flour, paprika, salt and pepper. Continue to stir until smooth. Gradually add cream and cook slowly until thickened. Add cheese and Worcestershire sauce, and stir until cheese is melted. Add crab meat. Place mixture in a greased baking dish or in individual bake-and-serve dishes and cover with crumbs. Bake at 400 degrees for approximately 20 minutes. Makes 4 to 6 servings.

CRAB MEAT SALAD

1 pound blue crab meat, lump grade
1 cup celery, chopped
2 tablespoons sweet pickle, chopped
2 tablespoons onion, chopped
2 hard boiled eggs, chopped
Dash pepper
½ teaspoon salt
½ cup mayonnaise or salad dressing
Lettuce leaves

Remove any remaining shell or cartilage from crab meat. Combine all ingredients except lettuce. Chill 1 hour in refrigerator. Serve on lettuce leaves. Makes 4 to 6 servings.

BLUE CRAB STUFFING

1 pound blue crab meat
1½ cups cracker crumbs
¾ cup celery, finely chopped
¾ cup onion, finely chopped
1 tablespoon green pepper, finely chopped
½ cup butter or margarine, melted
¼ cup milk
½ teaspoon salt
1 teaspoon dry mustard
Dash Cayenne pepper
2 tablespoons parsley, finely chopped

Combine all ingredients thoroughly in a large mixing bowl. Stuff mixture into shells or casserole dish and bake at 350 degrees for 30 minutes. Makes enough stuffing for 6 crab shells.

OYSTER STEW

1 pint fresh oysters
¼ cup butter or margarine
1 quart milk
1½ teaspoons salt
Dash pepper
Paprika

Cook oysters over low heat in oyster liquor for 3 minutes, or until edges begin to curl. Stir in remaining ingredients except paprika. Heat to a near boil. Garnish with paprika and serve immediately. Makes 4 to 6 servings.

GOLDEN FRIED OYSTERS

1 pint fresh oysters
2 eggs, beaten
2 tablespoons milk
1 teaspoon seasoned salt, or table salt
⅛ teaspoon pepper
1 cup fine cracker crumbs

Drain oysters. Combine eggs, milk, and seasonings. Dip oysters in egg mixture and roll them in cracker crumbs. Repeat process to form double breading.
Deep Fat Fried: Fry in oil, hot but not smoking (375 degrees) until golden brown. Total frying time is 2 to 3 minutes. Drain on absorbent paper.
Pan Fried: Fry in ¼ inch of oil, hot but not smoking, until bottom side is golden brown, then turn and fry other side until golden brown. Makes 4 servings.

ANGELS ON HORSEBACK

1 jar (12 ounces) fresh oysters
2 tablespoons chopped parsley
½ teaspoon salt
Paprika
Pepper
8 slices bacon, cut in thirds

Drain oysters. Place an oyster on each piece of bacon. Sprinkle with parsley and seasonings. Wrap bacon around oyster and secure with a toothpick. Place "angels" on broiler rack and broil about 4 inches from source of heat for 8 to 10 minutes. Turn carefully. Broil 4 to 5 minutes longer or until bacon is crisp and oysters begin to curl at the edges. Makes approximately 20 to 25 hors d' oeuvres.

OYSTERS ROCKEFELLER

1 pint large fresh oysters (approximately 18)
¼ cup margarine or butter
¼ cup chopped celery
¼ cup chopped green onions including tops
2 tablespoons chopped parsley
1 package (10 ounces) frozen, chopped spinach, defrosted
1 tablespoon anisette
¼ teaspoon salt
Rock salt
18 oyster shells or ramekins
¼ cup dry bread crumbs
1 tablespoon melted margarine or butter

In small saucepan, sauté celery, onions and parsley in margarine until tender. In blender, combine sautéed vegetables, spinach, anisette and salt. Blend until almost pureed. When necessary, stop blender and push vegetables into blades. Fill a shallow, oven-proof serving dish with rock salt. Nest oyster shells into salt bed. (The rock salt holds shells in place and keeps oysters hot.) Place the oysters in the shells. Top each oyster with spinach misture. Combine bread crumbs and melted margarine, and sprinkle crumb mixture over oysters. Bake at 450 degrees for 10 minutes. Serve immediately. Makes 6 appetizer servings of 3 oysters each.

FISHERMAN'S TARTAR SAUCE

1 cup mayonnaise
2 tablespoons kosher dill pickle, finely chopped
2 tablespoons onion, finely chopped
2 tablespoons olives, finely chopped
1 teaspoon lemon juice
Dash pepper
¼ cup sour cream (optional)

Combine all ingredients well and chill. Makes 2 cups of sauce.

JALAPENO HUSH PUPPIES

1½ cups white cornmeal
½ cup sifted flour
2½ teaspoons baking powder
1½ teaspoons salt
½ teaspoon pepper
⅓ cup onion, finely chopped
1 cup milk
1 egg, beaten
3 tablespoons vegetable oil
¼ cup Jalapeno peppers, finely chopped (optional)

Combine dry ingredients. Add remaining ingredients and stir until blended. Using a fork, drop heaping portions of the mixture into hot, deep fat (350 degrees). Fry each hush puppy approximately 3 minutes, or until golden brown. Turn once during cooking. Drain on absorbent paper. Makes approximately 30 hush puppies.

ROCKPORT RED SAUCE

1 cup catsup
3 tablespoons lemon juice
1 tablespoon horseradish
3 drops liquid hot pepper sauce
½ teaspoon celery salt
teaspoon salt

Combine all ingredients well and chill. Makes Approximately 1 cup sauce.

PROMOTION THROUGH SPECIAL EVENTS

Promotional success can also be enhanced by "tying-in" to a special event or season. For example, an effort to promote "Oyster Stuffing" for turkey is more effective at Thanksgiving or Christmas than in May or June. Below is a list of tie-in opportunities for each season, followed by a more comprehensive list of months:

1. Spring (Lent)—An effective tie-in is a good supply of Lenten specials with hot vegetable

2. Summer—Now is the time for crisp seafood salads that can be served as the main course.

3. Fall—Now is the time for seafood appetizers and oyster stuffing. Tie-in with national "October is Fish and Shellfish Month" promotions; promote all species.

4. Winter—Hearty fish dinners are just the thing after cold winter sports. Include all the trimmings for fish soups and chowders, oyster dressing for holiday turkeys and seafood canapes for appetizer trays at gala festive parties. Feature shellfish of all kinds.

Not only can effective promotions vary during the four seasons, but in-store displays can also differ each month. Following is a month-to-month suggestion of possible in-store displays and a chart of popular seafoods that may be featured each month.

JANUARY

"Have a Down East Feast"

January is an excellent month to feature fish and clams as a money-saving food, because of Christmas bills experienced by most families. Emphasize the abundance of inexpensive seafoods that can help balance those budgets after Christmas. Post signs that emphasize fish in both fresh and frozen forms, perhaps including a couple of serving suggestions.

"The fabulous Fish-Wich"

Display the many kinds of fish that can be used for lunches, in sandwiches, or as a quick "heat-up" when the kids come home for lunch. Stock frozen soups by the seafood display case, as well as tartar and remoulade sauces. January is also a good time to feature fish and shellfish as change-of-pace tastes from poultry.

FEBRUARY

"A Fine Kettle of Fish—Bouillabaisse"

Bouillabaisse, the French fish soup, usually takes about six different kinds of seafood. Mimeograph copies of a simple recipe for this tasty dish and hang them over your frozen seafood case. Group all the seafood ingredients for the recipe together.

"Ah, So Delicious! Oriental Fish Fillets"

Promote frozen (or fresh) fillets and bottled teriyaki sauce. Use a sign to suggest canned oriental vegetables and fortune cookies as go-togethers. Since February can be a dreary, chilly month, suggestions for bright and cheerful dinners will be welcomed. Check magazines for color

pictures of seafood dishes; open a magazine to a specific seafood recipe and hang it above your fresh or frozen seafood case. If possible, place a small rack with salable copies of the same magazine nearby.

MARCH

"Elegent Dinners with Fish"

Watch for pictures in newspapers and magazines of special and unusual fish dishes. Feature main dish, frozen fish packages with signs suggesting menu tie-ins.

"Fish 'n Chips"

March is an in-between month, not yet spring but not winter. Give it some zip with the fish 'n chip theme, which you can merchandise with paper British flags and mod decorations. Display a picture of an English scene from a magazine to use on the freezer case. Promote Fish 'n Chips packaged dinners in your freezer, as well as breaded clam strips, fish sticks and portions, and frozen French fries. Demonstrate the deliciousness of Fish 'n Chips—use a small oven to warm crisp frozen potato products and breaded fish. Fish sandwiches for lunch is still a good secondary theme.

APRIL

"Maine Dishes"

Plan family meals with main dishes of seafood—emphasize the New England historical appeal of fish and seafoods with promotional materials or pictures. Advertise some products on special as "Sea Captain's Specials" or "First Rate for the First Mate".

"Party Perfect"

Offer luncheon suggestions and party uses for canned, fresh and frozen seafoods. For graduation parties, school ribbons may be pinned on a dummy package or a graduate's hat.

Lenten Luscious!"

For the Lenten period feature seafoods from around the world! Emphasize your stock of fresh and fresh-frozen fish. Advertise the tremendous variety of seafoods that are available.

Point out the freshness and spring-like quality of seafoods. Watch for color pictures of ladies' luncheon type menus featuring fresh seafood.

MAY

"Salads of the Seven Seas"

Emphasize the abundance of fresh shellfish to suggest salads and salad plates. Post tie-in signs around the produce section; perhaps even place one by the salad dressings.

"Fresh as the Season"

Any point-of-sale materials that emphasizes the fresh-caught flavor of seafood is advantageous. Signs like "Fresh frozen for the best flavor" or "Freshest taste—just heat and serve" draw attention to frozen seafood dinners.

"Seafood Fun-Fare"

Now is the beginning of the salad season, when women serve their families and club groups a

variety of combinations. Shrimp, salmon, lobster, and crab are just a few of the seafoods that women traditionally think of for seafood salads. For your part, suggest quick and easy seafood dishes and salads. Have recipe pads or a sample mimeographed sheet made up for items like Lobster Newburg, Creamed Whitefish, etc. Continue this practice all summer and suggest seafoods your customers may not usually buy.

JUNE

"Weightless Wonders"

Emphasize simple, low-calorie meals with other dietetic products. Display signs to suggest complete, low-calorie dinners with products from your store. Read magazines for simple recipes, hopefully with color pictures to post by your seafood cases.

Have a two-week special on all forms of one kind of fish. Salmon, for instance, with an umbrella theme "Salmon is Supreme". Feature frozen salmon steaks, canned salmon, and any fresh salmon available. Use signs that suggest salmon salad; that tell how to broil salmon steaks; that indicate what weight equals one portion; and that list cooking methods! Feature salmon recipes in your weekly ads—of course, you'll advertise your special too.

"Seafood Fanfare – Everybody applauds quick-cooking seafood dinners"

Emphasize the TV-type dinners in your case. Signs can show their cooking time and advertise that they are a delicious change of taste from meat. Beef and chicken, probably eaten in quantity all winter, may be less attractive at this time. Suggest that seafood can slip into the family menu different ways—and at less expense than many meat cuts.

JULY

"Cool Cooking with Seafood"

Continue to feature low-calorie aspects of seafood, so important to women who are slipping into bathing suits. Also continue advertising the convenience of fish salads and seafoods that can be cooked on top of the stove. Mount pictures of cold seafood plates—hang them by the seafood counter and in the produce case for tie-ins with lettuce and other fresh vegetables.

AUGUST

"Super Shellfish Suppers"

Promote the use of chilled lobster, crab, shrimp, etc. for cold plate suppers or in sandwiches for kid's lunches. Most important, however, is the "quick 'n easy" dinner angle, during a month when homemakers prefer not to cook.

"Have a Fish Fly-In"

August is a month when customers need to be lifted out of their eating doldrums. Persuade them that seafood can be an exciting, easy way to break from usual eating habits. Build a promotion around fresh fish, perhaps trout, that you will have flown in daily or regularly. Advertise the speciality in your local papers, including recipes in your ads. Have recipes available at sales counters if possible; obtain color photographs that depict different ways to prepare fish. Convenience and ease of preparation are important points to stress. This type of promotion, properly handled, can be very successful.

SEPTEMBER

"Captain's Choice"

Suggest hearty man-style dinners, and tie-in convenience foods with quick dish products. Frozen, breaded seafood products, frozen potatoes, and other vegetables can be promoted together as "quick family dinners that are delicious".

"Short-Cut Specials"

Offer lunch suggestions for school children. Hot sandwiches made of different kinds of fish portions, teamed with frozen French fried potatoes are good suggestions. Introduce your customers to heartier seafood dinners and the wide variety of fish and shellfish available. Much of the summer heat has subsided and homemakers are enjoying cooking again.

OCTOBER

"Harvest from the Deep"

Using themes of abundance, call attention to the tremendous variety of seafoods available in your store. Each week you can feature a certain method of preserving fish (i.e., fresh, frozen, canned, smoked or salted). Watch for local newspaper or national magazine articles on seafood and post them by your counters. October is a month when appetites call for homemade stews, chili, and soups. Take advantage of this thought trend by featuring easy-to-serve breaded fish portions of different species.

NOVEMBER

"Hearty Holidays"

Feature the same products that you will emphasize at Christmas—oysters for dressings, stew or frying, shrimp and crab for cocktails and hors d'oeuvres. If ethnic groups in your area are fond of fish, suggest seafood as an alternative to poultry.

"Snowflake Specials"

Highlight several kinds of frozen fish, breaded and unbreaded. Decorate your cases with paper snowflakes or other winter scenes. If possible, put a rack of tartar sauce, as well as various seafood seasonings near the case.

"Pacific Harvest"

Feature fish and shellfish from Pacific waters. Dramatize the origin of fresh and frozen species with pictures of salty fishermen and old fishing boats. Continue suggesting hearty seafood meals adding the thought that frozen seafood dinners save time and trouble during the holiday rush. Of course, fancy fish and shellfish fit nicely into Thanksgiving menus.

DECEMBER

"Christmas Companions"

Suggest oysters for stews, dressings, and frying for holiday breakfasts. Suggest shrimp and shellfish cocktails for holiday dinner accompaniment. Promote!

"Hurry-Up Holiday Dinners"

Emphasize frozen seafood dinners and frozen portions. Heat-and-serve fish dishes (such as fish sticks) can be suggested for nutritious meals that any family member can cook.[2]

The following "Monthly Seafoods to Feature" chart offers general suggestions. Depending on location within the United States, certain species may or may not be available during the whole year. Thus, availability of supply, along with customer demand, will determine to a large extent the seafood item to offer each month.

MONTHLY SEAFOODS TO FEATURE

Fish	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Salmon				X	X	X	X	X	X	X		
Oysters	X	X	X							X	X	X
Jack Mackerel					X	X	X	X	X	X	X	
Cod	X							X	X	X	X	
Halibut	X		X			X	X	X	X			
Lingcod	X		X			X	X	X				
Smelt	X	X					X	X			X	
Scallops	X			X	X		X			X	X	X
Clams	X		X				X	X	X	X		X
Dungeness Crabs	X	X	X	X	X	X						X
Sole	X	X	X	X	X	X	X	X	X	X	X	X
Shrimp		X	X	X	X		X		X	X	X	X
Frog Legs		X			X			X				X
Pacific Red Snapper			X		X	X				X	X	X
Catfish			X		X							X
Ocean Perch			X									
Herring			X									
Fresh Albacore							X	X	X	X	X	X
Lobster				X	X	X			X	X	X	X
Swordfish						X	X	X	X	X		
Tuna				X		X	X		X			
Trout			X			X		X			X	
Sea Bass		X	X			X	X	X	X	X		
Shark				X		X	X	X	X			
Squid		X	X		X	X	X					
Butterfish			X			X			X	X		X
Abalone	X			X	X	X	X		X			
Mussels								X		X	X	X

PROMOTION THROUGH MEDIA ADVERTISING

Display advertising in local newspapers, together with "spot" commercials on T.V. and radio, provide profit-making opportunities to reach the greatest number of potential customers at proportionately low cost. Many homemakers use newspaper ads as shopping lists; to many readers an advertised "sale special" is news.

To ensure the best newspaper promotion, ads should be run in selected editions as determined mutually by you and the newspaper's display advertising manager.

Frequency of radio and T.V. advertising will probably be determined by cost factors since this type of advertising is usually more expensive than newspaper space.

Special seafood seasons such as Lent, or special promotions such as "Summer Festival of Seafoods", demand more ads each week to match heightened consumer interest in seafoods and to tie-in with promotions by government and seafood industry groups.

Effective seafood advertising, whether in a newspaper, on radio or on T.V., should always include one or more of the following concepts:

1. **Sell your "image" as a seafood expert.** Use words and pictures that promote images of succulent seafoods harvested by hearty seafarers. Never forget that seafoods are surrounded by the excitement, adventure and romance of the sea. This uniqueness of the sea is a good selling point to feature in ads.

2. **Sell "value" in terms of quality, flavor, wholesomeness and variety.** Since most of your customers are budget-conscious, remind them that a pound of fish fillets or scalloped meat is a full pound of edible food—no bones, fat, or waste.

3. **Use colorful words and phrases to describe seafoods.** These words should create mental images of fresh, savory seafood that excites the taste buds. Appealing descriptions might include:

   "Tasty, tender, 'n plump!"
   "Sea-licious—with true sea-flavor locked in!"
   "Succulent, fresh-caught flavor!"
   "Foods from foamy seas—with fathoms of flavor!"
   "Heat 'em, eat 'em—savory seafoods in seconds!"

4. **Sell seafood's nutritional value.** Fish is low in cholesterol and calories and high in protein and other valuable nutrients. These healthful benefits are especially appealing to weight watchers. A National Heart Institute meeting produced a consensus that fish should be included in the diet four times a week.

5. **Tie-in with other food promotions.** Nationally promoted, seasonal seafood campaigns offer timely vehicles on which ads can "ride". Ads in August, for example, should feature scallops to tie-in with "Scallop Festival Days".

6. **Always have easy-to-read and easy-to-understand advertisements.** Advertising copy should be simple, to the point, and believable. The following poem by Orville Reed illustrates this point:

   Copy that lilts like the song of a bird,
   Or flows like a brook in the spring,
   Syntax that sings—a job to be heard—
   I've found may not sell a darn thing.

   But stuff that informs is simple and plain,
   That says what it says and then stops,
   Is often the reason that sales show the gain
   That pays for the fine-written flops.

   Writing copy is a highly developed skill, and for the most part should be left to the professionals.

SOURCES OF PROMOTIONAL MATERIALS

There are many organizations that periodically offer different types of seafood promotional materials to help boost sales. Utilize promotional materials and recipes supplied by such associations, but do not use so many displays that customers become confused. Develop friendly relations with sources of materials because these organizations can provide attractive literature, most of which is free. Listed below are some groups from which promotional materials may be secured:

National Fisheries Institute
1730 Pennsylvania Ave., N.W.
Washington, D.C. 20006

Massachusetts Seafood Council
Administration Bldg., - Fish Pier
Boston, Massachusetts 02210

Texas Parks and Wildlife Dept.
Seafood Advisory Service
4200 Smith School Road
Austin, Texas 78744

National Marine Fisheries Service
Duval Building
9450 Gandy Blvd.
Saint Petersburg, Florida 33702

American Shrimp Canners Association
P.O. Box 50775
New Orleans, Louisiana 70150

California Seafood Institute
11th and L Building, Suite 1003
Sacramento, California 95814

Department of Chesapeake Bay Affairs
69 Prince George Street
Annapolis, Maryland

Virginia Seafood Council
P.O. Box 687
Newport News, Virginia

Marine Dept. of Sea and Shore Fisheries
State Capital Building
Augusta, Maine 04332

Boston Fisheries Association, Inc.
Administration Bldg., - Fish Pier
Boston, Massachusetts 02210

Halibut Association of North America
911 Western Avenue
Seattle, Washington 98104

Maine Sardine Council
15 Grove Street
Augusta, Maine 04330

National Canners Association
1133 Twentieth Street, N.W.
Washington, D.C. 20036

Texas Shrimp Association
910 East Levee Street
Brownsville, Texas 78520

Canned Salmon Institute
Pier 89
Seattle, Washington 98119

Florida Board of Conservation
107 West Gaines Street
Tallahassee, Florida 32301

Tuna Research Foundation, Inc.
215 Cannery Street
Terminal Island, California 90731

Shellfish Institute of North America
212 Washington Avenue, Suite 9
Baltimore, Maryland 21204

Alaska King Crab Institute
217 Sixth Avenue, N.
Seattle, Washington 98109

U.S. Department of Commerce
National Fisheries Educational Center
Room 526
100 East Ohio
Chicago, Illinois 60611

U.S. Trout Farmers Association
67 West 9000 South
Sandy, Utah 84070

Oyster Institute of North America
22 Maine Street
Sayville, L.I., New York 11782

California Fisheries Association
321 East Second Street, Suite 403
Los Angeles, CA 90012

Southeastern Fisheries Association
330 South Adams Street
Tallahassee, Florida 32301

National Shellfisheries Association, Inc.
State Office Building
Annapolis, Maryland 21404

Northwest Fisheries Association
911 Western Avenue
Seattle, Washington 98104

CHAPTER VIII
REGULATIONS AFFECTING THE SEAFOOD INDUSTRY

In starting a retail business, the businessman is faced with numerous federal, state and local laws, along with various fees and licenses. Therefore, the seafood retailer should familiarize himself with the regulations that apply to him.

Some general and specific federal laws concerning seafoods are found in regulations issued under sections of the Federal Food, Drug, and Cosmetic Act. The laws that cover "current good manufacturing practice (sanitation) in the manufacture, processing, packing, or holding of fish and seafood products," are referred to by this act. Part 128 of Title 21 of these federal regulations relates to sanitation of food in general and contains the following:

Section	
128.1	Definitions
128.2	Current good manufacturing practice (sanitation)
128.3	Plant and ground
128.4	Equipment and utensils
128.5	Sanitary facilities and controls
128.6	Sanitary operations
128.7	Processes and control
128.8	Personnel
128.9	Exclusions

Included in the definitions section are those used in Section 201 of the Federal Food, Drug and Cosmetic Act and the definitions of "adequate, plant and sanitize".

Adequate refers to that which accomplishes the intended purpose, in keeping with good public health practice.

Plant means the building, buildings or parts thereof used in manufacturing, processing, packaging, labeling, or holding human food.

Sanitize pertains to adequate treatment of surfaces by a process that destroys bacteria and substantially reduces other microorganisms.

Such treatment shall not adversely affect the product and shall be safe for the consumer.

Sections 128.3 through 128.8 refer to facilities, methods, practices, and controls that assure food for human consumption is safe and has been prepared, packed and held under sanitary conditions.

More specifically, Part 128a of Title 21 is entitled "Fish and Seafood Products". Subpart A pertains to smoked and smoke-flavored fish; subpart E concerns frozen raw breaded shrimp. Both subparts are divided into the same seven sections listed above for general food regulations.

Before the retailer opens his doors for business, he must be sure he has (1) met minimum federal sanitation and safety standards that concern the handling of human food, (2) secured the proper state license or licenses and (3) complied with regulations relating to lengths of certain fish species.

The federal and state regulations presented here do not include all laws that confront the retail fish dealer. He must check with local county and city authorities since there are probably local ordinances with which he must comply before he can open a retail seafood business.

Copies of federal laws that concern wholesaling and retailing of fresh seafoods can be found in the Code of Federal Regulations at public libraries. Copies may also be obtained by writing to the Food and Drug Administration (Washington, D.C.) or to the Department of Commerce, National

Marine Fisheries Service, Washington, D.C.

Copies of state regulations can be located by contacting the appropriate state agency or agencies.

CHAPTER IX
RECORD KEEPING–THE BASIS FOR OPERATIONAL CONTROL

A good businessman is always aware of how well his business is functioning. He normally has a dollar or profit goal in mind, and knows how closely he is meeting objectives. He realizes that, to evaluate the performance of his business, adequate and up-to-date performance ratios to compare current business activities with past results and to judge budgeted performance goals.

The purpose of this chapter is to provide an introductory exposure to the benefits of establishing and maintaining efficient records. No attempt is made to investigate the details of accounting and financial procedures. These matters should be directed to qualified personnel (certified public accountants or financial consultants), who can be located by consulting the Yellow Pages of the telephone directory, by inquiring at the local Chamber of Commerce, by contacting your banker or lawyer, or by getting in touch with the local Small Business Administration field office.

Two financial statements are essential to all business firms. The Profit and Loss (P and L) Statement indicates how much money was collected and how much was paid during a time period. A Balance Sheet indicates the items in which money is invested (your money and your creditors' money) and the source of this money.

In addition to these two basic financial statements, a businessman should utilize performance ratios that help him compare his business to other firms in this product-industry category. Current Ratio, Inventory Turnover Ratio, Profit Ratio, Investment Ratio and Return-on-Investment Ratio are basic performance tools that can significantly aid the seafood retailer in evaluating his business performance.

THE PROFIT AND LOSS STATEMENT

A firm's profit for a given time period is determined by subtracting from net sales (total sales less returns and allowances) the cost of merchandise sold (cost of goods sold). The resulting figure is called gross profit (profit before deducting all operating costs). When operating costs are subtracted from gross profit, the remainder is net profit before income taxes. Once business income taxes have been computed and subtracted from net profits, the balance reflects profits after taxes for the firm. A simplified profit and loss statement might read as follows:

Gross sales	$50,000
Less: Sales returns and allowances	(1,000)
Net sales	49,000
Less: Cost of goods sold	(27,000)
Gross profit:	22,000
Less: Operating expenses	(5,000)
Net Profit before taxes	17,000
Income taxes	(2,000)
Net Profit	$15,000

COST OF GOODS SOLD

The simplest way to compute "cost of goods sold" is to record every item sold (using sales tickets) and then to "cost out" each ticket by determining from the purchase records the cost of each item. In firms where several hundred transactions take place, this process may be simple in concept but tedious to perform. Since the cost of some goods fluctuates frequently, it is often impossible to determine the exact cost of the item sold; there may be several of the same item in stock that were purchased previously at a lower or higher price.

Given these difficulties, the "cost of goods sold" section of the profit and loss statement is designed to accommodate mass selling practices. A typical section would appear as follows:

Beginning inventory at cost (at onset of time period; e.g., January 1)	$ 300
Add: Purchases at cost during beginning and ending time period; (e.g., January 1 - January 31)	2,700
Cost of goods available for sale	3,000
Less ending inventory	(500)
Cost of goods sold	$2,500

An additional problem is determining the inventory cost when purchases are frequent and when prices fluctuate during the accounting time frame (e.g., Jan 1 - Jan 31). The retailer should incorporate into his business an accounting system which reflects a policy where fish are sold on a "first-in-first-out" basis to insure product quality and freshness. The following paragraphs illustrate how the "cost of goods sold" section reflects this policy in a firm's accounting system.

The "cost of goods sold" section for a specified period consists of cost for the first seafood purchased, thus leaving the cost for the last seafood purchased still in inventory. To illustrate the "FIFO" (first-in-first-out) method of accounting, assume the data shown below.[1]

	No. of Pounds	Avg. Cost per pound	Total Cost
Beginning Inventory	100	$ .80	$ 80
First Purchase (Jan. 1)	50	.90	45
Second Purchase (Jan. 2)	50	1.00	50
Third Purchase (Jan. 18)	50	1.20	60
Fourth Purchase (Jan. 24)	50	1.30	65
Goods Available for Sale	300		$300
Pounds Sold	-180		
Pounds in Ending Inventory	120		

"Goods available for sale" consists of beginning inventory plus additional purchases made during the period. Sales are from the oldest stock, and final inventory consists of the most recently acquired stock, as follows:

Five pounds from Jan. 25 at $1.30	$65
Five pounds from Jan. 15 at $1.20	60
Two pounds from Jan. 8 at $1.00	20
Ending Inventory (based on FIFO)	$145

Cost of Goods Sold is then determined by:

Cost of goods available for sale	$300
Less: Ending Inventory	(145)
Cost of goods sold (based on FIFO)	$155

A simple accounting system may consist of accounts for purchases, inventory, and receipts. A spoilage account could also be established in which the purchases account is credited for the amount of spoilage account is debited for the same amount. In this way the manager will know how much seafood is lost due to spoilage.

Amount of purchases is determined from invoices received. Receipts from sales of seafood can be determined from daily cash register totals. A simple income statement might look like this:

Revenue or sales		4,500
Less: Cost of goods sold:		
Beginning inventory (at cost)	350	
Plus: Purchases	2,600	
Equals: Goods available for sale	2,950	
Less: Ending inventory	320	
Equals: Cost of goods sold		(2,630)
Equals: Gross profit		1,870
Less: Operating Expenses		(930)
Equals: Profit		$ 940

To determine net profit, operating expenses such as employee wages, insurance, heating and lighting, advertising, etc. should be deducted. These expenses vary according to size of business operation and size of town or city in which the store is located.

BALANCE SHEET

The balance sheet indicates where the businessman invests his money and to whom he is liable for use of this money. Money invested in particular business items that maintain the firm are assets. Cash, Accounts Receivables, Inventory are typical examples of **Current** Assets; these items are relatively "liquid" and can be converted into cash in 30-60 days. Building, equipment and land are **Fixed** Assets that can be converted into cash in but may take considerable time to be negotiated for sale. For example, assets generate revenue for the firm to buy inventory, pay employees, buy and operate delivery equipment. Assets are accumulated from the retailer's own savings and from previous business profits over and above the operating costs, business taxes and the proprietor's living salary. These expenses are termed capital or equity. Assets may also accumulate by borrowing. Accounts Payable to suppliers is one type of borrowing; on a short-term basis. These suppliers "lend" money for 10-30-60 days, and the retailer may "use" this money for his business during the time length allowed by the purchase invoice before he is obligated to repay. Notes Payable reflects long-term borrowing. Both categories, Accounts and Notes Payable, are liabilities incurred by the firm to lenders. Equity or Capital invested is also a type of liability since the firm "owes" the retailer the amount he has contributed. Thus the worth of the business is assets minus liabilities and personal capital invested (by retailer, partners or stockholders). Subtracting liabilities from assets yields **Net Worth**, and the excess of net worth over capital is Earned Surplus. A typical balance sheet might look like the following:

Balance Sheet
Jan. 31

Assets			**Liabilities**	
Current Assets			Current liabilities:	
Cash		$ 50	Accounts payable	$ 50
Accounts receivable		50	Notes payable to bank	50
Inventory		100	Owner's Equity	200
Fixed Assets:				
Equipment	200		TOTAL	$300
Less: Depreciation	(100)			
		100		
TOTAL		$300		

PERFORMANCE RATIOS

Good accounting records are the foundation on which sound financial management is based, and the two most important accounting statements are the balance sheet and the income or "profit and loss" statement. However, these two records only begin to explain the financial condition of a business. A number of indicators reveal relationships between some figures on the balance sheet and the profit and loss statement. The first objective of financial management, "liquidity" may be defined simply as the ability to pay bills. "Current ratio" is one of the best known indicators of liquidity. This ratio is computed from the balance sheet by dividing current assets by current liabilities:

$$\frac{\text{Current Assets}}{\text{Current Liabilities}} = \frac{\$200}{\$100} = 2$$

Is this an acceptable current ratio? This question cannot be answered with a definite yes or no. A popular rule of thumb for the current ratio is 2 to 1, but whether a specific ratio is satisfactory depends upon the nature of the business and the characteristics of its current assets and liabilities. If a retailer decides his current ratio is too low, he may be able to raise it by paying some debts or by increasing current assets.[2]

Since profit in a retail seafood business is greatly affected by inventory turnover, computation of the turnover rate is also an important liquidity ratio. Inventory turnover, which indicates the velocity with which merchandise moves through the business, is determined by either of two formulas:

$$\frac{\text{Cost of Goods Sold}}{\text{Average Inventory At Cost}} = \text{Inventory Turnover}$$

$$\frac{\text{Sales}}{\text{Average Inventory At Retail}} = \text{Inventory Turnover}$$

To determine average inventory for the period, add beginning and ending inventories and divide this figure by two. A high turnover suggests that business is operating with a relatively small investment in inventory or that inventories are not on display too long. Inventory turnover records for individual items or groups of items show which items sell well. Reorder fast-moving items quickly and dispose of slow-moving items before they become unsalable.

The second major objective of financial management is answering the question, "Does your business earn as much profit as it should, considering the amount of money invested"? The rate of return on investment (ROI), probably the most useful profitability measure for the small business owner, is based on two other ratios—"profit ratio" and "investment turnover". Profit ratio measures the difference between the amount your business earns and the amount it spends for business operations. Thus, changes in the ratio depend on operating costs and pricing policies. For example, net profit on sales (profit ratio) is computed as follows:

$$\frac{\text{Net Profit}}{\text{Net Sales}} = \frac{\$\ 20{,}000}{300{,}000} = 6.7\ \%\ \text{net profit}$$

This means that for every dollar of sales, this business makes a profit of 6.7 cents. This ratio is most useful when comparing your figures with those of comparable businesses.

Investment turnover, the ratio of annual net sales to total investment, measures the volume of sales you receive for each dollar invested in assets. Investment turnover is computed as follows:

$$\frac{\text{Net Sales}}{\text{Total Assets}} = \frac{\$300{,}000}{\$230{,}000} = 1.3 \text{ times}$$

Now, return on investment can be determined by multiplying the profit ratio by the investment turnover:

$$\frac{\text{Net Profit}}{\text{Net Sales}} \times \frac{\text{Net Sales}}{\text{Total Assets}} = \frac{\text{Net Profit}}{\text{Total Assets}} = \text{Return on Investment}$$

Usage varies in regard to which items from financial statements are used for "profit" and "investment". For example, "profit" may refer to net operating profit, net profit before taxes, or net profit after taxes. "Investments" can mean total assets or simply equity. Decide which values you will use in computing return on investment, then be consistent.[3]

Size, organization type, kind of business and other factors largely govern the records needed and the complexity of the records system. Every business needs seven basic kinds of records. In order to help you remember these, below is an anagram which spells R E C O R D S which lists the seven basic records.

Records of cash receipt with provisions that segregate receipts from sources other than income (e.g., bank loans).

Expenditure records that designate the nature of the expenditure (e.g., materials and labor expense) and the payment method (check or cash).

Control of payroll expenditures that show names, social security numbers, time of payment, gross pay, payroll deductions, and taxes.

On Account or accounts receivable records that show customers' accounts and your experience with them.

Resources and accounts payable that show your experience with suppliers (e.g., cash discounts and dates).

Documentation file for the orderly accumulation of documentary evidence (invoices, stubs, etc.) that supports other records.

Summarization in order to condense transactions already basically recorded, and to provide a permanent, intelligible history of the business. A general ledger contains the beginning values of assets, liabilities and capital. It also summarizes the results of operations for any given period (week, month, quarter, year), and it provides a "running" record of assets, liabilities, and capital at any given moment. A summary also establishes accountability to employees or to departments for funds or other assets entrusted to their care.[4]

The need for accurate record-keeping cannot be stressed too much. Any accounting system, simple or complex, is useless without a sound basis for accumulating information used to prepare various statements and ratios. The retailer should seek the services of a professional accountant to help him establish an adequate accounting system. Additionally, he should call upon a financial analyst to help him interpret his operations' performance as reflected in the Profit and Loss Statement on the Balance Sheet, and by Selected Performance Ratios. These professionals detect "soft spots" in business activities and suggest how to improve the firm's profitability.

CHAPTER X
FINANCING—MAKING MONEY WORK FOR YOU

The ability to obtain needed money is as necessary to the operation of a business as a good location, the right equipment, reliable sources of supply, and well-trained personnel. Before a bank will lend money, the finance officer must be satisfied by answers to the following questions:

1. What sort of person are you? The character of the borrower comes first, followed by his ability to manage the business.

2. What will you do with the money? This answer determines the type of loan, short or long-term. Money used for the purchase of seasonal inventory will require quicker repayment than money to buy fixed assets.

3. When and how do you plan to repay? The banker's judgement of your business ability and the type of loan will be deciding factors in answering this question.

4. Is the "cushion" in the loan large enough? In other words, does the amount requested allow for unexpected developments? The banker resolves this question on the basis of projected financial statements that you present to him.

5. What is the general outlook for the business community and for your particular type of business?

After deciding to borrow money, the businessman and his banker must decide what financing is needed—short-term loan, long-term loan or equity capital.

SHORT-TERM LOANS

Short-term loans usually finance a need that does not exceed one year, such as building a seasonal inventory during a five or six month period. Short-term loans, and some long-term loans, may be "secured" or "unsecured". The former loan involves a pledge of your assets as protection; the latter relies solely upon your credit reputation.

LONG-TERM LOANS

Long-term loans involve money borrowed over an extended period of time in order to finance fixed assets such as equipment and fixtures. These types of loans are paid back in periodic installments from earnings.

EQUITY CAPITAL

Equity is the owner's investment plus profits that accumulate in the business. Money invested as equity in the business is not repaid; instead, the owner has invested his own money or has acquired capital by selling a part interest in the business to someone else.

A businessman wishing to open a new seafood establishment would probably be required to contribute about 50 percent of the total investment himself in the form of equity and to borrow the remaining 50 percent as a long-term loan to purchase initial land, buildings, equipment, etc. If the need arises, he may later obtain short-term loans to finance seasonal inventories.

MONTHLY PROJECT STATEMENTS

Before a banker transacts a major loan, the "would-be" businessman must provide a detailed monthly projection of his expected financial requirements for a period of time, not more than two years in length. The projection is developed by combining budgeted expenses with a sales forecast, from which a cash-flow forecast is developed. The cash-flow forecast estimates cash receipts and disbursements during the budget period and represents a plan to meet working capital requirements.[1] This forecast information is based on previous business experience plus anticipated performance during the coming year. An estimated Profit and Loss Statement can also be prepared from this information.[2] The banker uses these projected statements, along with balance sheets and subjective judgment of the borrower's ability and credibility, to decide whether or not to grant the loan. If the loan cannot be justified by the borrower's financial statements, a pledge of security may be required. Pledges of security can be of several types:

1. **Endorsers, co-makers or guarantors.** The borrower has other people sign the note for him. These endorsers, co-makers and guarantors are contingently liable for the note.

2. **Real estate.** The borrower signs over real estate that he owns as collateral for long-term loans.

3. **Savings accounts.** The borrower may assign to the bank a savings account to which the bank keeps the passbook.

4. **Life insurance policies.** Banks will also accept life insurance as collateral for a loan. They will lend as much as the cash value of a life insurance policy.

5. **Stocks and bonds.** If the borrower offers stocks and bonds as collateral, they must be marketable. Banks usually lend no more than 75 percent of the market value for high grade stock. For federal or municipal bonds, banks may be willing to lend 90 percent or more of the market value.[3]

BREAK-EVEN ANALYSIS

Bankers often want to know what sales level is required before the borrower expects to earn a profit. The break-even technique is a good tool for analyzing the effect on profits of different costs, operating volumes, pricing methods and other management policies. The "break-even point" is reached when sales revenues just equal costs, with no profit or loss.

Two major classifications of costs are fixed-categories and variable costs. Fixed costs do not change with fluctuations in the level of business activity (e.g., property insurance or property taxes). Variable costs, on the other hand, vary directly with the volume of business activity and include expenses such as cost of goods sold. Once all costs are categorized as fixed or variable, the break-even point in pounds of fish can be found by using this formula:

$$\text{Break-even volume (in pounds of fish)} = \frac{\text{Total fixed costs}}{\text{Selling price} - \text{Variable cost (per pound)}}$$

This formula can be used to find the break-even point by assuming one fish product. Total fixed costs for a fish retailer excludes only what he pays for the fish (cost of goods sold). Included in total fixed costs, on a monthly basis, are items such as rent, salaries and wages (including owner's salary), insurance, heat, light and electricity. Costs of goods sold, (what the retailer pays for the fish wholesale) are variable costs. For example, suppose the XYZ Company figures the costs for one variety of fish (redfish) as follows:

Total fixed costs	=	$100.00
Variable cost (Cost of goods sold)	=	$ .50 per pound
Selling price	=	$ 1.00 per pound

This computation means that $ .50 per-pound-sold applies toward fixed costs. Since fixed costs are $100, the retailer must sell 200 pounds of redfish before any profit is realized. Once fixed costs are recovered, the $ .50 per pound sold will be profit. By applying the correct formula, the derived break-even point in pounds is:

$$\frac{\text{Break-even volume}}{\text{(pounds of fish)}} = \frac{\$100}{\$1.00 - \$\ .50} = \frac{\$100}{\$\ .50} = 200 \text{ pounds}$$

To determine a dollar break-even point, multiply the break-even volume in pounds by the selling price per pound. The retailer must sell 200 pounds of fish at $1.00 per pound for total sales of $200 in order to cover costs.

Of course, a seafood retailer sells more than one seafood variety. By applying a "weighted average" to the above formula a more realistic break-even point is obtained. The weights (percentages) are based on previous sales records and purchases. Assume that the retailer calculates from previous records that 60 percent of his sales are from redfish and 40 percent from trout. The selling price and cost of the two species are as follows:

	Selling Price Per Pound	Cost Per Pound
Redfish	$1.00	$ .50
Trout	$ .75	$ .45

By applying weighted averages to the original formula, the break-even point becomes:

$$\text{Break-even volume} = \frac{\$100}{.60\ (1.00 - \$\ .50) + .40\ (.75 - \$\ .45)} = \frac{\$100}{.30 + .12} = \frac{\$100}{.42} = 238 \text{ pounds}$$

The weights must now be applied to the total number of pounds to determine how many pounds of each species must be sold:

238 x .60 = 142.80

238 x .40 = 95.20

Thus, by applying weighted averages, the retailer can determine break-even points for each seafood variety he carries. Note that changes in fixed costs, selling price, or variable costs result in a changing break-even point. For example, reduced variable costs will lower the break-even point because more profit per unit is obtained from each sale. Similarly, if the retailer must pay more for his seafood products (variable costs rise), his break-even volume point will be higher. In this case, either he will raise his price or, he will sell more seafood at the original price in order to cover fixed costs.

THE SMALL BUSINESS ADMINISTRATION

Even with projected financial statements and break-even analysis, the banker may consider the loan too risky to authorize without additional guarantees. He may then suggest, if he feels the venture has merit, that the Small Business Administration consider the loan. By law, SBA cannot consider a loan application unless there is evidence that the loan cannot be obtained elsewhere on reasonable terms.

To be eligible for an SBA loan, a firm must qualify as a small business, i.e., the operation must (1) be independently owned and operated; (2) not be dominant in its business field; and (3) meet certain size standards in terms of employment or annual receipts. The loan applicant must also meet the following general credit requirements (notice that several of these criteria are required for conventional bank loans):

1. The applicant must be of good character.
2. Evidence must indicate that he is able to operate his business successfully.
3. The applicant must have enough capital when combined with the SBA loan, that he can operate on a sound financial basis.
4. The past record and future prospects of the business must indicate ability to repay the loan from the business income.[4]

If the bank is willing to supply part of the needed funds, SBA may advance the remaining money or may guarantee part of the loan made by bank participation loans. SBA can provide or guarantee as much as 90 percent of the bank loan.

If the bank cannot participate with SBA to extend credit, the borrower may apply for a "direct" loan financed wholly by SBA. Under law, however, SBA can authorize neither a direct-loan agreement if a participation loan is available, nor a participation agreement if the loan is available on a guarantee basis. If you need financial counseling or further information concerning SBA loans, call or write one of the field offices.

Obviously the retailer will require outside financing unless he can supply all necessary capital by himself or by selling part of his business. Regardless of whether the loan is short-term or long-term, from a bank or from SBA, the retailer is required to submit balance sheets, as well as profit and loss statements. In addition, a break-even analysis of tonnage and dollar volume is valuable to the retailer and his financial agent in evaluating the loan requirement.

CHAPTER XI
SUMMARY

This manual has provided a variety of marketing aids that range from purchasing seafood to obtaining financial aid. Now an organized perspective is in order.

Successful businesses operate systematically. In most cases the firm wants to answer three major questions:

1. "What do I want to accomplish during the planning period?" (week, month, quarter or year).

2. "What marketing strategies (product assortment, pricing decisions, promotional techniques, supply and storage factors, customer service requirements) will I use to obtain these goals?"

3. "What information (business records and financial analysis tools) shall I employ to know if I am "on target"—to know what activities should be maintained or changed to reach my goals?"

When answered, these three questions form the fundamentals of good business management; objectives, plans, and controls.

Objective—"What do I want to accomplish?"

This manual cannot tell you what your objectives should be. Objectives vary for each firm and each individual. For market planning purposes, a retailer must state his objectives or goals in such a way that he can measure them. That is, he may list a profit objective, "I plan to earn $500.00 additional profit this quarter"; or a sales goal, "I plan to increase my dollar volume by 15 percent this month"; or a product sales goal, "I plan to double (100% increase) my sales of shucked raw oysters?"

Notice three characteristics of these statements:

1. The goal is **stated in precise terms**, which when compared with results, will indicate whether or not the goal was achieved.

2. The goal will be attained within a **definite time period.** The planning period (week, month, quarter).

3. The goal is to be achieved by **use of a plan.**

Marketing Plans—"What marketing strategies will I use?"

Recall the "Trinity of Marketing Decisions" that was introduced in the first chapter. How the retailer resolves the "Trinity Decisions" becomes his plan to achieve goals. **The personal plans for pricing, promotion, etc., must support one another in order for objectives to be realized.** For example, it does not pay to develop an extensive advertising plan and not have adequate product on hand. A stock-out condition will not increase customer patronage nor loyalty. It is also inconsistent to maintain an attractive display case and allow untidy or unsanitary facility—or vice versa.

Controls—"Am I on target?"

Of course you, the retailer, want to know how you are doing. To gauge your progress, you need an "information system" or "feedback" that let's you learn if plans are resulting in the predetermined objectives. Recall that the financing and record-keeping chapters of this manual introduced the profit and loss statement, in addition to analytical tools such as return on investment and inventory ratios. These tools, plus daily records of sales and expenses, can compare present performance with past business activities and with budget figures estimated when your

market plans were set up. Controls dictate whether the retailer should continue his present course with the current marketing plan or whether he should make changes in the plan.

The Basic Market-Planning Framework

1. Establish a set of **reasonable goals** to achieve within a specific time period.

2. Develop a set of marketing strategies to achieve these goals—have a written plan based on the Trinity of Marketing Decisions:

    a. Select a target market.

    b. Develop a product mix tailored to meet the needs of this market.

    c. Combine promotion, retail pricing, source of supply, and customer service strategies to support your product assortment presentation.

3. Establish a record-keeping system that will provide useful marketing information on your business progress.

Listed below are some primary objectives that a seafood retailer should attempt to achieve. Although these objectives cannot be measured and compared against your business performance, you should plan on paper what you wish to accomplish. To help you get a "feel" of the kind of goals you may set for yourself, consider the following:

Primary Management Objectives for a Fresh Seafood Market

1. To increase customer satisfaction

    a. By making fresh seafood available

    b. By adding interest to the total store offering

2. To increase store revenue and profit

    a. By increasing patronage and customer loyalty

    b. By averaging higher check-out sales

3. To enhance the store's image

    a. By making it "the place" to purchase fresh seafood

    b. By creating a one-stop seafood center

    c. By being "fresh conscious"

Basic Management Guidelines for Accomplishing Seafood Market Objectives

1. Push the "seafood" concept—not just "fish".

    a. Use strong visual cues and symbols.

        1) Name the seafood market.

        2) Convey a market personality through architectual design.

b. Strengthen the impact of your concept by centralizing all seafood products in your display area.

2. Insure that your personnel have the proper attitudes and philosophies.

   a. Establish strong, positive support of top management.

   b. Structure carefully the training of seafood market employees.

   c. Separate the responsibilities and authority between red meat and seafood operations (for supermarkets).

3. Make your seafood department a customer contact point.

   a. Keep your merchandise area manned at all times.

   b. Inform your customers of new menu items and recipes.

   c. Be courteous and friendly to your customers.

4. Offer a wide selection in product assortment to increase sales potency and impulse buying.

   a. Stock fresh, frozen and canned seafood items. Display these items in the seafood market area to emphasize that all seafood is part of the total concept (for supermarkets).

   b. Stock a wide assortment of products that complement consumers seafood purchasing decisions.

5. Make product quality a selling point.

   a. Establish quality standards for receipt and processing products.

   b. Maintain an inventory control system to ensure fresh products.

   c. Stress cleanliness and sanitation at all times.

6. Actively promote fresh seafoods.

   a. Establish and follow a promotion program consisting of regularly recurring activities:

      1) Weekly leaflets or advertisements

      2) Weekend or seasonal specials

      3) Adequate supply of "freebees" (recipes, etc.)

      4) Paper overwrap with market's name

   b. Develop "special" promotion events:

      1) Hire a person to prepare seafood menus and distribute samples.

      2) Give away, as samples or sell at very low retail price, new products that you may want to test for potential market success.

Implementing these management guidelines has been discussed in this manual. If these fundamentals are studied and applied, your firm is far along on the road to a successful retail seafood operation. You will see profits increase, because customers are better satisfied; and satisfied

customers are the best marketing tool you have. Start now to develop marketing objectives, implement marketing plans and monitor your performance. Put the pencil, the paper, and yourself to work!

FOOTNOTES

Chapter I

1. "How to Sell Seafoods and Net More Profits"; Developed by the Massachusetts Division of Marine Fisheries in cooperation with the U.S. Bureau of Commercial Fisheries under P.L. 88-309; p. 3.

2. "There's Gold in Them There Gills"; U.S. Department of Interior, Bureau of Commercial Fisheries; p. 2.

3. *Ibid.*; p. 3.

4. "How to Sell Seafoods and Net More Profits"; p. 3.

Chapter II

1. **An Analysis of Seafood Consumption Patterns and Product Perceptions in Texas** by Dr. Samuel M. Gillespie and Dr. Michael J. Houston, TAMU-SG-75-216, August, 1975, Texas A & M University, Sea Grant College, College Station, Texas.

Chapter IV

1. "There's Gold in Them There Gills"; U.S. Department of Interior, Bureau of Commercial Fisheries; p. 7.

2. "There's Gold in Them There Gills"; U.S. Department of Interior, Bureau of Commercial Fisheries; p. 33.

3. *Ibid.*; p. 34.

4. Burgess, G.H.O.; **Fish Handling and Processing;** New York: 1967; p. 259.

5. "The Care of Fish in Retail Stores"; Department of Fisheries, Ottawa Canada; 1967; pp. 8-11.

6. "There's Gold in Them There Gills"; p. 26.

7. "The Care of Fish in Retail Stores"; pp. 14-16.

8. "There's Gold in Them There Gills"; p. 28.

Chapter V

1. "Life Begins at 40°F: How to Use a Seafood-Handler's Thermometer;" Wm. D. Davidson, Extension Seafood Technologist, Oregon State University.

2. SMI Sanitation System Guidelines and Standards; Super Market Institute, Inc., Chicago; pp. 1-28.

Chapter VII

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2. "The Profitable Role of Fish in Your Store"; Part II; pp. 1-12.

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Chapter IX

1. Meigs, Walter B., Charles Johnson, and A.N. Mosich; **Financial Accounting**; New York, 1970; pp. 328, 330, and 331.

2. Zwick, Jack; "A Handbook of Small Business Finance"; Small Business Administration; 1965; p. 19.

3. *Ibid.*; p. 28.

4. Records and Credit in Profitable Management; Administrative Management Course Program; Small Business Administration, Washington D.C.; 1964; p. 24.

Chapter X

1. Small Business Administration Management Aids, "The ABC's of Borrowing," No. 170; August, 1971; p. 1.

2. *Ibid,*; pp. 3-4.

3. *Ibid,*; p. 4

4. Zwick, Jack; "A Handbook of Small Business Finance," Small Business Administration, Small Business Management Series No. 15; p. 66.