

Fishery market development series
15.

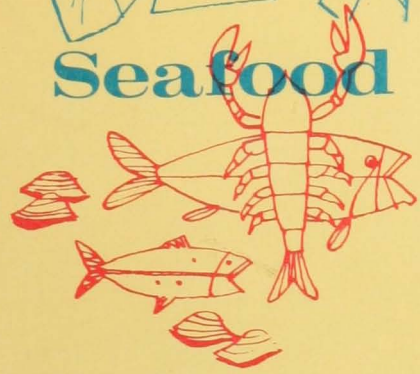
UNIVERSITY OF OREGON
JAN 27 1972
LIBRARY



How to
eye **and**
buy



Seafood



FOREWORD

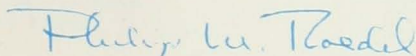
With this publication, the Department of Commerce and the National Marine Fisheries Service provide valuable information to everyone who buys and enjoys food from the sea.

One of the Service's goals as part of NOAA (National Oceanic and Atmospheric Administration) is to assure that the vast protein resources of the sea will be harvested in such a way as to provide the greatest benefit to the greatest number of people, and to help provide the consumer with wholesome, nourishing fish and shellfish.

Here is timely information on selecting and purchasing fishery products. Restaurant operators and mass feeders will find it a reliable teaching aid.

The National Marine Fisheries Service, formerly the Bureau of Commercial Fisheries, became a part of NOAA on October 3, 1970, under a Presidential Reorganization Plan.

National Marine Fisheries Services



Director

Q. WHY SEAFOODS?

A. They are *preserved at the peak of their flavor* through modern techniques that keep fish and seafood at their delicate best. The problems of the past, not-so-fresh, bony products, have been greatly reduced. Patrons know they can count on high quality in even the most modestly priced menu items.

Q. WHY SEAFOODS?

A. They are *pre-portioned* when you want them that way, or breaded, if that's your "oyster." They are convenient in cans, in individually wrapped frozen portions, or shipped fresh to your specifications.

Q. WHY SEAFOODS?

A. They are a flavorful *problem-solver* for diet watchers. There's no reason you have to offer the same diet special broiled beef and cottage cheese menu when there's such a range of appetizing possibilities with seafood. Salads, broiled fish fillets, and cold seafood buffets are practically all lower in calories than most meat dishes and are just as nutritious. And, for the customer who's been warned to watch his cholesterol intake, no main dish beats high-protein, low-fat fish. His doctor has already told him; your menu would just give him a gentle reminder (but go easy on those rich sauces!).

Q. WHY SEAFOODS?

A. They are popular . . . They are pre-sold . . . They are profitable . . . They are preserved at the peak of their flavor . . . They are problem-solvers for dieters! In short, fish (and, of course, shellfish of all types) are Right Now foods for the 70's.

With so many "reasons why" going for it, fish should certainly be included in your future menu plans.

If you haven't been a big user of fish before, you may feel a little overwhelmed at the thought of purchasing and preparing a new, major category of entrees.

But cheer up! Learning the basics is as easy as "shooting fish in a barrel." Keep abreast of the times. It's an ever-changing world.



*Seafoods
Catch Customers*

PURCHASING FISH AND SHELLFISH

Each year, about three billion pounds of fish and shellfish are caught commercially for food in the United States. The consumer may buy these fresh and frozen in a variety of forms.

- Whole or round fish are marketed just as they come from the water. Before cooking, they must be scaled and eviscerated. Usually, head, tail, and fins are removed.

- Drawn fish are marketed with only the entrails removed. They need to be scaled and head, tail, and fins are removed before cooking.

- Dressed or pan-dressed fish are both scaled and eviscerated; usually, head, tail, and fins are removed and they are ready for cooking. Smaller fish, called pan-dressed, usually have head and tail left on, and are ready for cooking. Larger, dressed fish are frequently cut into steaks or fillets.

- Steaks are cross-section slices of the larger types of dressed fish. They are ready to cook as purchased.

- Fillets are the sides of dressed fish, cut lengthwise away from the backbone. They are practically boneless, may be skinned, and require no preparation before cooking.

- Butterfly fillets are two sides or fillets of the fish held together by the uncut belly skin and are usually boneless.

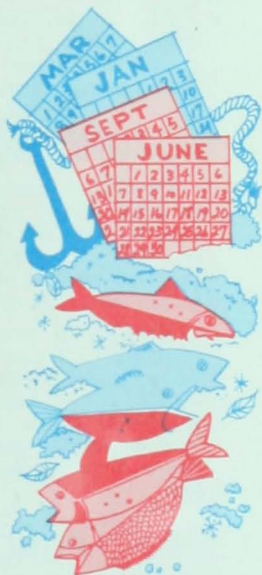
- Fish sticks are pieces of fish cut from frozen fish blocks into uniform portions usually about 1 inch wide and 3 inches long. They weigh up to 1½ ounces.

- Fish portions, so very popular today, are cut from frozen fish blocks into uniform portions weighing not less than 1½ ounces and up to 6 ounces.

- Shellfish (such as clams, lobsters, oysters, and some varieties of crabs) should be alive if purchased in the shell.

- Shucked shellfish have shells removed.

- Shrimp are usually sold headless. "Green" shrimp applies to raw, headless shrimp in the shell in most areas. Peeled shrimp are headless shrimp with the shells



*Seafoods Know
No Season*

removed. Deveined shrimp are shrimp with the intestinal track or black vein down the back removed. Cooked shrimp, available fresh, frozen, and canned, is usually sold peeled and deveined, ready to use.

PURCHASING FRESH FISH

Check your fish dealer for information on when to purchase fish. Different varieties of fish are abundant at different times of the year. Check with your dealer.

When buying fish whole or round, watch for bright, clear eyes; reddish-pink gills free from odor or slime; and bright-colored scales adhering tightly to skin. Flesh is firm and elastic (springs back when pressed gently) and free from objectionable odors.

Fish is perishable and must be handled with utmost care. Fresh fish should be packed in ice and kept in the coolest part of the refrigerator.

PURCHASING FROZEN FISH

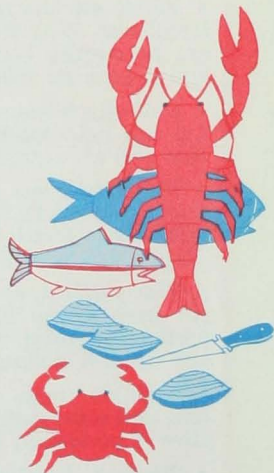
Excellent variety of products with built-in labor bonus makes these items a good buy. Frozen fish should be stored at -10°F . or lower until ready to use. Dressed frozen fish, fillets, and steaks may be cooked in frozen form but require extra cooking time.

Thawing is necessary for cleaning and dressing of frozen whole and drawn fish. Thawing at refrigerator temperatures (40° to 45°F .) is accepted practice. But fish should be held at this temperature only long enough to permit ease of preparation. *Never refreeze thawed or partially thawed fish.*

PURCHASING CANNED FISH

Wide variety is offered in canned fish, shellfish, and speciality products. These include canned clams, salmon, sardines, shrimp, and tuna in addition to fish balls, chowders, cakes, and roe.

Five species of salmon are canned on the West Coast and Alaska. The higher priced varieties are deeper red in color and have a higher oil content. Salmon may be pur-



*Seafoods Ensure
Menu Variety*

chased in 3 $\frac{3}{4}$ -, 7 $\frac{1}{2}$ -, 15 $\frac{1}{2}$ -, and 64-ounce cans.

There are two broad classifications of canned tuna—white meat, which in the United States, may be canned only from albacore, and light meat, which is canned primarily from yellowfin, bluefin, and skipjack species. Tuna may be purchased in 3 $\frac{1}{2}$ -, 7-, 13-, and 60- to 66 $\frac{1}{2}$ -ounce cans.

Store canned fish in a cool, dry place; avoid high temperatures and humidity.

FISH FAVORITES

Some of the more popular fresh or frozen fish varieties regularly used by food service operators are:

Catfish: Available whole, dressed, fresh, and frozen. Deep-fat fry or use in catfish stew.

Cod: Available breaded, raw and pre-cooked in sticks or portions; fillets, fresh, frozen, or dry-salted. Deep-fat fry, broil, poach, or bake fresh or frozen portions; use salt cod in creamed dishes and in fish cakes.

Halibut: Available drawn, dressed in steak form, fresh and frozen. Broil or bake; stuff and broil or bake. Cooked flakes may be used in casseroles.

Perch: Available fresh or frozen dressed whole and filleted. Pan-fry, deep-fry, or baked in sauce.

Pollock: Available dressed as fillets; fresh or frozen. Deep-fat fry, broil or bake; cook in sauce.

Red Snapper: Available dressed, steaks, and fillets, fresh and frozen. Deep-fat fry, broil, or bake.

Salmon: Available dressed, fresh or frozen in steaks or fillets; also smoked and canned. Poach, bake, broil, pan-fry; flakes of fresh or canned salmon are used for fried patties or cakes and in salads.

Sole: Available whole or in fillets; fresh or frozen. Deep-fry, stuff and bake, broil, pan-fry.

Trout: Brook trout and rainbow trout, raised on trout farms, are usually purchased whole, frozen, and dressed. The 6- to 12-



*Seafoods Lure
the Diet Conscious*

ounce fish are most popular. Broil, bake, stuff and bake, saute, or pan-fry.

Whitefish: Available whole, drawn, dressed, in fillets, fresh or frozen. Bake, broil, or poach.

SHELLFISH FAVORITES

Shellfish are divided into two classifications: crustaceans, which include crabs, crayfish, lobster, and shrimp; and mollusks, which include clams, oysters, and scallops.

Shellfish are among the most delicate and perishable of foods. Bargains should never be considered unless top quality is assured. Purchase only the best at all times, but not necessarily the most expensive. Once purchased, shellfish must be kept refrigerated until preparation time.

CRUSTACEANS

Shrimp: Raw or "green" shrimp varies from a greenish-grey to reddish-brown depending on the species and where it is caught. The common varieties are: white or common; brown or grooved; pink or coral; red or royal. When cooked, all are similar in appearance, flavor, texture, and yield.

The term "shrimp" refers to the fresh, frozen, or cooked tail section of the shrimp.

These tails are graded according to number per pound—a unit known as the "count". The shrimp are usually designated by such terms, corresponding to number per pound, as jumbo, large, medium, small, etc. Regular, non-peeled shrimp are divided into the following categories; 15 and under; 16 to 20; 21 to 25; 26 to 30; 31 to 42; 42 and over.

Shrimp are marketed; headless, peeled and deveined, cooked in the shell, cooked, peeled, and deveined, and breaded.

Shrimp are also marketed as broken, imperfect pieces for use in salads or mixed dishes where shape is unimportant. Shrimp in the shell are usually marketed frozen in 5-pound boxes. Shelf-ready, freezer-dried shrimp are also available in hermetically sealed cans. The water is removed from the shrimp in a special freezing and drying process.



Seafoods
Are Groovy

Shrimp may be boiled for use as hors d'oeuvres, in cocktails, salads, sandwiches; cooked in Newburg, creole, and other sauces; sauteed or dipped in breading or batter and then deep fried. Large shrimp may be stuffed and baked.

Breaded uncooked shrimp ready for deep-frying, and pre-cooked, breaded shrimp, ready to heat-and-serve are also available.

Prawns are large shrimp, and the term usually refers to jumbo Gulf shrimp.

Lobster: Live northern or Maine lobsters may be purchased for shipment to all parts of the country. They are also available alive, through the use of holding tanks, in many areas of the country. Lobsters may also be obtained in three other forms: cooked in the shell, fresh or frozen lobster meat, and canned lobster meat. Except in the producing areas, fresh lobsters cooked in the shell and lobster meat are not found on the market in large quantities.

A live lobster may weigh from $\frac{3}{4}$ -pound to 3 pounds or heavier. The meat comes from both the tail and claws. Northern or Maine lobsters must not be confused with crayfish or rock lobster, which have marketable tails only.

The frozen tails of the rock lobsters are imported to the United States largely from South Africa, Australia, and New Zealand. Rock lobster tails usually run from 4 ounces to 1 pound each.

Whole lobsters may be boiled, steamed, broiled, or baked stuffed, and served in the shell. Lobster meat is used for salads, cocktails, sandwiches; in Newburg; in chowders and bisques.

Lobster tails may be treated in the same manner as other lobsters, but are used most successfully broiled, baked, and baked stuffed, or broiled.

Crabs: Varieties available are the hard-shell or blue crab from Atlantic waters, the Dungeness crab from Pacific waters, and King and tanner or queen crab from Pacific waters off Alaska. Soft-shell crabs are molting blue crabs that have shed their hard shells.

Crabs may be purchased in the following forms: live; cooked in the shell; fresh, frozen, or pasteurized meat, and canned meat.



*Seafoods Pass
All the Tests*

Near the fishing grounds, crabs are generally sold alive or freshly cooked.

Hard-shell crabs are frequently cooked by steaming or boiling almost as soon as taken from the water. As the meat is very perishable, the crabs must be refrigerated or packed in ice till used.

The meat is picked from cooked crabs and shipped in iced containers.

Cooked blue crab meat is available in the following forms:

- Lump meat—comes from the larger muscles. It is known as “special” or back-fin. The meat is white.
- Flake meat—also white in color is the remaining portion of the body meat.
- Flake and lump meat—in some sections both kinds of white meat are packed together.
- Claw meat—as the name implies, comes from the claws. The outer surface of the meat is brownish in color. There is only one grade.

Crab meat may be sauteed, creamed, served in Newburg, salads, cocktails, sandwiches and hors d'oeuvres. Whole crabs may be steamed and served with drawn butter.

King crabs weigh from 6 to 20 pounds each. The leg meat is available cooked and frozen in 5 pound blocks; cooked and frozen leg sections in the shell are available whole and split. Whole legs may be broiled, baked in the shell, or served cold with mayonnaise.

Soft-shell crabs are available fresh or frozen. They are marketed by size or number to the pound. They are usually cleaned prior to freezing and may be eaten shell and all. Soft-shell crabs may be sauteed or deep fried.

Canned and pasteurized crab meat are available in all parts of the country and can be used interchangeably in recipes calling for cooked crab meat.

Deviled crab in aluminum foil “shells” are now marketed frozen ready to heat-and-serve.



*Seafoods Are
Easy to Prepare*

MOLLUSKS

Bay and Sea Scallops: Bay scallops, taken from inshore waters, are small and considered a delicacy. The supply is very limited. The large sea scallop, an inhabitant of offshore banks and deep waters, is the one used extensively in quantity food operations. Both species have sweet, firm, white meat.

Scallops can be served broiled, en brochette (on a skewer), sauteed, breaded and deep fried, au gratin, in Newburg sauce, and in soups and chowders.

Clams: Clams in the shell should be alive when purchased. Gaping shells that will not close when handled mean that the hard-shell clam is dead and no longer usable. With other varieties, the siphon or neck of a live clam will twitch when touched. Shell clams will remain alive for several days if refrigerated at about 40° F. They are sold by the peck, bushel, and barrel.

Shucked clams should be plump, with clear liquor, and free from any pieces of shell. They should be kept refrigerated or packed in ice. When properly handled, they will remain fresh and in good condition for a week to 10 days. Shucked clams are usually purchased by the gallon for chowders, for frying, or sauced entrees.

Frozen shucked clams should not be thawed until ready to use; *once thawed, they should never be refrozen.*

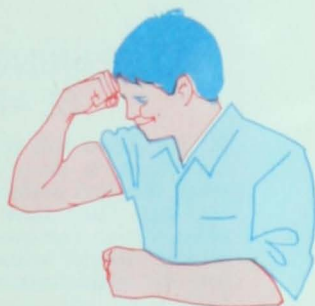
Cherrystone and Little Neck clams can be served raw on the half shell.

Soft-shell clams can be steamed and served with broth in which they were cooked and with drawn butter.

Frozen fresh clam strips are available for deep frying.

Shucked clams are canned whole, minced, or as clam chowder and are widely used in many quantity food establishments.

Oysters: Oysters vary in size, texture, and flavor according to where they are harvested. They inhabit the Atlantic and Pacific Coasts and the Gulf of Mexico. Those taken from the waters of the Atlantic, from the Canadian Maritime Provinces to Texas,



*Seafoods
Promote Growth*

are known as Eastern oysters. The Olympia, a small delicately-flavored oyster, is found in Puget Sound. The giant Japanese oyster is taken from the Pacific.

Oysters may be purchased in three forms; live in the shell, fresh and frozen shucked, and canned.

Shell oysters are sold by the bushel, sack, and barrel. They should be alive when purchased, as indicated by a tightly-closed shell. Oysters with gaping shells that do not close when handled are dead and unfit to eat. Shell oysters refrigerated at 40° F. or lower will keep alive for several days.

Shucked oysters should be plump and have a natural cream color, with clear liquor free from shell particles. Fresh shucked oysters are packed in metal containers or waxed cartons and should be kept refrigerated. They are sold by the pint, quart, and gallon. When properly refrigerated, they will remain fresh from a week to 10 days.

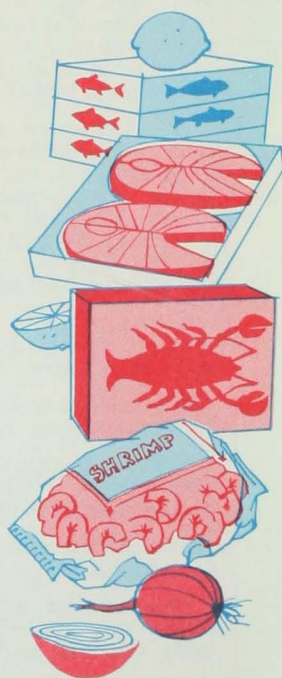
Oysters may be served raw on the half shell as appetizers or baked on the half shell with various toppings. Shucked oysters may be escalloped, breaded and fried, or used for chowders, stews, bisques, and in stuffing mixtures.

Eastern oysters are designated by terms corresponding to number of meats to the gallon: small, 301 to 500; select, 211 to 300, preferred for frying; extra selects, 160 to 210, and counts, under 160 to the gallon.

PREPARING FISH AND SEAFOOD

Frying: Most fish cooked in quantity food operations is deep fried. When properly fried, fish and seafoods are appetizing and inviting. They have an attractive brown color, a crisp, non-greasy crust, a thoroughly cooked interior without being overcooked, and the characteristic flavor of the specific fish.

Frying Fats: The quality of the frying fat is of prime importance because it affects the flavor of the fish. For this reason, the fat must be frequently checked.



*Seafoods Offer
Portion Control*

The following fats are the ones commonly used for deep frying: hydrogenated shortening; salad oils of good quality produced from cotton seed, peanut, or corn oil; and modern lards that have an anti-oxidant added.

Do not overload frying kettle. The ratio to use is 1:8, that is 1 pound of fish to 8 pounds of fat.

Frying temperatures: The temperature of frying fat also affects the quality of the fish. Fish fried at too low a temperature absorbs a great deal of fat, while that cooked at the correct temperature absorbs little fat. Temperature should not be lower than 325° F. or higher than 385° F.; 360° F. is optimum.

CAUTION: DO NOT OVERCOOK FISH

Broiling: Frozen fish is usually thawed before broiling. Fresh or thawed fillets and steaks are placed in a pre-heated broiler 3 to 4 inches from the broiling unit. The distance from the source of heat for split fish varies from 2 to 6 inches. Frozen fish or fish of a very delicate texture is placed about 4 inches from the direct heat.

The fish is brushed several times with oil, melted butter, or margarine. Some chefs prefer to dust the fish lightly with seasoned flour when preparing it for broiling.

Steaks are turned once; fillets are never turned.

When fish is charcoal grilled, the grill should be sufficiently hot to mark the fish.

Steaming: Steaming, simmering, and poaching are closely related, the difference being in the amount of cooking liquid used. In steaming, the product is placed on a rack over the liquid, covered tightly, and cooked. Steaming may be done in top-of-the-stove, shallow pans; in the oven in covered pans or wrapped tightly in foil; or in steam cooking equipment.

In simmering, the liquid must cover the fish. The fish is steamed, boiled, or simmered in water or a prepared stock called court bouillon. It may be necessary to wrap



*Seafoods
Cut Costs*

the fish tightly in cheesecloth to prevent flaking or breaking apart during steaming and later handling. This is particularly true when cooking whole fish such as fresh salmon.

Fish cooked in moist heat requires very little cooking time and is usually accompanied by a sauce.

Cod, halibut, haddock, salmon, and similar fish, as well as shellfish, may be steamed. Cod, flounder, haddock, halibut, ocean perch, pompano, salmon, sea bass, and sole are the varieties that lend themselves to poaching in liquid to which a little white wine has been added.

Baking: Unlike meat, fish and seafoods even in the raw state are already tender. They are flavorful and moist when baked at a moderately high temperature (400° to 425° F.) for the shortest period of time.

Sauteing and Pan-Frying: The fish is floured and sauteed in the usual manner with a small amount of hot butter or other fat. Ordinary butter may be used if the fish are quite small but clarified butter is preferable to prevent burning for both small and larger fish. When fish are browned on one side, they are then carefully turned for completion of cooking and browning.

Flounder, perch, salmon, sole, crab pieces, lobster chunks, whole soft-shell crabs, and shucked oysters are some of the fish and shellfish which lend themselves to sauteing and pan-frying.

Boiling "Green" Shrimp: Shrimp may be peeled, deveined, and cooked; or cooked, peeled, and deveined. Some chefs believe that shrimp cooked in the shell are more flavorful.

The amount of salt varies according to the method. For every 15 pounds of peeled shrimp, allow 3 gallons of water and 1½ cups of salt. Bring salted water to a boil. Add shrimp. Cover, return to boil and simmer 3 to 5 minutes.

If the recipe calls for further cooking in a sauce or casserole, reduce initial cooking time for shrimp.

Breaded Frozen Shrimp: No kitchen preparation is necessary; no thawing is needed. The shrimp are cooked from their



*Seafoods Are
Easy to Handle*

hard-frozen state in 2 to 3 minutes in 350° F. deep fat. This convenient product can be cooked to order, with no delay even during busy rush periods.

While large-size shrimp will cook from a hard-frozen state in about 2 to 3 minutes in 350° F. deep fat, jumbo shrimp require 3 to 4 minutes.

Boiled Live Lobsters: Live lobsters are usually plunged headfirst into a large pot of boiling, salted water and simmered for 12 to 15 minutes. Large lobsters (over a pound) may take up to 20 minutes.

For cold boiled lobster or to prepare lobsters for meat, cool cooked lobster in cold running water. For hot boiled lobster, serve directly from range with drawn butter. Claws should be disjointed and cracked, or portion of the shell removed for ease of eating. Body may be split from head to tail down to the back shell, the stomach and intestinal vein removed, and the cavity filled with parsley, stuffing, or mayonnaise.

Some operators split live lobsters before dropping in boiling water.

Broiled Lobster: Rinse live lobsters thoroughly in cold water. Chop off claws and legs. Place lobster on chopping board with back down. Starting at the head, insert a sharp knife between body and tail segments and split lobster lengthwise, but do not cut through back shell. Remove the stomach, which lies just back of the head, and the intestinal vein. Fill cavity with stuffing of bread crumbs and butter or other stuffing. Place under broiler, about 4 inches from the heat, 12 to 15 minutes or on bake sheets or roast pans in 400° F. oven 15 to 20 minutes, depending upon size of the lobster. Large claws may be baked in oven with a little water to retain moisture.

Crack claws after cooking for convenience of patrons and arrange near body in a natural way.

Broiled Lobster Tails: Frozen rock lobster tails should be thawed only in time to be used, not far in advance of actual preparation. Split lengthwise down to, but not through, the back shell. Brush with butter and broil 15 to 17 minutes, depending upon size.



*Seafoods Are
Time Savers*

HANDLING AND PREPARATION TIPS

Do not over-cook fish or shellfish. Fish is tender as it comes from the waters. It is cooked to heat or brown, to develop the flavor, and to soften the small amount of connective tissue present.

Do not over-season. Fish and seafoods have a delicate flavor that should not be overwhelmed by too much seasoning.

Cook fresh fish within 1 day. To store fresh fish, place dry, dressed fish in dish and loosely wrap with foil or plastic wrap or in pan surrounded with fresh crushed ice. Keep fresh shellfish in cracked ice in the refrigerator or in meat compartment.

Do not refreeze thawed seafoods. To store frozen fish or seafoods, keep solidly frozen in original wrapper, with best storage temperature -10° F. Use immediately after defrosting.

Do not thaw frozen seafood at room temperature. Partially thaw fillets and steaks in the refrigerator, or under cold water in water-tight wrappings if in a hurry. Defrost only until portions separate easily. Do not thaw breaded fish portions, sticks, or shellfish. They go directly from the freezer to oven, broiler, fry-pan, or deep fryer. If you do your own breading, thaw seafoods before deep frying.

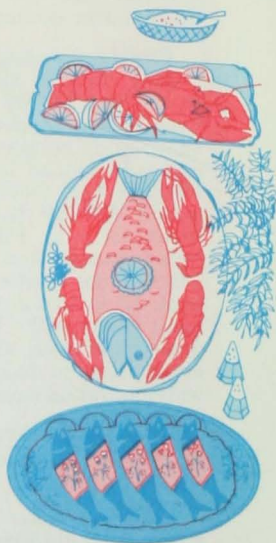
MERCHANDISING LOG

To net new profits serve fish and seafood throughout the week, not just on Friday. Keep customers interested in your operation by offering more than one variety of fish entrees on the daily menu.

To capture the attention of the customers, use streamers, banner, table tents, menu clip-ons, or other promotional materials that are available from fish and seafood associations and from processors and suppliers.

Set aside one day of the week as a Fish Fry day. Special regular promotions bring customers back for more.

Consider offering fish and chips (breaded and deep fried fish sticks or pieces served



*Seafoods Are
Easy on the Eyes*

with French Fries) for takeout. New disposable containers are available just for this purpose.

Fish is good for breakfast. It's a change of pace idea for adults. It's considered "groovy" by the kids who do not eat breakfast at home.

Catchy names for seafood specials hoist your sales. Here are a few suggestions for your marine menu features:

- Sea Captain Special
- Sea-Slimmer
- Surf and Turf (Fish and steak combination)
- The Day's Catch
- Mardi Gras Seafare
- Heavenly Sole
- Triton's Triumph
- Snappy Snapper
- Fisherman's Luck
- Captain's Bounty
- Pirate's Treasure
- Seafaring Soup

For children's menu, use:

- Moby Dick Dinner
- Robinson Crusoe Special
- Seafood Submarines
- Pirate's Pizza
- or
- Piscatorial Pizza

SEVEN REASONS SEAFOOD BELONG ON EVERY MENU, EVERY DAY

- Seafoods Are Popular with All Age Groups
- Seafoods Are Economical
- Seafoods Are Always Available
- Seafoods Add Variety to the Menu
- Seafoods Are Nutritious and Low-Calorie
- Seafoods Are Easy to Handle and Prepare
- Seafoods Are Versatile

SUGGESTED METHODS OF COOKING FISH AND SHELLFISH

SPECIES	APPROXIMATE WEIGHT OR THICKNESS	BAKING		BROILING		BOILING, POACHING OR STEAMING		DEEP-FAT FRYING		PAN FRYING	
		Temperature	Minutes	Distance From Heat	Minutes	Method	Minutes	Temperature	Minutes	Temperature	Minutes
FISH											
Dressed	3 to 4 lb.	350° F	40 to 60			Poach	10/lb.	325 to 350° F	4 to 6		
Pan-dressed	½ to 1 lb.	350° F	25 to 30	3 in.	10 to 15	Poach	10	350 to 375° F	2 to 4	Moderate	10 to 15
Steaks	½ to 1¼ in.	350° F	25 to 35	3 in.	10 to 15	Poach	10	350 to 375° F	2 to 4	Moderate	10 to 15
Filletts		350° F	25 to 35	3 in.	8 to 15	Poach	10	350 to 375° F	2 to 4	Moderate	8 to 10
Portions	1 to 6 oz.	350° F	30 to 40					350° F	4	Moderate	8 to 10
Sticks	¾ to 1¼ oz.	400° F	15 to 20					350° F	3	Moderate	8 to 10
SHELLFISH											
Clams—Live, Shucked		450° F	12 to 15	4 in.	5 to 8	Steam	5 to 10	350° F	2 to 3	Moderate	4 to 5
Crabs—Live, Soft-shell				4 in.	8 to 10	Boil	10 to 15	375° F	2 to 4	Moderate	8 to 10
Lobsters—Live	¾ to 1 lb.	400° F	15 to 20	4 in.	12 to 15	Boil	15 to 20	350° F	2 to 4	Moderate	8 to 10
Spiny Lobster Tails — Frozen	¼ to ½ lb.	450° F	20 to 30	4 in.	8 to 12	Boil	10 to 15	350° F	3 to 5	Moderate	8 to 10
Oysters—Live, Shucked		450° F	12 to 15	4 in.	5 to 8	Steam	5 to 10	350° F	2 to 3	Moderate	4 to 5
Scallops—Shucked		350° F	25 to 30	3 in.	6 to 8	Boil	3 to 4	350° F	2 to 3	Moderate	4 to 6
Shrimp— Headless, raw						Boil	3 to 5				
Headless, raw, peeled		350° F	20 to 25	3 in.	8 to 10	Boil	3 to 5	350° F	2 to 3	Moderate	8 to 10

INSPECTION

The U.S. Department of Commerce makes available an impartial official inspection service for fishery products. The service is voluntary and offered on a service-fee basis. Federal Government inspectors check products for quality, quantity, condition, packaging and other factors that affect product acceptability.

There are two major types of inspection service available and each has several advantages for the mass-feeding buyer.

* *Continuous*—During continuous inspection, one or more inspectors are assigned to a processing plant at all times when it is operating. This service is made available only if a plant meets rigid sanitary requirements for facilities, equipment, and product. Continuous inspection assures the purchaser that the product was processed and packed under good hygienic conditions. Inspected products may bear approved inspection marks and/or grade designation such as U.S. Grade "A" or "B". These grades indicate the following.

Grade A means top or best quality. All are uniform in size, practically free from blemishes and defects, in excellent condition, and possess a good flavor and odor in the cooked state.

Grade B means good quality. Products may not be as uniform in size or as free from blemishes or defects as Grade A. This is a general commercial grade and is quite suitable for most purposes.

Quality Grade Standards are substantially above any minimum requirements for safety and edibility designed for consumer protection.

After inspection a certificate is issued stating the quality, quantity, condition, and other pertinent findings that affect the market ability of the product.

* *Lot*—You may request inspection on specific lots of fish or fishery products in which you have a financial interest. The lots may be of any size and may be located in places such as processing plants, warehouses, cold-storage plants, or terminal markets. Products are examined from a representative number of samples, depending upon lot size, to determine grade, quality and condition, condition only, or compliance with other factors requested by the applicant. The results are reported on an official certificate.

Lot inspection for condition only can be utilized prior to delivery to assure that previously inspected products are still in the original condition. Such certification is used to assure that the products have been properly handled in transit or cold storage.

U.S. DEPARTMENT OF COMMERCE

Maurice H. Stans, Secretary

Rocco C. Siciliano, Under Secretary

Dr. Robert M. White, Administrator

National Oceanic and Atmospheric Administration

Philip M. Rodel, Director
National Marine Fisheries Service

This publication was developed by the National Marketing Services Office,
National Marine Fisheries Service,
100 East Ohio St., Chicago, Illinois 60611.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1970-O-817-561

For sale by the Superintendent of Documents, U. S. Government Printing Office
Washington, D.C., 20402 - Price 30 cents.