

WEDNESDAY—NOVEMBER 2

Chairman—HARRY F. SAHLMAN, *Sahlman Seafoods, Fernandina, Florida*

**The Economic Research of the Fish and Wildlife Service  
under the Saltonstall-Kennedy Act, with Special  
Reference to the Gulf and Caribbean Area**

RICHARD A. KAHN

*Chief, Economics and Cooperative Marketing Section  
U.S. Fish and Wildlife Service  
Washington, D.C.*

MANY ECONOMIC PROBLEMS of the fishing industry are being attacked by research made possible under the Saltonstall-Kennedy Act. One of the basic problems stems from the change of the wants of mankind and the changing methods of satisfaction of these wants. Starting from these basic problems, economic research can assist the fishing industry by studying the changes of consumer preferences for certain fishery products and by studying the processing and distribution and marketing conditions which prevail to satisfy these preferences. We can help the industry immediately by illuminating its industrial organization, the differences of labor, the influence of machinery and the influence of business management. The study of demand, supply and value, of the costs of production and distribution, of the equilibrium of normal demand and supply can help in giving industry guide lines to go on.

This paper outlines the main purposes of our economic research and indicates how the actual program has been formulated to follow the basic principles of economic science.

In staff conferences we discussed the "wants" mentioned above, and we came to the conclusion that we know very little about the wants of one large part of the population—namely those who eat in public eating places. Aside from surveys in two or three cities, fish consumption in public eating places had not been studied. There are about 400,000 public eating places in the United States and they represent a big market for fish. We set out to find something about this market for fish and fish products. In order to do this, a lot of field work was required and we decided to have most of the work performed by the Bureau of Census.

The Bureau of the Census undertook the survey of fish consumption in public eating places last May with the following objectives:

- (1) To determine the form in which each species is purchased by public eating places, e.g., fresh, frozen filleted, canned or cured.
- (2) To ascertain the factors which influence the use or non-use of the various forms or types of fish and shellfish by public eating places.
- (3) To determine the source of supply of fishery products, sizes of unit, prices and other characteristics of purchases.
- (4) To obtain opinions as to preferences regarding quality of fishery

products purchased, methods of cooking, methods of serving, prices of servings, size of portions, and comparative prices of fish and non-fish meals.

Apart from restaurants and other public eating places, there are a lot of institutions which regularly use large quantities of fish and shellfish. This type of mass feeding is usually referred to as "in-plant" feeding. It includes feeding facilities in schools, hospitals, factories, and corrective institutions as well as cafeterias in business houses and Government cafeterias. While the results of the public eating study are being tabulated, we are undertaking a smaller scale survey to find out how in-plant feeding institutions can make greater use of fish and shellfish. The fishing industry will be informed about the needs of hospitals, Government cafeterias, and penal institutions for fish and shellfish. Some interesting findings can already be released. We found, for example, that in federal penitentiaries about double the quantity of salmon is served compared to tuna and in-plant feeding places of the industry more higher priced fish are used than in the in-plant feeding places of colleges and schools.

We expect to continue these consumption studies made possible under the Saltonstall-Kennedy Act. The changing pattern in the household consumption of canned fish and shellfish and fresh and frozen fish and shellfish will be examined in the future years, and marketing conditions resulting from variations in tastes and eating habits will be given further analysis. Armed with these facts, the Service's market development facilities can often render special assistance to the industry.

Since the enactment of the Saltonstall-Kennedy Act, special attention has been given to segments of the fishing industry suffering economically from adverse conditions. These adverse conditions may be brought about by foreign competition or by sudden market gluts which lower the prices of fishery products to such levels that fishermen or vessel owners operate at a loss. Depressed prices may also be caused by over-expansion of capacity in vessels and plants. Depressed economic conditions are sometimes caused by abnormal production or processing costs, among which are labor costs, insurance rates, repair expenses, gear and net costs and expenditures for gasoline and diesel oil. All of these will be studied by the Service to determine ways to assist the industry.

The shrimp industry is one of the segments of the fishing industry which we are now looking into in order to find ways to improve economic conditions. In 1954, shrimp prices were very low. In 1953, wholesale shrimp prices for the 21-25 count frozen shrimp, Chicago, dropped 32 per cent in two months, from \$1.11 to 75c per pound. The high prices were reached due to a shortage of shrimp. With increasing supplies, prices in 1954 declined still further from 75c to 50c. We were in the midst of this near catastrophe in the fishing industry in 1954, when the Saltonstall-Kennedy Act was implemented, on July 1st. The Service laid out a plan of action for assistance to the industry, including a survey designed to improve production, processing and marketing conditions. In order to carry out the survey job on many fronts at once, we let five contracts to assist us in this work, amounting to more than \$50,000. They were the following:

First, a study on vessel and plant operating costs, by the Federal Trade Commission, providing for the analysis of 40 vessels and 10 processing plants. The operating cost in 1952, 1953 and 1954, and as far as possible in 1955, are

taken from the books of vessel owners and plant owners.

The second contract, undertaken by the firm Harwell, Knowles and Associates in Coral Gables, Florida, refers to the physical efficiency of shrimp vessels. This study has, among others, the following objectives:

- (1) To determine the increase in catch per man-hour and per vessel-hour with improved vessel operations.
- (2) To determine the cost advantages of recent devices, such as the shrimp-lupe, radar, ship-shore phone, fathometer, etc.
- (3) To determine the most efficient method of heading, shelling, freezing and packing on board the vessel.

A third contract refers to the physical efficiency of processing plants. One of the purposes of the study is to determine possible improvements in efficiency of physical handling and processing equipment for each operation, including unloading from the vessel, handling in the plant, heading, sorting, shelling, canning, breading, drying, freezing, packaging and loading out. This study was undertaken by the First Research Corporation of Florida, Miami, Florida.

A fourth research contract was given to the Bureau of Business Research of the University of Miami to study the economic conditions of production and primary marketing of domestic shrimp. The contract provides that the final report should include, among other things, the following points of interest to the fishing industry:

- (1) Determination of economic characteristics of the shrimp industry at producer's, processor's and primary distributor's levels, regarding the catch, utilization, capitalization, gear and machinery capacity, production adjustments to market changes and related factors.
- (2) Description of open and undercover selling practices and sales arrangements by vessel owners, plant owners and primary wholesalers.

Finally, a contract was let with the firm of A. C. Nielson Company in Chicago on economic questions of merchandising as well as consumer preferences. This contract contains the following two assignments to the contractor:

- (1) A sample survey of secondary wholesalers and retailers to determine the availability of fresh, frozen uncooked breaded, cooked breaded, and canned shrimp in principal United States markets.
- (2) A controlled merchandising experiments of factors involved at retail point-of-sales, to determine the principal merchandising factors which influence retail sales of fresh, frozen, uncooked breaded, and cooked breaded, shrimp.

In addition, the study on the shrimp industry situation will contain a report from the transportation division of the Department of Agriculture on transportation rates, a study on time and motion on shrimp vessels, for which another contract was recently let with the First Research Corporation of Florida. There is an historical study on the development of the shrimp industry up to the current catches and the quantities of packaged or canned shrimp offered for sale including imports and exports. Finally, a study is included on the economics of the shrimp industry in the Latin American countries, especially on shrimp resources in Central and South America.

This research work undertaken under the Saltonstall-Kennedy Act runs parallel with the regular assignments of the Economics and Cooperative Marketing Section, which include the study of transportation problems in the fishing industry, the study of relationship of prices received by fishermen and prices

paid by fishermen in the main production areas, a study on the development of foreign trade, including tariff quotas, restrictions and other trade barriers imposed on the fishing industry in this country and foreign countries, a study on the development of cooperative associations, trade associations and unions in the fishing industries of the United States.

In addition, smaller research studies are undertaken as need and opportunities arise. For example, a study on consumer preferences for breaded shrimp and fish sticks recently was completed. This study was proven helpful to the industry to determine package sizes and price ranges for such package sizes. Some other contracts which were let by the Branch of Commercial Fisheries indirectly affect the Gulf and Caribbean area. One of these contracts is a study of the economic feasibility of freezing fish on the high seas. Despite the fact that this study is done in New England, the results will be useful for the Gulf and Caribbean area. Another contract, namely, the study of fishing craft hull and P. & I. insurance, was let with Boston University for the purpose of obtaining lower insurance rates and reducing damages. This contract was directly influenced by the Gulf and Caribbean area, especially Tampa and Brownsville where in recent years insurance rates rose to unusual heights.

We hope that the economic research program, as outlined above and as it will be improved in accordance with the needs of the industry, will help the industry and will lay the basis for future economic progress of the fisheries of the United States. The employees of the Fish and Wildlife Service do their research with their minds and hearts on a better economic future for the fishing industry.

---

## **The Economic Factors Of The Shrimp Industry Of The Gulf Coast Area**

REINHOLD P. WOLFF, *Director,*

*Bureau of Business and Economic Research,  
University of Miami,  
Coral Gables, Fla.*

THE BUREAU OF BUSINESS AND ECONOMIC RESEARCH of the University of Miami has been asked by the United States Fish and Wildlife Service to undertake an economic study of the shrimp industry at the primary level of production and distribution. While our investigation is approaching its final stages, it is not yet concluded and the following remarks about the economic problems of the industry must be taken as tentative.

Shrimp fishing is an old industry, yet there are probably few economic areas in which so little is known about the economic structure, problems and trends of an industry as shrimp fishing. The reason for this lack of factual data is to be sought in the substantial changes which the industry has recently undergone. Some of these changes parallel shifts that have occurred in fisheries all over the country. Some shifts are explained by local conditions and circumstances, but as a whole the most important of the trends in shrimp fishing are specific to this branch of fishing endeavor and nationwide rather than local. The rapid pace of technological development has a great deal to