Production and Distribution Costs in Florida Fisheries

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Introduction

IN 1953 the Bureau of Economic and Business Research at the University of Flordia made a field survey to obtain information on the production and distribution activities of the Florida producers (initial wholesalers) of edible fish and shellfish. Part of the information from this survey was incorporated into a statistical report which was presented at a meeting of the Southeastern Fisheries Association in June, 1953.

After the 1953 field survey the Bureau continued its study of the Florida fisheries, utilizing information from a number of sources, and has published a report on its investigations entitled "Florida's Commercial Fisheries—Markets, Operations, Outlook." In the present paper a report will be made on some aspects of production and distribution costs in certain Florida fisheries.

In obtaining production and distribution data in the 1953 survey, questionnaires were sent to all known producers in the state and interviews were carried out with a large sample of them. Although many responded to the questionnaire and interview, adequate and usable production and distribution cost information was received from a comparatively small proportion of these respondents. The average costs reported here are based on only the reports that were usable and thus represent no more than the average costs of those reporting the information. Complete reports on production costs were received on 21 boats engaged in gill net operations, and fishing principally for mullet or Spanish mackerel, on nine boats employing lines, and fishing principally for snappers and grouper, and twenty-two shrimp boats using otter trawls. Although we cannot say that the costs of these operations reflect the averages for these various segments of the industry, it is believed that they are indicative of the cost conditions in the industry because of the similarity of the fishing operations within the segments.

In summarizing and analyzing the distribution costs of the producers, the same approach was followed as that used for production costs. Distribution costs cannot be broken down in the same manner as production operations; however, distributors were classified into three groups on the basis of the principal species of fish handled: those whose most important species were (1) mullet and Spanish mackerel; (2) snapper and grouper; and (3) shrimp. Again the distribution costs of the producers represent no more than the average costs of those reporting.

One of the first problems encountered by the Bureau in its attempt to secure cost data was the lack of complete and accurate firm records on fishing operations—a factor which led to the decision to obtain data on only the producers' major cost elements in production and distribution. A further justification for this approach was the belief that sufficient information would be revealed on the existing cost structure, and about per unit costs of production and distribution, to indicate some of the cost problems in certain major segments of the Florida fisheries.

In examining the information on overall average costs for certain types of fishing operations, various, more detailed aspects of costs were noted that should be subjects for future study. For example, there is a need to examine the influence of geographic location on the cost of mullet fishing. The northern part of Florida's west coast as opposed to the southern part presents different production situations. The type of ocean bottom limits the type of gear that may be used in the northern area and the average sizes of fish are different from those landed in the southern area. There are also the important questions as to the use of other types of gear as a means of increasing productivity over that now being achieved by gill-net fishing. There is need to know more about the efficiency of specific types of boats and gear operations within all of the major fisheries. These matters cannot be dealt with here but study specifically oriented to them should be initiated.

Production Costs in the Mullet and Spanish Mackerel Fisheries

Producers' records reveal that the gross return to small boats may vary from

considerably less than a thousand dollars to over ten thousand dollars per year, depending on the time spent fishing, the skill and success of the fishermen, and the types of boats and gear employed. Given these conditions, which made it difficult to obtain representative data, even if the records were available, it appeared more feasible to examine the cost data on boats reported to be actively engaged in fishing operations throughout the fishing season. The twenty-one boats on which the cost figures for gill-net operations are based ranged in size from 20 to 37 feet. One boat had total annual landings of slightly less than 26,000 pounds, whereas another had landings of approximately 100,000 pounds. Within these limits the majority landed from 40 to 60 thousand pounds during the year. The average number of pounds landed per boat for the year was 53,180. The value of the production per operating unit was $5,763 and the value per fisherman was $2,575. There were an average of 2.24 men per boat, so that on the basis of the average labor cost of $3,166 per boat, the fisherman's average wage was $1,413. The costs as a percentage of the sales value were labor 55.0%, gear 12.0%, gas 19.4%, oil 0.8%, maintenance (repairs) 8.9%, depreciation 7.1%, ice 0.9%. These costs were 104.1% of the sales value of the fish. These figures readily suggest the reason why producers would prefer the fisherman both to own and operate his boat. There is little profit to be obtained from boat operations if costs conditions such as these prevail, and the difference between profitable and nonprofitable boat operations will be closely linked to the costs of maintenance and repairs and the speed with which the replacement of capital items will occur.

Although precise average profit or loss from boat operations cannot be ascertained because of incomplete cost data, the figures on average cost of mullet and Spanish mackerel boat operations show that even though the average wage to the fisherman is low, the average labor cost per pound of fish landed is high. Also, the fuel cost is equal to about 20 per cent of the value of the product landed, which is much greater relative to value of product than was found for the other fisheries. Given this cost situation at the production level, the existing transportation rates, and the customary margins at the various levels of distribution, fresh mullet and Spanish mackerel moving to the New York wholesale market will require an average retail price of from 29 to 36 cents per pound. This is the price for the fish in the round, not drawn or dressed. If mullet and Spanish mackerel are drawn or dressed, the required price will be from 39 to 48 cents. If the two varieties are filleted by the retailer, the required price per pound would be from $1.00 to $1.20. If mullet and Spanish mackerel are sorted, packaged, and frozen before distribution, it is estimated on the basis of an average price of 10.8 cents per pound paid to the fisherman, that the required minimum retail price would be 94 cents. The term "required price" as used here indicates the price which results when the customary margins and transportation costs are added to the average price paid to the fishermen, plus any processing costs that may have been incurred before distribution.

Production Costs of Snapper and Grouper Fishing Operations

The operation of the snapper and grouper boats was characterized by a high degree of seasonality. One boat reported as much as eight months of fishing activity, whereas the remainder reported less time, and several only about two months. The boat operating over the longest period of time reported landings of 180,000 pounds, while the boats operating only two months reported about 20,000 pounds. The value of the production per operating unit was $7,747 and the value per fisherman was $3,874. The costs as a percentage of sales

values were, labor 55.5%, groceries 12.2%, gear 4.8% bait 2.3%, fuel 5.9%, ice 3.2%, maintenance (repairs) 8.2% and depreciation 7.5%. These costs were 99.6% of the sales value of fish. The very manner in which certain costs such as labor, groceries, bait, and fuel were incurred caused them to be high or low per pound of landings depending on the average value of landings per trip rather than on the number of trips. Maintenance and depreciation per pound, on the other hand, will be high or low depending on the total number of pounds landed during the accounting period.

On the basis of the average price of 16.6 cents per pound to the fishermen, the retail price of grouper, in the round, moving into the New York wholesale market, would be approximately 35 cents per pound; if drawn, the required price would be around 47 cents; if in steaks, around 70 cents; and if filleted, around $1.00 per pound. These figures are based on the customary margins and the average weight loss experienced in the various indicated types of processing.

Costs of Production for Shrimp Boat Operations

These boats ranged in length from 49 to 72 feet, with the majority 60 feet or longer. The average gross receipts per boat were $26,900—an average of 48 cents per pound of headless shrimp. The cost as a percentage of sales were, labor and groceries 38.1%, gear 7.7%, fuel 12.2%, ice 7.3%, maintenance (repairs) 13.7%, insurance 3.6% and depreciation 11.2%. These costs were 93.8% of the sales value. Despite the favorable percentages, the per-pound costs of these operations are high in comparison to the costs in the other two types of fishing operations examined. Although shrimp has occupied a very favorable market position, there is need to develop more cost information on the different methods of shrimp fishing. Based on the average costs and margins found for shrimp-boat operations and the corresponding margins for fishhouse operations, headless shrimp moving to the New York wholesale market would require a retail price of approximately 97 cents per pound.

Distribution Costs of Mullet and Spanish Mackerel Producers

The thirteen producers on whose operations the mullet and Spanish mackerel cost data are based handled an average volume per producer of 448,893 pounds of fish, having a net sales value per producer of $70,310. The cost of the principal items as a per cent of sales were as follows: cost of fish sold, 74.2%; wages and salaries 7.9%; wooden boxes and barrels 5.0%; ice 2.0%; telephone and telegraph 1.2%; depreciation 0.9%; heat, light and power 1.5%; taxes 1.9%; insurance 0.6%; office expense 0.2%. These averages reveal the relative importance of the major distribution costs, but perhaps of more importance were the significant variations in the amounts producers were paying for services and materials purchased for operations. In view of the fact that, on the average, these mullet and Spanish mackerel producers were operating on a margin of four cents per pound of fish handled, a slight reduction in a number of these cost items could have a significant effect on the profit position of individual producers.

Distribution Costs of Snapper and Grouper Producer Operations

The four snapper and grouper producers on whose operations the cost data are based handled an average of 1,546,750 pounds of fish per producer, having a net sales value of $449,692. The average costs as a per cent of net sales were as follows: cost of fish sold, 68.5%; wages and salaries 19.2%; wooden boxes

and barrels 2.4%; ice 0.8%; telephone and telegraph 0.5%; depreciation 0.3%; heat, light and power 1.5%; taxes 1.4%; insurance 0.6%; office expense 0.2%.

The gross margin for these producers was 9.17 cents per pound of fish handled. The labor cost of 5.59 cents per pound was by far their largest single item of distribution cost. On a cents-per-pound basis this figure exceeds the gross margin on which the mullet and Spanish mackerel producers operate.

Distribution Costs of Shrimp Producers

The shrimp producers' distribution costs as a per cent of net sales were as follows: cost of shrimp sold, 81.9%; wages and salaries 2.4%; wooden boxes and barrels 1.4%; ice 0.6%; telephone and telegraph 0.4%; depreciation 0.1%; heat, light and power 1.5%; taxes 1.4%; insurance 0.6%; and office expense 0.2%. On a cents-per-pound basis the distribution costs of the shrimp producers were lower than those of the snapper and grouper producers, and yet higher than those of the mullet and Spanish mackerel producers. The wages and salaries, amounting to 1.4 cents per pound, is very little above the comparable figure shown for the mullet and Spanish mackerel producers. This low cost reflects in part the small amount of processing done by the shrimp producers. It was frequently the practice for shrimp to be unloaded from the boat and packed in hundred pound boxes and carried away almost immediately by waiting trucks. This type of operation depended heavily upon a favorable market, and the producer assumed little responsibility for the marketing of the product.

Costs of Services and Supplies

The percentage relationships of the producers' distribution costs give a summary view of the relative importance of the cost components in production and distribution operations. Some idea of the extent to which these influence the total cost picture may be gleaned from these data. A large proportion of the producers reported information on the prices paid for goods and services purchased for production and distribution needs. These cannot be fully examined here, but an analysis of individual items reveals important differences in the prices paid for them. These differences are attributable to many factors, such as the size of the firm's operations, its location, the products handled, and the character of its associated activities. Nevertheless it is important to note that such differences suggest that a number of firms may be able to improve their cost position by securing lower prices than those now being paid for certain commodities and services.

Conclusions

More cost studies are needed to afford the information necessary to appraise some of the specific problems of the industry and the available alternative courses of action that may be pursued. However, the costs examined in the present review indicate a number of problems confronting the three segments of the industry examined. The lack of profit from mullet and Spanish mackerel boat operations suggests why producers are glad for fishermen to be boat owners. Certainly what profit there may be from these operations is closely linked to the costs of maintenance and repairs and to the speed with which capital replacements must be made. The high cost of labor relative to the value of landings does not result in a high wage to the fisherman. This is a clear reflection of the average low productivity per fisherman.

A comparison of like items of cost incurred by the three types of fishing

operations examined reveals wide variations in their relative importance. This is to be expected from the nature of the differences in fishing operations, but at the same time it directs attention to the differences in the cost problems involved. For example, fuel costs are of greater relative importance in mullet and Spanish mackerel fishing.

In production operations such as exist in the Florida fisheries, in which the biggest single item of cost is directly tied to the value of the product, and where wage improvements can occur only as a result of an increased productivity or an increased market value for the product, possible improvements in both production and marketing should be carefully studied.

Wide difference in the prices paid by producers for goods and services used in production and distribution operations indicates that each producer should carefully examine the prices he is paying his suppliers.