MFR PAPER 1041

One of the nation's oldest fishing ports strives to meet the challenges of the '70s.

Diversification Means Progress in the Gloucester Fishing Industry

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A Gloucester dragger.

INTRODUCTION

In celebrating the city's 350th anniversary in 1973, the people of Gloucester, Mass., honored one of the nation's oldest industries, the commercial fishing industry. Its importance to the economy of Gloucester has been recognized in the past, but is now being jeopardized by a decline in the availability of traditional fish resources and increases in operating costs.

As the resource availability has changed over the decade, industry in this port has met the challenge in numerous ways, the most important of which has been its willingness to diversify. Diversification has taken the form of changes in the species composition of the catch and the increased utilization of imported raw fish to supply a large new price-conscious and convenience-minded market for prepared frozen fish products. As a result, a rather large frozen fishery products sector has developed to complement the more traditional fresh fish sector.

LANDINGS

The decade of the 60's saw a continuing decline in landings of fresh fish at the port, falling from the 10-year high of 192 million pounds in 1960 to a low of 69 million pounds in 1969. Since then, the industry has enjoyed three successive years of increased landings and prosperity (Figure 1). Total landings increased 32 percent in 1970 and 1972 landings are estimated to be as much as 62 percent higher than in 1969.

The decline through the 60's was the result of a decline in the landings of whiting and ocean perch—the mainstay of the industry in the early 60's (Figure 2). The darkest year in the decade was experienced in 1967 when the value of landings fell to a low of sightly more than $5 million, down nearly $2.5 million from the previous year (Figure 1). By 1970, landings were valued at over $8 million and by 1972 the value of landings had increased to an estimated record $9.6 million due to increases in prices paid for cod and haddock and increased

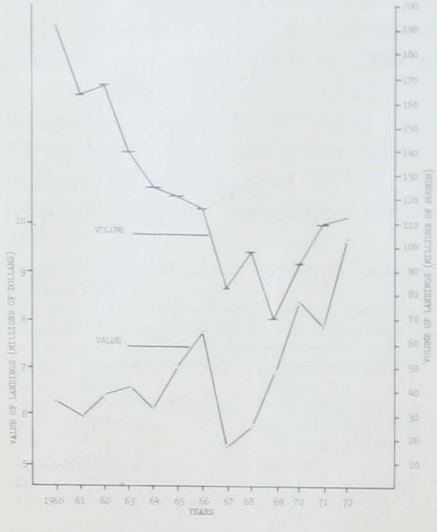

Figure 1.—Volume and value of landings at Gloucester (1960-1972 in millions of dollars and millions of pounds).

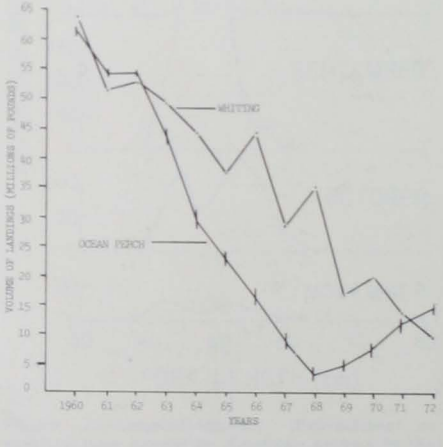

Figure 2.—Volume of whiting and ocean perch landings (1960-1972 in millions of pounds).

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Table 1.—Value (in millions of dollars) of Gloucester landings, 1960-72, adjusted for inflation (1967 = 100 percent).

Year	Value adjusted by Consumer Price Index
1960	7.1
1961	6.65
1962	7.1
1963	7.21
1964	6.55
1965	7.45
1966	7.95
1967	5.29
1968	5.499
1969	6.27
1970	7.19
1971	6.42
1972	7.7

Table 2.—Three-year average value of Gloucester landings based on adjusted values in Table 1 (in millions of dollars).

Period	3-Year Average
1960-1962	6.95
1961-1963	6.99
1962-1964	6.95
1963-1965	7.07
1964-1966	7.32
1965-1967	6.90
1966-1968	6.25
1967-1969	5.69
1968-1970	6.32
1969-1971	6.63
1970-1972	7.10

landings of herring, ocean perch, shrimp, and other incidental species. Adjusting the value of landings for inflationary effects, i.e. multiplying actual values by the Consumer Price Index, allows comparison of the industry's relative prosperity over a number of years. This adjustment has been made, using the value of the dollar in 1967 as the base year, and is presented in Table 1. From these data it can be seen that the industry has enjoyed increased prosperity since 1967 and appears to be healthier today than it was a decade ago. An examination of 3-year averages, computed from the values in Table 1, shows that the first 3 years of this decade were in fact better, in terms of value, than the same period of the preceding decade (Table 2).

It is to the credit of the industry in Gloucester that, in the face of declining stocks of traditional species, it has developed new fisheries for such species as herring, shrimp, and offshore lobster (Figures 3 and 4). But, despite the fine performance of the fleet in recovering from the 1967 decline, the real test of its adaptability and willingness to diversify lies in the years immediately ahead. Unless the fleet maintains this capability and willingness to be short-term flexible, the possibility of a decline, such as that experienced in 1967, is always very real. In part, the ability of the fleet to remain flexible depends upon the willingness of the industry to actively seek or develop markets for abundant species product forms to supplement products of the more traditional species.

Monofilament gill nets are used in the mackerel fishery out of Gloucester.

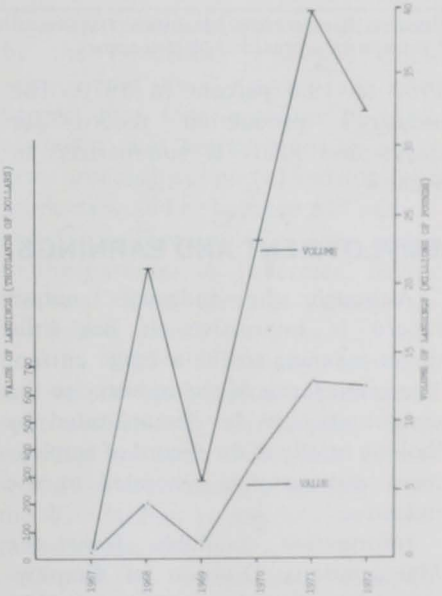

Figure 3.—Volume and value of herring landings in Gloucester, 1967 through 1972 (millions of pounds and thousands of dollars).

Imported frozen fish blocks being moved into cold storage facilities located in Gloucester. The port is a major cold storage center on the east coast with about 85 million pounds of capacity.

PROCESSING

In 1970, 130 million pounds of fishery products, valued at nearly $65 million, were processed in Gloucester.

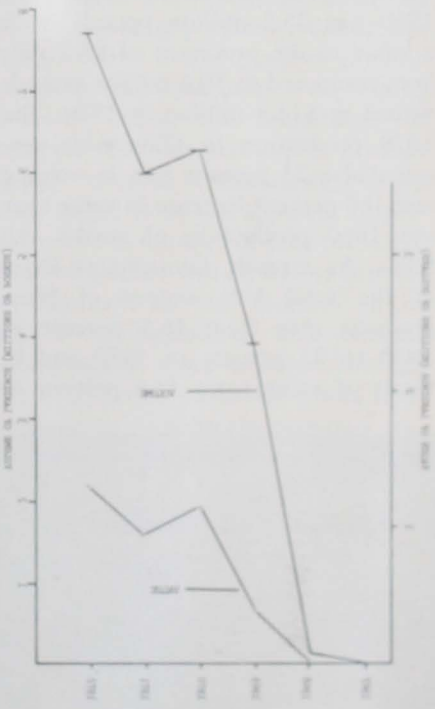

Figure 4.—Volume and value of shrimp landings in Gloucester, 1967-1972 (millions of pounds and millions of dollars).

This represented a 160 percent increase over the 1960 value of production. Nearly 73 percent of this production was in the form of fish sticks, portions, and fillets.

Fish Sticks and Portions

Total U.S. production of fish sticks and portions tripled during the decade while production in Gloucester doubled. As a result, Gloucester plants contributed about 18.5 percent to total U.S. output in 1970 compared to its 1960 contribution of 26.2 percent. The industry's production record is summarized in Table 3 for 1960 and 1970.

Table 3.—U.S. and Gloucester production of fish sticks and portions, 1960 and 1970 (in thousands of pounds and dollars)[1].

	U.S.		Gloucester		Gloucester as a percent of U.S.	
Year	Volume	Value	Volume	Value[2]	Percent of Volume	Percent of Value
1960	114,500	$ 46,188	30,000	$12,700	26.2	27.5
1970	349,373	$155,290	64,799	$29,526	18.5	19.0
Percent Change	+206	+237	+116	+132.5		

[1] Source: Current Fishery Statistics, Fisheries of the U.S., NMFS, NOAA, Department of Commerce.
[2] Value to the processor, FOB Gloucester.

Steaks and Fillets

Total U.S. production of steaks and fillets declined during the decade from 153.2 million pounds valued at $48.4 million in 1960 to 133.5 million pounds valued at $74.8 million in 1970.

Interestingly, Gloucester's production of steaks and fillets did not follow the U.S. trend. Production in 1960 was 25.2 million pounds, with a value to the processor of $5.7 million, compared to 30.6 million pounds valued at $14.8 million in 1970. The 1970 production in Gloucester represented a 21 percent gain in volume and 160 percent increase in value over the 1960 production of steaks and fillets. As a result, Gloucester's share of the total U.S. output of these products rose from 16.5 percent in 1960 to 23 percent in 1970 and in terms of value from 11.8 percent in 1960 to 19.6 percent in 1970. The industry's production record for steaks and fillets is summarized in Table 4.

Table 4.—U.S. and Gloucester production of steaks and fillets, 1960 and 1970 (in thousands of pounds and dollars)[1].

	U.S.		Gloucester		Gloucester as a percent of U.S.	
Year	Volume	Value	Volume	Value[2]	Percent of Volume	Percent of Value
1960	153,200	$48,400	25,200	$ 5,700	16.5	11.8
1970	133,809	$75,430	30,616	$14,813	23.0	19.6
Percent Change	−12.7	+55.8	+21.5	+160		

[1] Source: Current Fishery Statistics, Fisheries of the U.S., NMFS, NOAA, Department of Commerce.
[2] Value to the processor, FOB Gloucester.

EMPLOYMENT AND EARNINGS

Although the industry's output record is impressive, it has little direct meaning to the average citizen. The importance of the industry to the community can be demonstrated by looking briefly at the record of employment and earnings generated by the industry.

Information available from the Massachusetts Division of Employment Security shows that in 1971 there were 94 Gloucester fishing vessels that made payments to the State to cover their employees under the unemployment insurance program.[1] These Gloucester fishing vessels paid the insurance cost for 648 fishermen in 1971. It is also estimated that there are about 100 other Gloucester men self-employed full-time on other craft[2]. Thus, total full-time fishing employment was nearly 750 men in 1971. This represents 5.7 percent of the total work force of 13,250 persons in Gloucester in 1971 compared to 12 percent in 1960 when a total of 1,211 persons[3] were engaged full-time in fishing.

This decline in employment in fishing has been offset to some degree by an increase in the manufacturing and allied industries sector. Information provided by the Gloucester Fisheries Commission as a result of a survey of firms shows that total employment of plant workers and stevedores in 1972 had reached a level of about 2,000. This, when added to

[1]NMFS does not keep official statistical data on vessels by "home port." Thus, since employers are required to pay into the Employment Security System for employees hired for 13 or more weeks in any one calendar year, this appears to be the most reliable source for employment data.
[2]Gloucester Fisheries Commission.
[3]Zellen, Michael S. "Port of Gloucester Sets Example of Bootstrap Pulling," *Fishing Gazette*, Sept. 1972.

Part of the small-boat fleet tied up at a pier in Gloucester.

Unloading cod at a Gloucester fresh fish processing plant.

the number of fishermen, brings total direct fishing industry employment to nearly 2,800 or approximately 21 percent of the total work force in the city in 1972.

Earnings of most fishermen are based on a share of the landed value of fish. An analysis of the Boston large trawler fleet suggested that about 40 percent of the value of catch goes to fishermen as net earnings.[4] On this basis, then, it is estimated that in 1972 there were about $4.5 million[5] in crew earnings in Gloucester compared to about $2.7 million[6] annual crew earnings in 1960. This, along with the 648 men covered by the Employment Security program in 1971,[7] indicates that the average annual earnings by these Gloucester fishermen were nearly $7,000 for 1972 compared to $3,000 in 1960.[8] This compares favorably with the Employment Security data available on these 648 fishermen, which reports their reported average annual wage credits as being $7,235 for 1971. There is, however, a wide range in individual earnings. A 1973 sample survey of Gloucester fishermen Employment Security claimants showed a $381 difference in the average weekly earnings of claimants in the first quarter of 1973.[9]

Although available data reveal little with regard to earnings in the allied industries of Gloucester, it is possible to make some rough estimates. According to data available from NMFS, in 1972 nearly 400 million pounds[10] of imported fishery products were handled by the two stevedoring groups in Gloucester at an estimated total charge of over $1 million.

Although exact data are not available on the earnings of plant workers, the employment information provided by the Gloucester Fisheries Commission and union hourly wage rates suggest that total earnings to plant managers and workers employed in firms processing imported and domestic products would be between $15 million and $16 million in 1972. This, added to the earnings by fishermen, brings the total direct earnings to labor in the fishing industry to over $20 million in 1972. If accurate estimates on return to capital investments were available for the industry, total earnings to both labor and capital would be considerably greater than the $20 million return to labor estimated above.

Overall, it is estimated that an equal amount of economic activity is being generated in the community by those firms providing a domestically produced product and those providing an imported product for American consumption.

A CHALLENGE FOR THE FUTURE

In the face of adverse resource conditions and inflationary pressures, the industry in Gloucester has managed to make adjustments which resulted in an economically improved condition in 1972, relative to 1960. Undoubtedly this industry will face additional and perhaps even more difficult problems in the decade of the 70's. However, its demonstrated resiliency and adaptability are encouraging signs. Unemployment continues to be a persistent problem in Gloucester due primarily to a shortage of employment opportunities outside the fishing industry. Thus, the importance of both the domestic and import product fishery sectors in Gloucester looms even larger than the apparent importance of the number of jobs provided. The community will do well to support all segments of this industry in its efforts to modernize and become economically more efficient through the 70's. To do otherwise would level a disastrous blow to the economy and the people of Gloucester.

[4]Noetzel, B. G. and Norton, V. J. "Cost and Earnings in the Boston Large Trawler Fleet," Working Paper No. 7, Bureau of Commercial Fisheries, Division of Economic Research, June 1969.

[5]Includes estimated value of landings by Gloucester boats in other ports.

[6]Zellen, op. cit.

[7]1971 employment is used as a best estimate for 1972.

[8]Zellen, op. cit.

[9]Personal conversation with officials of the Massachusetts Division of Employment Security. The sample ranged from a low of $77 to $458 per week and cannot be considered an estimate of the annual range but only a reflection of the variability in fishermen earnings. Such survey data was not available for previous years.

[10]This includes fresh sea herring.

MFR Paper 1041. From Marine Fisheries Review, *Vol. 36, No. 3, March 1974. Copies of this paper, in limited numbers, are available from D83, Technical Information Division, Environmental Science Information Center, NOAA, Washington, DC 20235.*