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**U.S. DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
Washington, D.C. 20235

Date : February 28, 1975

Reply to Attn. of:

To : Norman Ross  
Assistant Director of the Domestic Council

From : *Jack W. Gehring* *clear and up*  
Jack W. Gehring, Deputy Director  
National Marine Fisheries Service

Subject: Shrimp imports

We are pleased to submit, for your information, a report that deals with the relationship of shrimp imports to the present depressed seafoods market situation. Please feel free to call upon us if you require future information.

~~143-4007~~  
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or 634-7243





**U.S. DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
Washington, D.C. 20235

**THE ROLE OF SHRIMP IMPORTS IN A DECLINING SEAFOODS MARKET--**  
**A BACKGROUND PAPER\***

**\*Prepared by:**  
**Morton M. Miller, Acting Chief**  
**Division of Economic and Marketing Research**  
**February 27, 1975**



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## The Role of Shrimp Imports in a Declining Seafoods Market A Background Paper\*

### Introduction

This report was drafted in the National Marine Fisheries Service in response to a request by the Domestic Council for information on economic conditions in U.S. fisheries. The Council is particularly interested in the shrimp industry, which has expressed to both the executive and legislative branches its serious concern about the effects of imports on market conditions. The report provides summary glances of the general market picture for fishery products in the U.S., a discussion of the shrimp situation, and the impact of imports on shrimp markets in the U.S.

### The General Picture

A slack economy has contributed to lower consumer demand for food in the U.S., while rising costs throughout the food production and distribution chain has forced prices up and, in some cases, supplies down. Foods markets as a rule, are volatile, but uncertainties related to the national economy, and to international events as well, have pushed volatility to the extreme. In the fourth quarter of 1974, for example, retail prices for fats and oils were up 44 percent from a year earlier; sugar and sweets were up 85 percent. Meat prices, in contrast, were down 4 percent while

\*Prepared by Morton M. Miller, Acting Chief, Division of Economic and Marketing Research, National Marine Fisheries Service. Material assistance in the preparation of this report was provided by Roger Hutchinson, Industry Economist. This document reflects a staff position and should not be construed as an expression of recommended policy by the National Marine Fisheries Service.



fish prices were up 10 percent. The immediate outlook is for more uncertainty, related in part "to the impact of the current economic recession on the demand for food." <sup>1/</sup>

Producers and distributors of fishery products face a dubious marketing environment over the coming months. They have already been dealt severe blows by the rapid change in economic conditions, and their problems are compounded by the enormous cost increases associated with characteristically fuel intensive fishing operations. Adjustment is taking place, albeit slowly, and painfully. Further, the speed of adjustment is impaired by an additional complicating factor of imports, notably in the case of the domestic shrimp industry. Sectors of the shrimp industry in fact view the import problem as a principal threat to their recovery and are seeking federal relief in the form of some control over shrimp imports. It is not unlikely that similar pleas will be made by other fishery industry sectors. With imports accounting for two-thirds of the supplies of fishery products in the U.S. (the figure for shrimp is about 51 percent), the possibility at least of a clash between domestic production and imports is recognizable--made more so in the case of shrimp by the absence of import barriers of any kind, except for health and sanitation reasons. <sup>2/</sup>

<sup>1/</sup> "Prognosis for the financial ills of the Gulf Shrimp Industry", Miller, M.M. and Greenfield, J.E. Dr., NMFS

<sup>2/</sup> In 1973, 79 percent of fishery items, by weight and value, entered the United States free of duty. Major items on the duty free list other than shrimp included: raw tuna, frozen fish blocks, lobster, scallops and many varieties of fish fillets.





The fact is world demand for fish and shellfish has dropped, and efforts to increase shipments to the U.S., the world's leading importer of fishery products, can be expected.

#### Dimensions of the Fisheries Market Problem

Adversities in the U.S. fishing industry presently stem in large part from the following three economic problems:

- (1) Demand for fishery products is falling in a sagging economy;
- (2) Prices for fishery products are falling under pressure from slack demand and heavy supplies; and,
- (3) Costs have risen sharply, under the influence of enormously increased fuel prices.

#### (1) Demand Slips:

Following sharp increases--9% in 1972, 3.4% in 1973--growth in consumption of fishery products in the U.S. abruptly stopped in 1974. The change is blamed principally on a deepening economic recession. For more than a decade, a strong national economy provided a suitable climate for growth of demand for a wide variety of fishery products. A sharp climb begun in the 1960's raised per capita consumption of fishery products in the U.S. to a record 12.6 pounds in 1973, which represented an 18 percent increase over 10 years (1963-1973). This was a larger gain than registered by other major animal protein products, with the exception of chicken. However, along with the collapse of



the economic boom in 1974, per capita consumption of fishery products in the U.S. dropped about 2 1/2 percent from a year earlier. Food consumption, overall, gained slightly in 1974, but was still below 1971-1972 levels. It was apparent that the energy crisis, galloping inflation, rising unemployment and consequential losses in consumer buying power markedly increased caution among shoppers, who altered eating habits accordingly. Inflated food prices meant that food purchases in 1974 required a greater proportion of the family budget than formerly, despite self-imposed restraints on buying. The proportion of total consumer expenditures allocated to food in 1974 was 18.8%, compared with 17.8% in 1973.

Prospects are not bright for substantial economic recovery in 1975, which equally dims the outlook for resumption of growth in fish consumption (Figure 1). NMFS economists in fact see another downturn in 1975. They are predicting, at best, a further 2% decline in total fishery products consumption, premised on a standstill economy. If the slowdown accelerates-- as it did in the fourth quarter of 1974-- and "real" GNP slips as much as 4%, consumption of fishery products in the U.S. will drop 4%.<sup>1/</sup>

<sup>1/</sup> Forecast by NMFS, Economic and Marketing Research Division

U.S. CONSUMPTION OF ALL FISH AND SHELLFISH, 1971-1974, and FORECAST 1975

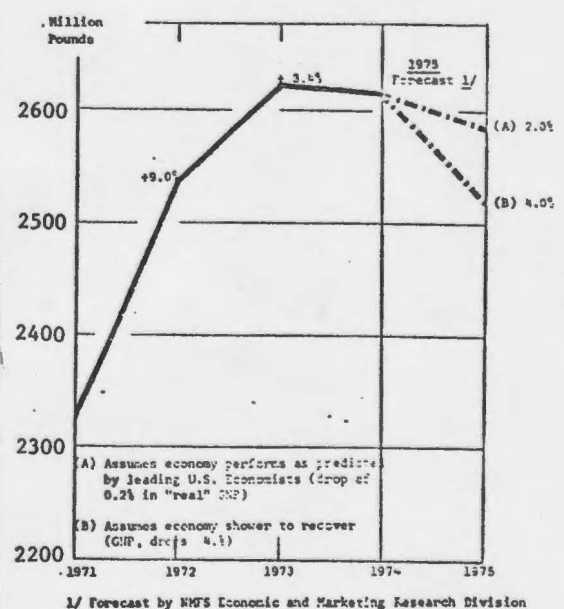


Figure 1

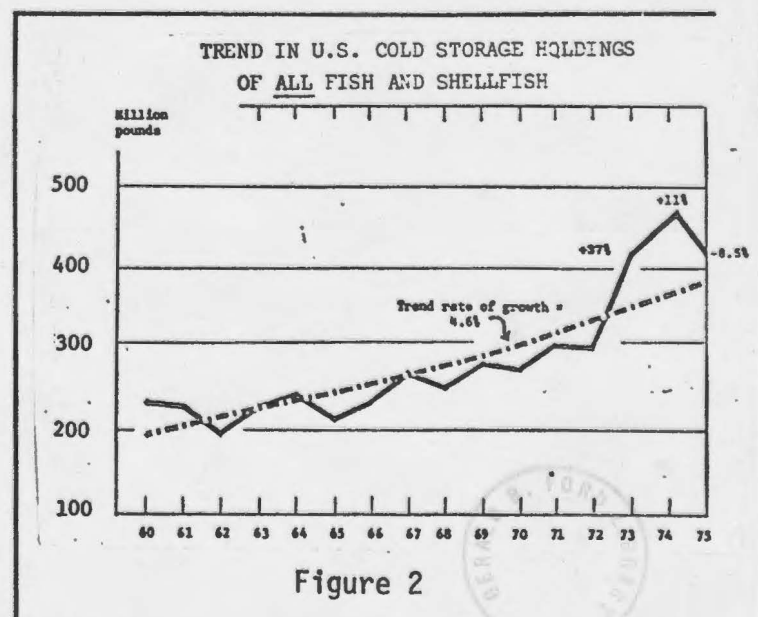


## (2) The Supply Side

The sharp back-to-back gains in demand for fishery products in 1972 and 1973 particularly brightened market outlook and suppliers geared up to handle anticipated further increases. Practically speaking, this meant a step-up in imports of items in high demand because resource constraints ruled out any short run substantial gains in domestic production. Imports of shrimp, for example climbed to a record 270 million pounds in 1974, up 12% from the average imported during the prior two years.

Following a drive to build up inventories, the quantity of all fish and shellfish in cold storage in the U.S. increased 37% during 1972 and another 11% during 1973. The inventory carry over into 1974 was a record 459 million pounds, compared with an average carryover of 359 million pounds for 1972-73. Inventory levels have been rising over the last 15 years, in accordance with requirements of growing demand. However, the buildup during 1972 and 1973 were well above trend.

Inventory levels eased somewhat during 1974, but were still higher than warranted by market conditions, at year's end (Figure 2).



### (3) Pressure on Prices

Under the burden of heavy supplies, and with inadequate demand strength, prices received by producers and wholesalers of fishery products have dropped sharply, although retail prices have been much slower to react to change. The fall has been especially steep, and prolonged, at the exvessel level. U.S. fishermen, on average, priced their catches

20% below a year earlier during the final quarter of 1974 which was the fourth consecutive quarter in which dockside prices fell. Prices by this time had dropped well below the established trend (Figure 3). The movement in wholesale prices paralleled the drop in dockside prices after a brief lag. In June 1974, average wholesale prices for all fishery products in the U.S. were about 14% above the corresponding month in 1973. By December, however, the wholesale average was down 13% compared with the same month a year earlier. In contrast, retail prices throughout 1974 stayed considerably above 1973 prices (Figure 4).

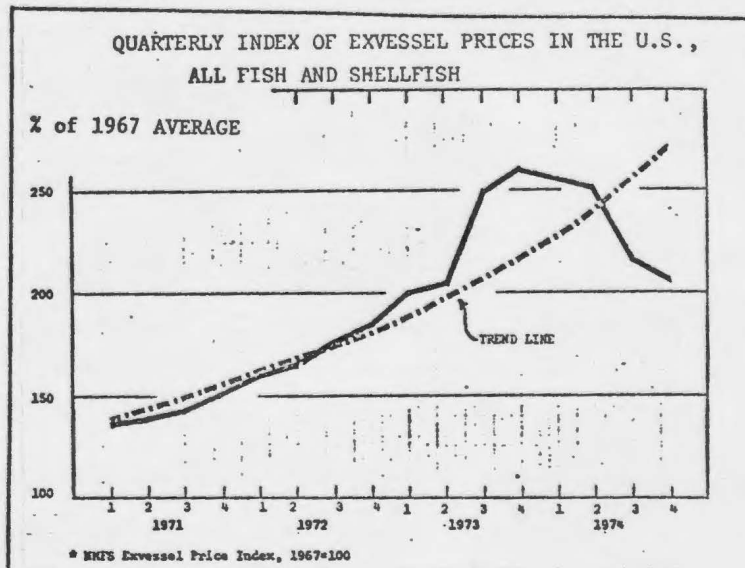


Figure 3

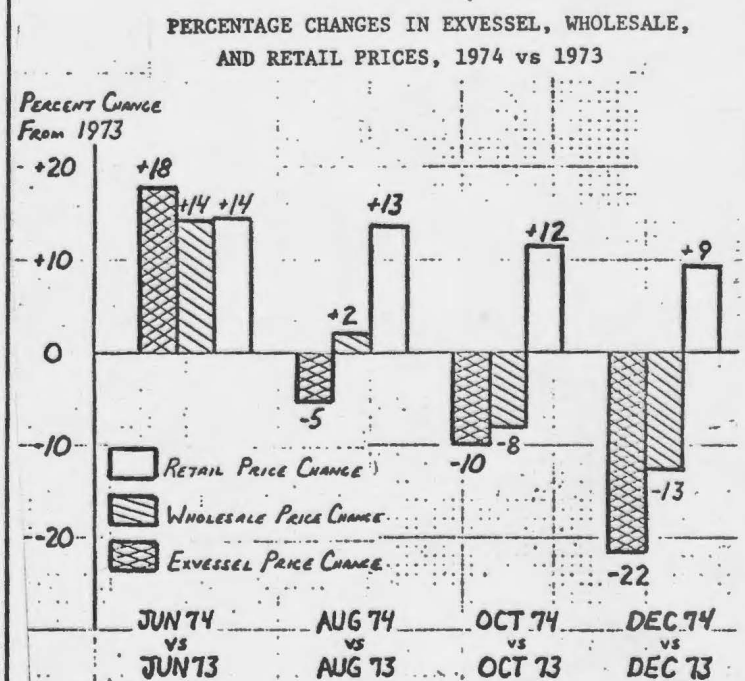


Figure 4

Relatively high fish and shellfish retail prices were inconsistent with trends in prices of competing products. Whereas average meat prices for the full year 1974 were about 2% higher than 1973 and poultry was down 5%, fish prices were up 15%. Moreover, fish remained high, while meat prices were dropping. Fourth quarter 1974 meat prices were 4% below the same quarter a year earlier, but corresponding fish prices were up 10% (Figures 5 and 6). Breaded shrimp were a notable exception to the general trend in fishery product prices (Figure 7).

#### RETAIL PRICE TRENDS FOR FISH, MEAT, AND POULTRY

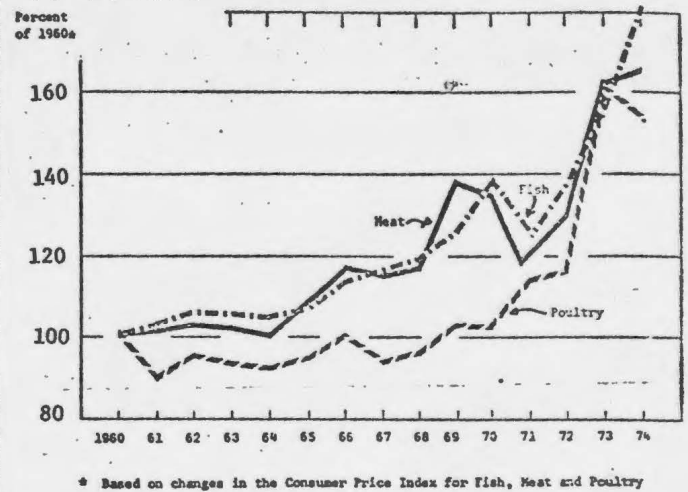


Figure 5

#### NMFS SURVEY OF RETAIL PRICES RETAIL PRICE SURVEY OF FISH, MEAT, AND POULTRY

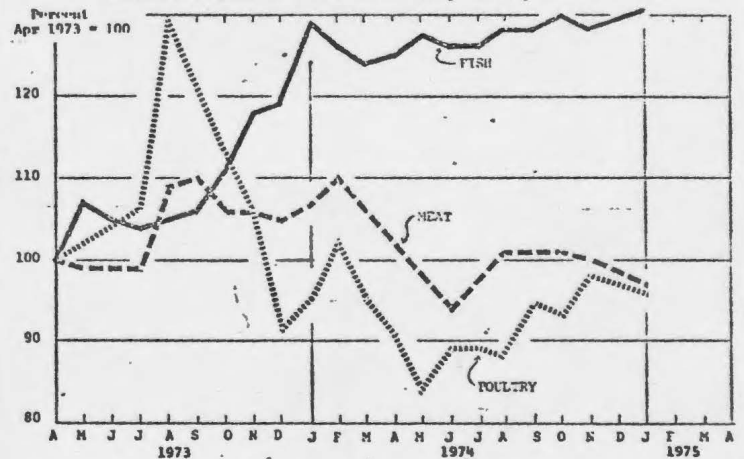


Figure 6

#### RETAIL PRICE INDEX OF SELECTED FISH AND MEAT ITEMS

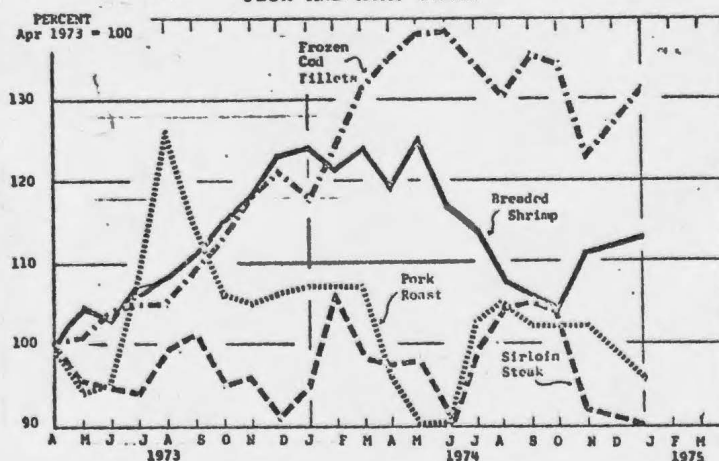


Figure 7

After a sharp rise, the retail prices of breaded shrimp leveled in the first half of 1974 and then began to drop. The slide lasted until the final month of 1974, when breaded shrimp prices began to firm at a time when meat prices were dropping.

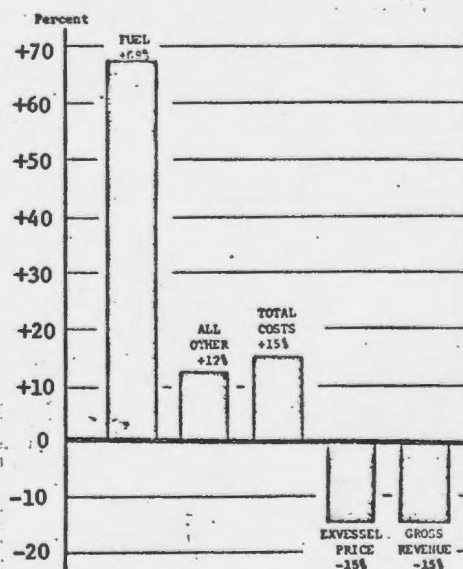
### Cost-Price Squeeze

In the grip of a serious cost-price squeeze, vessel operators in particular have seen profits vanish and losses mount. A typical gulf shrimp trawler, in the 63-69 foot class, experienced a 68% increase in fuel costs in 1974, over 1973. Other vessel costs in 1974 were up 12%, with total costs 15% above a year earlier. Lower prices, however, reduced revenues, and, as a result, this "typical" trawler incurred a net loss in excess of \$45,000 on gross receipts of about \$64,000 (Figure 8).

### The Shrimp Market Situation

Shrimp marketing problems as noted above, parallel general industry trends--weak demand, low prices, rising costs. Prior to the present recession, shrimp markets exhibited unequal growth in comparison with other fishery products. Per capita consumption of shrimp in the U.S. has increased 2.4% yearly, on average, since 1960. This compares with annual gains of 1.3% of all fish, and 1.0% of all meats (Figure 9). However, consumption in 1974,

CHANGES IN COSTS, PRICES AND REVENUES, 1974 vs. 1973 CLASS III OFFSHORE SHRIMP TRAWLERS



1/ Wood vessels, 63-69 feet (comprise about 42 percent of the Gulf fleet of offshore trawlers.)

Figure 8



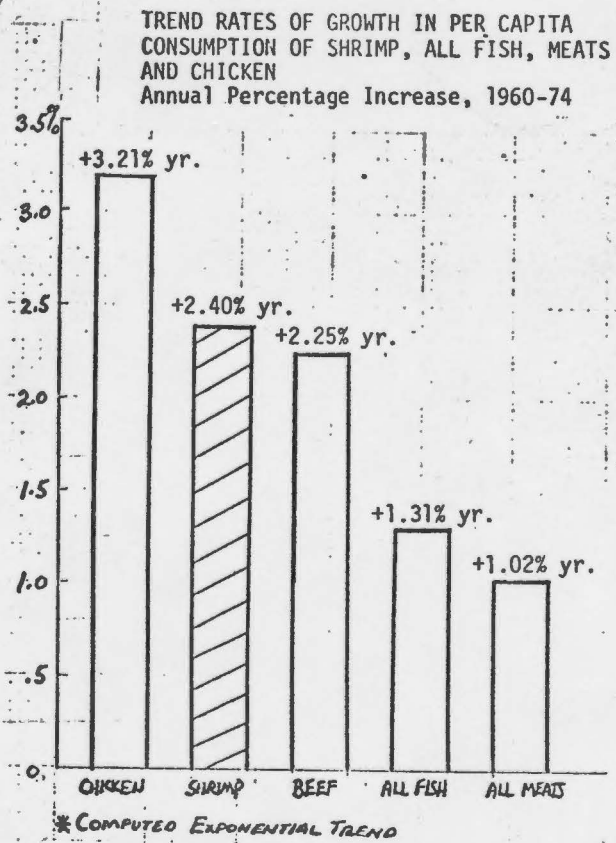


Figure 9

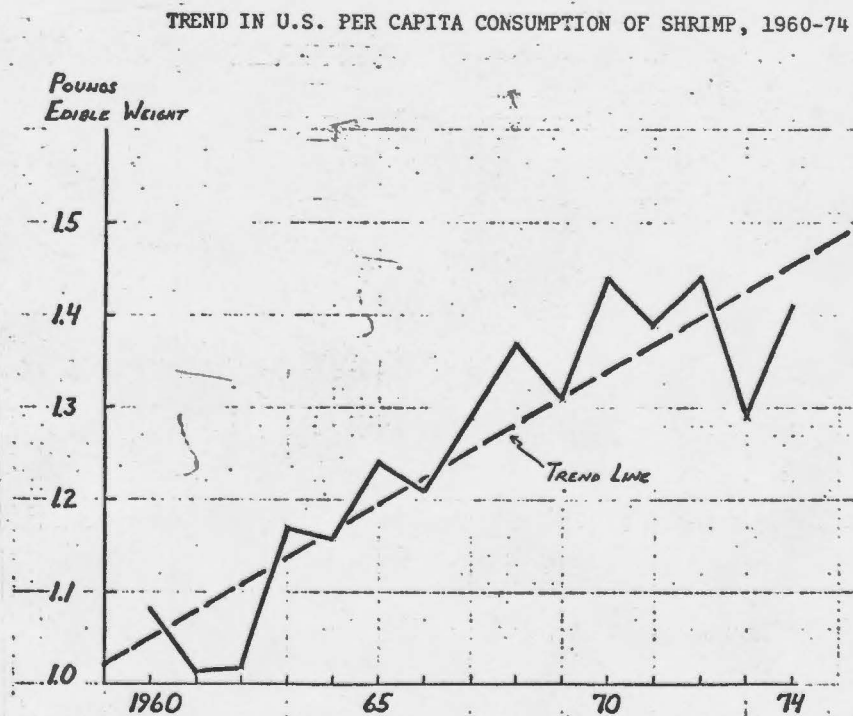


Figure 10



although higher than 1973 (when consumption was depressed by short supplies) was down 2.1% from the 1970 and 1972 peaks, and clearly below trend (Figure 10).

As demand grew, supplies of shrimp increased, but at a faster rate than the increase in consumption to accomodate the requirements of expanding supply pipelines. (The ratio of supplies to consumption averaged 1.25 during 1965-1969, and rose to 1.33 during 1970-1974). Periodically, however, supply increments outgain consumption by an extraordinary margin and this can set the stage for marketing problems. The increase in per capita supplies of shrimp in 1972 was in fact double the increase in consumption, and this resulted in an enormous buildup in shrimp inventories. The carryover of frozen shrimp into 1973 was a record 93 million pounds, which was a third higher than the average carryover for the prior two years. Fortunately, the large carryover helped to sustain consumption during a period when both domestic landings and imports were in short supply. However, toward the end of 1973 landings and imports improved at a time when demand weakened notably. Inventories again began to build rapidly, and this proved to be a formidable depressant on prices, as well as a cost burden in light of prevailing high interest rates. Shrimp cold storage holdings going into 1975 were below a year earlier, and slightly below trend. However, consumption likewise is below trend, and the present inventory levels appear still to be exerting undue pressure on prices (Figure 12).





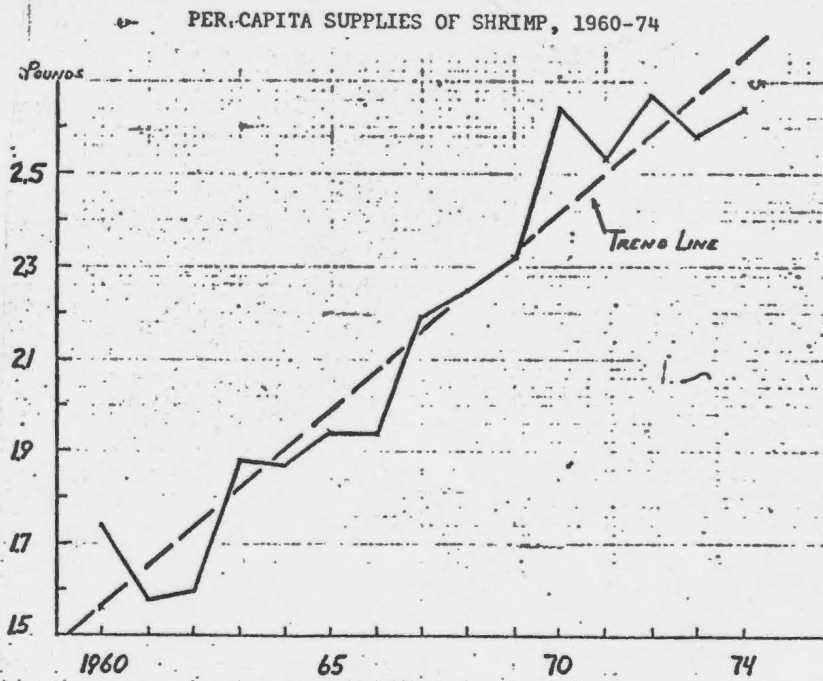


Figure 11

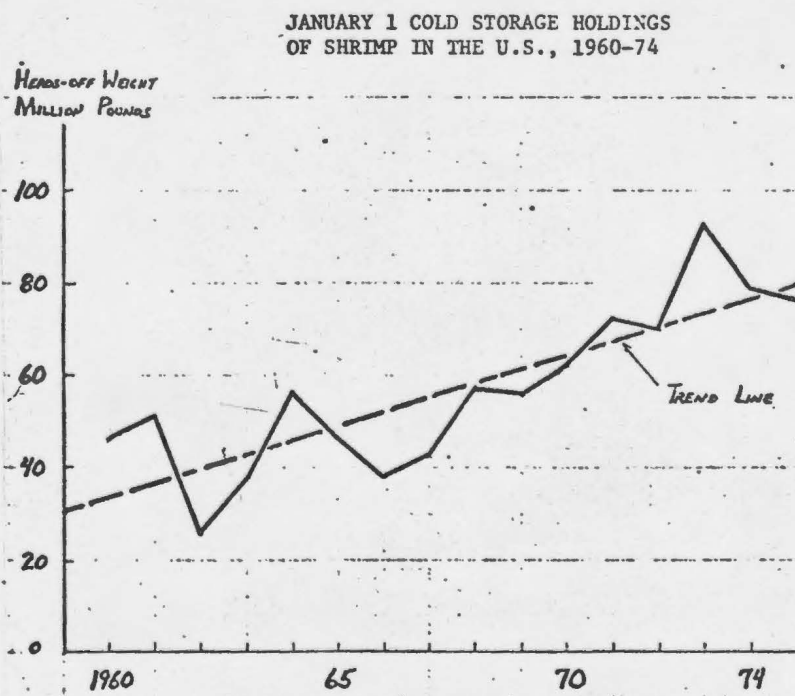


Figure 12





### Imports Gaining, Affecting Prices

There are signs that efforts to strike a more suitable balance between inventories and demand may be impaired by a conflicting trend in imports. Inventories on February 1, 1975, dropped markedly from a month earlier, on a seasonally adjusted bases (Figure 13). However, following a sharp drop-off during the first half of 1974, imports began a sharp rise in August, which sustained through the end of the year (Figure 14). Similarly, a downswing in domestic shrimp landings was reversed in the second half of 1974, although the increase was not nearly as precipitous as the climb in imports (Figure 15). The combination of heavier imports

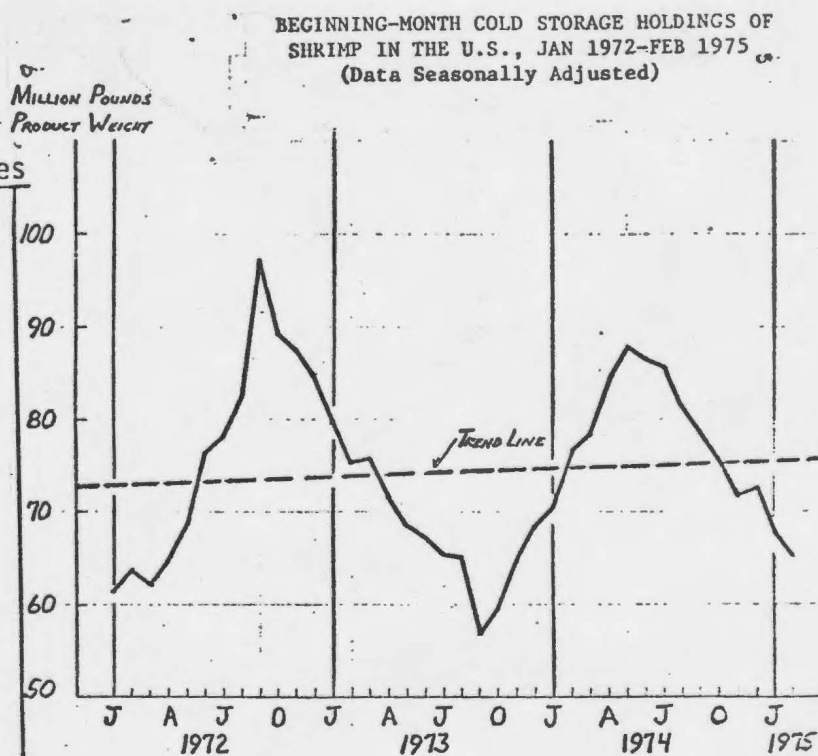


Figure 13

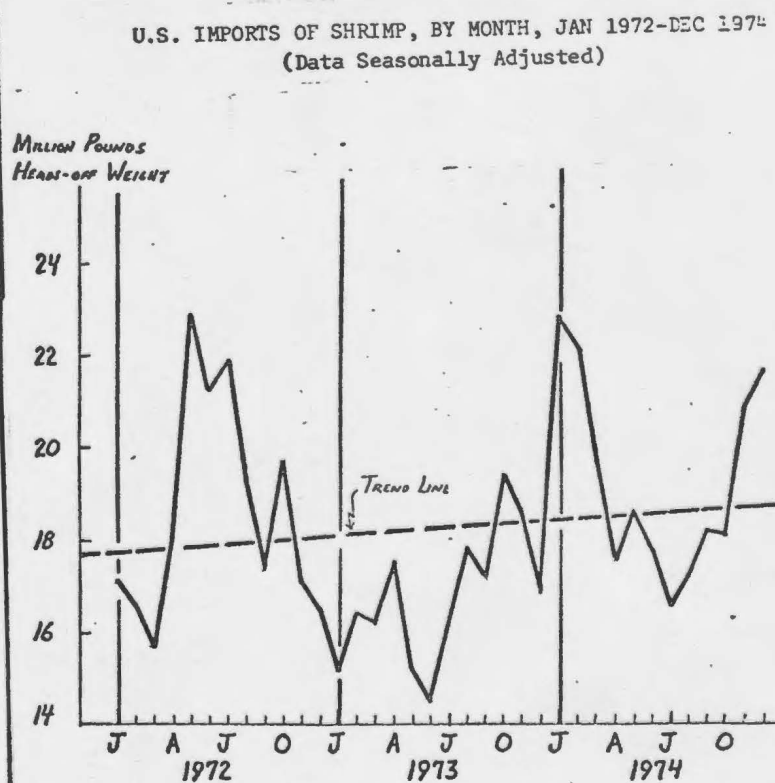


Figure 14



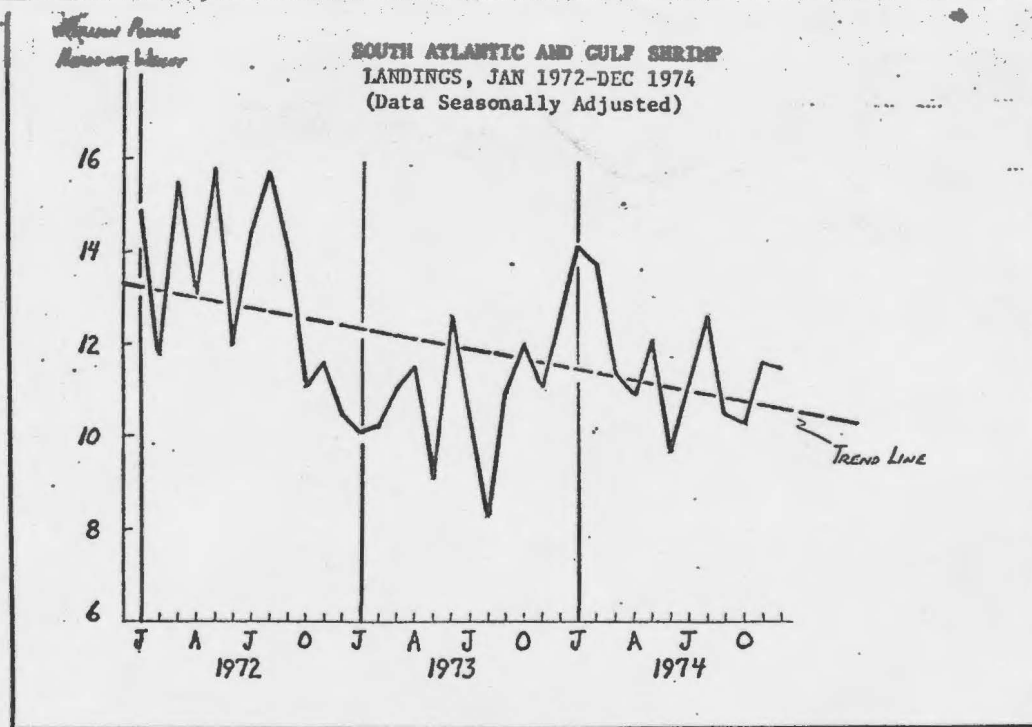


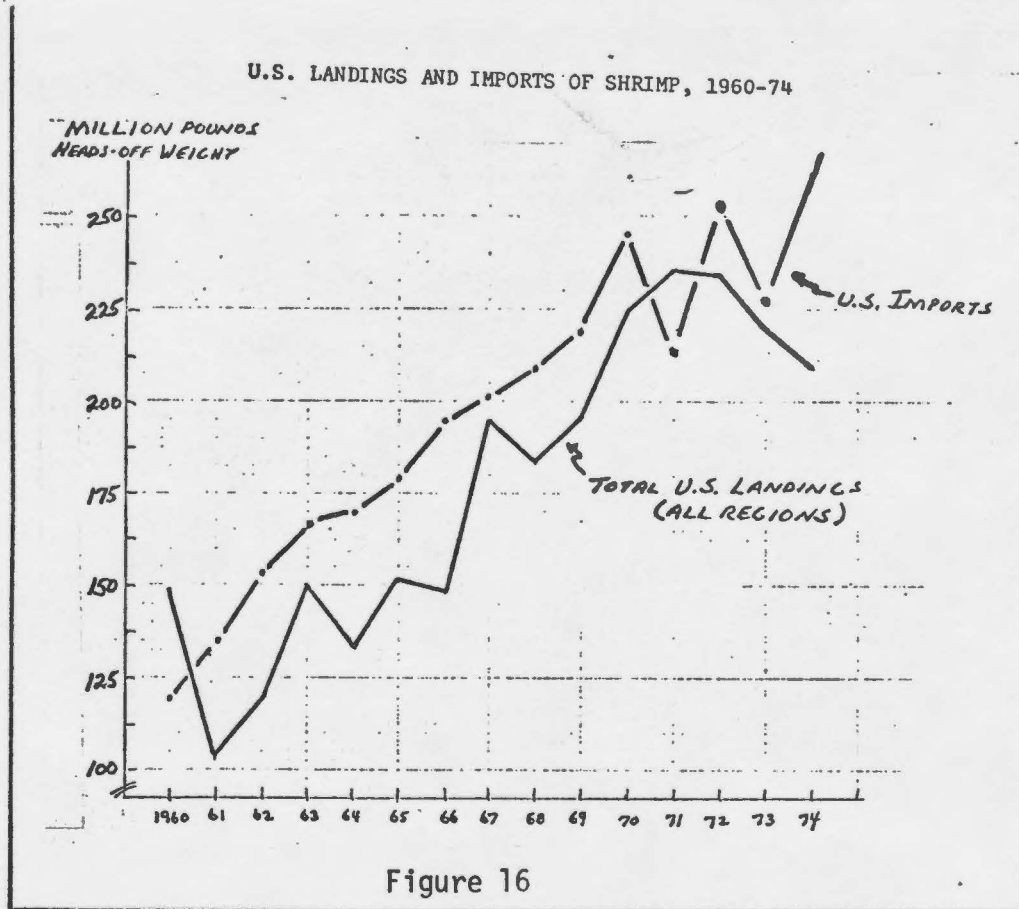
Figure 15

and landings, likely will continue to suppress prices, or at least prevent the degree of price recovery needed to restore profitability in the industry. In a recent special report, IMFS economists estimated that with restraints on the level of shrimp supplies and improved productivity, gulf shrimp vessels would not operate profitably until 1977. <sup>1/</sup>

#### Import Stability Disturbed

The need, and desirability for the U.S. to purchase substantial imports of shrimp has been amply demonstrated over the long run. Beginning in the early 1960's, imports as a rule have provided slightly more than half the quantity of shrimp supplies in the U.S. Traditional grounds fished by domestic fleets simply do not have adequate resources to satisfy the growing level of demand. Growth of imports over time, therefore, is compatible with consumer interests and not inconsistent--again over time--with the welfare of the domestic shrimp industry. Imports, for example help to keep production lines operating in shrimp packing plants during the off season for U.S. shrimp fishermen. In recent years, however, a relatively

<sup>1/</sup>Miller, Morton M. and Greenfield, John, "Prognosis for the Financial Ills of the Shrimp Industry," National Marine Fisheries Service, Division of Economic Research (Internal Report)



stable growth trend in imports has been radically disturbed and since 1970, the quantity imported in any given year has fluctuated widely and has contributed to the volatility of U.S. domestic shrimp markets (Figure 16). This is due in part to periods of sharp growth in production capacity throughout the world, but more importantly it reflects changes in competitive conditions for world shrimp supplies. Rising affluence in the industrialized countries, principally Japan, resulted in serious competition for supplies in a world market that was traditionally dominated by U.S. buyers.



### Influence of Japanese Activity in Shrimp Markets--The Far East Situation

The apex of Japanese shrimp buying activity occurred in 1973, when supplies that were badly needed in U.S. markets--because of setbacks in domestic production--were spirited away by affluent Japanese bidders (Figure 17). These events were a principal factor in the sharp rise in shrimp prices in 1973. However, in 1974, Japanese demand for shrimp dulled considerably and supplies that likely would have gone to Japan under normal circumstances were diverted to a rapidly softening U.S. market. While U.S. imports of shrimp in 1974 increased 13%, Japan's imports of shrimp dropped 14%.

The Japanese cutback in shrimp imports in 1974 proved to be even more disruptive than their hyperactivity in 1973. The bulk of the decline in Japanese imports was attributable to lighter purchases from countries of

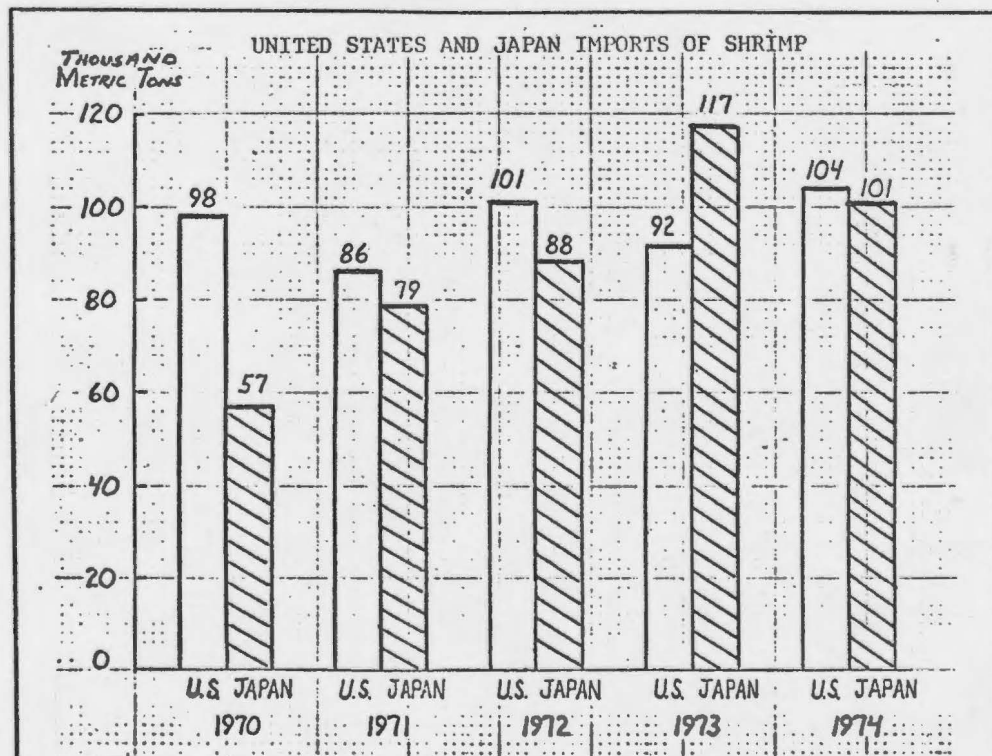


Figure 17

the Far East, notably India. This resulted in increased shipments to the U.S. from the Far East in 1974 of which a large portion was made up of smaller sized shrimp that jammed U.S. warehouses at the time the U.S. shrimping season was getting underway in the Gulf. Early season catches are heavy in the smaller sized shrimp and these were exposed to markets already depressed by an overload of imported small sized shrimp. Vessel prices received for shrimp early in 1974 were down as much as 60% from a year earlier. It is noteworthy that small sizes (51 count and over) comprised 57% of the quantity of shrimp imported into the U.S. from Asian countries, compared with 13% small shrimp in the mix of imports from North and South American countries. In any event, Asia in 1974 emerged as a highly prominent source of U.S. imports of shrimp, with 32.3% of total U.S. shrimp imports compared with 23% a year earlier (Figure 18).

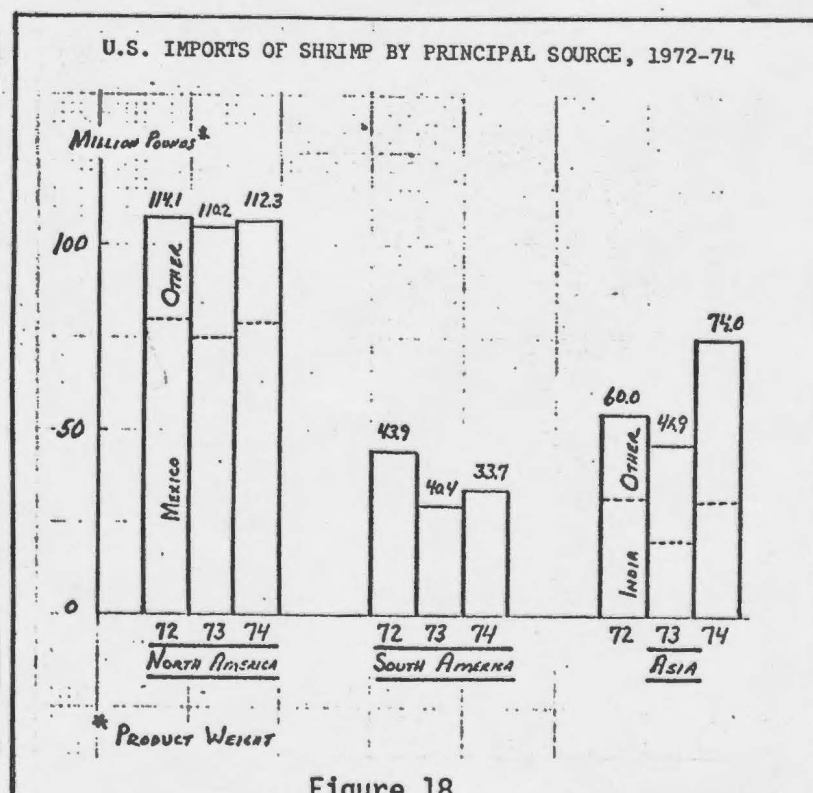
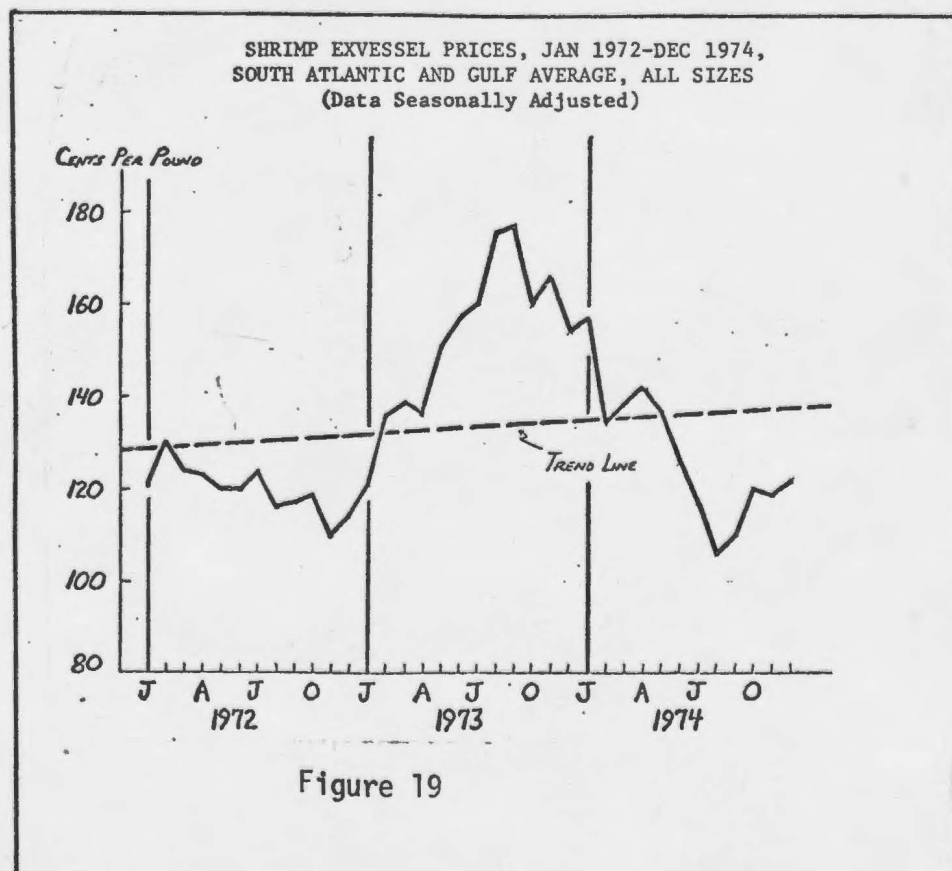


Figure 18

### Recent Price Movement

The heavy influx of shipments from the Far East continued to depress exvessel and wholesale prices throughout 1974. The prices, even of the larger, and more expensive shrimp were affected. Thus, chances narrowed for recovery from early year losses in vessel operations, despite some noticable firming of vessel prices in late 1974, and early 1975 (Figure 19). Wholesale shrimp prices similarly have remained depressed since mid 1974. There was a rising tendency during October, but the rally was apparently short-lived and wholesale prices were slipping at year's end. Retail shrimp price movements have followed the way of wholesale prices, but some important differences between the two can be identified. First of all, the rising trend in retail prices has been much steeper which means that retailers obviously were not absorbing--or even merely passing through the cost increases





SHRIMP WHOLESALE PRICES, JAN 1972-DEC 1974,  
26-30 COUNT AT CHICAGO, IL  
(Data Seasonally Adjusted)

at wholesale. They were in fact, widening their margins. Comparable trend measurements show that whereas the trend in wholesale prices increased 12% from January 1972 through December 1973, the retail trend increased 25% (Figures 20 & 21). One reason for this is the lag in retail price adjustment following changes in wholesale price prices. If unduly long, this lag obviously disbenefits consumers, as well as wholesalers and vessel operators. There is evidence that as much as several months may elapse before consumers get the benefit of lower prices at wholesale. Exvessel prices first dropped below year earlier levels in February 1974. Wholesale prices followed suit in March, but retail prices remained above prior year levels until August (Figure 22).

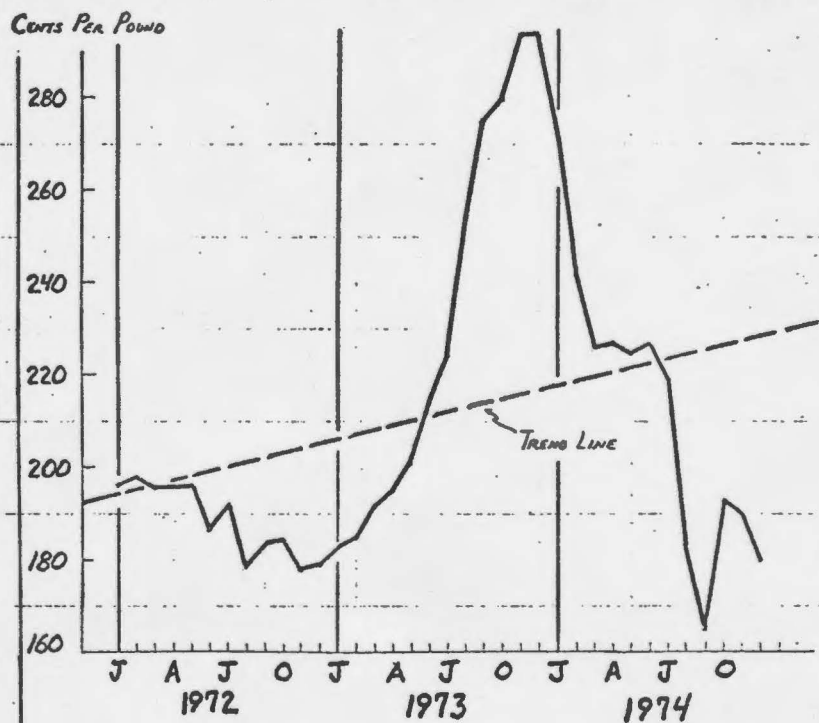


Figure 20

SHRIMP RETAIL PRICES, JAN 1972-DEC 1974,  
36-42 COUNT AT BALTIMORE, MD  
(Data Seasonally Adjusted)

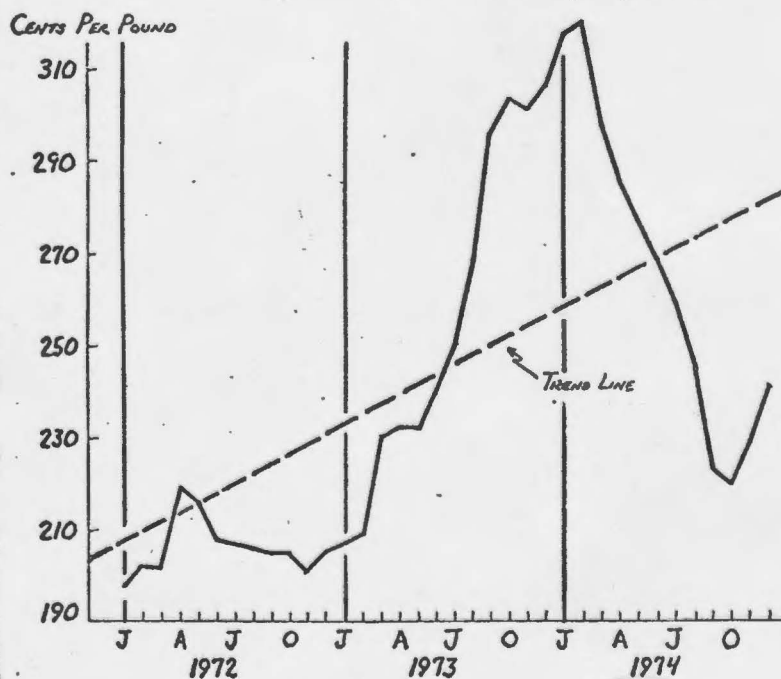
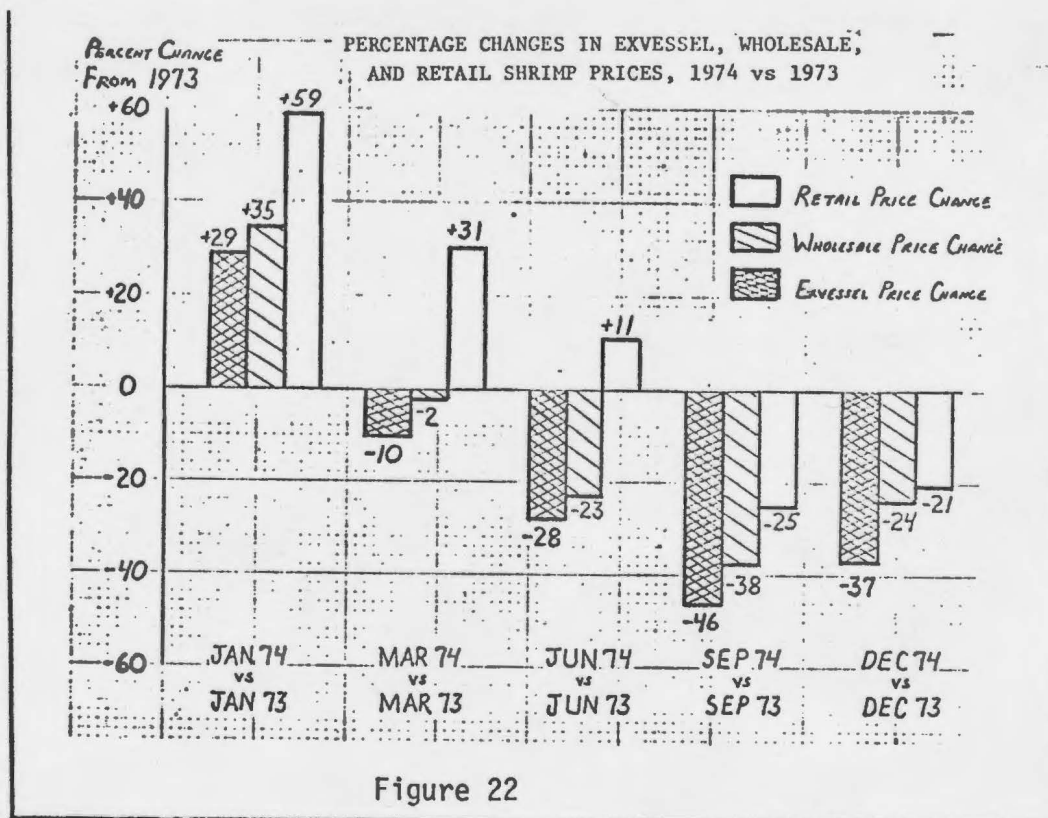


Figure 21





### Outlook for Imports

There is justifiable concern about the possibility of an import overload in shrimp markets in coming months. No evidence has emerged that foreign production, particularly in the Far East, will be cut back significantly. It is known, however, that the Japanese market for shrimp remains soft, as economic recession continues in that country. Japanese consumers endured an inflation rate of 25 percent during 1974 and are budgeting purchases accordingly. Shrimp is moving in Japan but reportedly at cut prices. One of Japan's major suppliers, Indonesia, lowered its frozen shrimp export price to Japan in January 1975, because of the sluggishness of the Japanese market. Meanwhile, cold storage facilities in producing countries in the Far East likely are still bulging with shrimp. As recently as November 1974, the Pakistan Government was taking action to persuade



freezing plant operators to resume purchases of shrimp from fishermen. A relevant fact to keep in mind is that the crowded storage conditions existed just when the peak landings season (which lasts 3 or 4 months) was getting under way. Pressure to price shrimp more attractively for export, therefore, will mount.

#### Impact of Import Restriction

The principal objective of restrictions on imports would be to reduce supplies and thereby relieve the serious depression in prices received by domestic shrimp fishermen. In 1974, vessels operating in the Gulf and South Atlantic received, on average, \$1.22 per pound for landed shrimp compared with \$1.53 in 1973. This represented a 20% drop in terms of current prices, but with the general effects of inflation taken into account, the decrease amounts to 33%. This occurred while higher fuel costs radically changed vessel cost schedules. In 1973, about 17 cents worth of fuel was used to land a pound of shrimp. In 1974, fuel cost per pound of landed shrimp rose to 45 cents per pound.

Prior general knowledge, reinforced by economic studies, informs that exvessel price levels are highly sensitive (inversely) to changes in the level of supplies (Figure 23). Shrimp prices also are sensitive to changes in consumer income--that is, increases in consumer income raise the demand for shrimp and have a positive effect on prices. The following quote from



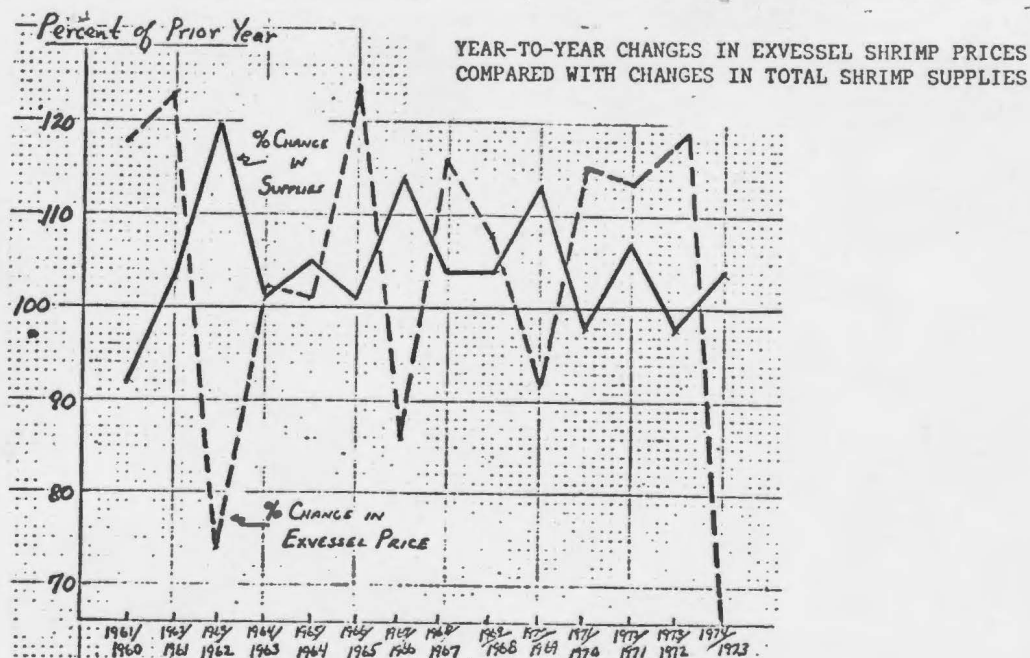


Figure 23

from a detailed study of the shrimp market summarized these effects:

"Exvessel prices were found to decrease as beginning stocks, landings and imports increase, but to increase as income increases."<sup>1/</sup>

Further, the study concluded:

...imports have a negative impact upon domestic prices. It was estimated that an increase of imports by one million pounds, heads off weight, would, if sustained for 5 years, reduce exvessel price by 6 cents per pound. While these amounts seem small, over the period from 1950 to 1968, imports increased an average of 9 million pounds per year."

The study covered data running from 1950 through 1968. During that period there were four price breaks in shrimp markets, and the conclusion with regard to these was as follows:

"The causes of the four price breaks of the period were not always similar although each did occur during a slowdown in the national

<sup>1/</sup> Doll, John P., "An Econometric Analyses of the U.S. Shrimp Market" Study sponsored by the National Marine Fisheries Service: publication pending.



economy. The 1954 drop resulted from the increased domestic landings--  
1954 was a record year in the South Atlantic and Gulf States. In 1959-  
1960, the increased landings were augmented by the largest annual  
increment in imports to occur during the 19-year period. The 1963 and  
1967 breaks were similar and occurred when rapidly expanding imports  
coincided with high domestic landings, causing supplies to outrun demands  
weakened by a business recession." (Emphasis applied)

The requirement for supplies to be reduced, in order to restore exvessel price strength is made stronger by the expectation of further reduction in consumer buying power in 1975, in the U.S. Per capita disposable "real" income in 1974 was down about 3% from a year earlier, and a further decline is expected in 1975. This places a negative factor into the price equation, assuming supplies remain about the same as in 1974. With demand thus weakened, it appears that only reduced supplies would help to assure more favorable prices for domestic shrimp fishermen. This raises three immediate questions: (1) how much of a cutback in supplies is needed to bring about a desired change in exvessel prices? (2) how should a cutback be allocated, as between domestic production and imports? and (3) what would be the impact of reduced supplies on consumer prices?

The first and third questions are susceptible to economic analysis, and attempts were made (with partial success) to quantify the relevant interrelationships. The second question--allocation of cutback--is chiefly



political, and for the purpose of this paper, the answer required a basic assumption that national policy would favor maintaining present levels of domestic production.

Applying ordinary least squares regression analysis to annual data covering 1960-1974, an attempt was made to measure the impact of changes in supplies, and in per capita disposable income upon changes in exvessel prices. The results proved to be statistically significant.<sup>1/</sup> Similar analyses using wholesale and exvessel prices were made, but the results were inconclusive.

According to the analysis a 12% reduction in total supplies in 1975 of shrimp would be accompanied by a 20% increase in average exvessel shrimp prices for the year (assuming "real" per capita disposable income drops 3%). If in this case domestic landings match 1974 totals, imports would have to be reduced about 63 million pounds, or 13 %. (Imports in 1974 entered at an average monthly rate of 22.5 million pounds, with a high of 30 million pounds and a low of 18 million pounds).

For exvessel prices to increase 30%, total supplies would have to drop about 18%. This would mean a 36% cutback in imports (96 million pounds)

<sup>1/</sup> The technique used is a standard statistical procedure which measures functional relationships between designated variables. Statistically significant correlations, it should be noted, do not "prove" casual relationships. A priori judgment is needed to determine the reasonableness of the measured relationship.





assuming no change in the domestic catch. These and other impact estimates appear in the table below. It needs to be stressed that these are not precise estimates, given the shortcomings of the statistical techniques applied. Nonetheless, the estimates provide guidelines that can be usefully applied with allowance for some reasonable margin of error. The analysis does clearly demonstrate that taking into account the relatively high level of carryover holdings going into 1975, a substantial reduction in imports would improve the exvessel price situation measurably if domestic production stays about the same as in 1974.

The statistical analysis failed to produce precise estimates, but did indicate that wholesale and retail prices also react to changes in supply, but to a lesser degree than exvessel prices, with retail prices being the least sensitive. Undoubtedly, a cut back in supplies, through a reduction in imports, would result in higher retail prices, and dampened consumer demand. This, in turn, would tend to check the rise in exvessel prices to some degree. As evidence suggests, there may room for retailers to absorb some of the increase--which they may choose to do in the interest of consumer relations. However, there is always an inflationary risk in reducing supplies.

But, on the other hand, domestic fleets cannot long maintain former levels of production at the unprofitable price levels that prevail. As conditions now stand a large scale reduction of domestic effort appears inevitable without some change. This, too, is a risk that needs to



be balanced against the risk of stimulating an increase in consumer prices. Restrictions on imports of shrimp, therefore, offer one avenue of effective relief for U.S. shrimp fishermen, and probably for most processors as well. However, it needs to be recognized that restricted imports may run counter to the interests of some sectors of the shrimp industry and would likely be opposed by these sectors. Processors of breaded shrimp and shrimp canners, for example depend in part upon imports for their raw material requirements, and a ban on imports could prove disruptive. Also, U.S. private capital underwrites certain foreign shrimp operations which produce for the U.S. market. Adding to this the international political implications, makes it clear that there are perils, as well as benefits in restricting imports of shrimp, and that caution and thought should precede such action.



Table A

Estimated changes in shrimp exvessel prices and imports associated with assumed reductions in total supplies of shrimp (constant domestic landings)

| 1975 Exvessel<br>price - average |                                     | Price change associated with: <sup>2/</sup> |                                               |                                    |     |
|----------------------------------|-------------------------------------|---------------------------------------------|-----------------------------------------------|------------------------------------|-----|
| Per<br>Pound                     | increase <sup>3/</sup><br>over 1974 | Decrease in<br>total supplies               | Decrease in imports<br>Quantity <sup>1/</sup> | Allowable<br>imports <sup>1/</sup> |     |
| <u>\$/lb.</u>                    |                                     | <u>Percent</u>                              |                                               | <u>million pounds</u>              |     |
| 1.46                             | 20                                  | 12                                          | 23                                            | 68                                 | 207 |
| 1.59                             | 30                                  | 18                                          | 34                                            | 96                                 | 174 |
| 1.71                             | 40                                  | 24                                          | 48                                            | 128                                | 142 |
| 1.83                             | 50                                  | 30                                          | 60                                            | 161                                | 109 |

<sup>1/</sup> Heads off weight.

<sup>2/</sup> The estimating equation is:

$$\Delta P_v = -1.76732 + 4.36163 \Delta I - 1.58835 \Delta S$$

(\$ .355)      (4.008)

where:  $\Delta P_v$  = Ratio - Exvessel price, deflated by WPI, current year to prior year  
( $P_{vt}/P_{vt-1}$ )

$\Delta I$  = Ratio - per capita disposable "real" income current year to prior year.  
( $I_t/I_{t-1}$ )

$\Delta S$  = Ratio - total supplies current year to prior year.  
( $S_t/S_{t-1}$ )

Note: See Table B, page 33 for printout of regression analysis

<sup>3/</sup> The increases in this column are based on changes in the actual price. The estimating equation is computed in terms of "real", or deflated prices. Thus, a 20 percent increase in actual prices in 1975, would be the equivalent of a change of 6.7 percent in the "real" price (assuming that the WPI will climb to 180 in 1975).



Printout of the estimating equation for the change in exvessel price associated with a change in income and supplies:

Dependent variable:  $\Delta P_v = P_{vt}/P_{vt-1}$

Independent variables:

(Variable 4)  $\Delta I = I_t/I_{t-1}$

(Variable 5)  $\Delta S = S_t/S_{t-1}$

TABLE B

STD. ERROR OF EST. .10172  
 MULTIPLE 'R' SQUARED .73595  
 'F' FOR ANALYSIS 15.32970 ON 2 , 11 D.F.

| VARIABLE  | REG. COEFF. | ST. ERROR | T-VALUE  | 'F' TO REMOVE |
|-----------|-------------|-----------|----------|---------------|
| 4         | 4.36163     | 1.30003   | 3.35503  | 11.25620      |
| 5         | -1.58835    | .39631    | -4.00788 | 16.06310      |
| INTERCEPT | -1.76732    |           |          |               |

TABLE OF RESIDUALS

| OBS. | OBSERVED 'Y' | PREDICTED 'Y' | RESIDUAL | NORMAL DEV. |
|------|--------------|---------------|----------|-------------|
| 1    | 1.17600      | 1.18933       | -.01333  | -.13100     |
| 2    | 1.23200      | 1.08638       | .14562   | 1.43149     |
| 3    | .73800       | .79655        | -.05855  | -.57557     |
| 4    | 1.11700      | 1.23037       | -.11337  | -1.11448    |
| 5    | 1.01500      | 1.13867       | -.12367  | -1.21579    |
| 6    | 1.23500      | 1.15700       | .07800   | .76677      |
| 7    | .86400       | .89858        | -.03458  | -.33995     |
| 8    | 1.15800      | 1.06614       | .09186   | .90305      |
| 9    | 1.07700      | .98327        | .09373   | .92144      |
| 10   | .92000       | .87163        | .04837   | .47552      |
| 11   | 1.14900      | 1.14082       | .00818   | .08044      |
| 12   | 1.13500      | 1.03911       | .09589   | .94264      |
| 13   | 1.18700      | 1.27406       | -.08706  | -.85587     |
| 14   | .66900       | .80008        | -.13108  | -1.28860    |

DURBIN-WATSON STATISTIC 1.63557

**STATISTICAL APPENDIX**



TABLE 1

## U.S. SUPPLIES AND CONSUMPTION OF ALL FISHERY PRODUCTS

| Year                       | Jan. 1 cold<br>storage holdings | Total<br>supply | Per capita<br>supply | Total<br>consumption | Per capita<br>consumption |
|----------------------------|---------------------------------|-----------------|----------------------|----------------------|---------------------------|
| - - - MILLION POUNDS - - - |                                 |                 |                      |                      |                           |
|                            |                                 |                 | POUNDS               | MIL LBS              | POUNDS                    |
| 1960                       | 232                             | 2,285           | 12.8                 | 1,834                | 10.3                      |
| 61                         | 230                             | 2,368           | 13.1                 | 1,938                | 10.7                      |
| 62                         | 198                             | 2,468           | 13.4                 | 1,947                | 10.6                      |
| 63                         | 230                             | 2,504           | 13.4                 | 1,995                | 10.7                      |
| 64                         | 244                             | 2,537           | 13.4                 | 1,985                | 10.5                      |
| 1965                       | 215                             | 2,589           | 13.5                 | 2,069                | 10.8                      |
| 66                         | 236                             | 2,723           | 14.2                 | 2,108                | 10.9                      |
| 67                         | 271                             | 2,605           | 13.5                 | 2,070                | 10.6                      |
| 68                         | 252                             | 2,746           | 14.1                 | 2,168                | 11.0                      |
| 69                         | 284                             | 2,796           | 14.0                 | 2,229                | 11.2                      |
| 1970                       | 275                             | 2,992           | 14.8                 | 2,380                | 11.8                      |
| 71                         | 306                             | 2,956           | 14.5                 | 2,327                | 11.4                      |
| 72                         | 302                             | 3,304           | 16.0                 | 2,537                | 12.3                      |
| 73                         | 415                             | 3,443           | 16.5                 | 2,622                | 12.6                      |
| 74                         | 459                             | 3,337           | 15.8                 | 2,619                | 12.3                      |
| 75                         | 432                             |                 |                      |                      |                           |

NOTE: COLD STORAGE HOLDINGS ARE REPORTED IN PRODUCT WEIGHT. ALL OTHERS ARE EDIBLE WEIGHT.

Source: U.S. Dept. of Commerce, NMFS, Statistics and Market News Division





TABLE 2

## TRENDS IN PER CAPITA CONSUMPTION OF ALL FISH, SHRIMP, BEEF, ALL MEATS AND CHICKEN

| Year | ALL FISH &<br>SHELLFISH | SHRIMP | % SHRIMP OF<br>ALL FISH | BEEF  | TOTAL MEAT | CHICKEN |
|------|-------------------------|--------|-------------------------|-------|------------|---------|
|      | POUNDS                  |        | PERCENT                 |       | POUNDS     |         |
| 1960 | 10.3                    | 1.08   | 10.5                    | 85.1  | 160.9      | 28.1    |
| 61   | 10.7                    | 1.01   | 9.4                     | 87.8  | 160.5      | 30.0    |
| 62   | 10.6                    | 1.02   | 9.6                     | 88.9  | 163.1      | 30.0    |
| 63   | 10.7                    | 1.17   | 10.9                    | 94.5  | 169.7      | 30.7    |
| 64   | 10.5                    | 1.16   | 11.0                    | 99.9  | 174.7      | 31.1    |
| 65   | 10.8                    | 1.24   | 11.5                    | 99.5  | 167.1      | 33.4    |
| 66   | 10.9                    | 1.21   | 11.1                    | 104.2 | 170.9      | 36.1    |
| 67   | 10.6                    | 1.29   | 12.2                    | 106.5 | 178.3      | 37.2    |
| 68   | 11.0                    | 1.37   | 12.5                    | 109.7 | 183.2      | 37.4    |
| 69   | 11.2                    | 1.31   | 11.7                    | 110.8 | 182.5      | 39.1    |
| 70   | 11.8                    | 1.44   | 12.2                    | 113.7 | 186.3      | 41.5    |
| 71   | 11.4                    | 1.39   | 12.2                    | 113.0 | 191.8      | 41.4    |
| 72   | 12.3                    | 1.44   | 11.7                    | 116.1 | 189.0      | 43.0    |
| 73   | 12.6                    | 1.29   | 10.2                    | 109.6 | 175.7      | 41.4    |
| 74   | 12.3                    | 1.41   | 11.5                    | 116.5 | 187.5      | 41.4    |

Trend rate  
of increase  
per year 1/

1.31%

2.40%

2.25%

1.18%

3/2%

1/ Exponential trend.

NOTE: Per capita consumption figures for all fish, shellfish and shrimp are reported in edible weight, while beef and total meat are reported in carcass weight, and chicken in ready-to-cook weight.

Source: U.S. Dept. of Commerce, NMFS, Fisheries of the United States  
U.S. Dept. of Agriculture, Food Consumption, Prices, and Expenditures  
AER-138



TABLE 3

U.S. SUPPLIES AND CONSUMPTION OF SHRIMP ( ALL FORMS)  
(HEADS-OFF WEIGHT)

| Year | Jan 1<br>cold storage<br>holdings | Total <sup>1/</sup><br>available<br>supplies | Per capita<br>supplies | Domestic<br>consumption | Per capita<br>consumption | Exports |
|------|-----------------------------------|----------------------------------------------|------------------------|-------------------------|---------------------------|---------|
|      | MILLION POUNDS                    |                                              | POUNDS                 | MIL LBS                 | POUNDS                    | MIL LBS |
| 1960 | 46.0                              | 313.6                                        | 1.74                   | 251.2                   | 1.39                      | 11.4    |
| 61   | 51.0                              | 289.5                                        | 1.58                   | 246.6                   | 1.34                      | 16.7    |
| 62   | 26.2                              | 297.8                                        | 1.60                   | 249.1                   | 1.34                      | 10.8    |
| 63   | 37.9                              | 355.9                                        | 1.88                   | 279.4                   | 1.48                      | 20.7    |
| 64   | 55.8                              | 358.4                                        | 1.87                   | 289.5                   | 1.51                      | 23.4    |
| 1965 | 45.5                              | 376.7                                        | 1.94                   | 314.6                   | 1.62                      | 24.0    |
| 66   | 38.2                              | 381.4                                        | 1.94                   | 313.5                   | 1.59                      | 25.5    |
| 67   | 42.5                              | 434.5                                        | 2.19                   | 342.3                   | 1.72                      | 34.6    |
| 68   | 57.6                              | 451.2                                        | 2.25                   | 366.0                   | 1.82                      | 29.4    |
| 69   | 55.8                              | 470.9                                        | 2.32                   | 361.2                   | 1.78                      | 47.2    |
| 1970 | 62.5                              | 541.8                                        | 2.64                   | 413.0                   | 2.02                      | 56.6    |
| 71   | 72.2                              | 523.6                                        | 2.53                   | 396.1                   | 1.91                      | 57.3    |
| 72   | 69.9                              | 557.4                                        | 2.67                   | 412.5                   | 1.98                      | 52.2    |
| 73   | 92.7                              | 542.7                                        | 2.58                   | 395.9                   | 1.88                      | 67.8    |
| 74   | 79.0                              | 559.5                                        | 2.64                   | 433.9                   | 2.05                      | 49.4    |
| 75   | 76.2                              |                                              |                        |                         |                           |         |

<sup>1/</sup> DOMESTIC LANDINGS PLUS IMPORTS PLUS NET CHANGE IN  
COLD STORAGE HOLDINGS

Source: U.S. Dept. of Commerce, NMFS, Economic and Marketing Research Division



TABLE 4

## U.S. Shrimp Landings and Imports

(Heads-Off Weight)

| Year | Landings          |                   | Imports          |                | Total            |
|------|-------------------|-------------------|------------------|----------------|------------------|
|      | Quantity          | Value             | Quantity         | Value          | Quantity         |
|      | <u>1,000 lbs</u>  | <u>\$1,000</u>    | <u>1,000 lbs</u> | <u>\$1,000</u> | <u>1,000 lbs</u> |
| 1960 | 148,483           | 66,932            | 119,139          | 56,406         | 267,622          |
| 61   | 103,865           | 51,688            | 134,564          | 68,538         | 238,429          |
| 62   | 119,154           | 73,236            | 152,504          | 91,898         | 271,658          |
| 63   | 150,737           | 70,044            | 167,344          | 103,153        | 318,081          |
| 64   | 133,113           | 70,376            | 169,510          | 107,254        | 302,623          |
| 1965 | 152,346           | 82,409            | 178,955          | 113,754        | 331,301          |
| 66   | 148,255           | 96,296            | 194,946          | 143,129        | 343,201          |
| 67   | 189,972           | 103,100           | 202,105          | 150,776        | 392,077          |
| 68   | 184,065           | 113,300           | 210,063          | 162,167        | 394,128          |
| 69   | 195,002           | 122,900           | 218,697          | 174,886        | 413,699          |
| 1970 | 224,272           | 129,758           | 245,658          | 200,035        | 469,930          |
| 71   | 236,328           | 166,610           | 213,857          | 196,277        | 450,185          |
| 72   | 234,432           | 193,188           | 253,065          | 250,331        | 487,497          |
| 73   | 220,662           | 219,420           | 229,332          | 281,587        | 449,994          |
| 74   | 210,026 <u>I/</u> | 182,215 <u>I/</u> | 270,514          | 387,335        | 480,540          |

I/ PreliminarySource: U.S. Dept. of Commerce, NMFS, Fisheries of the United States

TABLE 5

## SHRIMP LANDINGS BY REGION

(HEADS-OFF WEIGHT)

THOUSAND POUNDS

| YEAR | NEW ENGLAND | SOUTH ATLANTIC | GULF    | PACIFIC              | TOTAL   |
|------|-------------|----------------|---------|----------------------|---------|
| 1960 | 57          | 18,580         | 122,454 | 7,079                | 148,170 |
| 61   | 42          | 11,755         | 79,640  | 11,920               | 103,357 |
| 62   | 228         | 16,537         | 89,302  | 13,057               | 119,124 |
| 63   | 326         | 9,849          | 128,406 | 12,118               | 150,699 |
| 64   | 513         | 10,992         | 113,284 | 8,263                | 133,052 |
| 1965 | 1,211       | 16,729         | 122,913 | 12,637               | 153,490 |
| 66   | 2,224       | 13,588         | 112,754 | 19,630               | 148,196 |
| 67   | 3,990       | 13,100         | 141,386 | 33,573               | 192,049 |
| 68   | 8,208       | 15,562         | 128,202 | 29,754               | 181,726 |
| 69   | 16,473      | 17,423         | 126,523 | 35,568               | 195,987 |
| 1970 | 13,407      | 13,148         | 145,345 | 52,930               | 224,830 |
| 71   | 14,069      | 19,697         | 143,076 | 69,143               | 236,985 |
| 72   | 13,979      | 16,162         | 143,885 | 60,437               | 234,463 |
| 73   | 11,836      | 15,774         | 114,821 | 82,251               | 224,682 |
| 74   | 9,797       | 14,884         | 116,994 | 72,659 <sup>1/</sup> | 214,333 |

<sup>1/</sup> Preliminary

Source: U.S. Dept. of Commerce, NMFS, Fisheries of the United States  
and shrimp Landings Bulletin.



TABLE 6

SOUTH ATLANTIC AND GULF SHRIMP LANDINGS  
(HEADS-OFF WEIGHT)

| YEAR                                | NORTH<br>CAROLINA | SOUTH<br>CAROLINA | GEORGIA | FLORIDA | ALABAMA | MISSISSIPPI | LOUISIANA | TEXAS  |
|-------------------------------------|-------------------|-------------------|---------|---------|---------|-------------|-----------|--------|
| - - - - - THOUSAND POUNDS - - - - - |                   |                   |         |         |         |             |           |        |
| 1960                                | 3,565             | 4,780             | 6,192   | 30,510  | 4,267   | 6,566       | 36,760    | 48,395 |
| 61                                  | 1,795             | 2,325             | 4,054   | 25,050  | 2,098   | 2,624       | 18,468    | 34,980 |
| 62                                  | 3,616             | 4,102             | 5,495   | 23,433  | 2,349   | 3,837       | 27,778    | 35,230 |
| 63                                  | 2,098             | 1,375             | 3,478   | 24,763  | 4,877   | 5,910       | 51,702    | 44,052 |
| 64                                  | 2,666             | 1,655             | 3,795   | 27,904  | 4,552   | 4,034       | 38,095    | 41,574 |
| 1965                                | 3,395             | 4,341             | 5,520   | 27,106  | 6,028   | 5,157       | 39,818    | 48,278 |
| 66                                  | 3,552             | 2,671             | 4,142   | 21,286  | 6,623   | 4,731       | 39,564    | 43,774 |
| 67                                  | 3,067             | 2,588             | 4,270   | 17,839  | 9,027   | 6,005       | 47,499    | 64,191 |
| 68                                  | 2,876             | 4,069             | 5,522   | 20,167  | 9,636   | 6,349       | 42,923    | 52,324 |
| 69                                  | 4,893             | 3,742             | 5,460   | 17,708  | 9,411   | 5,587       | 52,700    | 44,445 |
| 1970                                | 3,153             | 3,162             | 3,865   | 19,607  | 9,448   | 6,014       | 57,837    | 55,408 |
|                                     | 4,754             | 6,904             | 5,722   | 15,764  | 10,471  | 5,927       | 58,712    | 54,385 |
|                                     | 3,503             | 5,186             | 4,665   | 17,073  | 10,959  | 4,860       | 52,689    | 61,112 |
| 73                                  | 3,165             | 5,313             | 5,339   | 18,279  | 7,518   | 2,259       | 37,270    | 51,453 |
| 74                                  | 5,294             | 4,636             | 4,509   | 19,873  | 8,714   | 3,321       | 37,935    | 49,349 |

Source: U.S. Dept of Commerce, NMFS, Shrimp Landings



TABLE 7

U.S. LANDINGS OF NORTHERN SHRIMP <sup>1/</sup>  
(HEADS-OFF WEIGHT)

| Year                       | NEW ENGLAND |       |        |        | PACIFIC    |        |            |        | GRAND TOTAL |
|----------------------------|-------------|-------|--------|--------|------------|--------|------------|--------|-------------|
|                            | MAINE       | MASS  | TOTAL  | ALASKA | WASHINGTON | OREGON | CALIFORNIA | TOTAL  |             |
| ----- THOUSAND POUND ----- |             |       |        |        |            |        |            |        |             |
| 1960                       | 51          | 1     | 52     | 4,239  | 1,029      | 655    | 1,156      | 7,079  | 7,131       |
| 61                         | 38          | 1     | 39     | 9,109  | 834        | 834    | 1,143      | 11,920 | 11,959      |
| 62                         | 200         | 20    | 220    | 9,658  | 797        | 1,583  | 1,019      | 13,057 | 13,277      |
| 63                         | 307         | 13    | 320    | 8,622  | 571        | 1,726  | 1,199      | 12,118 | 12,438      |
| 64                         | 527         | 4     | 531    | 4,404  | 219        | 3,010  | 630        | 8,263  | 8,794       |
| 1965                       | 1,183       | 10    | 1,193  | 9,587  | 50         | 998    | 817        | 11,452 | 12,645      |
| 66                         | 2,184       | 13    | 2,197  | 16,070 | 190        | 2,670  | 700        | 19,630 | 21,827      |
| 67                         | 3,947       | 13    | 3,960  | 23,833 | 604        | 5,788  | 818        | 31,043 | 35,003      |
| 68                         | 8,187       | 65    | 8,252  | 23,984 | 678        | 6,183  | 1,307      | 32,152 | 40,404      |
| 69                         | 13,814      | 2,228 | 16,042 | 27,275 | 825        | 5,853  | 1,688      | 35,641 | 51,683      |
| 1970                       | 9,692       | 3,647 | 13,339 | 42,326 | 547        | 7,736  | 2,321      | 52,930 | 66,269      |
| 71                         | 10,499      | 3,423 | 13,922 | 54,088 | 422        | 5,173  | 1,757      | 61,440 | 75,362      |
| 72                         | 9,444       | 4,404 | 13,848 | 46,341 | 1,545      | 11,742 | 1,135      | 60,763 | 74,611      |
| 73                         | 6,542       | 4,861 | 11,403 | 65,094 | 2,280      | 13,851 | 1,026      | 82,251 | 93,654      |
| 74                         | 5,489       | 4,361 | 9,850  | 61,724 |            |        |            | 73,109 | 82,959      |

SOURCE: U.S. Dept. of Commerce, NMFS, Various State Landings Bulletins

<sup>1/</sup> Total may differ slight from Table 5 because of different sources used



TABLE 8

## U.S. AND JAPAN SHRIMP IMPORTS, 1971-1974 (product weight)

| Source                                           | 1971    | 1972    | 1973    | 1974    |
|--------------------------------------------------|---------|---------|---------|---------|
| ----- THOUSAND POUNDS -----                      |         |         |         |         |
| Imports from India                               |         |         |         |         |
| U.S.                                             | 22,770  | 33,524  | 20,553  | 31,378  |
| Japan                                            | 21,389  | 28,245  | 48,287  | 39,742  |
| % U.S. of Japan                                  | 106.5   | 118.7   | 42.6    | 79.0    |
| Imports from 5 Major Asian Sources <sup>1/</sup> |         |         |         |         |
| U.S.                                             | 6,424   | 17,370  | 14,068  | 20,165  |
| Japan                                            | 62,675  | 75,692  | 95,038  | 72,227  |
| % U.S. of Japan                                  | 10.2    | 22.9    | 14.8    | 27.9    |
| Imports from all other countries                 |         |         |         |         |
| U.S.                                             | 162,101 | 172,332 | 167,984 | 177,369 |
| Japan                                            | 89,882  | 90,332  | 115,658 | 109,923 |
| % U.S. of Japan                                  | 180.5   | 190.8   | 145.2   | 161.4   |
| Total Shrimp Imports                             |         |         |         |         |
| U.S.                                             | 191,295 | 223,226 | 202,605 | 228,912 |
| Japan                                            | 173,886 | 194,269 | 258,983 | 221,892 |
| U.S. of Japan                                    | 110.0   | 114.9   | 78.2    | 103.2   |

<sup>1/</sup> Pakistan, Taiwan, Thailand, Indonesia, Malaysia

Source: U.S. Dept. of Commerce, Bureau of Census  
U.S. Dept. of Commerce, NMFS



TABLE 9

U.S. IMPORTS OF SHRIMP BY COUNTRY OF ORIGIN  
( PRODUCT WEIGHT )

| COUNTRY                     | 1970    | 1971    | 1972    | 1973    | 1974    |
|-----------------------------|---------|---------|---------|---------|---------|
| ----- THOUSAND POUNDS ----- |         |         |         |         |         |
| North America               |         |         |         |         |         |
| Mexico                      | 72,018  | 74,624  | 80,681  | 76,105  | 78,137  |
| Panama                      | 11,633  | 9,316   | 10,105  | 10,382  | 10,105  |
| Nicaragua                   | 6,146   | 5,639   | 6,605   | 6,115   | 6,532   |
| El Salvador                 | 6,662   | 6,707   | 5,735   | 5,880   | 6,088   |
| Honduras                    | 2,442   | 3,942   | 4,811   | 3,443   | 3,429   |
| Other N. America            | 11,668  | 7,751   | 6,212   | 8,307   | 8,120   |
| Total N. America            | 110,569 | 107,979 | 114,149 | 110,232 | 112,311 |
| South America               |         |         |         |         |         |
| Guyana                      | 10,165  | 8,981   | 6,906   | 10,062  | 7,319   |
| Ecuador                     | 5,992   | 5,332   | 6,935   | 7,500   | 6,210   |
| Venezuela                   | 11,563  | 10,083  | 7,995   | 5,714   | 6,497   |
| Columbia                    | 4,802   | 4,841   | 5,979   | 6,032   | 6,174   |
| Brazil                      | 2,605   | 4,406   | 8,931   | 4,263   | 2,968   |
| Other S. America            | 8,451   | 6,424   | 7,137   | 6,790   | 4,542   |
| Total S. America            | 43,578  | 40,067  | 43,883  | 40,316  | 33,710  |
| Europe                      | 992     | 1,131   | 1,225   | 1,138   | 890     |
| Asia                        |         |         |         |         |         |
| India                       | 33,570  | 22,770  | 33,527  | 20,553  | 31,378  |
| Taiwan                      | 914     | 500     | 6,021   | 5,374   | 5,315   |
| Thailand                    | 3,572   | 2,020   | 3,978   | 2,912   | 3,748   |
| Indonesia                   | 242     | 435     | 2,441   | 2,497   | 6,270   |
| Pakistan                    | 7,125   | 2,924   | 2,636   | 1,350   | 2,785   |
| Other Aisa                  | 12,639  | 6,404   | 11,385  | 14,179  | 24,549  |
| Total Aisa                  | 58,062  | 35,053  | 59,985  | 46,865  | 74,045  |
| Australia & Oceania         | 1,608   | 3,058   | 1,497   | 612     | 4,863   |
| Africa                      | 3,906   | 4,008   | 2,487   | 3,397   | 2,841   |
| Grand Total                 | 218,715 | 191,296 | 223,226 | 202,605 | 228,587 |

Source: U.S. Dept. of Commerce, NMFS, Fisheries of the United States



TABLE 10

## U.S. SHRIMP IMPORTS BY COUNT SIZE 1973 and 1974

(PRODUCT WEIGHT)

| COUNT SIZE                                | NORTH & SOUTH AMERICA |         | ASIA   |        |
|-------------------------------------------|-----------------------|---------|--------|--------|
|                                           | 1973                  | 1974    | 1973   | 1974   |
| ----- T H O U S A N D   P O U N D S ----- |                       |         |        |        |
| Shell-on                                  |                       |         |        |        |
| Under 15                                  | 12,603                | 11,996  | 1,465  | 3,763  |
| 15-20                                     | 10,433                | 13,236  | 510    | 2,273  |
| 21-25                                     | 8,938                 | 8,826   | 363    | 1,970  |
| 26-30                                     | 7,950                 | 7,349   | 411    | 1,421  |
| 31-40                                     | 12,574                | 10,634  | 435    | 1,267  |
| 41-50                                     | 9,111                 | 6,738   | 323    | 740    |
| 51-60                                     | 5,086                 | 3,477   | 241    | 603    |
| 61-70                                     | 2,402                 | 1,714   | 177    | 406    |
| 71 & over                                 | 2,991                 | 2,098   | 405    | 929    |
| other                                     | 11,588                | 8,823   | 885    | 2,800  |
| Total                                     | 83,676                | 74,891  | 5,215  | 16,172 |
| Raw-peeled                                |                       |         |        |        |
| Under 15                                  | 1,435                 | 1,697   | 261    | 524    |
| 15-20                                     | 2,882                 | 3,023   | 248    | 413    |
| 21-25                                     | 2,748                 | 3,490   | 336    | 529    |
| 26-30                                     | 3,537                 | 3,953   | 352    | 711    |
| 31-40                                     | 3,841                 | 4,475   | 835    | 1,253  |
| 41-50                                     | 2,093                 | 2,111   | 729    | 1,022  |
| 51-60                                     | 1,779                 | 1,448   | 693    | 1,160  |
| 61-70                                     | 902                   | 934     | 795    | 1,242  |
| 71 & over                                 | 5,078                 | 4,670   | 20,811 | 20,574 |
| other                                     | 5,576                 | 6,145   | 1,797  | 2,955  |
| Total                                     | 29,871                | 31,946  | 26,857 | 30,383 |
| Total Above <sup>1/</sup>                 | 113,547               | 106,837 | 32,072 | 46,555 |

<sup>1/</sup> Represents receipts of imported fresh and frozen shrimp at certain customs ports

Source: U.S. Department of Commerce, NMFS, Statistics and Market News Division



TABLE 11

U.S. EXPORTS OF SHRIMP<sup>1/</sup>

| Product type   |               | 1971   | 1972   | 1973   | 1974   |
|----------------|---------------|--------|--------|--------|--------|
| Fresh & Frozen |               |        |        |        |        |
| Domestic       | thous lbs     | 30,003 | 28,984 | 37,434 | 27,816 |
| Foreign        | thous lbs     | 10,475 | 6,095  | 10,212 | 6,617  |
| Total          | thous lbs     | 40,478 | 35,029 | 47,646 | 34,433 |
| Total Value -  | thous dollars | 46,070 | 42,258 | 72,433 | NA     |
| Canned         |               |        |        |        |        |
| Domestic       | thous lbs     | 8,334  | 8,450  | 9,949  | 6,926  |
| Foreign        | thous lbs     | -      | 8      | 42     | 50     |
| Total          | thous lbs     | 8,334  | 8,458  | 9,991  | 6,976  |
| Total Value -  | thous dollars | 9,278  | 10,739 | 14,529 | NA     |
| Total          |               |        |        |        |        |
| Domestic       | thous lbs     | 38,337 | 37,434 | 47,383 | 34,742 |
| Foreign        | thous lbs     | 10,475 | 6,103  | 10,254 | 6,667  |
| Total          | thous lbs     | 48,812 | 43,537 | 57,637 | 41,409 |
| Total Value    | thous dollars | 55,348 | 52,997 | 86,962 | NA     |

<sup>1/</sup> Product weightSource: USDC, NMFS Fisheries of the United States

TABLE 12

## EX-VESSELS PRICES - SHRIMP, GULF AND SOUTH ATLANTIC, ALL SIZES

ANNUAL AVERAGE, 1960-1974

| YEAR | ACTUAL      | DEFLATED<br>BY WPI | INDEX OF<br>DEFLATED PRICE |
|------|-------------|--------------------|----------------------------|
|      | CENTS/POUND |                    | 1960=100                   |
| 1960 | 47          | 49.5               | 100                        |
| 61   | 55          | 58.2               | 117.6                      |
| 62   | 68          | 71.7               | 144.8                      |
| 63   | 50          | 52.9               | 106.9                      |
| 64   | 56          | 59.1               | 119.4                      |
| 1965 | 58          | 60.0               | 121.4                      |
| 66   | 74          | 74.1               | 149.7                      |
| 67   | 64          | 64.0               | 129.3                      |
| 68   | 76          | 74.1               | 149.7                      |
| 69   | 85          | 79.8               | 161.2                      |
| 1970 | 81          | 73.4               | 148.3                      |
| 71   | 96          | 84.3               | 170.3                      |
| 72   | 114         | 95.7               | 193.3                      |
| 73   | 153         | 113.6              | 229.5                      |
| 74   | 122         | 76.0               | 153.5                      |

Source: U.S. Dept. of Commerce, NMFS, Shrimp Landings

TABLE 13

WHOLESALE PRICE, FROZEN RAW HEADLESS SHRIMP,  
ANNUAL AVERAGE, 1960-1974

Wholesale - Chicago

26 - 30 count

| YEAR                                 | ACTUAL | DEFLATED<br>BY WPI | INDEX OF<br>DEFLATED PRICE |
|--------------------------------------|--------|--------------------|----------------------------|
| - - - - CENTS/POUND - - - - 1960=100 |        |                    |                            |
| 1960                                 | 73     | 76.9               | 100                        |
| 61                                   | 77     | 81.5               | 106                        |
| 62                                   | 102    | 107.6              | 140                        |
| 63                                   | 91     | 96.3               | 125                        |
| 64                                   | 82     | 86.6               | 113                        |
| 1965                                 | 90     | 93.2               | 121                        |
| 66                                   | 110    | 110.2              | 143                        |
| 67                                   | 107    | 107.0              | 139                        |
| 68                                   | 120    | 117.1              | 152                        |
| 69                                   | 131    | 123.0              | 160                        |
| 1970                                 | 126    | 114.1              | 148                        |
| 71                                   | 151    | 132.6              | 172                        |
| 72                                   | 189    | 158.7              | 206                        |
| 73                                   | 231    | 171.5              | 223                        |
| 74                                   | 214    | 132.7              | 173                        |

Source: U.S. Dept. of Commerce, NMFS, Economic and Marketing Research Division





TABLE 14

RETAIL PRICE, FROZEN RAW HEADLESS SHRIMP,  
ANNUAL AVERAGE, 1960-1974

Retail - Baltimore,

31 - 42 count

| YEAR | ACTUAL                  | DEFLATED<br>BY WPI | INDEX OF<br>DEFLATED PRICE |
|------|-------------------------|--------------------|----------------------------|
|      | - - - CENTS/POUND - - - |                    | - 1960=100                 |
| 1960 | 103                     | 109                | 100                        |
| 61   | 107                     | 113                | 104                        |
| 62   | 117                     | 123                | 113                        |
| 63   | 114                     | 121                | 111                        |
| 64   | 104                     | 110                | 101                        |
| 1965 | 113                     | 117                | 107                        |
| 66   | 123                     | 123                | 113                        |
| 67   | 131                     | 131                | 120                        |
| 68   | 130                     | 127                | 117                        |
| 69   | 154                     | 145                | 133                        |
| 1970 | 160                     | 145                | 133                        |
| 71   | 175                     | 154                | 141                        |
| 72   | 206                     | 173                | 159                        |
| 73   | 257                     | 191                | 175                        |
| 74   | 265                     | 165                | 151                        |

Source: U.S. Dept. of Commerce, NMFS, Economic and Marketing Research Division.



TABLE 15

## FIRST-OF-THE-MONTH COLD STORAGE HOLDINGS OF SHRIMP, MONTHLY 1971-75

(HEADS-OFF WEIGHT)

| MONTH     | 1971                                             | 1972 | 1973 | 1974 | 1975 |
|-----------|--------------------------------------------------|------|------|------|------|
|           | . . . . . <u>MILLION</u> <u>POUNDS</u> . . . . . |      |      |      |      |
| January   | 72.2                                             | 69.9 | 92.7 | 79.0 | 74.1 |
| February  | 62.6                                             | 68.9 | 82.7 | 80.6 |      |
| March     | 58.2                                             | 61.9 | 79.2 | 78.2 |      |
| April     | 50.5                                             | 58.5 | 67.6 | 80.3 |      |
| May       | 43.0                                             | 56.9 | 58.1 | 76.9 |      |
| June      | 39.4                                             | 59.5 | 54.1 | 70.2 |      |
| July      | 44.9                                             | 64.1 | 51.6 | 69.4 |      |
| August    | 46.6                                             | 69.2 | 52.3 | 66.4 |      |
| September | 56.2                                             | 88.2 | 47.9 | 66.0 |      |
| October   | 65.5                                             | 88.6 | 54.8 | 66.5 |      |
| November  | 66.0                                             | 92.3 | 64.7 | 69.6 |      |
| December  | 68.7                                             | 95.2 | 71.9 | 75.5 |      |

Source: U.S. Department of Commerce, NMFS, Economic and Marketing Research Division



TABLE 16  
SOUTH ATLANTIC AND GULF SHRIMP LANDINGS, MONTHLY 1971-75  
(HEADS-OFF WEIGHT)

| MONTH                             | 1971 | 1972 | 1973 | 1974 | 1975 |
|-----------------------------------|------|------|------|------|------|
| . . . . . MILLION POUNDS. . . . . |      |      |      |      |      |
| January                           | 5.5  | 7.8  | 5.6  | 8.2  |      |
| February                          | 5.1  | 5.7  | 4.2  | 5.7  |      |
| March                             | 4.3  | 5.9  | 4.3  | 4.6  |      |
| April                             | 3.9  | 4.7  | 4.0  | 3.8  |      |
| May                               | 12.6 | 15.1 | 8.7  | 11.2 |      |
| June                              | 21.6 | 19.1 | 19.7 | 15.1 |      |
| July                              | 21.7 | 22.1 | 16.3 | 16.5 |      |
| August                            | 21.9 | 22.5 | 11.7 | 16.3 |      |
| September                         | 17.4 | 18.5 | 13.8 | 12.9 |      |
| October                           | 21.8 | 16.3 | 17.0 | 14.4 |      |
| November                          | 16.9 | 14.1 | 13.6 | 14.3 |      |
| December                          | 10.1 | 9.2  | 11.7 | 8.9  |      |

Source: U.S. Department of Commerce, NMFS, Shrimp Landings



TABLE 17  
TOTAL IMPORTS OF SHRIMP, MONTHLY 1971-75  
(HEADS-OFF WEIGHT)

| MONTH     | 1971           | 1972 | 1973          | 1974 | 1975 |
|-----------|----------------|------|---------------|------|------|
| <hr/>     |                |      |               |      |      |
|           | <u>MILLION</u> |      | <u>POUNDS</u> |      |      |
| January   | 17.6           | 20.0 | 18.5          | 30.0 |      |
| February  | 12.9           | 16.0 | 16.8          | 25.0 |      |
| March     | 16.7           | 16.2 | 16.3          | 21.1 |      |
| April     | 14.9           | 18.3 | 17.0          | 18.5 |      |
| May       | 16.1           | 25.1 | 16.4          | 21.0 |      |
| June      | 17.9           | 23.6 | 15.4          | 19.5 |      |
| July      | 16.5           | 23.6 | 17.0          | 17.7 |      |
| August    | 17.1           | 20.0 | 18.6          | 18.5 |      |
| September | 19.1           | 19.1 | 18.3          | 19.6 |      |
| October   | 19.9           | 29.4 | 30.2          | 27.2 |      |
| November  | 18.9           | 22.2 | 25.2          | 27.4 |      |
| December  | 27.5           | 21.1 | 21.3          | 25.1 |      |

Source: U.S. Department of Commerce, NMFS, Economic and Marketing Research Division



TABLE 18

TOTAL SUPPLIES OF SHRIMP, MONTHLY 1971-75  
(HEADS-OFF WEIGHT)

| MONTH                              | 1971  | 1972  | 1973  | 1974  | 1975 |
|------------------------------------|-------|-------|-------|-------|------|
| . . . . . MILLION POUNDS . . . . . |       |       |       |       |      |
| January                            | 94.4  | 97.1  | 116.8 | 115.5 |      |
| February                           | 80.2  | 89.5  | 103.8 | 109.2 |      |
| March                              | 78.6  | 83.7  | 99.7  | 102.3 |      |
| April                              | 69.0  | 81.3  | 88.5  | 100.9 |      |
| May                                | 71.1  | 96.9  | 83.0  | 108.4 |      |
| June                               | 78.5  | 102.1 | 88.8  | 103.4 |      |
| July                               | 82.7  | 109.6 | 84.6  | 102.4 |      |
| August                             | 85.3  | 111.8 | 82.4  | 100.3 |      |
| September                          | 92.1  | 125.6 | 79.9  | 97.9  |      |
| October                            | 106.9 | 134.2 | 101.5 | 107.9 |      |
| November                           | 101.5 | 128.5 | 103.2 | 111.2 |      |
| December                           | 105.7 | 125.1 | 104.8 | 109.6 |      |

Source: U.S. Department of Commerce, NMFS, Economic and Marketing Research Division



TABLE 19

CONSUMPTION OF FRESH AND FROZEN SHRIMP, MONTHLY 1971-75  
(HEADS-OFF WEIGHT)

| MONTH                                     | 1971 | 1972 | 1973 | 1974 | 1975 |
|-------------------------------------------|------|------|------|------|------|
| . . . . . <u>MILLION POUNDS</u> . . . . . |      |      |      |      |      |
| January                                   | 28.1 | 24.6 | 29.1 | 30.1 |      |
| February                                  | 17.8 | 24.9 | 19.2 | 26.6 |      |
| March                                     | 23.2 | 20.8 | 25.5 | 17.8 |      |
| April                                     | 23.1 | 20.9 | 25.9 | 22.0 |      |
| May                                       | 25.1 | 29.7 | 22.8 | 31.5 |      |
| June                                      | 20.8 | 28.9 | 24.7 | 24.6 |      |
| July                                      | 29.9 | 32.2 | 27.1 | 30.4 |      |
| August                                    | 25.7 | 19.5 | 30.7 | 30.4 |      |
| September                                 | 23.3 | 33.4 | 20.6 | 29.9 |      |
| October                                   | 32.1 | 35.8 | 30.6 | 33.5 |      |
| November                                  | 24.7 | 26.7 | 23.6 | 28.4 |      |
| December                                  | 31.3 | 27.3 | 18.9 | 31.0 |      |

Source: U.S. Department of Commerce, NMFS, Economic and Marketing Research Division





TABLE 20

RATIO OF COLD STORAGE HOLDINGS TO CONSUMPTION FOR SHRIMP,  
MONTHLY, 1971-75

| MONTH     | 1971 | 1972 | 1973 | 1974 | 1975 |
|-----------|------|------|------|------|------|
| January   | 2.5  | 2.8  | 3.2  | 2.6  |      |
| February  | 3.4  | 2.6  | 4.3  | 3.0  |      |
| March     | 2.5  | 2.8  | 3.3  | 4.4  |      |
| April     | 2.2  | 2.7  | 2.7  | 3.7  |      |
| May       | 1.7  | 1.9  | 2.6  | 2.4  |      |
| June      | 1.9  | 2.1  | 2.1  | 2.8  |      |
| July      | 1.5  | 2.0  | 1.9  | 2.3  |      |
| August    | 1.6  | 3.6  | 1.7  | 2.2  |      |
| September | 2.3  | 2.7  | 2.3  | 2.2  |      |
| October   | 2.0  | 2.5  | 1.8  | 1.9  |      |
| November  | 2.7  | 3.2  | 2.7  | 2.4  |      |
| December  | 1.9  | 3.5  | 3.8  | 2.4  |      |

Source: U.S. Department of Commerce, NMFS, Economic and Marketing Research Division



TABLE 21

EXVESSEL PRICE OF SHRIMP, MONTHLY 1971-75<sup>1/</sup>

(CENTS PER POUND)

| MONTH     | 1971 | 1972 | 1973 | 1974 | 1975 |
|-----------|------|------|------|------|------|
| January   | 85   | 126  | 124  | 160  |      |
| February  | 92   | 143  | 146  | 141  |      |
| March     | 107  | 144  | 160  | 157  |      |
| April     | 118  | 147  | 162  | 168  |      |
| May       | 77   | 101  | 130  | 119  |      |
| June      | 64   | 84   | 111  | 90   |      |
| July      | 82   | 107  | 139  | 102  |      |
| August    | 102  | 117  | 177  | 108  |      |
| September | 109  | 126  | 192  | 120  |      |
| October   | 114  | 124  | 167  | 135  |      |
| November  | 108  | 108  | 165  | 128  |      |
| December  | 122  | 112  | 152  | 128  |      |

<sup>1/</sup> Weighted Average ALL SIZES SOUTH ATLANTIC AND GULFSource: U.S. Department of Commerce, NMFS, Shrimp Landings

TABLE 22

## SHRIMP EXVESSEL PRICES FOR SELECTED COUNT SIZES, MONTHLY, 1972-74

| MONTH                               | 15-20 |      |      | 31-40 |      |      | 51-67 |      |      |
|-------------------------------------|-------|------|------|-------|------|------|-------|------|------|
|                                     | 1972  | 1973 | 1974 | 1972  | 1973 | 1974 | 1972  | 1973 | 1974 |
| . . . . . CENTS PER POUND . . . . . |       |      |      |       |      |      |       |      |      |
| January                             | 210   | 166  | 282  | 124   | 133  | 172  | 79    | 71   | 96   |
| February                            | 214   | 176  | 247  | 130   | 148  | 144  | 79    | 90   | 91   |
| March                               | 209   | 189  | 247  | 132   | 157  | 141  | 78    | 101  | 88   |
| April                               | 208   | 195  | 246  | 136   | 162  | 141  | 82    | 109  | 91   |
| May                                 | 208   | 201  | 252  | 136   | 168  | 131  | 70    | 116  | 74   |
| June                                | 200   | 203  | 254  | 123   | 164  | 118  | 67    | 117  | 65   |
| July                                | 204   | 210  | 247  | 122   | 168  | 109  | 80    | 127  | 67   |
| August                              | 173   | 245  | 227  | 120   | 194  | 106  | 81    | 143  | 67   |
| September                           | 168   | 266  | 193  | 124   | 205  | 111  | 75    | 144  | 74   |
| October                             | 167   | 264  | 187  | 129   | 187  | 124  | 86    | 122  | 88   |
| November                            | 159   | 279  | 167  | 128   | 193  | 122  | 84    | 122  | 86   |
| December                            | 157   | 287  | 161  | 130   | 188  | 122  | 78    | 119  | 90   |

Source: U.S. Department of Commerce, NMFS, Shrimp Landings

TABLE 23

WHOLESALE PRICE OF 36-40 COUNT SHRIMP AT  
NEW YORK, N.Y., MONTHLY 1971-75

(CENTS PER POUND)

| MONTH     | 1971 | 1972 | 1973 | 1974 | 1975 |
|-----------|------|------|------|------|------|
| January   | 89   | 135  | 141  | 190  | 156  |
| February  | 99   | 144  | 153  | 171  |      |
| March     | 109  | 148  | 170  | 164  |      |
| April     | 117  | 147  | 180  | 156  |      |
| May       | 124  | 148  | 187  | 155  |      |
| June      | 123  | 141  | 192  | 147  |      |
| July      | 112  | 141  | 184  | 136  |      |
| August    | 124  | 140  | 210  | 132  |      |
| September | 121  | 145  | 218  | 136  |      |
| October   | 120  | 143  | 209  | 145  |      |
| November  | 124  | 138  | 212  | 155  |      |
| December  | 128  | 136  | 200  | 152  |      |

Source: U.S. Department of Commerce, NMFS, Economic and Marketing Research Division



TABLE 24

RETAIL PRICE OF 36-42 COUNT SHRIMP AT  
BALTIMORE, MARYLAND, MONTHLY, 1971-75

(CENTS PER POUND)

| MONTH     | 1971 | 1972 | 1973 | 1974 | 1975 |
|-----------|------|------|------|------|------|
| January   | 154  | 193  | 204  | 314  | 254  |
| February  | 154  | 199  | 209  | 322  |      |
| March     | 150  | 200  | 229  | 299  |      |
| April     | 148  | 214  | 226  | 276  |      |
| May       | 170  | 215  | 228  | 268  |      |
| June      | 184  | 209  | 238  | 262  |      |
| July      | 188  | 209  | 249  | 255  |      |
| August    | 189  | 209  | 273  | 249  |      |
| September | 189  | 209  | 303  | 228  |      |
| October   | 190  | 205  | 305  | 223  |      |
| November  | 194  | 204  | 309  | 238  |      |
| December  | 194  | 206  | 309  | 245  |      |

Source: U.S. Department of Commerce, NMFS, Economic and Marketing Research Division



TABLE 25

SEASONALLY ADJUSTED FIRST-OF-THE-MONTH COLD STORAGE HOLDINGS  
OF SHRIMP, MONTHLY, 1972-75

(PRODUCT WEIGHT)

| MONTH                                                | 1972 | 1973 | 1974 | 1975 |
|------------------------------------------------------|------|------|------|------|
| . . . . . <u>M I L L I O N P O U N D S</u> . . . . . |      |      |      |      |
| January                                              | 61.5 | 79.9 | 70.3 | 67.8 |
| February                                             | 63.9 | 75.1 | 76.4 | 65.7 |
| March                                                | 62.1 | 75.9 | 78.3 |      |
| April                                                | 64.5 | 71.6 | 84.3 |      |
| May                                                  | 68.7 | 68.4 | 87.9 |      |
| June                                                 | 76.2 | 67.2 | 86.5 |      |
| July                                                 | 78.0 | 65.4 | 85.6 |      |
| August                                               | 82.9 | 65.0 | 81.3 |      |
| September                                            | 97.2 | 57.0 | 78.4 |      |
| October                                              | 89.4 | 59.6 | 75.6 |      |
| November                                             | 87.5 | 64.9 | 71.7 |      |
| December                                             | 84.9 | 68.6 | 72.5 |      |

Source: U.S. Department of Commerce, NMFS, Economic and Marketing Research Division





TABLE 26

SEASONALLY ADJUSTED SOUTH ATLANTIC AND GULF  
SHRIMP LANDINGS, MONTHLY, 1972-74

(HEADS-OFF WEIGHT)

| MONTH                                            | 1972 | 1973 | 1974 |
|--------------------------------------------------|------|------|------|
| . . . . . <u>MILLION</u> <u>POUNDS</u> . . . . . |      |      |      |
| January                                          | 14.9 | 10.1 | 14.1 |
| February                                         | 11.8 | 10.2 | 13.7 |
| March                                            | 15.5 | 11.0 | 11.4 |
| April                                            | 13.1 | 11.5 | 10.9 |
| May                                              | 15.8 | 9.1  | 12.1 |
| June                                             | 12.0 | 12.6 | 9.7  |
| July                                             | 14.4 | 10.6 | 11.1 |
| August                                           | 15.7 | 8.3  | 12.6 |
| September                                        | 14.0 | 11.0 | 10.5 |
| October                                          | 11.1 | 12.0 | 10.3 |
| November                                         | 11.6 | 11.1 | 11.6 |
| December                                         | 10.5 | 12.7 | 11.5 |

Source: U.S. Department of Commerce, NMFS, Economic and Marketing Research Division



TABLE 27

SEASONALLY ADJUSTED TOTAL IMPORTS OF SHRIMP, MONTHLY, 1972-74  
(PRODUCT WEIGHT)

| MONTH     | 1972                               | 1973 | 1974 |
|-----------|------------------------------------|------|------|
|           | - - - - - Million Pounds - - - - - |      |      |
| January   | 17.1                               | 15.2 | 22.8 |
| February  | 16.6                               | 16.4 | 22.2 |
| March     | 15.7                               | 16.2 | 19.8 |
| April     | 18.1                               | 17.5 | 17.6 |
| May       | 22.9                               | 15.2 | 18.6 |
| June      | 21.3                               | 14.5 | 17.8 |
| July      | 21.9                               | 16.2 | 16.6 |
| August    | 19.3                               | 17.8 | 17.2 |
| September | 17.4                               | 17.2 | 18.2 |
| October   | 19.7                               | 19.4 | 18.1 |
| November  | 17.1                               | 18.6 | 20.9 |
| December  | 16.5                               | 16.9 | 21.7 |

Source: U.S. Department of Commerce, NMFS, Economic and Marketing Research Division



TABLE 28

SEASONALLY ADJUSTED EXVESSEL PRICE OF SHRIMP, MONTHLY, 1972-74<sup>1/</sup>  
(CENTS PER POUND)

| MONTH     | 1972 | 1973 | 1974 |
|-----------|------|------|------|
| January   | 121  | 121  | 157  |
| February  | 130  | 136  | 134  |
| March     | 124  | 139  | 138  |
| April     | 123  | 136  | 142  |
| May       | 120  | 151  | 136  |
| June      | 120  | 157  | 126  |
| July      | 124  | 160  | 117  |
| August    | 116  | 175  | 106  |
| September | 117  | 177  | 110  |
| October   | 119  | 160  | 120  |
| November  | 110  | 166  | 119  |
| December  | 114  | 154  | 122  |

<sup>1/</sup>Weighted Average All Sizes, South Atlantic and Gulf

Source: U.S. Department of Commerce, NMFS, Economic and Marketing Research Division



TABLE 29

SEASONALLY ADJUSTED WHOLESALE PRICE OF 26-30 COUNT SHRIMP AT  
CHICAGO, IL., MONTHLY, 1972-74

(CENTS PER POUND)

| MONTH     | 1972 | 1973 | 1974 |
|-----------|------|------|------|
| January   | 196  | 183  | 272  |
| February  | 198  | 185  | 242  |
| March     | 196  | 192  | 226  |
| April     | 196  | 195  | 227  |
| May       | 196  | 201  | 225  |
| June      | 187  | 215  | 227  |
| July      | 192  | 224  | 219  |
| August    | 179  | 254  | 183  |
| September | 183  | 275  | 165  |
| October   | 184  | 280  | 193  |
| November  | 178  | 293  | 190  |
| December  | 179  | 294  | 180  |

Source: U.S. Department of Commerce, NMFS, Economic and Marketing Research Division



TABLE 30  
SEASONALLY ADJUSTED RETAIL PRICE OF 36-42 COUNT SHRIMP AT  
BALTIMORE, MARYLAND, MONTHLY, 1972-74

(CENTS PER POUND)

| MONTH     | 1972 | 1973 | 1974 |
|-----------|------|------|------|
| January   | 198  | 207  | 317  |
| February  | 202  | 209  | 320  |
| March     | 202  | 230  | 298  |
| April     | 219  | 232  | 285  |
| May       | 216  | 232  | 277  |
| June      | 208  | 240  | 269  |
| July      | 207  | 250  | 259  |
| August    | 206  | 268  | 245  |
| September | 205  | 296  | 223  |
| October   | 205  | 303  | 220  |
| November  | 201  | 301  | 229  |
| December  | 205  | 306  | 241  |

Source: U.S. Dept. of Commerce, NMFS Economic and Marketing Research Division



TABLE 31  
EXVESSEL PRICE INDEX -- ALL FISH, MONTHLY, 1972-74  
(1967=100)

| MONTH     | 1972  | 1973  | 1974  |
|-----------|-------|-------|-------|
| January   | 154.6 | 190.8 | 260.1 |
| February  | 156.5 | 202.1 | 261.9 |
| March     | 157.8 | 203.2 | 262.7 |
| April     | 158.4 | 208.6 | 262.4 |
| May       | 156.7 | 201.2 | 248.1 |
| June      | 156.6 | 207.1 | 243.7 |
| July      | 163.8 | 233.3 | 241.2 |
| August    | 170.6 | 250.9 | 238.4 |
| September | 170.8 | 253.2 | 225.1 |
| October   | 178.6 | 250.3 | 225.5 |
| November  | 181.2 | 259.1 | 220.7 |
| December  | 184.1 | 268.8 | 211.0 |

Source: U.S. Dept. of Commerce, NMFS, Statistics and Market News Division





TABLE 32  
WHOLESALE PRICE INDEX -- ALL FISH, MONTHLY, 1972-74  
(1967=100)

| MONTH     | 1972  | 1973  | 1974  |
|-----------|-------|-------|-------|
| January   | 156.3 | 174.5 | 215.3 |
| February  | 156.2 | 172.0 | 222.6 |
| March     | 160.1 | 174.7 | 211.9 |
| April     | 163.8 | 176.6 | 222.4 |
| May       | 155.1 | 180.3 | 206.8 |
| June      | 153.1 | 173.6 | 198.3 |
| July      | 157.3 | 186.6 | 205.4 |
| August    | 156.2 | 193.6 | 197.9 |
| September | 159.9 | 203.6 | 196.8 |
| October   | 161.2 | 208.9 | 192.1 |
| November  | 169.2 | 222.3 | 190.6 |
| December  | 165.7 | 223.1 | 194.7 |

Source: Bureau of Labor Statistics, Wholesale Price Index



TABLE 33  
RETAIL PRICE INDEX -- ALL FISH, MONTHLY, 1972-74  
(1967=100)

| MONTH     | 1972  | 1973  | 1974  |
|-----------|-------|-------|-------|
| January   | 134.7 | 149.2 | 184.3 |
| February  | 137.0 | 151.3 | 182.6 |
| March     | 138.3 | 152.8 | 185.2 |
| April     | 139.8 | 156.1 | 186.9 |
| May       | 140.2 | 160.2 | 187.1 |
| June      | 141.3 | 163.7 | 187.1 |
| July      | 142.0 | 163.8 | 188.2 |
| August    | 142.8 | 165.2 | 187.4 |
| September | 144.4 | 167.1 | 188.6 |
| October   | 145.8 | 170.8 | 190.4 |
| November  | 148.0 | 175.8 | 193.6 |
| December  | 148.6 | 178.1 | 194.8 |

Source: Bureau of Labor Statistics, Consumer Price Index



## PROGNOSIS FOR THE FINANCIAL ILLS OF THE GULF SHRIMP INDUSTRY

### An Analysis of Vessel Losses and the Duration of Their Period of Financial Stress \*

#### Introduction

Shrimp vessel operations in the Gulf of Mexico are sustaining heavy financial losses in the wake of events triggered by the energy crisis. These losses can be expected to diminish as the industry moves along a recognizable recovery path, although sizable deficits will accrue. Vessel operators who have suffered financially owing to fuel related problems have an opportunity to apply for emergency financial assistance from the Small Business Administration, by way of loans for operating capital. The loan requirements, from an operator's view and as they relate to the size and conditions of loans, are dependent upon the absolute dollar losses sustained by the vessels, and the duration of the loss period. As an informational aid to SBA, to private creditors, and to the shrimp industry as well, economists in the National Marine Fisheries Service undertook an analysis to determine when profitability will be restored to shrimp vessel operations in the Gulf, and what the dollar losses for the average vessel will amount to up to the point of recovery.

The analysis, of necessity, is couched in certain basic assumptions, namely that: (1) the national economy will begin to recover in 3rd quarter 1975, when inflation rates will subside, and "real" personal disposable incomes will begin again to rise; (2) historic determinants of shrimp prices will continue to operate as in the past; (3) there will be attrition in the numbers of U.S. vessels operating in the Gulf shrimp fishery; and (4) actions by the federal government and private industry will guard against an oversupply of imports of shrimp.

The net result of the analysis is an estimate of the operating results of an average Class III shrimp trawler projected over the period 1973-1977. These are wood vessels, 63-69 feet in length, and their number comprises about 42 percent of the Gulf shrimp fleet of offshore trawlers.

#### Background for Analysis

More than a year has passed since the energy crisis set in motion events that put the Gulf shrimp industry--particularly the vessels sector--in a

\*Prepared by Morton M. Miller and Dr. John E. Greenfield, respectively, Acting Chief, Division of Economics and Marketing Research, NMFS, and Chief, Division of Economics, NMFS Southeast Region.



crippling cost-price squeeze. Conditions going into 1975, however, show definite signs of improvement, although severe financial losses persist throughout the industry. Market mechanisms are working, albeit slowly, to bring about the adjustments necessary to restore profitability to shrimp fishermen in the Gulf, and these "natural" forces are being supplemented by federal and state efforts to speed the process through marketing and financial assistance.<sup>1/</sup>

Prices received by shrimp fishermen appear to have bottomed, and can be expected to firm as supplies are reduced to levels that are compatible with current demand strength. Carryover inventories of frozen shrimp at the start of 1975 were only slightly higher than a year earlier, and were considerably below quantities in storage two years ago. Demand is improving. Consumption of shrimp during the second half of 1974 was up 12 percent from the first half (on a seasonally adjusted basis). The indicated rate of consumption during the final quarter of 1974 was, in fact, a record. Obviously, lower prices have stimulated demand, along with promotional effort, but there are clear indications also that wholesale and exvessel prices are firming. Vessel prices, for example, improved measurably during the 4th quarter of 1974, when prices advanced about 8 percent from the preceding quarter (seasonally adjusted), which now appears to be the bottom period. This encouraging sign, however, must be read in light of the additional fact that 4th quarter 1974 prices were about 25 percent below the same quarter a year earlier.

Vessel costs have continued to rise, in pace with the general rate of inflation. There have been however no recent quantum change in cost schedules, such as occurred in late 1973 when fuel prices suddenly doubled--even tripled in some cases--thereby increasing vessel operating costs by as much as 50 percent. It is reasonable to expect the general rate of inflation in the economy to subside as the economy adjusts into better balance (abetted by an active government role) and this will slow the rise in vessel costs. Also, vessel productivity can be expected to improve. Marginal operators inevitably will drop out of fishing competition over the coming months, leaving fewer vessels to share a relatively fixed resource. This means more catch per unit of effort expended, and of course lower unit costs.

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<sup>1/</sup> An intensive 2-year special marketing program for fishery products is being coordinated by the National Marine Fisheries Service. Supplemental funding in the amount of \$1 million has been provided by the administration from a reserve fed by duties collected on fishery product imports (Saltonstall-Kennedy Act funds).



### Expected Duration of Problem - Historic Precedent

On balance, there are ample signs to warrant optimism about eventual economic recovery in the shrimp industry. There is no cause for glee, however, because recovery, in all likelihood, will constitute a long and arduous process. Moreover, without immediate financial help, many operators with the requisite skills to ride out the financial storm will be foreclosed from that opportunity.

In any event, past history has demonstrated that the shrimp industry is no stranger to economic upheaval. The industry also has shown it is amply resilient and can survive its economic problems. Prior to the current slump, there were downturns in 1954-55, 1958-63, 1967 and 1970. It is probably more than chance that four out of the six shrimp "recessions" over the past 25 years coincided with recession years for the nation as a whole (1954, 1958, 1970 and 1974).<sup>1/</sup> These events, incidentally, testify to the close link between the strength of demand for shrimp and the rise or fall of consumers' discretionary income.

The shrimp industry in the past, however, has not rebounded as quickly from recession periods as has been the case for the national economy, ignoring of course the 1930's. Following the shrimp slump in 1954, for example, it took more than two years for prices and revenues to match former achievement. The dip in 1958 was followed by a further downturn in 1959, and a slow recovery period that endured through 1961. Next, there was a two year recovery period associated with the 1963 setback in the shrimp industry. Subsequent shrimp "recessions", in 1967 and 1970 were more quickly reversed. As to the present crisis, a reasonable assessment is that the recovery period will more closely pattern the longer terms experienced in the early 1960's and 1950's, owing to the depth of the present<sup>2/</sup> condition, and the complex and unprecedented cost factors involved.

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<sup>1/</sup> These are years in which "real" GNP was lower than in the prior year.

<sup>2/</sup> It must be recognized that the fortunes of the shrimp industry are directly exposed to considerable risks from natural phenomenon (weather, environmental hazard, etc.), whereas the national economy in aggregate, is insulated from direct impact of such risks, although not immune from direct impact of such risks, although not immune from their effects.





### A More Precise Assessment of the Problem

Fortunately the data base for shrimp and shrimping operations is advanced enough to support somewhat more precise estimates of the duration of the duration of the presently unfavorable situation. Thanks to a considerable amount of work done at Texas A&M, and partly funded by NMFS, an accurate picture is available of costs and earnings relationships for Gulf offshore shrimp vessels. Thus armed, it is possible to properly join estimates of future costs with future prices and determine expected profitability. This was in fact done, and the following observations were made:

- (1) The average shrimp vessel has incurred operating deficits totaling about \$61,000 for the years 1973-74.
- (2) Losses will continue to mount, although at a diminishing rate, during 1975-76 and into 1977. The 1975-76 operating deficits for the average offshore vessel will total about \$48,000.
- (3) Turnaround will occur sometime in 1977, and the average vessel in that year will show a modest profit--about \$10,000.

Thus something more than 24 months, possibly closer to 36 months (from January 1, 1975) will pass before the cost and earnings situation in shrimp fishing favors profitability. Until such time, the average vessel will have sustained operating losses amounting to more than \$100,000.

### Notes on Estimating Procedure

Possibly a brief narrative explanation of key elements in the estimating procedure will help in evaluating its credibility. As noted, cost and returns information from studies conducted at Texas A&M provided the framework for the analysis. It was necessary, however, to make certain projections of future prices and costs, to be applied to the A&M framework. First, prices: Using quarterly data for 1950-74, regression analysis was used to examine relationships between exvessel prices and several apparent determinants of prices. The objective was to obtain a reasonably accurate predicting equation for projecting exvessel prices at least three years ahead. The selected candidate for this task was an equation that related exvessel prices to: (X1) the total supply of shrimp in the U.S.; (X2) the cost of living (CPI); the price of major competing products, designated (X3) and represented by the CPI for meats; and (X4) discretionary ability of consumers to purchase shrimp as evidenced by "real" disposable personal income.<sup>1/</sup>

<sup>1/</sup> Price = -94.21956 - .31837 (X1) + .20515 (X2) + .68862 (X3) + .04469 (X4) R = .937; Std. error of est. = 10.8025; variables except (X2) significant at 99% level.



Once the coefficients were developed, it was necessary then to project the variables for future years, and some key assumptions were made in doing so, namely that: (1) total supplies would drop moderately until late 1976 in response to voluntary restraints on imports, and then would resume normal growth; (2) the rate of inflation would decrease commencing about mid 1975; (3) meat prices would maintain historic relationships to changes in the CPI; and (4) per capita disposable income will continue to drop in the first quarter of 1975, level, and then proceed to climb in the fourth quarter, rates achieved during the 1960's. Plugging the projected variables into the equation resulted in predicted prices increasing at a rate of about 5 to 6 cents per quarter, and at this rate price levels would match 1973 peaks during the first quarter of 1976. (Prices predicted represent the average price for total landings of all vessel classes in the Gulf and South Atlantic.

The next step was to apply predicted prices to the A&M cost-revenue information--adjusted to an equivalent price that would be representative of the catch associated with Class III trawlers. These prices, annualized, were:

|      |            |
|------|------------|
| 1973 | \$1.93/lb. |
| 1974 | 1.64       |

Projected:

|      |      |
|------|------|
| 1975 | 1.97 |
| 1976 | 2.29 |
| 1977 | 2.58 |

On the cost side, allowance was made for further increases in fuel prices, and other cost increases. Allowance was also made for production increases per vessel totaling about 27 percent over three years, owing to fewer vessels competing for the fixed resource. Changes would also be made in the share system, so as to make it compatible with the higher productivity rates. Crew shares would decrease proportionally, but dollar earnings would rise considerably. This would be acceptable to labor, in light of the substantial dollar gains, and the fact that increased productivity in this case in no way related to increased labor efficiency. It is estimated that in 1974, vessel gross income was equal to about 60 percent of total costs. Projected relationships for following years are:

|      |       |
|------|-------|
| 1975 | 71.5% |
| 1976 | 88.6  |
| 1977 | 107.3 |



Net earnings for the above years amount to:

|      |    |         |
|------|----|---------|
| 1974 | \$ | -43,424 |
| 1975 |    | -33,745 |
| 1976 |    | -14,581 |
| 1977 |    | 10,007  |

(Losses per vessel in 1973 amounted to \$17,521).

Conclusion from Analysis.

Barring unforeseen jolts to the nation's economy--positive or negative--or some adverse biological happenstance that would affect shrimp catches, there is a reasonably high probability that the forecasts contained herein will eventuate within a reasonable margin of error. This confidence stems not merely from the statistical reliability of projections formulated through the use of standard statistical techniques, but on a thorough review of long run trends in the industry (which have been only briefly touched in this narrative) and a fairly intimated knowledge of the industry gained by the authors through relatively long experience. Accordingly, it is the opinion of the authors that the analysis supports a loans policy that would consider delay payback by as much as 36 months in order to allow borrowers to regain adequate financial stability to properly service their long term debts. The burden of no delay, or too brief a moratorium on payback could lead to postponement by vessel operators of critical maintenance expenditures that are necessary to maintain vessel efficiency. This could prolong vessel losses, or in some cases foreclose against a return to profitability and result in defaults on loans. Whatever the case, it is obvious that the intent of the loans would be subverted.

MM, JEG  
11 January 1975



Table 1. Forecast Profitability of Class Offshore Shrimp Trawlers (Per vessel)  
1975, 1976, 1977, and Estimates of 1973-1974 Results\*

|              | Production                               | Price                           | Gross<br>Income | Crew<br>Share         | Fuel                           | All other<br>costs | Total<br>Costs | Net<br>Profit |
|--------------|------------------------------------------|---------------------------------|-----------------|-----------------------|--------------------------------|--------------------|----------------|---------------|
|              | lbs.                                     | \$/lb.                          | \$              | \$                    | \$                             |                    |                |               |
| 1973         | 39,170                                   | 1.93                            | 75,598          | 26,459                | 18,786                         | 47,874             | 93,119         | -17,521       |
| 1974         | 39,170                                   | 1.64                            | 64,239          | 22,484                | 31,560                         | 53,619             | 107,663        | -43,424       |
| 1975         | 43,087                                   | 1.97                            | 84,881          | 25,464                | 34,717                         | 58,445             | 118,626        | -33,745       |
| 1976         | 49,550                                   | 2.29                            | 113,470         | 28,368                | 37,147                         | 62,536             | 128,051        | -14,551       |
| 1977         | 56,983                                   | 2.58                            | 147,016         | 32,343                | 39,004                         | 65,662             | 137,009        | 10,007        |
| ASSUMPTIONS: |                                          |                                 |                 |                       |                                |                    |                |               |
|              | Production Increases:                    |                                 |                 |                       |                                |                    |                |               |
|              | (a) from fewer<br>vessels operat-<br>ing | (b) greater tech.<br>efficiency | Price           | Fuel cost<br>increase | All other<br>cost<br>increases | Crew<br>Shares     |                |               |
| 1973         |                                          |                                 |                 |                       |                                |                    |                |               |
| 1974         | 0                                        | 0                               |                 | +68%                  | +12%                           | 35%                |                |               |
| 1975         | +5%                                      | +5%                             | 1.97            | +10%                  | + 9%                           | 30%                |                |               |
| 1976         | +10%                                     | +5%                             | 2.29            | + 7%                  | + 7%                           | 25%                |                |               |
| 1977         | +10%                                     | +5%                             | 2.58            | + 5%                  | + 5%                           | 22%                |                |               |

\*73/74 estimates from Texas A&M Cost/Earnings Studies

Table 2. Parameters for Price Estimating Equation\*

|      |          | (1)                               | (2)                    | (3)                       | (4)                                               |                                                                          |
|------|----------|-----------------------------------|------------------------|---------------------------|---------------------------------------------------|--------------------------------------------------------------------------|
|      |          | Total<br>Supplies<br>(seas. adj.) | CPI-All<br>Commodities | CPI-Meats<br>(seas. adj.) | Per Cap. Disp.<br>"Real" Income<br>(1958 dollars) | Average Ex-<br>vessel Price<br>Gulf & S. A.<br>all sizes<br>(seas. adj.) |
|      |          | mil. lbs.                         | 1967=100               | 1967=100                  | \$                                                | \$/lb.                                                                   |
| 1974 | actual 1 | 167.3                             | 139.1                  | 177.7                     | 3233                                              | 1.44                                                                     |
|      | actual 2 | 179.8                             | 143.4                  | 160.3                     | 3192                                              | 1.36                                                                     |
|      | actual 3 | 181.4                             | 147.5                  | 158.5                     | 3185                                              | 1.10                                                                     |
|      | est. 4   | 176.0                             | 151.4                  | 170.9                     | 3168                                              | 1.25                                                                     |
| 1975 | fore- 1  | 170.0                             | 155.4                  | 177.3                     | 3136                                              | 1.46 *                                                                   |
|      | cast 2   | 165.0                             | 159.6                  | 182.1                     | 3136                                              | 1.51                                                                     |
|      | " 3      | 160.0                             | 164.0                  | 187.1                     | 3161                                              | 1.58                                                                     |
|      | " 4      | 155.0                             | 167.1                  | 190.7                     | 3189                                              | 1.64                                                                     |
| 1976 | " 1      | 155.0                             | 170.9                  | 197.7                     | 3221                                              | 1.71                                                                     |
|      | " 2      | 156.0                             | 174.8                  | 202.2                     | 3250                                              | 1.77                                                                     |
|      | " 3      | 156.0                             | 178.9                  | 207.0                     | 3296                                              | 1.83                                                                     |
|      | " 4      | 157.0                             | 183.0                  | 211.7                     | 3337                                              | 1.88                                                                     |
| 1977 | " 1      | 157.0                             | 186.4                  | 218.6                     | 3385                                              | 1.95                                                                     |
|      | " 2      | 158.0                             | 189.3                  | 222.0                     | 3436                                              | 2.01                                                                     |
|      | " 3      | 159.0                             | 192.5                  | 225.8                     | 3491                                              | 2.06                                                                     |
|      | " 4      | 160.0                             | 195.8                  | 229.7                     | 3540                                              | 2.11                                                                     |

\*Predictions made on basis of following equation:

$$\text{Prices} = -94.21956 - .31837 (X_1) + .20515 (X_2) + .68862 (X_3) + .04469 (X_4)$$

(4.256)      (.52605)      (3.70823)      (6.150)

Parens are t values

R= .93692      F-ratio = 168.833, 4 on 94 d.f.

Std. error of est. = 10.80251

Table 3. Trends in Landings/Prices of Shrimp,  
Gulf and South Atlantic  
Third Quarter Data 1950-1974

|          | Landings  | Exvessel<br>Avg. Price | Value of<br>Catch | "Real" Avg.<br>Price-deflat-<br>ed by CPI,<br>1967=100 | "Real" Value<br>of catch in<br>1967 dollars |
|----------|-----------|------------------------|-------------------|--------------------------------------------------------|---------------------------------------------|
|          | (mil lbs) | (cents/lb.)            | (\$ mil)          | (cents/lb.)                                            | \$ (mil)                                    |
| 1950     | 34.1      | 37                     | 12.6              | 46                                                     | 15.7                                        |
| 1951     | 43.1      | 31                     | 13.4              | 36                                                     | 15.5                                        |
| 1952     | 42.4      | 41                     | 17.4              | 47                                                     | 19.9                                        |
| 1953     | 49.1      | 45                     | 22.1              | 52                                                     | 25.5                                        |
| 1954 R/S | 50.0      | 30                     | 15.0              | 35                                                     | 17.5                                        |
| 1955 S   | 56.3      | 38                     | 21.4              | 45                                                     | 25.3                                        |
| 1956     | 44.7      | 52                     | 23.2              | 60                                                     | 26.8                                        |
| 1957     | 44.1      | 62                     | 27.3              | 70                                                     | 30.9                                        |
| 1958 R/S | 43.5      | 61                     | 26.5              | 67                                                     | 29.1                                        |
| 1959 S   | 54.4      | 41                     | 22.3              | 45                                                     | 24.5                                        |
| 1960 S   | 61.0      | 45                     | 27.5              | 49                                                     | 29.9                                        |
| 1961 S   | 31.1      | 56                     | 17.4              | 61                                                     | 19.0                                        |
| 1962     | 37.6      | 70                     | 26.3              | 75                                                     | 28.2                                        |
| 1963 S   | 54.1      | 50                     | 27.1              | 53                                                     | 28.6                                        |
| 1964 S   | 44.5      | 54                     | 24.0              | 57                                                     | 25.4                                        |
| 1965 S   | 47.8      | 56                     | 26.7              | 58                                                     | 27.7                                        |
| 1966     | 49.2      | 78                     | 38.4              | 79                                                     | 38.9                                        |
| 1967 S   | 60.4      | 61                     | 36.8              | 60                                                     | 36.2                                        |
| 1968     | 55.1      | 75                     | 41.3              | 72                                                     | 39.7                                        |
| 1969     | 52.5      | 84                     | 44.1              | 77                                                     | 40.4                                        |
| 1970 R/S | 56.1      | 75                     | 42.1              | 66                                                     | 37.0                                        |
| 1971     | 62.2      | 98                     | 60.9              | 83                                                     | 51.6                                        |
| 1972     | 64.7      | 117                    | 75.7              | 96                                                     | 62.1                                        |
| 1973     | 43.0      | 169                    | 72.7              | 128                                                    | 55.0                                        |
| 1974 R/S | 47.3      | 126                    | 59.5              | 88                                                     | 41.6                                        |

Note: R = Recession year for national economy  
 S = Recession year for shrimp industry

Table A1-- Shrimp landings by area, monthly, 1973 and 1974 <sup>2/</sup>

| Month                      | Gulf | New<br>England   | Pacific | South<br>Atlantic | Total |
|----------------------------|------|------------------|---------|-------------------|-------|
| ----- Million pounds ----- |      |                  |         |                   |       |
| <u>1973</u>                |      |                  |         |                   |       |
| January                    | 5.4  | 1.9              | 5.9     | 0.2               | 13.4  |
| February                   | 4.1  | 2.2              | 5.6     | .1                | 12.0  |
| March                      | 4.3  | 3.1              | .1      | <u>1/</u>         | 7.4   |
| 1st quarter                | 13.8 | 7.2              | 11.6    | .3                | 32.9  |
| April                      | 4.0  | .9               | 3.1     | <u>1/</u>         | 8.0   |
| May                        | 8.1  | .7               | 5.7     | .6                | 15.1  |
| June                       | 18.1 | 1.0              | 7.1     | 1.7               | 27.9  |
| 2d quarter                 | 30.2 | 2.6              | 15.9    | 2.3               | 51.0  |
| July                       | 14.5 | .6               | 10.0    | 1.6               | 26.7  |
| August                     | 9.7  | .2               | 12.3    | 1.9               | 24.1  |
| September                  | 10.3 | .4               | 10.9    | 3.3               | 24.9  |
| 3d quarter                 | 34.5 | 1.2              | 33.2    | 6.8               | 75.7  |
| October                    | 14.0 | .2               | 8.3     | 2.6               | 25.1  |
| November                   | 11.3 | .2               | 7.5     | 2.0               | 21.0  |
| December                   | 10.4 | .4               | 6.2     | 1.1               | 18.1  |
| 4th quarter                | 35.7 | .8               | 22.0    | 5.7               | 64.2  |
| <u>1974</u>                |      |                  |         |                   |       |
| January                    | 7.9  | 1.2 <sup>o</sup> | 4.3     | .3                | 13.7  |
| February                   | 5.6  | 2.0              | 2.9     | .1                | 10.6  |
| March                      | 4.5  | 1.6              | 1.6     | .1                | 7.8   |
| 1st quarter                | 18.0 | 4.8              | 8.8     | .5                | 32.1  |
| April                      | 3.6  | 1.1              | 3.5     | .2                | 8.4   |
| May                        | 10.0 | .7               | 5.7     | 1.3               | 17.7  |
| June <u>3/</u>             | 13.8 | 1.0              | 6.3     | 1.8               | 22.9  |
| 2d quarter                 | 27.4 | 2.8              | 15.5    | 3.3               | 49.0  |
| July                       | 14.3 | .9               | 7.9     | 2.1               | 25.2  |
| August                     | 14.0 | .3               | 11.5    | 2.2               | 28.0  |
| September                  | 10.2 | .4               | 7.2     | 2.7               | 20.5  |
| October                    | 12.4 | .3               | 11.1    | 2.0               | 25.8  |

<sup>1/</sup> Less than 51,000 pounds<sup>2/</sup> Preliminary<sup>3/</sup> Estimated

Note: Figures may not add to total because of rounding.





Table A2-- U.S. shrimp imports by product type, monthly, 1973 and 1974

(Product weight)

| Month                      | Raw<br>headless | Raw<br>peeled | Canned | Other | Total | Total<br>heads-off<br>weight |
|----------------------------|-----------------|---------------|--------|-------|-------|------------------------------|
| ----- Million pounds ----- |                 |               |        |       |       |                              |
| <b>1973</b>                |                 |               |        |       |       |                              |
| January                    | 10.6            | 5.4           | 0.1    | 0.4   | 16.5  | 18.5                         |
| February                   | 8.8             | 5.5           | .2     | .3    | 14.8  | 16.8                         |
| March                      | 9.3             | 4.4           | .2     | .5    | 14.4  | 16.3                         |
| 1st quarter                | 28.7            | 15.3          | .5     | 1.2   | 45.7  | 51.6                         |
| April                      | 10.3            | 4.4           | .2     | .3    | 15.2  | 17.0                         |
| May                        | 9.4             | 4.4           | .3     | .4    | 14.5  | 16.4                         |
| June                       | 8.5             | 4.7           | .4     | 1/    | 13.6  | 15.4                         |
| 2d quarter                 | 28.2            | 13.5          | .9     | .7    | 43.3  | 48.8                         |
| July                       | 8.3             | 5.9           | .3     | .2    | 14.7  | 17.0                         |
| August                     | 8.5             | 7.1           | .1     | .3    | 16.0  | 18.6                         |
| September                  | 9.8             | 6.0           | .2     | .2    | 16.2  | 18.3                         |
| 3d quarter                 | 26.6            | 19.0          | .6     | .7    | 46.9  | 53.9                         |
| October                    | 16.7            | 8.6           | .3     | .8    | 26.4  | 30.2                         |
| November                   | 12.3            | 8.3           | .3     | .8    | 21.7  | 25.2                         |
| December                   | 10.8            | 6.7           | .4     | .5    | 18.4  | 21.3                         |
| 4th quarter                | 39.8            | 23.6          | 1.0    | 2.1   | 66.5  | 76.7                         |
| <b>1974</b>                |                 |               |        |       |       |                              |
| January                    | 14.3            | 9.2           | .8     | 1.0   | 25.3  | 30.0                         |
| February                   | 10.4            | 8.9           | 1.1    | .5    | 20.9  | 25.0                         |
| March                      | 9.6             | 6.6           | .8     | .6    | 17.6  | 21.1                         |
| 1st quarter                | 34.3            | 24.7          | 2.7    | 2.1   | 63.8  | 76.0                         |
| April                      | 8.8             | 5.2           | .8     | .6    | 15.4  | 18.5                         |
| May                        | 9.2             | 7.3           | .4     | .7    | 17.7  | 21.0                         |
| June                       | 7.9             | 6.8           | .7     | .7    | 16.1  | 19.5                         |
| 2d quarter                 | 25.9            | 19.3          | 1.9    | 2.0   | 49.2  | 59.0                         |
| July                       |                 |               |        |       |       | 17.7                         |
| August                     |                 |               |        |       |       | 18.5                         |
| September                  |                 |               |        |       |       | 19.6                         |
| October                    |                 |               |        |       |       | 27.2                         |

1/ Less than 51,000 pounds

Note: Figures may not add to total because of rounding.



Table A4-- First-of-the month cold storage holdings of shrimp, monthly, 1973 and 1974

(Product weight)

| Month                      | Raw<br>headless | Breaded | Peeled | Unclassified | Total | Total<br>heads-off<br>weight |
|----------------------------|-----------------|---------|--------|--------------|-------|------------------------------|
| ----- Million pounds ----- |                 |         |        |              |       |                              |
| January                    | 52.7            | 10.2    | 25.7   | 7.2          | 95.8  | 92.7                         |
| February                   | 45.6            | 9.7     | 23.7   | 7.0          | 85.9  | 82.7                         |
| March                      | 40.4            | 9.8     | 25.0   | 6.0          | 81.2  | 79.2                         |
| April                      | 32.3            | 11.0    | 21.7   | 6.3          | 71.3  | 67.6                         |
| May                        | 29.4            | 10.0    | 17.1   | 6.3          | 62.8  | 58.2                         |
| June                       | 26.2            | 10.9    | 16.1   | 4.6          | 57.8  | 54.2                         |
| July                       | 25.7            | 11.1    | 14.3   | 5.4          | 56.5  | 51.6                         |
| August                     | 26.8            | 11.3    | 14.0   | 4.5          | 56.6  | 52.3                         |
| September                  | 24.6            | 9.9     | 13.0   | 4.2          | 51.7  | 47.9                         |
| October                    | 30.1            | 10.6    | 13.8   | 3.7          | 58.2  | 54.8                         |
| November                   | 35.6            | 12.9    | 16.0   | 4.4          | 69.0  | 64.7                         |
| December                   | 42.1            | 14.0    | 16.0   | 5.7          | 77.8  | 72.0                         |
| January                    | 47.1            | 14.6    | 17.4   | 4.9          | 84.0  | 79.0                         |
| February                   | 48.8            | 14.4    | 17.2   | 7.4          | 87.8  | 80.6                         |
| March                      | 46.7            | 12.5    | 17.9   | 7.8          | 84.9  | 78.3                         |
| April                      | 45.5            | 12.0    | 20.7   | 7.4          | 85.6  | 80.3                         |
| May                        | 45.4            | 11.2    | 18.6   | 7.1          | 82.3  | 77.0                         |
| June                       | 39.2            | 11.0    | 18.2   | 7.3          | 75.8  | 70.2                         |
| July                       | 37.8            | 10.4    | 18.5   | 7.9          | 74.6  | 68.8                         |
| August                     | 33.5            | 9.9     | 20.2   | 7.5          | 71.1  | 66.4                         |
| September                  | 30.9            | 9.0     | 22.0   | 6.5          | 68.9  | 66.0                         |
| October                    | 32.5            | 9.3     | 21.0   | 8.7          | 71.8  | 66.5                         |
| November                   | 36.7            | 9.4     | 20.4   | 8.5          | 74.9  | 69.6                         |
| December                   | 37.8            | 10.0    | 21.7   | 8.5          | 80.0  | 74.7                         |



Table A6-- Supply and utilization of fresh and frozen shrimp, monthly, 1973 and 1974 1/

(Head of weight)

| Month                      | Supply              |          |         |       | Ending<br>stocks | Utilization       |                   |                | Apparent consumption |            |
|----------------------------|---------------------|----------|---------|-------|------------------|-------------------|-------------------|----------------|----------------------|------------|
|                            | Beginning<br>stocks | Landings | Imports | Total |                  | Exports           |                   | Canned<br>pack | Total                | Per capita |
|                            |                     |          |         |       |                  | Fresh &<br>frozen | Foreign<br>shrimp |                |                      |            |
| ----- Million pounds ----- |                     |          |         |       |                  |                   |                   |                |                      |            |
| 1973                       |                     |          |         |       |                  |                   |                   |                |                      | Pounds     |
| January                    | 92.7                | 7.5      | 18.3    | 118.5 | 82.7             | 3.7               | 0.8               | 0.5            | 30.8                 | 0.147      |
| February                   | 82.7                | 6.3      | 16.5    | 105.7 | 79.2             | 3.6               | 1.3               | .4             | 21.1                 | .101       |
| March                      | 79.2                | 7.3      | 15.8    | 102.3 | 67.6             | 4.9               | 1.7               | -              | 28.0                 | .134       |
| 1st quarter                | 92.7                | 21.1     | 50.6    | 164.6 | 67.6             | 12.2              | 3.8               | .9             | 79.9                 | .382       |
| April                      | 67.6                | 4.9      | 16.5    | 89.0  | 58.2             | 2.8               | 1.6               | -              | 26.4                 | .125       |
| May                        | 58.2                | 9.1      | 13.6    | 82.9  | 54.2             | 3.1               | 1.1               | 1.8            | 21.9                 | .104       |
| June                       | 54.2                | 20.2     | 14.9    | 90.0  | 51.6             | 2.7               | 1.8               | 7.9            | 26.0                 | .124       |
| 2d quarter                 | 67.6                | 34.2     | 45.0    | 146.8 | 51.6             | 8.6               | 4.5               | 9.7            | 73.3                 | .354       |
| July                       | 51.6                | 16.7     | 16.4    | 84.7  | 52.3             | 2.7               | .4                | 2.2            | 28.0                 | .133       |
| August                     | 52.3                | 11.7     | 18.4    | 82.4  | 47.9             | 2.9               | .4                | .6             | 30.6                 | .146       |
| September                  | 47.9                | 14.1     | 18.0    | 80.1  | 53.8             | 2.9               | .2                | 1.4            | 21.7                 | .103       |
| 3d quarter                 | 51.6                | 42.5     | 52.8    | 146.9 | 53.8             | 8.5               | 1.0               | 4.2            | 79.4                 | .382       |
| October                    | 53.8                | 16.7     | 28.1    | 98.6  | 64.7             | 2.5               | .3                | 3.5            | 27.6                 | .131       |
| November                   | 64.7                | 13.4     | 24.6    | 102.7 | 72.0             | 3.1               | .4                | 4.1            | 23.1                 | .110       |
| December                   | 72.0                | 12.0     | 20.4    | 104.4 | 79.0             | 2.6               | .4                | 3.4            | 19.0                 | .090       |
| 4th quarter                | 53.8                | 42.1     | 73.2    | 169.1 | 79.0             | 8.2               | 1.1               | 11.0           | 69.8                 | .331       |
| 1974                       |                     |          |         |       |                  |                   |                   |                |                      |            |
| January                    | 79.0                | 9.4      | 28.3    | 116.7 | 80.6             | 2.8               | .5                | 1.6            | 31.2                 | .148       |
| February                   | 80.6                | 7.7      | 22.9    | 111.2 | 78.3             | 2.7               | .3                | 1.3            | 28.6                 | .136       |
| March                      | 78.3                | 6.2      | 19.5    | 104.0 | 80.3             | 2.9               | .7                | .6             | 19.5                 | .092       |
| 1st quarter                | 79.0                | 23.3     | 70.7    | 173.0 | 80.3             | 8.4               | 1.5               | 3.5            | 79.3                 | .376       |
| April                      | 80.3                | 4.8      | 16.9    | 102.0 | 77.0             | 1.5               | .4                | 1.5            | 21.6                 | .102       |
| May                        | 77.0                | 11.9     | 20.1    | 109.0 | 70.2             | 2.4               | .7                | 2.4            | 33.3                 | .158       |
| June                       | 70.2                | 18.6     | 16.6    | 105.4 | 68.8             | 2.2               | .8                | 6.4            | 27.2                 | .129       |
| 2d quarter                 | 80.3                | 35.3     | 53.6    | 169.2 | 68.8             | 6.1               | 1.9               | 10.3           | 82.1                 | .389       |
| 3d quarter                 | 69.4                | 47.1     | 53.3    | 169.8 | 66.5             | 5.7               | 1.2               | 5.5            | 90.9                 |            |

1/ Preliminary

Note: Figures may not add to total because of rounding.