

ber that the methods and standards of such an operation are vastly different. Useless weight must be eliminated, the temperatures of the product kept in the thirties, and time saved.

A step by step guide for the packaging and marketing of airborne seafoods together with detailed information on production, consumption, costs and propensity to air carriage appears in the study "Markets for Airborne Seafoods." Developments in the industry since publication of this study indicate, however, that a realistic research job has been done. It is believed to be a blueprint that will work if sensible adaptations are made in it.

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## **An Economic Survey of the Texas Fishing Industry**

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THE TEXAS GAME, FISH AND OYSTER COMMISSION MARINE LABORATORY made an attempt to survey the dollar value of the Texas fishing industry. Little was known of the economic condition of the fishing industry along the Texas coast because Stevenson's work (1863) is, of course, outdated. The expansion of the frozen food industry has made the work of Woolrich (1946) inaccurate for general use. The work of Woolrich and Stevenson was and is of great value but with the change of the economic standards after World War II there was a need for a re-valuation of the Texas fishing industry.

McDaniel (1949) estimated that the commercial seafood industry had an investment in Texas amounting to \$40,325,000.00. This estimate considered not only the investment along the coast but also the investment of many inland retailers, wholesalers and freezing plants dealing with marine products. The survey by the Marine Laboratory did not include these inland investments nor did it include seafood cafes inland or on the coast. McDaniel's estimate of the value of 2,220 fishing boats is only \$4,400,000.00, which is very conservative. The number of fishermen on fishing boats is higher than reported in this survey but probably includes many of the part-time fishermen in skiffs.

Under the direction of Mr. J. L. Baughman, Chief Marine Biologist, Texas Game, Fish and Oyster Commission, Mr. Byron B. Baker, Jr., Mr. F. M. Daugherty, Jr. and the author contacted the owners of the various commercial fish houses, boats, shipyards and freezing plants. A standard questionnaire form was used to record the information given us. Each owner was assured that the information would be used to compile totals for each area and that the information would not be used singularly for any one house, boat, shipyard or freezing plant. In many cases the information was taken from the company books. All information is based on the calendar year 1948.

The extent of the fishing industry made it impossible to cover every detail and the values expressed represent only the basic value of the industry. In the expressed totals the figures were rounded off to the nearest one hundred or one thousand dollars depending on the figure in question.

The figures in Tables 1 and 2 represent only the major items considered. Many minor items are not included.

### **Commercial Fish Houses**

In 1948 there were 83 commercial fish houses on the Texas coast with a total investment valuation of \$2,583,000.00. The payroll for the permanent em-

**TABLE 1**  
**VALUATION AND EXPENSES OF THE TEXAS GULF COAST FISHING INDUSTRY**

FISH HOUSES	
<i>Houses</i>	
Number .....	83
Valuation .....	\$2,583,000.00
<i>Permanent Employees</i>	
Number .....	319
Payroll .....	\$748,000.00
<i>Part Time Employees</i>	
Payroll .....	\$429,000.00
<i>House Owned Trucks</i>	
Number .....	151
Valuation .....	\$329,000.00
Expense .....	\$166,000.00
FISHING BOATS	
Number .....	1,393
Valuation .....	\$7,383,000.00
<i>Expense</i>	
Maintenance .....	\$1,180,400.00
Fuel .....	\$1,199,600.00
Ice .....	\$ 855,000.00
FREEZING AND COLD STORAGE	
<i>Capacity in pounds of Marine Products</i>	
Freezing 24 hrs. ....	528,200
Storage above 32° F. ....	712,000
Storage below 32° F. ....	2,473,300
SHIPYARDS	
Number .....	21
Valuation .....	\$1,623,000.00
Payroll .....	\$ 575,000.00
CHARTER BOATS	
Number .....	114
Valuation .....	\$415,000.00
Maintenance .....	\$ 80,000.00
Fuel .....	\$ 67,000.00

**TABLE 2**  
**VALUATION AND EXPENSES OF THE TEXAS GULF COAST FISHING INDUSTRY**

AREA	CAPITAL INVESTMENT	VALUATION	EXPENSE
1. Port Isabel	\$ 1,111,000		\$ 347,000
2. Corpus Christi	986,000		740,000
3. Port Aransas	200,000		93,400
4. Aransas Pass	1,313,000		441,000
5. Rockport	1,311,000		454,000
6. Port Lavaca	683,000		1,025,000
7. Palacios	1,116,000		379,000
8. Matagorda	92,000		49,000
9. Freeport	444,000		172,000
10. Houston	378,000		171,000
11. Galveston Bay	899,000		198,000
12. Galveston	1,665,000		963,000
13. Port Arthur	2,135,000		997,000
<b>TOTAL</b>	<b>\$12,333,000</b>		<b>\$6,029,400</b>

ployees in these 83 houses exceeded \$748,000.00. There were 319 permanent employees concerned. The payroll for the part-time employees exceeded \$429,000.00. It was impossible to determine the number of part-time employees.

There were 151 house-owned trucks with a total value of \$329,000. The truck operating expense exceeded \$166,000.00 in 1948. Generally, shipments of marine products are F.O.B. the point of origin, and charges are paid by the receiving company.

The type of construction and floor space of the houses was considered but is too general to be shown here.

### ***Fishermen***

In 1948 there were 2,557 commercial fishermen on the Texas coast as compared to the 601 reported by the U.S. Fish Commission in 1880. Stevenson reported that there were 1,277 commercial fishermen in 1890. He reported a property value of only \$315,000. This property value of \$315,000 was based on the value of the sail craft, skiffs, apparatus of capture, shore property and cash capital.

In 1948 the fishermen received \$6,500,000 for their catch. This estimated value is based on the production figures and average price in 1948. It should be noted that this estimated figure is above the total expense of the fishing industry.

### ***Fishing Boats***

There were 1,393 commercial fishing boats in use in 1948. Their value exceeded \$7,383,000. The maintenance costs on these boats was slightly over \$1,180,000 which included haul-outs and mechanical work. The fuel costs for 125 diesel boats and 1,221 gasoline powered boats was \$1,199,600. There were 47 sail boats fishing on the Texas coast. The annual ice cost was \$855,000 while gear maintenance cost was \$729,400. The total expense of the fishing boats was \$3,964,000 in 1948.

Twenty-four of the fishing boats had depth recorders. The number of fishing boats with depth recorders is increasing. Two hundred and fifty-two boats were equipped with radio receivers while 168 other boats had two-way radios.

The fishing days per boat ranged from 60 to 220. The average number of working days per year was 140.

### ***Freezing and Cold Storage***

Woolrich listed several freezing plants with a freezing capacity of 500,000 pounds for each twenty-four hour period. This economic survey of the Gulf Coast considered all but one of the freezing plants listed by Woolrich. Comparable figures would show a freezing capacity of 600,000 pounds each twenty-four hour period in 1948.

The storage capacity for marine products below 32° F. totaled 2,473,300 pounds in 1948. The same type storage capacity in 1946 was only slightly over one million pounds.

The storage capacity for marine products above 32° F. in 1948 was 712,000 pounds.

### ***Ship Yards***

Boat maintenance is an important item to the boat owners of the Texas coast. There were twenty-one boat yards in Texas doing work on fishing boats. Fishing boat maintenance, that year, amounted to over \$1,180,000. The twenty-one boat yards had a total of 296 permanent employees. The payroll for these employees was \$575,000.

### ***Charter Boats***

At first glance, the charter boat service to the sports fishermen along the Texas coast appears to be of great importance. When one drives along the docks at Corpus Christi, Port Aransas or Port Isabel, Texas, it appears that there is a great amount of money invested in the charter boat service. Survey figures do not show this to be true.

The Port Aransas area has a total of \$188,000 invested in the charter boat service. Their annual maintenance cost is \$35,000, while the annual fuel cost

is \$40,000. With a capital investment of \$70,000, Corpus Christi ranks second in charter boat service. Their annual maintenance cost was set at \$5,000. The annual fuel cost was estimated at \$3,000.

Port Isabel has a capital investment of \$40,000. The annual maintenance and fuel costs are not known.

The total value of 114 charter boats on the Texas coast was set at \$415,000. The maintenance cost was \$80,000 and the fuel cost for the same period was \$67,000.

### ***Grand Totals***

The valuation and expenses of the Texas Gulf coast fishing industry are shown by items in Table 1. The number and valuation of the commercial fish houses is shown on Table 1. The permanent and part-time employee payroll for the fish houses was in excess of one million dollars. The house owned trucks were valued at \$329,000 and their maintenance cost was \$166,000 in 1948. The number of commercial fishing boats was 1,393 with a total valuation of \$7,383,000. The total expense of these boats was \$3,964,400 during the above mentioned period.

Table 1 also shows the freezing and cold storage capacity of the freezing plants. It shows the total number and valuation of the ship yards and also the number and valuation of the charter boats with their maintenance and fuel costs.

Table 2 shows the valuation and expenses of the Texas fishing industry by area. The Port Aransas, Galveston, Rockport, Aransas Pass, Palacios and Port Isabel areas have the greatest capital investment. In all probability they are the greatest producers of marine products on the Texas coast. There is no basis for a comparison of the valuations and expenses as shown in Table 2.

### ***Summary***

The work of Stevenson (1893) gives us a good means of comparison of the increased capital investment and expenses. In 1948 there was \$12,333,000 invested in the fishing industry of the Texas coast. Stevenson reported \$315,427 in 1890 or about 39 per cent of today's investment.

Woolrich (1946) reported that there was a freezing capacity of about 500,000 pounds of marine products in the various freezing plants on the Texas coast. In 1948 this capacity had increased to 600,000 pounds.

The capital investment valuations in this report are not as high as those shown by McDaniel (1949). This report does not consider the many types of businesses that lie inland and deal with marine products.

Texas is growing! This important production of our natural resources is linked directly with the sorely needed increased production of industrial products. The increased production of our natural resources in the past thirty years has made it necessary to impose upon the producers various types of management regulations.

Farm products have felt the restriction and aid of the federal government. The oil industry in Texas has seen the restriction of oil production as a conservation measure. Likewise, the producers of marine products have had restrictions imposed upon them to stop needless waste.

Today the production of these products is above the production of yesteryear, and rightly so. The increased need by the people of the world has forced production up and up. The restrictions, we hope, have not retarded the needed production but have limited and decreased the waste above and beyond the production that could be utilized.

As time goes on each industry looks for new fields into which it can expand. The fishing industry is no exception. Since 1946 the red shrimp production has aided the fishermen of the Texas coast. In 1948 mullet fishery was opened on a small scale. There is now a possibility of a shark fishery on the Texas coast. These new products call for a higher capital investment and higher expenses and at the same time benefit the fishing industry to the people of Texas.

The people of the nation and the world benefit from the added investment and expenses. This money goes to various places to produce the needed equipment and materials for the increased production.

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## **The Legislative Situation on Sponges**

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### **1. General Background of the Present Condition of the Sponge Market**

BEFORE REFERRING to the legislative situation on sponges, the general background of the present condition of the American and Caribbean sponge market must be discussed.

The principal commercial sponges are sheepswool, yellow, velvet, grass, wire, reef, and hardhead, largely from the waters of the United States, Cuba, and the Bahamas; and Turkey cup, Turkey toilet, Zimocca, elephant-ear and honey-comb or Mandruke, chiefly from the Mediterranean countries. The Turkey cup, Turkey toilet, and minor species of similar texture are marketed in the United States as Mediterranean silk sponges. The West Indian reef sponges are finer grades of hardhead from the same source are marketed as American silk sponges.

The best grades of American sponges are obtained by divers who descend in diving suits to depths of 100 feet or more. Sponges in shallower waters are gathered from boats by pronged hooks on the ends of long poles. The use of drag nets does a great deal of harm to the sponge beds because it uproots small sponges as well as those of marketable size, and is therefore not permitted in the Florida sponge fishery.

### **2. American Production of Sponges**

There were employed about 730 sponge fishermen in 1940 and 1123 in 1939. Many in the meantime migrated to other employment. Where formerly 200 boats were employed there are now 60.

The production of sponges in the United States is confined to a limited area along the West Coast of Florida, and yielded a production of 158,304 pounds in 1947, at \$1,741,883, or \$11 per pound. Among the 1947 production were 12,456 lbs. large wool; 15,715 lbs. small wool; 99,408 lbs. wool rags; 127,579 lbs. total wool; 11,220 lbs. yellow and 19,505 lbs. grass sponges. Fluctuations in the annual catch, at least until the middle '30's, were caused mainly by