

**Mail Survey of the U.S. Seafood Wholesale Market Channel with an  
Emphasis on Whole Farmed Marine Shrimp**

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Technical Report No. 79  
November, 1992

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This work was partially funded by the U.S. Department of Agriculture as administered by the Oceanic Institute/Gulf Coast Research Laboratory Consortium. The views expressed in this report do not necessarily reflect those of the U.S. Department of Agriculture, Oceanic Institute, or the S.C. Wildlife and Marine Resources Department. Any commercial product or trade name mentioned herein is not to be construed as an endorsement.

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## Executive Summary

Cultured marine shrimp producers in the United States (U.S.) (e.g., South Carolina, Texas, etc.) and other countries (e.g., Ecuador, Panama, etc.) have attempted to identify and develop whole (heads-on) shrimp market segments in the U.S and Europe. Past marketing studies have generally focused on various U.S. markets for headless (heads-off) marine shrimp. Consequently, there is a paucity of data on U.S. markets for whole marine shrimp.

The objectives of this research were (a) to describe existing marine shrimp preferences in the U.S. wholesale market channel and (b) to identify critical product attributes in the wholesale market when selling heads-on marine shrimp. Use and preference data was collected on U.S. seafood wholesalers, distributors, and other market channel members based on a 1989 mail survey.

A two-page questionnaire was designed and tested for a mail survey of marine shrimp usage and preferences. The Dun & Bradstreets Marketing Service in Parsippany, New Jersey, was the mailing list source. In June 1989, 6,021 questionnaires were mailed to seafood wholesalers, distributors and other buyers in the U.S. The highest percentage of firms had mailing addresses in the Northeast region, followed by the West region, the South and the Midwest. A total of 393 (6.4%) usable questionnaires and six unusable questionnaires were returned. The number of responses was generally consistent with the number of mailings by region.

When asked to classify their business, 45.2% chose wholesaler/distributor, 12.7% processor, 10.2% broker, 10.0% importer, 8.6% retailer, 6.8% trader, 4.9% exporter and 1.6% others (e.g. restaurants, producers). The highest number of "processor" classifications was found in the South region.

Most businesses have reported that their seafood sales in 1988 were under \$5 million. The average percent contribution of shrimp sales to total seafood sales generally decreased as the companies' sales volume increased. For companies with annual seafood sales under \$5 million, shrimp contributed to about 59% of gross seafood sales in 1988. Shrimp sales averaged a 54% contribution to seafood sales of all companies responding.

Wholesaler/distributors reported the highest percentage, 40%, of their shrimp were sold to white tablecloth restaurants outlets in 1988. In contrast, processors responses indicated that wholesalers/distributors outlets were their major outlet, 52% of their 1988 sales.

34% of the business reported purchasing of U.S. farmed marine shrimp during the 12 months preceding this survey. The authors believe that some of the respondents may have assumed that farmed shrimp imported into the U.S. was the same as "U.S. farmed shrimp." When asked if they would be interested in purchasing marine white shrimp farmed (cultured) in the U.S., 46% said "maybe", 43% said "yes" and 11% said "no".

As expected, heads-off shrimp products dominated the general purchases and reported preferences of seafood wholesalers and others in the market channel. Based upon shell-on shrimp product forms, the most commonly desired (requested) product was heads-off frozen shrimp (28.1%), heads-off IQF (20.3%), heads-off fresh (16.9%), heads-on fresh (9.8%), heads-on IQF (8.3%), heads-on frozen (6.4%), other products (5.5%) and live (4.7%). The desired count sizes (i.e. number of heads-on individual shrimp per pound) for selected heads-on (i.e. fresh, frozen and IQF) shrimp products were the following: 16-30 counts (31.1%), all major counts (28.3%)<sup>1</sup>, U15 counts (20.6%), 31-50 counts (16.7%), counts greater than 50 (3.3%).

When asked to indicated desired monthly quantities (pounds) of heads-on shrimp, 40.7% chose fresh, 40.0% IQF and 19.3% frozen. Average monthly quantities desired were the highest for IQF shrimp.

Although heads-off (headless) marine shrimp is obviously the dominant product form in the U.S. wholesale sector, there appears to be some willingness to purchase whole (heads-on) marine shrimp products. It is estimated that the latent demand for U.S. farmed marine shrimp by U.S. wholesalers and distributors may range between 490,000 and 970,000 pounds per month. This report indicates that there are several problems confronting U.S. farms wanting to target whole marine shrimp buyers in the U.S. wholesaler sector. The most obvious is the dominance of heads-off shrimp in the wholesale sector. Even when buyers expressed interest in purchasing heads-on shrimp, it is assumed that many wanted to process them into various heads-off product forms. In addition, some respondents may be generally indifferent to the actual source of the whole shrimp.

The apparent latent demand for frozen and IQF whole shrimp should be considered by U.S. shrimp farms. Unfortunately, these are product forms that would appear to be the most vulnerable to other competitors like U.S. processors and/or foreign producers. For example, it appears that Latin American shrimp farmers would not have any major difficulties in marketing competitively priced

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<sup>1</sup>"Major" counts were considered U15 to 81+.



heads-on IQF shrimp in the U.S. In contrast, fresh heads-on shrimp marketing may be vulnerable to competition from the domestic shrimp fisheries. The live shrimp market segment in the U.S. may warrant additional research as a potential outlet to supplement sales of U.S. farms. Live shrimp would at least be a product form generally isolated from import competition and probably much of the U.S. wild shrimp production.

## Introduction

In 1988, 767 million pounds of shrimp (NMFS, 1990) entered U.S. market channels. Much of the domestic and imported marine shrimp, mainly Penaeus spp., entering the wholesale market channels in the U.S. was sold in various frozen headless product forms. Past marketing studies have generally focused on U.S. markets for headless (heads-off) marine shrimp. In contrast, there is a paucity of data on U.S. markets for whole marine shrimp, especially at the wholesale level.<sup>2</sup> Moreover, cultured marine shrimp producers in the U.S. (e.g., South Carolina, Texas, etc.) and other countries (e.g., Ecuador, Panama, etc.) have attempted to identify and develop whole (heads-on) shrimp market segments in the U.S and Europe (Anonymous, 1990).

The objectives of this research were (a) to describe existing marine shrimp preferences in the wholesale market channel and (b) to identify critical product attributes in the wholesale market when selling heads-on marine shrimp. Use and preference data was collected on U.S. seafood wholesalers, distributors and others based on a 1989 mail survey.

## Materials and Methods

### Mail Survey

A two-page questionnaire was designed and tested for a mail survey of marine shrimp usage and preferences by U.S. wholesalers (see Exhibit 1). The survey questions consisted of the respondent's mailing address, shrimp product preference, and current purchases of shrimp. Dun & Bradstreets Marketing Service in Parsippany, New Jersey, was the source for the mailing list. Companies listed under the Standard Industrial Classification (SIC) Code of 514699 "Fish & Seafoods, nec" were selected for the survey's mailing list.

In May 1989, thirty-three (33) firms were randomly selected for the seafood wholesalers survey pretest. A week after the mail-out of questionnaires, a telephone follow-up was conducted to see if the firms received a questionnaires and to encourage them to return their survey. Eight (24%) of the thirty-three (33) firms returned their questionnaire and four were returned due to insufficient addresses. The questionnaire did not need any major revisions.

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<sup>2</sup> Wholesalers and/or distributors usually buy shrimp directly from importers, processors and/or "handlers" (assemblers). Shrimp handlers in the Southeastern U.S., often purchase and/or broker heads-on and heads-off shrimp directly from producers (e.g. shrimp trawler operators) and sell the shrimp to wholesalers or processors.

In June 1989, 6,021 remaining questionnaires were mailed to seafood wholesalers, distributors and other buyers in the U.S. The highest percent of firms had mailing addresses in the Northeast region, followed by the West region, the South and the Midwest (Table 1). The highest number of firms on the mailing list were located in Florida and the fewest number were in Wyoming (Table 1A).<sup>3</sup>

Table 1. The Seafood Wholesaler Mailing List Addresses by Region, 1989.

<u>Region</u>	<u>Mailings</u>	
Northeast <sup>1</sup>	2,232	(36.9%)
West <sup>2</sup>	1,671	(27.6%)
South <sup>3</sup>	1,645	(27.2%)
Midwest <sup>4</sup>	506	(8.3%)
Total	6,054	(100.0%)
Returned Mailings <sup>5</sup>	58	(1.0%)
Total Completed Mailings	5,996	(99.0%)

<sup>1</sup>CT, ME, MA, NH, RI, VT, DE, DC, MD, NJ, NY, PA, VA, WV

<sup>2</sup>AZ, CO, ID, NV, UT, WY, AK, CA, HI, OR, WA, NM, OK, TX

<sup>3</sup>AL, FL, GA, NC, SC, AR, KY, LA, MS, MO, TN

<sup>4</sup>IA, KS, MN, MT, ND, SD, NE, IL, IN, MI, OH, WI

<sup>5</sup>Insufficient address, forwarding address expired or no forwarding address.

Note: The U.S. Bureau of the Census' Divisions and Regions were not used in this study.

A microcomputer data entry program, MPA Version 3.0, sold by Detail Technologies Inc., was used to enter responses for each questionnaire. The responses were entered based upon a standardized coding procedure (see Appendices Exhibit 1). A cross tabulation or crosstabs microcomputer software, A-cross sold by Analytical Computer Service-East, Inc., was used to analyze the questionnaire data.

## Results And Discussion

### Response Rate

A total of 393 (6.4%) usable questionnaires and six unusable questionnaires were returned. Most of the questionnaires, 74%, were received in the first 30 days of the mailing (Table 2). Other marketing researchers have reported response rates under 10% for mail surveys of U.S. seafood

<sup>3</sup> All tables with its table number followed by the capital letter "A" are in this report's appendices.

wholesalers and brokers. For example, Harvey, et al. (1990) reported that out of 920 wholesalers mailed questionnaires in the Mid-Atlantic states, only 65 (7%) responded to their 1989 mail survey regarding cultured hybrid striped bass.

Higher response rates might have been achieved by using follow-up phone calls and/or mailings. Haby and Cuenco (1987) reported a response of 50% from their mail survey of 374 Southeastern seafood wholesalers and retailers when using follow-up techniques. The pretest methodology used in this study also indicates that response rates can be improved with follow-up calls.

The highest percent of respondents had mailing addresses in the Northeast region (34.4%) followed by the South (31.0%), the West (23.4%) and the Midwest (11.2%) (Fig. 1). The number of responses was generally consistent with the number of mailings by region (see Table 1). At the state level, Florida had the highest number of respondents (Table 1A). In contrast, 28 states had three or fewer responses (Table 1A). Florida also had the highest usable response percentage, followed by California and New York (Table 1A).

#### Responses by Business Classification and Customer Locations

When asked to classify their business, 45.2% chose wholesaler/distributor, 12.7% processor, 10.2% broker, 10.0% importer, 8.6% retailer, 6.8% trader, 4.9% exporter and 1.6% others (e.g. restaurants, producers) (Table 3). The largest total number of wholesaler/distributors responding were in the state of Florida (Table 2A). The highest number of processors responding were in the state of Florida (Table 2A). Since none of the businesses used in the mailing list were given specific classifications by the list vendor, it is not possible to comment on the response rate by different type of businesses. The highest number of processor classifications was found in the South region. In 1987, shrimp processors in the South Atlantic and Gulf states represented 73% of reported 329 million pounds of U.S. frozen processed shrimp products, (NMFS unpublished data, 1987).

Most wholesalers/distributors had customers in their resident state and bordering states. As might be expected, retailers reported that most of their customers were located in their resident state (Table 3A). Wholesalers/distributors and retailers reported that most of their customers were located East of the Mississippi River (Table 4A). About 65% of the respondents were located in the Northeast and South regions (Fig. 1).

Respondents reporting that the majority of their customers were West of the Mississippi River had the highest percent, 58.6%, of answers to the question regarding interest in purchasing marine white shrimp farmed in the U.S. (Table 5A).

Table 2. Date of Questionnaires Received, June-November, 1989.

<u>Pretest Date:</u>	<u>Total No. Received:</u>
JUNE 5-9	3
JUNE 12-16	2
JUNE 19-23	1
	-----
TOTAL	6

<u>Date:</u>	<u>Total No. Received</u>
JULY 3-7	0
JULY 10-14	3
JULY 17-21	180
JULY 24-28	116
JULY 31-AUG 4	49
AUG 7-11	18
AUG 14-18	11
AUG 21-25	5
AUG 28-SEPT 1	2
SEPT 4-8	5
SEPT 11-15	1
SEPT 18-22	0
SEPT 25-29	0
OCT 2-6	0
OCT 9-13	1
OCT 16-20	0
OCT 23-27	0
OCT 30-NOV 3	2
	-----
TOTAL	393



Table 3. The Respondent's Classification of Business by Regions, 1989.

<u>How would you best describe your firms seafood marketing activities?</u>										
Business Classification	Northeast		Midwest		South		West		All Regions	
Broker	18	(9.6%)	4	(6.3%)	20	(9.4%)	22	(13.3%)	64	(10.2%)
Exporter	4	(2.1%)	1	(1.6%)	11	(5.2%)	15	(9.0%)	31	(4.9%)
W/D <sup>1</sup>	100	(53.5%)	36	(56.3%)	93	(43.9%)	55	(33.1%)	284	(45.2%)
Processor	13	(7.0%)	4	(6.3%)	42	(19.8%)	21	(12.7%)	80	(12.7%)
Importer	17	(9.1%)	4	(6.3%)	15	(7.1%)	27	(16.3%)	63	(10.0%)
Trader	12	(6.4%)	3	(4.7%)	11	(5.2%)	17	(10.2%)	43	(6.8%)
Retailer	20	(10.7%)	12	(18.8%)	17	(8.0%)	5	(3.0%)	54	(8.6%)
Others	3	(1.6%)	0	(0.0%)	3	(1.4%)	4	(2.4%)	10	(1.6%)
Totals	187	(29.7%)	64	(10.2%)	212	(33.7%)	166	(26.4%)	629	(100.0%)

<sup>1</sup>Wholesaler/Distributor

Note: There were multiple responses to the business classification question. Percentages were calculated based upon totals for a given column except for "Totals" category row. These percentages are not consistent with percentages in Fig. 1 due to multiple responses to the business classification question. The sum of the actual percentage may not exactly equal 100.0% due to rounding error.

"Yes" answers for this question by respondents with customers located East and West of the Mississippi River, and East of the Mississippi River were 47.5% and 37.3%, respectively (Table 5A).

Response rates relative to the question on the continent of the customer were low (Table 6A). For all business types the highest percentage of customers were located in North America, 30%, followed by Asia, 20% (Table 6A).

For wholesalers/brokers, the highest response rate was in the 5-9 employee category. Most business responding to this survey employed fewer than 50 people (Table 4). Processors had the highest response rate, 35.4%, in the 20-49 employee category. Exporters and "Other"<sup>4</sup> types of businesses usually had the lowest number of employees (Table 4).

#### Reported Seafood and Shrimp Sales in 1988

Most businesses have reported that their seafood sales in 1988 were under \$5 million (Table 7A & 8A). The average percent contribution of shrimp sales to total seafood sales generally decreased as the company's sales volume increased (Table 7A). For companies with annual seafood sales under \$5 million, shrimp contributed to about 59% of gross seafood sales in 1988 (Table 7A). Shrimp sales averaged a 54% contribution to seafood sales of all companies responding. If companies interested in purchasing shrimp were more likely to respond to this survey, then these averages may over estimate the contribution of shrimp sales to seafood companies in the U.S.

Businesses with sales volume less than \$5 million generally had fewer than 50 employees (Table 5). The largest business group, wholesaler/distributor, responding to this survey, generally reported 1988 seafood sales of less than \$5 million (Table 6). Processors also reported the highest percentage, 56.2%, in the less than \$5 million sales range (Table 6).

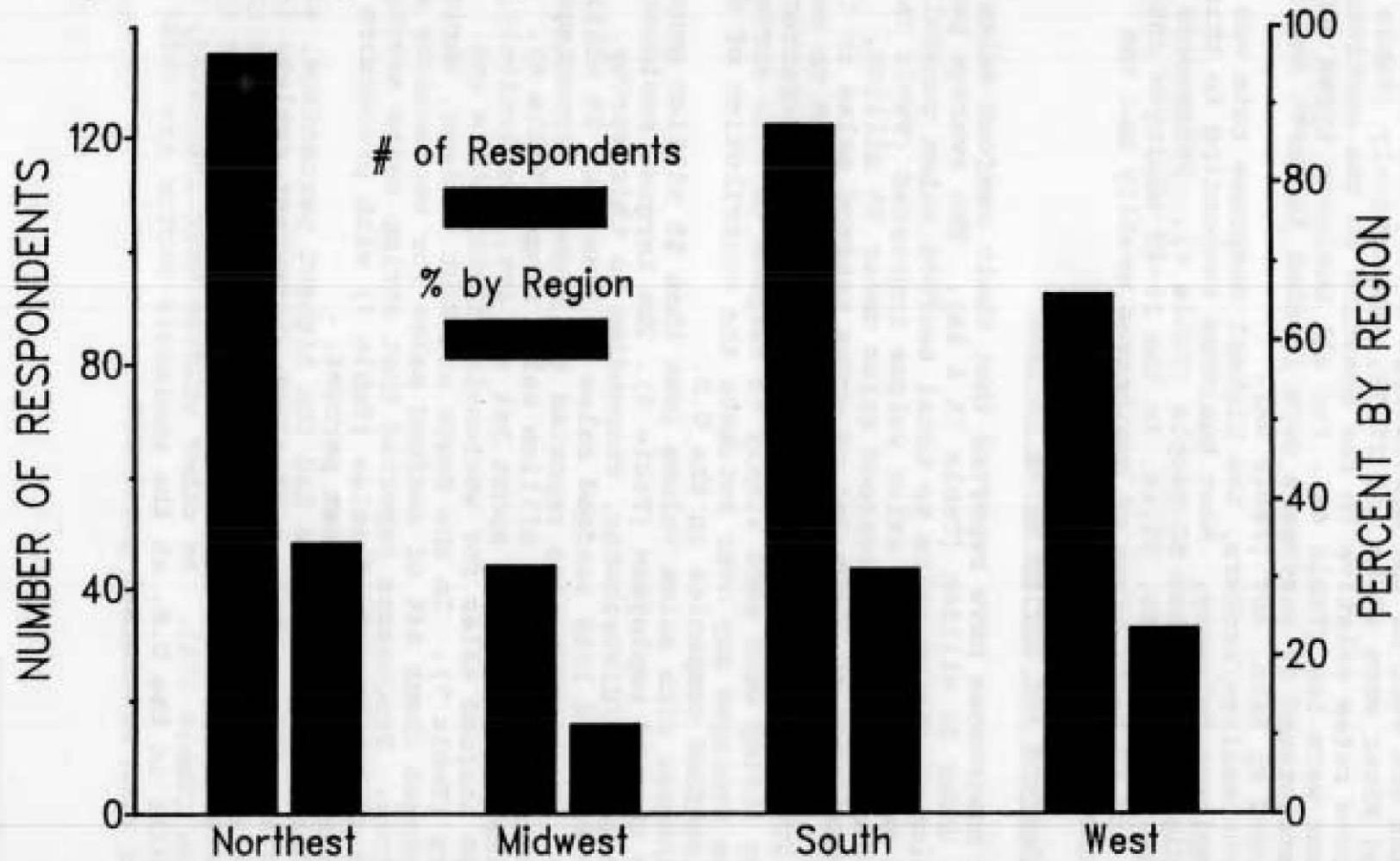
Shrimp sales averaged about 36% and 40%, respectively, of total 1988 seafood sales for wholesaler/distributors and processors (Table 7). In the South and West regions, shrimp sales averaged about 44% of seafood sales for wholesalers and distributors. Processors reported that shrimp sales averaged about 40% of total seafood sales (Table 7) with processors in the West region having the highest percent.

Wholesaler/distributors had the highest percentage, 40%, of their shrimp sold to white tablecloth restaurant outlets in 1988 (Table 9A). In contrast, processors responses indicated that wholesalers/distributors were their major outlet, 52% of their 1988 sales (Table 10A). As other studies have indicated, the shrimp sales in the U.S. at the wholesale sector are still dependent upon restaurant purchases.

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<sup>4</sup>Restaurants and producers.

Figure 1. Major Geographic Region of Respondents, 1989.



Total questionnaires-6,021

Table 4. Business Classification vs. Number of Reported Employees in 1988.

Number of Employees	Business Classification														Total Responses <sup>2</sup>
	Broker	Exporter	W/D <sup>1</sup>		Processor		Importer		Trader	Retailer		Others			
1-4	27 42.9%	10 33.3%	66 23.6%	9 11.4%	21 33.9%	13 31.0%	18 34.0%	7 70.0%	171	27.6%					
5-9	18 28.6%	4 13.3%	67 23.9%	8 10.1%	15 24.2%	13 31.0%	15 28.3%	2 20.0%	142	22.9%					
10-19	5 7.9%	2 6.7%	64 22.9%	17 21.5%	10 16.1%	6 14.3%	8 15.1%	0 0.0%	112	18.1%					
20-49	10 15.9%	7 23.3%	55 19.6%	28 35.4%	10 16.1%	4 9.5%	7 13.2%	0 0.0%	121	19.5%					
50-99	2 3.2%	5 16.7%	22 7.9%	10 12.7%	4 6.5%	6 14.3%	2 3.8%	0 0.0%	51	8.2%					
100-249	1 1.6%	2 6.7%	5 1.8%	6 7.6%	2 3.2%	0 0.0%	3 5.7%	1 10.0%	20	3.2%					
250-499	0 0.0%	0 0.0%	0 0.0%	1 1.3%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1	0.2%					
500+	0 0.0%	0 0.0%	1 0.4%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1	0.2%					
<b>Total</b>	<b>63 10.2%</b>	<b>30 4.8%</b>	<b>280 45.2%</b>	<b>79 12.8%</b>	<b>62 10.0%</b>	<b>42 6.8%</b>	<b>53 8.6%</b>	<b>10 1.6%</b>	<b>619</b>	<b>100.0%</b>					

<sup>1</sup>Wholesaler/Distributor

<sup>2</sup>Column percentage based on "Total" for this column, "Total Responses".

Note: There were multiple responses to the business classification questions. The sum of the actual percentage may not exactly equal 100.0% due to rounding error.

Table 5. Employees vs. Reported Shrimp Sales Volume, 1988.

Number of Employees	Sales Volume, Million of Dollars, 1988										Total	
	<\$5		\$5 to \$9.9		\$10 to \$14.99		\$15 to \$19.9		>\$20		Response <sup>1</sup>	
1-4	86	35.2%	10	19.2%	4	12.9%	1	25.0%	1	3.6%	102	28.4%
5-9	71	29.1%	8	15.4%	3	9.7%	1	25.0%	2	7.1%	85	23.7%
10-19	55	22.5%	11	21.2%	6	19.4%	0	0.0%	4	14.3%	76	21.2%
20-49	24	9.8%	16	30.8%	12	38.7%	1	25.0%	7	25.0%	60	16.7%
50-99	7	2.9%	4	7.7%	2	6.5%	1	25.0%	9	32.1%	23	6.4%
100-249	1	0.4%	3	5.8%	2	6.5%	0	0.0%	5	17.9%	11	3.1%
250-499	0	0.0%	0	0.0%	1	3.2%	0	0.0%	0	0.0%	1	0.3%
500+	0	0.0%	0	0.0%	1	3.2%	0	0.0%	0	0.0%	1	0.3%
Total	244	68.0%	52	14.5%	31	8.6%	4	1.1%	28	7.8%	359	100.0%

<sup>1</sup>Column percentage based upon totals for a given column except for "Total" category row.  
 Note: The sum of the actual percentage may not exactly equal 100.0% due to rounding error.



Table 6. Business Classification vs. Reported Sales Volume Level in 1988.

Business Classification	<u>Sales Volume, Millions of Dollars, 1988</u>										Total	
	<\$5		\$5 to \$9.9		\$10 to \$14.9		\$15 to \$19.9		>\$20		Responses <sup>1</sup>	
Broker	30	48.4%	16	25.8%	8	12.9%	1	1.6%	7	11.3%	62	10.5%
Exporter	10	37.0%	7	25.9%	4	14.8%	1	3.7%	5	18.5%	27	4.6%
W/D <sup>2</sup>	188	70.7%	36	13.5%	22	8.3%	3	1.1%	17	6.4%	266	45.2%
Processor	41	56.2%	15	20.5%	6	8.2%	0	0.0%	11	15.1%	73	12.4%
Importer	26	43.3%	13	21.7%	9	15.0%	1	1.7%	11	18.3%	60	10.2%
Trader	20	48.8%	6	14.6%	5	12.2%	0	0.0%	10	24.4%	41	7.0%
Retailer	43	89.6%	2	4.2%	1	2.1%	0	0.0%	2	4.2%	48	8.2%
Others	10	90.9%	0	0.0%	1	9.1%	0	0.0%	0	0.0%	11	1.9%
<b>Total</b>	<b>368</b>	<b>62.6%</b>	<b>95</b>	<b>16.2%</b>	<b>56</b>	<b>9.5%</b>	<b>6</b>	<b>1.0%</b>	<b>63</b>	<b>10.7%</b>	<b>588</b>	<b>100.0%</b>

<sup>1</sup>Column percentage base on "Total" for this column, "Total Responses".

<sup>2</sup>Wholesaler/Distributor

Note: There were multiple responses to the business classification questions. The sum of the actual percentage may not exactly equal 100.0% due to rounding error.

## Interest in U.S. Farmed Marine Shrimp

34% of the businesses reported purchasing of U.S. farmed marine shrimp during the 12 months preceding this survey (Table 8). Wholesaler/distributors from the midwest had the highest response rate, 36% to the "yes" category (Table 8). The supply of U.S. farmed marine shrimp in 1988 was probably less than 0.5% of U.S. total shrimp supplies. Consequently, the authors believe that some of the respondents may have mistakenly assumed that farmed shrimp imported into the U.S. was the same as "U.S. farmed shrimp." This could be indicative of the U.S. shrimp farming industry's difficulties in differentiating U.S. farmed shrimp from sources and/or buyer indifferences relative to the source.

When asked if they would be interested in purchasing marine white shrimp farmed (cultured) in the U.S., 46% said "maybe", 43% said "yes" and 11% said "no" (Table 9a). Midwest respondents had the highest response percentage for the "yes" category (61%) while Northeast buyers had the lowest response (Table 9a). "Traders" and "Brokers" had the highest percentages relative to interest (i.e. a "yes" response) while "Other" and "Exporters" had the lowest response rates to "yes" (Table 9b). In comparison, Wirth (1989) reported that 87% of the responding Mid-Atlantic seafood wholesalers were willing to purchase U.S. cultured hybrid striped bass. Perhaps the availability of both domestic and imported shrimp products compared to other aquaculture species (e.g. hybrid striped bass, etc.) may have accounted for this relative lower lack of interest in U.S. farmed shrimp.

## Product Forms Purchased and Buyer Preferences

As expected, heads-off shrimp products dominated the general purchases and reported preferences of seafood wholesalers and others in the market channel. When asked to indicate the raw shell-on shrimp products purchased in 1988, 54.2% of those responding indicated that they purchased heads-off frozen shrimp including individually quick frozen (IQF) shrimp, 18.1% heads-off fresh, 13.6% heads-on fresh, 11.9% heads-on frozen and IQF, and 2.2% indicated live shrimp. Based upon shell-on shrimp product forms, the most commonly desired (requested) product was heads-off frozen shrimp (28.1%), heads-off IQF (20.3%), heads-off fresh (16.9%), heads-on fresh (9.8%), heads-on IQF (8.3%), heads-on frozen (6.4%), other products (5.5%) and live (4.7%) (Fig. 2).

## Heads-on Shrimp and Buyer Preferences

The desired count sizes (i.e. number of heads-on individual shrimp per pound) for selected heads-on (i.e. fresh, frozen and IQF) shrimp was the following: 16-30 counts (31.1%), all major counts (28.3%), U-15 counts (20.6%), 31-50 counts (16.7%), counts

Table 7. Business Classification by Region vs. Average (Mean) Percent Contribution of Shrimp Sales to Reported 1988 Seafood Sales.

<u>Estimate the percent contributions of shrimp sales to your 1988 seafood sales?</u>					
<u>Business Classification</u>	<u>Northeast</u>	<u>South</u>	<u>Midwest</u>	<u>West</u>	<u>All Region</u>
<u>Broker:</u>					
Number	11	13	2	9	35
Responses Percent <sup>1</sup>	(10.5%)	(10.7%)	(4.4%)	(10.5%)	(9.8%)
Average Percent <sup>2</sup>	29.2%	55.6%	42.5%	54.4%	46.3%
<u>Exporter:</u>					
Number	1	4	1	6	12
Responses Percent <sup>1</sup>	(1.0%)	(3.3%)	(2.2%)	(7.0%)	(3.4%)
Average Percent <sup>2</sup>	20.0%	31.8%	75.0%	68.3%	52.7%
<u>W/D:<sup>3</sup></u>					
Number	53	55	26	33	167
Responses Percent <sup>1</sup>	(50.5%)	(45.5%)	(57.8%)	(38.4%)	(46.8%)
Average Percent <sup>2</sup>	23.7%	44.2%	30.7%	44.8%	35.7%
<u>Processor:</u>					
Number	8	19	2	10	39
Responses Percent <sup>1</sup>	(7.6%)	(15.7%)	(4.4%)	(11.6%)	(10.9%)
Average Percent <sup>2</sup>	8.8%	44.8%	7.5%	62.4%	40.0%
<u>Importer:</u>					
Number	11	10	2	13	36
Responses Percent <sup>1</sup>	(10.5%)	(8.3%)	(4.4%)	(15.1%)	(10.1%)
Average Percent <sup>2</sup>	46.5%	47.2%	45.0%	56.5%	50.2%

Table 7. Business Classification by Region vs. Average (Mean) Percent Contribution of Shrimp Sales to Reported 1988 Seafood Sales (Continued).

Estimate the percent contributions of shrimp sales to your 1988 seafood sales?

Business Classification	Northeast	South	Midwest	West	All Region
<u>Trader:</u>					
Number	7	8	2	12	29
Responses Percent <sup>1</sup>	(6.7%)	(6.6%)	(4.4%)	(14.0%)	(8.1%)
Average Percent <sup>2</sup>	39.3%	64.8%	50.0%	56.6%	54.2%
<u>Retailer:</u>					
Number	12	10	9	2	33
Responses Percent <sup>1</sup>	(11.4%)	(8.3%)	(20.0%)	(2.3%)	(9.2%)
Average Percent <sup>2</sup>	31.2%	28.0%	17.2%	52.5%	27.7%
<u>Others:</u>					
Number	2	2	1	1	6
Responses Percent <sup>1</sup>	(1.9%)	(1.7%)	(2.2%)	(1.2%)	(1.7%)
Average Percent <sup>2</sup>	20.5%	42.5%	5.0%	20.0%	25.2%
<u>Grand Total<sup>4</sup></u>					
Number	105	121	45	86	357
Responses Percent	(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)
Average Percent	27.3%	45.3%	29.4%	52.8%	39.8%

<sup>1</sup>The percent of responses, "Number", compared to the "Grand Total" of the column.

<sup>2</sup>Average of reported shrimp sales percent by outlet.

<sup>3</sup>Wholesaler/Distributor

<sup>4</sup>Combined totals from the Northeast, South, Midwest, and West Region columns.

Note: There were multiple responses to the business classification question. The sum of the actual percentage may not exactly equal 100.0% due to rounding error.

Table 8. Business Classification by Region vs. Reported Purchases of U.S. Farmed Marine Shrimp, 1989.

During the last 12 months did you purchase marine shrimp farmed in the U.S.?

BC <sup>1</sup>	"Yes"		"No"		"I Don't Know"		Total Responses <sup>2</sup>	
<b>Northeast:</b>								
W/D <sup>3</sup>	13	14.8%	68	77.3%	7	8.0%	88	50.0%
Processor	4	30.8%	9	69.2%	0	0.0%	13	7.4%
Retailer	3	15.0%	15	75.0%	2	10.0%	20	11.4%
"Other" <sup>4</sup>	21	38.2%	31	56.4%	3	5.5%	55	31.3%
Total	41	23.3%	123	69.9%	12	6.8%	176	100.0%
<b>South:</b>								
W/D <sup>3</sup>	28	30.4%	57	62.0%	7	7.6%	92	41.3%
Processor	12	29.3%	27	65.9%	2	4.9%	41	18.4%
Retailer	3	18.8%	12	75.0%	1	6.3%	16	7.2%
"Other" <sup>4</sup>	40	54.1%	30	40.5%	4	5.4%	74	33.2%
Total	83	37.2%	126	56.5%	14	6.3%	223	100.0%
<b>Midwest:</b>								
W/D <sup>3</sup>	13	36.1%	21	58.3%	2	5.6%	36	56.3%
Processor	3	75.0%	1	25.0%	0	0.0%	4	6.3%
Retailer	5	45.5%	4	36.4%	2	18.2%	11	17.2%
"Other" <sup>4</sup>	9	69.2%	4	30.8%	0	0.0%	13	20.3%
Total	30	46.9%	30	46.9%	4	6.3%	64	100.0%
<b>West:</b>								
W/D <sup>3</sup>	19	35.2%	31	57.4%	4	7.4%	54	31.2%
Processor	10	47.6%	9	42.9%	2	9.5%	21	12.1%
Retailer	1	20.0%	3	60.0%	1	20.0%	5	2.9%
"Other" <sup>4</sup>	34	36.6%	55	59.1%	4	4.3%	93	53.8%
Total	64	37.0%	98	56.6%	11	6.4%	173	100.0%
Grand Total <sup>5</sup>	218	34.3%	377	59.3%	41	6.4%	636	100.0%

<sup>1</sup>Business Classification

<sup>2</sup>Column percentage based on "Grand Total" for this column, "Total Responses". All other percentages are calculated "across row".

<sup>3</sup>Wholesaler/Distributor

<sup>4</sup>Brokers, Exporters, Importers, Traders and Others

<sup>5</sup>Combined totals from the Northeast, South, Midwest and West regions.

Note: There were multiple responses to the business classification questions. The sum of the actual percentage may not exactly equal 100.0% due to rounding error.



Table 8. Business Classification by Region vs. Reported Purchases of U.S. Farmed Marine Shrimp, 1989.

During the last 12 months did you purchase marine shrimp farmed in the U.S.?

BC <sup>1</sup>	"Yes"		"No"		"I Don't Know"		Total Responses <sup>2</sup>	
<b>Northeast:</b>								
W/D <sup>3</sup>	13	14.8%	68	77.3%	7	8.0%	88	50.0%
Processor	4	30.8%	9	69.2%	0	0.0%	13	7.4%
Retailer	3	15.0%	15	75.0%	2	10.0%	20	11.4%
"Other" <sup>4</sup>	21	38.2%	31	56.4%	3	5.5%	55	31.3%
Total	41	23.3%	123	69.9%	12	6.8%	176	100.0%
<b>South:</b>								
W/D <sup>3</sup>	28	30.4%	57	62.0%	7	7.6%	92	41.3%
Processor	12	29.3%	27	65.9%	2	4.9%	41	18.4%
Retailer	3	18.8%	12	75.0%	1	6.3%	16	7.2%
"Other" <sup>4</sup>	40	54.1%	30	40.5%	4	5.4%	74	33.2%
Total	83	37.2%	126	56.5%	14	6.3%	223	100.0%
<b>Midwest:</b>								
W/D <sup>3</sup>	13	36.1%	21	58.3%	2	5.6%	36	56.3%
Processor	3	75.0%	1	25.0%	0	0.0%	4	6.3%
Retailer	5	45.5%	4	36.4%	2	18.2%	11	17.2%
"Other" <sup>4</sup>	9	69.2%	4	30.8%	0	0.0%	13	20.3%
Total	30	46.9%	30	46.9%	4	6.3%	64	100.0%
<b>West:</b>								
W/D <sup>3</sup>	19	35.2%	31	57.4%	4	7.4%	54	31.2%
Processor	10	47.6%	9	42.9%	2	9.5%	21	12.1%
Retailer	1	20.0%	3	60.0%	1	20.0%	5	2.9%
"Other" <sup>4</sup>	34	36.6%	55	59.1%	4	4.3%	93	53.8%
Total	64	37.0%	98	56.6%	11	6.4%	173	100.0%
Grand Total <sup>5</sup>	218	34.3%	377	59.3%	41	6.4%	636	100.0%

<sup>1</sup>Business Classification

<sup>2</sup>Column percentage based on "Grand Total" for this column, "Total Responses". All other percentages are calculated "across row".

<sup>3</sup>Wholesaler/Distributor

<sup>4</sup>Brokers, Exporters, Importers, Traders and Others

<sup>5</sup>Combined totals from the Northeast, South, Midwest and West regions.

Note: There were multiple responses to the business classification questions. The sum of the actual percentage may not exactly equal 100.0% due to rounding error.

greater than 50 (3.3%) (Table 10). Responses suggest that heads-on shrimp buyers are generally not interested in purchasing shrimp counting fifty or more per pound. In addition, the highest percentage for four count ranges was in the 16-30 count range (Table 10). The highest number of responses regardless of count size was recorded for fresh heads-on shrimp (Table 10). IQF shrimp products had second highest number of total responses (Table 10).

the largest group responding to this survey, had the highest percentage response rate in the 16-30 count range (excluding the "All Major Counts" category) (Table 11). For wholesalers/distributors, fresh heads-on shrimp had the highest total response rate, 42%, followed by IQF whole shrimp (Table 11).

When asked to indicated desired monthly quantities (pounds) of heads-on shrimp, 40.7% chose fresh, 40.0% IQF and 19.3% frozen (Table 12). Average monthly quantities desired were the highest for IQF shrimp (Fig. 3). Buyers in the South region had the highest response rate to this question and the highest mean quantity desired (Table 12).

The mail survey results are generally consistent with recent observations on the marketing of cultured marine shrimp in South Carolina. For example in 1990, the major buyer of S.C. cultured shrimp was a Gulf wholesaler purchasing fresh, heads-on, mainly 16-30 count shrimp (heads-on) in 20,000 to 40,000 pound quantities. In contrast, some of the firms in the South Region responding to this question were probably shrimp handlers

in the Gulf and South Atlantic States willing to pay only ex-vessel prices.

#### Estimates of Whole Marine Demand

Crude estimates of the number of U.S. wholesalers or distributors interested in purchasing whole marine shrimp were prepared based upon response rates by region and the percent of respondents claiming to be interested in purchasing whole shrimp (Table 13). Based upon these estimates, the highest number of whole marine shrimp buyers are in the South Region, 166, followed by the Northeast Region, 145. As previously discussed, some of the wholesalers in the South Region are probably dependent upon purchasing shrimp directly from shrimp trawlers.

Figure 2. U.S. Farmed Marine Shrimp Products Desired by Respondents, 1989.

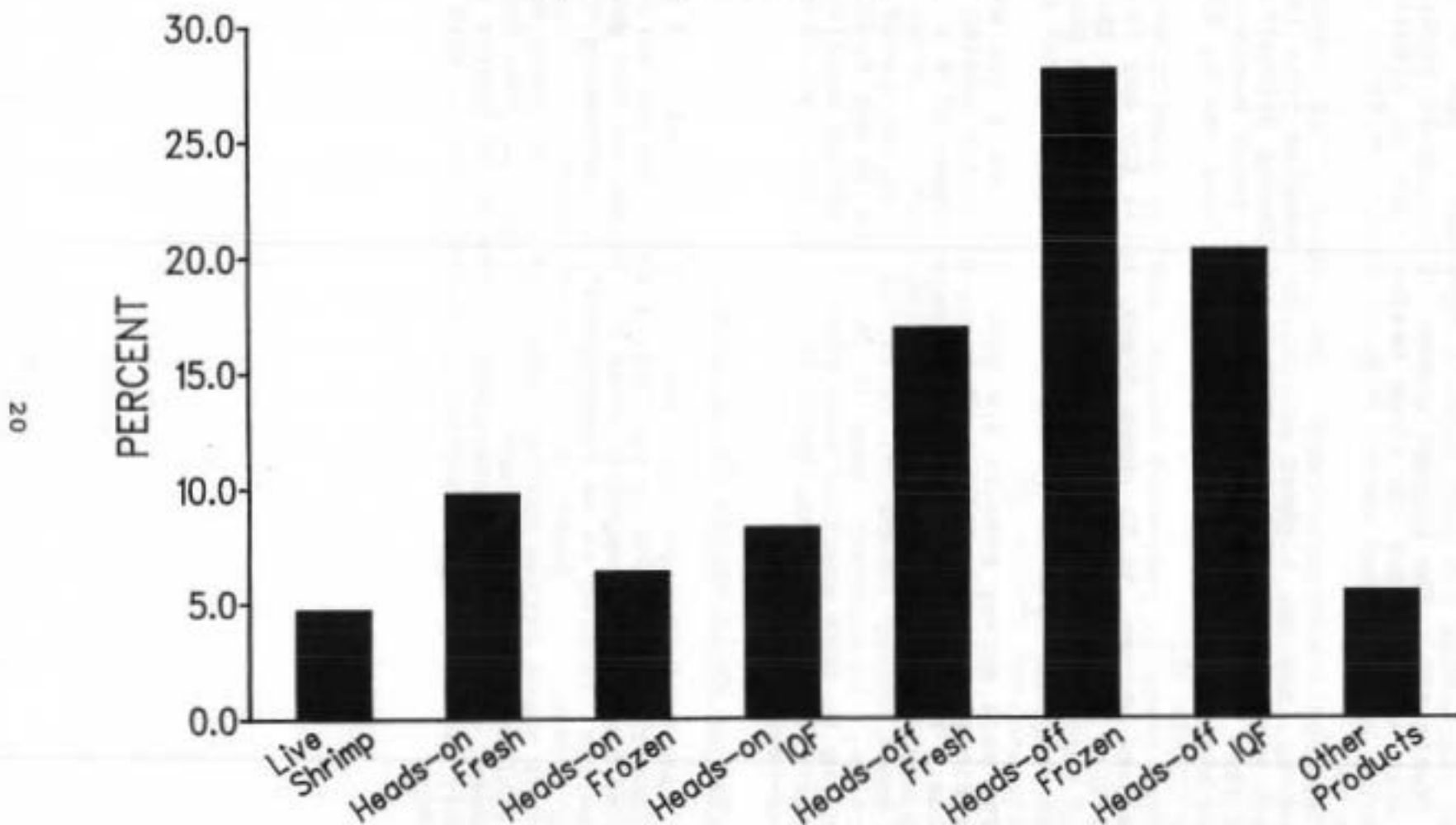


Table 10. Desired Count Sizes of Selected Heads-on Shrimp from White Marine Shrimp Cultured in the U.S.

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Responses Regardless of Business Classification

Count Sizes	IQF	Heads-On Product Form		All Product
		Fresh	Frozen	
U-15	9 (16.1%)	20 (25.3%)	8 (17.8%)	37 (20.6%)
16-30	16 (28.6%)	26 (32.9%)	14 (31.1%)	56 (31.1%)
31-50	10 (17.9%)	12 (15.2%)	8 (17.8%)	30 (16.7%)
>50	2 (3.6%)	2 (2.5%)	2 (4.4%)	6 (3.3%)
All <sup>1</sup>	19 (33.9%)	19 (24.1%)	13 (28.8%)	51 (28.3%)
Total <sup>2</sup>	56 (31.1%)	79 (43.9%)	45 (25.0%)	180 (100.0%)

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<sup>1</sup>All major counts wanted.

<sup>2</sup>The totals in Table 5 are not consistent with totals in Table 6, due to multiple business classification responses and/or non-responses to a given question. Note: There were multiple responses to this question. Percentages were calculated based upon totals for a given column except for "Total" category row. The sum of the actual percentage may not exactly equal 100.0% due to rounding error.

Table 11. Count Size Preferences for Selected Heads-on Marine Shrimp Products, 1989.

If you are interested in white shrimp culture in the U.S., indicate desired counts?

Business Classification	U-15	16-30	31-50	>50	All Major Counts Want	Total Responses <sup>4</sup>
<b>Heads-on, IQF:</b>						
W/D <sup>1</sup>	9 (19.6%)	14 (30.4%)	9 (19.6%)	2 (4.3%)	12 (26.1%)	46 (15.5%)
Processor	0 (0.0%)	1 (10.0%)	2 (20.0%)	0 (0.0%)	7 (70.0%)	10 (3.4%)
Retailer	2 (25.0%)	1 (12.5%)	1 (12.5%)	0 (0.0%)	4 (50.0%)	8 (2.7%)
"Other" <sup>2</sup>	3 (11.5%)	4 (15.4%)	3 (11.5%)	0 (0.0%)	16 (61.5%)	26 (8.7%)
<b>Total</b>	<b>14 (15.6%)</b>	<b>20 (22.2%)</b>	<b>15 (16.7%)</b>	<b>2 (2.2%)</b>	<b>39 (43.3%)</b>	<b>90 (30.3%)</b>
<b>Heads-on, Fresh:</b>						
W/D <sup>1</sup>	18 (26.1%)	23 (33.3%)	11 (15.9%)	2 (2.9%)	15 (21.7%)	69 (23.2%)
Processor	2 (16.7%)	3 (25.0%)	0 (0.0%)	0 (0.0%)	7 (58.3%)	12 (4.0%)
Retailer	3 (23.1%)	5 (38.5%)	2 (15.4%)	0 (0.0%)	3 (23.1%)	13 (4.4%)
"Other" <sup>2</sup>	5 (16.7%)	10 (33.3%)	4 (13.3%)	0 (0.0%)	11 (36.7%)	30 (10.1%)
<b>Total</b>	<b>28 (22.6%)</b>	<b>41 (33.1%)</b>	<b>17 (13.7%)</b>	<b>2 (1.6%)</b>	<b>36 (29.0%)</b>	<b>124 (41.8%)</b>
<b>Heads-on, Frozen:</b>						
W/D <sup>1</sup>	7 (18.4%)	11 (28.9%)	8 (21.1%)	3 (7.9%)	9 (23.7%)	38 (12.8%)
Processor	1 (10.0%)	1 (10.0%)	1 (10.0%)	0 (0.0%)	7 (70.0%)	10 (3.4%)
Retailer	1 (33.3%)	1 (33.3%)	0 (0.0%)	0 (0.0%)	1 (33.3%)	3 (1.0%)
"Other" <sup>2</sup>	2 (6.3%)	10 (31.3%)	6 (18.8%)	0 (0.0%)	14 (43.8%)	32 (10.8%)
<b>Total</b>	<b>11 (13.3%)</b>	<b>23 (27.7%)</b>	<b>15 (18.1%)</b>	<b>3 (3.6%)</b>	<b>31 (37.3%)</b>	<b>83 (27.9%)</b>
<b>Grand Total<sup>3</sup></b>	<b>53 (17.8%)</b>	<b>84 (28.3%)</b>	<b>47 (15.8%)</b>	<b>7 (2.4%)</b>	<b>106 (35.7%)</b>	<b>297 (100.0%)</b>

<sup>1</sup>Wholesaler/Distributor

<sup>2</sup>Brokers, Exporters, Importers, Traders and Others

<sup>3</sup>Combined totals from Heads-on IQF, fresh and frozen

<sup>4</sup>Column percentage based on "Grand Total" for this column, "Total Responses".

Note: There were multiple responses to these questions. The sum of the actual percentage may not exactly equal 100.0% due to rounding error.



Table 12. Desired Monthly Quantities of Selected U.S. Cultured Heads-on White Shrimp Products by Region, 1989.

If interested in heads-on shrimp... quantities desired?

	Fresh	Frozen	IQF
<b>Northeast:</b>			
Number	6	1	1
Percent <sup>1</sup>	35.4%	3.1%	61.5%
Mean	958	500	10,000
Total	5,750	500	10,000
<b>Midwest:</b>			
Number	5	5	3
Percent <sup>1</sup>	33.6%	48.9%	17.6%
Mean	880	1,280	767
Total	4,400	6,400	2,300
<b>South:</b>			
Number	20	8	19
Percent <sup>1</sup>	43.8%	13.3%	42.8%
Mean	43,970	33,437	45,200
Total	879,400	267,500	858,800
<b>West:</b>			
Number	15	12	9
Percent <sup>1</sup>	25.3%	48.8%	25.9%
Mean	6,843	16,467	11,667
Total	102,650	197,600	105,000
<b>Grand Total<sup>2</sup></b>			
Number	46	26	32
Percent <sup>3</sup>	40.7%	19.3%	40.0%
Mean	21,569	18,154	30,503
Total	992,200	472,000	976,100

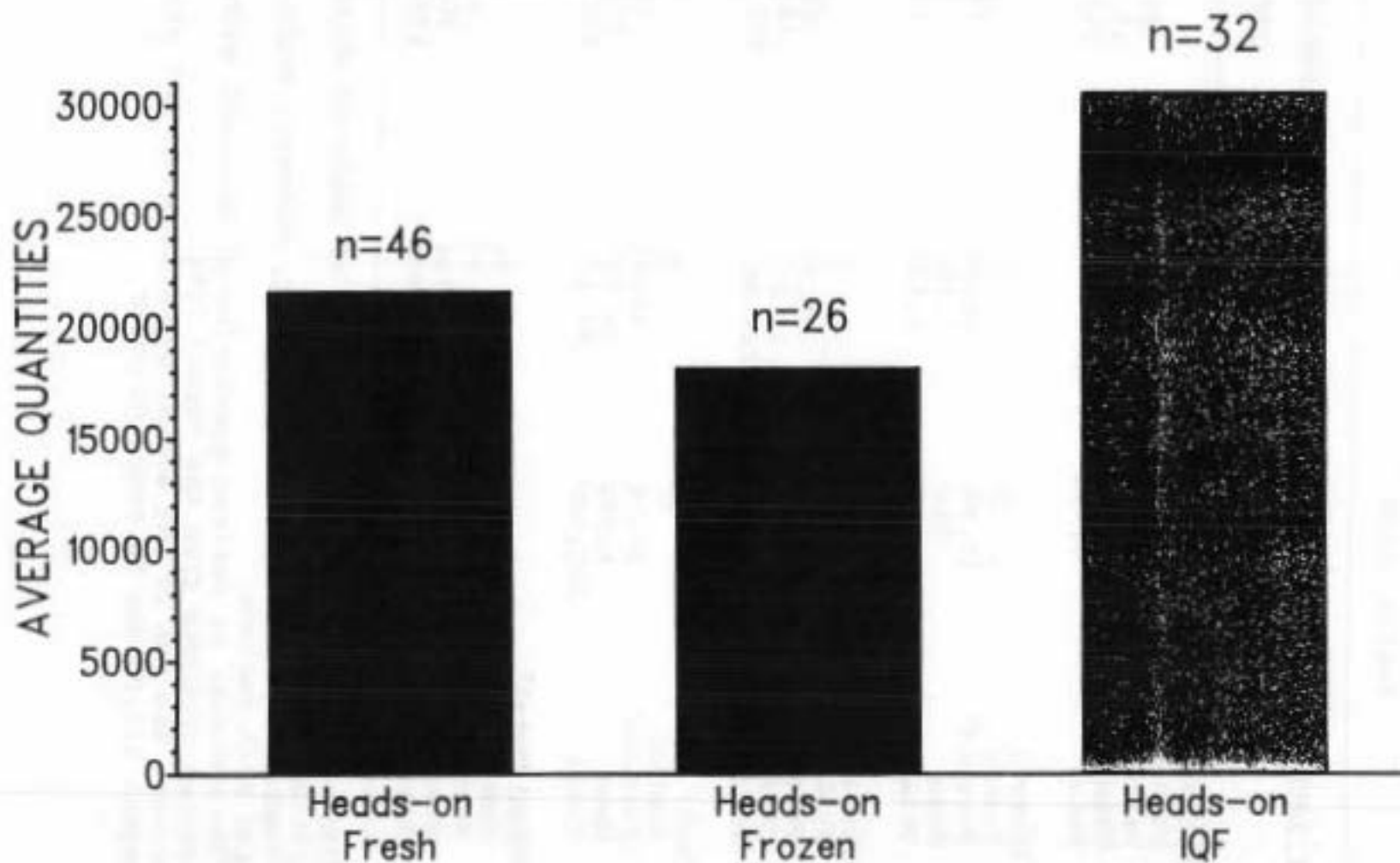
<sup>1</sup>Percentages of desired quantities of heads-on white shrimp products in each region.

<sup>2</sup>Combined totals from the Northeast, Midwest, South and West regions.

<sup>3</sup>Percentages of desired quantities of heads-on white shrimp products from the "Grand Total"

Note: The sum of the actual percentage may not exactly equal 100.0% due to rounding error.

Figure 3. Reported Monthly Quantities (pounds) of U.S. Farmed Shrimp Desired by Respondents, 1989



Simple estimates of the whole marine shrimp "desired" by the wholesale sector in the U.S. were generated (Table 14) based upon the number of estimated buyers (Table 13) and the quantities "desired" by buyers in the Midwest Region (Table 12). The Midwest Region averages were used in order to minimize the possibility of overestimating the aggregate quantities desired. In addition, quantities desired by respondents in the South Region may have been influenced by the desire of wholesalers to purchase large quantities of heads-on shrimp at ex-vessel "spot" market prices. Most S.C. shrimp farmers have been able to target buyers (e.g., secondary wholesalers, distributors, etc.) willing to pay prices substantially higher than local ex-vessel prices.

Seasonal quantities desired was extrapolated by multiplying the monthly estimates by three (3) months. A three month period was used in order to provide a conservative estimate of U.S. demand. Most farms in the continental U.S. usually have only a three month Fall harvest "window" for market size shrimp. Important exceptions would include U.S. farms located in Hawaii and Puerto Rico plus farms freezing and warehousing their own production.

The "Midpoint" estimate (Table 14) of whole U.S. farmed shrimp desired by wholesalers and distributors is near 7.3 million pounds or only about 1% of the total 1989 reported U.S. supply (NMFS, 1990), 743.3 million pounds (heads-off weight equivalent). The quantities estimated in Table 14 are intended to approximate the aggregate latent demand for whole U.S. farmed marine shrimp by U.S. wholesalers and others in the market channel in 1989. Among other factors, this estimation assumes that a significant number of the responding buyers were really interested in purchasing whole U.S. farmed shrimp but were unable to find suppliers (e.g. Louisiana handlers) at acceptable prices for both buyers and sellers. The actual usage of domestic fresh whole shrimp in the U.S. wholesale and processing sector regardless of the source is substantially higher than the 2.2 million pounds (about 9 million pounds when projected over a 12 month period) estimated in this report (Table 14). Roberts and Pawlyk (1986) estimated that Louisiana processors and handlers alone sold about 19 million pounds of whole ("heads-on") shrimp to wholesalers and processors during 1984.

There are several other major limitations to these projections besides the statistical validity of the estimates when trying to determine the latent demand for U.S. farmed shrimp. For example, the prices that wholesalers and distributors are willing to pay for U.S. farmed shrimp have not been addressed. In addition, this survey only represents a

Table 13. Estimated Total Number of U.S. Seafood Wholesalers or Distributors Willing to Purchase Whole ("Heads-on") Marine Shrimp in 1989.

Estimated Number of Wholesalers/Distributors:<sup>1</sup>

<u>Region</u>				
Northeast	Midwest	South	West	All Regions
806	306	739	672	2,522

Percent "Interested" in Purchasing U.S. Farmed Shrimp:

<u>Region</u>				
Northeast	Midwest	South	West	All Regions
36%	61%	45%	40%	50%

Unadjusted Estimated Number of Whole Marine U.S. Farmed Shrimp Buyers:

<u>Region</u>				
Northeast	Midwest	South	West	All Regions
291	185	332	270	1,078

"Adjusted" for Biased Response:<sup>2</sup>

<u>Region</u>				
Northeast	Midwest	South	West	All Regions
145	93	166	135	539

<sup>1</sup>Estimated number of wholesalers or distributors based upon number of mailings per region (Table 1 ) and percentage of businesses classified as wholesalers or distributors (Table 3 ).  
<sup>2</sup>Assuming that wholesalers and distributors interested in purchasing shrimp were more likely to respond to this survey, the number of buyers was reduced by 50%.

Table 14. Estimated Aggregate Quantities of Whole Marine ("Heads-on") Shrimp "Desired" by U.S. Seafood Wholesalers or Distributors, 1989 (In Thousands of Pounds).

	Northeast	<u>"LOW" ESTIMATE<sup>1</sup></u>			All Region
		Midwest	South	West	
<u>Monthly, Lbs.:</u>					
Fresh:	131	84	149	122	486
Frozen:	189	121	216	176	702
IQF:	116	74	133	108	431
All Forms:	436	279	498	406	1,619
Seasonal Estimate <sup>2</sup>	1,308	837	1,494	1,218	4,857
<hr/>					
<u>Monthly, Lbs.:</u>		<u>"HIGH" ESTIMATE (Two times the "LOW" Estimate)</u>			
Fresh:	262	168	298	244	972
Frozen:	378	242	432	352	1,404
IQF:	232	148	266	216	862
All Forms:	872	558	996	812	3,238
Seasonal Estimate <sup>2</sup>	2,616	1,674	2,988	2,436	9,714
<hr/>					
<u>Monthly, Lbs.:</u>		<u>"MIDPOINT" ESTIMATE</u>			
Fresh:	197	126	224	183	730
Frozen:	284	182	324	264	1,054
IQF:	174	111	200	162	647
All Forms:	655	419	748	609	2,431
Seasonal Estimate <sup>2</sup> :		(IN THOUSANDS)			
Fresh:	591	378	672	549	2,190
Frozen:	852	546	972	792	3,162
IQF:	522	333	600	486	1,941
All Forms:	1,965	1,257	2,244	1,827	7,293

<sup>1</sup>The Midwest Region quantities "desired" (Table 12) were used in the "Low" estimate.

<sup>2</sup>"Seasonal" estimates were 3 times the monthly estimate.



"snapshot" of the U.S. shrimp market in the summer of 1989. If restaurant purchases of shrimp did decrease in the future due to perhaps the U.S. economic recession, then these aggregate demand estimates may need to be decreased.

### Conclusions

Although heads-off (headless) marine shrimp is obviously the dominant product form in the U.S. wholesale market, there appears to some willingness to purchase whole (heads-on) marine shrimp products. It is estimated that the nominal latent demand for U.S. farmed marine shrimp by U.S. wholesalers and distributors may range between .5 to 1 million pounds per month. In 1990, S.C. commercial shrimp farmers were able to sell over 600,000 pounds of fresh whole shrimp to wholesale buyers in about a 60 day period at prices higher than the equivalent S.C. ex-vessel prices<sup>5</sup>. Consequently, the S.C. marketing experience appears to be consistent with the demand levels estimated in this report.

This report indicates that there are several problems confronting U.S. farms wanting to target whole marine shrimp buyers in the U.S. wholesaler sector. The most obvious is the dominance of heads-off shrimp in the wholesale sector. Even when buyers expressed interest in purchasing heads-on shrimp, it is assumed that many still wanted to process them into various heads-off product forms. In addition, buyers may be generally indifferent to the actual source of the whole shrimp.

The apparent latent demand for frozen and IQF whole shrimp should be considered by U.S. shrimp farms. Unfortunately, these are product forms that would appear to be the most vulnerable to other competitors like U.S. processors and/or foreign producers. For example, it appears that Latin American shrimp farmers would not have any major difficulties in marketing competitively priced heads-on IQF shrimp in the U.S. Fresh heads-on shrimp marketing may be vulnerable to competition from domestic shrimp fisheries. The live shrimp market segment in the U.S. may warrant additional research as a potential outlet to supplement sales of U.S. farms. Live shrimp would at least be a product form generally isolated from import competition and probably much of the U.S. wild shrimp production. The characteristics of the U.S. live shrimp market segment needs to be investigated.

A total of 150 copies of this document was printed at a total cost of \$160.02. The unit cost was \$1.067 per copy.

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<sup>5</sup>These higher prices may not necessarily be indicative of perceived higher quality (e.g., freshness, taste, etc.) for S.C. farmed shrimp by buyers. In some cases, higher prices were received due to "by passing" others in the market channel.

## Acknowledgements

We wish to thank Charlie Bearden, David Liao, and David Whitaker for reviewing this manuscript. Karen Swanson prepared all of the graphs and Z. Florence Pender assisted in manuscript preparation. Sincere thanks are extended to the South Carolina's shrimp farmers for their encouragement. Last but not least, we want to thank the Gulf Coast Research Laboratory Consortium for their funding, especially as wisely administered in South Carolina by Craig Browdy and Steve Hopkins with the Waddell Mariculture Center and Paul Sandifer, the Division of Marine Resources's Director.

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Table 1A. Geographic Location of Respondents, 1989.

State	Number of Mail-outs	Number of Respondents	Number of Usable Questionnaires <sup>1</sup>	
Alabama	92	6	6	(1.5%)
Alaska	45	2	2	(0.5%)
Arizona	40	3	3	(0.8%)
Arkansas	16	2	2	(0.5%)
California	705	43	43	(10.9%)
Colorado	40	3	3	(0.8%)
Connecticut	78	4	4	(1.0%)
Delaware	21	2	2	(0.5%)
Dist. of Columbia	20	3	3	(0.8%)
Florida	741	53	53	(13.5%)
Georgia	119	13	12	(3.1%)
Hawaii	84	5	5	(1.3%)
Idaho	20	1	1	(0.3%)
Illinois	139	13	12	(3.1%)
Indiana	25	1	1	(0.3%)
Iowa	20	3	3	(0.8%)
Kansas	14	1	1	(0.3%)
Kentucky	20	3	3	(0.8%)
Louisiana	265	22	22	(5.6%)
Maine	200	9	9	(2.3%)
Maryland	193	18	18	(4.6%)
Massachusetts	384	11	11	(2.8%)
Michigan	97	6	6	(1.5%)
Minnesota	48	5	5	(1.3%)
Mississippi	60	5	5	(1.3%)
Missouri	43	1	1	(0.3%)
Montana	14	2	2	(0.5%)
Nebraska	6	1	1	(0.3%)
Nevada	3	1	1	(0.3%)
New Hampshire	39	1	1	(0.3%)
New Jersey	234	21	19	(4.8%)
New Mexico	14	2	2	(0.5%)
New York	557	27	27	(6.9%)
North Carolina	179	19	18	(4.6%)
North Dakota	3	1	1	(0.3%)
Ohio	67	8	8	(2.0%)
Oklahoma	12	2	2	(0.5%)
Oregon	75	3	3	(0.8%)
Pennsylvania	177	25	25	(6.4%)

Table 1A. Geographic Location of Respondents, 1989  
(continued).

State	Number of Mail-outs	Number of Respondents	Number of Questionnaires'	Usable
Rhode Island	95	3	3	(0.8%)
South Carolina	76	0	0	(0.0%)
South Dakota	0	0	0	(0.0%)
Tennessee	34	0	0	(0.0%)
Texas	267	18	18	(4.6%)
Utah	23	1	1	(0.3%)
Vermont	13	0	0	(0.0%)
Virginia	215	13	13	(3.3%)
Washington	337	9	8	(2.0%)
West Virginia	6	0	0	(0.0%)
Wisconsin	73	4	4	(1.0%)
Wyoming	6	0	0	(0.0%)
Total	6,054	399	393	100.0%

'Two or more questions other than the mailing address.



Table 2A. The Respondent's Classification of Business by State, 1989.

How would you best describe your firms seafood marketing activities?

State Abbreviation	Business Classification													
	Broker		Exporter		W/D <sup>1</sup>		Processor		Importer		Trader		Retailer	
MA	2	7.7%	2	7.7%	9	34.6%	2	7.7%	2	7.7%	3	11.5%	1	3.8%
RI	1	25.0%	0	0.0%	2	50.0%	1	25.0%	0	0.0%	0	0.0%	0	0.0%
NH	0	0.0%	0	0.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%	1	50.0%
ME	1	9.1%	0	0.0%	7	63.6%	3	27.3%	0	0.0%	0	0.0%	0	0.0%
VT	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
CT	0	0.0%	0	0.0%	2	33.3%	1	16.7%	0	0.0%	0	0.0%	2	33.3%
NJ	3	10.0%	1	3.3%	13	43.3%	1	3.3%	2	6.7%	1	3.3%	4	13.3%
NY	3	5.2%	0	0.0%	20	34.5%	0	0.0%	9	15.5%	7	12.1%	3	5.2%
PA	2	6.3%	0	0.0%	23	71.9%	0	0.0%	2	6.3%	0	0.0%	3	9.4%
DE	0	0.0%	0	0.0%	2	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
DC	0	0.0%	0	0.0%	3	75.0%	0	0.0%	0	0.0%	0	0.0%	1	25.0%
MD	2	7.4%	0	0.0%	11	40.7%	3	11.1%	2	7.4%	1	3.7%	4	14.8%
VA	4	25.0%	1	6.3%	7	43.8%	2	12.5%	0	0.0%	0	0.0%	2	12.5%
WV	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
NC	2	9.1%	0	0.0%	12	54.5%	5	22.7%	0	0.0%	1	4.5%	1	4.5%
SC	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
GA	0	0.0%	2	11.8%	9	52.9%	3	17.6%	0	0.0%	0	0.0%	3	17.6%
FL	13	9.9%	5	3.8%	43	32.8%	18	13.7%	12	9.2%	8	6.1%	9	6.9%
AL	1	5.9%	1	5.9%	3	17.6%	3	17.6%	1	5.9%	2	11.8%	1	5.9%
TN	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
MS	1	14.3%	0	0.0%	4	57.1%	2	28.6%	0	0.0%	0	0.0%	0	0.0%
KY	0	0.0%	0	0.0%	3	75.0%	1	25.0%	0	0.0%	0	0.0%	0	0.0%

Table 2A. The Respondent's Classification of Business by State, 1989 (Continued).

How would you best describe your firms seafood marketing activities?

State Abbreviation	Business Classification													
	Broker		Exporter		W/D <sup>1</sup>		Processor		Importer		Trader		Retailer	
OH	0	0.0%	0	0.0%	8	57.1%	1	7.1%	0	0.0%	0	0.0%	5	35.7%
IN	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
MI	1	6.7%	1	6.7%	6	40.0%	1	6.7%	2	13.3%	1	6.7%	0	0.0%
IA	0	0.0%	0	0.0%	3	60.0%	1	20.0%	0	0.0%	0	0.0%	1	20.0%
WI	0	0.0%	0	0.0%	4	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
MN	1	11.1%	0	0.0%	2	22.2%	1	11.1%	1	11.1%	1	11.1%	1	11.1%
SD	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
ND	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
MT	1	50.0%	0	0.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
IL	1	5.3%	0	0.0%	8	42.1%	0	0.0%	1	5.3%	1	5.3%	5	26.3%
MO	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
KS	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
NE	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
LA	2	5.4%	3	8.1%	17	45.9%	10	27.0%	2	5.4%	0	0.0%	1	2.7%
AR	1	33.3%	0	0.0%	1	33.3%	0	0.0%	0	0.0%	0	0.0%	1	33.3%
OK	0	0.0%	0	0.0%	1	33.3%	0	0.0%	0	0.0%	0	0.0%	1	33.3%
TX	3	10.0%	0	0.0%	12	40.0%	6	20.0%	1	3.3%	2	6.7%	2	6.7%
CO	1	33.3%	0	0.0%	2	66.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WY	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
ID	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
UT	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
AZ	0	0.0%	0	0.0%	1	12.5%	1	12.5%	2	25.0%	1	12.5%	0	0.0%
NM	0	0.0%	0	0.0%	2	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%

Table 2A. The Respondent's Classification of Business by State, 1989 (Continued).

How would you best describe your firms seafood marketing activities?

State Abbreviation	<u>Business Classification</u>													
	Broker		Exporter		W/D <sup>1</sup>		Processor		Importer		Trader		Retailer	
NV	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
CA	15	11.9%	11	8.7%	28	22.2%	8	6.3%	20	15.9%	11	8.7%	1	0.8%
HI	0	0.0%	0	0.0%	2	18.2%	1	9.1%	2	18.2%	2	18.2%	0	0.0%
OR	0	0.0%	1	33.3%	1	33.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WA	1	8.3%	2	16.7%	4	33.3%	3	25.0%	1	8.3%	0	0.0%	0	0.0%
AK	1	11.1%	1	11.1%	0	0.0%	2	22.2%	1	11.1%	1	11.1%	1	11.1%
<b>Total</b>	<b>64</b>	<b>8.7%</b>	<b>31</b>	<b>4.2%</b>	<b>284</b>	<b>38.4%</b>	<b>80</b>	<b>10.8%</b>	<b>63</b>	<b>8.5%</b>	<b>43</b>	<b>5.8%</b>	<b>54</b>	<b>7.3%</b>

Table 2A. The Respondent's Classification of Business by State, 1989 (Continued).

How would you best describe your firms seafood marketing activities?

State Abbreviation	Business Classification		Total Responses <sup>2</sup>	
	Others			
MA	0	0.0%	26	3.5%
RI	0	0.0%	4	0.5%
NH	0	0.0%	2	0.3%
ME	0	0.0%	11	1.5%
VT	1	0.0%	0	0.0%
CT	2	16.7%	6	0.8%
NJ	0	6.7%	30	4.1%
NY	0	0.0%	58	7.8%
PA	0	0.0%	32	4.3%
DE	0	0.0%	2	0.3%
DC	1	0.0%	4	0.5%
MD	0	3.7%	27	3.7%
VA	0	0.0%	16	2.2%
WV	0	0.0%	0	0.0%
NC	0	0.0%	22	3.0%
SC	0	0.0%	0	0.0%
GA	3	0.0%	17	2.3%
FL	2	2.3%	131	17.7%
AL	0	11.8%	17	2.3%
TN	0	0.0%	0	0.0%
MS	0	0.0%	7	0.9%
KY	0	0.0%	4	0.5%
OH	0	0.0%	14	1.9%
IN	0	0.0%	1	0.1%
MI	0	0.0%	15	2.0%
IA	0	0.0%	5	0.7%
WI	0	0.0%	4	0.5%
MN	0	0.0%	9	1.2%
SD	0	0.0%	0	0.0%
ND	0	0.0%	1	0.1%
MT	1	0.0%	2	0.3%
IL	0	5.3%	19	2.6%
MO	0	0.0%	1	0.1%
KS	0	0.0%	1	0.1%
NE	0	0.0%	1	0.1%
LA	0	0.0%	37	5.0%
AR	1	0.0%	3	0.4%
OK	1	33.3%	3	0.4%
TX	0	3.3%	30	4.1%
CO	0	0.0%	3	0.4%
WY	0	0.0%	0	0.0%
ID	0	0.0%	1	0.1%
UT	0	0.0%	1	0.1%

Table 2A. The Respondent's Classification of Business by State, 1989 (Continued).

How would you best describe your firms seafood marketing activities?

State Abbreviation	Business Classification		Total Responses <sup>2</sup>	
	Others			
AZ	0	0.0%	8	1.1%
NM	0	0.0%	2	0.3%
NV	1	0.0%	1	0.1%
CA	0	0.8%	126	17.1%
HI	1	0.0%	11	1.5%
OR	0	33.3%	3	0.4%
WA	0	0.0%	12	1.6%
AK	0	0.0%	9	1.2%
Total	14	1.9%	739	100.0%

<sup>1</sup>Wholesaler/Distributor

<sup>2</sup>Column percentage based on "Total" for this column, "total Responses". All other percentages are calculated "across" rows. Note: There were multiple responses to the business classification questions. The sum of the actual percentage may not exactly equal 100.0% due to rounding error.



Table 3A. Classification of Customer Location vs. Business Type, 1989.

Business Type	<u>Where are the majority of your customers located?</u>											
	Only In State <sup>1</sup>		Only Adjacent States <sup>2</sup>		Other States <sup>3</sup>		In State & Only Adjacent States <sup>4</sup>		In State & Other States <sup>5</sup>		Total Responses <sup>6</sup>	
Broker	16	39.0%	3	7.3%	2	4.9%	10	24.4%	10	24.4%	41	8.2%
Exporter	3	37.5%	0	0.0%	0	0.0%	0	0.0%	5	62.5%	8	1.6%
W/D <sup>7</sup>	128	53.3%	4	1.7%	8	3.3%	78	32.5%	22	9.2%	240	48.3%
Processor	15	31.9%	4	8.5%	8	17.0%	11	23.4%	9	19.1%	47	9.5%
Importer	10	29.4%	1	2.9%	1	2.9%	7	20.6%	15	44.1%	34	6.8%
Trader	9	47.4%	0	0.0%	0	0.0%	5	26.3%	5	26.3%	19	3.8%
Retailer	40	81.6%	0	0.0%	0	0.0%	6	12.2%	3	6.1%	49	9.9%
Others	44	74.6%	0	0.0%	0	0.0%	9	15.3%	6	10.2%	59	11.9%
Total	265	53.3%	12	2.4%	19	3.8%	126	25.4%	75	15.1%	497	100.0%

<sup>1</sup>"Only In State"-Customers are only in the business address state of the respondent.

<sup>2</sup>"Only Adjacent State"-Customers are only in states bordering business address state of the respondent.

<sup>3</sup>"Other States"-Customers are a combination of bordering and non-bordering States.

<sup>4</sup>"In State & Only Adjacent States"-Combination of customers in state and only adjacent (bordering) states.

<sup>5</sup>"In State & Other States"-Combination of customers in state and from other states with at least one state not a border state.

<sup>6</sup>Column percentage based on "Total" for this column, "Total Responses". All other percentages are calculated "across" the row.

<sup>7</sup>Wholesaler/Distributor

Note: There were multiple responses to the business classification question. The sum of the actual percentage may not exactly equal 100.0% due to rounding error.

Table 4A. Location (Region) of the Business with "In State & Other States" Customers, 1989<sup>1</sup>

B/C <sup>2</sup>	Region of the Business								Total Responses <sup>3</sup>
	Northeast	South	Midwest	West					
Broker	3 30.0%	5 50.0%	0 0.0%	2 20.0%	10	13.2%			
Exporter	1 20.0%	0 0.0%	0 0.0%	4 80.0%	5	6.6%			
W/D <sup>4</sup>	5 21.7%	13 56.5%	2 8.7%	3 13.0%	23	30.3%			
Processor	0 0.0%	5 55.6%	1 11.1%	3 33.3%	9	11.8%			
Importer	4 26.7%	4 26.7%	1 6.7%	6 40.0%	15	19.7%			
Trader	1 20.0%	2 40.0%	0 0.0%	2 40.0%	5	6.6%			
Retailer	0 0.0%	4 100.0%	0 0.0%	0 0.0%	4	5.3%			
Others	1 20.0%	4 80.0%	0 0.0%	0 0.0%	5	6.6%			
Total	15 19.7%	37 48.7%	4 5.3%	20 26.3%	76	100.0%			

<sup>1</sup>"In State and Other States"-combination of customers in state and from other states with at least one state not a border state.

<sup>2</sup>Business Classification

<sup>3</sup>Column percentage based on "Total" for this column, "Total Responses". All other percentages are calculated "across" rows.

<sup>4</sup>Wholesaler/Distributor

Note: There were multiple responses to the business classification question. The sum of the actual percentage may not exactly equal 100.0% due to rounding error.

Table 5A. Location (Region) of the Business with "In State and Only Adjacent States" Customers, 1989.<sup>1</sup>

B/C <sup>2</sup>	Region of the Business								Total Responses <sup>3</sup>
	Northeast	South	Midwest	West					
Broker	4 40.0%	3 30.0%	0 0.0%	3 30.0%					10 8.3%
Exporter	0 0.0%	0 0.0%	0 0.0%	0 0.0%					0 0.0%
W/D <sup>4</sup>	42 54.5%	22 28.6%	6 7.8%	7 9.1%					77 64.2%
Processor	3 25.0%	8 66.7%	0 0.0%	1 8.3%					12 10.0%
Importer	6 85.7%	0 0.0%	0 0.0%	1 14.3%					7 5.8%
Trader	2 40.0%	1 20.0%	1 20.0%	1 20.0%					5 4.2%
Retailer	2 33.3%	1 16.7%	2 33.3%	1 16.7%					6 5.0%
Others	0 0.0%	1 33.3%	1 33.3%	1 33.3%					3 2.5%
Total	59 49.2%	36 30.0%	10 8.3%	15 12.5%					120 100.0%

<sup>1</sup>"In State and Only Adjacent States"-Combination of in state and only adjacent (bordering) states.

<sup>2</sup>Business Classification

<sup>3</sup>Column percentage based on "Total" for this column, "Total Responses". All other percentages are calculated "across" rows.

<sup>4</sup>Wholesaler/Distributor

Note: There were multiple responses to the business classification question. The sum of the actual percentage may not exactly equal 100.0% due to rounding error.

Table 6A. Location (Region) of the Business with "Other States" Customers, 1989.<sup>1</sup>

B/C <sup>2</sup>	<u>Region of the Business</u>								Total Responses <sup>3</sup>	
	Northeast		South		Midwest		West			
Broker	1	50.0%	0	0.0%	0	0.0%	1	50.0%	2	10.5%
Exporter	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
W/D <sup>4</sup>	3	37.5%	5	62.5%	0	0.0%	0	0.0%	8	2.1%
Processor	0	0.0%	4	50.0%	0	0.0%	4	50.0%	8	42.1%
Importer	0	0.0%	0	0.0%	0	0.0%	1	100.0%	1	5.3%
Trader	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Retailer	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Others	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	4	21.1%	9	47.4%	0	0.0%	6	31.6%	19	100.0%

<sup>1</sup>"Other States"-Customers are a combination of bordering and non-bordering states.

<sup>2</sup>Business Classification

<sup>3</sup>Column percentage based on "Total" for this column, "Total Responses". All other percentages are calculated "across" rows.

<sup>4</sup>Wholesaler/Distributor

Note: There were multiple responses to the business classification question. The sum of the actual percentage may not exactly equal 100.0% due to rounding error.

Table 7A. Location (Region) of the Business with "Only Adjacent States" Customers, 1989.<sup>1</sup>

B/C <sup>2</sup>	Region of the Business				Total Responses <sup>3</sup>
	Northeast	South	Midwest	West	
Broker	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Exporter	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
W/D <sup>4</sup>	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Processor	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Importer	0 0.0%	1 100.0%	0 0.0%	0 0.0%	1 100.0%
Trader	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Retailer	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Others	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Total	0 0.0%	1 100.0%	0 0.0%	0 0.0%	1 100.0%

<sup>1</sup>"Only Adjacent State"-Customers are only in states bordering business address state of the respondent.

<sup>2</sup>Business Classification

<sup>3</sup>Column percentage based on "Total" for this column, "Total Responses". All other percentages are calculated "across" rows.

<sup>4</sup>Wholesaler/Distributor

Note: There were multiple responses to the business classification question. The sum of the actual percentage may not exactly equal 100.0% due to rounding error.



Table 8A. Location (Region) of the Business with Only In State" Customers, 1989.'

B/C2	Region of the Business								Total Responses <sup>3</sup>	
	Northeast		South		Midwest		West			
Broker	2	12.5%	6	37.5%	2	12.5%	6	37.5%	16	7.1%
Exporter	0	0.0%	0	0.0%	1	33.3%	2	66.7%	3	1.3%
W/D4	38	29.7%	32	25.0%	26	20.3%	32	25.0%	128	56.6%
Processor	2	13.3%	6	40.0%	2	13.3%	5	33.3%	15	6.6%
Importer	1	10.0%	1	10.0%	1	10.0%	7	70.0%	10	4.4%
Trader	3	33.3%	2	22.2%	1	11.1%	3	33.3%	9	4.0%
Retailer	18	45.0%	10	25.0%	10	25.0%	2	5.0%	40	17.7%
Others	3	60.0%	1	20.0%	0	0.0%	1	20.0%	5	2.2%
Total	67	29.6%	58	25.7%	43	19.0%	58	25.7%	226	100.0%

'"Only In State"-Customers are only in the business address state of the respondent.

2Business Classification

3Column percentage based on "Total" for this column, "Total Responses". All other percentages are calculated "across" rows.

Note: There were multiple responses to the business classification question. The sum of the actual percentage may not exactly equal 100.0% due to rounding error.

Table 9A. Classification of Customer Relative to the Mississippi River vs. Business Type, 1989.

Business Classification	<u>Where are the majority of your customers located?</u>							
	<u>Customers' Location</u>						Total Response <sup>1</sup>	
	East & West Mississippi River	East Mississippi River	West Mississippi River					
Broker	21	33.3%	26	41.3%	16	25.4%	63	10.6%
Exporter	14	58.3%	5	20.8%	5	20.8%	24	4.0%
W/D <sup>2</sup>	52	19.0%	168	61.5%	53	19.4%	273	45.7%
Processor	32	42.7%	33	44.0%	10	13.3%	75	12.6%
Importer	27	48.2%	19	33.9%	10	17.9%	56	9.4%
Trader	18	45.0%	14	35.0%	8	20.0%	40	6.7%
Retailer	4	7.5%	41	77.4%	8	15.1%	53	8.9%
Others	3	23.1%	7	53.8%	3	23.1%	13	2.2%
Total	171	28.6%	313	52.4%	113	18.9%	597	100.0%

<sup>1</sup>Column percentage based on "Grand Total" for this column, "Total Response".

<sup>2</sup>Wholesaler/Distributor

Note: There were multiple responses to the business classification question. The sum of the actual percentage may not exactly equal 100.0% due to rounding error.

Table 10A. Location (Region) of the Business with Customers East of the Mississippi River, 1989.

Business Classification	Region of the Business									
	Northeast		South		Midwest		West		All Region <sup>1</sup>	
Broker	13	50.0%	12	46.2%	1	3.8%	0	0.0%	26	7.5%
Exporter	1	20.0%	3	60.0%	1	20.0%	0	0.0%	5	1.4%
W/D <sup>2</sup>	125	61.3%	54	26.5%	25	12.3%	0	0.0%	204	58.8%
Processor	10	30.3%	21	63.6%	1	3.0%	1	3.0%	33	9.5%
Importer	13	68.4%	5	26.3%	1	5.3%	0	0.0%	19	5.5%
Trader	8	57.1%	5	35.7%	1	7.1%	0	0.0%	14	4.0%
Retailer	20	51.3%	9	23.1%	10	25.6%	0	0.0%	39	11.2%
Others	3	42.9%	3	42.9%	1	14.3%	0	0.0%	7	2.0%
Total	193	55.6%	112	32.3%	41	11.8%	1	0.3%	347	100.0%

<sup>1</sup>Column percentage based on "Grand Total" for this column, "Total Response".

<sup>2</sup>Wholesaler/Distributor

Note: There were multiple responses to the business classification question. The sum of the actual percentage may not exactly equal 100.0% due to rounding error.

Table 11A. Location (Region) of the Business with Customers West of the Mississippi River, 1989.

Business Classification	Region of the Business									
	Northeast		South		Midwest		West		All Region <sup>1</sup>	
Broker	1	6.3%	1	6.3%	3	18.8%	11	68.8%	16	15.1%
Exporter	0	0.0%	0	0.0%	0	0.0%	5	100.0%	5	4.7%
W/D <sup>2</sup>	3	6.7%	5	11.1%	7	15.6%	30	66.7%	45	42.5%
Processor	0	0.0%	1	10.0%	2	20.0%	7	70.0%	10	9.4%
Importer	1	10.0%	0	0.0%	0	0.0%	9	90.0%	10	9.4%
Trader	1	16.7%	0	0.0%	1	16.7%	4	66.7%	6	5.7%
Retailer	0	0.0%	3	37.5%	2	25.0%	3	37.5%	8	7.5%
Others	0	0.0%	0	0.0%	0	0.0%	6	100.0%	6	5.7%
Total	6	5.7%	10	9.4%	15	14.2%	75	70.8%	106	100.0%

<sup>1</sup>Column percentage based on "Grand Total" for this column, "Total Response".

<sup>2</sup>Wholesaler/Distributor

Note: There were multiple responses to the business classification question. The sum of the actual percentage may not exactly equal 100.0% due to rounding error.

Table 12A. Classification of Customer Relative to the Major Region vs. Interest in Purchasing Marine White Shrimp Farmed in the U.S.

	<u>Where are the majority of your customers located?</u>									
	Northeast		<u>East and West of the Mississippi River</u>				All Region <sup>1</sup>			
			South		Midwest		West			
Yes	7	18.4%	20	52.6%	3	7.9%	8	21.1%	38	47.5%
No	4	40.0%	0	0.0%	0	0.0%	6	60.0%	10	12.5%
Maybe	3	9.4%	16	50.0%	2	6.3%	11	34.4%	32	40.0%
<u>Total</u>	<u>14</u>	<u>17.5%</u>	<u>36</u>	<u>45.0%</u>	<u>5</u>	<u>6.3%</u>	<u>25</u>	<u>31.3%</u>	<u>80</u>	<u>100.0%</u>
N&M <sup>2</sup>	7	16.7%	16	38.1%	2	4.8%	17	40.5%	42	52.5%

<sup>1</sup>Column percentage based on "Total" for this column, "All Region". All other percentages are calculated "across" rows.

<sup>2</sup>No and Maybe results combined

Table 12A. (Continued) Classification of Customer Relative to the Major Region vs. Interest in Purchasing Marine White Shrimp Farmed in the U.S.

	Where are the majority of your customers located?									
	Northeast		West of the Mississippi River		Midwest		West		All Region <sup>1</sup>	
Yes	1	2.4%	5	12.2%	9	22.0%	26	63.4%	41	58.6%
No	0	0.0%	0	0.0%	0	0.0%	3	100.0%	3	4.3%
Maybe	0	0.0%	3	11.5%	1	3.8%	22	84.6%	26	37.1%
Total	1	1.4%	8	11.4%	10	14.3%	51	72.9%	70	100.0%
N&M <sup>2</sup>	0	0.0%	3	10.3%	1	3.4%	25	86.2%	29	41.4%

<sup>1</sup>Column percentage based on "Total" for this column, "All Region". All other percentages are calculated "across" rows.

<sup>2</sup>No and Maybe results combined



Table 12A. (Continued) Classification of Customer Relative to the Major Region vs. Interest in Purchasing Marine White Shrimp Farmed in the U.S.

	Where are the majority of your customers located?									
	Northeast		East of the Mississippi River				West		All Region <sup>1</sup>	
			South	Midwest						
Yes	38	48.7%	27	34.6%	13	16.7%	0	0.0%	78	37.3%
No	16	61.5%	9	34.6%	0	0.0%	1	3.8%	26	12.4%
Maybe	57	54.3%	35	33.3%	13	12.4%	0	0.0%	105	50.2%
Total	111	53.1%	71	34.0%	26	12.4%	1	0.5%	209	100.0%
N&M <sup>2</sup>	73	55.7%	44	33.6%	13	9.9%	1	0.8%	131	62.7%

<sup>1</sup>Column percentage based on "Total" for this column, "All Region". All other percentages are calculated "across" rows.

<sup>2</sup>No and Maybe results combined

Table 13A. Classification of Customer Location vs. Business Type, 1989.

B/C <sup>1</sup>	Where are the majority of your customers located?																	
	North America		USA Only		Europe		Asia		South America		Africa		A&O <sup>2</sup>		Inter. <sup>3</sup>		Total Responses <sup>4</sup>	
Broker	3	23.1%	3	23.1%	0	0.0%	2	15.4%	1	7.7%	0	0.0%	0	0.0%	4	30.8%	13	8.9%
Exporter	7	25.0%	3	10.7%	5	17.9%	9	32.1%	1	3.6%	0	0.0%	0	0.0%	3	10.7%	28	19.2%
W/D <sup>5</sup>	11	34.4%	10	31.3%	3	9.4%	4	12.5%	0	0.0%	0	0.0%	0	0.0%	4	12.5%	32	21.9%
Processor	8	30.8%	4	15.4%	3	11.5%	6	23.1%	0	0.0%	0	0.0%	0	0.0%	5	19.2%	26	17.8%
Importer	10	34.5%	5	17.2%	4	13.8%	5	17.2%	1	3.4%	0	0.0%	0	0.0%	4	13.8%	29	19.9%
Trader	4	25.0%	3	18.8%	3	18.8%	2	12.5%	0	0.0%	0	0.0%	0	0.0%	4	25.0%	16	11.0%
Retailer	1	50.0%	0	0.0%	0	0.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	1.4%
Other	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	44	30.1%	28	19.2%	18	12.3%	29	19.9%	3	2.1%	0	0.0%	0	0.0%	24	16.4%	146	100.0%

<sup>1</sup>Business Classification

<sup>2</sup>Column percentage based on "Total" for this column, "Total Responses". All other percentages are calculated "across" rows.

<sup>3</sup>"International" customers are customers in two or more continents (e.g. customers in Asia and North America).

<sup>4</sup>Australia & Oceania

<sup>5</sup>Wholesaler/Distributor

Note: There were multiple responses to the business classification question. The sum of the actual percentage may not exactly equal 100.0% due to rounding error.

Table 14A. Location (Region) of the Business with "International"<sup>1</sup> Customers, 1989.

Business Classification	Region of the Business									
	Northeast		South		Midwest		West		All Region <sup>2</sup>	
Broker	1	25.0%	0	0.0%	0	0.0%	3	75.0%	4	16.0%
Exporter	0	0.0%	0	0.0%	0	0.0%	3	100.0%	3	12.0%
W/D <sup>3</sup>	1	25.0%	1	25.0%	0	0.0%	2	50.0%	4	16.0%
Processor	1	20.0%	2	40.0%	0	0.0%	2	40.0%	5	20.0%
Importer	0	0.0%	1	25.0%	0	0.0%	3	75.0%	4	16.0%
Trader	0	0.0%	1	25.0%	0	0.0%	3	75.0%	4	16.0%
Retailer	0	0.0%	1	100.0%	0	0.0%	0	0.0%	1	4.0%
Others	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	3	12.0%	6	24.0%	0	0.0%	16	64.0%	25	100.0%

<sup>1</sup>"International" customers are customers in two or more continents (e.g. customers in Asia and North America).

<sup>2</sup>Column percentage based on "Total" for this column, "All Region". All other percentages are calculated "across" rows.

<sup>3</sup>Wholesaler/Distributor

Note: There were multiple responses to the business classification question. The sum of the actual percentage may not exactly equal 100.0% due to rounding error.

Table 15A. Location (Region) of the Business with "North America" Customers, 1989.

Business Classification	Region of the Business									
	Northeast		South		Midwest		West		All Region <sup>1</sup>	
Broker	0	0.0%	2	66.7%	0	0.0%	1	33.3%	3	6.8%
Exporter	1	14.3%	4	57.1%	0	0.0%	2	28.6%	7	15.9%
W/D <sup>2</sup>	2	18.2%	7	63.6%	0	0.0%	2	18.2%	11	25.0%
Processor	1	16.7%	5	83.3%	0	0.0%	0	0.0%	6	13.6%
Importer	1	10.0%	4	40.0%	1	10.0%	4	40.0%	10	22.7%
Trader	1	25.0%	2	50.0%	0	0.0%	1	25.0%	4	9.1%
Retailer	0	0.0%	1	50.0%	0	0.0%	1	50.0%	2	4.5%
Others	0	0.0%	0	0.0%	0	0.0%	1	100.0%	1	2.3%
Total	6	13.6%	25	56.8%	1	2.3%	12	27.3%	44	100.0%

<sup>1</sup>Column percentage based on "Total" for this column, "All Region". All other percentages are calculated "across" rows.

<sup>2</sup>Wholesaler/Distributor

Note: There were multiple responses to the business classification question. The sum of the actual percentage may not exactly equal 100.0% due to rounding error.

Table 16A. Location (Region) of the Business with "Asia" Customers, 1989.

Business Classification	Region of the Business									
	Northeast		South		Midwest		West		All Region <sup>1</sup>	
Broker	0	0.0%	0	0.0%	0	0.0%	2	100.0%	2	7.1%
Exporter	1	11.1%	4	44.4%	0	0.0%	4	44.4%	9	32.1%
W/D <sup>2</sup>	0	0.0%	3	75.0%	0	0.0%	1	25.0%	4	14.3%
Processor	2	33.3%	3	50.0%	0	0.0%	1	16.7%	6	21.4%
Importer	0	0.0%	1	50.0%	0	0.0%	1	50.0%	2	7.1%
Trader	0	0.0%	1	50.0%	0	0.0%	1	50.0%	2	7.1%
Retailer	0	0.0%	1	50.0%	0	0.0%	1	50.0%	2	7.1%
Others	0	0.0%	0	0.0%	0	0.0%	1	100.0%	1	3.6%
Total	3	10.7%	13	46.4%	0	0.0%	12	42.9%	28	100.0%

<sup>1</sup>Column percentage based on "Total" for this column, "All Region". All other percentages are calculated "across" rows.

<sup>2</sup>Wholesaler/Distributor

Note: There were multiple responses to the business classification question. The sum of the actual percentage may not exactly equal 100.0% due to rounding error.

Table 17A. Location (Region) of the Business with "Europe" Customers, 1989.

Business Classification	Region of the Business									
	Northeast	South	Midwest	West	All Region <sup>1</sup>					
Broker	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Exporter	3	60.0%	1	20.0%	0	0.0%	1	20.0%	5	26.3%
W/D <sup>2</sup>	1	25.0%	1	25.0%	1	25.0%	1	25.0%	4	21.1%
Processor	1	33.3%	1	33.3%	0	0.0%	1	33.3%	3	15.8%
Importer	1	25.0%	1	25.0%	0	0.0%	2	50.0%	4	21.1%
Trader	1	33.3%	1	33.3%	0	0.0%	1	33.3%	3	15.8%
Retailer	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Others	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	7	36.8%	5	26.3%	1	5.3%	6	31.6%	19	100.0%

<sup>1</sup>Wholesaler/Distributor

<sup>2</sup>Column percentage based on "Total" for this column, "All Region". All other percentages are calculated "across" rows.

Note: There were multiple responses to the business classification question. The sum of the actual percentage may not exactly equal 100.0% due to rounding error.



Table 18A. Location (Region) of the Business with "USA Only" Customers, 1989.

Business Classification	Region of the Business									
	Northeast		South		Midwest		West		All Region'	
Broker	0	0.0%	2	66.7%	0	0.0%	1	33.3%	3	10.7%
Exporter	0	0.0%	2	66.7%	0	0.0%	1	33.3%	3	10.7%
W/D <sup>1</sup>	1	10.0%	5	50.0%	0	0.0%	4	40.0%	10	35.7%
Processor	1	25.0%	2	50.0%	0	0.0%	1	25.0%	4	14.3%
Importer	0	0.0%	3	60.0%	0	0.0%	2	40.0%	5	17.9%
Trader	0	0.0%	1	33.3%	0	0.0%	2	66.7%	3	10.7%
Retailer	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Others	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	2	7.1%	15	53.6%	0	0.0%	11	39.3%	28	100.0%

<sup>1</sup>Column percentage based on "Total" for this column, "All Region". All other percentages are calculated "across" rows.

<sup>2</sup>Wholesaler/Distributor

Note : There were multiple responses to the business classification question. The sum of the actual percentage may not exactly equal 100.0% due to rounding error.

Table 19A. Reported Seafood Sales in 1988 vs. Average Percent Contribution of Shrimp Sales to Seafood Sales by Region.

Seafood Sales	Region of Business Location				All Regions
	Northeast	South	Midwest	West	
<u>&lt;\$5 Million:</u>					
Number	54	49	21	25	149
Response Percent <sup>1</sup>	(74.0%)	(72.1%)	(67.7%)	(58.1%)	(69.3%)
Average Percent <sup>2</sup>	94.7%	43.3%	29.8%	38.0%	59.1%
<u>\$5-\$9.9 Million:</u>					
Number	6	12	5	8	31
Response Percent <sup>1</sup>	(8.2%)	(17.6%)	(16.1%)	(18.6%)	(14.4%)
Average Percent <sup>2</sup>	21.5%	56.8%	28.2%	58.5%	45.8%
<u>\$10-\$14.9 Million:</u>					
Number	8	4	2	4	18
Response Percent <sup>1</sup>	(11.0%)	(5.9%)	(6.5%)	(9.3%)	(8.4%)
Average Percent <sup>2</sup>	28.0%	60.8%	27.5%	43.0%	38.6%
<u>\$15-\$19.9 Million:</u>					
Number	1	1	0	0	2
Response Percent <sup>1</sup>	(1.4%)	(1.5%)	(0.0%)	(0.0%)	(0.9%)
Average Percent <sup>2</sup>	5.0%	25.0%	0.0%	0.0%	15.0%
<u>&gt;\$20 Million:</u>					
Number	4	2	3	6	15
Response Percent <sup>1</sup>	(5.5%)	(2.9%)	(9.7%)	(14.0%)	(7.0%)
Average Percent <sup>2</sup>	36.8%	22.5%	12.0%	62.5%	40.2%

(Footnotes on next page.)

Table 19A. Reported Seafood Sales in 1988 vs. Average Percent Contribution of Shrimp Sales to Seafood Sales by Region (Continued).

Seafood Sales	Region of Business Location				All Regions
	Northeast	South	Midwest	West	
<u>Grand Total:</u> <sup>3</sup>					
Number	73	68	31	43	215
Response Percent	(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)
Average Percent	77.0%	45.8%	27.7%	45.7%	53.8%

<sup>1</sup>The percent of responses, "Number", compared to the "Grand Total".

<sup>2</sup>Average of reported shrimp sales percent by seafood sales volume.

<sup>3</sup>Combined totals from the Northeast, South, Midwest, and West Region columns.

Note: The sum of the actual percentage may not exactly equal 100.0% due to rounding error.

Table 20A. Respondent's Reported Sales Volume Level in 1988 by Region.

Sales Volume, Millions	Region of Business Location								Total Response <sup>1</sup>	
	Northeast		South		Midwest		West			
<\$5	93	37.1%	81	32.3%	24	9.6%	53	21.1%	251	68.6%
\$5 to \$9.9	13	25.0%	17	32.7%	7	13.5%	15	28.8%	52	14.2%
\$10 to \$14.9	14	45.2%	7	22.6%	3	9.7%	7	22.6%	31	8.5%
\$15 to \$19.9	2	50.0%	1	25.0%	0	0.0%	1	25.0%	4	1.1%
>\$20	6	21.4%	6	21.4%	6	21.4%	10	35.7%	28	7.7%
Total	128	35.0%	112	30.6%	40	10.9%	86	23.5%	366	100.0%

<sup>1</sup>Column percentage based on "Total" for this column, "Total Response". All other percentages are calculated "across" row.

Note: The sum of the actual percentage may not exactly equal 100.0% due to rounding error.

Table 21A. Average Reported Percent Shrimp Sales by Outlet for Wholesalers and Distributors in 1988 by Region.

Outlets	Region				
	Northeast	South	Midwest	West	All Regions
<u>White Tablecloth:</u>					
Number	50	36	24	28	138
Response Percent <sup>1</sup>	(23.5%)	(18.0%)	(30.0%)	(25.2%)	(22.8%)
Average Percent <sup>2</sup>	41.9%	37.9%	35.6%	44.1%	40.2%
<u>Other Restaurants:</u>					
Number	53	43	14	25	135
Response Percent <sup>1</sup>	(24.9%)	(21.5%)	(17.5%)	(22.5%)	(22.4%)
Average Percent <sup>2</sup>	29.2%	30.2%	29.4%	24.0%	28.6%
<u>Seafood Specialty Shops:</u>					
Number	34	28	10	15	87
Response Percent <sup>1</sup>	(16.0%)	(14.0%)	(12.5%)	(13.5%)	(14.4%)
Average Percent <sup>2</sup>	33.3%	23.1%	27.0%	14.0%	26.0%
<u>Other:</u>					
Number	16	14	8	5	43
Response Percent <sup>1</sup>	(7.5%)	(7.0%)	(10.0%)	(4.5%)	(7.1%)
Average Percent <sup>2</sup>	29.2%	29.6%	39.6%	19.2%	30.1%
<u>Supermarkets:</u>					
Number	25	26	12	17	80
Response Percent <sup>1</sup>	(11.7%)	(13.0%)	(15.0%)	(15.3%)	(13.2%)
Average Percent <sup>2</sup>	28.8%	21.5%	28.8%	23.3%	25.3%

(Footnotes on next page.)

Table 21A. Average Reported Percent Shrimp Sales by Outlet for Wholesaler and Distributors in 1988 by Region (Continued).

Outlets	<u>Region</u>				All Regions
	Northeast	South	Midwest	West	
<u>W/D:</u> <sup>3</sup>					
Number	29	40	6	16	91
Response Percent <sup>1</sup>	(13.6%)	(20.0%)	(7.5%)	(14.4%)	(15.1%)
Average Percent <sup>2</sup>	22.0%	44.1%	13.3%	39.4%	34.2%
<u>Institutions:</u>					
Number	6	13	6	5	30
Response Percent <sup>1</sup>	(2.8%)	(6.5%)	(7.5%)	(4.5%)	(5.0%)
Average Percent <sup>2</sup>	7.0%	8.2%	5.2%	5.2%	6.9%
<u>Grand Total:</u> <sup>4</sup>					
Number	213	200	80	111	604
Response Percent	(100%)	(100%)	(100%)	(100%)	(100%)
Average Percent	31.2%	30.8%	28.9%	28.8%	30.3%

<sup>1</sup>The percent of responses, "Number", compared to the "Grand Total".

<sup>2</sup>Average of reported shrimp sales percent by outlet.

<sup>3</sup>Wholesaler/Distributor

<sup>4</sup>Combined totals from the Northeast, South, Midwest, and West Region columns.

Note: There were multiple responses to the business outlet questions. The sum of the actual percentage may not exactly equal 100.0% due to rounding error.



Table 22A. Average Reported Percent Shrimp Sales by Outlet for Processors in 1988 by Region.

Outlets	Region				
	Northeast	South	Midwest	West	All Regions
<u>White Tablecloth:</u>					
Number	5	14	0	8	27
Response Percent <sup>1</sup>	(23.8%)	(15.1%)	(0.0%)	(20.0%)	(17.2%)
Average Percent <sup>2</sup>	61.0%	31.1%	0.0%	36.5%	38.2%
<u>Other Restaurants:</u>					
Number	4	16	1	6	27
Response Percent <sup>1</sup>	(19.0%)	(17.2%)	(33.3%)	(15.0%)	(17.2%)
Average Percent <sup>2</sup>	33.8%	16.2%	3.0%	17.5%	18.6%
<u>Seafood Specialty Shops:</u>					
Number	5	14	0	5	24
Response Percent <sup>1</sup>	(23.8%)	(15.1%)	(0.0%)	(12.5%)	(15.3%)
Average Percent <sup>2</sup>	18.0%	36.6%	0.0%	8.0%	13.0%
<u>Other:</u>					
Number	3	8	1	4	16
Response Percent <sup>1</sup>	(14.3%)	(8.6%)	(33.3%)	(10.0%)	(10.2%)
Average Percent <sup>2</sup>	38.3%	34.5%	7.0%	4.5%	26.0%
<u>Supermarkets:</u>					
Number	1	13	0	7	21
Response Percent <sup>1</sup>	(4.8%)	(14.0%)	(0.0%)	(17.5%)	(13.4%)
Average Percent <sup>2</sup>	70.0%	23.1%	0.0%	20.4%	24.4%

(Footnotes on next page.)

Table 22A. (Continued) Average Percent Shrimp Sales by Outlet for Processor in 1988 by Region.

Outlets	Region				
	Northeast	South	Midwest	West	All Regions
<u>W/D:<sup>3</sup></u>					
Number	3	22	1	8	34
Response Percent <sup>1</sup>	(14.3%)	(23.7%)	(33.3%)	(20.0%)	(21.7%)
Average Percent <sup>2</sup>	30.0%	49.9%	100.0%	60.0%	52.0%
<u>Institutions:</u>					
Number	0	6	0	2	8
Response Percent <sup>1</sup>	(0.0%)	(6.5%)	(0.0%)	(5.0%)	(5.1%)
Average Percent <sup>2</sup>	0.0%	7.3%	0.0%	3.5%	6.4%
<u>Grand Total:<sup>4</sup></u>					
Number	21	93	3	40	157
Response Percent	(100%)	(100%)	(100%)	(100%)	(100%)
Average Percent	38.3%	27.9%	36.7%	27.1%	29.3%

<sup>1</sup>The percent of responses, "Number", compared to the "Grand Total"

<sup>2</sup>Average of reported shrimp sales percent by outlet.

<sup>3</sup>Wholesaler/Distributor

<sup>4</sup>Combined totals from the Northeast, South, Midwest, and West Region columns.

Note: There were multiple responses to the business outlet question. The sum of the actual percentage may not exactly equal 100.0% due to rounding error.



b. Where are the majority of your customers located? (Indicate states and/or cities):

(112) Country

1 North America

2 USA Only

3 Europe

4 Asia

5 Australia & Oceania

(113) U.S. Region

1 East & West Mississippi River

2 West Mississippi River

3 East Mississippi River

(114) State level

1 Only In State

2 Only Adjacent States

3 Other States

4 In State & Only Adjacent States

---

2. About how many people are employed by your firm?

(115)

1. 1 to 4

2. 5 to 9

3. 10 to 19

4. 20 to 49

5. 50 to 99

6. 100 to 249

7. 250 to 499

8. 500 & over

\_\_\_\_\_ person(s)

3. During the last 12 months did you purchase/trade marine (not freshwater) shrimp farmed (cultured) in the United States? (Check one)

(121) 1 Yes 2 No 3 I don't know

4. Are you interested in purchasing marine white shrimp farmed (cultured) in the U.S. (Check one)

(122) 1 Yes 2 No 3 Maybe, send more information.

a. If yes, please indicate desired shrimp products, count size(s) and quantities based on current market prices (Please circle "Yes" or "No" for each item):

<u>Shrimp Product</u> <u>Quantities</u> <u>Needed</u>	<u>Size Ranges</u>			<u>(counts)</u>		
	<u>(123)</u> Live shrimp	Yes	No	Maybe	<u>(124)</u>	<u>(125-132)</u> Lbs/Month
		1	2	3	1. u/15 2. 16-30 3. 31-50 4. 51-80 5. 81+ 6. all major counts	
(133) <u>Heads-On,</u> fresh	"			"	<u>(134)</u> *same as above	<u>(135-142)</u> Lbs/Month
(143) <u>Heads-On,</u> frozen	"			"	<u>(144)</u> *same as above	<u>(145-152)</u> Lbs/Month
(153) <u>Heads-On,</u> IQF	"			"	<u>(154)</u> *same as above	<u>(155-162)</u> Lbs/Month
(163) <u>Heads-Off,</u> fresh	"			"	<u>(164)</u> *same as above	<u>(165-172)</u> Lbs/Month
(173) <u>Heads-Off,</u> frozen	"			"	<u>(174)</u> *same as above	<u>(561-569)</u> Lbs/Month
(203) <u>Heads-Off,</u> IQF	"			"	<u>(204)</u> *same as above	<u>(205-212)</u> Lbs/Month

Other Farmed Shrimp Products Needed (Describe Product and Quantities Needed):

- (213) P&D Raw (214-200)
- (221) P&D Cooked (222-228)
- (229) PUD Raw (230-236)
- (237) PUD Cooked (238-244)
- (245) IQF P&D (246-252)
- (253) Shrimp Pieces (254-260)
- (261) Breaded (262-268)
- (269) Cooked Shrimp (270-276)
- (277) Peeled Shrimp (561-569) Data file on Seafood2.Dat
- (302) Peeled Block Frozen
- (303) Shrimp Tails

4. b. If no, please indicate why you are not interested in purchasing U.S. farmed marine shrimp:  
(304)

**IF YOU DO NOT MARKET (I.E. PURCHASE OR SELL) ANY SHRIMP, PLEASE SKIP TO QUESTION 7.**

5. a. If your firm currently purchases any of the marine (not freshwater) shrimp products listed below, please estimate how much you purchased in 1988 for your clients, as well as the count size and country of origin:

Amount Purchased	Major Counts (Size)	Major Country of Origin
Live Shrimp <u>(305-311)</u> Lbs/Yr.	<u>(312)</u>	<u>(313)</u>
	1. u-15	(314)/(315)
	2. 16-30	(316)
	3. 31-50	(317)
	4. 51-80	(318)
	5. 81+	(319)
	6. all major counts	(320)/(321) (322)
<u>Heads-On,</u> Fresh (Never frozen) <u>(323-329)</u> Lbs/Yr	<u>(330)</u>	<u>(331)</u>
	*same as above	(332)/(333) (334) (335) (336) (337) (338)/(339) (340)
<u>Heads-On, Frozen &amp; IQF</u> <u>(341-347)</u> Lbs/Yr.	<u>(348)</u>	<u>(349)</u>
	*same as above	(350)/(351) (352) (353) (354) (355) (356)/(357) (358)
<u>Heads-Off, Fresh</u> <u>(359-365)</u> Lbs/Yr.	<u>(366)</u>	<u>(367)</u>
	*same as above	(368)/(369) (370) (371) (372) (373) (374)/(375) (376)



Heads-Off, Frozen & IQF(Shell-On)

(570-578) Lbs/Yr.

(404)

\*same as  
above

(405)

(406)/(407)

(408)

(409)

(410)

(411)

(412)/(413)

(414)

5. b. Please roughly estimate the percent contribution of all your shrimp products (e.g. shell-on shrimp, P&D, PUD's, etc.) to your total 1988 seafood sales:

(415-417%)

6. Of your total annual sales of heads-off (shell-on) marine shrimp, please estimate the percentage (%) allocated to different outlets in 1988 (the total should equal 100%):

(418-420)% White Table

Cloth Restaurants

(430-432)% Supermarkets:

(421-423)% Other Restaurants

(433-435) % Wholesalers/

Distributors

(424-426)% Seafood Specialty

Shops

(436-438)% Institutions

(hospitals, etc.)

(427-429)% Other (Describe):

7. Are you interested in purchasing South Carolina farmed fish or shellfish? (Please circle "Yes" or "No" for each item)

				<u>Quantities</u>	
		<u>Needed</u>			
		Yes	No	Maybe	
		1	2	3	<u>(440-447)</u>
				Lbs/Month	
(439) Hybrid Striped Bass					
(448) Redfish (Red Drum)					*same as above <u>(449-456)</u> Lbs/Month
(457) Crawfish					*same as above <u>(458-465)</u> Lbs/Month
(466) Soft Shell Crawfish					*same as above <u>(467-474)</u> Lbs/Month
(475) Eastern Oysters					*same as above <u>(570-578)</u> Bu/Month *Data file on Seafood2.dat
(504) Soft Shell Blue Crabs					*same as above <u>(505-512)</u> Doz/Month
(513) Little Neck Clams					*same as above <u>(514-521)</u> Clams/Mon

- (522) Seed Clams for Culturing \*same as above (523-530)  
Clams/Mon
- (531) Southern Bay Scallops \*same as above (532-539)  
Gal/Month
- (540) Catfish \*same as above (541-548)  
Lbs/Month
- (549) Marine Shrimp \*same as above (550-557)  
Lbs/Month
- (558) Other farmed products needed
- 

8. Please place a check by the range of values in which your firm's total seafood sales in 1988 belong (Check one):

- (559)
- 1   less than \$5 million
- 2   \$5 to \$10 million
- 3   \$10 to \$15 million
- 4   \$15 to \$20 million
- 5   greater than \$20 million

(560) Seafood firms specializing in other seafood products

Please mail this questionnaire using the enclosed self-addressed business reply envelope or write to us at the following address:

Fisheries Economics Program  
SC Division of Marine Resources  
P.O. Box 12559  
Charleston, SC 29412

If you would like more information on this survey, please contact Valvy Grant at (803) 795-6350. We thank you for your cooperation.