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## Aquaculture and Marketing of the Florida Bay Scallop in Crystal River, Florida

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## **PREFACE**

Aquaculture in the state of Florida is in the developmental stages and the Florida Legislature is developing new legislation to encourage commercial ventures like scallop aquaculture. Florida's Nature Coast which includes Crystal River, very much needs new commercial ventures for displaced fishermen. This project has all the elements for success since it includes the cooperation of Sea Grant Faculty with the local community. The project will benefit the local economy of Citrus County through the involvement of fishermen with scallop aquaculture and a specialized fishery product.

The conclusions and opinions expressed in the report are those of the authors and do not necessarily represent those of the grantors.

## **ABSTRACT**

This study was undertaken to determine market acceptability and marketing strategies for whole bay scallops produced in aquacultural environments. Data for analyses were collected by surveying patrons of upscale, white tablecloth restaurants where seafood is a featured, but not exclusive, menu item. Freshly harvested whole bay scallops were prepared by chefs at four participating North Florida restaurants during September and October of 1997 and 1998, the peak harvest season for scallops. Survey respondents rated whole bay scallops favorably in regard to appearance, taste, texture, value and overall satisfaction. Ratings were generally very good. Over 85 percent indicated they would order whole bay scallops in the future.

Keywords: bay scallops, *Argopecten Irradians*, marketing, consumer evaluations

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## EXECUTIVE SUMMARY

- This study was undertaken to determine consumer acceptance of locally aquacultured Florida whole bay scallops.
- The American bay scallop has been successfully cultured as a specialty product in areas along the east coast from Virginia to New England. Supply has been inadequate to meet demand in these areas.
- Intensive harvesting and environmental pollution over the last 20 years have resulted in the decline of bay scallops in local Florida estuaries. As a result of this decline, the Florida Marine Fisheries Commission banned commercial harvest of the species and limited recreational harvest to areas north of the Suwannee River.
- The Shellfish Biology Laboratory at the University of South Florida has developed techniques for growing the Florida Bay Scallop by aquacultural methods. Research indicates that commercial production may be feasible in locales with satisfactory water quality.
- While American consumers traditionally enjoy eating the white fleshed, succulent adductor muscle of scallops, the small size of this muscle in Florida bay scallops makes aquaculture production for the muscle only infeasible.
- An in-restaurant survey carried out during the peak scallop season of September and October of both 1997 and 1998 was utilized to determine consumer acceptance. During both seasons, scallops used in the study were relatively small, ranging in size from 1"-1 2" (25-35mm) in diameter.
- Four local moderately upscale restaurants participated in the study. These restaurants are well known for seafood specialties, but do not serve seafood exclusively. Professional chefs prepared the product and promoted it as a menu special.
- Consumers rated specific product attributes of professionally prepared whole bay scallops. In addition, the consumers were asked if they would purchase the product again at the same price.
- In addition to the restaurant patrons, a group of citizens participating in a community fund raising event were asked to evaluate the whole bay scallops. The results from this sample were not analyzed with the restaurant patrons due to the fact that their demographics were not comparable, they did not purchase the product as a separate menu item, and they were served undersized, late season specimens that were somewhat inferior to those served in the restaurants.
- Survey results indicated that the product was very well received. Appearance, taste, texture, value and overall satisfaction generally received very good ratings. Taste received the highest ratings while value received the lowest. Written comments indicated that the value was rated lower because of the small size of the scallops.

- There seemed to be little apprehension regarding eating the whole bay scallop among survey participants. However, the chefs indicated that local residents and older people that were more likely to be familiar with the muscle-only scallop were not well represented among survey respondents because the chefs felt these people avoided the whole scallop. They would have likely rated their hesitation to purchase the product more highly.
- Eighty-seven percent of the restaurant patrons indicated that they would purchase the product again at the same price, indicating a high degree of acceptance of the product.
- Promotional efforts emphasizing the locally-grown, environmentally friendly, aquacultured product aspects can be utilized by restaurants serving whole bay scallops. Menu specials, recommendations by chefs or serving staff and table-tent style advertising can be effective marketing techniques.
- Although consumer evaluations were generally positive, several product attributes need to be improved. Consumers' and chefs' perceptions of value could be improved by providing larger sized scallops, about 12:1 (35-45mm) in diameter. Further, the chefs also expressed a preference for scallops with cleaner shells; many of the scallops had heavily fouled shells which were difficult or impossible to clean.
- Finally, commercial market development will require stable, reliable supplies of scallops and bi-weekly deliveries because of the product's limited shelf life.

## **INTRODUCTION**

More than 35 species of scallops are harvested world wide and many of these species are the focus of intense aquaculture. The American bay scallop has been one species that has been aquacultured in China and the meats enter the US market as a relatively inexpensive frozen product. However, in several places in New England, New York and Virginia, the species is now cultured and sold whole in the shell as a specialty product. Remarkably, market demand has exceeded production.

Intensive harvesting and environmental pollution over the last 20 years have resulted in the decline of bay scallops in local Florida estuaries. As a result of this decline, the Florida Marine Fisheries Commission banned scallop harvest for recreation south of the Suwannee River and totally banned the commercial harvest of the species from wild stocks. Since 1990, the Shellfish Biology Laboratory at the University of South Florida has developed the techniques for growing the Florida Bay Scallop for restoration of the species for recreational purposes. Bay scallop aquaculture research indicates that commercial production may be feasible in locales with satisfactory water quality.

Traditionally, American consumers have only eaten the white fleshed, succulent adductor muscle of scallops. However, the small size of this muscle in Florida bay scallops makes aquaculture production for the muscle only economically impractical. The successful development of commercial culture of bay scallops in Florida is therefore not only dependent on a successful culturing process, but on the marketability of the whole bay scallop. Further, a new specialty product such as whole bay scallops must have a marketing strategy for timely delivery of desired quantities of the product to the retail market. Product acceptability and overall market potential of the product requires evaluation. This study has been undertaken to determine consumer acceptance of the whole bay scallop produced under local conditions.

## **OBJECTIVES**

The primary objective of this study is to determine market acceptability and marketing strategies for whole bay scallops produced in aquacultural environments in Florida. Specific objectives included 1) determining how consumers rate specific product attributes of Florida whole

bay scallops including appearance, taste, texture, value and overall satisfaction with the product when prepared by professional chefs in an upscale restaurant setting, 2) measuring consumers' reactions to the thought of eating a whole bay scallop, and 3) determining if consumers were satisfied enough with the product to purchase it again.

## **PROCEDURES**

### **The Virginia Experience Investigated**

During the period of June 16-18, 1997, eight chefs representing six upscale restaurants in the Williamsburg/Yorktown/Virginia Beach, Virginia areas were interviewed. All eight chefs had participated in a pilot marketing program for cultured whole bay scallops initiated several years earlier by the Virginia Institute of Marine Sciences (VIMS), College of William & Mary. Most were general menu, white tablecloth restaurants that typically offered several seafood appetizers and entrees. However, two were upscale seafood specialty restaurants.

The general marketing environment in the Williamsburg/Yorktown/Virginia Beach areas of Virginia shares many of the same attributes as north central Florida which make them both positive marketing environments for seafood products. Tourism, mild climates, beaches, and a reputation for abundant seafood make the two markets comparable in many ways. Because of these similarities, it was anticipated that the Virginia chefs' experiences and suggestions for marketing aquacultured scallops could be readily adapted by many north central Florida restaurants.

Insight gained from the Virginia chefs' interviews was used to identify restaurants in North Florida with a high probability of successful marketing of whole bay scallops. In addition, comments regarding successful preparation techniques from the Virginia chefs were relayed to the participating Florida chefs to aid with their preparation decisions.

### **In-Restaurant Consumer Evaluation Experiment In North Florida**

Four upscale, white tablecloth restaurants in North Florida, known for their excellent seafood items, were willing to prepare whole bay scallops for the in-restaurant consumer evaluation survey. These restaurants, while known for excellent seafood, were not exclusively seafood restaurants. During September and October of both 1997 and 1998, the peak season for scallop harvest in North Florida, whole bay scallops were harvested on Thursday afternoons by research

personnel, chilled to approximately 45<sup>N</sup>F overnight, and delivered to the cooperating restaurants on Friday afternoons. Immediately after harvest, the scallops were taken to a commercial seafood wholesaler where they were placed in a polyethylene-lined expanded styrene shipping box. The scallops were usually placed in four layers of 25 each, for a total of 100 per box except for weeks when only 70 were packed. Each layer was separated by moist newspapers. Two chilled gel-packs were placed inside each box to maintain temperatures in the 45<sup>N</sup> - 50<sup>N</sup>F range during the one to two hours they were in transit to the restaurants. All boxes were tagged with shellfish harvest permits in compliance with Florida's Department of Environmental Protection's rules for fresh shellstock.

A daily discard form was affixed to the lid of each container so that daily mortality rates could be determined. However, reliable estimates of scallop mortality could not be obtained because the limited supplies of scallops available to each restaurant (70 to 100 per week) were usually exhausted within 24 to 48 hours after delivering. The only exception was the very first week; combined data from three restaurants showed losses of two percent during the first 24 hours, and two restaurants had a cumulative loss of about 22 percent after 72 hours. Initially, it was anticipated that restaurants would receive shipments of scallops each week. However, inclement weather prevented harvest on numerous occasions, and limited quantities of marketable sizes also reduced product availability during both the 1997 and 1998 season. The chefs prepared the whole bay scallops as menu specials and recommended them to customers.

To gain the cooperation of the chefs, no restrictions were placed on the preparation or cooking methods. However, wait staff was required to record the type of dish each respondent had eaten so that consumer evaluations could be analyzed by type of dish. All four restaurants served the scallops as some type of appetizer; these appetizers ranged from chioppini (fisherman's stew) to scallops Rockefeller to simple lemon-shallot butter or garlic butter sauce. The appetizers ranged in price from \$4.95 to \$7.95. Only one restaurant used the scallops as an ingredient in a main entree; scallops and smoked trout were incorporated into a pasta dish that was priced at \$14.95. Approximately 6 to 8 scallops were served in each dish, depending on the size of scallops available. Analyses of respondents willingness to buy scallops again by type of dish eaten revealed no significant differences among the various dishes.

A total of 106 restaurant patrons completed questionnaires, far short of the initial goal of 400 observations. A copy of the questionnaire is found in Appendix A. According to the chefs, approximately 50 percent of the patrons ordering whole bay scallops completed questionnaires. This

was corroborated by analyzing the numbers of scallops delivered to the restaurants and the numbers of scallops served in each dish. As mentioned previously, the number of consumer observations was severely restricted by product availability. The wait staff was instructed to promote the product and given instructions as to how to administer the questionnaire. A copy of the instructions to the wait staff is also found in Appendix A. Chefs were given an incentive of \$5.00 for each completed questionnaire; in most cases, the chef gave the entire incentive to the wait staff.

In addition to the restaurant patrons, citizens participating in a community fundraising event were asked to evaluate the whole bay scallops. These fund-raisers were given samples of the whole bay scallops which had been prepared by a chef associated with one of the restaurants participating in the formal study. It should be noted that data from the fund-raiser sample were not analyzed in combination with the restaurant patrons due to demographic differences and the fact that the fund-raisers did not have to purchase the product. Further, the whole bay scallops sampled by the fund-raisers were not comparable to the product served to the restaurant patrons. They were late season scallops that were smaller than those used in the restaurant evaluations.

Statistical analyses were conducted on the various product attributes and respondents' demographic characteristics. While some relationships between demographic characteristics and the responses were hypothesized, none could be found statistically significant based on Chi-square analyses because of the limited sample sizes and the non-normal distribution of both the response variables and the independent variables (Snedecor and Cochran, 1967). However, informational statistics were employed to ascertain the relative amount of information a given characteristic contributed to the various survey responses (Cover & Thomas, 1991). An overview of the information statistics procedure is found in Appendix B. In order to effectively utilize the Information Statistics technique, the five-point semantic differential scale was collapsed into three categories, i.e., excellent and very good into positive; good became neutral and fair and poor were categorized as negative. Tabular results of statistical analyses and discussion of the survey responses and respondents' demographics follows. These results provide valuable insights for developing market development strategies for whole bay scallops.

## FINDINGS

### Respondent Attributes

Of the 106 restaurant patrons completing the survey, 62 were male and 44 were female (Table 1). Fourteen percent were under age 35, and 37 percent were between 35 and 49 years of age. About 36 percent were between 50 and 64, and 12 percent were 65 years of age or older. Roughly half, 50 respondents, reportedly dined at moderately upscale restaurants in moderation, that is more than once per month but less than once per week. Thirty-six (34 percent) were classified as infrequent patrons of upscale restaurants, dining out once per month or less. Nineteen (18 percent) were classified as frequent patrons of upscale restaurants, dining at such restaurants once per week or more. There were 40 restaurant patrons (38 percent) that reported eating shellfish infrequently, that is less than once a month. Thirty-eight (36 percent) were classified as moderate consumers of shellfish, indicating that they ate shellfish more than once per month but less than once per week. Twenty-six (25 percent) were frequent shellfish consumers, indicating that they ate shellfish at least once a week.

Table 1. Demographic and behavioral characteristics of the restaurant sample.

Characteristic	Restaurant Patrons	
	Number	Percent
<u>Gender</u>		
male	62	58.5
female	44	41.5
Totals	106	100.0
<u>Age category</u>		
under 35	14	14.1
35 - 49	37	37.4
50 - 64	36	36.4
65+	12	12.1
Totals	99	100.0
<u>Frequency of dining out</u>		
infrequent (once per month or less)	36	34.3
moderate (more than once per month, less than once per week)	50	47.6
frequent (at least once per week)	19	18.1
Totals	105	100.0
<u>Frequency of shellfish consumption</u>		
infrequent (once per month or less)	40	38.5
moderate (more than once per month, less than once per week)	38	36.5
frequent (at least once per week)	26	25.0
Totals	104	100.0



### **Restaurant Patrons: Reasons for Trying**

Respondents were asked why they selected whole bay scallops. Multiple answers were allowed, with possible responses being 1) Familiarity with product, 2) Suggested by staff or chef, 3) Menu special, 4) Price and 5) Curiosity. Nearly two-thirds (63.5 percent) of the restaurant patrons indicated that their decision to select whole bay scallops was influenced by wait staff or the chef (Table 2). Thirty-four (33 percent) noticed whole bay scallops were a menu special and similar numbers were simply curious. Thirty-two were familiar with the product and six cited price as an influencing factor.

Table 2. Restaurant patrons= reasons= for trying whole bay scallops.

Reasons	Restaurant Patrons	
	Number	Percent <sup>a</sup>
Suggested by staff or chef	66	63.5
Menu special	34	32.7
Curiosity	34	32.7
Familiar with product	32	30.8
Price	6	5.8

<sup>a</sup> Percentages are based on 104 responses and do not add to 100 since each respondent was permitted to cite more than one reason.

### **Initial Reaction to the Thought of Eating a Whole Bay Scallop**

Most respondents in the restaurant sample had few qualms about eating whole bay scallops. The initial reaction to the thought of eating a whole bay scallop was not one of hesitation for most of the restaurant patrons (Table 3). On a rating scale of one to nine, where one was not hesitant at all and nine was extremely hesitant, the average response was 2.2. None of 105 respondents answering the question indicated a nine. Only eighteen scored their hesitation as five to eight, which could be interpreted as having reservations about eating the scallops whole. Sixty-nine, almost two-thirds, were not hesitant at all. Females rated their hesitancy slightly higher than males, and respondents 65 and older were the least hesitant. Those respondents eating out more often were slightly more hesitant than others and those respondents eating shellfish at least once per week were the least hesitant. Information measures were not calculated because of zeroes at the various rating levels.

### **Attributes of Whole Bay Scallops Rated by Survey Participants**

The restaurant patrons were asked to rate the whole bay scallops with regard to attributes of appearance, taste, texture, value and their overall satisfaction with the product using a five-point semantic differential scale. Respondents assigned a value of excellent, very good, good, fair or poor to each attribute.

Table 3. **Initial reaction to the thought of eating a whole bay scallop**, rated by restaurant patrons, by gender, age category, frequency of dining at an upscale restaurant, and frequency of shellfish consumption.

Characteristic	Rating									Mean Rating	Total Responding	
	1	2	3	4	5	6	7	8	9			
	(Not hesitant at all-----Extremely hesitant)									no.	no.	
<u>Gender</u>												
male	37	11	4	1	2	1	2	3	0	2.1	61	
female	32	0	1	1	3	1	1	5	0	2.4	44	
<u>Age category</u>												
under 35	8	1	0	1	0	0	1	2	0	2.8	13	
35 - 49	24	4	2	1	2	0	1	3	0	2.2	37	
50 - 64	23	4	2	0	1	2	1	3	0	2.4	36	
65+	9	2	1	0	0	0	0	0	0	1.3	12	
<u>Frequency of dining out</u>												
infrequent (once per month or less)	24	4	1	1	3	0	1	2	0	2.1	36	
moderate (more than once per month, less than once per week)	36	3	4	0	1	2	0	3	0	2.0	49	
frequent (at least once per week)	8	4	0	1	1	0	2	3	0	2.8	19	
<u>Frequency of shellfish consumption</u>												
infrequent (once per month or less)	26	5	2	1	1	1	1	2	0	2.1	39	
moderate (more than once per month, less than once per week)	24	3	2	0	4	0	2	3	0	2.5	38	
frequent (at least once per week)	18	3	1	1	0	1	0	2	0	2.0	26	
<u>All characteristics</u>	69	11	5	2	5	2	3	8	0	2.2	105	

Summaries of the respondents' ratings for appearance, taste, value and overall satisfaction appear below. In general, restaurant patrons' evaluations were positive, with nearly 80 percent of the respondents rating appearance and taste as *Aexcellent* or *Avery good*. Texture and overall satisfaction were rated *Aexcellent* or *Avery good* by 73 and 76 percent of the restaurant patrons, respectively. Value received the lowest evaluations, with only 58 percent rating it as *Aexcellent* or *Avery good* (Table 4).

The evaluations by the fund-raisers were not as favorable as those of the restaurant patrons. Percentages of fund-raisers rating appearance, taste and texture as *Aexcellent* or *Avery good* were about 35 points below the comparable ratings given by restaurant patrons. Only 31 percent of the fund-raiser sample rated overall satisfaction as *Aexcellent* or *Avery good*. In contrast, about 45 percent rated overall satisfaction as *Afair* or *Apoor* (Table 5). Detailed evaluations by the fund-raiser sample are found in the Appendix C.

Table 4. Attribute ratings for whole bay scallops by restaurant patrons.

Attribute	Rating										Total	No Response
	Excellent		Very Good		Good		Fair		Poor			
	no.	%	no.	%	no.	%	no.	%	no.	%		
Appearance	47	44.3	35	33.0	12	11.3	9	8.5	3	2.8	106	0
Taste	51	48.6	31	29.5	15	13.3	7	6.7	1	1.0	105	1
Texture	42	40.0	35	33.3	14	27.1	12	11.4	2	1.9	105	1
Value	34	35.4	22	22.9	26	13.2	13	13.5	1	1.0	96	10
Overall Satisfaction	48	45.3	33	31.1	14		8	7.5	3	2.8	106	0

Table 5. Attribute ratings for whole bay scallops by the fund-raiser respondents.

Attribute	Rating										Total	No Response
	Excellent		Very Good		Good		Fair		Poor			
	no.	%	no.	%	no.	%	no.	%	no.	%		
Appearance	12	27.3	6	13.6	13	29.5	6	13.6	7	15.9	44	0
Taste	8	18.2	11	25.0	12	31.8	10	22.7	3	6.8	44	1
Texture	10	22.7	6	13.6	14	n.a.	12	27.3	2	4.5	44	1
Value	n.a.	n.a.	n.a.	n.a.	n.a.	23.8	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Overall Satisfaction	9	21.4	4	9.5	10			26.2	8	19.0	42	0

There are several possible reasons for the markedly different product ratings by the restaurant patrons and the fund-raisers. One obvious reason was the restaurant patrons represented a self-selected group of consumers that made a conscious decision to purchase the product because of persuasion of the chef or wait staff, innate curiosity, or familiarity with the product. Thus, this group would have contained individuals with a high propensity to like the product; those that may have had a predisposition to dislike the product opted to not purchase it. On the other hand, the fund-raiser respondents made no conscious purchase decision; they received a serving of the product for evaluation whether or not they anticipated liking it, consequently the evaluations of this group were lower. Because the fund-raisers represented a somewhat atypical group of consumers, detailed analyses of their product ratings are relegated to the Appendix. The following sections focus on product evaluations by various demographic subgroups of the restaurant patron sample. Sparse numbers of observations in demographic and ratings categories precluded rigorous statistical analyses. However, the five-point semantic differential scale was aggregated into positive, neutral and negative categories to facilitate use of the information statistics technique.

## **Appearance**

The appearance of whole bay scallops was rated highly, with 44.3 percent of the 106 restaurant patrons rating appearance as excellent and 33 percent rating appearance as very good" (Table 6). Roughly 20 percent rated appearance as good or fair and only 2.8 percent (three respondents) said the appearance was poor. More women rated appearance as excellent (50 percent of women, 40 percent of men). The under age 35 and the over age 65 categories seemed slightly more critical of appearance than the 35-64 groups. Respondents that dined out most frequently rated appearance slightly lower than other diners, while those that consume shellfish most often were slightly more impressed with the product's appearance.

Table 6. **Appearance** of whole bay scallops rated by restaurant patrons, by gender, age category, frequency of dining at an upscale restaurant, and frequency of shellfish consumption.

Characteristic	Rating										Mean Rating	Total Responding
	Excellent		Very Good		Good		Fair		Poor			
	no.	%	no.	%	no.	%	no.	%	no.	%		
<b>Gender</b>												
male	25	40.3	21	33.9	7	11.3	6	9.7	3	4.8	2.0	62
female	22	50.0	14	31.8	5	11.4	3	6.8	0	0.0	1.8	44
<b>Age category</b>												
under 35	6	42.9	3	21.4	2	14.3	2	14.3	1	7.1	2.2	14
35 - 49	19	51.4	13	35.1	4	10.8	1	2.7	0	0.0	1.6	37
50 - 64	13	36.1	12	33.3	4	11.1	5	13.9	2	5.6	2.2	36
65+	6	50.0	4	33.3	1	8.3	1	8.3	0	0.0	1.8	12
<b>Frequency of dining out</b>												
infrequent (once per month or less)	17	47.2	12	33.3	4	11.1	2	5.6	1	2.8	1.8	36
moderate (more than once per month, less than once per week)	22	44.0	16	32.0	6	12.0	6	12.0	0	0.0	1.9	50
frequent (at least once per week)	8	42.1	7	36.8	1	5.3	1	5.3	2	10.5	2.1	19
<b>Frequency of shellfish consumption</b>												
infrequent (once per month or less)	16	40.0	17	42.5	6	15.0	1	2.5	0	0.0	1.8	40
moderate (more than once per month, less than once per week)	16	42.1	9	23.7	5	13.2	6	15.8	2	5.3	2.2	38
frequent (at least once per week)	14	53.8	9	34.6	1	3.8	1	3.8	1	3.8	1.7	26
<b>All characteristics</b>	47	44.3	35	33.0	12	11.3	9	8.5	3	2.8	1.9	106

The positive, neutral and negative ratings provide the relative information measure for the total characteristic contribution and for each level of the given characteristic. The highest informational content was found in the "frequency of shellfish consumption" characteristic. Age was the second greatest contributing characteristic, while gender and "frequency of dining out" provided relatively smaller amounts of information (Table 7).

## **Taste**

Taste was rated *Aexcellent* by 48.6 percent of the restaurant patrons and almost 30 percent rated taste as *Avery good* (Table 8). Slightly over 14 percent rated taste as *Agood*. Seven respondents (6.7 percent) rated taste as *Afair* and only one rated taste as *Apoor*. Ratings for taste by male and female respondents were very similar. Respondents between 50 and 64 years of age rated taste lowest, while the other three age categories rated taste higher. Respondents that consume shellfish moderately were slightly less impressed with taste than either the light or heavy shellfish consumers.

The highest informational statistic referring to restaurant patrons' evaluation of taste was found for the age variable (Table 9). Note that the under age 35 and the 35-49 age categories were combined to eliminate zeroes from analysis. Moderate and frequent diners, and moderate and frequent shellfish consumers were also combined to eliminate zeroes. The resulting relative information measures showed that frequency of shellfish consumption, gender of the respondent, and the frequency of dining out each contributed relative information totaling about .02, compared to .07 for the age characteristic.



Table 7. Measure of information content of socio-demographic characteristics of restaurant patrons in regard to their evaluation of the **appearance** of whole bay scallops.

Characteristic	Response						Total	Relative Information Measure <sup>a</sup>	
	Positive		Neutral		Negative				
	no.	%	no.	%	no.	%			
<u>Gender</u>									
male	46	74.2	7	11.3	9	14.5	62	58.5	0.002617
female	36	81.8	5	11.4	3	6.8	44	41.5	0.005651
Total characteristic contribution									<b>0.008268</b>
<u>Age category</u>									
under 35	9	64.3	2	14.3	3	21.4	14	14.1	0.006311
35 - 49	32	86.5	4	10.8	1	2.7	37	37.4	0.030307
50 - 64	25	69.4	4	11.1	7	19.4	36	36.4	0.008861
65+	10	83.3	1	8.3	1	8.3	12	12.1	0.001432
Total characteristic contribution									<b>0.046911</b>
<u>Frequency of dining out</u>									
infrequent (once per month or less)	29	80.6	4	11.1	3	8.3	36	34.3	0.001876
moderate (more than once per month, less than once per week)	38	76.0	6	12.0	6	12.0	50	47.6	0.000244
frequent (at least once per week)	15	78.9	1	5.3	3	15.8	19	18.1	0.006028
Total characteristic contribution									<b>0.008149</b>
<u>Frequency of shellfish consumption</u>									
infrequent (once per month or less)	33	82.5	6	15.0	1	2.5	40	38.5	0.034364
moderate (more than once per month, less than once per week)	25	65.8	5	13.2	8	21.1	38	36.5	0.013905
frequent (at least once per week)	23	88.5	1	3.8	2	7.7	26	25.0	0.015552
Total characteristic contribution									<b>0.063821</b>
<u>All characteristics</u>	82	77.4	12	11.3	12	11.3	106	100.0	

<sup>a</sup>A relative information measure is a positive value. It is not predictive. The larger the value, the more information that particular demographic characteristic contributes to the response. See Appendix B for further explanation.

Table 8. **Taste** of whole bay scallops rated by restaurant patrons, by gender, age category, frequency of dining at an upscale restaurant, and frequency of shellfish consumption.

Characteristic	Rating										Mean Rating	Total Responding
	Excellent		Very Good		Good		Fair		Poor			
	no.	%	no.	%	no.	%	no.	%	no.	%	no.	no.
<u>Gender</u>												
male	29	46.8	20	32.3	9	14.5	3	4.8	1	1.6	1.8	62
female	22	51.2	11	25.6	6	14.0	4	9.3	0	0.0	1.8	43
<u>Age category</u>												
under 35	7	50.0	4	28.6	3	21.4	0	0.0	0	0.0	1.7	14
35 - 49	20	55.6	11	30.6	4	11.1	1	2.8	0	0.0	1.6	36
50 - 64	14	38.9	10	27.8	6	16.7	5	13.9	1	2.8	2.1	36
65+	8	56.7	2	16.7	1	8.3	1	8.3	0	0.0	1.6	12
<u>Frequency of dining out</u>												
infrequent (once per month or less)	15	42.9	13	37.1	5	14.3	2	5.7	0	0.0	1.8	35
moderate (more than once per month, less than once per week)	27	54.0	10	20.0	7	14.0	5	10.0	1	2.0	1.9	50
frequent (at least once per week)	9	47.4	7	36.8	3	15.8	0	0.0	0	0.0	1.7	19
<u>Frequency of shellfish consumption</u>												
infrequent (once per month or less)	18	45.0	14	35.0	6	15.0	2	5.0	0	0.0	1.8	40
moderate (more than once per month, less than once per week)	19	51.4	7	18.9	6	16.2	5	13.5	0	0.0	2.2	37
frequent (at least once per week)	13	50.0	10	38.5	3	11.5	0	0.0	0	0.0	1.7	26
<u>All characteristics</u>	51	48.6	31	29.5	15	14.3	7	6.7	1	1.0	1.8	105

Table 9. Measure of information content of socio-demographic characteristics of restaurant patrons in regard to their evaluation of the **taste** of whole bay scallops.

Characteristic	Response						Total		Relative Information Measure <sup>a</sup>
	Positive		Neutral		Negative		no.	%	
	no.	%	no.	%	no.	%	no.	%	
<u>Gender</u>									
male	49	79.0	9	14.5	4	6.5	62	59.0	0.017195
female	33	76.7	6	14.0	4	9.3	43	41.0	0.007298
Total characteristic contribution									<b>0.024493</b>
<u>Age category<sup>b</sup></u>									
under 50	42	84.0	7	14.0	1	2.0	50	51.0	0.061766
50 - 64	24	66.7	6	16.7	6	16.7	36	36.7	0.005797
65+	10	83.3	1	8.3	1	8.3	12	12.2	0.009481
Total characteristic contribution									<b>0.077044</b>
<u>Frequency of dining out<sup>b</sup></u>									
infrequent (once per month or less)	28	80.0	5	14.3	2	5.7	35	33.7	0.012484
moderate (more than once per month, less than once per week) and frequent (at least once per week)	53	76.8	10	14.5	6	8.7	69	66.3	0.011160
Total characteristic contribution									<b>0.023644</b>
<u>Frequency of shellfish consumption<sup>b</sup></u>									
infrequent (once per month or less)	32	80.0	6	15.0	2	5.0	40	38.8	0.016172
moderate (more than once per month, less than once per week) and frequent (at least once per week)	49	77.8	9	14.3	5	7.9	63	61.2	0.012843
Total characteristic contribution									<b>0.029015</b>
<u>All characteristics</u>	51	68.9	15	20.3	8	10.8	74	100.0	

<sup>a</sup>A relative information measure is a positive value. It is not predictive. The larger the value, the more information that particular demographic characteristic contributes to the response. See Appendix B for further explanation.

<sup>b</sup>The under age 35 and the 35-49 age categories were combined into the "under 50" category to eliminate zeroes. Frequent and moderate diners were combined to eliminate zeroes. Frequent and moderate shellfish consumers were combined to eliminate zeroes.

## **Texture**

Overall, restaurant patrons rated texture of the whole bay scallops as *Aexcellent* (40 percent), *Avery good* (33.3 percent) and *Agood* (13.3 percent) (Table 10). Another 12 restaurant patrons rated the product's texture *Afair* (11.4 percent) and two patrons rated texture as *Apoor* (1.9 percent). Females were slightly more positive in their overall ratings of texture. Respondents over age 65 and those aged 35-49 rated texture more highly than those in the under 35 and the 50-64 categories. Those dining out a moderate number of times rated texture only slightly lower than the others. Those eating shellfish at least once per week were most favorable in regard to texture. Light and moderate diners rated texture slightly lower.

Age and gender contributed more relative information regarding restaurant patrons' evaluations of the texture of whole bay scallops (Table 11). The information measures were all very small, but could be ranked in order of importance as age, gender, frequency of dining out and frequency of shellfish consumption.

## **Value**

Restaurant patrons were asked to rate the value of whole bay scallops in the context of product received at the menu price paid. Value was rated *Aexcellent* by 34 (35.4 percent), less often than appearance, taste, texture or overall satisfaction (Table 12). A rating of *Avery good* was given by 22 restaurant patrons and *Agood* by 26. Value was rated *Afair* by 13 and *Apoor* by one. Men rated the value of the whole bay scallops slightly higher than the women. Respondents ages 35-49 rated the value the lowest with those in the other age categories rating value slightly better or roughly the same. Those dining out most often rated the value of the whole bay scallops slightly higher than those eating out less often. Those consuming shellfish at least once a week rated value higher than those that consumed shellfish less often. Many respondents provide written comments which

Table 10. **Texture** of whole bay scallops rated by restaurant patrons, by gender, age category, frequency of dining at an upscale restaurant, and frequency of shellfish consumption.

Characteristic	Rating										Mean rating	Total responding
	Excellent		Very Good		Good		Fair		Poor			
	no.	%	no.	%	no.	%	no.	%	no.	%		
<u>Gender</u>												
male	23	37.7	21	34.4	6	9.8	9	14.8	2	3.3	2.1	61
female	19	43.2	14	31.8	8	18.2	3	6.8	0	0.0	1.9	44
<u>Age category</u>												
under 35	4	28.6	7	50.0	2	14.3	1	7.1	0	0.0	2.0	14
35 - 49	16	43.2	13	35.1	5	13.5	2	5.4	1	2.7	1.9	37
50 - 64	15	41.7	9	25.0	4	11.1	7	19.4	1	2.8	2.2	36
65+	6	50.0	3	25.0	2	16.7	1	8.3	0	0.0	1.8	12
<u>Frequency of dining out</u>												
infrequent (once per month or less)	12	33.3	15	41.7	6	16.7	3	8.3	0	0.0	2.0	36
moderate (more than once per month, less than once per week)	21	42.9	13	26.5	7	14.3	7	14.3	1	2.0	2.1	49
frequent (at least once per week)	8	42.1	7	36.8	1	5.3	2	10.5	1	5.3	2.0	19
<u>Frequency of shellfish consumption</u>												
infrequent (once per month or less)	17	42.5	13	32.5	6	15.0	3	7.5	1	2.5	2.0	40
moderate (more than once per month, less than once per week)	13	34.2	12	31.6	4	10.5	9	23.7	0	0.0	2.2	38
frequent (at least once per week)	11	44.0	10	40.0	4	16.0	0	0.0	0	0.0	1.7	25
<u>All characteristics</u>	42	40.0	35	33.3	14	13.3	12	11.4	2	1.9	2.0	105

Table 11. Measure of information content of socio-demographic characteristics of restaurant patrons regarding the **texture** of whole bay scallops.

Characteristic	Response						Total		Relative Information Measure <sup>a</sup>
	Positive		Neutral		Negative		no.	%	
	no.	%	no.	%	no.	%	no.	%	
<b>Gender</b>									
male	44	72.1	6	9.8	11	18.0	61	58.1	0.007219
female	33	75.0	8	18.2	3	6.8	44	41.9	0.013237
Total characteristic contribution									<b>0.020457</b>
<b>Age category</b>									
under 35	11	78.6	2	14.3	1	7.1	14	14.1	0.003313
35 - 49	29	78.4	5	13.5	3	8.1	37	37.4	0.005883
50 - 64	24	66.7	4	11.1	8	22.2	36	36.4	0.009489
65+	9	75.0	2	16.7	1	8.3	12	12.1	<b>0.020676</b>
Total characteristic contribution									
<b>Frequency of dining out</b>									
infrequent (once per month or less)	27	75.0	6	16.7	3	8.3	36	34.6	0.005689
moderate (more than once per month, less than once per week)	34	69.4	7	14.3	8	16.3	49	47.1	0.002052
frequent (at least once per week)	15	78.9	1	5.3	3	15.8	19	18.3	0.008641
Total characteristic contribution									<b>0.016382</b>
<b>Frequency of shellfish consumption<sup>b</sup></b>									
infrequent (once per month or less)	30	75.0	6	15.0	4	10.0	40	38.8	0.002397
moderate (more than once per month, less than once per week) and frequent (at least once per week)	46	73.0	8	12.7	9	14.3	63	61.2	0.000298
Total characteristic contribution									<b>0.002696</b>
<b>All characteristics</b>	<b>77</b>	<b>73.3</b>	<b>14</b>	<b>13.3</b>	<b>14</b>	<b>13.3</b>	<b>105</b>	<b>100.0</b>	

<sup>a</sup>A relative information measure is a positive value. It is not predictive. The larger the value the more information that particular demographic characteristic contributes to the response. See Appendix B for further explanation.

<sup>b</sup>Moderate and frequent shellfish consumers were combined to eliminate zeroes.

Table 12. **Value** of whole bay scallops rated by restaurant patrons, by gender, age category, frequency of dining at an upscale restaurant, and frequency of shellfish consumption.

Characteristic	Rating										Mean Rating	Total Responding
	Excellent		Very Good		Good		Fair		Poor			
	no.	%	no.	%	no.	%	no.	%	no.	%		
<u>Gender</u>												
male	15	27.3	17	30.9	15	27.3	7	12.7	1	1.8	2.1	55
female	19	46.3	5	12.2	11	26.8	6	14.6	0	0.0	2.3	41
<u>Age category</u>												
under 35	7	50.0	2	14.3	2	14.3	3	21.4	0	0.0	2.1	14
35 - 49	10	29.4	13	38.2	8	23.5	3	8.8	0	0.0	2.1	34
50 - 64	10	30.3	5	15.2	10	30.3	7	21.2	1	3.0	2.5	33
65+	4	50.0	0	0.0	4	50.0	0	0.0	0	0.0	2.0	8
<u>Frequency of dining out</u>												
infrequent (once per month or less)	11	33.3	8	24.2	9	27.3	5	15.2	0	0.0	2.2	33
moderate (more than once per month, less than once per week)	15	34.1	10	22.7	13	29.5	5	11.4	1	2.3	2.3	44
frequent (at least once per week)	8	44.4	4	22.2	4	22.2	2	11.1	0	0.0	2.0	18
<u>Frequency of shellfish consumption</u>												
infrequent (once per month or less)	12	31.6	10	26.3	14	36.8	2	5.3	0	0.0	2.2	38
moderate (more than once per month, less than once per week)	7	22.6	8	25.8	7	22.6	9	29.0	0	0.0	2.6	31
frequent (at least once per week)	14	56.0	4	16.0	5	20.0	2	8.0	0	0.0	1.8	25
<u>All characteristics</u>	34	35.4	22	22.9	26	27.1	13	13.5	1	1.0	2.2	96

provide insights on their product evaluations. The small size of the scallops was a recurring comment which undoubtedly (and negatively) affected their perceptions of value.

Information measures pointed to frequency of shellfish consumption as the most explanatory demographic variable regarding the rating of the value of whole bay scallops (Table 13). Age was the second most explanatory variable. Gender and frequency of dining out provided much smaller measures of relative information.

### **Overall Satisfaction**

Overall satisfaction with the whole bay scallops was rated *excellent* by 48 (45.3 percent) of the restaurant patrons and *very good* by 33 (33.1 percent). Only 14 respondents (13.2 percent) rated overall satisfaction as *good*, and eight (7.5 percent) rated overall satisfaction as *fair* and three (2.8 percent) rated overall satisfaction with the purchase as *poor*. Thus, it appears that the overwhelming majority of the restaurant patrons were very satisfied with the whole bay scallops (Table 14). Thus, nearly 80 percent of the respondents appeared to be very satisfied with the product. Females indicated slightly more overall satisfaction than men. The age categories= mean ratings of overall satisfaction were similar for the under 35, 35-49, and over 65 age groups and slightly less satisfaction was indicated by the 50-64 age group. The respondents eating out moderately often were slightly less satisfied than the infrequent diners and the frequent diners were slightly more satisfied with their purchase than the others. Light and heavy shellfish consumers indicated equivalent overall satisfaction with the moderate shellfish consumers indicating slightly less overall satisfaction (Table 14).

Frequency of shellfish consumption contributed the most information relative to restaurant patrons' overall satisfaction with whole bay scallops (Table 15). The second most relevant demographic variable was age, followed by frequency of dining out and then gender.



Table 13. Measure of information content of socio-demographic characteristics of restaurant patrons regarding the **value** of whole bay scallops.

Characteristic	Response						Total		Relative Information Measure <sup>a</sup>
	Positive		Neutral		Negative		no.	%	
	no.	%	no.	%	no.	%	no.	%	
<b>Gender</b>									
male	32	58.2	15	27.3	8	14.5	55	59.1	0.000185
female	24	63.2	8	21.1	6	15.8	38	40.9	0.004721
Total characteristic contribution									<b>0.004905</b>
<b>Age category<sup>b</sup></b>									
under 35	9	64.3	2	14.3	3	21.4	14	15.7	0.010296
35 - 49	23	67.6	8	23.5	3	8.8	34	38.2	0.007742
50+	19	46.3	14	34.1	8	19.5	41	46.1	0.015075
Total characteristic contribution									<b>0.033114</b>
<b>Frequency of dining out</b>									
infrequent (once per month or less)	19	57.6	9	27.3	5	15.2	33	34.7	0.000312
moderate (more than once per month, less than once per week)	25	56.8	13	29.5	6	13.6	44	46.3	0.000564
frequent (at least once per week)	12	66.7	4	22.2	2	11.1	18	18.9	0.002458
Total characteristic contribution									<b>0.003334</b>
<b>Frequency of shellfish consumption</b>									
infrequent (once per month or less)	22	57.9	14	36.8	2	5.3	38	40.4	0.024264
moderate (more than once per month, less than once per week)	15	48.4	7	22.6	9	29.0	31	33.0	0.021789
frequent (at least once per week)	18	72.0	5	20.0	2	8.0	25	26.6	0.011009
Total characteristic contribution									<b>0.057062</b>
<b>All characteristics</b>	<b>56</b>	<b>58.9</b>	<b>26</b>	<b>27.4</b>	<b>13</b>	<b>13.7</b>	<b>95</b>	<b>100.0</b>	

<sup>a</sup>A relative information measure is a positive value. It is not predictive. The larger the value, the more information that particular demographic characteristic contributes to the response. See Appendix B for further explanation.

<sup>b</sup>The 50-64 and 65+ age categories were combined to eliminate zeroes.

Table 14. **Overall satisfaction** with whole bay scallops rated by restaurant patrons, by gender, age category, frequency of dining at an upscale restaurant, and frequency of shellfish consumption.

Characteristic	Rating										Mean Rating	Total Responding
	Excellent		Very Good		Good		Fair		Poor			
	no.	%	no.	%	no.	%	no.	%	no.	%		
<b>Gender</b>												
male	27	43.5	21	33.9	7	11.3	4	6.5	3	4.8	2.0	62
female	21	47.7	12	27.3	7	15.9	4	9.1	0	0.0	1.9	44
<b>Age category</b>												
under 35	6	42.9	5	35.7	3	7.1	2	14.3	0	0.0	1.9	14
35 - 49	19	51.4	12	32.4	4	10.8	2	5.4	0	0.0	1.7	37
50 - 64	13	36.1	10	27.8	7	19.4	4	11.1	2	5.6	2.2	36
65+	7	58.3	3	25.0	1	8.3	0	0.0	1	8.3	1.8	12
<b>Frequency of dining out</b>												
infrequent (once per month or less)	14	38.9	15	41.7	4	11.1	3	8.3	0	0.0	1.9	36
moderate (more than once per month, less than once per week)	25	50.0	11	22.0	8	16.0	3	6.0	3	6.0	2.0	50
frequent (at least once per week)	9	47.4	7	36.8	1	5.3	2	10.5	0	0.0	1.8	19
<b>Frequency of shellfish consumption</b>												
infrequent (once per month or less)	18	45.0	16	40.0	5	12.5	1	2.5	0	0.0	1.7	40
moderate (more than once per month, less than once per week)	16	42.1	8	21.1	5	13.2	7	18.4	2	5.3	2.2	38
frequent (at least once per week)	13	50.0	9	34.6	4	15.4	0	0.0	0	0.0	1.7	26
<b>All characteristics</b>	48	45.3	33	31.1	14	13.2	8	7.5	3	2.8	1.9	106

Table 15. Measure of information content of socio-demographic characteristics of restaurant patrons on **overall satisfaction** with whole bay scallops.

Characteristic	Response						Total		Relative Information Measure <sup>a</sup>
	Positive		Neutral		Negative		no.	%	
	no.	%	no.	%	no.	%	no.	%	
<u>Gender</u>									
male	48	77.4	7	11.3	7	11.3	62	58.5	0.001163
female	33	75.0	7	15.9	4	9.1	44	41.5	0.001427
Total characteristic contribution									<b>0.002590</b>
<u>Age category</u>									
under 35	11	78.6	1	7.1	2	14.3	14	14.1	0.003783
35 - 49	31	83.8	4	10.8	2	5.4	37	37.4	0.008889
50 - 64	23	63.9	7	19.4	6	16.7	36	36.4	0.013295
65+	10	83.3	1	8.3	1	8.3	12	12.1	0.002104
Total characteristic contribution									<b>0.028070</b>
<u>Frequency of dining out</u>									
infrequent (once per month or less)	29	80.6	4	11.1	3	8.3	36	34.3	0.001807
moderate (more than once per month, less than once per week)	36	72.0	8	16.0	6	12.0	50	47.6	0.002414
frequent (at least once per week)	16	84.2	1	5.3	2	10.5	19	18.1	0.008289
Total characteristic contribution									<b>0.012510</b>
<u>Frequency of shellfish consumption<sup>b</sup></u>									
infrequent (once per month or less)	34	85.0	5	12.5	1	2.5	40	38.5	0.028314
moderate (more than once per month, less than once per week)	46	71.9	9	14.1	9	14.1	64	61.5	0.004299
frequent (at least once per week)									
Total characteristic contribution									
<u>All characteristics</u>	81	76.4	14	13.2	11	10.4	106	100.0	<b>0.032613</b>

<sup>a</sup>A relative information measure is a positive value. It is not predictive. The larger the value, the more information that particular demographic characteristic contributes to the response. See Appendix B for further explanation.

<sup>b</sup>Moderate and frequent shellfish consumers were combined to eliminate zeroes.

### **Willingness to Order Whole Bay Scallops in the Future at the Same Price**

When asked whether or not they would buy whole bay scallops again, most restaurant patrons responded favorably (Table 16). Eighty-seven (84.5 percent) said they were willing to buy whole bay scallops in the future at the same price. A logistic analysis of the data indicated that no demographic characteristics were significant for predicting a given restaurant patron's willingness to buy whole bay scallops, although slightly larger percentage of women were willing to order whole bay scallops in the future at the same price. The percentage of respondents 65 or older willing to order the scallops again was also higher than younger age categories. All but one of the heaviest shellfish consumers (96.2 percent) indicated a willingness to order whole bay scallops in the future, while 10 (27 percent) of the more moderate shellfish consumers would not order them again. Only four (10.5 percent) of the infrequent shellfish consumers indicated that they would not purchase whole bay scallops again (Table 16).

The frequency of shellfish consumption provided by far the most information regarding restaurant patrons' willingness to buy whole bay scallops again in the future relative to the other demographic and behavioral variables (Table 17). The age category provided a moderate amount of information, but the gender of the respondent and the frequency of dining out added little information regarding willingness to buy whole bay scallops again.

Table 16. Restaurant patrons= **willingness to order whole bay scallops in the future** at the same price, by gender, age category, frequency of dining out and frequency of shellfish consumption.

Characteristic	Response				Total Number
	Yes		No		
	Number	Percent	Number	Percent	
<u>Gender</u>					
male	50	83.3	10	16.7	60
female	37	86.0	6	14.0	43
<u>Age category</u>					
under 35	12	85.7	2		14
35 - 49	30	83.3	6	14.3	36
50 - 64	28	80.0	7	16.7	35
65+	10	90.9	1	20.0	11
<u>Frequency of dining out</u>					
infrequent (once per month or less)	30	83.3	6		36
moderate (more than once per month, less than once per week)	40	85.1	7	16.7	47
frequent (at least once per week)	16	84.2	3	15.8	19
<u>Frequency of shellfish consumption</u>					
infrequent (once per month or less)	34	89.5	4		38
moderate (more than once per month, less than once per week)	27	73.0	10	10.5	37
frequent (at least once per week)	25	96.2	1	3.8	26
<u>All characteristics</u>	87	84.5	16	15.5	103

Table 17. Measure of information content of socio-demographic characteristics of restaurant patrons on the **willingness to order whole bay scallops in the future.**

Characteristic	Response				Total		Relative Information Measure <sup>a</sup>
	Yes		No		no.	%	
	no.	%	no.	%	no.	%	
<u>Gender</u>							
male	50	83.3	10	16.7	60	58.3	0.0002741
female	37	86.0	6	14.0	43	41.7	0.0004213
Total characteristic contribution							<b>0.0006954</b>
<u>Age category</u>							
under 35	12	85.7	2	14.3	14	14.6	0.0000906
35 - 49	30	83.3	6	16.7	36	37.5	0.0001765
50 - 64	28	80.0	7	20.0	35	36.5	0.002417
65+	10	90.9	1	9.1	11	11.5	0.0024214
Total characteristic contribution							<b>0.0051055</b>
<u>Frequency of dining out</u>							
infrequent (once per month or less)	30	83.3	6	16.7	36	35.3	0.0001661
moderate (more than once per month, less than once per week)	40	85.1	7	14.9	47	46.1	0.0000737
frequent (at least once per week)	16	84.2	3	15.8	19	18.6	0.0000046
Total characteristic contribution							<b>0.0002443</b>
<u>Frequency of shellfish consumption</u>							
infrequent (once per month or less)	34	89.5	4	10.5	38	37.6	0.0044405
moderate (more than once per month, less than once per week)	27	73.0	10	27.0	37	36.6	0.0137419
frequent (at least once per week)	25	96.2	1	3.8	26	25.7	0.0276422
Total characteristic contribution							<b>0.0458247</b>
<u>All characteristics</u>	87	84.5	16	15.5	103	100.0	

<sup>a</sup>A relative information measure is a positive value. It is not predictive. The larger the value, the more information that particular demographic characteristic contributes to the response. See Appendix B for further explanation

## **Reaction of Chefs in the Florida Experiment**

Overall, the chefs in the participating restaurants were very pleased with the whole bay scallops and were willing to include them on their menus in the future. Chefs cited the appeal of a local product that was farm-raised. The chefs indicated that aquacultured products are easy to promote because they combat the perception of over-fishing in the area. They also suggested that table tents would be an acceptable and effective means of promoting the product.

The chefs noted that those ordering the new menu item tended to be middle-aged, 40-55 years old, and probably upper-middle class. Scallop dishes were not of interest to children. It was also noted that older and locals who were not accustomed to eating whole scallops were not inclined to order them. The chefs had the perception that visitors from other geographic areas were more accepting of the idea of eating whole scallops.

Although the whole scallops had a non-traditional appearance, the chefs welcomed another type of shellfish to add diversity to their menus. Slight fouling, such as the barnacles encountered in the 1997 season, was acceptable to chefs and patrons alike. The chefs observed that the slight fouling gave the product a natural look. However, the heavier fouling that was common during the 1998 season detracted from the product's appearance, especially in pasta dishes. When served on the half-shell, the fouling posed no serious problems because the top half of the shell was removed. The chefs also suggested that a wholesale price of about 25 cents each would be acceptable, like clams, but maybe a little higher. They observed that at a wholesale cost of 25 cents each, the ingredient cost of scallops would be about \$1.50 per dish, in line with other appetizers that retailed for \$4.95 to \$5.95.

While scallops that were received on Friday were usually sold out by Monday, the chefs estimated that shelf life may be from three to five days. However, the chefs stressed that the shell stock should be tempered to maximize shelf life. Cooling shellfish harvested in 80°F waters to refrigeration temperatures too quickly results in damage and short shelf life. Comments regarding packaging indicated that damp excelsior would be both effective and acceptable.

## CONCLUSIONS

This study showed that whole bay scallops, when professionally prepared and presented, can be a successful part of full-service, white table cloth restaurant menus. Restaurant patrons ordering whole bay scallops rated the attributes of appearance, taste, texture, value and overall satisfaction quite highly. Further, many restaurant patrons were curious and few were apprehensive about whole bay scallops, even though eating the whole animal is not the common practice in the U.S. Taste was rated more highly than the other attributes which bodes well for future success in marketing the product. Value was rated a bit lower than the other characteristics, and based on written comments from the respondents, this may have been a result of the product size. The small size was the most prevalent negative comment from the survey respondents (Appendix D). The perception of value could be enhanced by including more scallops per serving, lowering the retail price, or doing both.

Informational statistics showed that frequency of consuming shellfish provides the greatest relative amount of information regarding restaurant patrons' evaluation of product characteristics and willingness to order whole bay scallops in the future; frequent consumers of shellfish appear to be the most favorably impressed with whole bay scallops. In addition, the participating chefs indicated that middle-aged patrons were most likely to order the product. The chefs also observed that locals and older patrons familiar with traditional scallop dishes (adductor muscle only) were not as likely to order whole scallops. On a positive note, although a small number of whole bay scallops were delivered to the participating local restaurants, the demand outstripped supply quickly, with all the product delivered on Friday being sold before Monday morning. Thus, it appears that markets could be readily developed if adequate supplies of reasonably-sized whole bay scallops were forthcoming.

Successful marketing efforts will require careful professional preparation. Satisfaction with whole bay scallops is probably most dependent on preparation and presentation. Chef or serving staff recommendations appear effective in directing restaurant patrons' interest in dishes which includes whole bay scallops, but their efforts could be enhanced through the use of table tents. These marketing materials could include information promoting the product as a locally grown, aquacultured species. This message would appeal to those concerned with overfishing and environmental preservation issues. The whole bay scallop can also be promoted as a local novelty dish to tourists. In addition, the local population may become more accustomed to the whole bay scallop product as opposed to the traditional muscle-only product given time and educational efforts.



## **APPENDIX A**

### Survey Materials



**A Consumer Evaluation  
of Farm Raised  
Whole Bay Scallops**

**A market research project**

**of**

**The Florida Agricultural Market Research Center**

Questions or concerns regarding this  
research may be also directed to  
The University of Florida  
UFIRB Office  
Box 112250  
Gainesville, FL 32611-2250

Dr. R. L. Degner, Director  
Dr. C. M. Adams, Professor  
1-800-4UF-POL  
(1-800-483-7655)

The bay scallops you just ate were grown under controlled conditions near Crystal River by the University of South Florida. The University of Florida is researching the marketability of whole bay scallops.

We'd like to know what you thought about them. This questionnaire will take about two minutes to complete. We can't compensate you for your time, but you'll have the satisfaction of knowing that your opinion counts!

*You do not have to answer any question you do not wish to answer. Your responses will be confidential to the extent provided by law.*

1. Why did you select whole bay scallops? (check all that apply).

- Familiar with product                       Menu special  
 Curiosity  
 Suggested by staff or chef                       Price

2. How would you rate the scallops on: (Place an "X" in the boxes to indicate your ratings)

	Excellent	Very Good	Good	Fair	Poor
Appearance					
Taste					
Texture					
Value					
Overall satisfaction					

3. Please indicate your initial reaction to the thought of eating a whole scallop.

1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6 \_\_\_\_\_ 7 \_\_\_\_\_ 8 \_\_\_\_\_ 9 \_\_\_\_\_  
 Not hesitant at all Extremely hesitant

4. Would you order this product again at the same price?  Yes  No

5. How many times per month or per year do you dine at a moderately upscale/upscale restaurant? Times per month \_\_\_\_\_ OR Times per year \_\_\_\_\_.

6. How many times per month do you eat shellfish such as oysters, clams or scallops? Times per month \_\_\_\_\_ OR Times per year \_\_\_\_\_.

7. Are you.....  Male  Female

8. In what year were you born?

Comments:

[For survey validation only --- About 10 percent of all participants will be called to verify personal completion of this questionnaire]

Last Name \_\_\_\_\_ Phone (\_\_\_\_)

**Thank You!**

# University of Florida SCALLOP STUDY

## A Note To The Wait Staff

We appreciate all your help in getting your customers to try the whole bay scallops and to complete the brief questionnaire. As you probably know, reaction to the whole bay scallops has been very positive.

We plan to conduct this consumer research a few more weeks, but our supplies of scallops are very limited. Please make every serving count by doing the following:

- \* Continue to promote them -- let's sell' em, not smell' em!
- \* Check questionnaires for completeness while the customer is present, if possible. If they have overlooked a question, please get them to answer it. Try hard to get phone numbers!
- \* Please list the menu item, the price, and your initials on the back of the form.
- \* Some people have been leaving the rating for "value" blank. Value simply means "at the price you were charged, were the whole bay scallops a good deal?"
- \* On question 3, a few customers are placing a check or "x" between the numbers. If you spot one marked in this manner, please get them to circle a single number.

Overall, we are very pleased with the way the study is going. Thank you very much for your help!

Bob Degner

Chuck Adams

1-800-4UF-POLL

## **APPENDIX B**

### Technical Note on Information Statistics

## Technical Note on Information Statistics

Most statistical applications examine the relationship between two normally distributed variables. Statistical causality is inferred if when the independent variable is higher than average, the dependent variable is also higher than its average. The statistical significance of this relationship can be tested using statistical inference based on the normal distribution function. In the current study, if statistical deviations of demographic characteristics are correlated with higher levels of a given response such as willingness to buy whole bay scallops, we conclude that the demographic characteristics determine the willingness to buy. The test statistics based on the normal distribution function are then t-tests or Chi-square statistics. However, the traditional mechanics of analysis under normality represent a subset of statistical measures of inference. A more basic notion of statistical inference can be derived from the concepts of statistical information. Theil (1967) develops one such measure of information based on the relative probability of a given event. Let  $p_i$  be the probability of event  $i$  and  $q_i$  be the probability of the same event given some other piece of information. For example, let  $p_1$  be the probability of buying whole bay scallops and  $p_2$  be the probability of not buying whole bay scallops. These probabilities represent the proportion of the total population that would be willing or unwilling to buy scallops. Next assume that we observe the share of people who are willing to buy scallops who enjoy frequently eating shellfish. Let these relative probabilities be  $q_1$  and  $q_2$ , respectively. The question typically asked of the analyst is: What is the effect of frequent shellfish consumption on the probability of buying whole bay scallops again in the future? To answer this question, we examine the relative difference in probabilities using Theil's information measure

$$I = \sum_{i=1}^N p_i \ln \left( \frac{p_i}{q_i} \right)$$

If the probability of buying whole bay scallops when one is a frequent shellfish consumer is close to the general probability of buying whole bay scallops, the ratio of the probabilities is close to one and the information index approaches zero. If the probability of buying whole bay scallops is different (either higher or lower) then the ratio becomes different than one and the information index becomes larger.

## **APPENDIX C**

### **The Fund-raiser Sample**



## **FINDINGS: THE FUND-RAISER SAMPLE**

The questionnaire used for the fund-raiser sample was identical to that used for the restaurant sample. Thus, discussions of fund-raisers= attributes and their evaluations of whole bay scallops follow the same general outline as used for the restaurant patrons.

### **Respondent Attributes**

Of the 44 participants from the fund-raiser group, half were male and half female (Appendix Table 1). Five were under 35 years of age, 14 were 35-49, 12 were 50-64 and nine were over 65. Thirteen (30 percent) dined at upscale restaurants infrequently, 19 (43 percent) moderately often, while 10 (23 percent) patronized upscale restaurants at least once per week. Eleven (25 percent) consumed shellfish at least once per week, 23 (52 percent) ate shellfish moderately often, and six ate shellfish infrequently.

### **Fund-raisers= Reasons for Trying**

Respondents were asked why they selected whole bay scallops. Multiple answers were allowed, with possible responses being 1) Familiarity with product, 2) Suggested by staff or chef, 3) Menu special, and 4) Curiosity. Note that price did not apply to participants from the fund-raiser group because these respondents had been provided scallops as part of a fund-raiser/dinner at a fixed price instead of as an a la carte menu item.

Suggestion by wait staff or the chef influenced 18 (43.9 percent) participants of the fund-raiser group to try the whole bay scallops. Fifteen (37 percent) tried them because they were listed as a menu special, and 10 (24 percent) because of curiosity. Four respondents, about 10 percent, said they tried the whole bay scallops because they were familiar with them (Appendix Table 2).

Appendix Table 1. Demographic characteristics of the fund-raiser sample.

Characteristic	Fund-raiser Sample	
	Number	Percent
<u>Gender</u>		
male	22	20.8
female	22	20.8
Totals	44	41.5
<u>Age category</u>		
under 35	5	5.1
35 - 49	14	14.1
50 - 64	12	12.1
65+	9	9.1
Totals	40	40.4
<u>Frequency of dining out</u>		
infrequent (once per month or less)	13	12.4
moderate (more than once per month, less than once per week)	19	18.1
frequent (at least once per week)	10	9.5
Totals	42	40.0
<u>Frequency of shellfish consumption</u>		
infrequent (once per month or less)	6	5.8
moderate (more than once per month, less than once per week)	23	22.1
frequent (at least once per week)	11	10.6
Totals	40	38.5

Appendix Table 2. Fund-raisers= reasons for trying whole bay scallops.

Reasons	Fund-raisers	
	Number	Percent <sup>a</sup>
Suggested by staff or chef	18	43.9
Menu special	15	36.6
Curiosity	10	24.4
Familiar with product	4	9.8
Price	n.a.	n.a.

<sup>a</sup> Percentages are based on 41 responses and do not add to 100 since each respondent was permitted to cite more than one reason.

### **Initial Reaction to the Thought of Eating a Whole Bay Scallop**

Fund-raisers indicated more hesitancy than the restaurant patrons with an average rating of 3.5 on the one to nine scale where 1 indicated not hesitant at all and 9 represented extremely hesitant (Appendix Table 3). Six out of the 43 (14 percent) fund-raisers rated their hesitation a nine. However, 21, nearly half, indicated no hesitation at all. Females rated their hesitation higher than males, and respondents 65 years old or more rated their hesitancy higher than any other age group. The most frequent diners and the most frequent shellfish consumers indicated more hesitation than the others. These results are consistent with the perceptions voiced by the chefs, i.e, that local residents that typically eat the adductor muscle only, would be more averse to eating the whole animal.

### **Attributes of Whole Bay Scallops Rated by Survey Participants**

Fund-raisers were asked to rate the whole bay scallops with regard to appearance, taste, texture, value and overall satisfaction using a five-point semantic differential scale. Respondents assigned a value of excellent, very good, good, fair or poor to each attribute. Since members of the fund-raiser group did not purchase whole bay scallops as a separately priced menu item, their ratings of value were not analyzed.

Appendix Table 3. **Initial reaction to the thought of eating a whole bay scallop**, rated by fund-raisers, by gender, age category, frequency of dining at an upscale restaurant, and frequency of shellfish consumption.

Characteristic	Rating									Mean Rating	Total Responding
	1	2	3	4	5	6	7	8	9		
	(Not hesitant at all-----Extremely hesitant)										
<u>Gender</u>											
male	13	2	1	0	1	0	0	1	3	2.9	21
female	8	2	0	2	3	2	0	2	3	4.1	22
<u>Age category</u>											
under 35	2	0	0	1	1	0	0	1	0	3.8	5
35 - 49	9	0	0	0	2	0	0	0	2	2.8	13
50 - 64	7	1	0	0	1	0	0	2	1	3.2	12
65+	2	2	0	0	0	2	0	0	3	5.0	9
<u>Frequency of dining out</u>											
infrequent (once per month or less)	8	1	0	1	1	1	0	0	1	2.6	13
moderate (more than once per month, less than once per week)	10	1	1	0	2	0	0	3	2	3.5	19
frequent (at least once per week)	3	2	0	0	1	1	0	0	2	4.0	9
<u>Frequency of shellfish consumption</u>											
infrequent (once per month or less)	5	0	0	0	1	0	0	0	0	1.7	6
moderate (more than once per month, less than once per week)	11	4	1	0	1	2	0	1	2	3.0	22
frequent (at least once per week)	3	0	0	1	2	0	0	2	3	5.5	11
<u>All characteristics</u>	21	4	1	2	4	2	0	3	6	3.5	43

## **Appearance**

Of the 44 fund-raisers, 27.3 percent rated appearance of the whole bay scallops *Aexcellent* and 13.6 percent *Avery good* (Appendix Table 4). About 30 percent rated appearance *Agood*, but 13.6 percent rated appearance *Afair* and 16 percent rated appearance as *Apoor*. An even number of men and women (six of each) rated appearance as *Aexcellent* but men rated appearance slightly lower overall. The 35-49 age category rated appearance higher than the other categories and the over 65 age category averaged the lowest rating on appearance. The infrequent diners at upscale restaurants rated appearance highest and the more frequent diners lowest. Those respondents eating shellfish at least once a week rated appearance slightly higher than the infrequent and moderately frequent shellfish consumers.

## **Taste**

Only eight (18.2 percent) of the fund-raisers rated taste as *Aexcellent* (Appendix Table 5). Ratings of *Avery good*, *Agood* and *Afair* were reported by 11 (25 percent), 12 (27.3 percent) and 10 (22.7 percent), respectively. Three rated taste as *Apoor*. Equal numbers of men and women rated taste as *Aexcellent*. Overall, women rated taste slightly higher than men. Those respondents under age 35 and over age 65 rated taste lower overall than those in the middle age groups. Those dining out most often in upscale restaurants rated taste lowest and those dining out once per month or less rated taste the highest. Respondents eating shellfish once per month or less rated taste higher than those consuming shellfish moderately or often or frequently.

Appendix Table 4. **Appearance** of whole bay scallops rated by fund-raisers, by gender, age category, frequency of dining at an upscale restaurant, and frequency of shellfish consumption.

Characteristic	Rating										Mean Rating	Total Responding
	Excellent		Very Good		Good		Fair		Poor			
	no.	%	no.	%	no.	%	no.	%	no.	%		
<u>Gender</u>												
male	6	27.3	1	4.5	9	40.9	2	9.1	4	18.2	2.9	22
female	6	27.3	5	22.7	4	18.2	4	18.2	3	13.6	2.7	22
<u>Age category</u>												
under 35	1	20.0	0	0.0	3	60.0	1	20.0	0	0.0	2.8	5
35 - 49	5	35.7	2	14.3	4	28.6	1	7.1	2	14.3	2.5	14
50 - 64	3	25.0	1	8.3	5	41.7	2	16.7	1	8.3	2.8	12
65+	2	22.2	2	22.2	0	0.0	1	11.1	4	44.4	3.3	9
<u>Frequency of dining out</u>												
infrequent (once per month or less)	5	38.5	2	15.4	3	23.1	2	15.4	1	7.7	2.4	13
moderate (more than once per month, less than once per week)	4	21.1	4	21.1	7	36.8	2	10.5	2	10.5	2.7	19
frequent (at least once per week)	3	30.0	0	0.0	3	30.0	0	0.0	4	40.0	3.2	10
<u>Frequency of shellfish consumption</u>												
infrequent (once per month or less)	2	33.3	1	16.7	1	16.7	1	16.7	1	16.7	2.7	6
moderate (more than once per month, less than once per week)	6	26.1	4	17.4	6	26.1	2	8.7	5	21.7	2.8	23
frequent (at least once per week)	3	27.3	1	9.1	5	45.5	1	9.1	1	9.1	2.6	11
<u>All characteristics</u>	12	27.3	6	13.6	13	29.5	6	13.6	7	15.9	2.8	44

Appendix Table 5. **Taste** of whole bay scallops rated by fund-raisers, by gender, age category, frequency of dining at an upscale restaurant, and frequency of shellfish consumption.

Characteristic	Rating										Mean Rating	Total Responding
	Excellent		Very Good		Good		Fair		Poor			
	no.	%	no.	%	no.	%	no.	%	no.	%		
<u>Gender</u>												
male	4	18.2	4	18.2	7	31.8	5	22.7	2	9.1	2.9	22
female	4	18.2	7	31.8	5	22.7	5	22.7	1	4.5	2.6	22
<u>Age category</u>												
under 35	0	0.0	2	40.0	1	20.0	2	40.0	0	0.0	3.0	5
35 - 49	3	21.4	4	28.6	3	21.4	3	21.4	1	7.1	2.6	14
50 - 64	1	8.3	5	41.7	5	41.7	1	8.3	0	0.0	2.5	12
65+	3	33.3	0	0.0	1	11.1	3	33.3	2	22.2	3.1	9
<u>Frequency of dining out</u>												
infrequent (once per month or less)	5	38.5	2	15.4	5	38.5	1	7.7	0	0.0	2.2	13
moderate (more than once per month, less than once per week)	1	5.3	8	42.1	5	26.3	4	21.1	1	5.3	2.8	19
frequent (at least once per week)	2	20.0	1	10.0	2	20.0	3	30.0	2	20.0	3.2	10
<u>Frequency of shellfish consumption</u>												
infrequent (once per month or less)	2	33.3	3	50.0	0	0.0	1	16.7	0	0.0	2.0	6
moderate (more than once per month, less than once per week)	4	17.4	3	13.0	9	39.1	4	17.4	3	13.0	3.0	23
frequent (at least once per week)	1	9.1	4	36.4	3	27.3	3	27.3	0	0.0	2.7	11
<u>All characteristics</u>	8	18.2	11	25.0	12	27.3	10	22.7	3	6.8	2.8	44

## **Texture**

Nearly one-fourth of the fund-raisers rated texture as *Aexcellent*® (22.7 percent). Other texture ratings were *Avery good*® (13.6 percent), *Agood*® (31 percent), *Afair*® (27.3 percent) and *Apoor*® (4.5 percent) (Appendix Table 6). Equal numbers of number of men and women rated texture as *Aexcellent*® or *Avery good*®. Overall, females were just slightly more positive regarding the scallop texture than males. Respondents over 65 rated texture the lowest and those 50-64 rated more positively than the those in other age categories. The more frequent diners rated texture slightly lower than either infrequent or moderate diners. Those consuming shellfish at least once a week rated texture the highest (Appendix Table 6).

## **Overall Satisfaction**

Fund-raisers were also asked to rate overall satisfaction, but results should be regarded in light of the fact that these respondents did not purchase the product and may have had a pre-existing aversion to whole bay scallops.

Out of 42 respondents providing from fund-raiser group, nine (21.4 percent) rated their overall satisfaction with the product as *Aexcellent*® (Appendix Table 7). An additional four (9.5 percent) rated overall satisfaction as *Avery good*® and ten (23.8 percent) rated it *Agood*®. Overall satisfaction ratings of *Afair*® or *Apoor*® were indicated by 11 (26.2 percent) and eight (19 percent) of the fund-raisers, respectively. Women rated overall satisfaction higher than men. The average rating of overall satisfaction was around three, with the over 65 age group slightly less satisfied with a mean rating of satisfaction of 3.5. Respondents eating out least often were more satisfied with the product.



Appendix Table 6. **Texture** of whole bay scallops rated by fund-raisers, by gender, age category, frequency of dining at an upscale restaurant, and frequency of shellfish consumption.

Characteristic	Rating										Mean Rating	Total Responding
	Excellent		Very Good		Good		Fair		Poor			
	no.	%	no.	%	no.	%	no.	%	no.	%		
<b>Gender</b>												
male	5	22.7	3	13.6	6	27.3	7	31.8	1	4.5	2.8	22
female	5	22.7	3	13.6	8	36.4	5	22.7	1	4.5	2.7	22
<b>Age category</b>												
under 35	1	20.0	0	0.0	3	60.0	1	20.0	0	0.0	2.8	5
35 - 49	2	14.3	3	21.4	4	28.6	5	35.7	0	0.0	2.9	14
50 - 64	3	25.0	3	25.0	3	25.0	3	25.0	0	0.0	2.5	12
65+	3	33.3	0	0.0	2	22.2	2	22.2	2	22.2	3.0	9
<b>Frequency of dining out</b>												
infrequent (once per month or less)	5	38.5	2	15.4	4	30.8	2	15.4	0	0.0	1.2	13
moderate (more than once per month, less than once per week)	2	10.5	4	21.1	7	36.8	6	31.6	0	0.0	1.0	19
frequent (at least once per week)	3	30.0	0	0.0	2	20.0	3	30.0	2	20.0	1.6	10
<b>Frequency of shellfish consumption</b>												
infrequent (once per month or less)	2	33.3	2	33.3	1	16.7	1	16.7	0	0.0	1.2	6
moderate (more than once per month, less than once per week)	5	21.7	2	8.7	6	26.1	8	34.8	2	8.7	1.3	23
frequent (at least once per week)	2	18.2	1	9.1	6	54.5	2	18.2	0	0.0	1.0	11
<b>All characteristics</b>	10	22.7	6	13.6	14	31.8	12	27.3	2	4.5	2.8	44

Appendix Table 7. **Overall satisfaction** with whole bay scallops rated by, by gender, age category, frequency of dining at an upscale restaurant, and frequency of shellfish consumption.

Characteristic	Rating										Mean Rating	Total Responding	
	Excellent		Very Good		Good		Fair		Poor				
	no.	%	no.	%	no.	%	no.	%	no.	%			
<u>Gender</u>													
male	4	18.2	2	9.1	5	22.7	7	31.8	4	18.2	3.2	22	
female	5	25.0	2	10.0	5	25.0	4	20.0	4	20.0	3.0	20	
<u>Age category</u>													
under 35	1	20.0	0	0.0	2	40.0	2	40.0	0	0.0	3.0	5	
35 - 49	3	23.1	1	7.7	4	30.8	4	30.8	1	7.7	2.9	13	
50 - 64	2	16.7	2	16.7	3	25.0	3	25.0	2	16.7	3.1	12	
65+	2	25.0	1	12.5	0	0.0	1	12.5	4	50.0	3.5	8	
<u>Frequency of dining out</u>													
infrequent (once per month or less)	3	25.0	3	25.0	3	25.0	2	16.7	1	8.3	2.6	12	
moderate (more than once per month, less than once per week)	4	22.2	0	0.0	6	33.3	6	33.3	2	11.1	3.1	18	
frequent (at least once per week)	2	20.0	1	10.0	1	10.0	2	20.0	4	40.0	3.5	10	
<u>Frequency of shellfish consumption</u>													
infrequent (once per month or less)	0	0.0	2	33.0	2	33.3	2	33.3	0	0.0	3.0	6	
moderate (more than once per month, less than once per week)	4	18.2	2	9.1	5	22.7	6	27.3	5	22.7	3.3	22	
frequent (at least once per week)	3	30.0	0	0.0	3	30.0	2	20.0	2	20.0	3.0	10	
<u>All characteristics</u>	9	21.4	4	9.5	10	23.8	11	26.2	8	19.0	3.1	42	

## **APPENDIX D**

Restaurant Patrons= and Fund-raisers= Comments

## Comments from Restaurant Patrons

1. **Nothing exceptional, very bland. Tastes more like an oyster than a scallop. Naturally raised scallops are better.**
2. The cook did an outstanding job. It was not fishy. Appearance was great, taste excellent. Keep up the great work!
3. **Familiar with bay & sea scallops. Compares favorably with Long Island scallops.**
4. **Well prepared by Decembers=.**
5. Fantastic product. Very familiar with farm raised clams. I am happy to see scallops being done. Scallops were tender and succulent.
6. The stew these scallops were served in was extremely complimentary to the scallop meat. Very tasty. Exceptional quality.
7. The scallops were wonderful. They would taste great over rice.
8. Great idea; but....
9. Excellent sauce.
10. I thought they were excellent. The size of the portion (8) was appropriate. The sauce they're served in is superb.
11. They were very tasteful! I could hardly tell the difference between these and natural ones.
12. Very good!
13. A pleasant change from the original version.
14. Preparation and presentation were well above average. Quality of the product was excellent.
15. Hopefully, as production increases they will become a better value.
16. Wonderful!
17. Surprisingly excellent, since I have always eaten bay scallops "cleaned" but I really enjoyed it and would definitely order it again!
18. Scallops are Great! Next to stone crab they are my favorite seafood.
19. Surprised at the appearance. I thought they would look like sea scallops which I've

eaten and seen in the past. The first bite - a little "too fishy." Sauce was excellent. I wonder how I would like it without sauce. When I think of sea scallops, I think of a "sweet taste".

20. They were so tiny we all laughed.
21. They were smaller than I expected. Eight scallops for \$5.95 is a tad bit pricey. They did have good texture and flavor. Good idea to raise instead of harvest "native."
22. The scallops were smaller than I expected. The preparation was excellent. Garlic, butter and parsley I expect.
23. Good taste.
24. Let the scallops grow bigger.
25. **Delicious dish!**
26. The scallops had a rather "fishy" taste.
27. Somewhat gritty.
28. Need a little more time to purge- - some grit.
29. Garlic and butter sauce were great with the scallops.
30. There was more "fish" flavor than bay scallops I have purchased in the past. This appealed to me. I would definitely order again. Are they safer health wise? Environmentally? I would be even more interested if I knew ordering these reduced over-harvesting of natural sources. Do you control the water quality?
31. Glad to see this type of research!
32. Very good!
33. Somewhat gritty, but very tasty!
34. We gather scallops in the Keaton Del area each July.
35. Great.
36. **The concept is there, but "cleaned" scallops - even if consumers didn't know they were cleaned, have a natural sweet taste that was missed in whole scallops.**
37. Very pleasant. I don't know why, but scallops have never been served to me in their shells. Why not? I suspect the large ones I have been served before were not scallops?

38. Delicious.
39. Very good texture (not stringy). Good flavor.
40. A bit undersized. A large scallop would make a better presentation. Crackers take away the taste. Perhaps bread instead. In addition, garnish the plate for a better presentation. Especially in upscale restaurants.
41. They were great.
42. They looked small. Taste wasn't excellent.
43. Without the barnacles they would be perfect.
44. Just great, but a little small.
45. A dozen for the price would be a better deal. Good stuff though.
46. Too small!!
47. I thought it was wonderful. It looked very appealing and tasted great.

## Fund-raiser Comments

1. Scallops were very small!!
2. The scallops were too small but very good. I am a scallop nut.
3. Love scallop muscle but not whole scallop!
4. I love raw oysters - but eating anything but the muscle of the clam is not too pleasing.
5. Fishy.
6. Small.
7. Too small.
8. Too small.
9. Scallops were very small - very difficult to eat - let them get bigger.
10. They need to be bigger.
11. These scallops were great, they just need to grow up. Too small.
12. Super grub.
13. Great food.
14. Excellent.
15. The scallops were way too small but the flavor and presentation were excellent.
16. **Beautiful but small.**
17. Scallops were harvested too small!
18. Excellent.
19. Scallops are delicious, but the whole animal is pretty disgusting before it is separated from its shell.
20. Samples were very small.
21. Too small.
22. **Product was too small physically and quantitatively to evaluate...but as is obvious, the wine had a good effect!!!**

23. I love the taste of all shellfish.
24. They were too small and I prefer the white meat only. Larger wild scallops are much sweeter. Of course that may be due to the way they were prepared. I do however hope this project is successful and has commercial success. No comparison to farm raised clams.
25. I'd rather eat clams! They were too small to evaluate. They might be good, but too small. We needed more to eat.
26. Wonderful.



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