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# College Students' Opinions of U.S. Farm-Raised Catfish

Terrill R. Hanson and Patrick Rose

A survey focusing on factors related to consumption of fish and seafood, including catfish, and targeted at college-aged students was developed and administered in conjunction with Auburn University's Earth Day dining promotion. Six hundred forty completed surveys were obtained over two days in April, 2010. Findings suggest that students had an overall positive opinion toward catfish, citing enjoyment of flavor (44 percent), better texture (38 percent), less expensive (43 percent), and greater availability in the area (52 percent) than other seafood choices as reasons to consume catfish. Twenty-seven percent of respondents consumed catfish at least once a month. Student non-consumers indicated a dislike of taste, texture, and/or smell (54 percent) as their reason for non-consumption. Factors that would increase catfish consumption included having local Alabama farm-raised catfish products available (48 percent), lower price (56 percent), and if they thought catfish had greater nutritional value compared to other fish products (40 percent). Students also believe that they would be more likely to consume catfish products that are locally grown (34 percent) and farm-raised (28 percent). When students eat catfish, 23 percent "always" or "frequently" cook it at home or enjoy it at a sit-down restaurant (23 percent). Sixty-nine percent of students preferred catfish fried, 46 percent preferred it grilled, and 18 percent preferred it baked. Environmental and sustainability concerns were important to 21 percent, who would increase consumption because catfish are grown in eco-friendly ways. Overall results suggest development of consumer-oriented products that address young adults' preferences for locally grown, environmentally friendly, easy-to-access, and easy to prepare catfish dishes.

Fish is an important nutritional component of our diet, and in the southern U.S. farm-raised catfish is widely consumed (NFI 2010). However, the quantity of U.S. farm-raised catfish grown, processed, and sold in the U.S. has been declining in recent years due to less-expensive imported catfish, substitute fish products, and increased costs of production (NOAA 2010; USDA-NASS 2010; Hanson and Sites 2010). Past studies have looked at factors explaining U.S. consumer attitudes and consumption patterns toward catfish, but did not focus on young adults (House et al. 2003).

The importance of marketing catfish products to young adults is critical to the U.S. farm-raised catfish industry's long-term sustainability, and consumption preferences developed at a young age will persist throughout a lifetime. It is believed that young consumers have very different expectations compared to their elders. Catfish marketing strategies need to be tailored to address the evolving preferences of these young consumers. Today's young adults are more racially and ethnically diverse, their attitudes and values toward life are much differ-

ent, and their lifestyles and jobs fluctuate more than those of previous generations (Jayson 2006). These characteristics require catfish marketers to adjust communication strategies and refocus product development with these and other relevant factors in mind. In order to increase catfish consumption among young adults, it is important to uncover the motivational factors that encourage young people to add more catfish to their diets. To address this problem, we conducted a study of Auburn University college students' opinions about catfish. The study interviewed young adults to discover the factors which influence their consumption choices.

## Data and Methods

A two-page survey consisting of 17 questions taking approximately five minutes to complete was developed by the Department of Fisheries and Allied Aquacultures at Auburn University (AU) with input from the AU Center for Governmental Services (CGS). The questionnaire was based upon a prior effort with similar research objectives (House et al. 2003) and having a general population sample, not a youthful population focus as in this study.

Surveys were conducted in conjunction with AU Earth Day activities hosted at the student center. Earth Day activities focused on educating

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Hanson is Associate Professor and Extension Specialist, Department of Fisheries and Allied Aquacultures and Rose is Survey Research Lab and BTOP Project Manager, Center for Governmental Studies, Survey Research Lab, Auburn University, Auburn, AL.

students about the locally grown food products that are generally believed to be more eco-friendly and supportive of rural Alabama farm communities. All participants were prescreened for age (>19), an AU Institutional Review Board requirement to participate in the study. Six-hundred forty completed surveys were obtained over two days, representing approximately 2.5 percent of the total AU student population.

Survey data were entered into a database by CGS researchers trained in proper data entry and data collection techniques. Throughout the study, CGS professional staff monitored, supervised, and evaluated survey data entry in order to maintain survey quality. The Statistical Package for Social Science (SPSS) was used to analyze and test the data. A profile of the respondents who consumed catfish or did not consume catfish was prepared using descriptive data analysis.

## Results

The results reveal that 89 percent of the survey respondents were between the ages of 19 and 25, about half of respondents were female (54 percent), and slightly more than three-quarters were Caucasian (77 percent), largely consistent with the characteristics of the AU student population. Forty-two percent reported that their parents have a combined income of over \$90,000 per year, and three-quarters (74 percent) are originally from urban areas. Most respondents (55 percent) have never lived within 100 miles of a coastal area, and nearly seven out of ten respondents (67 percent) are Alabamians. Sixty-eight percent of all AU students are catfish consumers. Congruent with the characteristics of the sample as a whole, the majority of consumers are originally from Alabama (70 percent) and Georgia (10 percent). Within Alabama and Georgia, the largest number of consumers were from the urban areas of Birmingham (19 percent), Auburn (14 percent), Huntsville (12 percent), Montgomery (eight percent), and Atlanta (seven percent).

Table 1 compares the demographics of catfish consumers and non-consumers. Results reveal that 52 percent of consumers are male and 48 percent are female. These results are reversed in the case of non-consumers: 34 percent are male and 66 percent are female. The percentage of non-consumers coming from more affluent families is higher. Forty-nine

percent of non-consumers reported their parents' combined income to be greater than \$90,000, ten percent greater than the number of consumers who reported this level of income. The percentages of African-American and rural respondents were also much higher among consumers. Fifteen percent of catfish consumers are African American and 11 percent are from rural areas, compared to seven percent and three percent, respectively, of non-consumers. Lastly, 70 percent of catfish consumers come from Alabama; this percentage drops to 59 percent in the case of non-consumers.

The data suggest that 27 percent of students eat catfish at least once a month. Shrimp, salmon, and catfish are students' three most favorite fish/shellfish. Twenty percent of students prefer shrimp, 13 percent salmon, and 9 percent catfish. Seventeen percent of students reported that oysters were their least favorite fish/shellfish, 13 percent said tuna, and seven percent reported that catfish was their least favorite fish.

Non-consumers were asked to identify the top reasons for their lack of consumption. Fifty-four percent of students who do not eat catfish reported that "they do not like the taste, texture, and/or smell of catfish" and 50 percent reported that they "do not like catfish in particular." Half (50 percent) of non-consumers indicated that they "do not eat fish in general." Twenty-one percent of students who do not consume catfish report that they "had a bad past experience" with the product and 18 percent explained that catfish is "too time consuming to prepare."

When consumers were asked to report the location where they mostly eat catfish, the majority of students reported that they "never" or "seldom" consume catfish from convenience stores (86 percent), grocery stores (70 percent), and fast food restaurants (65 percent). Instead, students seem to prefer eating catfish at sit-down restaurants (23 percent) or after preparing it themselves at home (23 percent) (Table 2).

When consumers were asked how they preferred catfish to be cooked, they reported frying, grilling, and baking as the most popular ways to prepare catfish. Approximately two out of three students (69 percent) preferred catfish fried, 46 percent preferred it grilled, and 18 percent preferred it baked.

The survey revealed an overall positive attitude toward catfish among consumers. Catfish was re-

**Table 1. Comparison of Demographic Characteristics between Catfish Consumers and Non-Consumers, 2010 (%).**

	Consumers	Non-consumers
Age		
19–21	64	71
22–25	24	23
26+	12	6
Gender		
Male	52	34
Female	48	66
Household income		
<\$50,000	16	9
\$50,000–90,000	25	21
>\$90,000	39	49
Don't know	20	21
Ethnicity		
African-American	15	7
Caucasian	75	83
Other	10	10
Size of hometown (population)		
Large (>100,000)	33	41
Medium (10,000–100,000)	38	40
Small (<10,000)	18	16
Rural area	11	3
States		
Alabama	70	59
Georgia	10	15
Other Southeastern state	12	14
Other	8	12
Educational major		
Business	8	14
Science/mathematics	13	15
Engineering	20	14
Liberal Arts	25	26
Agriculture/animal science	8	4
Other	25	22

**Table 2. “How Often Do You Consume Catfish at or from the Following Locations?” (%)**

Location	Always	Frequently	Sometimes	Seldom	Never
Cooked at home	9	14	31	30	16
Fast food restaurant	1	9	25	25	40
Convenience store (prepared food)	1	3	10	23	63
Sit-down restaurant	2	21	43	25	19
Grocery store (prepared food section)	1	6	23	27	43

ported to be a traditional type of seafood for 41 percent of students. Thirty-seven percent of students believe that catfish looks better than other types of fish, 44 percent claim that catfish has better taste than other fish, 38 percent state that it has better texture, and 32 percent believe that catfish smells better and is easier to cook. In addition, 27 percent considered catfish to have better nutritional value than other fish, 52 percent reported that catfish is more available in their area, and 43 percent found catfish less expensive.

The findings suggest that given a choice, consumers prefer local (i.e., Alabama farm-raised) catfish over catfish produced outside the state. Almost half of the students (48 percent) reported that they would be more likely to purchase Alabama farm-raised catfish. Thirty percent of the student respondents did not have an opinion on the issue.

The survey results indicate a number of factors that would increase the consumption of catfish (Figure 1). Fifty-six percent of consumers indicated that a lower price would play a significant role in encouraging them to consume more catfish. Students also believe that they would be more likely to consume catfish products that are locally grown (34 percent), farm-raised (28 percent), and have high nutritional value (40 percent). Environmental and sustainability concerns are important to about one in five respondents, as shown by 21 percent who would increase consumption because catfish are grown in eco-friendly ways. A demonstrated low carbon footprint of the industry would increase consumption for one in ten respondents. Product-safety assurance would increase consumption for one in five respondents.

## Conclusions

More knowledgeable and health conscious consumers tend to eat more fish, and the lack of consumer knowledge about the benefits of catfish has persisted for generations. The results of this research may serve as a springboard for developing new educational strategies that address this dilemma by informing consumers about the improved safety, taste, eco-friendly, and nutritional qualities of U.S.

farm-raised catfish. The study's findings suggest that the catfish industry should focus on developing products that address young adults' preferences for locally grown, environmentally friendly, easy-to-access, and easy to prepare catfish dishes. Many current products meet these criteria, so it is important to increase promotion of these themes through advertising and education. The results also draw attention to differences in preferences for catfish among subpopulations, which stresses the need for more precisely targeted product marketing.

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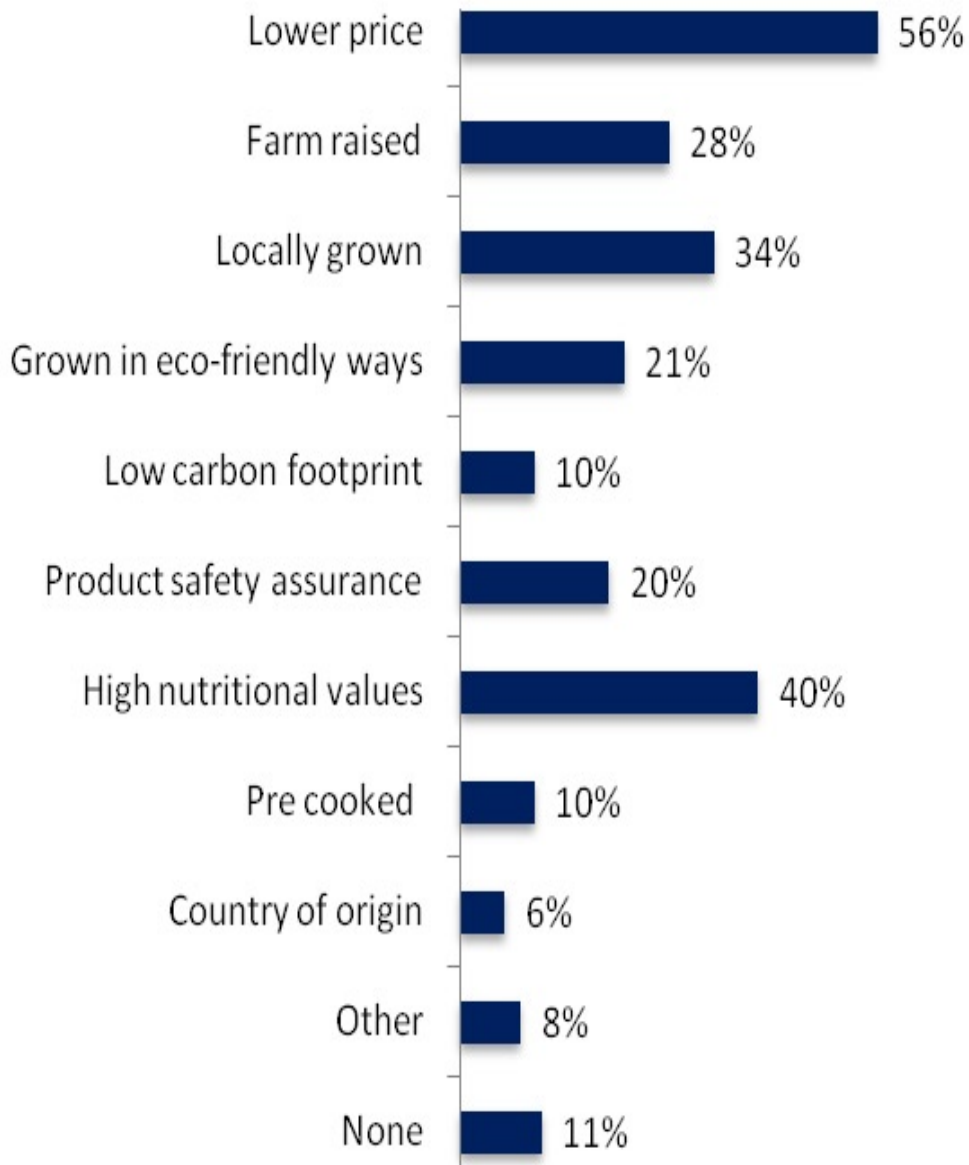


Figure 1. “What Factors Would Most Likely Increase Your Consumption of Catfish?”