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The Impact of an “Exotic” Label on Consumer Willingness to Taste Test, Purchase, and Price a New Meat Product

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A mail survey of 2,000 households in five major U.S. cities identified the most popular definitions of exotic meats, whether the consumers would taste test at their local food store a new exotic meat product having characteristics similar to beef, chicken, or catfish, whether the consumer would purchase the same exotic meat product for consumption in the home, and the price they would pay for the new exotic meat product relative to the price of three well established meat products. Approximately 60 percent of the respondents indicated they would taste test, 60 percent were neutral to highly willing to purchase the product, and 85 percent expected to pay an equal or higher price than for a comparable, well-established meat product.

Consumers are periodically introduced to new meat products that eventually either grow in popularity to serve a mass market, develop niche-market consumer bases, or virtually disappear from the market mainly because of lack of consumer interest. Meat products introduced over the past 20 years falling into the first category include chicken nuggets and steak fingers. Those falling into the second category might include buffalo and alligator. Finally, examples of meats falling into the third category are emu and nutria. While a number of factors are likely to influence a new meat product’s acceptance, the authors are most interested in the influence of the consumer’s labeling it as “exotic” on his or her willingness to consume it.

Growth of the U.S. fast food restaurant industry increased consumer awareness of now commonly consumed meats such as hamburger, fried chicken, and, more recently, chicken nuggets. Generally speaking, this industry has derived its new meat offerings from well-established, readily available sources of meat, such as beef, chicken, pork, turkey and the more abundant seafood species. Volume requirements necessitate the use of readily available raw product. Basing new meat products on familiar meat sources that few consumers would label as exotic may have improved initial consumer

acceptance of these products.

New fresh-meat products developed from less-familiar sources, such as buffalo, ostrich, emu, alligator, venison, and others, are more likely to have their initial offerings in white-linen-tablecloth restaurants or specialty meat markets. Volume requirements are smaller, and the restaurants may devote time to developing the culinary expertise required to prepare and serve the new meat product. Many of these products have originated from non-domesticated native animals or from imported sources. New meat products that survive the initial offering may remain in a niche market status for a number of years. According to Schupp, Gillespie, and Reed (1998), several of the above-listed meat products would fall into the exotic meats category for some consumers.

Particular fresh meats introduced into the market may not gain rapid acceptance for a number of reasons. Among these are consumer concerns with product safety, unfamiliarity with the product, negative bias arising from cultural or religious issues, or simply the biological or geographic area of the meat source. Some new fresh-meat products derived from less-familiar sources are subject to being labeled “exotic,” as are a number of non-food products such as vacation spots, flowers, etc. (Kale, McIntyre, and Weir 1987). The exotic label may also serve as a catch-all for a number of other descriptive terms, such as novel, rare, unfamiliar, or foreign. The exotic label can be attached to a product by an industry, an outlet, or an individual consumer. The authors’ casual observations suggest that application of the label to a product can influence the product’s demand positively, as might be the case with an exotic vacation spot, or influence

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its acceptance negatively, as may have happened with ratite meats.

Schupp, Gillespie, and Reed (1998) surveyed consumers to determine their attitudes toward selected alternative red meats: venison, buffalo, emu, and ostrich. Proportions of respondents identifying these four meats as being exotic were 30, 61, 84, and 88 percent, respectively. Only 21 percent would consume meats they classified as being exotic. The two ratite meats (emu and ostrich) were particularly discriminated against by use of the "exotic" label. High retail product prices, limited retail product availability, and the creation and destruction of a speculative "bubble market" at the breeder level, as discussed by Gillespie and Schupp (2002), likely further complicated the ratite industry's introduction of its meat products into the U.S. market.

Sellers may push the exotic label on foods if they believe it will enhance the product's value. Restaurants and supermarkets with ethnic ties or sections may promote the novelty and quality of their exotic meat offerings (Shalhevet, Spharim, and Haruvy 2002). Ethnic restaurants are one of the fastest-growing segments of the U.S. food-service industry (Zelinsky 1987).

Specific objectives of this paper are to determine the most commonly accepted consumer definitions of an exotic meat; estimate the factors affecting consumer willingness to taste test in the supermarket a new, exotic meat product with characteristics similar to either beef, chicken, or catfish; estimate the factors affecting consumer willingness to purchase a new, exotic meat product with characteristics similar to beef, chicken, or catfish; and estimate consumer-expected price levels for a new exotic meat relative to the price of the meat to which it is comparable (beef, chicken, or catfish). The study is expected to provide marketers of meat products from unfamiliar sources information about consumer reactions to these meats in terms of their willingness to purchase and prices they expect to pay relative to existing, more-established meat products.

Selected Literature

Consumers could label a meat product with which they are unfamiliar as being exotic. Unfamiliarity often generates a perception of risk associated with the product (such as health, religious, cultural, etc.), which often results in the consumer responding negatively toward the product (Aldrich and Blisard

1998; Ouchi 2002). Consumer perceptions influence preferences, and these preferences, in turn, influence demand for the product (Nayga 1996).

U.S. citizens traveling abroad often encounter restaurants serving specialty meats not readily available in the U.S. (Sheldon and Fox 1988). Likewise, immigrants coming to the U.S. from many other countries bring their willingness to buy and consume meats considered exotic in the U.S., thus providing limited but targetable markets for exotic meats.

A number of studies have examined the marketability and potential for specialty meats. Hui and McLean-Meynsse (1996) examined the market potentials for goat, rabbit, and quail, all meat products that a subset of consumers labeled as "exotic" in a survey by Schupp, Gillespie, and Reed (1998). Shalhevet, Spharim, and Haruvy (2002) reported that, from a list of 18 exotic animal species, five offered promise, based on comparative advantage, for viable niche-market production in Israel. They concluded that the production and marketing of exotic animals often offer the most profitable marketing opportunity for small producers in the developed countries.

Robinson and Amack (1986) surveyed purchasers of exotic fruits and vegetables from several major supermarkets in Kent and West Yorkshire, England, to identify consumer profiles. They reported purchasers of exotic fruits and vegetables as being in higher social classes, homeowners, more educated, venturesome, open-minded and forward thinking, and likely to try new products as they become available.

The impacts of taste-test opportunities, advertising, and sale offerings on willingness of consumers to purchase exotic fruits and vegetables were estimated by Edel (1984). Providing samples for the consumer to taste test in the supermarket was more effective in enticing purchase than was advertising or special sales.

Data and Procedures

A mail survey was used to obtain information on consumer definitions of exotic meats, their willingness to taste test the product in a local supermarket, their willingness to purchase the product in local stores, and their expectation of buying the meat product at prices below, equal to, or above the price of similar, well-established meats. Because

it was considered that consumer perceptions of exotic meats could differ by area of the U.S., five cities were chosen from which households would be sampled. The cities (Boston, Indianapolis, New Orleans, Denver, and San Francisco) were chosen from the northeast, southern, central, mountain, and western areas, respectively, to be representative of urban areas in each of the regions. Since the cities were approximately equal in population, no adjustment in sampling weights would be needed in the statistical analyses. The names and addresses of 400 randomly selected households in each city were obtained from a commercial source.

The survey questionnaire was developed, reviewed, and revised according to procedures discussed in Dillman (1991). The questionnaire included the question, "In your opinion, what is the best definition of an exotic meat?" Potential categorical responses were, "Meat from an animal which traditionally has not been used for meat production," "Meat from an animal which normally lives in the wild (i.e., little or no on-farm production), and "Meat that is not produced in the U.S. and must be imported from foreign countries." An additional "Other" category was included with a blank for the respondent to specify. A series of questions then followed to assess respondents' attitudes toward exotic meats. These questions referred to "an exotic meat similar to X." For one-third of the surveys, X was "beef," for one-third, "chicken," and for one-third, "catfish." This comparison was provided to give the respondent a well-known benchmark from which to evaluate the new exotic meat, as such comparisons are often made when a consumer is faced with a new meat source. The following question was then asked, "If available in a supermarket, would you taste test a free, ready-to-eat sample of the exotic (animal) meat (similar to X)?" Potential answers were, "Yes," "No," and "Undecided." Another question was, "Please rate, on a scale of 1 to 5, your willingness to buy and eat meat from an exotic animal that has recently been introduced in the market and has meat similar to X." A fourth question was, "In your opinion, should the price of the exotic (animal) meat considered in (the previous question) be lower, the same, or higher than the price of X?" For each questionnaire, X was the same for all three questions.

The questionnaire also included questions dealing with the respondent's general willingness to buy and consume game and/or new food products,

his or her knowledge of exotic meat availability, whether the household included a recreational hunter or fisherman, the respondent's overall risk preference, and the respondent's willingness to eat an exotic meat in the home of a friend. Information was also obtained on the respondent's socioeconomic characteristics.

A questionnaire, explanatory cover letter, and business reply envelope were bulk-mailed to the 2,000 households during the last week of July 2003. A duplicate questionnaire, a modified cover letter, and another business reply envelope were bulk-mailed in mid-August to all households that had not responded to the first mailing. A total of 414 questionnaires were returned. When incomplete questionnaires were removed (20), the effective return rate was 21.4 percent. All cities except Boston had return rates exceeding 20 percent. Since bulk mailing was used, non-delivered or refused mailings were not returned. Given the experience of the commercial source that provided the mailing list and the percentage of non-deliverables from a 2002 first-class mailing by the authors to households in comparable U.S. cities, the authors estimate that eight percent of the questionnaires (160) were not delivered or were refused. Based on Dillman's (1991) recommendations, the response rate would likely have been higher had first-class postage been used, had the households solicited the survey, and/or if some form of incentive had been given to encourage a response.

The Model

Given the objectives of the study and the qualitative nature of the data, multinomial logit and ordered probit models were used to analyze the data. Three separate equations were used for the analysis: *Taste Test Exotic*, *Buy Exotic*, and *Price Exotic*. These models were specified as follows:

Taste Test Exotic = f(notice, lookforward, hunter, game, attract, addvalue, friend, riskaverse, gender, age, single, children, education, homemaker, student, Black, Asian, Hispanic, income, city, fowl, fish, error)

Buy Exotic = f(taste test exotic, notice, lookforward, hunter, game, attract, addvalue, friend, riskaverse, gender, age, single, children, education, homemaker, student, Black, Asian, Hispanic, city, income, fowl, fish, error)

Price Exotic = f(taste test exotic, buy exotic, notice, lookforward, hunter, game, attract, addvalue, friend, riskaverse, gender, age, single, children, education, homemaker, student, Black, Asian, Hispanic, city, income, fowl, fish, error).

Taste Test Exotic is the willingness of the respondent to taste test in a local supermarket a sample of the new exotic meat with characteristics similar to beef, chicken, or catfish. *Buy Exotic* is the willingness of the respondent to buy the new exotic meat with characteristics similar to beef, chicken, or catfish in local supermarkets. *Price Exotic* is the expected price of the new exotic meat similar to beef, chicken or catfish in the supermarket relative to the price of the well-established meat. Since the respondent's answers to the last two questions were expected to depend on their answers to the previous question, a recursive relationship among the three dependent variables was hypothesized.

The independent variables are classified into three subgroups: Attitudinal, Socioeconomic, and Survey-Specific. Attitudinal variables include

Notice—"People I know are beginning to eat exotic meats." Potential answers were on a seven-point scale ranging from "strongly disagree" to "strongly agree," coded 1–7. Greater agreement would be expected to influence positively each of the dependent variables.

Look Forward—"I look forward to buying and consuming new non-traditional meat products as they become available in supermarkets." Potential answers were on a seven-point scale ranging from "strongly disagree" to "strongly agree," coded 1–7. Strongly agreeing would be expected to influence positively each of the dependent variables.

Friend—"I would eat most exotic meats if served to me in the home of a close friend." Potential answers were either "no" or "yes," coded 0 and 1, respectively. Respondents would be expected to be more likely to consume exotic meats under these circumstances because of trust in the preparation of the meat or not wishing to offend the host. A "yes" answer would be expected to influence positively each of the dependent variables.

Attract—"In your opinion, have you found

anything at all attractive in exotic meats?" Potential answers were "no" or "yes," coded 0 and 1, respectively. A "yes" answer would be expected to influence positively each of the dependent variables.

Add Value—"In your opinion, does the term exotic, when applied to non-food items, reduce, leave unchanged, or add to the item's value?" Potential answers were "reduce," "leave unchanged," or "add," coded 1, 2, and 3, respectively. This variable was used to determine whether consumers were consistent in their use of the term across non-food and meat items. This variable was included for exploratory purposes, with no specific sign expected a priori.

Risk Averse—"On a scale of 1–5, where 1 = take risks, 3 = risk neutral, and 5 = avoid risks, where would you rate yourself with regard to taking risks of all kinds?" Consumers who were more apt to take risks were expected to react more positively to exotic meats.

Socioeconomic variables commonly used in consumer preference analyses were the following. Unless otherwise specified, the variable was included for exploratory purposes because of a lack of previous research or economic theory as a basis to support a hypothesis; thus, no particular sign is expected a priori.

Female—Female = 1, Male = 0. Females were less likely to consume the alternative red meats (venison, buffalo, ostrich, and emu) than were males in the study by Schupp, Gillespie, and Reed (1998). Thus, females were expected to react less-positively to exotic meats.

Age—Age of the respondent, a continuous variable ranging from 21 to 93.

Single—Single parent household = 1, otherwise = 0.

Children—Household includes children = 1, otherwise = 0. Households with children were expected to have lower interest in exotic meats, consistent with Nayga (1996) and Ouchi (2002).

Education—Household head has some college or higher education = 1, otherwise = 0. More highly educated individuals were expected to react more positively to exotic meats than

were less-educated individuals, consistent with Robinson and Amack (1986). Schupp, Gillespie, and Reed (1998) found mixed results for the education variable, depending upon the exotic meat in question.

Homemaker—Defined as an individual whose occupation is being a homemaker. Household includes homemaker = 1, otherwise = 0.

Student—Household head is a student = 1, otherwise = 0.

Race—Three race variables were included in the model. *Black*, *Asian*, and *Hispanic* indicate the household head is African-American, Asian-American, or Hispanic, respectively, with the base being white, Native American, or other. Schupp, Gillespie, and Reed (1998) found whites to be more likely than non-whites to choose an exotic meat, though they did not analyze with respect to specific non-white groups.

Income—Continuous variable in \$15,000 increments ranging from <\$15,000 to >\$135,000.

Survey-specific variables included:

Hunter—“Does your household include an active recreational game hunter or fisherman?” Potential answers were “no” or “yes,” coded 0 and 1, respectively. Individuals from households including hunters or fishermen were expected to react more positively to exotic meats. They are considered more likely to have been exposed to family members’ positive attitudes regarding the consumption of meats other than beef, pork, chicken, and the major seafood products.

Game—“Do you eat game meat?” Potential answers were “no” or “yes,” coded 0 and 1, respectively. This variable is expected to positively influence each of the dependent variables, as the respondent has been exposed to meats that many would consider to be exotic. Schupp, Gillespie, and Reed (1998) found that most of the commonly consumed domestic wild game meats, such as venison and duck, were listed as exotic by some respondents.

Cities—Dummy variables were included for *Boston*, *New Orleans*, *Denver*, and *San Francisco*, (each coded 1 for the city, 0 otherwise)

with Indianapolis as the base city. These variables were used to explore whether there were differences in consumer perceptions of exotic meats by city.

Animal Type—Dummy variables were included for *Fowl*, the new exotic meat being described as similar to chicken, and *Fish*, the new exotic meat being described as similar to catfish (each coded 1 for the similar meat, 0 otherwise), where beef was the base. These variables were used to explore whether there were differences in consumer perceptions of exotic meats by meat type.

Results

While the household sample was randomly drawn from the five city populations, the actual households responding were somewhat biased toward the more highly educated, white, or higher-income segments of the city populations, compared to the sample provider’s means for education, income, and race for each city (Table 1). The authors did not have any basis for structuring the city samples for these socioeconomic variables. Therefore, these biases were not unexpected, and the reader should consider them in evaluating the responses.

As noted previously, the questionnaire listed three alternative definitions of an exotic animal and a fourth open-ended choice (Table 2). More than half of the respondents selected “Meat from an animal which traditionally has not been used for meat production.” Respondents from San Francisco were the most likely to choose this definition, and Denver respondents were the least likely. Slightly more than one-third chose “Meat from an animal which normally lives in the wild.” Denver and San Francisco respondents were the most and least likely, respectively, to choose this definition. The third most frequent definition, “Meat that must be imported,” was most popular with New Orleans respondents and least popular with Boston households.

Overall, approximately 60 percent expressed a willingness to taste test the new product in local supermarkets, while 25 percent indicated they would not. A multinomial logit model was used to estimate the variables most likely to influence a respondent’s willingness to taste test the new exotic meat (Table 3). The overall model was significant at the one-percent level ($\chi^2 = 229.83$, 50 df). The mar-

Table 1. Characteristics of Household Sample, Total Sample and by City, 2003.

Characteristic	Total	Boston	Indianapolis	New Orleans	Denver	San Francisco
Risk Preference (%)						
Take risk	26.0	17.7	24.4	36.2	32.9	16.9
Neutral	32.1	35.5	35.4	31.3	22.0	37.3
Avoid risk	41.9	46.8	40.2	32.5	45.1	45.8
Female (%)	49.4	44.4	50.0	55.0	56.1	39.8
Age (mean, in years)	49.08	47.72	48.68	50.88	49.70	48.15
Education (%)						
<High school	1.3	0.0	1.2	2.5	0.0	2.4
High school	11.6	8.1	11.0	26.2	8.5	3.6
Trade school	3.9	6.4	4.9	1.3	3.7	3.6
Some college	26.0	16.1	32.9	32.5	32.9	13.3
College degree	30.2	33.9	22.0	22.5	32.9	41.0
Post graduate	27.0	35.5	28.0	15.0	22.0	36.1
Household (%)						
Single adult	27.2	24.2	25.6	25.0	26.8	33.7
Single parent w children	7.7	1.6	9.8	15.0	4.9	6.0
Couple w/o children	29.0	30.6	35.4	23.8	30.5	25.3
Couple w children	33.8	38.8	28.0	35.0	35.4	32.6
Other	2.3	4.8	1.2	1.2	2.4	2.4
Status (%)						
Employed part time	9.3	12.9	12.2	3.8	8.6	9.6
Employed full time	60.7	58.1	61.0	51.3	63.4	68.7
Unemployed	1.8	1.6	0.0	6.2	1.2	0.0
Homemaker	6.4	3.2	6.1	10.0	7.3	4.8
Retired	19.5	19.4	18.3	26.2	18.3	15.7
Student	2.3	4.8	2.4	2.5	1.2	1.2
Race (%)						
African-American	8.0	4.9	12.2	17.4	2.4	2.5
Native American	0.8	1.6	0.0	0.0	2.4	0.0
Asian American	2.8	0.0	1.2	1.3	1.2	9.6
Caucasian	83.3	90.3	86.6	80.0	86.6	74.7
Hispanic	3.8	1.6	0.0	1.3	7.4	8.4
Other	1.3	1.6	0.0	0.0	0.0	4.8
Income (%)						
<\$15,000	5.2	3.2	2.4	13.8	3.7	2.4
\$15,000–\$44,999	27.0	24.2	32.9	36.2	19.5	21.8
\$45,000–\$74,999	29.8	32.2	36.7	30.0	34.2	16.9
\$75,000–\$104,999	18.0	16.1	19.5	13.8	23.1	16.8
\$105,000–\$135,000	10.0	17.8	3.6	3.7	9.8	16.8
>\$135,000	10.0	6.5	4.9	2.5	9.7	25.3

Table 2. Consumer Choices among Definitions of Exotic Meats, Including Respondent Definitions, and Percentages of Respondents Listing Each, Total Sample and by City, 2003.

Definition	Total	Boston	Indianapolis	New Orleans	Denver	San Francisco
	percentage of responses					
Meat from an animal that traditionally has not been used for meat production.	53.1	61.3	52.4	44.5	41.5	67.5
Meat from an animal that normally lives in the wild.	35.4	32.3	35.4	38.3	47.6	22.9
Meat that is not produced in the U.S. and must be imported from other countries.	8.2	3.2	8.5	16.0	6.1	6.0
Other definitions (see below)	3.3	3.2	3.7	1.2	4.8	3.6
Number of responses						
Don't know				5		
Any meat you don't find in the supermarket				2		
Meat from an animal that normally lives in the wild, except fish				2		
Any other meat except beef, chicken, turkey, and pork				1		
Meat not available, or reasonably priced, because of low demand				1		
Meat that is not served in U.S. restaurants				1		
An animal (not fish) that breathes and is not normally used for meat				1		

Table 3. Marginal Effects from the Multinomial Logit Analysis of Consumer Willingness to Taste Test a New Exotic Meat Comparable to Beef, Chicken, or Catfish.

Variable	Yes		No		Undecided	
	Coefficient	Probability	Coefficient	Probability	Coefficient	Probability
Constant	0.3132	0.1493	-0.0501	0.7394	-0.2630*	0.0739
Notice	0.0187	0.3563	0.0028	0.8424	-0.0216	0.1237
Look forward	0.0832*	0.0001	-0.0677*	0.0000	-0.0155	0.3134
Attract	0.1954*	0.0094	-0.0738	0.2141	-0.1216*	0.0236
Add value	0.8765*	0.0812	-0.0403	0.2324	-0.0474	0.1459
Friend	0.2900*	0.0000	-0.2060*	0.0001	-0.0839*	0.0732
Female	-0.0363	0.5669	-0.0189	0.6694	0.0553	0.2042
Age	-0.0024	0.2751	-0.0012	0.4297	0.0036*	0.0137
Single	-0.0624	0.3746	0.0254	0.6106	0.0369	0.4236
Children	-0.0542	0.3997	0.0292	0.5084	0.0250	0.5688
Education	-0.0595*	0.0308	0.0234	0.2225	0.0361*	0.0530
Homemaker	-0.0252	0.8430	-0.0308	0.7237	0.0560	0.4961
Student	-0.2638	0.1969	0.0289	0.8378	0.2349*	0.0429
Black	-0.0929	0.3896	-0.0038	0.9604	0.0967	0.1421
Asian	0.1676	0.3799	-0.2761*	0.0938	0.1085	0.2861
Hispanic	0.1112	0.4448	-0.0577	0.5733	-0.0535	0.6183
Income	-0.0105	0.4786	0.0176*	0.0810	-0.0071	0.4865
Hunter	-0.1030	0.2126	0.0023	0.9701	0.1007*	0.0599
Game	0.1216*	0.0852	-0.0874*	0.0912	-0.0341	0.4862
Risk averse	-0.0893*	0.0015	0.0593*	0.0028	0.0300	0.1055
Boston	0.0244	0.7945	-0.0042	0.9490	-0.0202	0.7358
New Orleans	0.1377	0.1367	0.0042	0.9485	-0.1419*	0.0249
Denver	0.0235	0.8005	0.0401	.5357	-0.0637	0.3067
San Francisco	-0.0494	0.5963	0.0372	0.5798	0.0122	0.8357
Fowl	0.1057	0.1500	-0.0318	0.5447	-0.0739	0.1156
Fish	0.0847	0.2504	0.0161	0.7544	-0.1009*	0.0360

* indicates that coefficients are significant at 0.10 level.

ginal effects indicate that *Look Forward*, *Attract*, *Add Value*, *Game*, and *Friend* are associated with an increased probability of replying “Yes” to being willing to taste test the new exotic meat product in a local supermarket, whereas *Risk Averse* and *Education* are associated with a decreased probability of replying “Yes” to being willing to taste test the new exotic meat product in a local supermarket.

Marginal effects indicate that *Asian* is associated with a lower probability of not being willing to taste test the specified exotic meat product. This

may reflect a broader experience with specialty meats among Asian-Americans. Variables *Look Forward*, *Friend*, and *Game* were also associated with a lower probability of not being willing to taste test the product. Higher-income and risk-averse individuals were more likely to be unwilling to taste test the product.

Marginal effects indicate that *Education*, *Hunter*, *Age*, and *Student* were associated with a higher probability of responding “undecided” in willingness to taste test the new exotic product in the supermarket.

On the other hand, *Attract*, *Friend*, *New Orleans*, and *Fish* were associated with a lower probability of responding “undecided” in willingness to taste test the new product. The latter groups were likely surer of their taste-test decisions.

On average, approximately 30 percent of the respondents expressed a willingness to purchase the exotic meat product, with the remainder being neutral or unwilling. This is nearly 10-percent higher than reported by Schupp, Gillespie, and Reed (1998). An ordered probit model was used to estimate the factors influencing willingness to purchase (Table 4). The overall model was significant at the one-percent level ($\chi^2 = 244.34$, 26 df). Significant attitudinal variables, *Look Forward*, *Attract*, and *Friend*, had the expected positive signs; *Risk Averse* had the expected negative sign. Those who consumed game were also more likely to purchase the exotic product. Socioeconomic variable *Black* carried a positive sign, and the survey-specific variable *Fowl* was positively related to a willingness to purchase the exotic product.

Respondents indicated whether they expected to purchase the new exotic meat product at less than, the same, or higher prices than that of the comparable, well-established meat product. On average, approximately 85 percent of the respondents expected to purchase the new exotic meat product at a price equal to or higher than the comparable, well-established meat product. The ordered probit model was significant at the one-percent level ($\chi^2 = 55.79$, 27 df). Significant positive variables were *Friend* and *Female*; *Homemaker*, *Black*, *New Orleans*, and *Fish* were negative factors. Each of the significant variables had the hypothesized signs.

Implications

As expected, this study found considerable variation in consumer definitions of an exotic animal (meat). Most respondents, however, opted for the broader definition, “Meat from an animal that traditionally has not been used for meat production,” which could open the label’s use to meat from any new animal source, whether foreign, domestic, or wild. New meat products from animals not previously used for meat in the U.S. run the risk of being labeled as exotic by many consumers and have difficulty getting established as meat products.

Respondents who were more likely to taste test the new exotic meat or were more likely to buy and

consume the new exotic meat could be described as individuals who liked to experiment with new meats, believed that exotic meats had something to offer, consumed game meat in their homes, would eat a non-traditional meat at a friend’s home, or were self-claimed risk takers. This composite consumer could be described as venturesome and innovative in food preferences.

Respondents who believed that the exotic label added to the attractiveness and value of a product were more likely to be willing to taste test the new exotic meat product in the supermarket. Furthermore, believing that the exotic label added to the attractiveness of the product indicated a greater willingness to buy the product, but not a greater willingness to pay a higher price for it.

Consumers receiving a survey that described the new exotic meat as being similar to chicken indicated an increased willingness to purchase the product than those whose survey described the meat as resembling beef. On the other hand, respondents receiving questionnaires that compared the new exotic meat to catfish did not expect to pay a higher price for the exotic meat than those whose surveys described the meat as resembling beef.

The expected recursive relationship between *Taste Test Exotic* and *Buy Exotic* and between *Buy Exotic* and *Price Exotic* did not materialize. The respondents apparently considered these decisions separately. It is likely that a recursive relationship may have been found had the consumer actually been exposed to the taste-test, purchase, and pricing decisions, as provided in experimental economics studies, such as discussed by Umberger and Feuz (2004).

Many New Orleans chefs commonly prepare meats that some individuals outside the region would consider non-traditional, such as crawfish and alligator. Accordingly, South Louisianians are recognized for using both traditional and less-traditional food products to create their dishes. Therefore, South Louisianians tend to be exposed to less-well-established foods on a regular basis, some of which consumers might term as being exotic. Hence, familiarity with less-well-established meats could result in New Orleans residents valuing exotic meats lower since they are less of a novelty, and they did.

These results imply the attachment of an exotic label to a fresh meat product can hinder its acceptance. These labels are mostly determined

Table 4. Ordered Probit Analyses of Consumer Willingness to Buy and Perceived Value of a New Exotic Meat with Characteristics Similar to Beef, Chicken, or Catfish.

Variable	Price Exotic		Buy Exotic	
	Coefficient	Probabibility	Coefficient	Probability
Constant	0.0325	0.9402	0.9712*	0.0513
Taste test exotic	-0.0003	0.7759	-0.0874	0.3801
Buy exotic	NA	NA	0.0567	0.3587
Notice	-0.0035	0.9290	0.0166	0.6829
Look forward	0.2746*	0.0000	-0.0266	0.5595
Attract	0.5401*	0.0002	-0.0468	0.7638
Add value	0.0361	0.7129	0.1330	0.1886
Friend	0.6212*	0.0000	0.2949*	0.0544
Female	0.1007	0.4122	0.2687*	0.0360
Age	-0.0013	0.7571	0.0009	0.8375
Single	0.0738	0.5913	-0.1204	0.3981
Children	-0.1233	0.3367	0.0508	0.7001
Education	-0.0731	0.1572	-0.0044	0.9341
Homemaker	-0.0766	0.7640	-0.5682*	0.0288
Student	0.2437	0.5431	0.5918	0.1735
Black	0.4307*	0.0530	-0.4326*	0.0589
Asian	0.1473	0.6749	-0.0144	0.9700
Hispanic	0.1873	0.5334	-0.2186	0.4718
Income	0.0172	0.5522	-0.0391	0.1931
Hunter	-0.2010	0.1907	-0.1649	0.3032
Game	0.3741*	0.0087	0.0327	0.8294
Risk averse	-0.1427*	0.0100	-0.0535	0.3470
Boston	-0.2171	0.2616	-0.1274	0.5217
New Orleans	0.0508	0.7788	-0.5214*	0.0061
Denver	-0.2074	0.2566	-0.1808	0.3394
San Francisco	0.1001	0.5875	-0.0515	0.7892
Fowl	0.2634*	0.0688	-0.0305	0.8402
Fish	0.1996	0.1681	-0.3849*	0.0107
MU1	0.5596*	0.0000	1.5431*	0.0000
MU2	1.7806*	0.0000	NA	NA
MU3	2.6937*	0.0000	NA	NA

* indicates that coefficients are significant at 0.10 level.

by consumers themselves, and there may be little the marketer of an entirely new meat product can do to prevent the consumer from labeling it as being exotic. The passage of time, dissemination of information on the product, and the entry of more immigrants into the country could serve to eliminate the consumer's negative perception of such meat products.

We suggest that marketers of new meat products that are likely to be labeled as exotic by consumers should provide potential consumers with as much information as possible on the product relative to the more established meats, including offering taste-test opportunities. With the exception of education, the most frequently used socioeconomic characteristics of consumers (income, race, presence of children, age, and occupation) offer little help in identifying target markets with enhanced sales opportunities for exotic meats. Until consumers become more familiar with exotic meats, the attitudinal and survey-specific variables are likely to be more important than the socioeconomic variables.

While the reputation of the seller was not a part of this study, Caudill's (1995) research indicates that consumers are more likely to buy a new product from a supplier that they perceive to be trustworthy and reputable. The seller's excellent reputation with consumers may be the most effective marketing tool available to move an exotic meat into the market.

References

- Aldrich, L. and N. Blisard. 1998. "Consumer Acceptance of Biotechnology Lessons from the rbST Experience." In *Current Issues in Economics and Food Markets*. Agriculture Information Bulletin No. 747-01, USDA Economic Research Service.
- Caudill, E. M. 1995. "Health Claims and Consumer Skepticism: The Influencing Effects of Information Type, Sponsor Reputation, and Information Channel." Ph.D. dissertation, University of Illinois, Urbana-Champaign.
- Dillman, D. 1991. "The Design and Administration of Mail Surveys." *Annual Review of Sociology* 17:225-249.
- Edel, R. 1984. "Consumer Acceptance of Exotic Produce Ripens." *Advertising Age* 55(21): 1000-01.
- Gillespie, J. M. and A. R. Schupp. 2002. "The Role of Speculation and Information in the Early Evolution of the U.S. Ostrich Industry: An Industry Case Study." *Review of Agricultural Economics* 24(1):278-292.
- Hui, J and P. McLean-Meynsse. 1996. "Assessing the Market Potential for Specialty Meat: Goat, Rabbit and Quail." *Journal of International Food and Agribusiness Marketing* 8(3):55-68.
- Kale, S., R. McIntyre, and K. Weir. 1987. "Marketing Overseas Tour Packages to the Youth Segment: An Empirical Analysis." *Journal of Travel Research* 25(Spring):20-24.
- Nayga, R. 1996. "Sociodemographic Influences on Consumers' Concerns for Food Safety: The Case of Irradiation, Antibiotics, Hormones and Pesticides." *Review of Agricultural Economics* 18(3):467-475.
- Ouchi, H. 2002. "Japanese Consumer Preferences for Biotechnology and Food Safety with Implications for Trade." M.S. Thesis, Washington State University.
- Robinson, T. and R. Amack. 1986. "Exotic Fruit and Vegetables: A Consumer Profile." *Food Marketing* 2(2):14-27.
- Schupp, A.R., J. M. Gillespie, and D. Reed. 1998. "Consumer Choice Among Alternative Red Meats." *Journal of Food Distribution Research* 29(3):35-43.
- Shalhevet, S., I. Spharim, and N. Haruvy. 2002. "Economic and Financial Aspects of Developing New Market Niches—A Case Study of Exotic Animals in Israel." *Journal of Financial Management and Analysis* 13(1):55-65.
- Sheldon P. and M. Fox. 1988. "The Role of Food-service in Vacation Choice and Experience: A Cross-Cultural Analysis." *Journal of Travel Research* 26(Fall):9-15.
- Umberger, W. J. and D. M. Feuz. 2004. "The Usefulness of Experimental Auctions in Determining Consumers' Willingness-to-Pay for Quality-Differentiated Products." *Review of Agricultural Economics* 26(2):170-185.
- Zelinsky, W. 1987. "You Are Where You Eat." *American Demographics* July:31-33, 56-61.