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Marketing Source-Verified Beef to Restaurant Patrons

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Summary

To determine consumer ordering behaviors in high-end restaurants and to see if consumers are interested in the origin of their beef, both an online survey and in-restaurant taste testing were conducted. About two-thirds of the participants in the in-restaurant taste testing ordered the steak with either the state or farm-of-origin description. Compared to a non-source verified steak, taste participants were willing to pay $4.74 more for the steak with the state-of-origin description, and $8.75 more for the steak with the farm-of-origin description. Almost all of the participants acknowledged the best beef comes from the Midwest, specifically naming Nebraska as a state that raises high-quality beef. These data suggest there is consumer interest in a source-verified beef product in high-end restaurants.

Introduction

Patrons in high-end restaurants are often willing to pay more for a premium product. Also, trends that are popular in high-end restaurants are frequently emulated in more casual restaurants.

Consumers are becoming more educated about the origin of their meat and use source-verification as a way of guaranteeing safety and quality. Restaurants and producers could create a market by offering products that are either source-verified or traceable from farm to restaurant. In order for this to be a viable option, there has to be a financial incentive. The objectives of this research were to determine factors influencing consumer purchasing decisions in high-end restaurants and to see if consumers are interested in knowing the origin of their beef.

Procedure

Online Survey

All surveys and protocols performed in this study were approved by the University of Nebraska–Lincoln Institutional Review Board. A survey was created and hosted by an online survey site (surveymonkey.com, 1999-2010) for a month. The survey asked consumers questions about their ordering behaviors, opinions on source-verification, and several demographic topics.

High-end restaurants in Connecticut (n = 3) and Arizona (n = 3) distributed postcards and sent out email blasts informing consumers of the online survey. An incentive in the form of a coupon for a free dessert, money off of a next meal, or an invitation to an in-restaurant steak tasting was offered for those that completed the survey. Results were composited and analyzed (n = 1087).

In-restaurant Tasting

From the six restaurants advertising the online survey, three were chosen to host an in-restaurant taste testing — two in Connecticut and one in Arizona. Participants (n = 192) were asked to select one of four New York strip steaks from a specialty menu. All descriptions stated steaks were USDA Choice and had superior flavor and tenderness. The primary differences between the descriptions were price and origin specification (no origin, region, state, or farm). Price was randomly assigned to each steak, and all steaks came from the same farm in Nebraska. All strip loins were upper 2/3 Choice, aged for 28 days, cut into approximately 14 oz steaks, and shipped fresh to the restaurants. After the meal, participants were given a short questionnaire and asked to rate sensory attributes of their steak (overall appearance, aroma, flavor, juiciness, tenderness, and overall acceptability).

Statistics

Results for both the online survey and in-restaurant steak tasting were analyzed using the frequency procedure in SAS (Version 9.1, SAS Institute Inc., Cary, N.C., 2004) to determine frequencies. The experimental unit was individual participant. In addition, a logistic panel regression model was used to analyze how much consumers are willing to pay for source-verified beef using the in-restaurant steak tasting data.

Results

Online Survey

Most of the participants were female (58%), 50 years of age or older (54%), and Caucasian (85%). For annual personal income, participants tended to make $100,000 or less (45%), and a fairly large number (34%) refused to reveal their personal income. Participants were fairly equally distributed in where they lived, with 47% residing in urban areas and 45% claiming residency in rural areas.

Most of the participants stated they consume beef on a weekly basis both in the home or while dining out. When participants did dine out, it was usually only two to three times per month, but some dine out on a weekly basis. Most of the participants preferred filet mignon when consuming beef, but the ribeye steak and New York strip were also favorites.

Besides the cut of beef, other attributes that participants used to make a decision when ordering steak in a restaurant included the price, USDA Quality Grade (e.g. Prime, Choice, etc.), and if there was a guarantee of tenderness or not (Table 1). Traits or attributes participants considered to be not as important were factors such as the breed of the cow or the brand (e.g., Certified Angus Beef®, Sterling Silver®, etc.). The most important

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characteristics that best determined overall eating satisfaction for the participants were flavor, tenderness, and degree of doneness (Table 1). Participants considered characteristics such as accompaniments (potatoes, vegetables, salad, etc.), thickness of the steak, and portion size to be less relevant.

For the most part, the participants assumed their meat came from within the U.S. When asked what type of origin information they would like provided, 39% wanted to know state-of-origin and 38% wanted to know country-of-origin. A fairly large number wanted region-of-origin (33%) and only 17% cared to know farm-of-origin. About 24% did not care about the origin at all.

When the price of a steak from an unspecified source is $20.95, 63% of the participants indicated they would be willing to pay more for a steak that was source-verified (Table 2). About 26% would only pay the same amount for the source-verified steak, 7% would only buy it if it was priced less than the unspecified source steak, and only 3% said they would not purchase the source-verified steak.

In-restaurant Tasting

When presented with a menu with four different steak descriptions, 37% of the participants ordered the steak that named the farm-of-origin, while 31% chose the steak that listed the state-of-origin. Conversely, the steak that did not specify any origin was ordered by 18% of the participants, and only 14% ordered the steak that named the region-of-origin. In addition, the state-of-origin and farm-of-origin steaks were the most ordered regardless of price. About 2/3 of the participants preferred steaks with a more specific source-verification in the description and were willing to pay extra for steaks that had it.

About 78% or more of the participants gave the steaks they consumed high ratings (1 or 2 on a 5-point scale) on all attributes, and 73% said they would order the same steak again (Table 3). Similar to the online

Table 1. Rank of deciding factors among steak attributes for participants of the online survey.

Steak traits/attributes consumers use when making a decision among several options	Weighted Average[1]
Specific cut (e.g. T-bone, Sirloin)	1.74
Price	2.84
USDA Quality Grade (e.g. Prime)	2.98
Tenderness verification/guarantee	2.89
Grass-fed	2.98
Nutritional Information	3.28
Aged for at least 14 days	3.72
Brand (e.g. Certified Angus Beef®)	3.82
Natural label	3.56
Corn-fed or grain-fed	3.80
Certified organic	3.38
U.S. origin	3.78
Free range	3.51
Locally raised	3.75
Traceable from farm to consumer	3.79
Breed (e.g. Angus, Hereford)	4.01
Other	3.40
Factors that determine consumers' overall satisfaction with eating experience of the steak	
Flavor/Taste	1.74
Tenderness	2.19
Degree of doneness	2.72
Juiciness	3.48
Little fat trim/less waste due to fat	3.63
Aroma/Smell	4.03
Portion size	4.09
Thickness of steak	4.09
Accompaniments (e.g. salad)	4.32
Other	3.41

[1]1 = very important and 5 = not as important

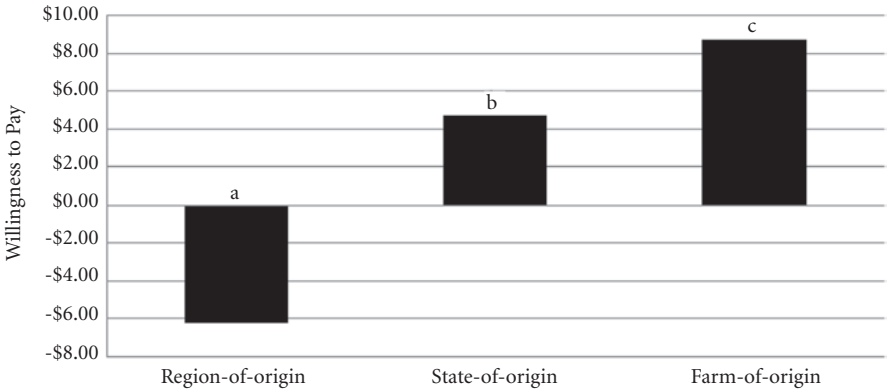
Table 2. Percentage of online survey participants willing to pay for a source-verified steak.

Statement	%
I would only pay the same price as the unspecified source steak ($20.95)	26.26
For this steak, I would pay a premium of:	
10-20 % ($23.05-$25.15)	35.94
30-40% ($27.25-$29.35)	17.71
>50% ($31.45-$41.90)	9.58
I would NOT purchase this steak	3.40
I would only purchase if priced LESS than the unspecified source steak	7.11

Table 3. In-restaurant steak tasting scores (%).

Item, %	1	2	3	4	5
Visual[1]	40.64	47.59	11.76	0.00	0.00
Aroma[1]	25.00	54.89	19.57	0.00	0.00
Flavor[1]	45.99	37.44	16.04	0.53	0.00
Juiciness[2]	34.59	49.19	15.14	1.08	0.00
Tenderness[3]	36.22	41.62	16.76	4.32	1.08
Acceptability[4]	59.24	26.63	12.50	1.63	0.00
Willingness to purchase again[5]	72.97	15.14	11.89	—	—

[1]1 = Extremely Desirable and 5 = Extremely Undesirable
[2]1 = Extremely Juicy and 5 = Extremely Dry
[3]1 = Extremely Tender and 5 = Extremely Tough
[4]1 = Extremely Acceptable and 5 = Extremely Unacceptable
[5]1 = Yes, 2 = No, 3 = Not Sure



[a]P = 0.06.
[b]P = 0.09.
[c]P < 0.01.

Figure 1. Premium or discount that restaurant consumers are willing to pay when compared to a generic, nonsource verified steak, %.

Table 4. Top states in-restaurant steak tasting participants believe grow the highest quality beef (%).

State	%
Nebraska	33.81
Texas	12.03
Iowa	11.75
Kansas	10.60
Oklahoma	4.01
Colorado	3.44
Montana	2.87

surveys, tenderness and quality grade were the main attributes that made participants decide on their steak selection (20% for both), but the specified location where cattle were raised was also a deciding factor (17%).

Participants were less likely to order the steak that only listed the Midwest as the origin. However, the participants were more likely to choose the steaks that had either the state ($P = 0.089$) or farm-of-origin ($P < 0.01$) listed. When steak price was added into the model, participants were willing to pay $4.74 more for a steak with state-of-origin specification ($P = 0.09$) and $8.75 more for a steak with farm-of-origin specification ($P = 0.001$) (Figure 1). Consumers perceived no benefit from knowing the region-of-origin specified (i.e.,Midwest); the price had to be discounted $6.20 below the price of the steak that had no origin specified in the description ($P = 0.06$) in order for region-of-origin steaks to be selected.

When asked where the best beef comes from (Table 4), 83% believed it was the Midwest, with Nebraska, Texas, and Iowa specifically named as states that grow the best beef (35%, 12%, and 12%, respectively). When asked if they would be willing to pay more for beef that is source-verified, 65% of the participants said yes. This implies that Nebraska source-verified beef products would be in high demand.

In conclusion, these data suggest consumers are interested in a source-verified beef product, and they would be willing to pay a premium for it.

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