

United States Mainstream Meat Market Entry: An Analysis of Specialty Goat Meat Products

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Abstract

This study uses data from a national consumer survey conducted in February 2024 to examine factors influencing acceptance of goat meat in the U.S. market. Understanding willingness to purchase products, such as sausage, jerky, patties, burgers, and meat sticks, is critical for market entry. Results show that men under 55, with some college education or less, household incomes above \$80,000, and frequent engagement with culinary media are more likely to purchase. Additional predictors include reading food labels and valuing taste, tenderness, leanness, and lower cholesterol. Targeted marketing should emphasize key demographic characteristics including age, gender, income, and education segments groups.

Keywords: consumer preferences, logistic models, market entry, specialty goat products

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Introduction

The U.S. meat market is dominated by three primary options: beef, pork, and poultry. However, consumer preferences are evolving as individuals become increasingly conscious of factors influencing their purchasing decisions, such as animal welfare, feeding practices, and product origin. Goat meat, although less common in the United States, has emerged as a growing industry in recent years (Riley, 2018). Incorporating goat meat into the American diet offers several benefits, including its nutritional profile. Goat meat is classified as red meat but contains less saturated fat than traditional beef products (Silva et al., 2024).

The rising ethnic diversity in the United States has contributed significantly to increased demand for goat meat. Many ethnic communities incorporate goat meat into cultural and religious celebrations, including Christmas, Easter, Ramadan, Eid al-Fitr, Eid al-Adha, weddings, and even national holidays such as the Fourth of July. Despite this growing demand, domestic producers often struggle to meet consumer needs due to structural challenges within the industry (Riley, 2018). Unlike the poultry industry, which is vertically integrated, the goat meat industry remains fragmented and lacks a well-developed supply chain. This disconnect between producers and consumers creates inefficiencies in point-of-sale transactions and limits market accessibility.

As global population growth accelerates, ensuring adequate protein supply for future generations has become a critical concern. Goat meat, widely consumed worldwide (Mazhangara et al., 2019), represents a viable alternative protein source. Although its popularity in the United States remains limited, demand is increasing. Educating consumers about the nutritional benefits of goat meat—such as its lower saturated fat content compared to beef (Rhee, 2003)—could position it as a healthier red meat option for health-conscious individuals. Goat meat offers a unique combination of nutritional advantages, cultural relevance, and sustainable production practices, making it an attractive alternative in the evolving protein market.

Although consumer perceptions often associate goat meat with inferior quality, toughness, or strong flavor, goat meat is leaner than other red meats and contains lower levels of saturated fat and cholesterol, making it a healthier choice (Mazhangara et al., 2019). With the growing segment of health-conscious consumers, goat meat can occupy a niche market by offering a protein source that aligns with nutritional goals better than traditional red meat options.

Unlike beef, pork, and poultry, the goat meat industry lacks a structured supply chain. Approximately 152,000 goat operations exist in the United States, with an average herd size of 20 animals (Riley, 2018). While the industry is expanding, inadequate infrastructure limits domestic producers' ability to meet demand. Many consumers prefer fresh goat meat over frozen imports, creating logistical challenges and requiring customers to travel long distances to access quality products.

Light (2020) examined consumer preferences for four specialty goat meat products: patties, burgers, sausage, and jerky. Her findings revealed that demographic factors, such as gender, age, and primary shopper status along with product attributes like quality, price, freshness, and

cholesterol content, significantly influenced willingness to purchase. Male consumers and younger age groups demonstrated higher purchase intent across all products. Regional differences were also observed, with greater willingness to buy goat burgers in the western and southern United States. Interestingly, while males were more likely to purchase goat meat products, the primary household shopper, more often female, was a consistent predictor across all models. These insights underscore the importance of demographic and behavioral factors in shaping consumer demand.

Building on Light's (2020) research, the current study extends the analysis to include goat meat sticks and uses a more recent nationally representative dataset. The objectives of this study are:

1. To identify and estimate key factors influencing consumers' willingness to purchase various goat meat products.
2. To develop a demographic and behavioral profile of individuals most likely to purchase four goat meat products: burgers, patties, sausage, and jerky.

Methods

The study uses consumer utility maximization theory to analyze willingness to purchase specialty goat meat products if made available in retail stores. This framework can be viewed as one where a utility depends not only on the product attributes, but also on the personal characteristics of the consumer. The logit model, which predicts the likelihood that the independent variable would occur solely on the consumer's socioeconomic characteristics and other product value attributes, is used in this study. Logit models have been widely used to model consumer behavior in applied economics.

The relationship between consumer willingness to purchase specialty goat meat products and products' attributes and consumer characteristics is explored by modeling the indicator variable Z_i , for the i^{th} consumer as a function of their economic, demographic, and value attributes associated with the meat product as follows:

$$Z_i = \beta X_i = \beta_0 + \beta_1 x_{i1} + \beta_2 x_{i2} + K + \beta_k x_{ik} + v_i, \quad i = 1, 2, K, n \quad (1)$$

where X_{ij} denotes the j^{th} attribute of the i^{th} respondent, $\beta = (\beta_0, \beta_1, \dots, \beta_k)$ is the parameter vector to be estimated and v_i is the random error or disturbance term associated with the i^{th} consumer. Under the logistical distributional assumption for the random term, the probability P_i (that the i^{th} consumer will be willing to buy goat meat products) can now be expressed as.

$$P_i = F(Z_i) = F\left(\beta_0 + \sum_{j=1}^k \beta_j x_{ij}\right) = F(\beta X_i) = \frac{1}{1 + \exp(-\beta X_i)} \quad (2)$$

The estimated β -coefficients of the above equation do not directly represent the marginal effects of the independent variables on the probability P_i that the consumer will be willing to purchase goat meat products. For binary explanatory variables, the marginal effect is determined as (source):

$$\partial P_i / \partial x_{ij} = P(x_{ij} = 1) - P(x_{ij} = 0) \quad (3)$$

The conceptual framework and empirical model is implemented using the data from a national survey on consumer preferences for goat meat in food diet. The analysis utilizes data from a 2024 national consumer survey on goat meat conducted between February 27 and March 4. An online consumer survey was sent to residents in all 50 states in the United States. Quotas were set to ensure balances in gender, ethnicity, and certain regions perceived to consume more goat meat. The survey target sampling frame was the civilian population over 18 years of age who had consumed goat meat at some point in their lifetime or were willing to try it. The target sample size was 2002 (+/- 3% sampling error). The survey took 15 minutes to complete.

Questions on the survey asked about the importance of goat meat product attributes, including freshness, leanness, taste, quality, cholesterol level, and price on consumer preferences. Additionally, questions regarding whether participants considered grass-fed, genetically modified, or locally grown attributes in their willingness to buy a product. Also included were questions about demographics, such as age of participant, education, gender, annual gross household income, and household size, as potential predictors of goat-meat product preferences.

Findings

Tables 1 and 2 present descriptive statistics of variables and the marginal effects of the independent variables on the dependent variable (i.e., willingness to purchase the specialty goat-meat products). The results show that age, gender, education, income, and regional residence significantly influenced willingness to purchase goat sausage and other products. The meat attributes of taste, tenderness, leanness, and lower cholesterol content had a strong positive impact on purchase intent. Additionally, cultural and seasonal occasions (e.g., Eid al-Fitr, Christmas, Independence Day) were associated with increased willingness to buy specialty goat meat products.

Across all five product categories (sausage, jerky, patties, sticks, burgers), respondents ages 18–54 were 8%–21% more likely to purchase compared to those over 54. Meat attributes of tenderness, skinless cuts, and lower cholesterol ranged between a 2% and 12% increase in likelihood of purchases. Low-to-medium income respondents were 5%–8% more likely to buy compared to high-income respondents. Watching cooking shows increased purchase likelihood by 4%–8% compared to those who rarely watched culinary events. Respondents with less education than a college degree were 2%–6% less likely to buy compared to the more educated. The ethnicity variables showed that Caucasians compared to other races were 5% more likely to purchase goat meat jerky but were 7% less likely to buy goat meat patty.

Table 1. Descriptive Statistics of Explanatory Variables Used in the Analysis

Variable	Description of the Variable	Mean	Std.Dev.
WLBL_SAU	1 = willing to buy sausage; 0 = otherwise	0.44	0.50
WLBL_JER	1 = willing to buy jerky; 0 = otherwise	0.41	0.49
WLBL_PAT	1 = willing to buy patties; 0 = otherwise	0.41	0.49
WLBL_BUR	1 = willing to buy burgers; 0 = otherwise	0.48	0.50
WLBL_STI	1 = willing to buy sticks; 0 = otherwise	0.24	0.43
FEMALE	1 = respondent is female; 0 = otherwise	0.49	0.50
YOUNG	1 = age less than 35 years; 0 = otherwise	0.32	0.47
MIDAGE	1 = age is between 35 and 54 years; 0 = otherwise	0.35	0.48
MATURE *	1 = age 55 years or higher; 0 = otherwise	0.33	0.47
NORTHEAS	1 = resident of Northeast region; 0 = otherwise	0.18	0.38
MIDWEST	1 = resident of Midwest region; 0 = otherwise	0.21	0.41
SOUTH	1 = resident of Southern region; 0 = otherwise	0.37	0.48
WEST *	1 = resident of Western region; 0 = otherwise	0.24	0.43
DAILY_WEEKLY SHOW	1 = watches cooking shows daily or once a week; 0 = otherwise	0.58	0.49
READLAB	1=consumer reads label ;0=otherwise	0.67	0.47
ATTR_QUALTY	1 = consume goat meat for Christmas; 0 = otherwise	0.86	0.35
ATTR_PRICE	1 = identifies quality as important; 0 = otherwise	0.66	0.47
ATTR_FRESHNES	1 = identifies price as important; 0 = otherwise	0.65	0.48
ATTR_LEANNESS	1 = identifies freshness as important; 0 = otherwise	0.47	0.50
ATTR_CHOLESTO	1 = identifies leanness as important; 0 = otherwise	0.37	0.48
HSE_SIZE	1 <= 2 residents in household; 0 = otherwise	0.55	0.50
LTHSCH	1 = Less than high school education; 0 = otherwise	0.26	0.44
SOMECOL	1 = Some college education; 0 = otherwise	0.34	0.47
DEGMASTER*	1 = College graduate; 0 = otherwise	0.40	0.49
INCOMLT4	1 = (annual) income < than \$40,000; 0 = otherwise	0.34	0.47
MID4180	1 = (annual) income between \$40,000 and \$80,000; 0 = otherwise	0.32	0.47

Table 1 (cont.)

Variable	Description of the Variable	Mean	Std.Dev.
HIGHINC *	1 = (annual) income >\$80,000 0 = otherwise	0.33	0.47
MARRIED	1 = respondent is married; 0 = otherwise	0.40	0.49
WHITE	1 = respondent is white; 0 = otherwise	0.73	0.45

Note: Asterisk implies that the variable was dropped during estimation to avoid dummy variable trap.

Table2: Marginal Effects of Independent Variables on Willingness to Buy: Goat Meat Products

	Sticks	Burger	Patty	Jerky	Sausage
Constant	-0.50	-0.38	-0.43	-0.47	-0.39
FEMALE	0.04*	0.07*	0.07*	0.08*	0.10*
YOUNG	0.07*	0.21*	0.14*	0.15*	0.10*
MIDAGE	0.09*	0.13*	0.09*	0.14*	0.12*
NORTHEAS	-0.02	-0.01	0.00	-0.10*	0.01
MIDWEST	0.07*	-0.05	0.00	0.02	0.00
SOUTH	0.01	-0.02	-0.01	-0.06*	-0.04
READLAB	0.05*	0.07*	0.05*	0.06*	0.06*
DAILY_WE	0.08*	0.09*	0.12*	0.07*	0.09*
QUALTY	0.05*	0.12*	0.12*	0.06*	0.13*
PRICE	-0.01	0.00	-0.01	0.00	-0.01
FRESHNES	0.01	0.04	0.03	0.03	0.02
LEANNESS	0.05*	0.07	0.09*	0.05*	0.04
CHOLESTO	0.02	0.03	0.01	0.00	0.00
HSE_SIZE	0.00	-0.02	0.00	0.00	0.02
LTHSCH	0.01	-0.06*	-0.03	0.09*	-0.02
SOMECOL	-0.02	-0.07*	-0.06*	0.06*	-0.01
INCOMLT4	0.05*	0.05*	0.06*	0.04	0.01
MID4180	0.06*	0.05*	0.03	0.03	0.03
MARRIED	0.01	-0.01	0.03	-0.01	-0.01
WHITE	0.02	-0.02	-0.07*	0.05*	-0.03
Loglikelihood	-1,065.73	-1,305.68	-1,278.81	-1,293.73	-1,320.40
DF	20.00	20	20	20.00	20
Restricted LL	-1,111.29	-1,385.14	-1,351.12	-1,351.87	-1,374.17
McFadden's R2	0.04	0.06	0.05	0.04	0.04
Chi-square	91.13	158.91	144.62	116.29	107.54
Prediction success	75.75	61.35	62.95	60.85	60.60

Note: *Significant at less than 5%

Conclusions and Implications

To successfully enter the mainstream U.S. meat market, it is critical to identify consumer segments most willing to purchase goat meat products (e.g., sausage, jerky, patties, burgers, sticks). Findings suggest that younger to middle-aged males (< 55 years) with less than a college education or who have a college education, have an annual income below \$80,000, and who watch culinary shows regularly, read food labels, and value meat quality attributes (taste, tenderness, leanness, and lower cholesterol) represent the most promising target market.

Strategies to expand goat meat consumption in the United States should focus on age, gender, income, and education; emphasize marketing based on highlighting meat attributes; and leverage media influence. Additionally, aligning marketing to cultural and holiday seasons will contribute to goat meat market penetration.

References

- Light, A.M. 2020. "Prospects for Enhancing the Market for Goat Meat Products: Analysis of the 2019 Goat Meat Survey." Graduate thesis, Missouri State University. Available online: <https://bearworks.missouristate.edu/theses/3585>.
- Mazhangara, I.R., E. Chivandi, J.F. Mupangwa, and V. Muchenje. 2019. "The Potential of Goat Meat in the Red Meat Industry." *Sustainability* 11(13):367.
- Rhee, K.S., C.E. Myers, and D.F. Waldron. 2003. "Consumer Sensory Evaluation of Plain and Seasoned Goat Meat and Beef Products." *Meat Science* 65(2):785–789.
- Riley, S. 2018. "Missouri Meat Goat Producers: A Focus Group Approach to Identify Opportunities and Challenges." Graduate thesis, Missouri State University. Available online: <https://bearworks.missouristate.edu/cgi/viewcontent.cgi?article=4359&context=theses>.
- Silva, N.D., W. Whittaker, and B. Chidmi. 2024. "Goat Meat Consumption in Oklahoma: A Quantitative Assessment of Potential Consumer Demand." *Journal of Food Distribution Research* 55(1):1–14.