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## **Factors affecting goat meat demand and willingness to pay a premium price for domestically produced goat meat in the southern United States**

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**Research Report:**  
**Factors Affecting Goat Meat Demand and Willingness to Pay  
a Premium Price for Domestically Produced Goat Meat  
in the Southern United States**

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## **Abstract**

A consumer survey in Arkansas, Georgia, and Missouri was conducted to determine the drivers of goat meat demand and explore consumers' willingness to buy goat meat on various festive occasions. Two logistic models were introduced to examine factors affecting current goat meat demand and willingness to pay more for the domestically produced goat meat. Results indicate that goat meat consumption in the South is driven by factors associated with younger age, being nonwhite, and having attained a bachelor's degree. The study also revealed that willingness to buy goat meat on various festive occasions is highly influenced respondents' willingness to pay more for domestically produced goat meat.

**Keywords:** festive occasions, goat meat consumption, logistic model, marketing strategies

## **Introduction**

Growing demand for goat meat and meat goats in the United States is reflected by the increase in meat goat inventory from 591,543 head in 1990 to 2,075,000 head in 2018 (U.S. Department of Agriculture, 2019b). Similarly, goat meat imports grew fourfold from 2000 to 2017, reaching 33 million pounds in 2018 (U.S. Department of Agriculture, 2019c). Currently, the United States is one of the world's major goat meat importing countries; most of its imported goat meat comes from Australia (U.S. Trade Numbers, 2019). This growing demand is the result of changes in U.S. population demographics. In recent years, most immigrants have come from countries where goat meat is a favorite, including Mexico, China, India, Philippines, and El Salvador (Pew Research Center, 2019).

Ibrahim et al. (2017) examined characteristics of goat meat consumers in Georgia and found that education, gender, and household size significantly affected respondents' willingness to consume goat meat. As most meat goats are farmed in the southern states (U.S. Department of Agriculture, 2019b), several questions can be raised: (i) Who are the goat meat consumers in the southern states? (ii) Can domestically produced goat meat compete with imported meat? (iii) What are the best ways to sell meat goats? The objectives of this study were to (i) determine the factors that influence goat meat demand in southern United States and (ii) determine the specific times/occasions that may influence people to pay a premium price for domestically produced goat meat.

## **Methods**

A consumer survey was conducted in Arkansas, Georgia, and Missouri in 2018. The survey instrument consisted of questions related to consumer characteristics, general meat-buying practices, and satisfaction with various meat qualities. A total of 1,201 respondents participated. Table 1 presents variable definitions and associated respondent percentages. To assess current consumers, respondents were asked, "Have you or any of your family members ever tasted or eaten goat meat?" The survey found that 57% had tasted goat meat. Further, respondents were asked, "Suppose your area grocery store is giving out goat meat samples. Would you be willing to try it?" This question helps to determine potential consumers in these southern states.

**Table 1.** Variable Definitions and Percentages of Respondents

Variable	Description	Percentage (%)
Dependent	Have you or any of your family members ever tasted or eaten goat meat? (yes = 685)	57
Dependent	Are you willing to pay more for domestically produced goat meat than imported goat meat? 1= if respondent said Yes; 0 otherwise (yes = 667, no = 534)	56
AGE	Age of participant	
Gender	If respondent is male	50
EDU	Bachelor's degree or higher	52
Race	If respondent is white	83
Ethnicity	If respondent is Hispanic	3
U.S. born	Were you born in the United States?	95

Food, especially meat, is a focal point of many celebrations. Goat meat is particularly important to migrants' celebrations and holidays. Hence, respondents' were asked for their willingness to purchase more goat meat on special holidays or occasions: "Please identify the top three occasions that you might purchase more goat meat." Eight occasions and other were listed: Christmas, Easter, Ramadan, Eid-al-fitr, Eid-al-adha, wedding, July 4th, and other. More than 50% of respondents indicated that they would be more willing to purchase goat meat for Christmas, Easter, and July 4th (Table 2). We found that 667 respondents (56%) indicated that they would be willing to pay more for domestically produced goat meat than for imported goat meat.

**Table 2:** Respondents Are More Willing to Purchase Goat Meat for Various Occasions

Occasion	No	Yes	Occasion	No	Yes
Christmas	39%	60%	Ramadan	85%	15%
Easter	37%	62%	Eid-al-fitr (feast after fasting month)	83%	16%
Wedding	61%	38%	Eid-al-adha (month of sacrifice)	85%	15%
July 4th	47%	53%	Other	60%	39%

## Results

We introduce two binomial logistic models. The first model attempts to determine consumers' willingness to buy goat meat. Six demographic independent variables were considered: gender, age, education, race, ethnicity, and U.S. born. Table 3 reports the analysis of maximum likelihood estimates for model 1. The probabilities for likelihood ratio, score, and Wald tests were less than 0.0001 for the global null hypothesis test, which means the models were of good fit. The parameters that were less than 10% were considered significant. Similar to Ibrahim et al. (2017), the education variable had a positive impact on goat meat consumption. Consumers with higher education levels may be aware of the heart-healthy nutritional benefits of goat meat relative to beef, pork, and chicken. The age variable was negative and significant at the 5% level, indicating older people were less willing to try goat meat. We also found that white people were less likely to purchase goat meat in the southern states.

**Table 3.** Maximum Likelihood Estimates for Willingness to Consume Goat Meat

Parameter	Estimate	Std. Err.	Pr > $\chi^2$
Intercept	1.3272***	0.3616	0.0002
Gender (male)	0.1887	0.1199	0.1155
Age	-0.0076**	0.0037	0.0380
Education (bachelors or higher)	0.3472***	0.1201	0.0039
Race (white)	-0.7821**	0.1801	0.0001
Ethnicity	0.4872	0.3817	0.2018
U.S. born	-0.3118	0.2926	0.2865

Note: Single, double, and triple asterisks (\*, \*\*, \*\*\*) indicate significance at the 10%, 5%, and 1% levels.

The second model was introduced to determine factors influencing willingness to pay more for domestically produced goat meat than for imported goat meat. Seven festive occasions were considered as the independent variables. Table 4 reports the analysis of maximum likelihood estimates for model 2. The model confirms that all seven occasions influence willingness to pay more for domestically produced goat meat.

**Table 4.** Maximum Likelihood Estimates for Willingness to Pay More for Domestically Produced Goat Meat than for Imported Goat Meat

Parameter	Estimate	Std. Err.	Pr > $\chi^2$
Intercept	-2.0112***	0.3255	< 0.0001
Christmas	0.9097***	0.1643	< 0.0001
Easter	0.8399***	0.1627	< 0.0001
Ramadan	0.5759***	0.2080	0.0056
Eid-al-fitr	0.9184***	0.2256	< 0.0001
Eid-al-adha	0.4927**	0.2272	0.0301
Wedding	0.9322***	0.1670	< 0.0001
July 4th	0.9441***	0.1698	< 0.0001

Note: Single, double, and triple asterisks (\*, \*\*, \*\*\*) indicate significance at the 10%, 5%, and 1% levels.

## Conclusion

This study found that goat meat consumption in the South is driven by factors associated with younger age, being nonwhite, and having attained, at least, a bachelor's degree. Hence, suggested marketing strategies for producers are to target younger, nonwhite, and more educated populations. Producers may also consider value-added goat meat products that may appeal to younger people. Since goat meat is new to many Americans, providing goat meat recipes may also attract people to buy goat meat. Additionally, promoting the health benefits of goat meat compared to other meats may encourage educated and younger people consume more goat meat. This study also found that consumers are willing to pay a premium for domestically produced goat meat relative to imported goat meat during festive occasions. Domestically produced goat meat can be promoted and producers can target holidays and festivals.

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