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Consumer Preferences for Goat Meat: Findings from a Hypothetical Choice Experiment

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Abstract

While goat meat demand in the United States is increasing, the response in domestic supply is lagging. This consumer study estimates preferences for five product and process attributes: product origin, organic, ethical, grass-fed, and storage condition. From 498 responses, our empirical analysis of choice experiment data revealed significant preferences for organic, grass-fed, and fresh goat meat. Respondents felt favorably toward local and domestic goat meat in comparison to imported goat meat, but indifferent between local and domestic. However, the definition of local mattered. Our findings urge goat meat producers to emphasize process attributes as opposed to locality.

Keywords: choice experiment, consumer behavior, goat, willingness-to-pay

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Introduction

Goat meat demand in the United States is reportedly on the rise, likely in part because goat meat is nutritionally superior to other red meat products, such as beef and pork (Mazhangara et al., 2019; De Silva, Whittaker, and Chidmi, 2024; Hambaryan et al., 2024). However, the domestic supply of goat meat is not increasing (see Figure 1). After peaking in 2008 at 11,133,617 kg, the amount of U.S. goat meat decreased to roughly 8,000,000 kg in 2016, before increasing up to approximately 9,372,000 kg in 2019. Then, the amount decreased for three years and increased again for two years. It appears as if the increase in consumer demand for goat meat is being addressed via imports, which, except for 2008, have exceeded domestic production, comprising over half of the supply.

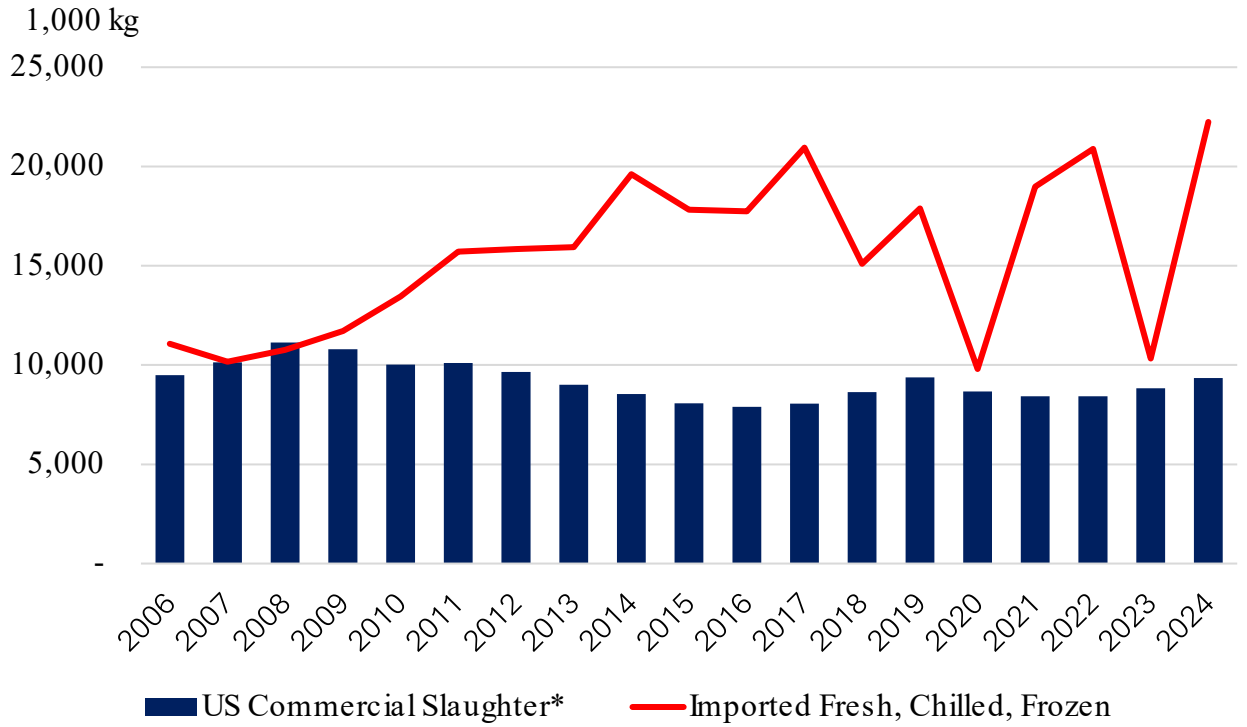

Figure 1. U.S. Goat Meat Supply and Import for the 2010–2024 Period

The increase in consumer demand and the apparent lack of response in producer supply in the United States suggest market opportunities for domestic goat meat producers. However, the number of obstacles to goat meat industry growth is substantial, with deficiencies in processor capacity, marketing system development, and high production cost as the most prominent (Gillespie, Nyaupane, and McMillin, 2013; Hart, Merkel, and Gipson, 2019). Beyond weather variability, goat industry professionals are not sure why goat producers are not increasing herd sizes in response to strong economic conditions (McMillin and Pinkerton, 2022). From a market perspective, among the obstacles is the mixed and scattered evidence of consumer preferences for goat meat attributes. As demonstrated by studies with beef (Grashuis and Su, 2023) and pork

consumers (Lusk et al., 2018), knowledge of demand-side preferences is necessary for the supply-side to inform market decisions in terms of production and communication.

To the best of our knowledge, there are only five studies of goat meat consumer preferences in the United States. Ekanem et al. (2013) conducted a hyper-local study of goat meat consumers in Nashville, Tennessee, and measured preferences for storage conditions, cuts, and purchase locations. With emphasis on Arkansas, Georgia, and Missouri, Ibrahim et al. (2020) found that willingness to pay (WTP) for goat meat is in part influenced by age, ethnicity, and education. Similarly, the WTP of goat meat consumers in Florida is correlated with food adventurousness, age, prior goat meat consumption, and ethnicity (Basen et al., 2025). With a representative sample of U.S. meat consumers, Khanal, Dhoubhadel, and Naya Jr. (2025) conducted a choice experiment with price and origin (i.e., domestic, international) as the two attributes of interest and related WTP estimates to information frames and demographic characteristics. The choice experiment design of Hambaryan, Lai, and Kassas (2024) featured more attributes—price, quality, origin, organic, USDA certification—but the sample came from a single state. While each study contributed to our collective knowledge of the U.S. goat meat industry from both producer and consumer perspectives, there are two common limitations: (i) except for Khanal, Dhoubhadel, and Naya Jr. (2025), each of the studies took place in relatively small regions, which limited the ability to generalize observations across the United States, and (ii) the choice experiments by Hambaryan, Lai, and Kassas (2024) and Khanal, Dhoubhadel, and Naya Jr. (2025) omitted ethical production, such as halal and kosher and feed source, as product or process attributes of relevance to goat consumers. Each study adopted a state-level (Hambaryan, Lai, and Kassas, 2024) or country-level perspective (Khanal, Dhoubhadel, and Naya Jr., 2025) of product origin, thus ignoring the possible importance of local production.

Considering the findings above, our objective is to better inform goat meat attribute preferences across the United States. Specifically, our research question is as follows: What are U.S. goat meat consumer preferences for product origin, organic production, ethical production, storage condition, and price? We address the research question with a hypothetical choice experiment with 498 U.S. goat consumers, placing specific emphasis on the product origin attribute, which is found to be of particular relevance to meat products (Balcombe et al., 2016; Dudinskaya et al., 2021). Using a framed approach, we estimate whether preferences for locally produced goat meat are different when labeled as, "from within 100 miles," or ,"from consumers' state," relative to "from the United States," and, "from Australia or New Zealand," while controlling for other common product and process attributes (i.e., organic production, grass-fed production, ethical production, and storage condition). While motivations behind the consumption of local food and drink products are plentiful (Feldmann and Hamm, 2015), such as perceptions of environmental friendliness, freshness, safety, and ethnocentrism, a common definition of local food is still elusive (Cappelli et al., 2022). Empirical distinctions of local food definitions may help address the inefficiencies in local food strategies, policies, and research directions (Brune et al., 2023). Per the analysis of the choice experiment data, local goat meat is unable to capture a price premium relative to domestic goat meat, whether it is labeled as "from within 100 miles" or "from consumers' state." However, U.S. goat meat consumers prefer both local and domestic goat meat to goat meat imported from

Australia or New Zealand. Price premiums for other product and process attributes (i.e., organic and grass-fed production and fresh storage) are similar to those of other meat products.

The article proceeds as follows. In the next section, we present our methodology, including the choice experiment design and procedure, the sample recruitment, and the data analysis method. Then, we present and discuss the results. Finally, we conclude with discussions of implications, limitations, and future research directions.

Methodology

Sample

In July 2025, we contracted with Dynata to recruit a sample of U.S. individuals to participate in an online survey and experiment hosted on Qualtrics. Individuals were required to meet four criteria in order to qualify for participation in our study: (i) be 18 years of age or older, (ii) be the primary or co-primary grocery shopper in their household, (iii) reside in the United States, and (iv) have purchased and consumed goat meat within the past year. Initially, we collected observations from 524 individuals. However, we eliminated observations from 26 individuals who failed one or more of five attention check questions (Paas and Morren, 2018). The decrease in sample size presented a tradeoff in terms of statistical power and data quality. In Table 1 we report the summary statistics of the demographic characteristics of our sample. The average respondent is young (40 years), male (74%), and highly educated (88% have more than a high school degree). However, our sample is not representative of the U.S. population in terms of age, gender, or education, which is not surprising as goat consumers in the United States generally have a different demographic profile (Knight et al., 2006; Khanal et al., 2025). The location of the sample is much more balanced as a third of the sample is from the West U.S. Census Region, 30% from the South, 22% from the Northeast, and 15% from the Midwest.

Table 1. Summary Statistics of Sample Demographic Characteristics

Demographic Characteristic	**Mean**	**Median**	**S.D.**
Age (years)	39.56	40.00	11.57
Male	0.74	1.00	0.44
Education level			
Less than high school	0.00	0.00	0.06
High school	0.07	0.00	0.26
Some college	0.05	0.00	0.22
2-year college degree	0.04	0.00	0.19
4-year college degree	0.42	0.00	0.49
Master's degree	0.34	0.00	0.47
Doctoral degree	0.04	0.00	0.21
Professional degree	0.03	0.00	0.17
Employment			
Full-time	0.72	1.00	0.45

Table 1 (cont.)

Demographic Characteristic	Mean	Median	S.D.
Part-time	0.08	0.00	0.27
Other	0.20	0.40	0.00
Income ($1000)	96.82	95.00	37.65
Household size	3.76	4.00	1.09
Ethnicity			
White	0.69	1.00	0.46
Asian	0.11	0.00	0.31
Black	0.12	0.00	0.33
Latino	0.03	0.00	0.18
Other	0.04	0.20	0.00
Location			
West	0.33		0.47
South	0.30		0.46
Midwest	0.15		0.37
Northeast	0.22		0.41

Tables 2–3 report summary statistics in terms of purchase frequency, purchase location, cut preference, and attribute importance. Most of the respondents purchase goat meat weekly (42%) or monthly (43%), which indicates our sample is composed of experienced goat meat consumers. The meat store is the most popular outlet to purchase goat meat (74%), followed by the grocery store (64%) and the butcher (46%). The leg (75%), the shank (61%), and the shoulder (59%) are the most popular cuts. Taste (4.53/5) and quality (4.51/5) rank as the two most important attributes to our respondents. Of the 25 product and process attributes, only kosher (3.70) and halal (3.38) have a score below 4.

Table 2. Summary Statistics for Purchase Frequency, Purchase Location, and Cut Preference

How frequently do you purchase goat meat?	
At least once a week	0.42
Once a month	0.43
Less than once a month	0.15
Where do your purchase goat meat?	
Meat store	0.74
Grocery store	0.64
Butcher	0.46
Farmers' market	0.34
Direct from a farmer	0.21
Restaurant	0.17

Table 2 (cont.)

What type of goat meat cuts do you purchase?	
Leg	0.75
Shank	0.61
Shoulder	0.59
Loin	0.35
Ground	0.29
Rib	0.16

Table 3. Importance of Goat Meat Product and Process Attributes

Attribute	Average
Taste	4.53
Quality	4.51
Store cleanliness	4.40
Free from pathogens and diseases	4.38
Safety	4.38
Quantity (weight)	4.32
Availability	4.30
Price	4.29
Free from antibiotics and hormones	4.27
Organic/ecological production	4.26
Condition (fresh/frozen)	4.24
Seller reputation	4.21
Fat content	4.19
Protein content	4.19
Grass-fed	4.18
Convenience	4.17
Cholesterol content	4.13
Origin	4.09
Animal welfare	4.06
Bone-in or boneless	4.06
Carbon footprint	4.06
Package	4.06
Biodegradable packaging	4.05
Kosher	3.70
Halal	3.38

Choice Experiment Design

The first step in designing the choice experiment is to select the attributes and the levels (Lizin et al., 2022). As evidenced by the empirical literature on consumer preferences for goat meat

(Hambaryan, Lai, and Kassas, 2024; Basen et al., 2025; Khanal, Dhoubhadel, and Naya Jr., 2025), there is no shortage of product and process attributes of potential relevance. With design complexity and respondent burden in mind, we are guided foremost by supply and demand considerations. As such, we consider both consumer preferences and producer capabilities, where the inclusion or exclusion of each attribute is informed by the question of whether it can be legally and credibly communicated to consumers. Thus, in close consultation with local extension professionals, we include the following list of attributes and levels:

Product origin. There are three levels: (i) Local, (ii) United States, and (iii) Australia or New Zealand. Generally, food consumers have positive preferences for food produced within a local environment (Feldmann and Hamm, 2015). The inclusion of the "Australia or New Zealand" level is in part based on a study by Phelps et al. (2018). Following Dudinskaya et al. (2021), we expect respondents to have a positive WTP for the "United States" level relative to the "Australia or New Zealand" level.

Organic production. There are two levels: (i) Not organic (i.e., conventional) and (ii) Organic. Lu, Gangyi, and Kawas (2010) discussed various opportunities (and challenges) within the organic goat meat industry. Generally, consumption of organic meat is driven by health and environmental considerations (Cordona et al., 2023). Producers must be certified by the U.S. Department of Agriculture to use the "Organic" label. Following Dudinskaya et al.'s (2021) findings, the expected effect of the "Organic" level is positive. The "Organic" level is often associated with the highest price premium among credence attributes (Li and Kallas, 2021).

Ethical production. There are three levels: (i) Conventional, (ii) Halal, and (iii) Kosher. To be clear, there is no label associated with the conventional production method. Instead, there is an absence of the "Halal" level and the "Kosher" level. Regenstein, Chaudry, and Regenstein (2003) noted "excellent opportunities" in the halal market and the kosher market for food producers. Using a sample of Muslim consumers in the United States, Ibrahim (2011) reported a WTP of $0.50/lb. However, according to Dudinskaya et al. (2021), the "Halal" level is expected to be associated with a negative WTP. No WTP for Kosher has been found.

Feed source. There are two levels: (i) Grain-fed or (ii) Grass-fed. The demand for food animals fed with grass as opposed to grain is driven by health and climate change concerns (Klopatek et al., 2022). From experimental evidence, a positive WTP for the "Grass-fed" level is expected (Britwum and Yiannaka, 2019; Lim, Hu, and Nayga, 2021).

Storage condition. There are two levels: (i) Fresh and (ii) Frozen. Freezing meat is sometimes necessary because of product perishability. Generally, frozen meat is discounted by food consumers, even if food safety is the reason (Lambooij et al., 2019).

Price. There are three levels: (i) $5.99/lb, (ii) $7.99/lb, and (iii) $9.99/lb. The range is informed by the weighted averages of goat meat products at the time of the study.[1] Per economic theory, the expected effect of the price attribute is negative.

The full factorial design is composed of 216 (3*2*3*2*2*3) unique product profiles with random attributes. Following Kuhfeld (2010), we generated a fractional factorial design with a D-efficiency score of 100 with 36 product profiles. Subsequently, we created 18 choice scenarios with two product profiles in addition to an opt-out option. We also established two blocks of nine choice scenarios in order to balance statistical power and respondent burden. We randomly assigned respondents to one of the two blocks.

Furthermore, we implemented a framed design to better inform the "Local" level of the product origin attribute. The term "local" is defined by ambiguity and misconception, both in practice and in theory (Dunne et al., 2011; Feldmann and Hamm, 2015; Granvik et al., 2017). We use two frames. In the first frame, the "Local" level is defined as "from within 100 miles." The reason 100 miles is chosen is based on Tran and Su (2023). In this study, we asked consumers to choose the definition of local food based on mileage from 400 miles, 100 miles, and 50 miles. The results found that 100 miles is the most common definition regarding distance by Missouri consumers. In addition, 100 miles is a common conception in the context of the United States (Smith and MacKinnon, 2009; Adalja et al., 2015). In the second frame, the "Local" level is defined as "from [state name]," where the state name is self-reported by the respondents in an earlier question. This is the most popular definition of "Local" in Tran and Su (2023). Here, we take care not to confuse state-level origin with state-sponsored designations (Onken and Bernard, 2010), such as "Kentucky Proud" (Soley, Hu, and Vassalos, 2019) or "Missouri Grown" (Grashuis and Su, 2023). While we expect a price premium for the "Local" level in both frames (Mehrjerdi and Woods, 2024), any difference between "from within 100 miles" and "from [state name]" is considered to be an empirical exercise.

Choice Experiment Procedure

Participants first received an introduction to the purpose of the study. After explaining the attributes and their levels, we demonstrated how to complete an example of a choice scenario (see Table 4). We then presented a cheap talk script with an objective to minimize hypothetical bias (Ladenburg and Olsen, 2014). Subsequently, participants stated preferences for product profiles in nine choice scenarios. Finally, we administered a brief survey to elicit standard demographic characteristics.

Table 4. Example of a Choice Scenario

Attribute	Product 1	Product 2
Origin	Australia or New Zealand	Local
Organic	USDA Certified	No
Production method		Kosher

[1]https://www.ams.usda.gov/market-news/lamb-veal-and-other-meat-reports

Table 4 (cont.)

Attribute	Product 1	Product 2
Feed source	Grain-fed	Grain-fed
Storage condition	Fresh	Fresh
Which product do you prefer to buy? If you do not like either product, then please answer "neither."		
Product 1		
Product 2		
Neither		

Choice Experiment Data Analysis

Empirically, we estimate consumer preferences for goat meat attributes with random utility theory as the foundation. The utility derived from purchasing and consuming a product is determined by a deterministic component from observed attributes and a random component from unobserved attributes (McFadden, 1974). Therefore, the utility individual *i* derives from product profile *j* in choice scenario *c* is defined as

$$U_{ijc} = \beta_i' x_{ijc} + \varepsilon_{ijc} \quad (1)$$

where x_{ict} is the vector of observed or revealed attributes to individual *i* for product profile *j* in choice scenario *c*, ε_{ict} is the random term representing the vector of unobserved or unrevealed attributes, and β_i is the vector of unknown parameters to be estimated. It is possible to separate the deterministic part of the utility function $\beta_i x_{ict}$ into price and non-price attributes, which facilitates a random utility model in WTP-space as opposed to preference-space (Train and Weeks, 2005).

In preference-space, WTP values are estimated by dividing coefficients for non-price attributes by the coefficient for the price attribute, which is assumed to represent fixed or non-random preferences. The price coefficient is therefore often modeled with a normal or log-normal distribution, which may facilitate high WTP values as well as long upper tail WTP distributions (Scarpa, Thiene, and Train, 2008). Thus, following other studies in the recent food consumer behavior literature (Areal and Asioli, 2024; Lin, Ortega, and Sun, 2025), we specify WTP-space as opposed to preference-space models to allow distributional assumptions to be placed directly on WTP. Hence, the utility derived by individual *i* from product profile *j* in choice scenario *c* is

$$U_{ijc} = -\gamma_i' p_{ijc} + (\gamma_i WTP_i)' x_{ijc} + \varepsilon_{ijc} \quad (2)$$

where p_{ict} is the price of product profile *j* in choice scenario *c*, x_{ict} is the vector of observed or revealed attributes to individual *i* for product profile *j* in choice scenario *c,* and WTP_i is the vector of WTP for each non-price attribute in the choice experiment design. The random scalar γ_i is positive and equals θ_i/k_i, where θ_i represents the price coefficient in preference space and k_i corresponds to the scale parameter for individual *i*. Also, $WTP_i = \delta_i/\gamma_i$ where δ_i is the vector of non-price coefficients in preference space. In econometric form, we translate equation (2) into

$$U_{ijt} = \omega_1' ProductOrigin_{ijt} + \omega_2' OrganicProduction_{ijt} + \omega_3' EthicalProduction_{ijt} + \omega_4' FeedSource_{ijt} + \omega_5' StorageCondition_{ijt} - \omega_6' Price_{ijt} + \varepsilon_{ijt} \quad (3)$$

We estimate equation (3) separately for the respondents in the first frame and respondents in the second frame. We also estimate an interaction model to allow a direct comparison of the WTP for the Product Origin attribute, as in

$$U_{ijt} = \omega_1' ProductOrigin_{ijt} + \varphi_1' ProductOrigin * Treatment + \omega_2' OrganicProduction_{ijt} + \omega_3' EthicalProduction_{ijt} + \omega_4' FeedSource_{ijt} + \omega_5' StorageCondition_{ijt} - \omega_6' Price_{ijt} + \varepsilon_{ijt} \quad (4)$$

The magnitude and the statistical significance of φ_1 indicate the effect of the frame on the WTP for the Product Origin attribute and the "Local" level specifically. As such, the probability of individual *i* choosing product profile *l* in choice scenario *t*, conditional on β_i, is

$$Q_{ilt}(\beta_i) = \frac{e^{-\gamma_i(p_{ilt} + WTP_i' x_{ilt})}}{\sum_{j \in J} e^{-\gamma_i(p_{ijt} + WTP_i' x_{ijt})}} \quad (5)$$

where β_i is the vector of $\gamma_i WTP_i$. The associated log-likelihood function is estimated by means of maximum simulated likelihood, and the standard errors are obtained with 100 bootstraps via the mixlogitwtp command in Stata 17 (Hole, 2007). We specified the distributions for the non-price attributes and the price coefficient as normal and lognormal, respectively.

Results

Table 5 reports the results of mixed logit WTP-space models on the basis of equation (3). Because the models are estimated in WTP-space as opposed to preference space, the means of the coefficients should be interpreted as the change in U.S. dollars per pound of goat meat relative to the base category. The statistical significance of the standard deviations of the coefficients shows whether there is preference heterogeneity for the given attribute.

Table 5. Mixed Logit WTP-Space Model Results by Frame

	Frame 1 (Local is within 100 Miles)		**Frame 2 (Local is in State)**	
Attribute	**Mean**	**S.D.**	**Mean**	**S.D.**
Price	-2.296***	-0.578***	-1.862***	0.761***
	(0.173)	(0.149)	(0.180)	(0.218)
Origin (base = local)				
USA	1.072	-3.901***	0.037	2.432**
	(0.677)	(1.247)	(0.650)	(1.117)
AUS or NZ	-3.362***	4.631***	-2.209***	4.999***
	(0.842)	(1.265)	(0.745)	(0.974)

Table 5 (cont.)

	Frame 1 (Local is within 100 miles)		Frame 2 (Local is in State)	
Attribute	**Mean**	**S.D.**	**Mean**	**S.D.**
Organic production (Base = unidentified)				
USDA organic	2.907***	2.788**	3.065***	-2.705*
	(0.689)	(1.297)	(0.752)	(1.433)
Production method (Base = unidentified)				
Halal	1.126	-9.949***	-0.364	-6.942***
	(1.102)	(2.195)	(1.016)	(1.883)
Kosher	0.876	-1.147	-2.289**	-2.987***
	(0.660)	(2.001)	(0.891)	(1.055)
Feed source (Base = grain)				
Grass	2.347***	-0.977	2.127***	-3.014***
	(0.744)	(1.573)	(0.738)	(0.998)
Storage condition (Base = fresh)				
Frozen	-2.206**	-2.576	-4.090***	-1.531
	(0.868)	(1.778)	(0.985)	(1.438)
Opt out	-64.469***	-28.137***	-64.959***	-28.233***
	(11.129)	(6.028)	(13.323)	(6.755)
N	322		176	
n	8,694		4,752	
Chi2	338.66		129.09	
Log likelihood	-2192.97		-1136.75	
p	0.000		0.000	

Note: ***, **, and * denote statistical significance at 99%, 95%, and 90% confidence levels, respectively. Parentheses contain standard errors.

With respect to the product origin attribute, we do not find a significant difference in the WTP between the "Local" level and the "United States" level in either of the two frames. As such, labeling goat meat as "from within 100 miles" or "from [state]" is the same as "from the United States" in terms of the price point, although the standard deviations indicate significant heterogeneity in the preferences of our respondents. Our base result is in contrast to most of the literature on local food. According to a meta-analysis by Printezis, Grebitus, and Hirsch (2019), the mean price premium for food labeled as "local" is between $1.70/lb and $2.08/lb. However, when adjusting for publication bias, the premium is decreased to $0.29/lb–$0.40/lb. As demonstrated by Davidson, Khanal, and Messer (2024), it is possible for the local label to have a null effect. In any case, there is much variability across products and countries; none of the 35 studies in Printezis, Grebitus, and Hirsch's (2019) meta-analysis had goat meat as the product of

interest. Enthoven and Van den Broeck (2021) also claimed that the overall effect of local food production is dependent on the product and the country. Relativity is also important; many of the price premiums for "local" food have been estimated in relation to "non-local" food with no indication of product origin (Malek et al., 2019). In our case, the "Local" level competed with "from the United States" and "from Australia or New Zealand." Imported goat meat is associated with a significant price discount. Relative to the "Local" level, the WTP estimates are -$3.36/lb in Frame 1 when local is defined within 100 miles and -$2.21/lb in Frame 2 when local is defined within state. The result is in line with most other studies in the food consumer behavior literature with respect to country-of-origin labels (Loureiro and Umberger, 2007; Balcombe et al., 2016; Kang et al., 2025).

The results of the interaction model (see Table 6) allow insights regarding relative preferences for the local attribute depending on its definition. When local is defined as "within 100 miles," it is valued at $7.58/lb relative to when it is defined as "from [state]." Generally, our result informs the ongoing discussion about the definition of local food (Enthoven and Van den Broeck, 2021). There continues to be no consensus around the boundaries of local food, whether the measurement is given in distance, ownership, or otherwise (Brune et al., 2023). Our study relates directly to applied investigations by Adams and Adams (2011) and Brune et al. (2023), who measured preferences for two or more definitions of local food. As in our case with goat consumers, a narrower definition of local appears to be of value. We therefore see a demand-driven incentive for producers and other stakeholders to pursue an industry standard or definition of local food. While state-sponsored designations have been prominent (Onken and Bernard, 2010), there is increasingly more empirical evidence to suggest that local food has the capacity to be marketed and communicated differently.

Table 6. Mixed Logit WTP-Space Interaction Model Results

	Mean		**S.D.**	
Attribute	**B**	**S.E.**	**B**	**S.E.**
Price	-2.188***	0.121	0.794***	0.135
Origin (base = local)				
Local * frame 1	7.580***	2.804	-2.952**	1.229
USA	-0.125	0.599	0.038	1.185
USA * frame 1	8.715***	2.828	-2.901	1.556
AUS or NZ	-1.735**	0.691	4.066***	0.728
AUS or NZ * frame 1	6.782**	2.735	-1.548**	0.646
(Base = unidentified)				
USDA organic	2.408***	0.484	1.968***	0.704
Production method				
(Base = unidentified)				
Halal	0.659	0.596	-5.713***	1.340
Kosher	-0.394	0.440	0.603	0.799

Table 6 (cont.)

	Mean		S.D.	
Attribute	**B**	**S.E.**	**B**	**S.E.**
Feed source				
(Base = grain)				
Grass	1.715***	0.485	2.651***	0.519
Storage condition				
(Base = fresh)				
Frozen	-2.926***	0.602	-2.453***	0.795
Opt Out	-79.014***	12.632	40.974***	7.411
N	498			
n	13,446			
Chi2	494.35			
Log likelihood	-3351.61			
p	0.000			

Note: ***, **, and * denote statistical significance at 99%, 95%, and 90% confidence levels, respectively. Parentheses contain standard errors.

As expected, the organic attribute is associated with a significant price premium in both Frame 1 (WTP = \$2.91/lb, p = 0.000) and Frame 2 (WTP = \$3.07/lb, p = 0.000). Furthermore, there is significant heterogeneity in consumer preferences. Our result corroborates prior findings in the empirical literature on organic meat consumer preferences. For example, the average Italian beef consumer is WTP 26.25 €/kg more for the organic version (Zanoli et al., 2012). In Germany, Risius and Hamm (2017) also estimated high price premiums for organic beef. Across several European Union countries, the organic label captured the second-highest price premium (following product origin) in the context of red meat products (Dudinskaya et al., 2021). With respect to chicken and pork, Möstl, Janssen, and Zander (2025) found a positive WTP for the organic label among German consumers. Arguably, the best comparison to our result is provided by Van Loo et al. (2011), who estimated a price premium of \$3.55/lb for chicken breast labeled as USDA Certified Organic. Although the meat product differs—chicken breast compared to goat—the organic label is identical, and the price premium is similar.

Our first indicator of ethical meat production (i.e., halal) is not associated with a significant WTP in either of the two frames. Three studies can shed light on our results. First, Ibrahim (2011) reported a WTP of \$0.50/lb of goat meat using a sample of Muslim consumers in Atlanta, Georgia. Second, Dudinskaya et al. (2021) estimated a price premium for halal red meat products in Turkiye but not in six other European Union countries.

Third, using a predominantly Muslim sample in Belgium, Verbeke et al. (2013) estimated a price premium of €0.90/kg in the context of chicken fillet. These results all suggest the price premium for halal food in general or halal meat in particular is contingent on samples or populations of Muslim consumers. Our sample featured only a small proportion of Muslim consumers, which is the likely explanation for our null result. A literature review by Iranmanesh et al. (2022) revealed a need to conduct more research into non-Muslim attitudes toward halal food, which our result

supports. Kosher, our second indicator of ethical goat meat production, is associated with no price premium in Frame 1 (WTP = $0.88/lb, $p = 0.184$) and a significant price discount in Frame 2 (WTP = -$2.29/lb, $p = 0.010$). It is unclear why there is a difference in consumer preferences across the two frames. Furthermore, to the best of our knowledge, there are no other WTP studies to compare and contrast our WTP estimates for the kosher attribute. Overall, it appears as if halal and kosher attributes may only appeal to goat meat producers when targeting niche markets with ethnic populations.

As expected, the grass-fed attribute is associated with a significant price premium in both Frame 1 (WTP = $2.35/lb, $p = 0.002$) and Frame 2 (WTP = $2.13/lb, $p = 0.004$). In the context of meat products, evidence of price premiums for the grass-fed attribute comes exclusively from the beef sector. For example, according to retail data analysis by Wang, Isengildina-Massa, and Stewart (2023), grass-fed beef price premiums are between 48%–193%. Within an experimental setting, Xue et al. (2010) and Lim, Hu, and Nayga (2021) estimated a mean WTP of $2.00/lb and $0.75/lb for the grass-fed attribute, respectively. However, not all the evidence is positive. For example, Umberger, Boxall, and Lacy (2009) generally found a price discount for grass-fed beef steak in comparison to grain-fed beef steak, although a segment of their sample awarded a $0.42/lb premium. Our result serves as economic motivation to goat meat producers to pursue grass-fed practices and certifications. An example could be A Greener World.

The price discount for the frozen storage condition, which is estimated at -$2.21/lb in Frame 1 and -$4.09/lb in Frame 2, is also in line with prior evidence in the food consumer literature. For example, Korean grocery shoppers prefer fresh and chilled beef, not frozen beef (Chung, Briggeman, and Han, 2012). Chinese pork consumers also award price premiums to fresh and chilled products (Wang, Xia, and Guan, 2018). Lambooij et al. (2019) also estimated a price discount for frozen meat, even if it is frozen for food safety reasons. The price discount for the frozen attribute is further motivation for goat meat producers to serve local markets; non-local markets may require the product to be frozen to slow or stop perishability.

Conclusion

The findings of our study carry several important implications for industry practitioners and policy makers who are concerned with the development of the U.S. goat meat sector. For producers and marketers, the lack of a price premium for local product origin—regardless of a narrow ("from within 100 miles") or broad ("from [state]") description—suggests that locality does not facilitate a viable strategy for the pursuit of product differentiation. Instead, practitioners should consider attributes with demonstrated value in both hypothetical and non-hypothetical market environments. Organic and grass-fed attributes command price premiums from food consumers, including goat meat consumers, and should therefore be prioritized by producers over product origin.

For policy makers and extension professionals, the results suggest a need to reassess strategies for promoting local food systems, at least in the context of goat meat. While supporting local production is and will be important in the context of (rural) community development, consumer preferences and market developments may not necessarily align with such policy objectives.

Public investment in the goat meat industry should be calibrated to match demand-side signals, which indicates that a greater emphasis on production rather than location is warranted. Outreach and education may help close the gap between local food narratives and consumer valuations, particularly if there are observed or perceived relationships to food safety and product quality.

Although our study contributes to the limited literature on goat meat consumer preferences, there are several weaknesses and limitations to be addressed. First, although our sample is composed of goat consumers across the United States, the online survey format may limit the generalizability of our results, especially to populations with limited access to the internet. Second, the framing of the "Local" attribute as "from within 100 miles" or "from [state]" may not capture the full range of possible definitions consumers attach to locality. Other definitions may have facilitated different interpretations and recommendations. Third, consumer preferences for credence attributes such as ethical production (i.e., halal, kosher) were estimated without considering religious affiliation or cultural identity. Therefore, nuanced preferences within subgroups may have been overlooked.

Considering the various implications and limitations of our study, future research should address further segmentation of food consumer populations with respect to various demographic and psychographic characteristics, such as ethnicity or food neophobia, to help identify niche markets. Field studies and experiments with information frames may help determine if local or ethical attributes are viable economic instruments by means of framing or messaging. Finally, integrating data on costs, input constraints, and certification challenges would bridge the gap between demand-side and supply-side feasibility, thus informing more realistic and actionable recommendations for the goat meat industry.

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