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Market Dynamics of U.S. Goat Meat (Chevon) in Reference to the Global Market

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ABSTRACT

Goat meat is becoming a more important component of the world's food system, particularly in Asia and Africa, where goats are considered "poor people's cows," greatly contributing to rural livelihoods and dietary protein requirements. Goats are considered valuable worldwide for their adaptability to marginal habitats, low production costs, and multifunctional contributions to meat, milk, fiber, and income-generating systems. This study analyzed long-term trends in goat population, production, marketing, slaughter, and trade at global and U.S. levels using secondary data from FAOSTAT and the USDA. Analyzed results reveal that nearly 94% of goats worldwide are found in Asia and Africa. Between 2000 and 2023, the global goat population increased by 49.5%, rising from 754 million to over 1.13 billion head. During this period, the world's chevon production almost doubled, with the largest increase coming from Asian and African countries. The U.S. is the world's leading importer of chevon, driven by a significant increase in demand, while Australia remains the largest exporter. However, the U.S. continues to experience a constant and growing trade deficit because domestic production remains stagnant and unable to meet national demand. The self-sufficiency ratio ranged from 27% to 48% within 2010-2023, meeting less than half of national demand in the U.S., indicating a persistent and widening reliance on imports. While federally inspected slaughter is heavily concentrated in New Jersey, California, Pennsylvania, Indiana, and Illinois, national demand varies significantly from year to year (32.6% to 44.8%). Overall, the results emphasize the need for increased domestic production capacity and improved supply-chain strategies to reduce import dependence and improve market stability in the U.S.

INTRODUCTION

Goat meat (Chevon) is one of the most popular red meats throughout Asia, Africa, Latin America, and the Middle East, where goats are important to rural livelihoods, culture, and food systems (Mazhangara *et al.*, 2019; Simela & Merkel, 2008; Devendra, 2012). Goats are highly adaptable small ruminants that can thrive in harsh and resource-limited environments globally (Emsen, 2025; Panigrahi, 2025). Under increasing climate change pressures, goats are becoming more important for sustainable livestock production due to their browsing behaviors, heat and drought tolerance, and low input requirements (Assan, 2014; Henry *et al.*, 2018). Goats supply meat, milk, fiber, and ecosystem services, which support smallholders, women farmers, and low-income households, especially in developing countries (Banda & Tanganyika, 2021; Tella & Chineke, 2022). Several studies have reported that the global population will exceed nine billion by 2050 (United Nations, 2017; National Research Council, 2015), which will increase the demand for meat and other animal-source foods (Thornton, 2010; Henchion *et al.*, 2014; Henchion *et al.*, 2017; Weber & Windisch, 2017). To meet this demand, sustainable and efficient goat breeds that can adapt to harsh, resource-limited environments are expected to play a growing role in the future protein supply (Aziz, 2010; Mazhangara *et al.*, 2019).

Despite their significance, research on goats has been limited relative to that on cattle, sheep, and pigs. Developing countries with extensive production systems have dominated goat-meat production, although most of it is consumed domestically (Devendra, 2015; Mcmillin *et al.*, 2012). Asia and Africa produce about 90% of goat meat worldwide, but their share of trade is small (Skapetas & Bampidis, 2016). These differences between high production and low export share are due to small-scale, fragmented production systems, insufficient processing capacity, weak cold-chain infrastructure, and a strong domestic preference for goat meat (Cowley *et al.*, 2019; Tumurtogtoh *et al.*, 2025; Abdilahi *et al.*, 2023). While demand for goat meat in developed countries is rising, consumption per capita seems to be low.

Goat farming in the U.S. has concentrated on fiber and dairy rather than meat, resulting in an inefficient and poorly documented meat-goat sector (Hart *et al.*, 2019). Demand has increased due to demographic shifts, particularly the growth of African, Middle Eastern, Asian, and Caribbean immigrants. These ethnic communities have strong cultural and health-conscious consumers who prefer goat meat for its lower fat (Webb *et al.*, 2005; Lu, 2023; Ibrahim *et al.*, 2018; Peacock, 2025) and cholesterol levels compared to other red meats (Knight, 2005; Oliveira *et al.*, 2014; Ivanović *et al.*, 2016; Mazhangara *et al.*, 2019; Madruga & Bressan, 2011; Anaeto *et al.*, 2010).

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U.S. goat meat imports have dominated the world since 1999, mainly from Australia and New Zealand (Locke & Connor, 2017; Abhijith *et al.*, 2023; Meat & Livestock Australia, 2025). Imports rose 27% between 2016 and 2017, showing a high gap between domestic production (FAOSTAT, 2023). Other developed regions, such as the European Union and the Gulf Cooperation Council, have similar patterns in which domestic production has been unable to meet consumer demand (Gani, 2021). Goats, with their adaptability and ability to use marginal lands, are becoming a popular red-meat source in resource-limited environments (Webb & Pophiwa, 2018; Mazhangara *et al.*, 2019). Their potential for climate resilience, with increasing consumer preference for antibiotic-free products, makes them an attractive protein source (Aniume, 2023; Gawat, 2023).

Despite these benefits and growing consumer awareness of goat meat, significant gaps remain between domestic production capacity and growing demand. Global supply, demand, and trade data are also fragmented. FAOSTAT contains data on stock numbers, production, imports, and exports, but this information has not been systematically evaluated to determine goat-meat trade trends worldwide or regionally. Therefore, this study aims to (1) analyze global production trends, (2) identify leading goat-meat-producing countries and key goat meat trading nations, (3) evaluate U.S. domestic production and slaughter patterns, (4) assess demand and self-sufficiency, and (5) examine U.S. import-export and trade dynamics of goat meat.

MATERIALS AND METHODS

This study utilized secondary data obtained from the Food and Agriculture Organization's statistical database (FAOSTAT) and the U.S. Department of Agriculture (USDA). Data extraction, organization, and analysis were conducted in multiple stages to examine global and U.S. trends in goat populations, production, slaughter, and trade.

Global and U.S. Goat Population (2000-2023)

The global and U.S. goat populations were extracted from FAOSTAT and USDA NASS on a headcount basis and then converted to millions of head for analysis. The percentage change between 2000 and 2023 was calculated for comparison. Similarly, for the global goat population distribution in 2023, data on goat populations by region (head basis) were extracted from FAOSTAT. For the comparison study, the population of each region was a percentage share and expressed in billion head.

Total Goat Population Across Different Regions (2000-2023)

The total goat population for Asia, Africa, Europe, South America, North America, Australia, and New Zealand was extracted from FAOSTAT (2000-2023). The "Other regions" category comprises Europe, South America, North America, Australia, and New Zealand, which were grouped because of their relatively small contribution to the global goat population in the dataset, compared with Asia and Africa. All values are converted into million heads. Percentage changes were calculated to identify significant patterns in the goat population over the period.

Top Goat Meat Import and Export Countries (2014-2023)

For the years 2014–2023, FAOSTAT data on goat-meat import and export quantities (tonnes) have been compiled. The average export and import quantities for the top five countries for the ten years were calculated because national rankings change from year to year. To determine each country's relative significance in international trade, its share of the world's total export and import volume was also determined.

Global Trends in Goat Meat Production and Slaughter (2000-2023)

Global goat-meat production (t) data from FAOSTAT have been extracted for the years 2000–2023. In the same way, trend analysis was conducted by converting the number of slaughtered goats from heads to million heads.

Goat Meat Production Trend Among the Top Five Goat Meat Producing Countries (2010-2023)

To examine global production trends over time, production data (tonnes) for the top-producing countries were taken from FAOSTAT for the years 2010–2023 and converted to Million Metric Tons (MMT).

U.S. Goat-Meat Trade: Export, Import, and Trade Balance (2000-2023)

U.S. goat meat export and import data (quantity in tonnes and values in 1000 USD) were extracted from FAOSTAT (2000-2023). The following equation, adapted from Arshad and Mukhtar (2019), OECD/FAO (2023), and Blavasciunaite *et al.* (2020), was used to calculate the trade balance:

$$\text{Trade Balance (TB)} = \text{Export (t)} - \text{Import (t)} \quad (1)$$

$TB > 0$: Trade surplus

$TB < 0$: Trade deficit

$TB = 0$: Balanced trade

U.S. Domestic Goat-Meat Production (2010-2023)

Domestic goat meat production in the U.S. was estimated by using USDA NASS data (2010-2023) on the number of slaughtered goats (head) and average live weight (lb), and calculated by using the equation below, adapted from Ajayi, Osowe, & Babayemi (2017), Webb (2014), and Hassan, Hashem, & Khan (2023):

$$P = N \times W \times D \quad (2)$$

Where:

P = Total goat meat production (lb)

N = Number of slaughtered goats (head)

W = Average live weight (lb)

D = Dressing percentage

The goat dressing percentages typically range from 40% to 56%. Therefore, a dressing percentage of 48% was used in the calculation, and values were converted to metric tonnes.

National Demand for Goat Meat in the U.S. (2010-2023)

The annual national demand for goat meat in the U.S. was calculated using the equation below, adapted from Fader *et al.* (2013), Gibson (2025), and FAO (2011):

National Demand= (Domestic Production + Import) – Export (3)

To determine changes in national goat meat demand across time, the percentage change in national demand from year to year was computed.

Top Federally Inspected Goat-Slaughtering States in the U.S. (2006-2023)

The top three states for federally inspected (FI) goat slaughter between 2006 and 2023 were determined using USDA NASS data.

Self-Sufficiency Ratio (SSR) in Goat Meat in the U.S. (2010-2023)

After calculating national demand and domestic goat meat production, the self-sufficiency ratio (SSR) was computed using the equation below to determine the percentage of domestic production that meets national consumption. The ratio was computed as follows (Popescu *et al.*, 2024; Takahashi, 2024; Szajner *et al.*, 2024):

Self-Sufficiency Ratio (SSR)=Domestic Production / National demand×100 (4)

RESULTS AND DISCUSSION

Global Goat Population Trend (2000-2023)

Goat population trends worldwide and in the U.S. from 2000 to 2023 show distinct dynamics across production systems (Figure 1). The global goat population increased increased by 49.5% (754 million in 2000 to 1127 million in 2023) globally, mostly due to growth in Africa and Asia, where they are essential for climate-resilient agriculture, cultural demand, and food security (Asan, 2025; Sejian *et al.*, 2025). This significant rise is due to both the species' ability to adapt to marginal habitats and the growing demand for goat meat worldwide.

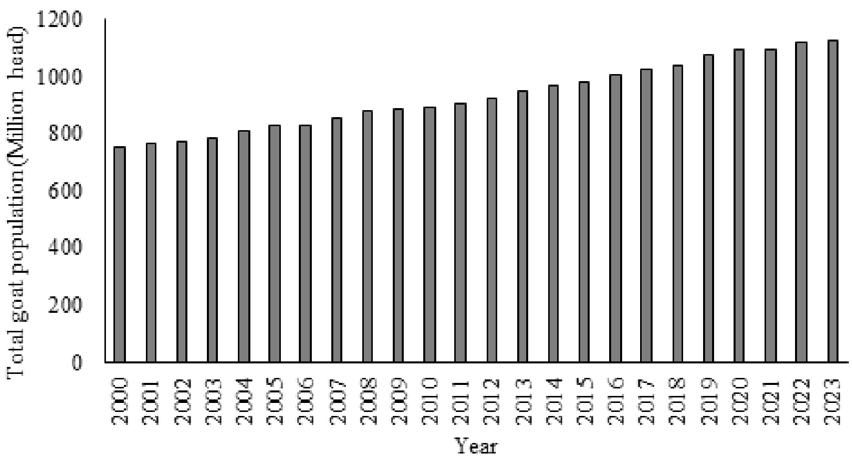

Figure 1: Global goat population trends (2000-2023)

Regional Pattern of Global Goat Populations (2000-2023)

Asia remained the largest region in the global goat population, increasing from 454.3 million to 547.4 million head, representing a 20.5% rise (Figure 2). Between 2000 and 2010, growth in Asia was relatively modest at 6.3%, followed by a more significant expansion of 13.4% from 2010 to 2023, suggesting the intensification of smallholder and semi-commercial goat production systems. Similarly, Africa had the greatest significant increase, with goat populations rising from 243.6 million in 2000 to 522.2 million in 2023, a 114.4% increase over the period. The goat population increased by 43.2% from 2000 to 2010, and then by an additional 49.7% from 2010 to 2023. This rapid expansion illustrates the growing significance of goats in African pastoral and agro-pastoral systems, especially for population growth, food security, and climate resilience.

The other areas (Europe, South America, North America, Australia, and New Zealand) constituted an average and consistent proportion of the global goat population. The population of goats rose slightly from 56.2 million in 2000 to 57.6 million in 2023, representing a 2.5% increase over the period, with negligible fluctuations. The graph illustrates a notable structural transformation in worldwide goat population dynamics, with expansion primarily centered in Africa and Asia. As of 2023, Asia and Africa collectively accounted for over 95% of the global goat population, underscoring their crucial role in goat production, livelihoods, and the future market for goat meat.

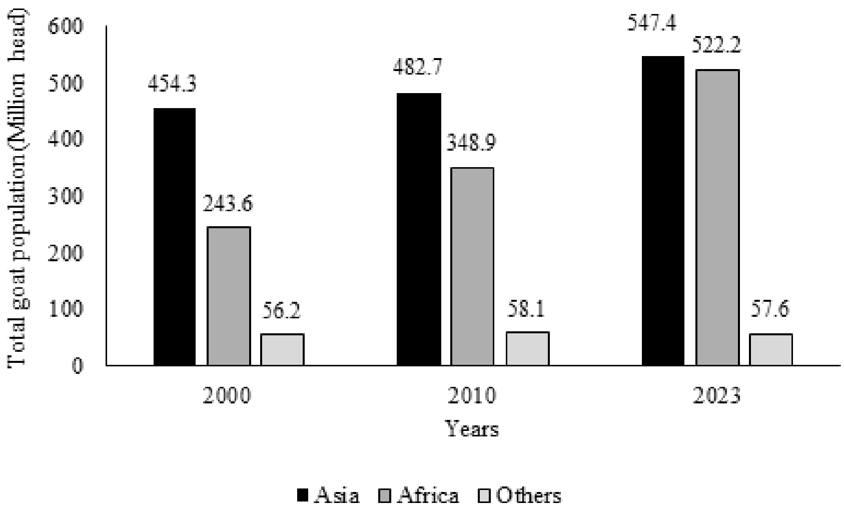

Figure 2: Distribution of the global goat population across different regions (2000-2023)

Distribution of Goat Population Across Different Regions (2023)

In 2023, the global distribution of goat populations (World total: 1.13 billion head) shows a significant regional concentration, with Asia and Africa accounting for most of the global total (Figure 3). Asia accounted for 48.56% of the global population, while Africa accounted for 46.33%. Together, these two regions account for almost 94% of the global goat population, indicating the important role of small ruminants in agricultural markets, food systems, and livelihoods in developing countries.

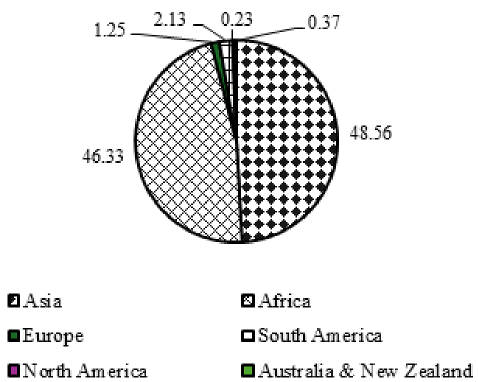

Figure 3: Distribution of goat populations across different regions (2023)

However, the other regions contributed only a small fraction to the global goat populations. South America accounted for 2.13%, while Europe contributed 1.25%, reflecting the marginal significance of goats in their livestock industries and their overall structural transitions towards intensified dairy and beef production systems. North America (0.23%) and Australia & New Zealand (0.37%) together accounted for less than 1%, highlighting the specialized, niche-oriented characteristics of goat farming in these regions, often driven by ethnic market demand or export-oriented production.

Top Five Goat Meat Exporting Countries (2014-2023)

Goat-meat exports between 2014 and 2023 were concentrated in a few significant exporting countries (Table 1). Asia and Africa produce most goat meat, but their farming methods are mostly smallholder-based and focused on domestic consumption, limiting their exports (Dubeuf *et al.*, 2004; Mazhangara *et al.*, 2019; Gawat *et al.*, 2023). Australia leads global exports with 25,685.47 tonnes per year, accounting for 40.83%. This dominance is due to Australia's well-developed commercial goat industry and efficient slaughter and processing systems (Dubeuf *et al.*, 2004; Star *et al.*, 2021). Ethiopia is the second-largest exporter, due to its extensive pastoral systems and strong export links (Abduletif, 2019; Eshetu & Abraham, 2016; Aklilu & Catley, 2014), especially to Middle Eastern markets, with exports totaling 13,691.06

Table 1: Top 5 goat meat exporting countries (2014–2023) with percentage contribution

Rank	Country	Average Export Quantity (tonnes/year)	Contribution to Total Export (%)
1	Australia	25,685.47	40.83
2	Ethiopia	13,691.06	21.77
3	Kenya	8,685.02	13.81
4	Spain	3,340.71	5.31
5	Pakistan	3,039.28	4.83

Note: Total average global export (2014–2023): 62,902.17 tonnes.

tonnes per year (21.77%).

Kenya ranks third in global exports (8,685.02 t/year) It's dry and semi-arid farming systems (Mutunga *et al.*, 2023; Kosgey *et al.*, 2008) ensure a constant supply of goats for regional and international trade. Spain ranks fourth, with 5.31% of global exports (3,340.71 tonnes/year), due to its Mediterranean goat breeds and European value chains (Morales *et al.*, 2019). Due to cultural and festival demand in importing nations (Sohaib & Jamil, 2017; Ghaffar & Ashfaq, 2017), Pakistan ranks fifth among exporting nations with 4.83% of global exports (3,039.28 t/year). More than 86% of global goat-meat exports come from these countries, which shows the geographical concentration of the goat industry.

Top Five Goat Meat Importing Countries (2014-2023)

Import patterns of goat meat from 2014 to 2023 show significant concentration among a limited number of high-demand countries (Table 2). The U.S. is the leading importer, with an average of 16,908.45 tonnes per year, accounting for 27.32% of the world's total imports (Table 2). This substantial import volume is primarily driven by the growing number of ethnic and ethnically diverse customers with significant traditional preferences for goat meat (Ibrahim *et al.*, 2018; Harrison *et al.*, 2013; Sande & Houston, 2007; Gillespie *et al.*, 2016; Ekanem *et al.*, 2013). The United Arab Emirates ranks closely behind the U.S., importing 15,899.99 tonnes per year (25.69%), indicating substantial domestic consumption, limited local livestock production, and high purchasing power (Gani, 2021; Sherif *et al.*, 2014; Gani, 2025).

Table 2: Top 5 goat-meat importing countries (2014–2023) with percentage contribution

Rank	Country	Average Import Quantity (tonnes/year)	Contribution to Total Import (%)
1	United States of America	16,908.45	27.32
2	United Arab Emirates	15,899.99	25.69
3	China	6,403.02	10.35
4	Republic of Korea	4,583.85	7.41
5	Saudi Arabia	4,327.17	6.99

Note: Total average global import (2014–2023): 61,881.17 tonnes.

China ranked third, accounting for 10.35% of global imports (6,403.02 tonnes/year), driven by growing urban markets and continuous domestic supply gaps (Nguyen *et al.*, 2023; Bai *et al.*, 2018; Yu & Cao, 2015). The Republic of Korea imports 4,583.85 tonnes per year (7.41%), reflecting a combination of culinary history and medicinal applications of goat meat (Sujiwo & Jang, 2025; Nam *et al.*, 2010). Saudi Arabia ranks fifth with 4,327.17 tonnes per year (6.99%), driven by higher per-capita consumption and limited domestic production capacity (Albalawi, 2016; Aljohani *et al.*, 2024). However, developed countries perceive goat meat as an exotic or niche product consumed mostly by migrants and produced in smaller amounts (Dhanda *et al.*, 2003; Peacock & Sherman, 2010). Collectively, these nations account for over 77% of goat meat imports worldwide, underscoring the significant reliance of particular regions on international supplies to satisfy consumer demand.

Global Trends in Goat Meat Production and Slaughter (2000–2023)

The data show a stable and steady increase in both overall production and slaughter numbers over the period (Figure 4). Global production increased from around 3.8 MMT in 2000 to 7.46 MMT in 2023, a rise of over 95%. The number of goats slaughtered increased from 308 million to 544 million, a nearly 76% rise. Production growth was gradual from 2000 to 2012,

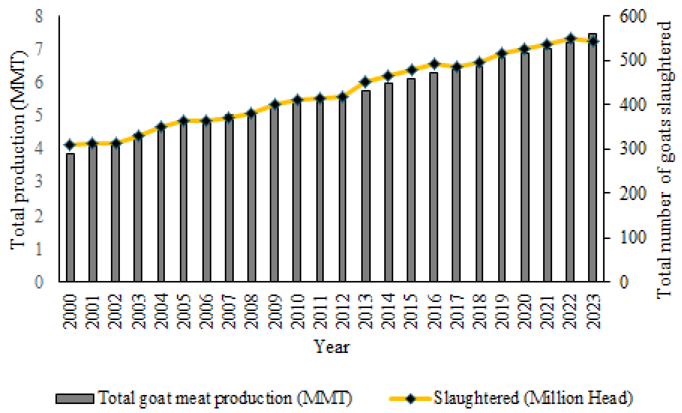

Figure 4: Global goat meat production and the number of goats slaughtered

Note: Total goat production is represented on the x-axis, and the total number of goats slaughtered is represented on the y-axis.

followed by a considerable increase from 2013 onwards, corresponding with increased demand in Asia and Africa. The simultaneous changes in production and slaughter indicate a structural uniformity in worldwide goat meat supply chains, primarily driven by population growth, social preferences towards goat meat, and the prevalence of smallholder farmers. The continuous upward trend shows the growing global importance of goat meat as a principal protein source in low- and middle-income countries.

Global Goat Meat Producing Trend Among the Top Five Goat Meat Producing Countries (2010–2023)

China was the dominant global producer from 2010 to 2023, continuously exceeding 1.9 MMT each year and gradually increasing to approximately 2.1 MMT in the subsequent years (Figure 5). India holds the second place, with a steady and continuous rise from 0.69 MMT in 2010 to about 0.90 MMT in 2023, suggesting both increasing domestic consumption and the rising importance of small-ruminant production systems (Devendra, 2015; Mohini *et al.*, 2018). Pakistan demonstrated a moderate yet steady increase, with production increasing from 0.39 MMT to roughly 0.43 MMT during the same period. Nigeria and Bangladesh, significant producers in Africa and South Asia, reported modest but significant increases. Nigeria's production ranged from 0.21 to 0.29 MMT, while Bangladesh demonstrated a gradual rise from 0.16 MMT in 2010 to approximately 0.20 MMT by 2023. These trends collectively represent a consistent increase in worldwide goat-meat supply, mainly driven by growing populations, cultural preferences towards goat meat, and continuing dependence on smallholder production systems in Asia and Africa (Devendra, 2015; Miller & Lu, 2019; Dubeuf *et al.*, 2023; Navarrete-Molina *et al.*, 2024; Olmo *et al.*, 2024).

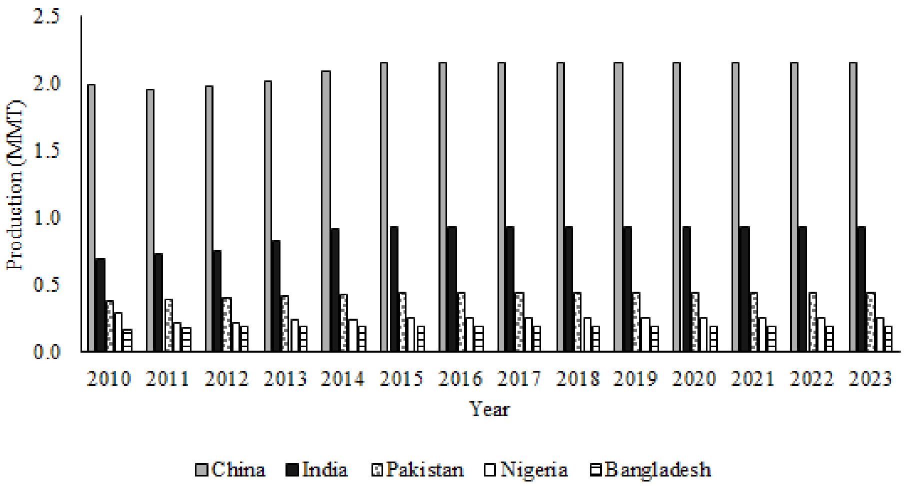

Figure 5: Global goat meat production among the top five countries (2010-2023)

Total U.S. Goat Population (2000-2023)

The number of goats in the U.S. increased by just 10% during the same period, reaching a peak of over 3.1 million in 2008–2009, then steadily falling and stabilizing around 2.5–2.6 million after 2014 (Figure 6). This static pattern points to structural limitations in the U.S. goat industry, including restricted economies of scale, increased production costs, problems with predation, inconsistent market access, and reliance on specialized ethnic markets (Nguyen *et al.*, 2023; Hart *et al.*, 2019). The discrepancy between U.S. and global trends suggests that although goat production is increasing globally, local production has not kept pace with rising U.S. consumption, thereby increasing reliance on imports (Nguyen *et al.*, 2023; Lu, 2023).

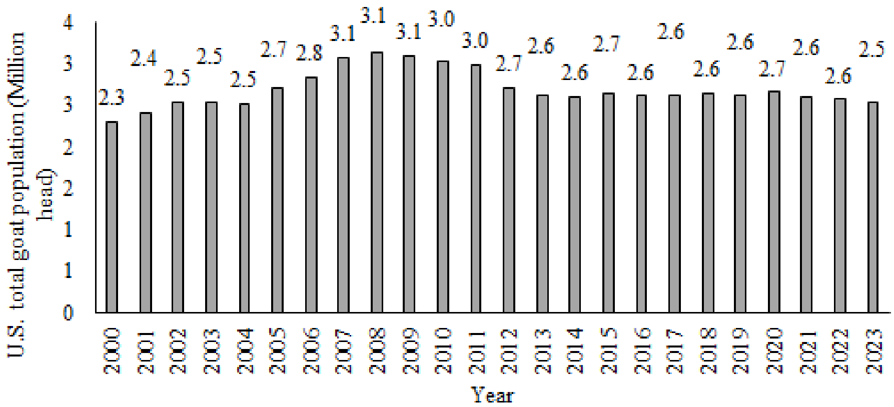

Figure 6: Trends in U.S. total goat population (2000-2023)

Note: Number in top of each bar represents the U.S. goat population in the respective year.

U.S. Goat Inventory by Production Categories (2008-2024)

From 2008 to 2024, the overall U.S. goat inventory declined gradually, mainly due to decreases in the Meat & Other category (Figure 7). The population of meat goats and other goats decreased from 2,590 thousand head in 2008 to 1,950 thousand head in 2024, showing a decline of around 25%, despite a short-term stabilization from 2015 to 2020. In contrast, milk goat populations saw a modest increase, rising from 320 thousand head in 2008 to 420 thousand head in 2024, indicating consistent growth in the dairy goat sector. The inventory of Angora goats decreased gradually throughout the period, decreasing from 210,000 to 110,000 head, indicating a reduction in the population of fiber-producing goats.

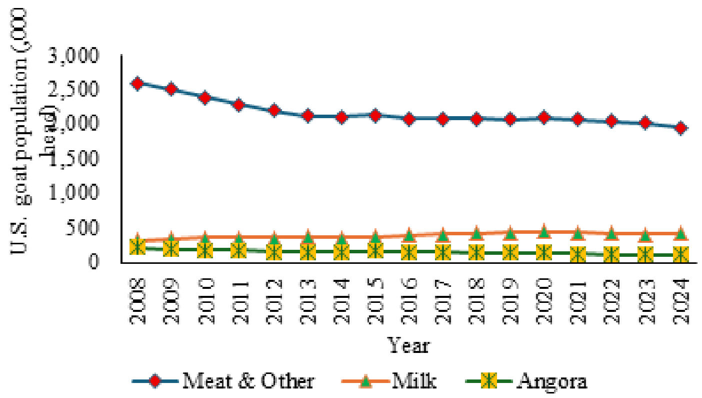

Figure 7: Different types of goat populations in the U.S.

U.S. Goat Meat Import & Export Quantities (2000-2023)

U.S. imports increased significantly, exceeding 260% between 2000 and their peak years post-2016 (Figure 8) due to domestic production's inability to meet increasing demand (Gillespie *et al.*, 2013; Hart *et al.*, 2019; Miller & Lu, 2019). In contrast, exports remained small (Qushim *et al.*, 2016), typically below 1,000 tons, with negligible growth throughout the whole period. Import values increased by more than 500% during 2000, suggesting both rising prices and an increasing dependence on foreign supplies. Due to persistently low exports, the U.S. trade balance has remained negative annually, with deficits rising from approximately 5,000 tons in the early 2000s to over 18,000 tons in the 2020s, an increase of over 300%. The chart clearly depicts a gap between increasing imports and stagnant exports, illustrating the U.S. goat meat market's growing reliance on foreign sources to meet consumer demand (Gillespie *et al.*, 2016; Nyaupane *et al.*, 2017; Ibrahim *et al.*, 2018; Nguyen *et al.*, 2018).

Furthermore, the import value of goat meat in the U.S. has risen significantly, expanding more than fivefold since 2000 due to rising demand and rising global prices. The import value started at approximately USD 20 million and increased to over USD 120–160 million in subsequent years. However, export value remained extremely low over the whole period. The expanding gap between import and export values clearly demonstrates the U.S. market's heavy dependence on imports to satisfy domestic goat meat demand (Gillespie *et al.*, 2016; USDA-ERS, 2024; Lu *et al.*, 2010; Turk, 2016).

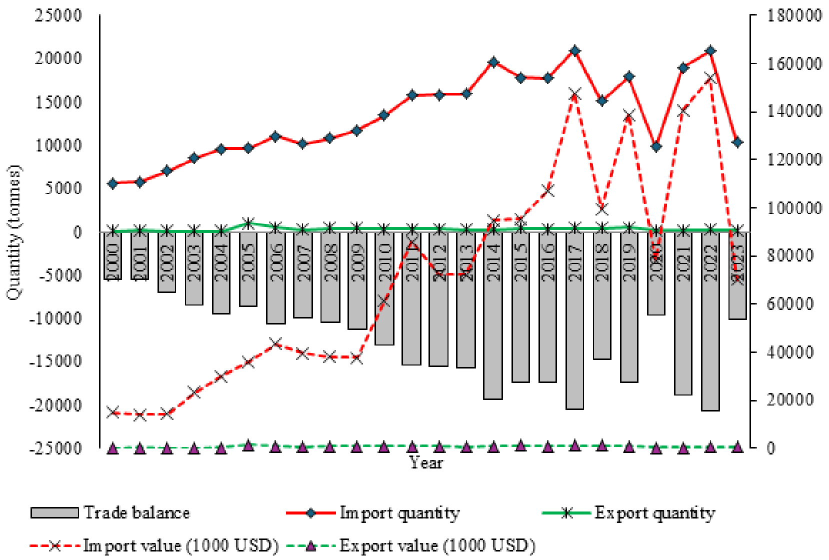

Figure 8: U.S. goat meat trade pattern (2000-2023)

Trends in U.S. Goat Meat National Demand and Domestic Production (2010-2023)

National demand shows high volatility, characterized by significant increases in certain years—most significantly in 2011 (9.9%), 2014 (11.7%), 2017 (12.4%), 2019 (14.3%), and 2021 (44.8%)—followed by significant decreases in years such as 2015 (–8.5%), 2018 (–17.1%), 2020 (–30.3%), and 2023 (–32.6%) (Figure 9). However, domestic production is relatively stable, demonstrating only slight variations annually. The stability, combined with significant fluctuations in demand, indicates a fundamental supply-demand imbalance in the U.S. goat meat industry. The incapability of domestic supply in response to rising demand results in a persistent deficiency that is regularly addressed by increasing dependence on imported goat meat (Ibrahim *et al.*, 2018; Gillespie *et al.*, 2013; Lu & Miller, 2019).

Between 2010 and 2022, domestic goat meat production in the U.S. decreased by 15.9%, from 11,780 tons to 9,911 tons, although national consumption increased by 22.9%, from 24,872 tons to 30,570 tons. This expanding gap demonstrates how domestic production is not meeting increasing consumption demands, leading to a persistent dependence on imports. Yet, when including 2023, the trend alters significantly: domestic production has a smaller total decline of 11.8%, whereas national demand has a considerable decline, resulting in a 17.3% decrease compared to 2010. The abrupt decrease in 2023 signifies an unexpected fall in consumption after a decade of increases and instability.

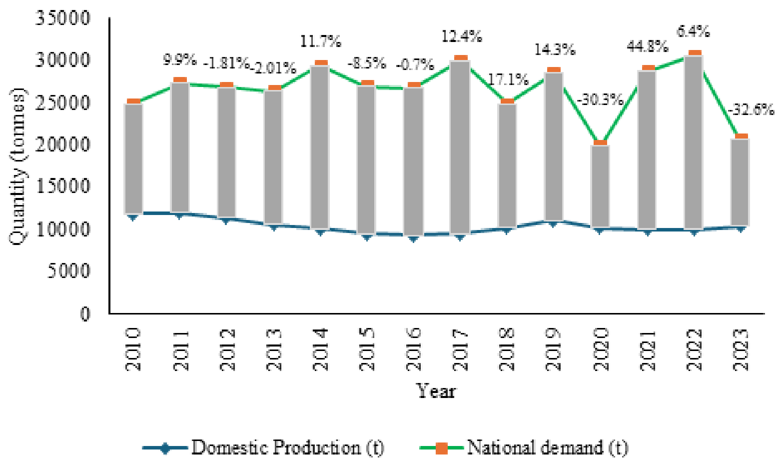

Figure 9: Trends in U.S. goat meat national demand and domestic production (2010-2023)
Note: Percentage in the line graph means change in national demand compared to the previous year, t=tonnes.

U.S. Self-Sufficiency Trend in Goat Meat Supply (2010-2023)

Between 2010 and 2023, there were significant variations in the self-sufficiency ratio for goat meat. The average self-sufficiency ratio was approximately 38%, indicating that domestic production consistently supplied less than half of the national goat meat demand. From 2010 (47.5%) to 2013 (36.5%), there was a downward trend. In 2014, there was a temporary improvement (2.4%), but in 2015, there was a significant decline (-7.0%). After a small rebound in 2016 (1.9%), the ratio declined once more in 2017 (-1.6%). In 2018, it had a stronger recovery (8.1%), whereas 2019 saw stability (0.2%). In 2020, the demand-supply gap significantly increased, reflected in the most notable decrease of 13.2% in the self-sufficiency ratio (SSR). But starting in 2021, the ratio started to improve, increasing by 2.0% in 2022 and 5.1% in 2021. The SSR increased by 14.5% in 2023, the year with the biggest improvement and the greatest level during the study period. The results show that the country remains fundamentally dependent on external suppliers to meet domestic demand for goat meat.

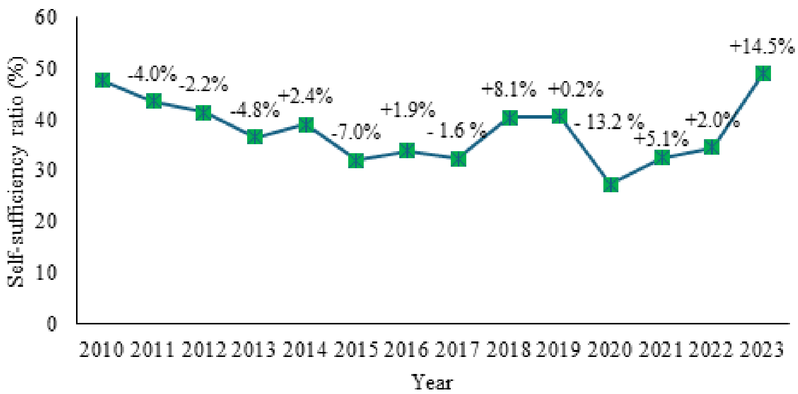

Figure 10: U.S. self-sufficiency in goat meat (2010-2023)
Note: Percentage in the line graph means change in self-sufficiency compared to the previous year.

Top 3 Federally Inspected Goat-Slaughtering States in the U.S. (2006-2023)

Table 3 explains federally inspected (FI) goat-slaughter data from 2006 to 2023, showing a significant geographical distribution, with slaughter operations primarily concentrated in a limited number of states. New Jersey has consistently ranked as the top slaughtering state for the past 18 years, highlighting its pivotal role in the U.S. goat-meat supply chain (Hart *et al.*, 2019). Since 2006, New Jersey's annual slaughter has fluctuated between approximately 112,000 and more than 240,000 head, reaching its peak between 2008 and 2010 before gradually stabilizing at reduced levels post-2016. The state's dominance is related to its accessibility to significant ethnic consumer markets, especially New York City, Philadelphia, and other northeastern urban centers. In these areas, demand for goat meat remains high year-round and increases during cultural and religious observances such as Ramadan and Eid al-Fitr, leading to an overall increase in pricing during these holiday seasons (Kidane *et al.*, 2019; Ibrahim *et al.*, 2020; McKenzie-Jakes, 2021; Singh-Knights & Knights, 2005).

Table 3: The top federally inspected goat slaughtering states in the U.S. (2006-2023)

Year	Rank 1		Rank 2		Rank 3	
	State	Head	State	Head	State	Head
2006	New Jersey	216,078	Maryland	37,995	Illinois	36,152
2007	New Jersey	237,562	Maryland	53,736	Illinois	41,602
2008	New Jersey	240,912	Maryland	52,815	Illinois	40,968
2009	New Jersey	226,817	Maryland	56,802	Illinois	39,341
2010	New Jersey	197,431	Maryland	58,255	Illinois	40,645
2011	New Jersey	187,432	Maryland	56,524	Illinois	38,683
2012	New Jersey	163,858	Maryland	53,833	Indiana	38,038
2013	New Jersey	157,476	Maryland	43,941	Indiana	41,204
2014	New Jersey	137,263	Indiana	42,936	Maryland	37,966
2015	New Jersey	119,908	Indiana	41,956	Illinois	30,552
2016	New Jersey	114,242	Indiana	40,031	Illinois	37,207
2017	New Jersey	120,740	Indiana	42,860	Illinois	36,383
2018	New Jersey	133,772	Indiana	48,231	Illinois	36,212
2019	New Jersey	146,795	Indiana	50,084	Pennsylvania	46,847
2020	New Jersey	144,786	Pennsylvania	49,573	Indiana	45,292
2021	New Jersey	124,491	Indiana	46,449	Pennsylvania	49,877
2022	New Jersey	108,439	Pennsylvania	51,420	Indiana	45,343
2023	New Jersey	112,115	California	44,930	Illinois	44,564

The states that placed second and third varied over the period, alternating between California, Pennsylvania, Indiana, Illinois, and Maryland, each serving as significant regional centers with unique market characteristics. From 2020 to 2023, California, Pennsylvania, and Indiana alternated between the second and third positions. California's popularity is associated with its large and varied ethnic populations and persistent demand in the West Coast halal and Hispanic markets (USDA-ERS, 2024). Pennsylvania and Indiana, in contrast, have established livestock auction networks and comparatively more small-farm participation, allowing them to serve both local processors and interstate buyers (Gipson, 2019).

During the first years of the series (2006–2014), Maryland and Illinois consistently ranked among the top three states. The strength of Maryland is linked to the Mid-Atlantic corridor, which has a large number of African, Middle Eastern, and Caribbean consumers, along with readily available small-scale processors and halal-certified facilities (USDA-APHIS, 2022). Illinois has historically ranked highly due to high demand from varied immigrant communities and strong meat distribution networks serving the Midwest (Goldsmith, 2012).

CONCLUSION

This study concludes that over the two decades (2000–2023), there has been significant growth in the production and slaughter of goat meat globally, primarily in Asia and Africa, which together accounted for about 94% of the world's goat population and supply. Despite this, major importers such as the U.S., the United Arab Emirates, China, and Korea continue to rely significantly on international markets to meet their domestic demand. Exports remain concentrated in a few countries, primarily Australia, Ethiopia, and Kenya. Long-term reliance on imports has increased in the U.S. due to an increasing supply deficit driven by stagnant production and rising consumption. Moreover, strengthening domestic meat goat production should be the top priority to meet national demand, which would require addressing persistent challenges such as a lack of processing facilities, predation problems, low farm profitability, and uneven access to veterinary and extension assistance. Addressing the domestic supply–demand gap will require an understanding of price transmission along the value chain, seasonal demand patterns associated with cultural and religious events, and consumer preferences for local versus imported goat meat. At the global level, future research should focus on monitoring the informal sector's goat meat production and establishing standardized monitoring techniques to predict supply, demand, and trade flows more accurately. Research on sustainability and climate resilience is also needed, with a focus on goats' roles in low-emission livestock systems and the utilization of marginal land.

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