



ISSN (E): 2277-7695
ISSN (P): 2349-8242
NAAS Rating: 5.23
TPI 2023; SP-12(7): 2049-2051
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www.thepharmajournal.com
Received: 15-04-2023
Accepted: 28-05-2023

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Export performance of Goat/Sheep meat from India

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Abstract

Goat/sheep farming is the most profitable enterprise in India due to its low maintenance cost and it provides better prices in the market than any other meat in India. Mainly the poor, uneducated and old age people are involved in Goat or sheep rearing and with zero input. The demand for goat/sheep meat is increases and now it became big business and many educated people are now involved in this enterprise. The goat and sheep together contributed almost 20 percent to total meat production in the country. The demand for goat/sheep meat increased in global market and India is one of the major exporters of goat/sheep meat. The country is the one of the largest exporter of goat/sheep meat to the world. The country has exported 9,592.31 MT of goat/sheep meat to the world for the worth of Rs. 537.18 Crores during the year 2022-23. In 1987-88 the percent share contribution of goat/sheep meat export from total agricultural export was 0.65 percent in quantities and 2.40 percent with respect to value. Whereas, in 2022-23 the export volume and value were drastically reduced and it contributed 0.02 and 0.24 percent respectively due to low production from 2016-17 onwards. Rajasthan, Jammu and Kashmir, Uttar Pradesh, Gujarat, and Hilly regions of North-Eastern Himalayas are the major livestock contributor to the country and United Arab Emirates was the main destination for goat meat exports from India, with a 58 percent share of total exports. The CAGR was used to find the growth rate and it was found that 2.31 percent and 11.44 percent of growth with respect to quantity and value of export from the year 1987-88 to 2022-23. In the global market, the demand for goat/sheep meat is expected to grow rapidly in the coming years and it is the opportunity for Indian farmers to take Goat/sheep rearing and get better profit through these enterprises.

Keywords: Goat/Sheep rearing, market, CAGR and export etc.

Introduction

Livestock are a significant contributor to our country's agricultural sector. It provides various valuable products such as milk, meat, skins, manures, wool and draft power. As per livestock census, India is ranked first in cattle and buffalo populations, second in goat population, third in sheep population and seventh in poultry.

Small ruminants play significant role in improving economical and financial status of farmers. It's mainly because both sheep and goat are sturdy, short gestation period, higher prolificacy and can be marketed as and when needed to the farmers, so they are also called as "moving ATM". Most of the goat breeds have litter size of 1.5 or higher (Naude and Hofmeyr, 1981) [6]. Thus because of their enormous contribution towards the development of rural community they are considered as very significant in India.

As per APEDA, 2023 statistics, India is the largest exporter of mutton and chevon to the world. It accounts for 9592.31 MT which is value of 537.18 crores. The major importing nations of small ruminant meat are United Arab Emirates, Qatar, Kuwait, Maldives and Oman. Over the past 50 years, the world's meat intake has seen significant shift. The term "nutrition transition" refers to a series of significant changes in human food and nutritional status (Popkin, 2006; Tey *et al.*, 2010) [8, 9]. Most of the consumers prefer the goat meat due to its leaner quality. Chevon is leaner than meat from other domestic red meat species as well as being comparable in terms of its nutritional constituents (Dhanda *et al.*, 2003) [5]. Thus to meet the growing demand for animal protein in the world can be met by meat of small ruminants. With this background, the present study examines the exports performance of goat and sheep meat from India.

Materials and Methods

Data period and its Sources: The 35 year's annual secondary data on export of sheep/goat meat from India were collected from the Directorate General of Commercial Intelligence and Statistics (DGCIS), Government of India for the period 1987-88 to 2022-23.

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For the analysis, the whole data was subdivided into two periods such as Period I is from 1987-88 to 2005-06, whereas period II is from 2007-08 to 2022-23. The period was divided for better understanding by diving the 35 years into two parts for better understanding of exports of goat/sheep meat from India.

Statistical analysis

Compound Annual Growth Rate (CAGR) analysis

The compound annual growth rate analysis was carried out to know the annual growth rate in export of goat/sheep goat in terms of both value and quantity. CAGR were computed by using the exponential function of the form (Damodar and Sangeetha 2007; Stephan Raj *et al.*, 2022) ^[4, 11].

$$Y_t = AB^t + U_t \dots \dots \dots (1)$$

Where,

Y_t = Export in terms of Quantity and Values (Goat/Sheep Meat)

t = Year 1, 2,.....n

U_t = Disturbance term in year “t”

“a” and “b” are the parameters to be estimated

The equation (1) was transformed into a log linear form and written as

$$\text{Log } Y = \text{log } A + t \text{ log } B + \text{log } U_t \dots \dots \dots (2)$$

Equation (2) was estimated by using ordinary least squares (OLS) technique. Compound growth rate (g) was then estimated by using the relationship given in equation (3).

$$G^{\wedge} = (b-1) * 100 \dots \dots \dots (3)$$

Where,

g^{\wedge} = Estimated compound growth rate % per annum

b^{\wedge} = Antilog of B

The standard error of the growth rate was estimated and tested for its significance with ‘t’ statistics.

Results and Discussion

Share of goat/sheep export to total agricultural exports: 1987-88 to 2021-22

India has been exporting great quantities of goat/sheep meat to several nations around the world since many years. In the years 1987-88, the total agricultural export from India was 10,61,153.44 MT and the contribution of goat/sheep meat export to the total export was 0.65 percent. Whereas, in terms of value it contributed 2.40 percent in the same year (Table 1). It is observed that during 1995-96 the percent share of goat/sheep meat export quantity and in terms of value was reduced to 0.11 and 0.72 percent respectively. It is drastically reduced from the year 2005-06 to 2022-23 because of its low production and increase in domestic consumption.

Table 1: Share of goat/sheep meat export to total agricultural exports: 1987-88 to 2022-23

Years	Basmati Rice	
	Percent share in total export (Quantity ‘000 tonnes)	Percent share in total export (Value Lakhs)
1987-88	0.65	2.40
1990-91	0.84	3.38
1995-96	0.11	0.72
2000-01	0.25	0.86
2005-06	0.07	0.43
2010-11	0.06	0.31
2015-16	0.11	0.78
2020-21	0.02	0.22
2021-22	0.02	0.24

Source: DGCIS, 2023.

Table 2 indicated the CAGR of the export of goat/sheep meat in terms of quantity and values of exports. The CAGR for the export of goat/sheep meat in terms of quantity, value, and unit value during the period 1987-88 to 2022- 23 is presented in Table 2. During the period 1987-88 to 2005-06, the quantity of goat/sheep recorded positive growth with respect to quality and value and it was 0.20 and 6.64 percent respectively, this is a period the production and export were positive. Whereas in the II period 2006-07 to 2022-23 the export quantity was shown native in growth and it was because of low production

of goat/sheep meat and also an increase in domestic consumption. When compared to export in value terms in the same period (II), it was observed positive growth because of an increase in the value of goat/sheep meat in the global market (Fig. 1). It was observed that from the year 2009-10 onwards the price of goat/sheep meat was increased. However, it was observed that a positive growth rate in the overall performance of the export of goat/sheep meat was with respect to the quantity of export and in terms of value, ie 2.31 and 11.44 respectively.

Table 2: Compound annual growth rates (CAGR) of quantity and value of Goat/Sheep meat export from India, 1987-88 to 2021-22.

Period	Goat/Sheep meat	
	Quantity	Value
I (1987-88 to 2005-06)	0.20 (0.906)	6.64* (0.004)
II (2006-07 to 2021-22)	-1.85 (0.540)	8.199* (0.022)
Overall (1987-88 to 2022-23)	2.31* (0.012)	11.44 (4.75)

Note: Figures within the parentheses indicate standard error in respective values
 ** and * denote significance at 1 percent and 5 percent level, respectively.

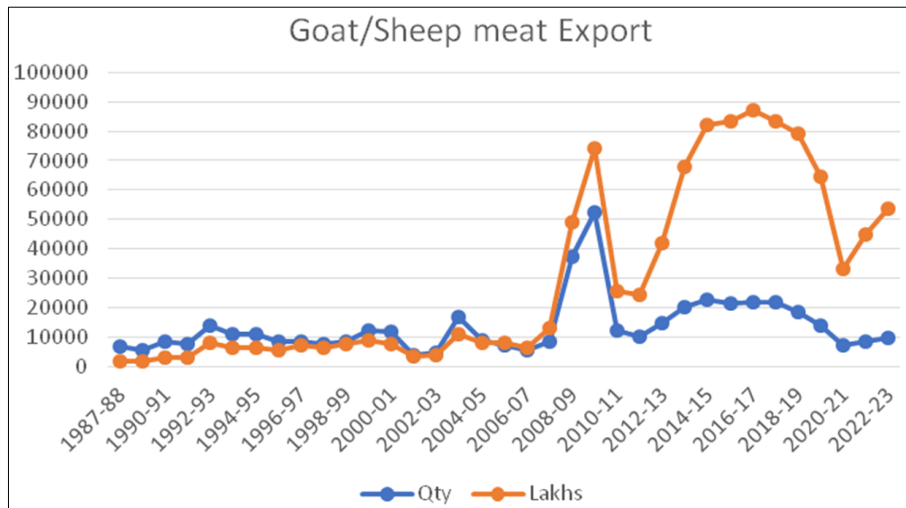


Fig 1: Export of Goat/sheep meat from India 1987-88 to 2022-23

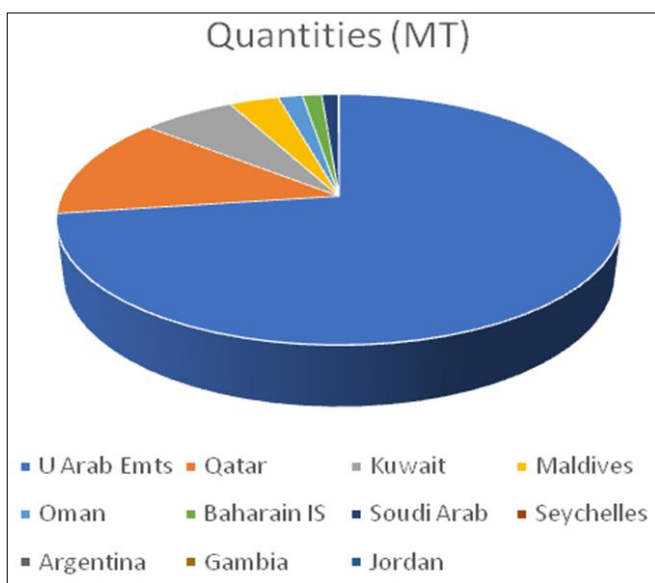


Fig 2: Country wise export destination of goat/sheep meat from India

Conclusion

The study concluded that the demand for Indian goat/sheep meat is very high and it is observed that 70 percent of imported by United Arab Emirates and other countries like Qatar, Kuwait, Maldives and Oman. The percent contribution of goat/sheep export (Quantity) to total agricultural export was drastically reduced from the decades and it was observed 0.65 percent in the year 1987-88 to 0.11 percent in the year 1995-96 and 0.02 percent during the year 2022-23 respectively. Similarly with respect to export in value terms also reduced from 2.40 percent (1987-88) to 0.24 percent (2022-23). The CAGR in period I was positive (0.20 percent) and it reduced to negative (-1.85 percent) with respect to quantity in export. As the overall growth showed a positive with respect to export in quantity and value terms. As the goat/sheep meat production has reduced and domestic consumption increased which impacted on export from India.

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