

# STUDY OF CAMEL MEAT MARKETING STRUCTURE IN SEMNAN PROVINCE, IRAN

S. Mashayekhi<sup>1</sup> and S. JahanPanah<sup>2</sup>

<sup>1</sup>Tehran Province Agriculture & Natural Resources Research Centre, Tehran, Iran

<sup>2</sup>Department of Animal Science, Varamin-Pishva Branch, Islamic Azad University, Varamin, Iran

## ABSTRACT

Camels play an important role in the local economy of Iran. This study aims to investigate existing marketing situation of camel meat in Semnan province in northeast of Iran. For this purpose, marketing channels were identified and marketing costs, margins, price spread, and marketing efficiency were determined. The necessary primary data was collected by direct interview from all 16 breeders and 4 slaughterhouses through a survey and 47 camel meat retailers selected by random sampling method in four districts of Semnan province in 2011. The different marketing channels identified for the marketing of camel meat are channel-I (producer-retailer-consumer), channel-II (producer-middleman-retailer-consumer) and channel-III (producer-consumer). More than 86 per cent of camel meat was marketed through channel-I followed by channel-III (10%) and channel-II (4%). The results showed that most of the producers had more than 15 years of experience in camel breeding. It is found that the marketing of camel meat in study area is dominated by local traders. The producer share in consumer's price was the highest (91.8%) in channel-III and the lowest (66.8%) in channel-II. The marketing cost was less in channel-III and the producers received no share in marketing costs of camel meat in all marketing channels. The marketing cost coefficient was the highest (9.3%) in channel-II. The marketing efficiency ratio was higher in channel-III (11.19), mainly because of higher price realization by the producers.

**Key words:** Camel meat, Marketing margin, Marketing cost coefficient, Marketing efficiency, Semnan province

Although several studies on meat production and marketing (Wohlgenant and Mullen, 1987; Digby, 1989; Elsener *et al*, 1998; Marsh & Brester, 2004; Pandit & Dhaka, 2005; Musemwa *et al*, 2007; Ahmed, 2008; Vahabi, 2009; Seidi, 2010) have been conducted in Iran and world, still there is a gap in the literature in terms of economic and marketing aspects of camel meat. As the published information regarding the meat production and marketing in Iran and world are very meager. Aujla *et al* (1998) studied socio-economic aspects of camel herders in Pakistan. The results showed that marketing of camel products is not customary in the studied area. Meanwhile, camel meat gets a low dietary preference by local people and hence, little is consumed locally. Sadr and Fayazi (2009) also investigated the trend of camel production in Iran. They suggested that development of camel breeding is considered as a major priority in Iran's livestock sector. Mehari *et al* (2007) examined marketing situation of camel and camel products in Ethiopia.

Gharehbash *et al* (2008) studied one-humped camel husbandry in Golestan province, Iran. They found that camels are bred for meat production and

average carcass weight was 187.5 Kg. Ahmad *et al* (2010) revealed that there is no established marketing infrastructure at either site and the market places are no more than open grounds in Pakistan.

In this study, identification of all the camel meat marketing channels and the share of marketing agencies, marketing margins, marketing cost coefficient and marketing efficiency in Semnan province was carried out.

## Materials and Methods

The study was conducted in 4 districts of Semnan province, Iran which included, i.e. Semnan, Shahrood, Damghan and Garmsar with an area of 95815 square kilometers.

The necessary primary data was collected through completion of questionnaire by direct interview from all 16 breeders and 4 slaughterhouses through a survey and 47 camel meat retailers, which were selected by random sampling method in 4 townships of Semnan province in the year 2011.

Questionnaires were developed for breeder, retailer and slaughterhouse and pre-tested before use. The executive and scientific experts and canonesses

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SEND REPRINT REQUEST TO S. MASHAYEKHI [email: mashayekhi1346@gmail.com](mailto:mashayekhi1346@gmail.com)

opinions were used for validity test of questionnaires. The coefficient of reliability was determined by Cronbach's alpha coefficient, which were equal to 87, 88 and 77 per cent for breeder, retailer and slaughterhouse, respectively.

A marketing channel is a business structure of interdependent organizations that reach from the point of product or origin to the consumer with the purpose of moving products to their final consumption or destination (Kotler & Armstrong, 2003). Hence, marketing channels indicate how various market participants are organized to accomplish the movement of a product from the producer to the final consumer.

Marketing margin is one of the best tools to analyze performance of market. Marketing margin is calculated taking the difference between producer and retail prices. The high marketing margins reflect less income to producers and more benefits to middlemen. Normally, marketing margins classified into the wholesale and retail margins. Considering the lack of camel meat wholesaler in the study area, marketing margin include only the retail margin, which is difference between retail and farm gate prices. Mathematically, these relationships can be expressed as:

$$MM = PR - PF$$

$$MM = MR$$

Where: MR = Retail margin of camel meat

MM = Total marketing margin of camel meat

PR = Retailer price of camel meat

PF = Producer price of camel meat

The producers' and retailers' share in consumer price are worked out as:

$$PS = \frac{PF}{PR} \times 100$$

$$RS = \frac{PR - PF}{PR} \times 100$$

Where: PS = Producer share in consumer price

RS = Retailer share in consumer price

The definitions of PR and PF were the same as in expression.

Marketing costs are the costs incurred by different marketing functionaries in the marketing process. In camel meat production, the total marketing costs comprises costs on transport, storage, slaughtering, processing, wholesaling, retailing, losses and wastage.

Marketing Efficiency has a lot of importance in marketing analysis. Marketing efficiency is the ratio of value addition for the goods to their marketing cost (Shepherd, 1965). On the other hand, Sheth *et al* (2002) define marketing efficiency as the ratio of marketing output over input. In this study, marketing efficiency was calculated using the Shepherds' formula (Shepherd, 1965). The higher the ratio, the higher is the marketing efficiency and vice-versa. It is given by Equation:

$$ME = \frac{V}{I} - 1$$

Where,

ME = index of marketing efficiency

V = Value of camel meat sold (consumer price)

I = total marketing cost of camel meat

Whenever, marketing cost is considered as a percentage of the final price of product, then this coefficient is called "marketing cost coefficient". It is mathematically expressed as follows:

$$r = \frac{MC}{PR} \times 100$$

Where: r = marketing cost coefficient

The definition of PR is the same as given in expression and MC is equal to I in expression.

## Results and Discussion

The socio-economic attributes of camel meat producers and retailers, which were analyzed using descriptive statistics, is shown in table 1. The study revealed that all the producers and retailers were men. More than 62 per cent of producers and 85 per cent of retailers were within 20-40 years age group.

For the purpose of adopting new technologies, education is an important factor which if lacking can impact adversely on future camel meat production. The study of education status of producers indicated that majority of producers (87.5%) had formal education. It could be inferred therefore, that producers are predominantly literate. But, none of the producers and retailers had higher education.

The results also indicated that most of the producers had more than 15 years of experience in camel breeding. On the contrary, only 12.8 per cent of retailers had above 15 years of experience in business.

As a mentioned, there was no wholesaler in marketing network of camel meat in Semnan province, Iran. Three channels for marketing of camel meat were identified in the study area:

**Table 1.** Distribution of camel meat producers and retailers based on socio-economic variables.

Variable	Producer		Retailer	
	Frequency	%	Frequency	%
<b>Gender</b>				
Male	16	100	47	100
Female	-	-	-	-
<b>Age</b>				
Under 20	1	6.25	2	4.2
20 - 30	3	18.75	13	27.7
31 - 40	6	37.5	25	53.2
41 - 50	6	37.5	7	14.9
Above 50	-	-	-	-
<b>Level of education</b>				
Illiterate	2	12.5	-	-
1 - 5	7	43.75	23	48.9
6 - 8	4	25	15	31.9
9 - 12	3	18.75	9	19.2
Above 12	-	-	-	-
<b>Years of Experience</b>				
1 -5	1	6.25	17	36.2
6 -10	2	12.5	15	31.9
11 -15	1	6.25	9	19.1
Above 15	12	75	6	12.8

Source: Research findings

Channel I: (Producer - Retailer - Consumer)

Channel II: (Producer - Middleman - Retailer-Consumer)

Channel III: (Producer - Consumer)

The marketing of camel meat was dominated by local traders. More than 86 per cent of camel meat was marketed through channel I followed by channel III (10%) and channel II (4%). In channel I as well as channel II producers sold their produce directly to

local traders. Only in channel III, no intermediary was involved and the produce was sold directly to consumer. The channel-wise distribution of camel meat in the study area has been presented in Fig 1.

The marketing cost of camel meat was worked out separately for the seller and buyer for each channel (table 2). The seller's marketing cost components were maintenance, extra-feeding, transportation, market fee, middlemen commission, slaughter cost, labour and some miscellaneous costs. In this study, the marketing cost components were not considered in detail. It is interesting to note that the producers received no share in marketing costs of camel meat in all marketing channels in the study area.

**Table 2.** Marketing cost of camel meat through different channels (Rials\*/Kg).

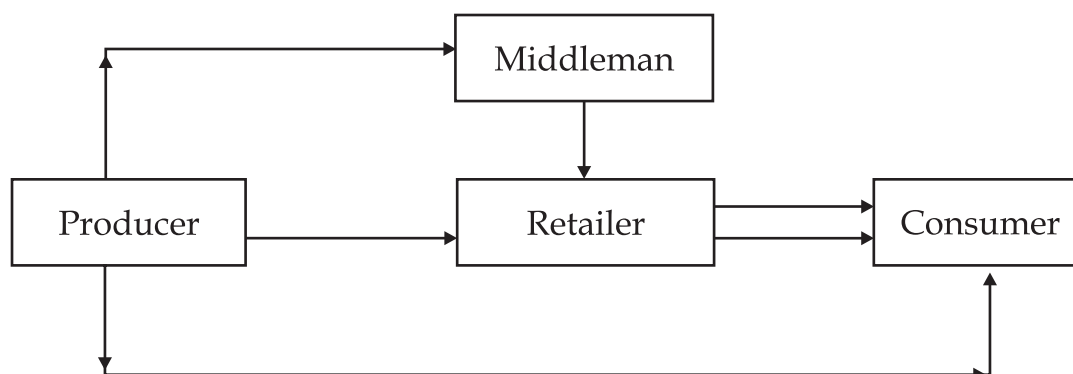
Particular	Channel I	Channel II	Channel III
Producers	-	-	-
Middlemen	-	1520	-
Retailers	9850	9150	-
Consumers	-	-	7440
Total	9850	10670	7440

Source: Research findings

\* In the period of study 1 US\$= 11233 Rials

The marketing cost was lower in channel III. It was due to the fact that there is no market fee and middlemen commission in this marketing channel. On the other hand, it was found that the transportation and slaughter costs were almost the same in all channels.

The producer share in consumer's price showed variation across different channels (table 3). It was the highest (91.8%) in channel III and the lowest (66.8%) in channel II. The high share was made possible due to the total elimination of middlemen intervention between producers and consumers. Although the highest price was realised by producer in channel III



**Fig 1.** Camel marketing channels in Semnan province.

(83220 Rials/ Kg), but this channel was least preferred by producers, because of two reasons, the first reason is that producer has to search customer for longer period and the second is risk of some unsold produce associated with this channel.

**Table 3.** Producer and retailer price of camel meat and their share in consumer price.

Particular	Channel I	Channel II	Channel III
Producer price (Rials/Kg)	78570	76370	83220
Retailer price (Rials/Kg)	110370	114250	-
Consumer price (Rials/Kg)	110370	114250	90660
Producer share in consumers' price	71.2	66.8	91.8
Retailer share in consumers' price	28.8	33.2	-

Source: Research findings

**Table 4.** Price spread, marketing cost coefficient and marketing efficiency under different channels.

Particular	Channel I	Channel II	Channel III
Price received by producer (Rials/Kg)	78570	76370	83220
Retailer's net margin (Rials/Kg)	22310	27210	-
Total marketing cost (Rials/Kg)	9850	10670	7440
Consumer price (Rials/Kg)	110370	114250	90660
Total marketing margin (Rials/Kg)	32160	37880	7440
Marketing cost coefficient	8.9	9.3	8.2
Marketing efficiency	10.21	9.71	11.19

Source: Research findings

The costs, margins and efficiency of marketing depend primarily on the channels of marketing. The Price spread, marketing cost coefficient and marketing efficiency of camel meat in study area is presented in table 4. The marketing cost in camel meat in channel I, II and III accounted for nearly 8.9, 9.3 and 8.2 per cent, respectively of the consumer's price indicating that a relatively substantial amount is spent on marketing. The marketing cost coefficient was highest (9.3%) in channel II and the lowest (8.2%) in channel III. It shows the increased role of middlemen in channel II.

The marketing efficiency ratio was higher in channel III (11.19), mainly because of higher

price realisation by the producers due to reduced marketing cost. This means that higher marketing margins taken away by marketing intermediaries in channel I and II resulted in poor efficiency recorded by them. On the other hand, this table shows that the longer marketing channel (channel II), the larger marketing margin.

On the whole, this study on marketing structure of camel meat showed that the current marketing system of camel meat in study area is inappropriate. It is dominated by local traders and producer share in consumers' price is low for more than 90 per cent of produce distributed to the market. High marketing margin is observed in marketing system. In addition, among all identified marketing channels, direct marketing channel (producer-consumer) was most efficient marketing channel.

Based on the insights provided by the study, government should encourage development of cooperatives and marketing self-help groups between camel meat producers to increase the producer share in consumers' price.

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