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A Survey on Production and Marketing Patterns of Small Ruminants in Balochistan

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ABSTRACT

A survey (n= 214) was conducted on the production and marketing patterns of small ruminants in Balochistan in 2001. Data was collected from producer, middleman, wholesaler and final seller. The average number of small ruminants per flock was 134. The breeds of sheep and goats reared were Balochi, Bibrik, Rakhshani and Khurasani, Pahari, Lehri, respectively. Average mortality rate was 25 % in sheep and 17% in goats while abortion rate was 14% in sheep and 13% in goats. A farmer on an average spent on feed, veterinary, marketing, shepherding and miscellaneous costs Pakistani Rupees (Rs.) 118, 124, 24, 383 and 55 per animal per year respectively. Average net return earned by the farmer was Rs. 247 per animal per year. Breakdown of consumer rupee showed that the share for producer, middleman, wholesaler and final seller was 66%, 20%, 8% and 6% respectively. The cost benefit ratio for producer, whole seller, middlemen and final seller was Rs. 1:1.03, 1:1.03, 1:1.09 and 1:1.02 respectively. It may be concluded that among various marketing agencies, middleman received better return in the business of small ruminants in Balochistan.

***Key words*:** Production, marketing, small ruminants, Balochistan.

INTRODUCTION

Balochistan has vast area (347,190 sq. km) which is 44 percent of the total land mass of Pakistan. It has an arid and semi-arid climate. Nagy et al. (1989) reported that only 4 percent of the area is cultivable and the remainder is comprised of deserts, rangeland and mountain forests. Sheep and goats are particularly important in the rangeland areas from socio-economic standpoint. The rangelands located in the north of the province are considered to be the best in grazing quality. This region constitutes about 38% of the total area and carries 76% of total livestock in the province (Faqir and Atiq, 2000).

Transhumant and nomadic livestock production system is faced with unorganized practices, high marketing costs, long marketing channels, lack of grading, information gap, and unspecified government policies. This has not only adversely affected the consumers but also constrained the livestock farmers. There is a need to improve small ruminant production to make it commercially more viable and market oriented. It is expected that this change will help in alleviating poverty in the province. In order to plan better production and marketing in small ruminants, it becomes extremely important that an exploratory research be designed. Therefore, the present study was planned to conduct and analyze a survey on the production and marketing patterns in small ruminants.

MATERIALS AND METHODS

In order to assess the production and marketing system of small ruminants, a survey was conducted in 2001 in district Mustong, Balochistan. It was based on

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farmer/producer (n=85), wholesaler (n=47), middlemen (n=37) and final seller (n=47). A detailed questionnaire was developed and related people were interviewed amongst various marketing channels.

Method of Analysis

The definitions and formulae used to analyze the collected data are as follows.

Market Margins:

Estimation of marketing margins was done as described by Qureshi (1974), which revealed the earning of the specific agencies (marketing channel) to saving.
Mm = (Am x100) / Sp, whereas, Mm, Am, Sp denote marketing margins, absolute margins and selling price respectively.

Net Margins

Net margins were calculated according to Thomsen (1951), which showed earnings by specific marketing channel after all marketing costs incurred. Nm = Am – Mc, whereas, Nm, Am, Mc denote net margins, absolute margins and marketing costs, respectively.

Breakdown of Consumer's Rupee

Breakdown of Consumer's rupee, an important indicator of consumer expenses was computed by the formula used by Thomsen (1951). Bdcr = Nm/Rp, whereas, Bdcr, Nm and Rp denote breakdown of consumer's rupee, net margins and retail price, respectively.

Cost Benefit Ratio

It is the amount received in the shape of profit on the cost of rupee, computed by the method adopted by Siddiqui et al. (1983).
Cbr = Nr/Tc, whereas, Cbr, Nr and Tc stand for cost benefit ratio, net returns and total cost, respectively.

RESULTS AND DISCUSSION

Production Aspects

Productive and reproductive parameters of small ruminants in Balochistan are presented in table 1. The average number of the animals (sheep and goats) from the flock was 133. Majority of flock owners raised Balochi breed (65%) followed by Bibrik (25%) and Rakhshani (10%). This pattern of breeds is in agreement to previous findings reported for Zhob Distict (Mandokhail, 2001) and Quetta regions (Khan, 2000). The average body weight in sheep was 34 kg and in goats was 28 kg. The average male: female ratio for breeding purpose in sheep flock was 1: 40 while in goats was 1:25. Breeding age (puberty) was similar in both sheep and goats which ranged from 17-23 months. In sheep, breeding season was from August to October, while, in goats it was little earlier i.e., from July to September. Lambing season was from February to March while kidding season was from January to March. Shearing/ clipping were done in April for sheep and in March for goats. Shortage of feeding was observed from December to March for small ruminants in the area. Housing management was not permanent for sheep and goats. Abortion rate was 14 % in sheep and 13 % in goats. Breeding and productive life was 7 years in sheep and 8 years in goats. The higher mortality percent in young sheep may be due to extreme weather conditions. There was severe cold (winter, -10 to 15^0C) and most of the farmers had 'kacha' housing for their animals with very little or no proper arrangements of heating. This seems to be the cause of higher mortality percentage in the flocks. The productive and reproductive results of the present study are comparable with Khan (2000); however mortality ratio recorded was comparatively less (8% in sheep, 10% in goats) in his study. This could be due to better housing management by the farmers in similar climatic conditions. In case of wool

Table1: Productive and Reproductive Parameters of Small Ruminants in Balochistan

Parameter	Sheep	Goats
Breed	Balochi, Bibrik, Rakhshani	Khurasani, Pahari, Lehri
Adult weight (kg)	34	28
Male to female	1:40	1:25
Breeding season	August & October	July to September
Breeding age (months)	17 to 23	17 to 23
Lambing/kidding season	February to March	January to March
Shearing/clipping	April	March
Shortage of feeding	December to March	December to March
Housing	Not Permanent	Not Permanent
Mortality (%)	25	17
Abortion rate	14	13
Breeding life (years)	7	8

production from sheep, the average yields for Balochi, Bibrik and Rakhshani were 2.38, 1.45 and 1.0 kg respectively. The average goat hair production was 1.17, 0.91 and 1.78 kg for Khurasani, Lehri and Pahari respectively.

Marketing Aspects

Fixed costs

The data of the present study showed that average total fixed cost was Rs. 428 per animal per year. The results are in agreement with Khan (2000) who reported similar trend in fixed costs in Quetta region.

Cost of production

The present data revealed the average amount spent by producer for both small ruminants on feed (Rs. 119), veterinary (Rs. 124), marketing (Rs. 124), shepherding (Rs. 383) and miscellaneous (Rs. 55) things per animal per annum. In this way the gross recurring expenditure incurred by each farmer / producer per animal per annum was Rs. 805. Raina and Moorti (1990) observed that cost of production was lower for the large sized farms (flock size > 50 animals) in comparison to the small sized farms (flock size < 50 animals) mainly due to better management.

Gross revenue by different sources to farmers / producers

The present data showed producer / farmer earnings from the sale of animals (Rs. 1006), wool / hair (Rs. 39) and sale of manure (Rs. 7). In this way the farmer/producer obtained a total gross income from different sources to Rs. 1052/animal/year. Our findings are consistent with those of Khan (2000) who reported similar trend of gross revenue on sheep and goats in Quetta. However, Nwafor (2006) concluded that prices of these ruminants are not determined by weight, rather by the general appearance of the animal, market site and season of the year.

Average net revenue:

In this study, it was observed that the total expenditure (fixed cost + gross expenditure) of the farmer was Rs. 805 per animal per year and he received Rs. 1052 per animal per year. It shows that net returns to farmers / producers were Rs. 247 per animal per year. Other workers who conducted similar studies in other districts of Balochistan (Khan, 2000; Mandokhail, 2001) reported higher net margins. This could be due to higher demand or location of marketing systems near big cities. In general, price information is not clear in the current marketing systems and traders are unwilling to share the purchasing and sale prices to the end user. It was

observed in Kenya that in the absence of market information system, the share of the total value that producers receive is minimal and discourages production (Anonymous, 1995).

Cost incurred by agents:

The wholesaler incurred marketing cost of Rs. 91, middlemen of Rs. 80 and final seller of Rs. 103.0 / animal / year in this study. These values are higher when compared with earlier survey conducted in Zhob (Mandokhail, 2001).

Marketing margins:

The results showed that through small ruminants marketing, the wholesaler earned Rs. 121, middlemen Rs. 155, and final seller Rs. 127, per head per year. This indicates that wholesaler earned 7.37 %, middlemen 8.62 % and final seller 6.59 %. These values vary with those of the earlier reports (Khan, 2000; Mandokhail, 2001). It was observed that after incurring all marketing costs, the middlemen earned more profit i.e., Rs. 75 (48.28 %), while wholesaler earned Rs. 30 (24.77 %), and final seller Rs. 24 (18.77 %), which is the lowest from marketing of small ruminants.

Breakdown of consumer rupee:

Breakdown of consumer rupee showed that producer pocketed 66 % followed by middlemen (20 %), wholesaler (8%) and final seller (6%). However, this trend could be different in other locations due to various marketing patterns.

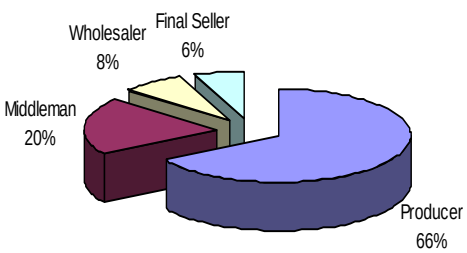

Figure 1 Breakdown of consumer's rupee in business of small ruminants

Cost benefit ratio

It was observed that on investment of one rupee, the farmer/producer earned Rs. 1: 0.30 rupee while, middlemen got maximum benefit (1:0.93) and final seller got the lowest (1:0.23). Chauhan (1990) in his findings concluded that due to non availability of specific channel for marketing livestock products, it is often sold to middleman who earned the maximum profit. It may also be due to more efficient and well versed marketing intelligence of the middleman.

In summary, it is concluded that among various marketing channels, middleman got better return for the business of small ruminants. It is recommended that efforts to educate the farmers about livestock health, management and marketing should be carried. Furthermore, price should be fixed on live weight basis in order to bring uniformity. Establishing markets which have all facilities for housing etc. can be very useful to the producers.

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