



Costs, returns and profitability of goat rearing business in Maharashtra

B.R. PAWAR, S.A. CHIVARE, P.U. KAUTHEKAR AND A.L. MANE

ABSTRACT: Investigation was carried out during the year 2010-11. About 60 goat rearers were randomly selected from ten villages of two Tehsils of Osmanabad district of Maharashtra. Cross sectional data were collected from goat rearers with the help of pre-tested schedule by personal interview method. Cost concept of variable cost and fixed cost were used for evaluation of total cost. The results revealed that, average size of goat unit was 13.75 invested goats. Use of human labour was 352.55 man days. It implied that goat rearing could create sufficient employment in rural area. Annual production of young goats was 29.15 produced goats. In short young goats, milk and manure were sources of income in goat rearing business. Total cost per farm was Rs. 68149.68 while, that of per goat was Rs. 4955.62. Among individual items of expenditure, the share of human labour was 1.73 per cent followed that of by depreciation on invested goat (14.40 %) and interest on fixed capital (13.95 per cent) and so on. Thus, goat rearing business was labour intensive. Gross return per farm and per goat was Rs. 95566.05 and Rs. 6950.26, respectively. Per farm net profit was Rs. 27429.74 while, per goat net profit was Rs. 1994.69. Output-Input ratio was found to be 1.40.

KEY WORDS : Invested goat, Produced goat, Total cost, Gross return, Net profit

HOW TO CITE THIS PAPER : Pawar, B.R., Chivare, S.A., Kauthekar, P.U. and Mane, A.L. (2012). Costs, returns and profitability of goat rearing business in Maharashtra, *Res. J. Animal Hus. & Dairy Sci.*, 3(2) : 85-87.

INTRODUCTION

In India, goat is an important part of rural economy. In the country goat is reared for milk in addition to meat. The country ranks second in goat meat production in the World. Goat provides meat, milk and manure which aspects are helping to improve the economic contribution of goat rearers. Goat creates employment to the rural poor besides effectively utilizing unpaid family labour. Goat has religious importance in many societies. Due to small size of body and domicile nature, housing requirements and managerial problems with goat are less. Goat is prolific breeder and achieve sexual maturity at the age of 10-12 months; gestation period in goat is short (150 days) and at the age of 16-17 months it starts giving milk. Twinning is very common and triplet and quadruplets are rare. The animal can thrive well on wide variety of thorny bushes, weeds, agricultural

by-products unsuitable for human consumption. Osmanabadi goat is major breed in Marathwada region. Osmanabadi goat is multifunctional animal and plays a significant role in the region. Goat rearing is an enterprise which has been practiced by a large section of population in the study area. By keeping in view, the above aspect, the present study has been undertaken.

MATERIALS AND METHODS

Multistage sampling design was adopted for the selection of district, Tehsils, villages and goat rearers. In first stage, Osmanabad district was purposely selected because of more goat population. In second stage, Tuljapur and Osmanabad Tehsils of Osmanabad district were selected on the basis of highest goat population. In third stage, from each selected tehsil, five villages were selected on the basis of highest number of goat rearers in villages. The villages were like Bembali, Dhuta, Kangara, Palaswadi and Sarola from Osmanabad Tehsil. Five villages namely, Ganjewadi, Jalkotwadi, Kati, Kemwadi and Savargaon were selected from Tuljapur Tehsil. In fourth stage, from each village, six goat rearers were selected randomly. In this way, from 10 villages of two Tehsils, 60 goat rearers were selected. Then cross section all data were collected with the help of pre-tested schedule by personal interview method. The

MEMBERS OF RESEARCH FORUM

Address for correspondence :

S.A. CHIVARE, Department of Agricultural Economics, College of Agriculture, LATUR (M.S.) INDIA
Email : ukmeel@gmail.com

Associated Authors' :

B.R. Pawar, P.U. Kauthekar and A.L. Mane, Department of Agricultural Economics, College of Agriculture, LATUR (M.S.) INDIA

data were collected during the year 2010-11 for the period from 1st July, 2010 to 30th June, 2011. The data were related to use of resources namely invested goats, use of dry fodder, green fodder concentrate and human labour in goat rearing business. Data with respect to output as produced goat, milk and manure were also collected.

Cost concept of variable cost and fixed cost was used to analyze the data. Variable cost included dry fodder, green fodder, concentrate, human labour, medicine, electricity charge and miscellaneous expenditure. Fixed cost included depreciation on invested goats, goat shed and equipments. Evaluation of cost items as human labour was evaluated at the rate Rs. 100.00 per day for male and Rs. 80.00 per day for female. One man day consisted with 8 hours of work. The female labour was converted into man day by multiplying to number of female with 0.80. Rates of dry fodder, green fodder and concentrate were Rs. 3.00 per kg, Rs. 1.00 per kg and Rs. 20.00 per kg, respectively. Interest on working capital was calculated at the rate of 13 per cent. Depreciation on goats was calculated at the rate of 12.5 per cent while depreciation on goat shed and

equipments was calculated at the rate of 10 per cent. Interest on fixed capital was calculated at the rate of 11 per cent on the asset. In term of produced goat, milk and manure, the rates were Rs. 3027.00 per produced goat, Rs. 18.00 per litre of milk and Rs. 200 per quintal of manure.

RESULTS AND DISCUSSION

Results with respect to physical inputs, costs and returns in goat rearing business - were obtained and are presented as follows :

Physical inputs and outputs in goat rearing business:

Per farm and per goat annual physical inputs and outputs in goat rearing business, unit as a whole were calculated and are presented in Table 1. The results showed that, use of human labour was 352.55 man days for goat unit as a whole but that was 25.64 man days for one invested goat. For goat unit as a whole, use of dry fodder, green fodder and concentrate was 184.39 kg, 517.41 kg and 249.37 kg, respectively. Per goat use of dry fodder green fodder and concentrate was 13.41 kg, 37.63

Table 1 : Per farm and per goat annual physical inputs and outputs in goat rearing business

Sr. No.	Particulars	Physical unit	Per farm (Unit/13.75 goats)	Per goat (Unit/goat)
Input				
1.	Dry fodder	kg	184.39	13.41
2.	Green fodder	kg	517.41	37.63
3.	Concentrate	kg	249.37	18.13
4.	Human labour	man day	352.55	25.64
Output				
1.	Young goats (Produced goats)	No	29.15	2.12
2.	Milk	L	283.50	20.61
3.	Manure	q	11.13	0.81

Table 2: Per farm and per goat annual expenditure in goat rearing business

Sr. No.	Particulars	Per farm (Rs./ 13.75 goats)	Per goat (Rs./goat)	Per cent
1.	Dry fodder	553.17	40.23	0.81
2.	Green fodder	517.41	37.63	0.76
3.	Concentrate	4987.40	362.72	7.32
4.	Human labour	35255.00	2564.31	51.73
5.	Medicine	683.24	49.69	1.00
6.	Electricity charge	139.84	10.17	0.21
7.	Miscellaneous expenditure	369.88	26.90	0.54
8.	Interest on working capital @ 13%	5525.77	401.85	8.11
9.	Variable cost (Σ 1 to 8)	48031.71	3493.22	70.49
10.	Depreciation on goat @ 12.5%	9812.50	713.65	14.40
11.	Depreciation on shed @ 10%	555.00	40.36	0.81
12.	Depreciation on equipments @ 10%	235.70	17.14	0.35
13.	Interest on fixed capital @ 11 %	9504.77	691.26	13.95
14.	Fixed cost (Σ 10 to 13)	20107.97	1462.40	29.51
15.	Total cost (Σ 9 and 14)	68139.68	4955.62	100.00

Table 3: Per farm and per goat annual profitability in goat rearing business

Sr. No.	Particulars	Per farm (Rs/13.75 goats)	Per goat (Rs /goat)	Per cent
1.	Return from young stock (Produced goats)	88237.05	6417.24	92.33
2.	Return from milk	5103.00	371.13	5.34
3.	Return from manure	2226.00	161.89	2.33
4.	Gross return (Σ 1 to 3)	95566.05	6950.26	100.00
5.	Variable cost	48031.71	3493.22	70.49
6.	Fixed cost	20107.97	1462.40	29.51
7.	Total cost (Σ 5 and 6)	68139.68	4955.61	100.00
8.	Operating income (Gross return minus variable cost)	47534.71	3457.06	--
9.	Net profit (Gross return minus total cost)	27429.74	1994.69	--
10.	Output-input ratio (Gross return divided by total cost)	1.40	1.40	--

kg and 18.13 kg, respectively.

It was evident from the table that per farm production of young goats was 29.15 in numbers but that was 2.12 produced goats per invested goat. In the year round milk production was 283.50 litres per farm and 20.61 litres per invested goat. Manure production was 11.13 quintals per farm while that was only 0.81 quintal per invested goat.

Expenditure in goat rearing business:

Per farm and per goat annual expenditure in goat rearing business was estimated and is presented in Table 2. The results revealed that, per farm variable cost was Rs. 48031.71 while that of fixed cost was Rs. 20107.97. Thus, per farm total cost was found to be Rs. 68139.68. It was clear that expenditure on human labour was Rs. 35255.00 which was predominant item in variable cost. Similarly, depreciation on invested goats showed dominant item of fixed cost as Rs. 9812.50. In relation to per goat expenditure, total cost was found to be Rs. 4955.62 in a year. The variable cost and fixed cost per goat was Rs. 3493.22 and Rs. 1462.40, respectively. It was also observed that in total cost, the share of human labour was 51.73 per cent in goat rearing business. In other words, goat rearing business was labour intensive which could provide employment in rural households. The similar results were found by Prabhakaran and Thirunavakkarasu (1995) in regards to percentage of human labour and annual income in goat rearing business.

Profitability in goat production:

Per farm and per goat annual profitability in goat rearing business was estimated with respect to goat unit as whole as well as per goat and is presented in Table 3. Gross return per goat farm was Rs. 95566.05 while that of per invested goat was

Rs. 6950.26. Thus, share of young goats (produced goats) was 92.33 per cent followed by that of milk (5.34 per cent) and manure (2.33 per cent). It was also observed that, operating income was Rs. 47534.71 per farm and Rs. 3457.06 per invested goat. Thus, net profit was Rs. 27429.74 per farm and Rs. 1994.89 per invested goat. It was clear that output-input ratio was 1.40 in goat rearing business. The results were in conformity with the observations made by Yadav (2002) in regards to gross return per goat.

LITERATURE CITED

- Deoghare, P.R. and Bhattacharyya, N.K. (1994). Economics of Jamunapari goat rearing in Etawah district of Uttar Pradesh. *Indian J. Anim. Sci.*, **64**(12): 1390-1293.
- Gupta, D.C, Suresh, A. and Sethi, D. (2011). Economics of sheep and goat rearing in semiarid region of Rajasthan. *Indian J. Small Ruminants*, **17**(2): 215-221.
- Jitender, B., Pandey, U.K. and Suhag, K.S. (2005). Small ruminants economy of semi-arid region in Hariyana. *Indian J. Agric. Econ.*, **60**(2): 163-183.
- Kakade, S.J., Jahagirdar, S.W., Kale, P.N. and Deshmukh, A.W. (1998). Goat rearing: A profitable enterprise. *Maharashtra. J. Agric. Econ.*, **9**(1/2): 72.
- Pawar, B.R. and Thombre, B.M. (1995). Economics of goat rearing industry in Maharashtra. *Indian J. Anim. Production Mgmt.*, **10**(172): 48-51.
- Prabhakaran, R.T. and Thirunavakkarasu, M. (1994). Income and employment dynamic of goat fann in different Agro-climatic zones of Tamilnadu. *Indian J. Anim. Prod. Mgmt.*, **11**(1): 14-26.
- Yadav, S.S. (2002). Economics of goat farming in Sangali district. *Thesis Abstract*, **29**(2):181-182.

Received : 21.05.2012; Revised: 07.11.2012; Accepted : 16.11.2012