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Socio Economic Status and Sheep Husbandry Practices of Migratory Shepherds in Western Maharashtra

S. G. Shirsat[1], S. R. Kolhe[2], M. P. Nande[3*], A. V. Khanvilkar[4] and T. C. Shende[5]

[1]M.V.Sc. Student, Department of Veterinary & A.H. Extension Education,
[2]Assistant Professor, Department of Veterinary & A.H. Extension Education,
[3]Assistant Professor, Department of Veterinary & A.H. Extension Education,
[4]Associate Professor, Department of Livestock Production & Management,
[5]Assistant Professor, Department of Animal Genetics & Breeding
Krantisinh Nana Patil of College of Veterinary Science, Shirwal
Maharashtra Animal & Fishery Sciences University
*Corresponding Author E-mail: drmilinda@yahoo.co.in

ABSTRACT

A study of socio economic status of migratory shepherds and sheep husbandry practices of sheep in Western Maharashtra was carried out on 120 migratory shepherds in Pune and Sangli district of Western Maharashtra. The study revealed that, majority of migratory shepherds were in the middle age group (61.67%), illiterate (60%), almost all belonging to nomadic tribe and medium family sized (63.33%). Sheep rearing was their main occupation; they possessed kutcha type of house (66.33%), marginal type of land holding (43.33%), medium type of material possession (65.83%), medium annual income (72.50%), medium level of experience (65%) and medium flock size (72.50%). Most of the respondents were member of one organization (71.67%) and had middle level of extension contact (64.16%). Women were actively participated in care and management of sheep (98.33%). Village market was preferred mostly for marketing of sheep and sheep products (94.17%). Migratory shepherds had medium level of knowledge (67.50%) followed by low (21.67%) and high (10.83%) regarding sheep husbandry practices. They have adequate knowledge of selection of ram, feeding of colostrum, vaccination and deworming. Migratory shepherds had medium level of adoption (70.83%) followed by low (16.67%) and high (12.50%) level of adoption in breeding, feeding, management, health care, record keeping and marketing sheep husbandry practices.

Key words: Socio economic status, migratory shepherds, Sheep Husbandry Practices, Western Maharashtra.

INTRODUCTION

Livestock is one of the fastest growing agricultural sub sectors in developing countries and indispensable to the economic, nutritional, and social well-being of the farmers. Livestock and poultry are the important contributors to the national economy.

In India, according to the 19th Livestock Census, total population of sheep was 65.06 million which is 6.4 per cent of the world's sheep population. Maharashtra state has a population of around 25.80 lakh sheep, which is the 6th largest state-wise population in India and is responsible for 3.97 per cent share of the total sheep population of our country. Maharashtra state belongs to the southern peninsular region of the country and has only two recognized sheep breeds i.e. Deccani and Madgyal. This region is semi-arid, hot and humid along the coast. According to the 19th Livestock Census the sheep population of western Maharashtrais 19.94 lakh. Sheep rearing is done principally in dry and semi-arid district of western Maharashtra. Small ruminants like sheep and goat are very important sources of livelihood for small and marginal farmers. In agrarian economy they contributed greatly, especially in areas where crop and dairy farming are not economical, and play an important role in the livelihood of a large population.

In Maharashtra sheep farming is done mostly with temporary or seasonal migration. Migration of flock in search of feed, fodder and water is a common practice of shepherds in western Maharashtra. During migration period, shepherds generally follow certain traditional practices but modern scientific practices do play a very important role in improving the production. The improved sheep husbandry practices make it more sustainable and profitable livelihood enterprise. The knowledge regarding existing sheep husbandry practices helps to prepare the strategies for better adoption of sheep husbandry practices.

MATERIAL AND METHODS

The study was conducted in Pune and Sangli district of Western Maharashtra. A total of 60 migratory shepherds were selected from each district by purposive random sampling. They were interviewed with the help of structured schedule keeping in view the objectives of the study. Thus, total 120 respondents were selected from both districts to study the sheep husbandry practices adopted by them.

Collected data were tabulated and analysed by using mean, median and Standerd deviation. A modified scale of socioeconomic status and sheep husbandry practices of migratory farmers was developed with the help of expert of K.N.P. College of Veterinary Science, Shirwal of Maharashtra state.

RESULT AND DISCUSSION

Age:
It was revealed that majority of the Shepherds (61.67%) fall into middle age group followed by young age group (20%) and old age group (18.33%). Distribution of respondents according to the age is presented in Table 01 (Sr.No.01).

Involvement of shepherds belonging to middle age is obvious in different activities associated with migratory sheep, husbandry and associated practices by virtue of their physical fitness. Since, they can smoothly shoulder the responsibility. Similar findings were reported by Rajanna *et al.*[15] and Rao[18] and most of the shepherds studied by them were of old and young age groups. In another study from Thanjavur district of Tamil Nadu maximum sheep farmers belonged to 30 to 40 years of age group. More number of shepherds belonging to middle age group (57.50%), followed by old age (26.67%) and young age (15.83%) in Mahabubnagar district of Telangana state were also recorded by Sridhar,[22].

Education:
The educational status of migratory shepherds is presented in Table 01 of (Sr. No.02). Most of the migratory shepherds were illiterate (60%), followed by shepherds attended secondary schooling (17.5%), primary schooling (15%), higher secondary education (5.83%), and least at college level (1.67%).

The increased percentage of illiteracy in migratory shepherds could be attributed to the fact that traditionally, least priority must have been given to the education by them. Seasonal migration may also be hindrance in acquiring education. These findings are in accordance with Rajanna *et al.*[15]. They

reported that larger population of sheep farmers were illiterate (74.65%) followed by literate (25.35%) shepherds from Telangana Zone of Andhra Pradesh. Involvement of illiterate shepherds in sheep rearing and sheep husbandry practices has also been observed by other researcher previously[3,22,16].

Caste:

The Caste status of Migratory shepherds is prescribed in Table 01of (Sr. No.03). Caste based observation were made to know the involvement of different communities in migratory type of sheep husbandry. It was observed that almost all migratory shepherds were from Nomadic Tribe category. In Maharashtra, sheep husbandry is a traditional and predominant occupation of shepherds of Dhangar community. These observations are in accordance with the Patil *et al*.[12] and Pokharkar[13]. Patil *et al*.[12] observed that dhangar is traditionally semi-nomadic pastoral society primarily located in the state of Maharashtra. Pokharkar[13] stated that, sheep is one of the most important livestock species adopted by dhangar community in Maharashtra state.

Family size:

Family size was evaluated and presented in Table 01 at (Sr.No.04). It was observed that most of them had medium family size (63.33%) followed by small family size (31.67%). Hardly five per cent migratory shepherds were having large family size. Medium family size was a group of members five to eight members which includes spouse, children and their parents. Most of the shepherds were living with their parents hence maximum shepherds had medium family size. Medium family size was helpful for them during migration period. Rajanna *et al*.[15] reported similar observation that most of the sheep farmers (71.53%) had medium family size followed by large (21.01%) and only (7.14%) had small family size in Telangana Zone of Andhra Pradesh. These observations were also in concurrence with the findings reported by Tungu *et al*.[25], Sridhar[22] and Ramesh[16].

Occupation:

It was observed that main occupation of the respondents was sheep farming (100%). Among subsidiary occupation, shepherds were involved in agriculture (81.67%), goats rearing along with sheep (11.67%) and dairy farming (6.66%) presented in the Table 01 at (Sr. No.05)

The main occupation of all shepherds was sheep farming since it is traditional occupation and this occupation is taken generation to generation. These observations are in agreement with the findings of Choudary *et al*.[5] and Sridhar[22]. They have also observed that sheep husbandry as a primary occupation of shepherds from other region of India. Majority of shepherds were involved in agriculture as a subsidiary occupation due to holding of agricultural land. Some of the shepherds reared goat along with sheep as a subsidiary occupation for additional income. A study conducted by Chandran *et al*.[4] from Bihar recorded sheep rearing as primary occupation of Shahabadi sheep rearers (69.52%), followed by agriculture (25.71%) and other occupation (4.76%).

Type of house:

Relatively more number of shepherds (66.33%) lived in kutcha houses and remaining shepherds (36.67%) were lived in pucca houses during their non migratory period presented in table No. 01 at (Sr. No.06). Majority of migratory shepherds living in kutcha house might be due to their maximum period passed in migration and they use house only in rainy season for shelter. These findings are in accordance with the observations of Rajanna *et al*.[15] and Chandran *et al*.[4]. They also reported that majority of shepherds possessed kutcha house followed by pucca house present findings are also supported by Amitendu *et al*.[1], who revealed that shepherds from Paschim Midnapur district of West Bengal had kutccha house (44.60%) followed by hut (24.46%), mixed type houses (17.27%) and pucca house (13.67%).

Land holding:

Majority of the respondents (43.33%) were marginal farmers followed by small farmers

(31.67%), semi medium farmers (21.67%), landless farmers (2.50%) and medium farmers (0.83%) respectively presented in Table 01 at (Sr. No.07). The size of land holding might be decreasing due to division of land holding along the generations and change of integrity of family hence most of the shepherds were marginal farmers. Rajanna *et al*.[15] investigated migratory pattern of shepherds from Telagana zone of Andhra Pradesh and related observations were recorded. They revealed that majority of sheep farmers were marginal (45.66%) followed by small (33.16%), landless (14.24%) and very few (6.94%) belonged to the large farmers category. Present findings are also supported by Choudary *et al*.[5] and Arpana *et al*.[3].

Material Possession:
Table 01 (Sr. No.08) indicated that maximum respondents belonged to medium category (65.83%) of material possession followed by low category (30%) and high category (4.67%). High frequency of medium category of material possession might be due to moderate annual income and increase in standard of living of the respondents. The above findings were comparable with the observation made by Rao[18] and Roy *et al*.[19] Rao[18] observed that 70.83 per cent of the shepherds belonged to medium material possession category, subsequently 22.5 per cent in low, and 6.67 per cent in high categories in Srikakulan district of Andhra Pradesh.

Annual income:
Majority of respondents (72.50%) had medium annual income group followed by (15.83%) high income group and (11.67%) low income group, presented in Table 01 at (Sr. No. 09).

Results showed that average annual income of the migratory shepherd in the study area was Rs.94, 024/-. The migratory shepherds were mainly depends upon sheep farming as a traditional occupation. Sheep were the main source of income to the migratory shepherds. It was found in a study by Patil *et al*.[12] that, in Maharashtra most of the sheep farmers (44%) had annual income ranged between Rs.50000-100000 followed by

(26.66%) less than Rs.50, 000/- and more than Rs.100000/-. Similar findings were made by Rajanna *et al*.[15]. They revealed that 85.76 per cent of farmers generated medium annual income (54,957 to 90,750/-) and 10.24 per cent farmers had high annual income above 90,750/- in Telangana region. Rao[17] conducted research work on knowledge empowerment of sheep husbandry practices through multimedia modules and concluded with the parallel observations that majority of sheep farmers had medium annual income.

Experience:
It was observed from Table 01 at (Sr. No.10), that majority of the respondents (65.00%) had medium level of experience followed by low level of experience (19.17%) and high level of experience (15.83%). Sheep farming is the main family occupation of shepherds from several decades therefore maximum farmers had 16 to 37 years of experience. These observations are in accordance with the findings recorded by Rajanna *et al*.[14] in which 64.58 per cent of sheep farmers had medium experience (17 to 41 years) in sheep farming. Findings of Swarnkar and Singh[23], Thilakar and Krishnaraj[24] and Hassan *et al*.[7] are also in agreement with the present observations.

Flock size:
As depicted in Table 1 at (Sr.No.11), most of the respondents rear medium (72.50%) flock size of sheep followed by small (14.17%) and large flock size (13.33%). Similar findings were recorded by Hassan *et al*.[7]. The maximum shepherds reared medium (51-158) size of flock which might be due to migratory pattern and source of sufficient income. These findings of the study are in accordance with the observations reported by Rajanna *et al*.[15]. Choudary *et al*.[5] also noted parallel findings wherein that 41.34 per cent farmer maintained small sized flocks consisting of 50 to 100 sheep, 31.73 per cent shepherds kept medium sized flocks with 101 to 150 animals.

Social participation:
Present finding recorded that majority of respondents (71.67%) were the members of oneorganizations followed by non member of any organization (28.33%) and none of the respondents was office bearer presented in

table 01 at (Sr.No.12). It was revealed that most of them were member of Punyaslok Ahilyadevi Maharashtra Mendhiva Sheli Vikas Mahamandal, Pune. Establishment of regional mahamandal wherein all the sheep rearing farmers are brought under a single frame that aims to protect the interest of the group. Amitendu *et al.*[1] reported correlated findings that, majority of 78.41 per cent of sheep farmers had membership of one organization followed by member of more than one organization (19.42%), office holder of any organization (1.44%) and wider public leader (0.72%) in terms of social political participation in Paschim Midnapur district of West Bengal.

Extension contact:
The extension contact of the migratory shepherds were measured and presented in Table 1 at (Sr.No.13). It was observed that majority of the respondents (64.16%) had medium level of extension contacts followed by low level (21.67%) and high level (14.17%).

Result revealed that most of the respondents in study area had medium level of extension contacts. They used formal and informal sources of information to take care of sheep husbandry practices. Similar finding was reported by Shaik[21]. He conducted research work on farmers preparedness towards sheep health care with specific reference to vaccination in Andhra Pradesh and recorded that three fourth (75%) of the respondents had medium level of extension contact, followed by high (17.22%) and low level of extension contact.The findings of Patil *et al.*[12] revealed that in Sangli and Kolhapur district of Maharashtra, majority of the respondents (97%) used other sheep owner for consultation followed by village quack (62%) and veterinary officer (51%). In case of mass media sources, mobile phones were the major source of information (72%) followed by animal fair (66%) and listening radio (17%).

Marketing pattern:
The result showed that maximum migratory shepherds purchased sheep at village level (94.17%) followed by from friends and relatives (89.17%) and tehsil level (37.5%) presented in the Table 01 at (Sr.No.14).

Women participation:
Sizable participation of women was recorded in migratory sheep husbandry. Women assisted in most of the sheep husbandry activities viz. management of lamb (98.33%), grazing of sheep (30%), feeding and watering (20%), milking (68.33%) and marketing (6.67%) presented in table No. 01 at (Sr. No.15). In south central Rajasthan women were mostly engaged in caring of the newborn (89%) followed by caring of sick sheep (53%), milking (42%) and feeding of sheep (20%), as observed by Geerlings[6]. Hulela[8] observed related findings in which 87.5 per cent women were knowledgeable regarding the different tasks performed in sheep and goat production and women perform similar roles to those performed by men in sheep and goat rearing.

Knowledge level:
Results indicated that higher percentage of migratory shepherds fall under medium level of knowledge category (67.50%) followed by low (21.67%) and high (10.83%) levels of knowledge presented at table 01 in (Sr.No.16).

Overall, medium level of knowledge was recorded which might be due to traditional rearing of sheep, experience in sheep farming, traditional practices followed, reluctance to social and extension contacts etc. These findings are in accordance with Sharma and Reddy[20], who have stated that majority of the sheep rearers possessed medium level of knowledge regarding improved sheep rearing practices. Similar findings were also observed by Verma and Sharma[26], Pokharkar[13] and Shaik[21].

Sheep husbandry practices adopted by migratory shepherds:
Medium level of adoption (70.83%) was observed in most of the migratory shepherds followed by low level of adoption (16.67%) and high level of adoption (12.50%) presented at table 01 in (Sr.No.16). These findings are in accordance with the observations reported by Meena and Singh[11]. They found that in arid zone of Rajasthan overall technology adoption rate of the participants was high (40.00%) and medium (46.5%) in projected area as compared to non-projected area (6% and 51%) respectively.

Table 1: Socio economic Status and Sheep Husbandry Practices of Migratory Shepherds in Western Maharashtra

Sr. No.	Characters	Categories	Respondents N=(120)	Percentage (%)
01	Age	Young age	24	20.00
		Middle age	74	61.67
		Old age	22	18.33
02	Education	Illiterate	72	60.00
		Primary	18	15.00
		Secondary	21	17.50
		Higher secondary	07	05.83
		College	02	01.67
		Illiterate	72	60.00
03	Caste	NT(Nomadic tribe)	120	100.00
04	Family Size	Small	38	31.67
		Medium	76	63.33
		Large	06	05.00
05	Occupation	Main	120	100.00
		Subsidiary	00	00
		Agriculture	98	81.67
		Goat rearing	14	11.67
		Dairy farming	08	06.66
06	Type of House	Kutcha house	76	66.33
		Pucca house	44	36.67
07	Land Holding	Landless	03	02.50
		Marginal	52	43.33
		Small	38	31.67
		Semi medium	26	21.67
		Medium	01	00.83
		Large	00	00.00
08	Material Possession	Low (up to 3)	36	30.00
		Medium (4 to 5)	79	65.83
		High (above 5)	05	04.67
09	Annual Income	Low (up to Rs.55,000)	14	11.67
		Medium (Rs.55001 to 133000)	87	72.50
		High (above 133000)	19	15.83
10	Experience	Low(< 16 years)	23	19.17
		Medium(16 to 37 years)	78	65.00
		High(> 37 years)	19	15.83
11	Flock Size	Small (up to 50)	17	14.17
		Medium (51 to 158)	87	72.50
		Large (above 158)	16	13.33
12	Social participation	No Member of any Organization	34	28.33
		Member of Organization	86	71.67
		Office bearer	00	00.00
13	Extension contact	Low (up to 8)	26	21.67
		Medium (9-14)	77	64.16
		High (above 14)	17	14.17
14	Marketing Pattern	Village	113	94.17
		Tehsil	45	37.5
		Government scheme	00	00
		Animal market	00	00
		Friends and Relative	107	89.17
15	Women Participation	Grazing	36	30.00
		Lamb Management	118	98.33
		Feeding and Watering	24	20.00
		Milking	82	68.33
		Marketing	08	6.67
16	Knowledge Level	Low (up to 11)	26	21.67
		Medium (12 to 15)	81	67.50
		High (above 15)	13	10.83
17	Adoption of Sheep Husbandry Practices	Low (up to 28)	20	16.67
		Medium (29 to 35)	85	70.83
		High (above 35)	15	12.50

CONCLUSION

Migratory shepherds under study had medium level of socioeconomic status. They had medium level of extension contacts and least social participation. Women were actively involved in care and management of sheep. Village level market was preferred mostly for marketing of sheep and sheep byproducts. Hence, capacity building of migratory shepherds through organization of appropriate farmers training and awareness campaign is obligatory to amplify the level of adoption of sheep husbandry practices.

Acknowledgement

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