

Socio-Economic Profile and Knowledge Level of Dairy Farmers about Improved Dairy Farming Practices in Jammu District

Shazia Shafiq¹, Pranav Kumar², S.A.Khandi³ and M.S.Bhadwal⁴

Abstract

The present investigation was conducted in Jammu district of J & K state with the objective to assess the knowledge level of dairy farmers about improved dairy farming practices. The data were collected from 120 respondents, belonging to R.S Pura and Marh block, through personal interview. The study revealed that a majority of the respondents were in the middle age group and majority had poor education. The respondents were mainly marginal farmers with land holding of less than 2.5 acres and a herd size of 2-4 animals. Most of the dairy farmers had low level of social participation and extension contact. However, they had medium level of mass media exposure. The study revealed that majority of the respondents (71.66%) had medium level of knowledge about improved dairy farming practices. The dairy farmers had greater knowledge about feeding practices (73.28%) and least about improved breeding practices (48.22%). It is suggested that efforts may be made to increase the literacy rate of farmers so that they can utilize the available literature for improving their knowledge as well as skills. Mass media also need to be utilized for transfer of improved dairy farming practices to farmers for enriching their knowledge.

Introduction

India is predominantly an agrarian economy. About 75 per cent of its population depends upon agriculture, animal husbandry and allied activities for its livelihood. Livestock is an essential part of the socio-economic structure of rural India as a source of livelihood and provider of draught power, manure and energy. Over the last three decades, livestock production has grown faster than the crop sector as a whole. It has made a significant contribution to agricultural growth, and is considered to be an important factor in poverty alleviation in most developing countries (Birthal and Taneja, 2006). Today, the livestock sector contributes about 4.36 per cent of total GDP (Central Statistical Organisation, 2006).

¹ M.V.Sc Scholar, Division of Veterinary and Animal Husbandry Extension, Faculty of Veterinary Sciences & Animal Husbandry, R.S. Pura, SKUAST-Jammu

^{2&3} Assistant Professors, Division of Veterinary and Animal Husbandry Extension, Faculty of Veterinary Sciences & Animal Husbandry, R.S. Pura, SKUAST-Jammu

⁴ I/c Head & Associate Dean, Division of Veterinary and Animal Husbandry Extension, F.V.Sc & A.H, R.S. Pura, SKUAST-Jammu

Livestock farming is an important economic branch of agriculture. It is not only an indispensable component of agriculture, but also the most suitable production system that has enormous potential to improve the socio-economic status of a large percentage of the rural population. The current levels of productivity of milch animals remain an area of concern in the given circumstances. The large population of Jammu district has a great demand for milk and milk products which is insufficiently met by the nearby villages and other parts of the district. The inability of the livestock population to meet the local demand calls for an increase in the productivity of animals. This productivity can be increased by the adoption of improved dairy farming practices. Dairy farmers need to be made aware of improved dairy farming practices through various training programmes. Training of dairy farmers is a critical input for accelerating livestock production on one hand and increasing employment and income of the farming community on the other. The milk production per animal is not commensurate with the size of population of Jammu district. This is mainly due to the fact that many of the farmers do not adopt scientific dairy farming practices because of lack of knowledge and unfavourable attitude. There is now an awakening among the dairy farmers that they must achieve maximum yield per animal. This can be done by imparting knowledge of the latest dairy technologies to dairy farmers, through training so as to increase adoption level by following scientific management practices.

Adoption of any improved technology involves a process in which awareness is created, attitudes are changed and favourable conditions for adoption are provided. Knowledge of a dairy farmer about various animal husbandry practices such as breeding, feeding and management of milch animals largely determines the success or failure of a dairy enterprise. To enhance the production potential of milch animals which are distributed throughout the length and breadth of our country, the only way is to introduce improved animal husbandry practices for mass adoption and to create the critical and necessary infrastructure facilities (Ghosh *et al.* 2005). In this context, it becomes pertinent to gather information from the farmers about knowledge on scientific dairy farming practices at the field level, which could help in formulating an action plan as per the needs of farmers in Jammu district. Hence, this study was carried out in a few villages of Jammu district to ascertain the level of knowledge of dairy farmers to prepare an action plan in the study area for their development in the dairy sector.

Methodology

Knowledge of improved dairy farming practices was computed as the information possessed by the respondents regarding improved dairy farming

practices. To measure the knowledge level of dairy farmers a schedule was developed using the package of practices of neighbouring universities as the 'universe of content'. It was divided into four areas i.e. general management, feeding, breeding and health care practices. Each area consisted of true / false and multiple choice questions. For multiple choice questions, scoring ranged from 0-3 and for true / false questions 1 mark was awarded for each correct answer and zero for every false answer. The study was conducted in Jammu district of Jammu and Kashmir state. Two blocks (R.S Pura and Marh) were randomly selected using a simple lottery method. A comprehensive list of villages of the selected blocks was prepared. Five villages were selected randomly from each of the two selected blocks. Thus, a total of ten villages were selected in all. Twelve dairy farmers were selected randomly from each village, on the basis of possession of at least one dairy animal. Thus a total of 120 respondents were selected in all as the sample. Data were collected personally using a structured interview schedule which was appropriately pre-tested and evaluated.

Results and Discussion

Socio-personal and Socio-economic profile

The socio-economic and personal profile of the respondents is presented in Table 1. The variables studied were age, education, family size, land holding, social participation, herd size, extension contact and mass media exposure.

Table 1: Socio-economic and Personal Profile of Respondents (n=120)

Variable	Possible range	Observed range	Mean $\pm$ S.E.	Standard Deviation (SD)
Age	-	22-75	42.175 $\pm$ 0.898	9.839
Education	0-6	0-6	2.083 $\pm$ 0.184	2.023
Family size	-	4-9	5.641 $\pm$ 0.117	1.288
Land holding	0-5	0-2	0.75 $\pm$ 0.043	0.471
Social participation	0-4	0-4	0.133 $\pm$ 0.042	0.466
Herd size	-	1-27	3.991 $\pm$ 0.337	3.702
Extension contact	0-32	0-2	0.47 $\pm$ 0.066	0.732
Mass media exposure	0-16	0-8	1.808 $\pm$ 0.114	1.252

In the present study, possible range under Education refers to the formal education received by the respondents. It was measured using the scale developed by Pareek and Trivedi (1964). Respondents were categorized into six categories:

illiterate, functionally literate, primary, middle, high and graduate or above. Under land holding possible range was on the basis of the socio-economic scale developed by Pareek and Trivedi (1964). The respondents were classified into landless (0), marginal (1) with less than 2.5 acres, small (2) with 2.5-4 acres, semi-medium (3) with 5-10 acres, medium (4) with 10-25 acres and large (5) with more than 25 acres. Social participation refers to the respondents being members of any society or any social organization like village panchayat, rural clubs, religious committee and others. It was measured by using the scale developed by Supe (1969). The respondents were categorized into low (less than 1) and high (greater than 1). Extension contact was computed by a scale, developed by Dana (1987), on five continuum based on frequency of use of different communication sources by the respondents: never (0), half-yearly (1), monthly (2), fortnightly (3), weekly (4). Respondents were grouped into three categories by keeping mean and standard deviation as check. Mass Media refers to the frequency of use of various mass media aids like television, radio, news papers, magazines and exhibitions as a source of information about improved dairy farming practices by the respondents. They were categorized into groups on the basis of frequency of mass media exposure.

Table 2 indicates that majority (73.33%) of the respondents were middle aged, the average age being 42 years. Fifteen percent of the respondent belonged to the young age group whereas remaining 11.66% of respondents were in the old age group. Minimum age of the respondents was 22 years with a maximum of 75 years, indicating that the farmers of all age groups were fairly represented in the study.

Table 2: Distribution of respondents according to Age (n=120)

Age (years)	R. S. Pura		Marh		Total	
	No. of respondents	(%)	No. of respondents	(%)	No. of respondents	(%)
Young <32	7	11.66	11	18.33	18	15
Middle 32-52	42	70	46	76.66	88	73.33
Old >52	11	18.33	3	5	14	11.66

As evident from Table 3, 44.16 per cent of the respondents were illiterate, followed by 21.66 per cent having education upto middle level, 20 per cent had primary level of education and 7.5 per cent had high level. An equal and considerably low percentage (3.33%) of respondents were functionally literate and graduate and above. The education level of majority of the farmers was poor with a

mean value average score being 2.083 ± 0.184 (Table 1). Similar findings were recorded by Bordoloi *et al.* (2005).

Table 3: Distribution of respondents according to Education (n=120)

Education	R. S. Pura		Marh		Total	
	No. of respondents	%	No. of respondents	%	No. of respondents	%
Illiterate	24	40	29	48.33	53	44.16
Functionally literate	3	5	1	1.66	4	3.33
Primary	11	18.33	13	21.66	24	20
Middle	17	28.33	9	15	26	21.66
High	2	3.33	7	11.66	9	7.5
Graduate and above	3	5	1	1.66	4	3.33

Majority of the farmers had medium family size with the mean value of 5.641 ± 0.117 . These findings are in accordance with those of Gaur (2002) and Kavitha and Reddy (2007). Majority of the farmers were marginal as indicated by the mean value of their scores (0.75 ± 0.043) (Table 1). The reason for possession of marginal land holding by majority of the farmers could be the subdivision of land due to the separation of families. Similar findings have been reported by Raval and Chandawat (2011).

The social participation of majority of the respondents was poor with the mean value of 0.133 ± 0.042 . Lower social participation of dairy farmers may be due to time constraints and higher workload, as dairy farming is a time and energy consuming activity. Similar findings were reported by Khandi (2008) and Sharma (2011). Further, majority of the farmers possessed medium herd size of 2-4 animals. Mundhawa and Padheria (1998) and Temkar (2000) have also reported that majority of the dairy farmers possessed medium herd size of dairy animals. Extension contact was rated poor by the respondents. On the other hand, a majority of the respondents (55.83%) in the present study had medium level of mass media exposure followed by low category (33.33%). The remaining 10.83 per cent of the respondents constituted the high category. Mass media is an important source of information dissemination relating to all walks of life. It is largely believed that better the access to these sources of information, better is the productivity. The reason behind the present finding may be the possession of TV and radio. Tyagi and Sohal (1984) reported that mass media exposure demonstrated its influence in increasing the knowledge of dairy innovations. The study also revealed that extension contact followed by mass media exposure were

the most effective ways of increasing knowledge. The table also indicates that they had medium level of mass media exposure with average score being 1.808 ± 0.114 .

Knowledge on Dairy Farming

The knowledge level of the respondents regarding improved dairy farming practices was studied under four components i.e. general management, feeding, breeding and health care practices. The scores obtained in the study are presented in Table 4. The average score obtained by the respondents was 53.77 ± 0.51 (56.01%). The variation observed in the knowledge level was not fairly large with a standard deviation of 5.59. It can be inferred that medium level of knowledge of dairy farmers might be because of illiteracy, poor educational facilities and fear of changing the status quo and bringing new technology to their farm.

Table 4: Knowledge level of respondents in different areas of Dairy Farming

Variable	Possible range	Observed range	Mean $\pm$ SE	SD	% of total
General management practices	0-18	6-15	10.82 ± 0.15	1.72	60.11
Feeding practices	0-21	9-20	15.39 ± 0.21	2.35	73.28
Breeding practices	0-36	10-23	17.36 ± 0.23	2.53	48.22
Health care practices	0-21	5-14	10.19 ± 0.14	1.64	48.52
Total	0-96	34-68	53.77 ± 0.51	5.59	56.01

A closer look at Table 4 reveals that the respondents had greater knowledge about feeding practices (73.28%) and least about improved breeding practices (48.22%). These findings are in accordance with those of Hazarika (1983).

For appropriate analysis, the respondents were divided into three categories on the basis of total knowledge score obtained (Table 5). It is evident from the table that majority (71.66%) of the respondents had medium level of knowledge followed by an equal percent (14.16%) of respondents having low and high level of knowledge about improved dairy farming practices. Similar findings regarding the knowledge level of dairy farmers about improved dairy farming practices have been reported by Singh and Dhaliwal (1980), Meena and Chauhan (1999), Sharma and Saini (2003), Singh and Sharma (2004), Patil *et al.* (2009), Aulakh *et al.* (2011) who concluded that majority of the dairy farmers had medium level of overall knowledge regarding dairy innovations.

Table 5: Distribution of respondents on the basis of their knowledge level about improved dairy farming practices (n=120)

Range of knowledge score	Low (<48)	Medium (48- 59)	High (>59)
Percent of respondents	14.16	71.66	14.16
General management (Mean $\pm$ S.E)	9.29 $\pm$ 0.435	10.73 $\pm$ 0.148	12.82 $\pm$ 0.355
Feeding management (Mean $\pm$ S.E)	12.00 $\pm$ 0.445	15.71 $\pm$ 0.207	17.17 $\pm$ 0.345
Breeding management (Mean $\pm$ S.E)	14.29 $\pm$ 0.634	17.34 $\pm$ 0.194	20.58 $\pm$ 0.384
Health care management (Mean $\pm$ S.E)	8.47 $\pm$ 0.560	10.29 $\pm$ 0.131	11.41 $\pm$ 0.343
Total score of all practices	44.06 $\pm$ 0.778	54.07 $\pm$ 0.312	62 $\pm$ 0.568

Conclusion

The socio-economic and personal profile of the respondents showed that a majority of the respondents belonged to the 'middle age group. It can be concluded that middle age is considered as productive time-period in the life of an individual as the younger generation has not been taking to dairy farming as a livelihood activity. As far as their education was concerned, majority of the respondents had poor education. Majority of the dairy farmers had medium level of family size. Majority of the respondents were marginal farmers (<2.5 acres land holding). The dairy farmers had medium dairy herd size. Extension contact of majority of dairy farmers was found low but majority of the respondents had medium mass media exposure. Mass media is an important source of information dissemination relating to all walks of life. It is largely believed that better the access to these sources of information, better is the productivity. Social participation of the dairy farmers was found low.

The overall knowledge level of respondents regarding improved dairy farming practices was medium. They had greater knowledge about feeding practices and least about breeding practices. Therefore, it is suggested that efforts should be made to increase the literacy rate of farmers so that they can utilize the available literature for improving their knowledge as well as skills. Moreover, mass media need to be utilized to a great extent for transfer of improved dairy farming practices to the needy farmers for enriching their knowledge.

References

- Aulukh, G.S., Yadav, J.S., Singh, R. (2011). Knowledge level of dairy farmers regarding recommended buffalo management practices. *Journal of Dairying, Foods and Home Sciences*, 30(2): 147-149.
- Bordoloi, J.P., Laskar, S.K., Haquque, A. and Bola, N.N. (2005). Socio-economic characteristics of daily households of Guwahati in Assam. *Indian Veterinary Journal*, 82:427-432.
- Birthal, P.S. and Taneja, V.K. (2006). Livestock sector in India: Opportunities and challenge. Paper presented at ICAR-ILRI work shop on "Small holder livestock production in India", 24th-25th January 2006, NCAP, New Delhi.

Central Statistical Organization, CSO, Govt. of India, *Livestock Census* 2006-2007.

Gaur, A.K. (2002). Factors influencing adoption of some improved animal husbandry practices of dairy in Anand and Vadodara district of Gujarat. Ph.D. Thesis. Gujarat Agricultural University, S. K. Nagar, Junagarh.

Ghosh, R.K., Goswami, A. and Mazumdar, A.K. 2005. Adoption behaviour of the dairy farmers in relation to artificial insemination in co-operative farming system. *Livestock Research for Rural Development*, 17(3): 33-37.

Hazarika. P. (1983). A study of correlates of knowledge and adoption behaviour of dairy farmers under ICDP, Khanapra (Assam). M.Sc. Thesis, NDRI, Karnal.

Kavitha, L. and Reddy, M. S. 2007. Personal and socio-economic characteristics of farm women. *Journal of Research ANGRAU*, 35(1): 79-83.

Khandi, S.A. 2008. Perception of gujjars towards modern animal husbandry practices. M.V.Sc. Thesis, Sher-e-Kashmir University of Agricultural Sciences and Technology, Jammu.

Meena, M.S. and Chauhan, J.P.S. (1999). Awareness of improved dairy farming practices by farmers of Sawai Madhopur district. *Journal of Dairying, Foods and Home Sciences*. 18(1): 58-60.

Mundhawa, A. B. and Padheria, M. N. (1998). A study on profile of dairy entrepreneur women and their problems and suggestions regarding dairy farming. *Gujarat Agricultural University Research Journal*, 24(1): 52-57.

Patil, A.P., Gawande, S. H., Gobade, M.R. and Nande, M.P. (2009). Assessment of knowledge level of dairy farmers in Nagpur district and the co-relation between socio-economic variable with the training needs. *Veterinary World*, 2(5): 199-201.

Raval, R.J. and Chandawat. 2011. Extent of knowledge of improved animal husbandry practices and socio-economical characteristics of dairy farmers of district kheda, Gujarat. *International Journal of Farm Sciences*, 1(2): 129-137.

Sharma, K and Saini, G.S. (2003). Knowledge of the secretaries of milk co-operatives societies regarding animal husbandry. *Indian Journal of Extension Education*. 3(1): 84.

Sharma, M. (2011). Adoption of improved animal husbandry practices by dairy farmers of Samba district. M.V.Sc. Thesis, Sher-e-Kashmir University of Agricultural Sciences and Technology, Jammu.

Singh, M. and Dhaliwal, A.J.S. (1980). Knowledge and adoption of the dairy innovations. *Journal of Research- Punjab Agricultural University*, 17(2): 169-172.

Singh, N. and Sharma, F.L. (2004). Knowledge of dairy co-operative society members and non-members about advanced dairy production technology. *Rajasthan Journal of Extension Education*, 12(3): 142-145.

Temkar, G.K. (2000). A study on extent of knowledge and attitude towards artificial insemination in the milch animals of the dairy farmers of Anand district. M.Sc. (Agri.) Thesis, Gujarat Agricultural University, S. K. Nagar, Junagarh.

Tyagi, K.C. and Sohal, T.S. (1984). Factors associated with adoption of dairy innovations. *Indian Journal of Extension Education*, 20(3 & 4): 1-8