

Impact of Dairy Co-operative Society on the Knowledge Level of Dairy Farmers in Rajasthan

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ABSTRACT

Present study was conducted on a total 120 dairy farmers having minimum two milch animals which include 60 member and 60 non-member of dairy co-operative, selected from eight villages of Sikar district of Rajasthan during the year 2014, to ascertain the impact of dairy co-operative on dairy farmers in terms of their knowledge level about scientific dairy farming practices. Findings revealed that majority of the respondents (53.33%) of both the categories possessed moderate knowledge about scientific dairy farming practices. It was found that knowledge level of member dairy farmers was significantly higher than the non-member dairy farmers except: knowledge about artificial insemination, deworming and feeding of green fodder.

Key words: Knowledge, dairy farmers, milch animal, scientific dairy farming practices.

INTRODUCTION

India has more than 57 per cent of buffalo population and about 15 per cent of cattle population of the world and is the leading milk producer in the world during 2011-12 with an annual output of 133.2 million tones milk production (DHAD, 2013). India's milk production accounts for 16 per cent of the world's total output. The dairy co-operatives are the backbone of Indian dairy industry as the growth of milk production throughout India paced only after the introduction of co-operatives, particularly in the name of AMUL in 1946. Role of dairy co-operatives had been crucial in white revolution. (Sharma *et al*, 2007). It is the major source of income for an estimated 27.6 million people. (Naidu, 2004). The dairy sector supports around 183 milk unions operating in over 418 districts having 15.1 million members/farmers through 1, 55,634 village level dairy co-operative societies during 2012-13 (NDDDB, 2013; GOI, 2013). Presently, 0.15 million village dairy co-operatives are federated into about 176 district milk unions, which are subsequently federated into 22 state cooperative dairy federations (DHAD, GOI, 2012). Undoubtedly, dairy cooperatives are the most professionally managed sector of the Indian co-operatives which provides basic dairy extension services such as input supply (cattle feed, fodder seed,) animal health services, artificial insemination for both cattle and buffaloes to the members of dairy co-operative societies (Sasikumar, 1998). Dairy

co-operatives play an instrumental role in delivering livestock marketing services to enhance efficiency due to which, they are getting attention from the past decade in developing countries. White revolution resulted due to dairy development efforts made in India in the past. Now, once again started to replicate the success story of milk production in the form of launching second white revolution in phased manner for 15 years from 2010 2025. The dairy co-operative are expected to play an important role in bringing the second White Revolution. Keeping the importance of dairy co-operatives in view the study was planned to ascertain the knowledge of dairy farmers about scientific dairy farming practices; to see the impact of dairy co-operatives on the knowledge level of member dairy farmers.

METHODOLOGY

The study was conducted in Sikar district of Rajasthan state. There 8 blocks in Sikar district, out of which, four are having good linkage to the dairy co-operatives. Eight blocks were divided into two strata of four each and one block from each stratum was selected, randomly.

Further, from each selected block, four villages were selected randomly. Thus 8 villages formed the sample of the study. For the selection of the respondents, a list of dairy farmer was prepared, who were having two or more

milch animals and were selling the milk as well. From each village, 15 respondents were selected, randomly. Therefore, the total sample size for this study was 120 dairy farmers. The data were collected with the help of pre-tested interview schedule and were analyzed using proper statistical tools. A knowledge test developed by Goswami (1987) was used for the study. The knowledge of the respondents was measured on in the form of correct and wrong answer and the score of 1 and 0 was allotted, respectively. Total score obtained by each respondent as well as for each statement was calculated. The respondents were classified into three categories viz., high, medium and low levels of knowledge on the basis of equal class interval method. Frequency and percentage of respondents in each category were calculated. In order to see the significance of difference in mean knowledge score between member and non-member respondents regarding scientific dairy farming practices, student't'-test was applied.

RESULTS AND DISCUSSIONS

The Present in Table 1 revealed that knowledge about Artificial Insemination (A.I.) was high in majority of the member (91.67%) and non-member (83.33%) dairy farmers. Knowledge about vaccination found medium to high in both the categories but the knowledge about deworming was medium to low in both, member and non-member dairy farmers and similar trend was observed in case of knowledge about cultivation of green fodder. Further the table shows that knowledge about feeding of green fodder was high to medium, while knowledge about feeding of concentrate was found medium to high among both the categories.

Table 1: Extent of knowledge about scientific dairy farming practices among member and non-member dairy farmers.

Knowledge level	Member (n=60)	Non-members (n=60)	Pooled (n=10)
	F (%)	F (%)	F (%)
Knowledge about A.I.			
Low (0 to 4.33)	0 (0.00)	0 (0.00)	0 (0.00)
Medium (4.33to 8.66)	5 (8.33)	10 (16.67)	15 (12.50)
High (above 8.66)	55 (91.67)	50 (83.33)	105 (87.50)
Mean score	10.7	10.51	10.60
Knowledge about vaccination			
Low (0 to 6.33)	0 (0.00)	0 (0.00)	0 (0.00)
Medium (6.33 to 12.66)	31 (51.67)	45 (75.00)	76 (63.33)
High (above 12.66)	29 (48.33)	15 (25.00)	44 (36.67)
Mean score	12.25	11.50	11.87

Knowledge about deworming

Low (0 to 2.67)	5 (8.33)	11 (18.33)	16 (20.00)
Medium (2.67 to 5.34)	55 (91.67)	49 (81.67)	104 (86.67)
High (above 5.34)	0 (0.00)	0 (0.00)	0 (0.00)
Mean score	3.52	3.05	3.28

Knowledge about cultivation of green fodder

Low (0 to 23.33)	1 (1.67)	5 (8.33)	6(5.00)
Medium (23.33 to 46.67)	59 (98.33)	55 (91.67)	114 (95.00)
High (47 & above)	0 (0.00)	0 (0.00)	0 (0.00)
Mean	34.53	31.85	33.17

Knowledge about feeding of green fodder

Low (0 to 4)	0 (0.00)	0 (0.00)	0 (0.00)
Medium (4 to 8)	2 (3.33)	5 (8.33)	7 (5.83)
High (above 8)	58 (96.67)	55 (91.67)	113 (94.67)
Mean score	10.73	10.86	10.79

Knowledge about feeding of concentrate

Low (0 to 9)	1 (1.67)	5 (8.33)	6 (5.00)
Medium (9 to 18)	42 (70.00)	53 (88.33)	95 (79.17)
High (above 18)	17 (28.33)	2 (3.33)	19 (15.83)
Mean score	16.35	14.5	15.42

A perusal of data in Table1 vividly corroborate that majority of the respondents (53.33%) were from medium knowledge category, while 34.17 per cent were under high knowledge category followed by the low (12.50%) level category. Further the table reveals that majority of member (50.00%) and non-member (56.67%) dairy farmers fall under medium category of knowledge but percentage of member dairy farmers (46.67%) in high category of knowledge level is significantly higher as compared to non-member (21.67%) dairy farmers. While in low category of knowledge level there were only 3.33 percent dairy farmers as compared to 21.67 percent non-members. To find out the significance of difference in overall knowledge between member and non-member dairy farmers independent't'-test was applied.

The calculated't'-value (4.042) is significant at 1 per cent level of significance (Table 2). Thus, there was a significant difference in knowledge between member and non-member respondents of dairy co-operative regarding scientific dairy farming practices. This might be due to the reason that member dairy farmers had better extension contacts and active social participation as dairy co-operative provided a better opportunity of their greater exposure to new technology influencing their overall knowledge level.

Table 2: Distribution of the respondents on the basis of extent of knowledge regarding scientific dairy farming practices

Level of knowledge	Member n=60		Non-member n=60		Pooled N=120	
	F	%	F	%	F	%
Poor (below 77)	2	3.33	13	21.67	15	12.50
Medium (78 to 89)	30	50.00	34	56.67	64	53.33
High (89 and above)	28	46.67	13	21.67	41	34.17
Mean ± S.E.	88.12 ± 0.847		82.90 ± 0.974			

N=Sample size, F=Frequency, %=Percent. 't' value (calculated) - 4.042**
** Significant (P≤ 0.01)

To find out the difference in knowledge level about different scientific dairy farming practices among member and non-member, independent 't'-test was applied. Table 3 reveals that knowledge about vaccination, deworming, cultivation of green fodder and feeding of concentrate was significantly higher in member dairy farmers as compared to non-member dairy farmers, Whereas, difference in knowledge about artificial insemination and feeding of green fodder between member and non-member dairy farmers were non-significant. This indicates that dairy co-operatives have positive impact on knowledge level of dairy farmers.

Table 3: Difference in knowledge mean score of different scientific dairy farming practices between member and non-member dairy farmers:

Scientific dairy farming practices	Mean score (Member)	Mean score (Non-member)	t- value
Artificial Insemination	10.7	10.51	0.827
Vaccination	12.25	11.5	2.478**
Deworming	3.52	3.05	2.834**
Cultivation of green fodder	34.53	31.85	4.092**
Feeding of green fodder	10.73	10.86	0.501
Feeding of concentrate	16.35	14.5	5.569**

** Significant (P≤ 0.01)

CONCLUSION

The majority of the dairy farmers of both the categories had medium level of knowledge about scientific dairy farming practices and member dairy farmers were having significantly higher knowledge than the non-member dairy farmers regarding vaccination, deworming, cultivation of green fodder and feeding of concentrate. Significantly higher knowledge level of member dairy farmers than the non-member dairy farmers indicate the positive impact of dairy co-operatives on the knowledge level of their member dairy

farmers. Dept. of veterinary and livestock extension may play a crucial role to make the farmers aware about different type of scientific dairy farming practices using different means of communication. Dairy co-operatives also have to improve their services to improve the knowledge of their member dairy farmers regarding artificial insemination and feeding of green fodder.

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REFERENCES

- Goswami, A. 1987. A study of the knowledge level of the livestock owners about selected animal husbandry practices. M.V.Sc. Thesis Deemed University, IVRI, Izatnagar, India.
- Government of India. 2012. Annual Report, 2012-13. Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture. New Delhi.
- Government of India. 2013. Annual Report, 2013-14. Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture. New Delhi.
- Naidu, A. S. and Kondaiah, N. 2004. Livestock production and post production systems Need for a pragmatic approach. *Indian Journal of Agricultural Marketing*, 18 (3): 91-105.
- National Dairy Development Board. (2013, March 12). *Facts at a glance*. Retrieved from dairy development
- Sasikumar, M.V. 1998. Dairy Cooperatives in the Post Operation Flood Phase. *Yojana*, Nov.1998:31-33.