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Knowledge of Dairy Farmers Regarding Improved Buffalo Health Care Practices in Murrah Tract of Haryana State

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ABSTRACT

To assess the knowledge of dairy farmers about improved buffalo health care practices a field study was undertaken in Murrah tract of Haryana state. The data were collected from 250 respondents with the help of structured interview schedule containing selected dependent and independent variables through personal interview technique. Majority (64.4%) of the respondents was having medium level of knowledge. Item-wise knowledge level of dairy farmers about health care practices indicated that only 3.6 per cent of them knew that animal house should be disinfected while 29.6 and 33.6 per cent of them were having knowledge regarding zoonosis through animals and milk, respectively. Caste, annual income, educational qualification, land holding, training on dairy farming, information seeking behaviour, economic motivation and scientific orientation showed positive and significant correlation with knowledge level of dairy farmers about health care practices. Educational qualification and training on dairy farming had emerged as potential contributors towards the overall knowledge of dairy farmers about health care practices.

Key words: *Dairy farmers, Caste, Annual income, Educational qualification, Land holding*

INTRODUCTION

Indian agricultural system is predominantly a mixed crop-livestock farming system, with the livestock segment supplementing farm incomes by providing employment, draught animals and manure. The share of Gross Value Added of livestock sector to total Agriculture (Crops & Livestock) has increased from 23.8 percent in 2011-12 to 26.7 percent in 2014-15 at Constant prices. At Current prices, the share has increased from 23.8 percent in 2011-12 to 26.9 percent in 2014-15. India ranks first in milk production accounting for 18.5 per cent of world production. The analysis shows nearly 36 percent of the milk production is contributed by Indigenous Buffaloes and non-descript buffaloes contribute 13 percent milk production[2]. The improvement of dairy production will be particularly important in coming years in view of the future demand for livestock products.

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It has been emphasized that dairy development is only possible if there is effective co-ordination among education, research, training and extension. It is also to be noted that just transferring the quality technologies cannot solve all the problems until the people have a sound knowledge about the existing technologies and technologies recommended by the experts. Health management is one of the most important aspects of buffalo productivity but unfortunately it is generally ignored by the farmers of the rural areas. Animal health has a direct bearing on the productivity of the dairy animals and so on the profitability of the dairy enterprise. Therefore, in order to assess the existing knowledge level of dairy farmer regarding improved health care practices, the present study was undertaken in Murrah tract of Haryana state.

MATERIAL AND METHODS

The present study was conducted in Haryana state during 2015-16. The Haryana state comprises of 21 districts. Out of which 5 districts namely Bhiwani, Hisar, Jind, Rohtak and Jhajjar were selected purposively for the study as these are the major tract of Murrah buffalo. From each district one block was selected randomly. A comprehensive list of villages of each selected block was prepared. Two villages were then randomly chosen from each selected block using simple lottery method. Thus, a total of ten villages were selected in all. Twenty five farmers were randomly selected from each of the ten selected villages thus constituting a sample size of 250 dairy farmers. Nineteen independent variables representing socio-economic, psychological and communication traits of dairy farmers were selected for correlation and regression purpose. Knowledge of improved buffalo health care practices was considered as dependent variable. Ten important health care items were included in the schedule. The data were collected personally by the researcher using the well-structured and pretested interview schedule. Data were subjected to appropriate statistical analysis. The overall knowledge score for each respondent was then calculated by adding up the scores obtained per statement. Then with the help of mean and standard deviation the respondents were categorized as low (Below mean - S.D.), medium (mean ± S.D.) and high (Above mean+ S.D.) with respect to their knowledge level for various practices.

RESULTS AND DISCUSSION

Distribution of the respondents based on their knowledge level regarding health care practices

The data given in Table 1 shows that majority (64.4%) of the respondents had medium whereas 19.6 and 16 per cent of the respondents had low and high level of knowledge regarding recommended health care practices. These findings are in accordance to the findings of Roy[7]. Prajapati[6] found that 63.5, 20.5 and 16 per cent of the dairy farmers were found to have medium, low and high level of knowledge about recommended health care practices.

Item-wise knowledge level of dairy farmers about health care practices

The data given in Table 1 shows that majority (86.4%) of dairy farmers knew while 13.6 per cent dairy farmers didn't know about the importance of vaccination of all the animals. The high level of knowledge about vaccination might be due to facility of vaccination provided by department of animal husbandry at farmer's doorstep. These finding also supported by the findings of Saha *et al.*[9] who found that most of them (89%) were aware of vaccination against foot and mouth disease. Mali *et al.*[5] also found that 91.66 per cent of dairy farmers had knowledge about time of vaccination against infection.

Majority (67.6%) of respondents were not having any idea whereas 32.4 per cent of them knew about timely and regularly deworming of buffalo. This might be due to less interaction with extension personal and low involvement in social organization. Moreover the farmers lack of knowledge about better management can reduce diseases and increase production of dairy cattle. Lohakare

et al.[4] observed that about 62.38 per cent of respondents had partial knowledge about deworming. Majority of respondents had partial knowledge about deworming schedule, vaccination of calves against B.Q. and calf raising. This finding is also supported by the findings of Saha *et al.*[9].

Majority (21.8%) of the respondents had the full knowledge that horn trimming should be done while the remaining respondents (21.2 %) didn't have the knowledge that horn trimming should be done. This might be due to the fact that they want to maintain the health of dairy animals.

Only 3.6 per cent of them knew that animal house should be disinfected. This might be due to unawareness about importance of disinfection of animal shed and ignorance of the complicated technique. Deshmukh and Pagar[1]found that the majority (72.66 %) of respondents didn't had the knowledge about cleanliness of animal shed.

Majority (74.8%) of dairy farmers were very well knows while only 25.2 per cent of them didn't have any idea about segregation of animal infected with contagious disease should be done. The results are on higher side than Sachan[8] who found that 19 per cent respondents were aware about isolation of diseased animal.

Only 42.8 per cent of respondents knew only two harms adverse effects followed by < 2 harms (36.4%) and > 2 harms of parasites (20.8%). There is need of extension programmes to educate the farmers about diseases transmitted through ectoparasites and to reduce the economic loss to the farmers.

Less than 20 per cent of the respondents possessed know that disinfectant should be used while bathing the animal. There is need to educate rest of the farmers about this as it will be an aid to the good health of the animals.

Majority (83.6%) of dairy farmers were fully aware whereas 16.4 per cent of them were not having the knowledge that animal should be given the recommended dose. This might be due to the fact that they want to maintain the health of dairy animals and farmers are seemingly well convinced about it.

About 47.2 per cent of dairy farmers were familiar with this fact while 52.8 per cent of dairy farmers didn't know that aborted foetus and discharge should not be handled with bare hands. This might be due to lack of awareness about harms caused by unsafe handling. There is need to educate the dairy farmers about the importance of this practice from public health point of view.

Out of total respondents, 29.6 and 33.6 per cent of them were having knowledge about zoonosis through animals and milk, respectively. The remaining respondents were not having knowledge regarding zoonosis. This might be because of their ignorance about their personal health and spread of zoonotic diseases through humanly infection via milk.

Correlation between personal attributes and knowledge level of dairy farmers about health care practices

Table 3 revealed that the variables such as caste, annual income, educational qualification, land holding, training on dairy farming, information seeking behaviour, economic motivation and scientific orientation showed positive and significant correlation with knowledge level of dairy farmers about health care practices at 1 per cent level of significance. Social participation had positive and significant correlation with knowledge level of dairy farmers about health care practices at 5 per cent level of significance. It was observed that educational qualification of dairy animal owners had highly significant and positive correlation with knowledge about improved dairy husbandry practices. This shows that the educated animal owners possessed more knowledge due to the fact that they tended to have more interaction with extension agencies and did not hesitate to discuss their problems related to dairy animals with veterinarians and scientists as compared to old illiterate respondents. Present results are similar to the findings reported by Sharma *et al.*[10], Shekhawat *et al.*[11] and Jeelani *et al.*[3].

Contribution of personal attributes of dairy farmers towards their knowledge about health care practices

When the data of all the 250 respondents was fitted in the equation, it was found that out of the nineteen antecedent variables, educational qualification and training on dairy farming had emerged as potential contributors towards the overall knowledge of dairy farmers about health care practices at 1 percent level of probability. The R^2 value again reveals that all the nineteen variables have contributed 58.82 per cent variation towards the knowledge of dairy farmers about health care practices. The F value (17.293) was also found to be significant at 1 percent level of significance in this case as shown in Table 4.

Table 1 Distribution of the respondents based on their knowledge level regarding health care practices

Aspect	Mean ± SD	Category	Respondents (n=250)	
			Frequency	Percentage
Health care practices	6.73 ± 1.73	Low (<5)	49	19.6
		Medium (5-8.46)	161	64.4
		High (>8.46)	40	16

Table 2 Item-wise knowledge level of dairy farmers about health practices

S. No.	Statements		Respondents (n=250)	
			Frequency	Percentage
1	Vaccination of all animals	Yes	216	86.4
		No	34	13.6
2	Timely and regularly deworming of buffalo	Yes	81	32.4
		No	169	67.6
3	Horn trimming	Yes	197	78.8
		No	53	21.2
4	Disinfection of animal house	Yes	9	3.6
		No	241	96.4
5	Segregation of animal infected with contagious disease	Yes	187	74.8
		No	63	25.2
6	Enumeration of harms of ectoparasites	< 2	91	36.4
		2	107	42.8
		>2	52	20.8
7	Disinfectant while bathing the animal	Yes	44	17.6
		No	206	82.4
8	Recommended dose of medicines	Yes	209	83.6
		No	41	16.4
9	Handling of aborted foetus and discharge with bare hands	Yes	118	47.2
		No	132	52.8
10	Source of zoonosis	Animals	Yes	74	29.6
			No	176	70.4
		Milk	Yes	84	33.6
			No	166	66.4

Table 3 Correlation between personal attributes and knowledge level of dairy farmers about health care practices

S. No.	Independent Variables	Respondents (n=250) 'r'
1	Age (X_1)	-0.084
2	Sex (X_2)	-0.119
3	Caste (X_3)	0.182**
4	Annual income (X_4)	0.166**
5	Educational qualification (X_5)	0.597**
6	Family size (X_6)	0.094
7	Type of family (X_7)	-0.057
8	Land holding (X_8)	0.164**
9	Social participation (X_9)	0.137*
10	Training on dairy farming (X_{10})	0.331**
11	Information seeking behaviour (X_{11})	0.194**
12	Economic motivation (X_{12})	0.167**
13	Risk orientation (X_{13})	0.105
14	Attitude towards rearing Murrah buffalo (X_{14})	0.117
15	Market orientation (X_{15})	0.124
16	Scientific orientation (X_{16})	0.270**
17	Localiteness-cosmopoliteness (X_{17})	0.018
18	Credit orientation (X_{18})	0.115
19	Change proneness (X_{19})	0.062

Table 4 Contribution of personal attributes of dairy farmers towards their knowledge about health care practices

S. No.	Independent Variables	Respondents (n=250)	
		b-value	t-value
1	Age (X_1)	0.005	0.616
2	Sex (X_2)	0.056	0.267
3	Caste (X_3)	0.041	0.278
4	Annual income (X_4)	-0.000	-0.302
5	Educational qualification (X_5)	0.569	7.475**
6	Family size (X_6)	0.019	0.351
7	Type of family (X_7)	0.260	0.859
8	Land holding (X_8)	0.008	0.083
9	Social participation (X_9)	0.230	0.735
10	Training on dairy farming (X_{10})	2.543	4.336**
11	Information seeking behaviour (X_{11})	0.101	1.066
12	Economic motivation (X_{12})	0.056	1.507
13	Risk orientation (X_{13})	0.034	1.028
14	Attitude towards rearing Murrah buffalo (X_{14})	0.241	1.065
15	Market orientation (X_{15})	0.043	1.242
16	Scientific orientation (X_{16})	0.111	1.670
17	Localiteness-cosmopoliteness (X_{17})	0.133	1.144
18	Credit orientation (X_{18})	0.090	1.662
19	Change proneness (X_{19})	0.092	1.611
R^2		0.5882	
F		17.293**	

*P<0.05, **P<0.01

CONCLUSION

The data reveal that majority (64.4%) of the respondents was having medium level of knowledge. But still there is an increasing recognition of the need to convert the medium knowledge in to high knowledge. More and concentrated efforts must be done to motivate farmers to follow disinfection of animal sheds, timely and regular deworming of buffaloes and complete isolation of contagious disease infected animal. So, there is great opportunity and wide scope for extension workers to disseminate these technologies among dairy farmers. The socio-economic and psychological variables substantially influencing the knowledge of dairy health care practices must be taken into consideration while improving the knowledge level of dairy farmers in the study area. Hence it is suggested that farmers must be educated and trained in this aspect through KVKs and department of animal husbandry.

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