Knowledge of Dairy Farmers about Improved Buffalo Husbandry Management Practices

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ABSTRACT

This study was conducted on 240 buffalo owners selected from eight villages of Haryana state during the year 2004 to ascertain the knowledge about buffalo husbandry management practices. The study reveals that majority of the respondents of all the categories possessed moderate knowledge about buffalo husbandry management practices ranging from 55 to 60 per cent followed by poor and high knowledge. Higher knowledge was recorded among the landless respondents in the cleanliness of buffalo shed followed by height of buffalo shed and expulsion of placenta where as the farmers of other groups possessed highest knowledge about height of buffalo shed. Almost similar observations were recorded in case of farmers having up to 2 ha of land and more than 2 ha of land. Knowledge about buffalo husbandry management practices was found among various categories of respondents in the area of disinfestations of shed before calving and type of housing system. Education, extension contact and attitude of farmers towards recommended buffalo husbandry management practices were found important variables, which influence their knowledge.

Key words: *Dairy farmers; Knowledge; Expulsion of placenta; Management practices;*

Buffalo holds the greatest promise for food security and sustainable development in the 21st century as these animals form an integral part of the typical farming system in India. In India, buffalo has been the backbone of rural economy. It is the mainstay in the production of butter and ghee. Not only this, buffalo is also considered more useful for reasons of higher fat content in milk, ability to utilize agricultural byproducts more efficiently and requires less amount of kilo calories to produce 1kg milk. Buffalo has been the friend of small farmers, often their largest capital asset. It is a fit companion for Indian farmers, who grow older with their buffaloes developing a high degree of mutual understanding. As with many of the live stock species maintained by the rural families, there is a socio-cultural linkage with buffaloes also. Keeping the importance of buffalo in view the study was planned to ascertain the knowledge of dairy farmers about improved buffalo husbandry management practices ; to establish relationship of personality traits of dairy farmers with their knowledge about improved buffalo husbandry management practices and to find out contribution of personality traits of dairy farmers towards their knowledge about improved buffalo husbandry management practices.

METHODOLOGY

The study was conducted in four divisions of Haryana state, viz., Ambala, Rohtak, Gurgaon and Hisar. From each selected division, one district was selected on the basis of highest concentration of the buffaloes. Thus, Kaithal from Ambala division, Sonipat from Rohtak, Faridabad from Gurgoan and Jind from Hisar division were selected purposively for the study. One block from already selected districts was selected randomly. Further from each block, two villages were selected randomly. Therefore, 8 villages formed the sample of the study. For the selection of the respondents, three categories of the buffalo owners were prepared on the basis of land holding, namely landless labourers, dairy farmers having land up to 2 ha and buffalo owners having more than 2 ha of land. A separate list of all the three categories of buffalo owners was prepared for each selected village and 30 respondents were selected by using proportional size of sampling technique.

Therefore, the total sample size for this study was 240 buffalo owners. The data were collected with the help of pre-tested structural interview. A knowledge test was developed and all the recommended management buffalo husbandry practices were included in the test. The knowledge of the respondents was measured on three point continuum i.e. correct, partially correct and wrong answer and the score of 3, 2 and 1 was allotted respectively. Eleven important independent variables reflecting personality traits of dairy farmers were selected to study relationship with their knowledge. These variables were measured with the scales/index already available in extension literature.

RESULTS AND DISCUSSIONS

Knowledge about buffalo husbandry management practices : It is evident from the data presented in Table 1 that in case of landless respondents the majority (58.95%) of them had moderate knowledge about buffalo husbandry management practices. While 18.95 and 22.10 per cent of the buffalo owners were found to have poor and high knowledge about the buffalo husbandry management practices. With respect to those dairy farmers having land up to 2 ha, it was found that 60 per cent of the respondents fell in moderate Therefore, the total sample size for this study was 240 buffalo owners. The data were collected with the help knowledge category followed by poor (20.95%) and high (19.05%) knowledge level, respectively. Likewise 55 per cent of the respondents having more than 2 ha of land also reported moderate level while 27.50 per cent of dairy farmers had poor knowledge level in case of management practices. Only 17.50 per cent of them possessed high level of knowledge regarding management practices.The pooled analysis of 240 respondents revealed that the maximum (58.75%) percentage of respondents had moderate knowledge level followed by poor (21.25%) and high (20.00) level of knowledge about management practices. These

Table 1: knowledge level of dairy farmers about improved buffalo husbandry management practices

Knowledge level	Landless (n=95)		Up to 2ha (n=105)		More than 2ha (n=40)		Overall (N=240)	
	F	%	F	%	F	%	F	%
Poor	18	18.95	22	20.95	11	27.50	51	21.25
Moderate	56	58.95	63	60.00	22	55.00	141	58.75
High	21	22.10	20	19.05	7	17.50	48	20.00

Table 2. Item-wise knowledge of buffalo owners about management practices.

Areas of knowledge	Landless (n=95)			Up to 2ha (n=105)			More than 2ha (n=40)			Overall knowledge (N=240)		
	Total knowledge	Mean score	Rank order	Total knowledge	Mean score	Rank order	Total knowledge	Mean score	Rank order	Total knowledge	Mean score	Rank order
1. Cleanliness of buffalo shed	168	1.77	I	140	1.33	V	63	1.58	III	371	1.55	II
2. Height of buffalo shed	162	1.71	II	207	1.97	I	81	2.03	I	450	1.88	I
3. Type of housing system	89	0.94	VII	121	1.15	VI	49	1.23	VI	259	1.08	VII
4. Time of stop milking during pregnancy	115	1.21	V	168	1.60	II	69	1.73	II	352	1.47	IV
5. Disinfestation of shed before calving	39	0.41	VIII	65	0.62	VIII	18	0.45	VIII	122	0.51	VIII
6. Help taken during calving	138	1.45	IV	157	1.50	III	61	1.53	V	356	1.48	III
7. Expulsion of placenta	141	1.48	III	144	1.37	IV	62	1.55	IV	347	1.45	V
8. Precautions needed after the expulsion of placenta	112	1.18	VI	120	1.14	VII	47	1.18	VII	279	1.16	VI

Table3 .Relatioship between pertional traits and knowledge of dairy farmers about improved buffalo husbandry management practices.

S. No.	Variables	Landless (n=95) 'r'	Up to 2ha (n=105) 'r'	More than 2ha (n=40) 'r'	Overall knowledge (N=240) 'r'
1.	Age	-0.190	-0.164	-0.383*	-0.202**
2.	Education	0.287**	0.648**	0.674**	0.514**
3.	Caste	0.088	0.174	-0.346*	0.099
4.	Socio-Economic status	0.228*	0.351**	0.376*	0.262**
5.	Herd size	-0.082	0.172	0.250	0.156*
6.	Extension contact	0.338**	0.471**	0.599**	0.452**
7.	Mass media exposure	0.217*	0.608**	0.689**	0.483**
8.	Attitude towards R.B.H.P.	0.416**	0.562**	0.372*	0.470**
9.	Opinion leadership	0.369**	0.531**	0.454**	0.468**
10.	Risk orientation	0.339**	0.349**	0.252	0.332**
11.	Economic motivation	0.315**	0.398**	0.395**	0.378**

* Significance at 5% level of probability ** Significance at 1% level of probability

Table 4. Regression coefficients between personal attributes and knowledge of dairy farmers about buffalo husbandry management practices

S. No.	Variables	Landless (n=95)		Up to 2ha (n=105)		More than 2ha (n=40)		Overall (N=240)	
		'b'	't'	'b'	't'	'b'	't'	'b'	't'
1.	Age	-0.049	0.646	0.024	0.394	-0.039	0.304	0.003	0.061
2.	Education	0.686	1.007	2.278	4.078**	3.104	3.134**	1.613	4.158**
3.	Caste	0.973	1.381	-0.102	0.088	-5.889	2.215**	-0.640	0.885
4.	Socio-Economic status	0.089	0.243	-0.174	1.045	0.276	1.109	-0.109	1.018
5.	Herd size	-1.726	1.865	1.544	1.541	-0.521	0.289	1.127	1.422
6.	Extension contact	1.205	0.433	0.316	1.114	1.001	1.535	0.583	2.445**
7.	Mass media exposure	-1.485	0.485	0.343	0.941	1.182	1.992	0.008	0.030
8.	Attitude towards R.B.H.P.	1.142	0.444	0.892	2.687**	-0.113	0.203	0.754	3.180**
9.	Opinion leadership	0.191	0.152	0.177	1.429	-0.359	1.662	0.173	1.914
10.	Risk orientation	0.428	0.323	-0.296	1.178	-0.081	0.172	-0.050	0.261
11.	Economic motivation	0.580	0.362	0.296	1.096	-0.112	0.200	0.197	0.989
	R2=Value	0.604		0.768		0.860		0.643	
	F=Value	4.32**		12.15**		7.22**		14.63**	

* Significance at 5% level of probability ** Significance at 1% level of probability

findings are in accordance with the findings reported by *Maity et al. (2002).*

Knowledge level of dairy farmers about management practices : The data in Table 2 highlights that the majority of respondents had higher knowledge about cleanliness of buffalo shed as evident by their mean knowledge score (1.77) followed by height of buffalo shed (1.71) and expulsion of placenta (1.48), in case of landless families. The poor knowledge of buffalo owners was found about disinfestation of shed before calving (0.41). The similar findings were also recorded in case of rest of two groups of farmers and overall analysis of 240 respondents.The inferences may be drawn from the above results that the farmers had maximum knowledge about cleanliness of buffalo shed and height of buffalo shed while poor knowledge was recorded about disinfestation of shed before calving among all management practices. It implies that the practice of cleaniness of buffalo shed is very common and simple which is generally adopted by almost all the buffalo owners and does not involved any complexibility. Similarly height of buffalo shed, majority of the buffalo owners followed the prescribed height. The buffalo owner did not know about the importance of disinfestation of shed before calving. Moreover, they do not know the chemical composition of disinfestants. The findings of the study are similar to the results reported by *Sohal and Tyagi (1978), Nataraju and Channegowda (1986), Lal (1999) and Kumar et al. (2001).*

Relationship between personal traits and knowledge of dairy farmers about management practices **:** The

data in Table 3 depicts that out of eleven, eight variables namely the education, socio-economic status, extension contact, mass media exposure, attitude towards ommended buffalo husbandry practices, opinion leadership, risk orientation and economic motivation had positive and significant relationship with knowledge of landless respondents and farmers having up to 2 ha of land about buffalo husbandry management practices either 1 or 5 per cent level of significance. Although negative and significant relationship were observed between age and caste with knowledge of farmers having more than 2 ha of land. But positive and significant relationship was also observed in case of remaining personal traits of dairy farmers except herd size and risk orientation. The similar relationship between independent variables and knowledge of 240 respondents as a whole was found about recommended buffalo husbandry management practices.Correlation clearly reveals that young, educated, having high economic status, better rapport with extension personnel, having more risk orientation and economically motivated dairy farmers have more interest to acquire high knowledge about buffalo husbandry management practices. These findings are supported by *Singh and Godara (2002)* and *Deepak (2004)*.

Contribution of personality traits of dairy farmers towards their knowledge about improved baffalo husbandry management practices: All the independent variables were fitted in regression equation and the result have been given in Table 4. It is seen from the Table 4 that out of the eleven variables only education and attitude of farmers were found to have significant 'b'-value. The R2-value highlights that all the eleven independent variables has explained 76.8 percent variation towards the knowledge of management practices in case of the farmers having up to 2 ha of land while R2-value in case of more than 2 ha of land was explained 86.00 per cent variation whereas, education, extension contact and attitude towards recommended buffalo husbandry practices was contributed 64 per cent variation towards the knowledge of management practices when responses of 240 dairy farmers fitted in equation jointly. It may be inferred from the above mentioned findings that only education, extension contact and attitude towards recommended buffalo husbandry management practices are the most important variables which can predict farmer's knowledge about improved buffalo husbandry management practices. These finding are in confirmation with the findings of and *Deepak (2004) and Kuhar and Singh (2006)*.

CONCLUSION

On the basis of findings of the study it may be concluded that the diary farmers had maximum knowledge about cleanliness and height of buffalo shed. However, poor knowledge was recorded in the area of disinfestation of shed before calving followed by precaution needed after the expulsion of placenta.

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