

EXTENT OF ADOPTION ABOUT FEEDING AND HEALTH CARE PRACTICES OF BUFFALO HUSBANDRY

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ABSTRACT

The study was conducted on 240 buffalo owners selected from eight villages of Haryana State to ascertain the adoption of buffalo owners regarding feeding and health care practices of buffalo husbandry. The study revealed that respondents of all categories possessed medium level of adoption about feeding and health care practices ranging from 51.57 to 57.50 percent. The higher adoption was recorded in colostrums feeding to newly born calf, chaffing of green fodder and timely vaccination of FMD by the respondents of each category. Poor adoption was found in case of ticks and mites and feeding of prepared hay to their buffaloes. Correlation analysis further revealed that all the Independent variables i.e. education, caste, extension contact, herd size, mass media exposure, attitude towards recommended buffalo husbandry practices, opinion leadership, risk orientation and economic motivation had significant and positive relationship except age which has negative significant correlation with adoption of feeding & health care practices.

INTRODUCTION

Animal Husbandry Sector plays a vital role in providing household nutritional security, increased income and employment especially of women and in rural transformation. Animals provide a diverse range of output for cultivation, irrigation, transport; fibre and leather goods, manure for fertilizer and fuel besides direct production of milk, meat and eggs for human consumption. Livestock provide economic security and social status to the family. Concentration of livestock in holdings which mostly represent poorer of the society. Thus progress in livestock sector is directly related to a more balanced development of rural economy and upliftment of poorer sections of the society.

Straws, stovers and other agricultural by-products would continue to be major inputs as livestock feed for ruminants. There is a large shortage of green fodder (45 to 50 per cent) and concentrates for livestock feeding. The programmes on production of feed and fodder are being further strengthened both for increasing bio-mass availability and enrichment of straws and stovers.

Livestock production is severely affected by devastating animal diseases. Although India is provisionally free from Rinderpest; Foot and Mouth, and Haemorrhagic Septicemia continue to be the major concerns. Residues due to pesticides chemicals, antibiotics and heavy metals in livestock products are critical both for human and livestock health. A programme to create disease free zones in the country is being initiated.

Keeping the importance of feeding and health care practices of increasing milk production and productivity, the present study was undertaken with following objectives:

1. To study the extent of adoption of buffalo owners about feeding and health care practices of buffalo husbandry .
2. To establish between personality traits of dairy farmers and their adoption of feeding and health care practices.
3. To work out the contribution of independent variables towards adoption of feeding and health care practices.

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RESEARCH METHODOLOGY

The study was conducted in four selected districts viz., Kaithal, Sonipat, Faridabad and Jind of Haryana state. One block from each selected district and two villages from each selected block were selected randomly. A dairy farmer had been defined as one who is rearing at least one milch buffalo. Three categories of the dairy farmers 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 dairy farmers was prepared for each selected villages and 30 respondents were selected by using proportional size of sampling techniques. Therefore, the total sample size for this study was 240 dairy farmers. The data were collected through well structured pre- tested interview schedule during 2004-05.

The term adoption has been operationalized as the practices recommended by scientists after thorough research for the benefit of buffalo owners. Whether the dairy farmers are using these technologies over a period of time at the farm or not? For the measurement of adoption of recommended

Feeding and Health Care practices of buffalo husbandry, a structured interview schedule was developed. All the major components of feeding and health care aspects related to buffalo husbandry were included in the interview schedule.

The respondents were asked to give opinion about adoption/ use of these technologies on three point continuum i.e. always, some times and never and the scores 2,1 and 0 were allotted, respectively. The respondents and area wise adoption scores were calculated. The dairy farmers of different categories were grouped into three categories low, medium and high adoption categories using the mean and standard deviation.

RESULTS AND DISCUSSION

Adoption level of the dairy farmers about feeding health care practices

Feeding practices

The data in Table 1 indicated that 51.57 per cent of respondents belonged to landless families had medium level of adoption in case of feeding practices Whereas 31.58 and 16.85 per cent of the total respondents possessed low and high level of adoption of feeding practices, respectively.

Table1. Adoption level of dairy farmers about feeding and health care practices of buffalo husbandry

Aspects	Category	Landless (n=95)		Upto 2ha (n=105)		More than 2ha (n=40)	
		f	%	f	%	f	%
Feeding	Low	30	31.58	29	27.62	14	35.00
	Medium	49	51.57	58	55.24	21	52.50
	High	16	16.85	18	17.14	5	12.50
Health care	Low	28	29.47	24	22.86	11	27.50
	Medium	51	53.69	60	57.14	23	57.50
	High	16	16.84	21	20.00	6	15.00

In case of respondents having land upto 2 ha, as high as 55.24 per cent of them had medium level of adoption followed by low (27.62) and high 17.14%, respectively. The respondents having more than 2 ha of land, majority (52.5%) had medium level of adoption while 35.00 and 12.50 per cent respondents had low and high adoption of respectively. These results are supported by Singh (1987).

Health care practices

It is also evident from the data given in Table 1 that majority (53.69%) of landless families had medium level of adoption. Whereas, 29.47 and 16.84 per cent of the respondents were having low and high level of adoption of health care practices. Almost similar trend was observed in case of respondents having upto 2 ha and more than 2 ha

of land as that of landless families . It reveals that the respondents of all categories possessed medium level of adoption about feeding and health care practices of buffalo husbandry. Similar findings have been reported by Singh (1987) and Yadav and Yadav (1995).

Item-wise adoption of feeding and health care practices among dairy farmers

Feeding Practices

The data presented in Table 2 explicate that 80 percent of landless buffalo owners feed colostrums to their calves continuously (1.60 mean score) hence it was first. Landless respondents had adopted grazing practices to the extent of 4.0% because they do not have cultivated land had growing fodder and they have to depend upon grazing. 46% respondents feed concentrate mixture to their buffalo followed by mineral mixture.

In case of farmers having upto 2 ha of land almost all the respondents (95.5%) had adopted chaffing of green fodder practices followed by colostrum feeding (81.0%) and continuous feeding of colostrum (80.5%). The lowest adoption was reported by the respondents in feeding of prepared hay (0.11). Almost similar trend was also observed in case of the farmers having more than 2 ha of land as was found amongst having upto 2 ha of land.

The results so appeared may be due to the fact that farmers know the importance of colostrums feeding to newly born calf because it develops antibodies and laxative for newly born calf. Whereas the farmers are not given priority to preparation of hay due to unawareness about importance and method of hay making. These results are supported by the observation of Awanti (1981) and Subhareddy (1981).

Health care Practices

It is observed from the data given in Table 3 that the 62% of landless buffalo owners had vaccinated their animals to control F.M.D. at proper time followed by timely treatment of sick and weak buffaloes by veterinary doctors (61.5%) and protection of animals from severe cold (59.1), respectively. The poor adoption was found to applying of pesticides for prevention of ticks and

mites etc. (7.5%). Almost similar rate of adoption were found in case of other two categories of respondents. Whereas the farmers having 2 ha of land and more than 2 ha of land much aware about the segregation of sick buffalo from the healthy animals so they adopted this practices in higher side in comparison to landless respondents. Other reason may be that they have more space for their animals than landless labourers.

From the above mention results It may be inferred concluded that timely vaccination of F.M.D. was found to have highest adoption score and placed on first priority which might be due the fact that farmers are more attentive for taking care of their buffaloes against F.M.D. Whereas the farmers were least bothered about ticks and mites due to ignorance of this practices. These findings are in line with the findings of Sohi & Kherde (1980), Yadav and Yadav (1995) and Mohammad et al. (2003).

Relationship between personal attributes and extent of adoption of feeding and health care practices by the dairy farmers

Feeding practices

The data in Table 4 indicated that mass media exposure and economic motivation of landless respondents had positive and significant relationship with extent of adoption of feeding practices at 5 per cent level of significance while age has negative and significant correlation.

In case of farmers having upto 2 ha land the variables such as education, extension contact, mass media exposure, attitude towards recommended buffalo husbandry practices, opinion leadership, risk orientation and economic motivation were found to have highly significant and positive correlation while socio- economic status and herd size were having significant and positive correlation with extent of adoption of feeding practices. Age of the dairy farmers having more than 2 ha of land was found negative and significant correlation with adoption of feeding practices. While education, socio- economic status, mass media exposure, attitude towards recommended buffalo husbandry practices and opinion leadership were found to have positive and significant relationship with the extent of adoption of feeding practices.

Table 2. Item-wise adoption of feeding practices among dairy farmers

Adoption areas	Landless (n=95)			Upto 2 ha (n=105)			More than 2 ha (n=40)					
	Total adoption score	Mean score	Mean percent score	Rank Order	Total adoption score	Mean score	Mean percent score	Rank Order	Total adoption score	Mean score	Mean percent score	Rank Order
Continuous feeding of	151	1.59	79.5	II	170	1.62	81.0	II	68	1.70	85.0	II
lostrum	152	1.60	80.0	I	169	1.61	80.5	III	63	1.58	75.0	III
eding concentrate mixture	87	0.92	46.0	IV	129	1.23	61.5	IV	55	1.38	69.0	V
buffaloes on the basis of												
ilk production												
eding advance pregnant	53	0.56	28.0	VIII	104	0.99	49.5	VI	45	1.13	56.5	VII
filalo with extra concentrate	57	0.60	30.0	VII	66	0.63	31.5	VIII	26	0.65	32.5	IX
eding of Mineral mixture												
ultivation of high yielding	24	0.25	12.5	X	82	0.78	39.0	VII	32	0.80	40.0	VIII
riceties of fodder												
application of recommended												
es of manure and fertilizers	40	0.42	21.0	IX	112	1.07	53.5	V	57	1.43	71.5	IV
the fodder crops												
igular feeding of												
ommended green fodder to	59	0.62	31.1	VI	112	1.07	53.5	V	50	1.25	62.5	VI
filaloes												
eding of prepared ha	14	0.15	7.5	XI	12	0.11	5.50	X	4.0	0.10	5.0	XI
affing of green fodder	80	0.84	42.5	V	201	1.91	95.5	I	80	2.00	100.0	I
igular grazing	141	1.48	74.0	III	54	0.51	25.5	IX	12	0.30	15.0	X

Table 3. Item-wise adoption of health care practices among dairy farmers

Adoption areas	Landless(n=95)			Upto 2 ha (n=105)			More than 2 ha (n=40)			
	Total adoption score	Mean percent score	Rank Order	Total adoption score	Mean percent score	Rank Order	Total adoption score	Mean percent score	Rank Order	
timely treatment of sick and weak buffaloes by Vet. doctors	117	1.23	61.5	136	1.30	65.0	60	1.50	75.0	II
isolation of diseased animals suffering from contagious disease	80	0.84	42.0	109	1.04	52.0	51	1.28	64.0	IV
burying of the dead body of animals dies of contagious diseases	45	0.47	23.5	88	0.84	42.0	27	0.68	34.0	VII
applying of pesticides for prevention of ticks and mites etc.	14	0.15	7.5	19	0.18	9.0	8.0	.20	10.1	VIII
isolation of sick animals from healthy ones	45	0.47	23.5	84	0.80	40.0	33	.83	41.5	VI
isolation of animals from other animals	112	1.18	59.1	119	1.33	66.5	51	1.28	64.0	IV
treatment of sick animals/heat breeders and oestrus by veterinary doctors	56	0.59	29.5	98	0.93	46.5	38	0.95	47.5	V
timely vaccination of FMD	118	1.24	62.0	143	1.36	68.0	62	1.55	77.5	I
timely vaccination of H.S.	104	1.09	54.5	129	1.23	61.5	54	1.35	67.5	III

Table 4. Relationship between personal attributes and extent of adoption of feeding and health care practices by the dairy farmers

S. No.	Variables	Feeding			Health care		
		Landless (n=95) 'r'	Upto 2 ha (n=105) 'r'	More than 2 ha (n=40) 'r'	Landless (n=95) 'r'	Upto 2 ha (n=105) 'r'	More than 2 ha (n=40) 'r'
1	Age	-0.203*	-0.138	-0.315*	-0.061	-0.137	-0.167
2	Education	0.159	0.517**	0.581**	0.142	0.349**	0.579**
3	Caste	-0.006	0.124	-0.280	0.096	-0.003	-0.138
4	Socio- Economic Status	0.122	0.229*	0.426**	0.046	0.157	0.363*
5	Herd Size	0.016	0.211	0.162	0.169	0.122	0.101
6	Extension Contact	0.176	0.450	0.389**	0.160	0.453**	0.488**
7	Mass media exposure	0.225*	0.541**	0.505**	0.158	0.398**	0.527**
8	Attitude towards R.B.H.P.	0.043	0.435**	0.326*	0.224*	0.442**	0.318*
9	Opinion leadership	0.188	0.370**	0.493**	0.187	0.391**	0.395**
10	Risk orientation	0.093	0.365**	0.049	0.195	0.267**	0.172
11	Economic motivation	0.206*	0.375**	0.214	0.177	0.392**	0.337*

* Significance at 5% level of probability

** Significance at 1% level of probability

It could be inferred from the above findings that these ten variables were important and may be useful in adoption of feeding practices.

Health care practices

The data in table 4 revealed that only attitude towards recommended buffalo husbandry practices was found to have positive and significant relationship with extent of adoption of health care practices in case of landless families. While in case of farmers having upto 2 ha of land education, extension contact, mass media exposure, attitude towards buffalo husbandry practices, opinion leadership, risk orientation and economic motivation were shown positive and highly significant correlation with extent of adoption of health care practices. Almost similar trend was observed in case of dairy farmers having more then 2 ha of land.

Regression coefficients between independent variables and extent of adoption of dairy farmers regarding feeding and health care practices.

Feeding practices

The perusal of table 5 indicated that out of eleven variables none of the variable had significant

value of 't' for 'b' in adoption of feeding practices in case of landless and the farmers having more than 2ha of land. The R²- value revealed that all the eleven variables had jointly explained 76.7 percent variation towards the adoption of feeding practices in case of farmers having more than 2 ha of land. Whereas In case of farmers having upto 2 ha of land only two variables namely, education and herd size, had contributed 66.8 percent variation towards adoption of feeding practices. The F values were found to have significant in all three categories of respondents.

Health care practices

It is evident from the data given in Table 5 that none of variable had significant value of 't' for 'b' in adoption of health care practices in case landless families. The R² values revealed that all the independent variables had explained 37.5 per cent variation in adoption of health care practices. Although in case of farmers having upto 2 ha of land, extension contact and economic motivation had significant regression coefficient and R² values also reveals that 61.6 percent variation towards adoption of health care practices was explained by

Table 5. Regression coefficients between personal attributes and extent of adoption of dairy farmers regarding feeding and health care practices

S. No.	Variables	Feeding						Health care					
		Landless		Upto 2 ha		More than 2 ha		Landless		Upto 2ha		More than 2 ha	
		'b'	't'	'b'	't'	'b'	't'	'b'	't'	'b'	't'	'b'	't'
1	Age	-0.071	1.804	-0.007	0.209	-0.064	1.060	0.015	0.385	-0.026	0.779	.0068	1.197
2	Education	-0.200	0.566	0.645	2.173**	0.878	1.862	0.279	0.814	0.166	0.535	1.121	2.550*
3	Caste	0.067	0.093	-0.162	0.262	-2.5.19	1.989	0.768	1.107	-0.540	0.838	-0.338	0.286
4	Socio- Economics Status	0.047	0.374	-0.149	1.688	0.151	1.273	-0.178	1.457	-0.104	1.121	0.144	1.302
5	Heed Size	0.208	0.216	1.329	2.492*	-0.490	0.570	1.790	1.911	0.796	1.427	-0.450	0.562
6	xtension contact	-0.032	0.140	0.203	1.345	-0.007	0.021	0.163	0.747	0.463	2.936**	0.307	1.061
7	Mass Media exposure	0.203	0.806	0.377	1.941	0.195	0.691	-0.48	0.199	0.116	0.570	0.245	0.931
8	Attitude towards R.B.H.P.	-0.316	1.377	0.145	0.821	0.195	0.732	0.259	0.507	0.058	0.846	-0.108	1.123
9	Opinion Leadership	0.098	1.240	-0.014	0.218	0.115	1.115	0.039	0.798	-0.240	1.713	0.014	0.067
10	Risk orientation	-0.079	0.474	0.006	0.043	-0.252	1.128	0.130	0.798	-0.240	1.713	0.014	0.067
11	Economic motivation	0.277	1.476	0.219	1.524	-0.318	1.190	0.092	0.503	0.340	2.265*	0.056	0.223
	R ² = Value	0.354		0.668		0.767		0.375		0.616		0.716	
	F= Value	1.08		6.80**		3.64**		1.24		5.18**		2.67*	

* Significance at 5% level of probability

** Significance at 1% level of probability

all variables. While, only education, in case of farmers having more than 2ha of land, had contributed significantly towards adoption of health care practices. The F Value (2.67) was also found significant at 0.05 level of probability.

CONCLUSION

On the basis of findings of the study it may be concluded that the majority of the respondents possessed medium level of adoption of feeding and health care practices. The higher adoption was recorded in colostrums feeding to newly born calf, chaffing of green fodder and timely vaccination of FMD level by the respondents of each category. Whereas farmers were least bothered about ticks and mites so adoption of this practice was found low. Results indicated that all the Independent variables were having highly significant and positive relationship except age which has negative significant correlation with extent of adoption of Feeding and Health Care practices. It could be inferred from the above findings that ten variables were important and may be useful in adoption of feeding and health care practices while age was not so important in this regard.

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