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Research Article

DAIRY FARMER'S KNOWLEDGE ABOUT BUFFALO FEEDING PRACTICES

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ABSTRACT

Ascertaining the knowledge level of farmers about different aspects of buffalo husbandry is essential part before developing any strategy for training purpose. A study thus was undertaken on 240 buffaloes owners selected from four districts of Haryana during 2004-05 to ascertain their knowledge level regarding dairy animals feeding practices. The study revealed that majority of the respondents possessed moderate level of knowledge. However, the farmers having more than 2 ha. of land had higher knowledge as compared to other categories of respondents. The buffalo owners had maximum knowledge about quality of balance ration for milch buffalo, quality and quantity of concentrate required for dry buffalo where as they had poor knowledge about use of mineral mixture and high yielding varieties of fodder. The correlation study further revealed that education, extension contact, mass-media exposure, opinion leadership and attitude of buffalo owners were had positive and significant relationship with their knowledge about recommended feeding practices.

Key words: Knowledge level, feeding practices, buffalo owners, opinion leadership

In Haryana, the animal husbandry sector has lead to an increased per capita per day availability of milk (660 gms) against country's overall average of 237 gms (Anonymous, 2006). However, production level and adoption of animal husbandry innovations have been far from satisfactory. Designing a suitable extension strategy to improve milk productivity requires a thorough understanding of existing level of knowledge of farmers. Keeping the above facts in mind, the present study was carried out to ascertain knowledge level of dairy farmers about recommended buffalo feeding practices.

MATERIALS AND METHODS

The study was conducted in Haryana state. The state is divided into four divisions and one district was selected from each division randomly. Thus, four districts viz. Kaithal, Sonipat, Faridabad and Jind were selected. One block from each selected district and two villages from each selected block were selected randomly (eight villages). For study purpose, a dairy farmer has 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, farmers having land up to 2 hectares and buffalo owners having more than 2 hectares of land. A separate list of all the three categories of dairy farmers was prepared for each selected village and 30 respondents were selected from each village by using Probability Proportional to Size (PPS) sampling technique. 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. A 'Teacher-Made' knowledge test comprising of 10 major recommended feeding practices of buffalo was developed to measure the knowledge level of the respondents. The items pertaining to the recommended feeding practices that could possibly represent the knowledge were presented to the respondents and their responses were recorded. Semi-structured interview schedule was used to collect the data. The responses of buffalo owners were obtained on three point continuums i.e. correct, partially correct and wrong answer and score of 2, 1 and 0 was allotted, respectively. On the basis of knowledge score, the respondents were categorized into three groups i.e. poor, moderate

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and high level of knowledge using mean and standard deviation.

RESULTS AND DISCUSSION

Knowledge level regarding buffalo feeding practices: The majority of landless families had moderate level of knowledge (63.16%) about feeding practices followed by poor (18.95%) and high (17.89%), respectively. More or less same trend was observed as far as the farmers having up to 2 hectares and more than 2 hectares of land. These findings got support from the findings of Gill and Minas (1978), Pawar (1979) and Kumar *et al.* (2001).

Item wise knowledge level of buffalo owners about feeding practices: The respondents of all the three categories possessed higher knowledge with respect to items quantity balance ration for milch buffalo (3.92 mean score), quantity of concentrate required for dry buffalo (1.72) and quantity of concentrate for pregnant buffalo (1.42) which indicated that all types of buffalo owners were having basic knowledge about feeding of balance ration to their buffaloes (Table 1). Poor knowledge was found among all the respondents about disadvantage of over feeding, use of mineral mixture and HYV of fodders as represented by their low knowledge mean score. Insufficient knowledge about these aspects implies that the buffalo owners don't know the importance of mineral mixture and disadvantage of overfeeding. The farmers generally understand that more feeding yields to higher milk production. This misconception among farmers may be removed by the field veterinarians and other extension agencies by organizing farmers training and awareness camps. The study is supported from the observations of Nataraju and Channegowda (1986) and Kumar *et al.* (2001).

Relationship of knowledge level of buffalo owners about feeding practices with some independent variables: Out of 11 variables, only five variables namely education, extension contact, mass media exposure, attitude and opinion leadership were positively and significantly correlated with knowledge of feeding practices of landless respondents (Table 2). Remaining variables such as caste, SES, risk orientation, and economic motivation were not found significantly related with the knowledge. Age and herd size had negative correlation with knowledge of respondents of landless families.

In case of farmers having upto 2 hectares of land, most of the independent variables except caste and age were having positive and significant correlation with knowledge. As far as buffalo owners having more than 2 hectares similar trend of correlation was found. The correlation study implies that socio-economic characteristics of buffalo owners play an important role in possessing knowledge about recommended feeding practices. The farmers having more basic educational qualification tend to seek more information on innovative feeding technologies and also become more inclined to bear the risk. Economic motivation also had a similar

Table 1

Item wise mean knowledge score level of dairy farmers about feeding practices

Areas of poor knowledge	Land less (n=95)	Up to 2 hectares (n=105)	More than 2 hectares (n=40)	Overall (N=240)
High yielding varieties of fodder	0.36 (X)	0.95 (VII)	0.88 (VIII)	0.70 (VIII)
Balance feeding	1.12 IV)	1.31 (VI)	1.55 (V)	1.28 (V)
Quantity of balanced ration for milch buffaloes	3.51 (I)	4.00 (I)	4.70 (I)	3.92 (I)
Importance of green fodder	1.08 (V)	1.34 (V)	1.63 (III)	1.29 (IV)
Quantity of concentrates for pregnant buffalo	1.31 (III)	1.47 (III)	1.58 (IV)	1.42 (III)
Method of increasing the utility of fodder	0.89 (VII)	1.24 (VII)	1.23 (VII)	1.10 (VII)
Ingredients of concentrate mixture	1.03 (VI)	1.35 (IV)	1.43 (VI)	1.24 (VI)
Quantity of concentrate required for dry buffalo	1.81 (II)	1.63 (II)	1.75 (II)	1.72 (II)
Disadvantages of over feeding	0.64 (VIII)	0.68 (IX)	0.85 (IX)	0.69 (IX)
Use of mineral mixture	0.62 (IX)	0.67 (X)	0.70 (X)	0.65 (X)

Values in parenthesis indicate rank order

Table 2

Relationship between personal attributes and knowledge level of dairy farmers about feeding practices

Variables	Land less (n=95) 'r'	Up to 2 hectares (n=105) 'r'	More than 2 hectares (n=40) 'r'	Overall (N=240) 'r'
Age	-0.034	0.012	-0.393**	-0.062
Education	0.237*	0.590**	0.676**	0.496**
Caste	0.037	0.135	-0.306*	0.173**
Socio-Economic Status	0.177	0.321**	0.373*	0.329**
Hard size	-0.025	0.205*	0.277	0.240**
Extension contact	0.295**	0.438**	0.674**	0.462**
Mass media exposure	0.240*	0.566**	0.776**	0.525**
Attitude towards R.B.H.P.	0.286**	0.558**	0.524**	0.451**
Opinion leadership	0.402**	0.468**	0.587**	0.489**
Risk orientation	0.143	0.293**	0.338*	0.277**
Economic motivation	0.061	0.365**	0.484**	0.328**

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

relationship with knowledge. A buffalo owner having a high level of economic motivation generally take more interest in scientific/ innovative dairy technology and tries to experiment the worth of such practices at his own animal for which he seeks more information.

Multiple regression analysis of personal attributes and knowledge level of buffalo owners regarding feeding practices: Except opinion leadership, all other independent variables had a non-significant relationship with the knowledge level of landless buffalo owners (Table 3). As the score of opinion leadership of the respondents' increases, their knowledge about feeding practices increases. It could be due to the fact that the respondents having opinion leadership are more innovative and have better rapport with external agencies. R^2 value of landless labourers showed that all the eleven variables explained 47 per cent variation in the dependent variables knowledge. The F value (2.14) was also significant.

Under the category of farmers having 2 hectares of land, it could be seen that age, education, and attitude of the respondents were found to have positive and significant relationship. The R^2 value showed that 75.8 per cent variation towards the knowledge level of respondents about feeding practices was explained by all the eleven independent

Table 3

Regression coefficients between personal attributes and knowledge of dairy farmers about feeding practices

Variables	Land less		Up to 2 hectares		More than 2 hectares		Overall	
	'b'	't'	'b'	't'	'b'	't'	'b'	't'
Age	0.079	1.105	0.138	2.781**	-0.026	0.290	0.090	2.369*
Education	0.906	1.431	2.038	4.415**	1.632	2.318*	1.290	4.104**
Caste	-0.219	0.170	-0.047	0.050	-4.065	2.151*	-0.034	0.057
Socio-Economic Status	-0.143	0.632	-0.191	1.394	0.072	0.407	-0.106	1.218
Hard size	0.001	0.001	1.100	1.329	0.140	0.109	1.343	2.076*
Extension contact	0.567	1.409	0.173	0.739	0.597	1.288	0.343	1.760
Mass media exposure	-0.354	0.786	0.269	0.893	0.992	2.352	0.222	1.030
Attitude towards recommended buffalo husbandry practices	0.495	1.20	0.937	3.416**	0.275	0.694	0.615	3.179**
Opinion leadership	0.345	2.442*	0.077	0.757	0.091	0.595	0.187	2.537*
Risk orientation	0.129	0.428	-0.348	1.675	-0.219	0.655	-0.146	0.934
Economic motivation	-0.371	1.105	0.302	1.354	0.086	2.17	0.106	0.651
R^2 = Value	0.470		0.758		0.882		0.653	
F = Value	2.14		11.39*		8.92**		15.42**	

* Significance at 5% level of probability

** Significance at 1% level of probability

variables. In case of buffalo rearing farmers having more than 2 hectares of land, education, caste and mass media exposure were had significant value of regression coefficient. The R^2 value also indicates that 88.2 per cent variation was explained by all the variables towards knowledge level of dairy farmers about feeding practices. Moreover, education, attitude, age, herd size and opinion readership were the most important factors which influence knowledge of buffalo owners. The farmers with large herd size tend to seek more information about latest buffalo husbandry practices for enhancing their income from animal husbandry. Buffalo husbandry being an innovative profession of many scientific dimensions will thus be more profitable to those farmers with high level of education and favourable attitude. These findings are in line with the findings of Deepak (2004).

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