

Original Research Article

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## Training Needs of Buffalo Farmers in Madhepura District of Bihar, India

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### ABSTRACT

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The training can be more effective and significant when analysis of training needs prior to the beginning of training programmes and imparting knowledge according to the needs of the farmers. The present study was conducted in the Madhepura District of Bihar with the purpose of identifying training needs of buffalo farmers. Seven different farming practices were undertaken for study as farmers training needs. Under each major component, specific and relevant training need items were collected and systematically incorporated into the structured interview schedule. The findings of study revealed that the 72 per cent of the respondents conveyed their opinion regarding training needs about proper housing management as most needed followed by feeding management practices of animal (70%), nutritional management (61%), general management of animal (57%), health care and management practices (55%), proper milking practices (33%) and breeding management practices (29%). Study also depicted overall training needs along with various factors relating to training needs.

### Introduction

India is predominantly an agrarian country with animal husbandry playing significant role in accelerating the growth of rural economy and thus it is a backbone of agricultural based farming sector. Out of the total agricultural GDP of India, livestock sector contributed about 27.25 per cent during 12<sup>th</sup> five year plan, 2012-13, of which maximum contribution was from dairy sector (Anonymous, 2014). Training is very much essential for rural dairy farmers which help to improve trainees skill,

desired attitude and values required for the work. According to Lyntonn and Pareek (1990), training consists of well organized opportunities for participants to acquire necessary understanding and skill. Farmers training mainly takes place outside of formal learning institutions and generally directed towards improving their job efficiency in respective field. Farmers training geared towards adult learning. In order to make any training meaningful and effective, it is important to identify the training needs of the farmers. Training need is the gap between

‘what is’ and ‘what ought to be’. Based on this, suitable training model can be developed so that the appropriate training is given to the right people, in right form, at right time so that his/her degree of productivity and profitability can be achieved. Davis and Rylance (2005) suggested that training focused on enterprise skills, such as market analysis, distribution and business management, would support small scale farmers in identifying the technologies that would encourage them most and would help them to participate in agricultural innovation. Needs of training is progressively realized all over the world.

## **Materials and Methods**

The present study was conducted in Madhepura district of Bihar, as the buffalo population was highest as per 19<sup>th</sup> livestock census in Bihar. Two blocks namely Madhepura and Kumarkhand was purposively selected as these two blocks had largest population of buffalo in Madhepura district. From each blocks, 5 villages were selected randomly. Therefore, a total of 10 villages were selected for the present study. From each village 10 buffalo farmers were randomly selected, thus forming a total sample size of 100. Respondents were interviewed personally with the help of pre-structured schedule developed for the study. In the present study the training needs of buffalo farmers were categorized into seven broad categories for the study viz, feeding practices, health care and management practices, housing management, general management, nutritional management, breeding management and proper milking practices of animal. Under each major component, specific and relevant training need practices were collected through different review of literature, district extension personal, experts, teachers, buffalo farmers as well as investigators own field experience and were systematically incorporated in the interview schedule. The structured schedules

were administered to the respondents for data collection. In this regard buffalo farmers were requested to give their response against each specified question and by investigators there training needs were categorized as most needed, needed or not needed based on their perceived needs regarding training for further improvement in their farming system and livelihood. Each major training (7 practices) needs comprises of several sub heads, thus operation making total of 42 training needs practices in selected area for study purpose. The statistical method used for data analysis is frequency.

## **Results and Discussion**

### **Training needs in feeding practices**

Efficient production requires efficient feeding management. Adequate feeding will ensure that animal attains desired body weight, produce more milk and remains healthy. As feeding alone accounts for around 70 percent of expenses incurred for dairying. Our findings observed that majority of the farmers (96%) needed training in balance ration preparation, followed by total dry matter feeding (83%), calf feeding (74%) and adequate provision of water (72%). Regarding pregnant animal feeding 57 percent of the respondent farmers expressed their training need as most needed followed by 43 percent needed and no respondents were found full knowledge of proper feeding to their animal during pregnancy (Table 1). It was found that majority of respondents expressed their need about feeding practices as ‘most needed’ training, this might be due to their will to know the ways to enhance milk yield, keep animal healthy, proper feeding at cheaper rates and to improve reproductive outcome, not only in terms of number of offspring born, but also in terms of physiological well-being and viability which is the key to progress in the dairy enterprise particularly when effective

cost of feed is increasing day by day, with not so much corresponding increase in milk rates. These findings were supported by Pharate *et al.*, (2010) and Patil *et al.*, (2009).

### **Training needs in health care and management practices**

Health management ensures the optimal care and well being of animal and reduces losses in productivity caused by diseases and management errors. The chronological training needs felt by the buffalo farmers in adoption of improved buffalo farming practices presented in the Table 2. Among several training needs, as regard to health care and management practices, the majority of respondents were of the opinion that found in the identification of common infectious diseases (82%) was the most needed training area followed by vaccination schedule (65%), deworming schedule (61%), Precaution during pregnancy (60%), management of pregnant animal before parturition (50%) and after parturition (44%), where as in case of animal protection in adverse environment 40 percent respondents conveyed their opinion as most needed followed by 44 percent needed and 16 percent as not needed. Majority of the respondents expressed their training need about health care and management practices as 'most needed' training, this might be due to lack of technical knowledge about health and clinical aspects, heavy economic losses because of diseases and unavailability of timely veterinary services in remote and rural areas in emergency situations. These findings are supported by Meena (1994) and Patil *et al.*, (2009).

Training needs in housing management: A well designed house will give opportunity to the buffalo owner for the further development, easy to clean, reduces feed cost and easier manure handling and or byproducts. Under principles of housing viz, space required for

different age group of animal, housing in different season, appropriate ventilation provision, dimension and direction of shed and day to day housing activities were considered. The results in Table 3 depicts that both principles of housing (75%) and shed cleaning (70%) was the most needed training area for the respondent buffalo farmers. These findings are in line with the findings of Patil *et al.*, (2009).

### **Training needs in general management**

Regarding training needs in general management practices of buffalo the majority of farmers were found to be require training in hygienic milk production (70%) followed by calf care (60%), navel cord cutting after birth of offspring (57%), care of animal before and after parturition (50%) and pregnant animal care (47%).

Majority of the respondents were found to have most needed training, this might be due to their desire of knowing the advance way of practicing different managerial practices (Table 4). Present findings are supported by Patil *et al.*, (2009).

### **Training needs in nutritional management**

The proper feeding of animal at different age group (82%) was indicated as most needed training area followed by importance of hygienic feeding (58%), importance of colostrums feeding (52%) and importance of mineral mixture in feed (51%). It was also reported that very few i.e. only 3 per cent of respondents did not required training in the field of feeding of animals at different age group of animals (Table 5). This might be due to their regular consultancy with veterinarian or any expert in the field of feed formulator and variation was also found in the field of practicing mineral mixture at proper ratio to

the animal this may be due to economic status of the farmer. These findings are agreed with the findings of Pharate *et al.*, (2010).

### **Training needs in breeding management practices**

The results in Table 6 identifies that only 12 percent of respondent famers perceived their training needs regarding heat detection in animal as most needed followed by gestation period only 7 percent. This indicates that majority of respondents easily identifies buffalo's behavior and other observable symptoms like mounting, mucous discharge, grunting etc. during heat. These findings are in line with the findings of Sah *et al.*, (2002). It was also found that majority of farmers (54%) were under most needed training area in knowing importance of Artificial insemination followed by benefits of regular pregnancy diagnosis (49%).

### **Training needs in milking practices**

Milk is the main product of cattle and buffalo farm enterprises, produced basically as food for human consumption. Therefore, buffalo farmer as well as dairy farmer must aim at maximizing on milk output from his/her animal herd. At the same time farmer must ensured that milk is produced in clean and hygienic condition so that it is fit for human consumption. The majority of the respondents (79%) required training in proper udder wash before milking of their buffalo followed by fixed time interval between consecutive milking (45%) and properly hind quarter wash prior to milking (38%). It was also found that majority of the respondents (50%) had medium level of knowledge regarding first strip milk collection, fixed time interval between consecutive milking and hind quarter secure (Table 7). As indicated in Table 8 the 70.77 per cent of the respondents conveyed their opinion regarding training needs about feeding management practices of animals as

most needed followed by 22.88 percent respondents as needed while 8.11 percent as not important, as reported by Pharate *et al.*, (2010). This might be because of their will to know the ways to enhance yield through proper feeding and balance feeding at cheaper rate which is the key to progress in this dairy enterprise particularly when effective cost of feed is increasing day by day, with not so much corresponding increase in milk rates.

Majority of the farmers (54.88%) had perceived their training needs as most needed in health care and management practices whereas 27.22 per cent expressed it as needed while 17.88 per cent respondents expressed it as not needed. Majority of the farmers expressed their training needs about health care and management practices aspects as most needed, might be because of lack of technical knowledge about health and clinical aspects, heavy economic losses because of diseases and unavailability of timely veterinary services in remote and rural areas. In emergency situations this findings are supported by Patil *et al.*, (2009). In housing management practices 72.5 per cent respondents were found to convey their training need as most needed followed by needed (22.75%) and not needed (5.5%). Regarding general management practices 56.8 per cent respondents were found to convey their training needs as most needed followed by needed (33%) and not needed (10.22%).

As regards information about nutritional management of animal majority of the respondents (60.75%) opined their training needs as most needed, 22.25 per cent of the respondents as needed while 17 per cent expressed it as not needed. In reference to breeding management practices of animals 29 per cent of the respondents expressed their training needs as most needed, while majority of the respondents (45%) as needed whereas 26 per cent respondents as not needed.

**Table.1** Distribution of feeding practices and training needs in percentage

Sl. No.	Categories	Training needs (%)		
		MN (Most needed)	N (Needed)	NN (Not needed)
1.	Dry matter intake	83	13	04
2.	Balanced ration and its importance	96	04	00
3.	Green fodder feeding	66	19	15
4.	Colostrums feeding	57	10	33
5.	Advantages of colostrums feeding	68	13	19
6.	Drinking water	72	24	06
7.	Milch animal feeding	64	36	00
8.	Pregnant animal feeding	57	43	00
9.	Calf feeding	74	26	00

**Table.2** Distribution of health care and management practices and training needs in percentage

Sl. No.	Categories	Training needs (%)		
		MN (Most needed)	N (Needed)	NN (Not needed)
1.	Common infectious diseases	82	03	15
2.	Vaccination schedule	65	15	20
3.	Deworming schedule	61	19	20
4.	Parasite control	56	29	15
5.	Floor during parturition	36	47	17
6.	Management after parturition	44	39	17
7.	Management before parturition	50	34	16
8.	Precaution during pregnancy	60	15	25
9.	Adverse environment protection	40	44	16

**Table.3** Distribution of housing management and training needs in percentage

Sl. No.	Categories	Training needs (%)		
		MN	N	NN
1.	Shed cleaning	70	24	06
2.	Principles of housing	75	25	05

**Table.4** Distribution of general management practices and training needs in percentage

Sl. No.	Categories	Training needs (%)		
		MN	N	NN
1.	Pregnant animal care	47	38	15
2.	Before and after parturition	50	35	15
3.	Calf care	60	40	00
4.	Navel cord cutting	57	32	11
5.	Hygienic milk production	70	20	10

**Table.5** Distribution of nutritional management and training needs in percentage

Sl. No.	Categories	Training needs (%)		
		MN	N	NN
1.	Proper feeding at different age groups	82	15	03
2.	Importance of mineral mixture in feed	51	19	30
3.	Importance of colostrums feeding	52	31	17
4.	Importance of hygienic feeding	58	24	18

**Table.6** Distribution of breeding management and training needs in percentage

Sl. No.	Categories	Training needs (%)		
		MN	N	NN
1.	Importance of A.I	54	19	27
2.	Gestation period	07	47	46
3.	Heat detection	12	62	26
4.	Regular pregnancy diagnosis	49	30	21
5.	Signs of parturition	23	68	09

**Table.7** Distribution of milking practices and training needs in percentage

Sl. No.	Categories	Training needs (%)		
		MN	N	NN
1.	Hind quarter wash	38	28	34
2.	Grooming during milking	10	45	45
3.	Hind quarter secure	5	51	44
4.	Hand washing	27	44	29
5.	Udder washing	79	16	05
6.	First strip milk collection	41	50	09
7.	fixed time interval between consecutive milking	45	49	06
8.	Concentrate offered during milking	16	75	09

**Table.8** Distribution of respondents according to their overall training needs in buffalo farming practices

Sl. No	Training area	Most needed		Needed		Not needed	
		Percent	Rank	Percent	Rank	Percent	Rank
1.	Feeding practices	70.77	II	20.88	VII	8.11	VI
2.	Health care and management practices	54.88	V	27.22	IV	17.88	III
3.	Housing management	72.50	I	22.00	VI	5.50	VII
4.	General management	56.80	IV	33	III	10.20	V
5.	Nutritional management	60.75	III	22.25	V	17	IV
6.	Breeding management	29	VII	45	I	26	I
7.	Milking practice	32.60	VI	44.75	II	22.62	II

The results revealed that there is a need for conducting more number of needs based and well tailored training programme suited to buffalo farmers which would in turn help them to have more extension contact. Thus in the present study among seven broader areas of training, respondents expressed their willingness to have most needed training in the descending order as housing management, feeding management practices, nutritional management, general management, health care and management practices, clean milk production practices and breeding management practices. The results of the study help the extension agencies to develop suitable training programme for the buffalo farmers to improve their productivity and run buffalo farming successfully which in turn increases farmers life style.

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