

Training Needs Perceived by Dairy Farmers Regarding Dairy and Animal Husbandry Practices

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ABSTRACT

The study was conducted with aim of to assess the training needs of dairy farmers. Data were collected from a randomly selected sample of 350 dairy farmers of Dahod district of Gujarat. The study covers main areas of animal husbandry practices. Majority of the dairy farmers perceived training need feeding schedule of milch animal followed by upkeeping the various records to maintain regarding animal husbandry management practices and urea treatment in terms of fodder production and its management.

Keywords: Training needs, Dairy farmers, Dairy, Animal Husbandry Practices, Milk production

INTRODUCTION

India is the largest milk producer in the world; however India has poor quality of milk with low productivity. Gujarat ranks 5th in the milk production of the country. Dahod has a large tribal population having agriculture and animal husbandry as major source of livelihood. The cows and buffalos are major milk producing animals in the district. The animal owners are not aware about the importance of scientific animal husbandry practices and hence milk productivity is very low. The success to sustain and enhance milk production entirely depends on farmers' knowledge about scientific animal husbandry practices coupled with regular advice, constant follow up, timely reminder and good coordination to take action on matters of their interest. The transfer of modern animal husbandry practices to the dairy farmers with pre-conceived thought of traditional animal keeping calls for a well developed and organized training programme for the farmers. Training is a critical input and also an integral part for quick transfer of technology and way to improve their agriculture, animal husbandry and uplift their socio economic condition. Thus, the importance of training as an indispensable instrument for human resources development at any level cannot be ignored. Farmers training programme can be taken as the most suitably designed programme to meet the present day complex extension requirements of taking the full technology in the shortest possible time to large number of farmers. Keeping in view the above reality government of Gujarat started Pashu Vigyan

Kendra at Limkheda to train animal keepers in scientific dairy farming. The centre is in establishment phase, hence it is essential to study the present status and training needs of the dairy farmers so that appropriated training modules can be developed and training programmes can be conducted accordingly. With this in view, the present study to assess the training needs of dairy farmers pertaining to dairy and animal husbandry practices conducted.

OBJECTIVE

To assess the training needs of dairy farmers pertaining to dairy and animal husbandry practices

METHODOLOGY

The present study was conducted in operational area of Pashu Vigyan Kendra, Limkheda. All Seven talukas of Dahod districts were selected for the study. Two villages were selected randomly from each Taluka and 25 dairy farmers were randomly selected from each village, thus making the total sample of 350 dairy farmers. . To assess the training need of dairy farmers, a well structured pre tested Gujarati version interview schedule was prepared in consultation with dairy, veterinary, extension experts and based on the review of the literature. Each respondent was asked to mention their response against the training needs on three point continuum viz 'most needed', 'needed', and 'not needed' for which a score of 2, 1 and 0 respectively was given. Training need index (TNI) was also computed with

help of following formula (Kanaga 1988, Patil and Kokate, 2011). Frequency was worked out and ranking was given to each based on the relative score.

$$TNI = (\text{Total obtained score} / \text{Maximum obtainable score}) \times 100$$

The training need index was also used to prioritize the training need of dairy farmers in relation to dairy and animal husbandry management practices.

RESULTS AND DISCUSSION

Table 1 : Training needs of dairy farmers in dairy and animal husbandry practices

n=350

Sr. No.	Item	Most needed	Needed	Not needed	Total Score	Mean Score	Rank
(A) Training needs of dairy farmers about housing and general management practices							
1	Up keeping the various records	315 (90.00)	13 (3.71)	22 (6.29)	643	1.84	I
2	Milking method	175 (50.00)	105 (30.00)	70 (20.00)	455	1.30	II
3	Ideal Housing	156 (44.57)	142 (40.57)	52 (14.86)	454	1.30	III
4	Grooming	170 (48.57)	109 (31.14)	71 (20.29)	449	1.28	IV
5	Use of chaff cutter	165 (47.14)	105 (30.00)	80 (22.86)	435	1.24	V
6	Replacement of stock at home	119 (28.57)	131 (34.00)	319 (37.43)	319	0.91	VI
7	Bathing	60 (17.14)	150 (42.86)	140 (40.00)	277	0.77	VII
8	Replacement of stock through purchase	65 (18.57)	108 (30.86)	177 (50.57)	238	0.68	VIII
9	Animal shed cleaning	45 (12.86)	118 (33.71)	187 (53.43)	208	0.59	IX
(B) Training needs of dairy farmers about feeding water management practices							
1	Feeding schedule of milch animals	308 (88.00)	37 (10.57)	5 (1.43)	653	1.87	I
2	Feeding schedule of dry animal	275 (78.57)	55 (15.71)	20 (5.71)	605	1.73	II
3	Feeding schedule of heifers	260 (74.29)	41 (11.17)	49 (14.00)	561	1.60	III
4	Feeding schedule of pregnant animals	206 (58.86)	64 (18.29)	80 (22.86)	476	1.36	IV
5	Importance of mineral mixture	175 (50.00)	86 (24.57)	89 (25.43)	436	1.25	V
6	Advantages of compound concentrate mixture	147 (42.00)	95 (27.14)	108 (30.86)	389	1.11	VI
7	Advantages unconventional livestock feed.	126 (36.00)	115 (32.86)	109 (31.14)	367	1.05	VII
8	Selection of feeds	105 (30.00)	113 (32.29)	132 (37.71)	323	0.92	VIII
9	Time and frequency of feeding and watering	105 (30.00)	108 (30.86)	137 (39.14)	318	0.91	IX

Sr. No.	Item	Most needed	Needed	Not needed	Total Score	Mean Score	Rank
(C) Training needs of dairy farmers about calf rearing practices							
1	Feeding of colostrums	220 (62.86)	78 (22.29)	52 (14.86)	518	1.48	I
2	Deworming	180 (51.43)	61 (17.43)	109 (31.14)	421	1.20	II
3	Vaccination	149 (42.57)	108 (30.86)	93 (26.57)	406	1.16	III
4	Dehorning	128 (36.57)	130 (37.14)	92 (26.29)	386	1.10	IV
5	castration	81 (23.14)	152 (43.43)	117 (33.43)	314	0.90	V
6	Cutting of naval cord and application of Tr. Iodine	41 (11.71)	208 (59.43)	101(28.86)	290	0.83	VI
7	Feeding schedule of calves up to one year	82 (23.43)	115 (32.86)	153 (43.71)	279	0.80	VII
(D) Training needs of dairy farmers about breeding practices							
1	Artificial insemination	270 (77.14)	31 (8.86)	49 (14.00)	571	1.63	I
2	Pregnancy diagnosis	231 (66.00)	33 (9.43)	86 (24.57)	495	1.41	II
3	Selection of Animal breeds	219 (62.57)	50 (14.29)	81 (23.14)	488	1.39	III
4	Reproductive efficiency of dairy animals	151 (43.14)	74 (21.14)	125 (35.71)	376	1.07	IV
5	Heat detection	137 (39.14)	74 (21.14)	139 (39.71)	348	0.99	V
6	Selection of dairy animal and heifers	82 (23.43)	102 (29.14)	166 (47.43)	266	0.76	VI
7	Post partum breeding management.	80 (22.86)	101 (28.86)	169 (48.29)	261	0.75	VII
(E) Training needs of dairy farmers about clean milk production, preservation and value addition							
1	Stripping of first 2 to 3 strip out side	203 (58.00)	73 (20.86)	74 (21.14)	479	1.37	I
2	Application of antiseptic solu-tion after milking	170 (48.57)	110 (31.43)	70 (20.00)	450	1.29	II
3	Cleanness of vessels	143 (40.86)	120 (34.29)	87 (24.86)	406	1.16	III
4	Selection of vessels	107 (30.57)	131 (37.43)	112 (32.00)	345	0.99	IV
5	Personal hygiene of milker	81 (23.14)	171 (48.57)	99 (28.29)	332	0.95	V
6	Ways and means to check milk adulteration	105 (30.00)	119 (34.00)	126 (36.00)	329	0.94	VI
7	Preparation of Milk products for their consumption	80 (22.86)	123 (35.14)	147 (42.00)	283	0.81	VII
8	Milk preservation	70 (20.00)	83 (23.71)	197 (56.29)	223	0.64	VIII
(F) Training needs of dairy farmers about fodder production and its management							
1	Urea treatment	277 (79.14)	30 (8.57)	43 (12.29)	584	1.67	I

Sr. No.	Item	Most needed	Needed	Not needed	Total Score	Mean Score	Rank
2	Silage making	260 (74.29)	41 (11.71)	49 (14.00)	561	1.60	II
3	Selection of varieties of fodder crop	148 (42.29)	52 (14.86)	150 (42.86)	348	0.99	III
4	Storage of fodder products	130 (37.14)	63 (18.00)	157 (44.86)	323	0.92	IV
5	Cultivation of fodder crop	77 (22.00)	65 (18.57)	208 (59.43)	219	0.63	V
6	Drying of fodder products	25 (7.14)	40 (11.43)	285 (81.43)	90	0.26	VI
(G) Training needs of dairy farmers about health care practices							
1	Treatment against common diseases	191 (54.57)	105 (30.00)	54 (15.43)	487	1.39	I
2	Vaccination schedule	168 (48.00)	93 (26.57)	89 (25.43)	429	1.23	II
3	Precaution against internal Parasitic diseases	141 (40.29)	145 (41.43)	64 (18.29)	427	1.22	III
4	External Parasite control	170 (48.57)	75 (21.43)	105 (30.00)	415	1.19	IV
5	Sterility treatment	158 (45.14)	92 (26.29)	100 (28.57)	408	1.17	V
6	Treatment against conterminous diseases	111 (31.71)	139 (39.71)	100 (28.57)	361	1.03	VI

Note : Figures in parenthesis indicate percentage

It is observed from the data presented in Table 1 that overwhelming majority of the dairy farmers (90.00 per cent) opted the training on up keeping the various records as “most needed”, while 3.71 per cent and 6.29 per cent of the dairy farmers opted it as “needed” and “not needed”, respectively.

Data pertaining to training needs of dairy farmers regarding milking method reveal that 50.00 per cent dairy farmers were grouped into ‘most needed’ category while 30.00 per cent and 20.00 per cent were grouped under ‘needed’ and ‘not needed’ category, respectively.

As far as training need with respect to ideal housing is concerned, more than two-fifth of dairy farmers fell under the category “most needed”, whereas 40.57 per cent and 14.86 per cent of them were found in the “needed” and “not needed” training group, respectively.

Further, in case of use of chaff cutter, more than two-fifth (43.89 per cent) of the dairy farmers belonged to ‘most needed’ group while 31.94 per cent and 24.17 per cent dairy farmer were found under “needed” and “not needed” group, respectively.

Training needs of the dairy farmers regarding

grooming and use of chaff cutter revealed half of the dairy farmers opined for ‘most needed’

It is evident from Table 1 that more than half of the dairy farmers fell under ‘not needed’ training group for replacement of stock through purchase and animal shed cleaning.

According to item wise training needs related to housing and general management practices hierarchy, up keeping the various records ranked first with mean score 1.84 followed by milking method (1.30), ideal housing (1.30), grooming (1.28), use of chaff cutter (1.24), replacement of stock at home (0.91), bathing (0.77), replacement of stock through purchase (0.68) and animal shed cleaning (0.59) which ranked II, III, IV, V and VI, VII, VIII, and IX, respectively.

Feeding and water management practices

Feeding is most important and complex aspect of dairy farming management. It accounts for around 70 to 75 per cent of total cost of milk production. Water is an important element for milk production in addition to the health and hygiene of animals.

From data in Table 1 it can be observed that great

majority the dairy farmers (88.00 per cent) opined for the training on feeding schedule of milch animal as “most needed” while 10.57 per cent and 1.43 per cent of them opined it as “needed” and “not needed”, respectively.

Data pertaining to training needs of the dairy farmers regarding feeding schedule of dry animals and heifers revealed majority of dairy farmers ‘most needed’ category while feeding schedule of pregnant animals and importance of mineral mixture were grouped under ‘not needed’ category.

Training needs of the dairy farmers regarding advantages of unconventional livestock feed, selection of feeds and time and frequency of feeding and watering more or less similarly belonged to “most needed”, “needed” and ‘not needed’ training group.

With respect to item wise training needs on feed management hierarchy, feeding schedule of milch animal ranked first with mean score 1.87, followed by feeding schedule of dry (1.73), feeding schedule of heifers (1.60), feeding schedule of pregnant animals (1.36), importance of mineral mixture (1.08), advantages of compound concentrate mixture (1.11), advantages unconventional livestock feed (1.05), selection of feeds (0.92) and time and frequency of feeding and watering (0.91) with rank of II, III, IV, V, VI, VII, VIII, and IX, respectively.

Calf rearing practices

Calves are the building blocks of a herd and proper calf care is essential for sustenance of the dairy farm and also for preserving and maintaining good quality of germplasm.

The data pertaining to training needs for feeding of colostrums reveal that more than two-third (62.86 per cent) of the dairy farmers fell under ‘most needed’ training group and one third of them fell under ‘needed’ and ‘not needed’ training group.

Data in Table 1 regarding training needs of dairy farmers for deworming and cutting of naval cord and application of tr. iodine revealed that more than half of the them were categorized under ‘most needed’ training group.

In case of dehorning, nearly one third each of the dairy farmers were observed in ‘most needed’ and ‘needed’ category.

As far as vaccination of animal is concerned, more than two fifth (42.57 per cent) of the dairy farmers fell under

“most needed” category followed by “needed” and “not needed”.

As per hierarchy in case of training needs on calf rearing, feeding of colostrums ranked first with mean score 1.48, followed by deworming (1.20), vaccination (1.16), dehorning (1.10), castration (0.90), cutting of naval cord application and application of Tr. iodine (0.83), feeding schedule of calves up to one year (0.80) and, which ranked II, III, IV, V, VI, and VII, respectively.

Breeding practices

Proper and better care of breeding stock helps in developing good dairy herd and getting good returns too.

From data presented in Table 1, it is observed that majority of the dairy farmers (62-77 per cent) were grouped in “most needed” category while 10.00 and 8.89 per cent of the dairy farmers were categorized under “needed” and “not needed” training group “ for artificial insemination, pregnancy diagnosis and selection of animal breed.

In case of training needs of the dairy farmers regarding reproductive efficiency of dairy animals, 43.14 per cent dairy farmers opined it as ‘most needed’ training while 21.14 and 35.71 per cent of them opined it as ‘needed’ and ‘not needed’, respectively.

The data with respect to training needs of the dairy farmers regarding heat detection revealed that 39 per cent dairy farmers were grouped in ‘most needed’ and ‘not needed’ category.

The finding put forth that more than two-fifth of the dairy farmers were grouped in “not needed” category with respect to item selection of dairy animal and heifers and post partum breeding management.

According to item wise training needs on breeding practices, artificial insemination ranked first with mean score 1.63 followed by pregnancy diagnosis (1.41), selection of animal breeds (1.39), reproductive efficiency of dairy animals (1.07), heat detection (0.99), selection of dairy animals and heifers (0.76), and post partum breeding management (0.75) with rank of II, III, IV, V, VI and VII, respectively.

Clean milk production, preservation and value addition

Clean milk production is an important practice of dairy farming. Quality of milk affects the farmers’ profitability every day. Producing clean milk has many positive benefits to

the dairy farmer.

Regarding stripping of first 2 to 3 strip outside, it is revealed that 58 per cent of dairy farmers were grouped in 'most needed' training while remaining half grouped under 'needed' and 'not needed' training respectively.

In case of cleanness of vessels, about two-fifth of the dairy farmers were observed under "most needed" training group while more than two-fifth of the dairy farmers were observed under "not needed" category for preparation of milk products for their consumption and milk preservation training groups

According to item wise training needs on different areas on clean milk production, preservation and value addition; stripping of first 2 to 3 strip out side ranked first with mean score 1.37 followed by application of antiseptic solution after milking (1.29), cleanness of vessels (1.16), selection of vessels (0.99), personal hygiene of milker (0.95), ways and means to check milk adulteration (0.94), preparation of milk products for their consumption (0.81), cleanness of vessels milk preservation (0.64) which ranked II, III, IV, V, VI, VII and VIII, respectively

Fodder production and its management

Fodder plays important role in vision and reproduction due to its higher content of vitamin A. it is also important and cheaper source of energy for ruminants.

Table 1 revealed that in regards with training needs for urea treatment and silage making, about 74-80 % of the dairy farmers fell under 'most needed' training group, while about 42% of the dairy farmers fell under 'most needed' and "not needed" category for "Selection of varieties of fodder crop" training group.

Further, less than half of the dairy farmers (44.86 per cent) were found in "not needed" training category for storage of fodder products, while 60-80% of them were found in same category for "cultivation of fodder crop" and "drying of fodder product" training groups.

With respect to item wise training needs in the areas of fodder production and its management, urea treatment ranked first with mean score 1.67 followed by silage making (1.60), selection of varieties of fodder crop (0.99), storage of fodder products (0.92), cultivation of fodder crop (0.63) and drying of fodder products (0.26), with rank of II, III, IV, V and VI, respectively.

Training needs of dairy farmers about Health care practices

Disease free and good health condition of dairy animal is prerequisite to the better animal productivity. Knowledge of commonly occurring animal diseases and preventive measures is of more significance for better productivity and profitability of dairy animals.

The data presented in Table 1 shows that more than 40 % of the dairy farmers fall under 'most needed' category for treatment against common diseases, vaccination, precaution against internal parasitic diseases, external parasite control measures and sterility treatment training groups while treatment against conterminous diseases training group most of the dairy farmers divided more or less equally in each category.

Item wise training needs related to health care hierarchy, treatment against common diseases(1.24) rank first with mean score 1.39 followed by vaccination schedule(1.23), precaution against internal parasitic diseases,(1.22), external parasite control (1.19), Sterility treatment (1.17) and treatment against conterminous diseases(1.03) with rank II, III, IV, V, and VI, respectively

CONCLUSION

Based on the training need of dairy farmers in Animal husbandry practices suitable extension programme should be formulated and implemented in scientific dairy farming. The training strategies can be formulated and course syllabus can be redesigned to impart knowledge and skill to the dairy farmer by various training institutes and state department of animal husbandry and state agricultural universities. Emphasis must be given up keeping the various records, urea treatment for fodder management, feeding schedule of milch and dry animals and artificial insemination.

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