CONTEMPORARY RESEARCH IN INDIA
ISSN 2231 - 2137

TRAINING NEEDS OF DAIRY FARMERS

G. K. Waman, *Assistant Professor (Agril.Extn.), Directorate of Extension Education, MPKV, Rahuri (M.S.)*

D. N. Pharate, *Assistant Professor (Agril.Extn.), Dept. of Extension Education, MPKV, Rahuri (M.S.)*

V. T. Shinde, *M.Sc. (Agri) Student, Dept. of Extension Education, PGI, MPKV, Rahuri (M.S.)*

Received: 03/05/2018 | **Edited: 11/05/2018** | **Accepted: 23/05/2018**

Abstract: *Dairy farming plays a very important role in improving the economy of the country. Milk has an important place in human diet. Dairy industry is of crucial importance to India. The country is the world largest milk producer, accounting for 18.5 per cent of global production in 2014-15. Dairy farming is a secondary component of agriculture. Thus, rural economy is closely tied up with milch animals. Dairy has been considered as one of the activities aimed at alleviating the poverty and unemployment especially in the rural areas in the rainfed and drought-prone regions.*

In India there are 190.09 million Cattles, 108.07 million Buffaloes, 135.01 million goats and 65.1 million Sheeps, 10.3 million Pigs, 729.2 million Poultry as per Animal Census 2012 and India stand first rank in Cattle and Buffalo, second in Goat and sixth in Sheep population (Anonymous, 2012).

India stands first in milk production (165.4) million tonnes during 2016-17. Per capita availability of milk in India is 355 grams per day during the year 2016-17. Among all the states in India, Uttar Pradesh is the leader in milk production in the country with an annual production of more than 20 million tonnes. Top 10 milk producing states account for more than 80 per cent of the total milk production in India. Maharashtra milk production is around 10.40 million tonnes (Department of AH and DF-2017).

Key words: *Dairy farming, Dairy industry.*

As per "19th Livestock census 2012", bovine population in Maharashtra has declined by about 5 per cent to 2.1 cores as against 2.2 crore in 2007, while crossbreeds cattle increased by 19 per cent, local cows and buffaloes have shown 8 to 9 per cent decline. However, the indigenous cattle and buffalo milch population declined by 8.94 to 9.1 per cent in 2007 to 2012, while there has been an impressive growth of 34.78 per cent in crossbreed milch animals (Anonymous, 2015)

Training programmes has crucial role in improving the efficiency of the farmers. Improved dairy management practices are in existence but not adapted by the farmers. Hence present study was planned with specific objective: To study the training needs of Dairy farmers.

Methodology

The present study was conducted in Sangola and Mangalwedha tahsils of Solapur district on the basis of purposive sampling. Five villages from each tahsil were selected on the basis of maximum number of dairy animals and total 120 respondents were selected by proportionate random sampling method.

Training need index of dairy farmers was calculated in the form of most needed, needed and not needed by assigning scores 2, 1 and 0 respectively. Training need index of dairy farmers was calculated by using following formula.

$$\text{Training need index (TNI)} = \frac{\text{Total obtained score}}{\text{Maximum obtainable score}} \times 100$$

Findings

Practices wise training needs of Dairy farmers

Table 1: Training needs of dairy management practices

Sr. No.	Training needs	Need of training (N=120)		
		Most needed	Needed	Not needed
A.	**Training needs for breeding practices**			
1.	Identifying milk yielding animal	22 (18.34)	83 (69.16)	15 (12.50)
2.	Knowing of best pregnancy method	75 (62.50)	34 (28.34)	11 (9.16)
3.	Selection of superior male for breeding	65 (54.16)	46 (38.34)	11 (9.16)
4.	Identifying of oestration sign	7 (5.83)	13 (10.83)	100 (83.34)
5.	Caring after parturition	45 (37.50)	65 (54.16)	10 (8.34)
6.	Identifying pregnancy sign	13 (10.84)	40 (33.34)	67 (55.83)
B.	**Training for fodder production**			
1.	Selection of fodder crops	36 (30.00)	57 (47.50)	27 (22.50)
2.	Selection of fodder crop variety	43 (35.84)	65 (54.16)	12 (10.00)
3.	Fodder crop cultivation	27 (22.50)	53 (44.16)	40 (33.34)
4.	Fodder crop storage	09 (7.50)	27 (22.50)	84 (70.00)
5.	Dry Fodder crop storage	13 (10.84)	29 (24.16)	78 (65.00)
6.	Silage making	96 (80.00)	21 (17.50)	03 (2.50)
C.	**Feeding management**			
1.	Daily requirement of fodder	63 (52.50)	21 (17.50)	6 (5.00)
2.	Proper time and method for silage feeding	55 (45.84)	47 (39.16)	18 (15.00)
3.	Determining proper quantity of green fodder	33 (27.50)	61 (50.84)	26 (21.66)
4.	Determining of proper quantity of dry fodder	47 (39.16)	37 (30.84)	36 (30.00)
5.	Different feeding methods	49 (40.84)	55 (45.83)	16 (13.33)
D.	**Clean milk production**			
1.	Care taken during milking	23 (19.16)	39 (32.50)	58 (48.34)
2.	Type of milking vessels and their care	25 (20.84)	42 (35.00)	53 (44.16)
3.	Methods of milking	47 (39.16)	53 (44.17)	20 (16.67)
4.	Cleaning of animals by machine	19 (15.84)	46 (38.33)	55 (45.83)
5.	Milk filtration, storage, cooling, etc.	24 (20.00)	39 (32.50)	57 (47.50)
E.	**Milk use technology training: Milk products**			
a.	**Khoa**			
1.	Preparation of khoa	61 (50.84)	22 (18.34)	47 (39.16)
b.	**Curd**			
1.	Curd preparation	0 (0.00)	0 (0.00)	120 (100.00
2.	Starter used and its types	75 (62.50)	45 (37.50)	0 (0.00)
3.	Making of different products from curd	31 (25.84)	55 (45.83)	34 (28.33)
c.	**Ghee**			
1.	Ghee preparation	0 (0.00)	0 (0.00)	120 (100.00
d.	**Butter**			
1.	Butter preparation	0 (0.00)	0 (0.00)	120 (100.00
2.	Starter used and its types	111 (92.50)	9 (7.50)	0 (0.00)
3.	Making of different products from butter	115 (95.84)	5 (4.16)	0 (0.00)
e.	**Kulfi**			
1.	Kulfi preparation	120 (100.00)	0 (0.00)	0 (0.00)
f.	**Shreekand**			
1.	Shreekand preparation	86 (71.66)	25 (20.84)	9 (7.50)
g.	**Paneer**			
1.	Paneer preparation	105 (87.50)	12 (10.00)	3 (2.50)

(Figures in parenthesis indicate percentages)

Training needs for breeding practices

It is evident from Table-1 that majority (62.50 %) of dairy farmers had most needed the training for knowing of best pregnancy method, followed by selection of superior male for breeding (54.16 %) and caring after parturition (37.50 %).

Training for fodder production

Table-1 further revealed that majority (80.00 %) of dairy farmers had most needed the training for silage making procedure, followed by selection of fodder crop variety (35.84 %) and selection of fodder crops (30.00 %).

Feeding management

The data presented in Table-1 showed that majority (52.50 %) of dairy farmers had most needed the training for daily requirement of fodder, followed Proper time and method for silage feeding (45.84 %) and different feeding methods (40.00 %).

Clean milk production

The Table-1 also revealed that 39.16 per cent of dairy farmers had most needed the training for methods of milking, followed type of milking vessels and their care (20.84 %) and milk filtration, storage, cooling, etc. (20.00 %) etc.

Milk use technology training (Milk products)

In case of milk products, training requirement to the following products were selected by the respondents are as follow

Khoa- Above half i.e. 50.84 per cent of dairy farmers had most needed the training for preparation of khoa.

Curd- Table-1 further that majority (62.50 %) of dairy farmers had most needed the training for starter used and making of different products from curd (25.84 %).

Ghee- It is evident from Table-1 that cent per cent (100.00 %) of dairy farmers had indicated no need of training for preparation of ghee.

Butter- A large majority (95.84 %) of dairy farmers had most needed the training for making of different products from butter and starter used and its types (92.50 %).

Kulfi - Cent per cent (100.00 %) of dairy farmers had showed most needed the training for preparation of kulfi.

Shreekand- Above seventy one per cent i.e. 71.66 per cent of dairy farmers had most needed the training for Shreekhand preparation.

Paneer- A majority (87.50 %) of dairy farmers had indicated most needed the training for Paneer preparation.

Table 2: Subject wise training need index of the dairy farmers

Sr. No.	Training subject	Training need index (%)	Rank
A.	**Training needs for breeding practices**		
1	Identifying milk yielding Animal	94.50	I
2.	Knowing of best pregnancy method	90.67	II
3.	Selection of superior male for breeding	85.66	III
4.	Identifying of oestration sign	68.00	V
5.	Caring after parturition	79.66	IV
6.	Identifying pregnancy sign	65.50	V
B.	**Training for fodder production**		
1.	Selection of fodder crops	88.50	III
2.	Selection of fodder crop variety	89.66	II
3.	Fodder crop cultivation	78.34	V
4.	Fodder crop storage	80.50	IV
5.	Dry Fodder crop storage	72.34	VI
6.	Silage making	97.00	I
C.	**Feeding management**		
1.	Daily requirement of fodder	94.34	III
2.	Proper time and method for silage feeding	96.50	I
3.	Determining proper quantity of green fodder	87.50	IV
4.	Determining of proper quantity of dry fodder	78.34	V
5.	Different feeding methods	95.00	II
D.	**Clean milk production**		
1.	Care taken during milking	88.66	II

2.	Type of milking vessels and their care	72.34	III
3.	Methods of milking	96.34	I
4.	Cleaning of animals by machine	52.67	IV
5.	Milk filtration, storage, cooling, etc.	45.00	V
E.	**Training need index of milk products**		
a.	**Khoa**		
1.	Preparation of khoa	0.00	-
b.	**Curd**		
1.	Curd preparation	0.00	-
2.	Starter used and its types	99.00	II
c.	**Ghee**		
1.	Ghee preparation	0.00	-
d.	**Butter**		
1.	Butter preparation	20.00	V
2.	Starter used and its types	100.00	I
3.	Making of different products from butter	100.00	I
e.	**Kulfi**		
1.	Kulfi preparation	100.00	I
f.	**Shreekhand**		
1.	Shreekhand preparation	93.66	IV
g.	**Paneer**		
1.	Paneer preparation	97.00	III

(Figures in parenthesis indicates percentage)

Training need index for breeding practices

It is evident from Table-2 that a large majority (94.50 %) of dairy farmers had high training need index in identifying milk yielding animal followed by knowing of best pregnancy method (90.67 %), selection of superior male for breeding (85.66 %), caring after parturition (79.66 %), identifying of oestration sign (68.00 %) and identifying pregnancy sign (65.50 %).

Training need index for fodder production

Table-2 further revealed that a vast majority (97.00 %) of dairy farmers had high training need index in silage making procedure, followed by selection of fodder crop variety (89.66 %), selection of fodder crops (88.50 %), fodder crop storage (80.50 %), fodder crop cultivation (78.34 %) and dry fodder crop storage (72.34 %).

Training need index for feeding management

The data depicted in Table-2 indicated that a large majority (96.50 %) of dairy farmers had high training need index in proper time and method for silage feeding followed by different feeding methods (95.00 %), daily requirement of fodder (94.34 %), determining of proper quantity of green fodder (87.50 %) and determining of proper quantity of dry fodder (78.34 %).

Training need index for clean milk production

The training need index of dairy farmers indicated that a vast majority (96.34 %) of dairy farmers had high training need index in methods of milking, followed by care taken during milking (88.66 %), type of milking vessels and their care (72.34 %), cleaning of animals by machine (52.67 %) and milk filtration, storage, cooling, etc. (45.00 %).

Training need index of preparation of milk products

It is evident from Table-2 that subject wise training need index of dairy farmers indicated that a cent per cent (100.00 %) of dairy farmers had high training need index in starter used and its types in preparation of butter, making of different products from butter and preparation of kulfi, followed by starter used and its types in curd preparation (99.00 %), preparation of paneer (97.00 %), preparation of shreekhand (93.66 %) and preparation of butter (20.00 %).

Formula for working out training need index of dairy farmers of particular subject

$$\text{Training need index (TNI)} = \frac{\text{Total obtained score}}{\text{Maximum obtainable score}} \times 100$$

Average (mean) training need index or All over training need index of the dairy farmers in dairy management

Formula

$$\text{Average training need index (ATNI)} = \frac{\text{Sum of the all index}}{\text{Total components}}$$

$$\text{Average training need index (ATNI)} = \frac{5562.5}{80} = \textbf{69.53 per cent}$$

Therefore, overall training need index of the respondents was **69.53** per cent.

Table 3: Suggestions of dairy farmers about training requirement on dairy management

Sr. No.	Particulars	Frequency (N=120)	Per cent
A.	**Duration of training**		
1.	One day	92	76.66
2	Three days	16	13.34
3	Five days	7	5.84
4	Seven days	3	2.50
5	Fifteen days	2	1.66
B.	**Place of training**		
1	In own village	102	85.00
2	Tahsil place	14	11.66
3	District place	2	1.67
4	Agriculture college	2	1.67
C.	**Organization Institute**		
1	Agricultural university	70	58.34
2	Agriculture college	15	12.50
3	KVKs	12	10.00
5	Cooperative milk producers institute	23	19.16
D.	**Training method**		
1.	Lecture	4	3.33
2.	Practical	19	15.83
3.	Lecture and practical combine	85	70.84
4.	Group discussion	12	10.00

The data presented in Table-3 revealed that a majority i.e. 76.66 per cent of farmers suggested duration of training should be one day followed by three days (13.34 %), five days (5.84 %), seven days (2.50 %) and fifteen days (1.66 %). With regard to place of training, 85.00 per cent farmers had suggested that training should be in their own village, 11.66 per cent farmers had suggested that they should have training at tahasil level and only 1.67 per cent farmers had suggested that they should have training at district level and at nearest Agriculture College. Further 58.34 per cent respondent farmers suggested that training should be organized by Agricultural University followed by Cooperative Milk Producers Institute (19.16 %) and Agriculture College (12.50 %). Nearly 71.00 per cent respondents suggested that the training method should be lecture and practical combine followed by practical (15.83

%), group discussion (10.00 %) and lecture method (3.33 %).

Conclusion

From the above crucial findings, it was observed that dairy farmers need training in areas viz: preparation of milk products, procedure of silage making, proper time and method for silage feeding, methods of milking, different feeding methods, identifying milk yielding animals, daily requirement of fodder, knowing of best pregnancy method, selection of fodder crop variety, care taken during milking, selection of fodder crops, determining proper quantity of green fodder, determining proper quantity of dry fodder, selection of superior male for breeding, fodder crop storage, etc.

Therefore, organizing and conducting training programmes based on felt need of dairy farmers would definitely influence and change the behavior in desired manner. Therefore extension agencies and training institutes need to orient their training programmes towards the areas as identified in the study.

Further, these dairy farmers need to be trained by organizing one day training programmes in their own village by Agricultural University through lecture and practical combined method.

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