

Adoption of No Cost and Low Cost Animal Husbandry Practices by Dairy Farmers

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ABSTRACT

The Study was carried out to determine the dairy farmer's adoption behaviour on no-cost and low cost technologies of animal Husbandry. The farmer were selected from eight talukas of Dahod district which is operational area of Pashu Vigyan Kendra (Limkheda) of Gujarat. Findings of the study revealed that majority of dairy farmers adopted no cost in provision of dry fodder on roof (Rank I), cleaning of calf nostrils & mouth immediately after birth (Rank II) while and low cost technology in provide proper ventilation & sufficient light in cattle shed (Rank I), Artificial Insemination (AI) /Natural service at proper time of heat (Rank II). Low producing animals was the major constraints faced by the dairy farmer in adoption of no cost and low cost technologies and rank first with mean score of 1.90 and loan and subsidy should be made for purchase of high producing milch animals is the main suggestion.

Keywords: Adoption; No cost and Low cost technology

INTRODUCTION

Animal husbandry is the most important economic activity in rural areas of India next to agriculture contributing significantly towards employment and income generation for rural household, particularly the landless labourers, small and marginal farmers. In spite of the fact that our country has largest milch animal population in the world, productivity of Indian dairy animal remains substantially low compared to potential and world average. Besides the poor genetic potential and poor economic status, this low productivity could largely be attributed to low level of adoption of scientific technologies regarding four important pillars of dairy farming- i.e. breeding, feeding, health care & management. Many of these technologies are mostly cost effective, either no-cost technologies or low-cost technologies. The adoption of such no-cost and low-cost animal husbandry technologies by dairy farmer have great scope for improving productivity, profitability and sustainability of dairy farming enterprise, especially for resource poor and socio-economically deprived

farmer and it is therefore necessary to understand the actual situation at grass-root level, to draw out certain inferences about adoption of no-cost and low-cost technologies of animal husbandry by dairy farmer and hence a study on "Adoption of no-cost and low-cost technologies of animal husbandry by dairy farmers in operational area of PVK" was undertaken.

METHODOLOGY

The present study was conducted in operational area of Pashu Vigyan Kendra, Limkheda. The entire eight Talukas of Dahod district were selected for the study. Two villages were selected randomly from each Taluka and 20 dairy farmers were randomly selected from each village, thus making the total sample of 320 dairy farmers. A well structured pre tested Gujarati version Interview schedule was prepared in light of the objectives in consultation with extension experts. The data were collected through personal interview method. The data were tabulated, classified, presented and interpreted in systematic manner as per objectives of the study.

RESULTS AND DISCUSSION**Adoption of no-cost animal husbandry technology****Table 1 : Adoption of no-cost animal husbandry technologies by dairy farmer**

Sr No	Practices	Fully adopted	Partially adopted	Not adopted	Total scores	Mean score	Rank
1	Provision of dry fodder on roof.	280 (87.50)	32 (10.00)	8 (2.50)	592	1.85	I
2	Cleaning of calf nostrils & mouth immediately after birth.	275 (85.93)	38 (11.88)	7 (2.19)	588	1.84	II
3	Washing & drying of milker's hands before milking.	278 (86.87)	30 (9.38)	12 (2.75)	586	1.83	III
4	Accurate and timely heat detection.	272 (85.00)	35 (10.94)	13 (4.06)	579	1.81	IV
5	Hygienically disposal of placenta & dead body.	270 (84.37)	36 (11.25)	14 (4.38)	576	1.80	V
6	Quick disposal/delivery of milk to the village co-operative immediately after milking.	264 (82.50)	35 (10.94)	21 (6.56)	563	1.76	VI
7	Cleanliness of milking utensils.	265 (82.81)	19 (5.94)	36 (11.25)	549	1.72	VII
8	Filtering fresh milk with clean, dry cloth & covering the milk container with lid.	245 (76.56)	42 (13.13)	33 (10.31)	532	1.66	VIII
9	Regular cleaning of cattle shed	231 (72.18)	67 (20.94)	22 (6.88)	529	1.65	IX
10	Provision of tree shade around the shed	226 (70.62)	42 (13.13)	52 (16.25)	494	1.54	X
11	Feeding of roughages after milking	215 (67.19)	56 (17.50)	49 (15.31)	486	1.52	XI
12	Pregnancy diagnosis at 60- 90 days after service	230 (71.87)	18 (5.63)	72 (22.50)	478	1.49	XII
13	Providing adequate fresh & clean drinking water.	188 (58.75)	88 (27.50)	44 (13.75)	464	1.45	XIII
14	Feeding adequate quantity of colostrums to the calf at proper time.	202 (63.12)	50 (15.63)	68 (21.25)	454	1.42	XIV
15	Washing and drying of udder, teat and hind quarter before milking.	195 (60.94)	60 (18.75)	65 (20.31)	450	1.41	XV
16	Quick, regular and accurate milking with full and dry hand.	183 (57.18)	83 (25.94)	54 (16.88)	449	1.40	XVI
17	Vaccination of animals for common contagious diseases like FMD and HS	152 (47.50)	142 (44.37)	26 (8.13)	446	1.39	XVII
18	Feeding of unconventional feeds	200 (62.50)	34 (10.63)	86 (26.87)	434	1.36	XVIII
19	Feeding of roughages during night time	190 (59.37)	48 (15.00)	82 (25.63)	428	1.34	XIX
20	Milking sick & treated animal at last and keep their milk separate.	172 (53.74)	82 (25.63)	66 (20.63)	426	1.33	XX
21	Personal hygiene of milker	181 (56.56)	50 (15.63)	89 (27.81)	412	1.29	XXI
22	Remove two strips of milk from each teat before milking.	136 (42.50)	74 (23.13)	110 (34.37)	346	1.08	XXII

Sr No	Practices	Fully adopted	Partially adopted	Not adopted	Total scores	Mean score	Rank
23	Cleaning & washing of floor before milking.	132 (41.25)	68 (21.25)	120 (37.50)	332	1.04	XXIII
24	Feeding of salt to livestock	121 (37.81)	74 (23.13)	125 (39.06)	316	0.99	XXIV
25	Bathing the dairy animals twice daily in summer.	110 (34.37)	64 (20.00)	146 (45.63)	284	0.89	XXV
26	Complete milking and stripping at the end of milking.	92 (28.75)	80 (25.00)	148 (46.25)	264	0.83	XXVI
27	Castration by scientific method	70 (21.87)	96 (30.00)	154 (48.13)	236	0.74	XXVII
28	Regular Grooming.	54 (16.88)	86 (26.88)	180 (56.24)	194	0.61	XXVIII
29	Early identification and Isolation of sick animals.	32 (10.00)	126 (39.38)	162 (50.62)	190	0.59	XXIX
30	Maintaining breeding, feeding, health care and production records.	21 (6.56)	115 (35.94)	184 (57.50)	157	0.49	XXX
31	Provision of bedding materials & its regular replacement.	18 (5.63)	102 (31.87)	200 (62.50)	138	0.43	XXXI
32	Prompt reporting of contagious diseases to nearby veterinary dispensary	15 (4.69)	90 (28.13)	215 (67.18)	120	0.38	XXXII

Note: Data in () indicate the percentage

It was observed from data in Table 1 that overwhelming majority (87.50 per cent) of the dairy farmer were grouped in “fully adopted” categories while 10.00 per cent of the dairy farmers were categorized under “partially adopted” and only 2.50 per cent under “Not adopted” group with regards to provision of dry fodder on roof.

As far as cleaning of calf nostrils & mouth immediately after birth is concern overwhelming majority (85.93 per cent) of the dairy farmer had fully adopted the practice while 11.88 per cent of them had partially adopted and rest 2.19 per cent had not adopted.

As far as adoption with respect to washing & drying of milker’s hands before milking, the same Table 1 also revealed that vast majority of dairy farmers (86.87 per cent) had full extent of adoption and rest 30.00 per cent of them had adopted such practice partially and 12 per cent not.

The data presented in Table 1 regarding accurate and timely heat detection revealed that more than four-fifth (85.00 per cent) of the dairy farmers belonged to ‘fully adopted’ group while 10.94 per cent were categories under partially adopted group and 4.06 per cent under not adopted.

As far as hygienically disposal of placenta & dead body is concerned, more than four-fifth (84.37 per cent) of

the dairy farmers had adopted this practice at fuller extent, while 11.25 per cent had partially adopted and 4.38 per cent had not adopted.

The data depicted in Table 1 showed that more than four-fifth (82.50 Per cent) of the dairy farmers had fully adopted Quick disposal/delivery of milk to the village co-operative immediately after milking followed by 10.94 percent had partially adopted and 6.56 per cent had not adopted.

The data presented in Table revealed that vast majority (82.14 Per cent) of dairy farmers had provided adequate fresh & clean drinking water to their animal at fuller extent followed by 10.71 per cent and 7.14 per cent at partial extent and not at all.

With regards to practice “Filtering fresh milk with clean, dry cloth & covering the milk container with lid” more than three-fourth (76.56) of the dairy farmers had fully adopted such practice followed by partially adopted and not adopted with 13.13 per cent and 10.31 per cent respectively.

Data pertaining to provision of tree shade around the shed revealed that 70.62 per cent dairy farmers were grouped into ‘fully adopted’ category while 13.13 per cent and 16.25 per cent were grouped under ‘partially adopted’ and ‘not

adopted ' category respectively.

The data presented in Table 1 revealed that more than one half of the dairy farmers had fully adopted the practice regarding feeding of roughages after milking (67.19 per cent), pregnancy diagnosis at 60- 90 days after service (71.87 per cent), feeding adequate quantity of colostrums to the calf at proper time (63.12 per cent), washing and drying of udder, teat and hind quarter before milking (60.94 per cent), providing adequate fresh & clean drinking water (58.75 per cent), feeding roughages during night time (59.37 per cent),

personal hygiene of milker (56.56 per cent) and milking sick & treated animal at last and keep their milk separate (53.74 percent).

Data with respect to early identification and isolation of sick animals (50.62 per cent), regular grooming (56.24 per cent), Provision of bedding materials & its regular replacement (62.50 per cent) and prompt reporting of contagious diseases to veterinary dispensary (67.18 per cent) more than half of the dairy farmers had not adopted such practices.

Adoption of low-cost animal husbandry technology

Table 2 : Adoption of low-cost animal husbandry technologies by dairy farmers

Sr No	Practices	Fully adopted	Partially adopted	Not dopted	Total score	Mean score	Rank
1	Provide proper ventilation & sufficient light in cattle shed.	278 (86.87)	34 (10.63)	8 (2.50)	590	1.84	I
2	Artificial Insemination (AI) / Natural service at proper time of heat.	272 (85.00)	35 (10.94)	13 (4.06)	579	1.81	II
3	Feeding of concentrate mixture	260 (81.24)	46 (14.38)	14 (4.38)	566	1.77	III
4	Regular deworming of dairy animals at least once in a year.	264 (82.50)	35 (10.94)	21 (6.56)	563	1.76	IV
5	Breeding after 60-90 days of calving.	265 (82.81)	19 (5.94)	36 (11.25)	549	1.72	V
6	Cutting & disinfections of naval cord with tincture iodine.	245 (76.56)	42 (13.13)	33 (10.31)	532	1.66	VI
7	Control of external parasite by proper & regular disinfestations	231 (72.19)	67 (20.94)	22 (6.88)	529	1.65	VII
8	Following regular deworming schedule of calf.	226 (70.63)	42 (13.12)	52 (16.25)	494	1.54	VIII
9	Provision of well sloped <i>pakka</i> floor in cattle shed	215 (67.19)	56 (17.50)	49 (15.31)	486	1.52	IX
10	Regular feeding of mineral mixture	230 (71.87)	18 (5.63)	72 (22.50)	478	1.49	X
11	Provision of manger in cattle shed.	188 (58.75)	88 (27.50)	44 (13.75)	464	1.45	XI
12	Feeding of chaffed green & dry fodder.	202 (63.12)	50 (15.63)	68 (21.25)	454	1.42	XII
13	Cultivation of green fodder	186 (58.12)	46 (14.38)	88 (27.50)	418	1.31	XIII
14	Proper care & post bite vaccination in case of dog bite.	173 (54.06)	44 (13.75)	103 (32.19)	390	1.22	XIV
15	Treatment of poor quality roughages by urea treatment.	133 (41.56)	103 (32.19)	84 (26.25)	369	1.15	XV
16	Purchasing animals after veterinary check up only.	74 (23.13)	125 (39.06)	121 (37.81)	273	0.85	XVI
17	Dehorning of calf.	56 (17.50)	131 (40.94)	133 (41.56)	243	0.76	XVII

Note: Data in () indicate the percentage

Table 2 revealed that overwhelming majority of the animal keeper had provide proper ventilation & sufficient light in cattle shed (86.87 per cent), artificial insemination (AI) /Natural service at proper time of heat (85.00 per cent), feeding of concentrate mixture (81.24 per cent), regular deworming of dairy animals at least once in a year (82.50 per cent), breeding after 60-90 days of calving (82.81 per cent), cutting & disinfections of naval cord with tincture iodine (76.56 per cent), control of external parasite by proper & regular disinfestations (72.19 per cent), following regular deworming schedule of calf (70.63 per cent), provision of well slopped *pakka* floor in cattle shed (67.19 per cent), regular feeding of mineral mixture (71.87 per cent), provision of manger in cattle shed (58.75 per cent), feeding of chaffed green & dry fodder (63.12 per cent), cultivation of green fodder (58.12 per cent) and proper care & post bite vaccination in case of dog bite (54.06 per cent), where as 41.56 per cent had not adopted the dehorning of calf.

CONCLUSION

The majority of dairy farmers adopted No-cost technologies like Provision of dry fodder on roof (Rank I), cleaning of calf nostrils & mouth immediately after birth (Rank II), washing & drying of milker's hands before milking (Rank III), accurate and timely heat detection (Rank IV) and

hygienically disposal of placenta & dead body (Rank V). The dairy farmers adopted low-cost technologies like provide proper ventilation & sufficient light in cattle shed (Rank I), artificial insemination (AI) /Natural service at proper time of heat (Rank II), feeding of concentrate mixture (Rank III), regular deworming of dairy animals at least once in a year (Rank IV) and breeding after 60-90 days of calving (Rank V). The dairy farmers had high level of adoption pertaining to low cost and no cost technologies combined together (90.94%) followed low cost technologies (70.31%) and no cost technologies (62.81).

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