Differential Adoption of Scientific Dairy Farming Practices and Related Constraints

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ABSTRACT

The nation still needs to adopt and follow better technologies of dairy farming to meet the growing demand for milk. This is the purpose sought in imparting the Scientific Dairy Farming training. But, parallel to imparting training it is of paramount importance to examine the level of adoption and the constraints faced by them in adopting various scientific technologies. In the present study, comparison of adoption and constraints perceived in Scientific Dairy Farming by Ex-trainees of KVK and the non-trainee was carried out. Sixty Ex-trainee and sixty non-trainee dairy farmers were selected at random from the villages of Karnal district of Haryana. The data was collected through personal interview with the help of a structured schedule. The ex-trainees were found to have better adoption than non-trainees. The respondents faced more constraints in breeding and health care. Some of the major constraints mentioned by the respondents were poor results of Artificial Insemination, lack of knowledge of common contagious diseases, their causes and control measures and non- availability of mineral mixture in the area. The present investigation concluded that scientific dairy farming training programme had positive impact on adoption of technologies by dairy farmers despite of many constraints.

Key words: *Dairy farming; Training; Constraints; Artificial Insemination, Mineral mixture;*

Dairy development in India has played a major role in increasing milk production, improving the nutritional standards of the people, generating employment opportunities, improving income level in rural areas, especially for small and marginal farmers. According to Economic Survey, 2003, the contribution of milk group in value terms was estimated as Rs. 1, 03,804 crore which was higher than rice (Rs. 73,965 crore); wheat (Rs. 43,816crore) and sugarcane (Rs. 28,592 crore) during 2001-2002. It has been emphasised that the agricultural and dairy development is only possible if there is effective co-ordination among education, research, training and extension. Although serious efforts to transfer the scientific dairy farming practices to the farmers have been made yet various studies indicates that farmers have adopted only 30 per cent of the technologies that too by resourceful farmers. Hence, it is more important to transfer the developed technologies to the resource poor farmers that include landless labourers who rear animals for milk production. Hence, it is emphasised that imparting suitable training in improved dairy farming practices can enhance the rate of adoption of technologies in these resource poor families. The nation still has the potential to meet the growing demand for milk, but the immediate need is to adopt and follow better technologies of dairy farming. In order to take full advantage of dairy farming technologies and to ensure their correct application in actual field conditions, dairy farmers need to be constantly trained so that they may develop a desired level of knowledge and skills in Scientific Dairy Farming. The present study was carried out with the specific objectives to study the differential level of adoption with regard to dairy farming and to identify the constraints faced by dairy farmers in adoption of scientific dairy farming practic es.

METHODOLOGY

The present study was carried out in Karnal district of Haryana state which was the operational area of KVK, NDRI, Karnal. The respondents' sample constituted trainees of on-campus training programmes

in scientific dairy farming as well as non-trainees from the same locality. Thus sixty ex-trainee and sixty non-trainee dairy farmers were selected at random from the twenty villages of Karnal district. The data was collected through personal interview with the help of a structured interview schedule. The data was coded, compiled, tabulated, analysed and interpreted using appropriate statistical tools. *Rogers and Shoemaker (1971)* defined adoption as "a decision to make full use of an innovation as the best course of action available". In the present study adoption was operationalised as the actual use of innovation regarding dairy farming .The adoption was measured by the scale three point continuum scale, viz., 'continuously', 'tried it once & rejected' & 'never tried it at all' with respective scores 2, 1 & 0 which was developed by *Sah (1996)*. In this study, the constraints were operationalised as certain obstacles or problems experienced by the dairy farmers in adoption of Scientific Dairy Farming Practices. Constraints were measured with three point continuum scale viz. strongly agree, agree and disagree, with respective scores of 2, 1 and 0 and these were ranked according to their total obtained scores.

RESULTS AND DISCUSSION

Adoption of scientific dairy farming practices: The adoption was considered appropriate to determine the extent to which the information imparted to ex-trainees have been applied in the field, because the ultimate purpose of knowledge learnt by the farmers is its implementation on farmers field (Table 1). Adoption level of ex-trainees was significantly higher than those of non-trainees (Table 2). The increased score of adoption in ex-trainees may be attributed to the training imparted by KVK. This finding was found similar to the results given *by Sah (1996) and Fulzele et al. (1995).*

Table 1. Adoption of Scientific Dairy Farming Practices By Dairy Farmers

S. No.	Practices	Ex-trainees			Non-trainees		
		Continuously (2)	Tried once Rejected (1)	Never tried (0)	Continuously (2)	Tried once Rejected (1)	Never tried (0)
1.	A.I. in cows	44 (73.33%)	16 (26.67%)	0 (0%)	29 (48.33%)	19 (31.67%)	12 (20%)
2.	Pregnancy diagnosis	52 (86.67%)	8 (13.33%)	0 (0%)	40 (66.67%)	12 (20%)	8 (13.33%)
3.	Get the animals vaccinated against contagious diseases	60 (100%)	0 (0%)	0 (0%)	60 (100%	0 (0%)	0 (0%)
4.	Feeding colostrums to calves immediately within half an hour of its birth & continuing up to the first 5 days	37 (61.67%)	11 (18.33%)	12 (20%)	36 (60%)	15 (25%)	9 (15%)
5.	Disinfecting cattleshed periodically	60 (100%)	0 (0%)	0 (0%)	53 (88.33%)	7 (11.67%)	0 (0%)
6.	Grow either Kharif or Rabi or both season fodder crops	59 (98.33%)	0 (0%)	1 (1.67%)	52 (86.67%)	7 (11.67%)	1 (1.67%)
7.	Incorporating mineral mixture in the animal ration	48 (80%)	12 (20%)	0 (0%)	32 (53.33%)	19 (31.67%)	9 (15%)
8.	Practising deworming in calves for the prevention of Internal parasite	30 (50%)	16 (26.67%)	14 (23.33%)	25 (41.67%)	17 (28.33%)	18 (30%)
9.	Do you go for dehorning of crossbreed calf	30 (50%)	14 (23.33%)	16 (26.67%)	22 (36.67%)	15 (25%)	23 (38.33%)

Table 2. Comparison between adoption level of ex-trainees and non-trainees

Groups	Mean score	S.D.	Difference between two means	Calculated 't' value
Ex-trainees	15.28	1.97	1.68	4.47**
Non-trainees	13.6	2.14		

***Significant at 1% level*

Table 3. Constraints faced by the ex-trainees in adoption of SDFPS

S.No.	Constraints	Score	Rank
i)	Poor results of A.I.	179	1
ii)	Non- availability of mineral mixture in the area	177	2
iii)	Lack of knowledge of common contagious diseases, their causes & control measures	176	3
iv)	High cost of mineral mixture	175	4
v)	High cost of compound feed	175	4
vi)	Interest in growing cash/ food crops rather than in fodder production	174	6
vii)	Inefficient services at A.I. centres	170	7
viii)	Poor education of modern dairy husbandry practices	161	8
ix)	Demanding of money for doing A.I. in addition to prescribed fee	159	9
x)	Preference to natural service as comparative to A.I.	156	10
A)	*Breeding*		
i)	Poor results of A.I.	179	1
ii)	Inefficient services at A.I. centres	170	2
iii)	Demanding of money for doing A.I. in addition to prescribed fee	159	3
B)	*Feeding*		
i)	Non- availability of mineral mixture in the area	177	1
ii)	High cost of mineral mixture	175	2
iii)	High cost of compound feed	175	3
C)	*Health care*		
i)	Lack of knowledge of common contagious diseases, their causes & control measures	176	1
ii)	Ignorance of utility of vaccines as a prophylactic measures against contagious diseases	154	2
iii)	Medicine market is not within reach	68	3
D)	*Management*		
i)	Poor education of modern dairy husbandry practices	161	1
ii)	Lack of resources for providing scientific housing	130	2
iii)	Knowledge of cheap & scientific housing of animals not available	125	3

Constraints faced by the ex-trainees in adoption of scientific dairy farming practices : According to the obtained scores of constraints faced by ex-trainee dairy farmers in adopting scientific dairy farming are listed in Table 3 with the rankings from the first to tenth.

Table 4. Constraints faced by the non-trainees in adoption of SDFPS

S.No.	Constraints	Score	Rank
i)	Poor results of A.I.	181	1
ii)	Lack of knowledge of common contagious diseases, their causes & control measures	179	2
iii)	Non- availability of mineral mixture in the area	177	3
iv)	High cost of mineral mixture	171	4
v)	High cost of compound feed	167	5
vi)	Interest in growing cash/ food cropsrather than in fodder production	161	6
vii)	Poor education of modern dairy husbandry practices	159	7
viii)	Inefficient services at A.I. centres	158	8
ix)	Preference to natural service as comparative to A.I.	152	9
x)	Demanding of money for doing A.I. in addition to prescribed fee	148	10
A)	*Breeding*		
i)	Poor results of A.I.	181	1
ii)	Inefficient services at A.I. centres	158	2
iii)	Preference to natural service as comparative to A.I.	152	3
B)	*Feeding*		
i)	Non- availability of mineral mixture in the area	177	1
ii)	High cost of mineral mixture	171	2
iii)	High cost of compound feed	167	3
C)	*Health care*		
i)	Lack of knowledge of common contagious diseases, their causes & control measures	179	1
ii)	Ignorance of utility of vaccines as \a prophylactic measures against contagious diseases	146	2
iii)	Medicine market is not within reach	76	3
D)	*Management*		
i)	Poor education of modern dairy husbandry practices	159	1
ii)	Lack of resources for providing scientific housing	142	2
iii)	Knowledge of cheap & scientific housing of animals not available	131	3

Poor results of A.I. were found to be the first major constraint in adoption whereas Non- availability of mineral mixture in the area is found to be the next major constraints. Lack of knowledge of common contagious diseases, their causes & control measures is the third

one whereas High cost of mineral mixture and High cost of compound feed, both were observed as fourth important constraints. The sixth constraint as per ranking is found to be the Interest in growing cash/ food crops rather than in fodder production. Whereas Inefficient services at A.I. centres, Poor education of modern dairy husbandry practices, Demanding of money for doing A.I. in addition to prescribed fee, Preference to natural service as comparative to A.I. were found to be the seventh, eighth, ninth and tenth major constraint in adoption of scientific dairy farming.

First ten major constraints in adoption of scientific dairy farming practices by non-trainee dairy farmers are grouped in Table 4 with their scores as well as ranks. Similar to ex-trainees, Poor result of A.I. was ranked first major constraint. Lack of knowledge of common contagious diseases, their causes and control measures; Non- availability of mineral mixture in the area, High cost of mineral mixture and High cost of compound feed were found to be the second, third, fourth and fifth constraint, respectively according to their ranks. The sixth major constraint was Interest in growing cash/ food crops rather than in fodder production whereas Poor education of modern dairy husbandry practices and inefficient services at A.I. centres were ranked seventh and eighth, respectively. Preference to natural service as comparative to A.I. was found ninth major constraint and the tenth ranked constraint in adoption of scientific dairy farming practices was demanding of money for doing A.I. in addition to prescribed fee.

CONCLUSION

This study concludes that there was significant difference between ex-trainees and non-trainees in adopting scientific dairy farming technologies. There are many technologies which are not yet tried by dairy farmers, this could considered as the great opportunity and wide scope for scientist to know reasons behind both active and passive adoptions; as well as for extension workers to disseminate technologies. The constraints experienced by the ex-trainees are the poor results of A.I., non- availability of mineral mixture in the area, lack of knowledge of common contagious diseases, their causes & control in adoption of scientific dairy farming practices. Whereas for non-trainees also poor result of A.I., lack of knowledge of common contagious diseases, their causes & control measures and non- availability of mineral mixture in the area. The constraints encountered in this study should be dealt by extension personnel of concerned area so that better technologies could be disseminated and also adopted by the ultimate users of the concerned field to the larger extent.

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