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Extent of adoption of improved dairy management practices by the trained farmers

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ABSTRACT

A study on adoption level of improved dairy management practices by trained farmers was conducted in Gadag and Haveri districts of Karnataka with sample size of 60 respondents. The findings raveled that, 40.00 per cent of respondents of KVK Hulakoti belonged to medium adoption category with respect to Dairy management practices, where as 46.67 per cent of respondents of KVK Hanumanamatti were belonged to low adoption category. The respondents of Hulakoti KVK registered significantly higher adoption scores in Dairy management practices compared to their counterparts in other KVK.. The practices like improved breeds (60.00% and 46.67%), fodder (56.66% and 36.67%), artificial insemination (56.67% and 40.00%) and colostrum feeding (50.00% and 40.00%) were fully adopted by Hulakoti and Hanumanamatti KVK respondents, respectively. A very meager percentage of respondents had fully adopted practices like disease management (33.33% and 13.33%) and umbilical cord treatment (10.00% and 6.67%).

Key words : Improved breeds, Fodder, Artificial insemination, Colostrum feedings, Dehorning, Umbilical cord treatment

INTRODUCTION

Majority of Indian masses are still dependent on agriculture and a large proportion of them are categorized as marginal (58.1%) farmers (Bansil, 1990). A good proportion of landless rural population works and produces milk by feeding their animals the by-products of agriculture. With the growing pressure of human population, dairying has to be developed in a scientific manner so as to harness maximum potentiality of milch animals within available land. This has not only placed India on top in the world but it also represents sustained growth in the availability of milk and milk products for the burgeoning population of the country. Dairying has become an important secondary source of income for millions of rural families and has assumed the most important role in providing employment and income generating opportunities.

Dairying in India has been considered to be playing a crucial role in Indian economy. The level and speed of adoption of dairy innovation by farming community has been far from satisfactory though it has direct bearing on dairy farm production. The slow pace of adoption of improved dairy practices is attributed to various factors. A first hand knowledge of these factors to the extension personnel would create the speedy adoption of dairy innovations in the villages.

Dairy development in developing countries has played a major role in increasing milk production, improving income level in rural areas, generating employment opportunities and improving the nutritional standards of the people, especially for small and marginal farmers.

Looking at the increasing demand and utility, it was felt necessary to undertake a study on extent of adoption of improved dairy management practices by the trained farmers. The findings of the study would be useful for making modifications in the KVKs programmes and their activities. The findings of the study would also help to understand the adoption behaviour of the trained farmer's about improved dairy management practices. Keeping these things in view, the present study was undertaken to study the extent of adoption of improved dairy management practices by the trained farmers.

MATERIALS AND METHODS

The present study was conducted in two KVKs, one managed by University of Agricultural Sciences, Dharwad and the other by NGO. KVK Hanumanamatti and KVK Hulakoti were selected, to represent University of Agricultural Sciences, Dharwad and NGO managed KVKs, respectively, as both of them were the oldest KVKs established in North Karnataka. During the year 2003 and 2004. The list of respondents, who had undergone training programmes during 2003 and 2004 in the areas of Dairy Management practices were obtained from the respective KVKs. Thirty respondents from each KVK were selected randomly for the study, thus constituting the total sample size of 60 respondents. In the light of the objectives set for the study, the variables *viz.*, adoption on Dairy Management practices were the main items of investigation. In order to measure the adoption quantitatively, important improved practices recommended for Dairy management practices were considered. There

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were twenty one practices for the adoption of Dairy management by the respondents.

To measure level of adoption, recommended important practices were listed and responses for the adoption of each practice was obtained. A numerical score of 2 was assigned for full adoption, while a score 1 was assigned for partial adoption and 0 was assigned for non adoption. Scores of all identified practices were summed up. This sum total was indicative of adoption level of that particular individual respondent. The maximum and minimum adoption score that could be obtained by individual was 42 and 0 for Dairy management training, respectively. A pre-tested interview schedule was used to collect the data through personal interview method. The data collected were tabulated and analyzed by using suitable statistical measures.

The statistical methods like mean, standard deviation were used for categorization of data. Co-efficient of correlation (r) suggested by Garrett (1967) was used for testing the significance of relationship between dependent and independent variables.

RESULTS AND DISCUSSION

The findings of the present study as well as relevant discussion have been presented under following heads :

Adoption level of the respondents about dairy management practices :

Adoption index of the respondents about dairy management practices :

The distribution of respondents based on adoption index is presented in Table 1. It can be observed that, 40.00 per cent of respondents of KVK Hulakoti belonged to medium adoption category with respect to Dairy management practices, where as 46.67 per cent of respondents of KVK Hanumanamatti were belonged to low adoption category.

Comparison of adoption level of KVK, Hulakoti and Hanumanamatti :

The data presented in Table 2 illustrates comparison of mean adoption scores of respondents of KVK, Hulakoti and Hanumanamatti about Dairy management practices also their analysis for significance of difference using‘t’ test. The results shown that the respondents of Hulakoti KVK registered significantly higher adoption scores in Dairy management practices compared to their counterparts in other KVK. The computed ‘t’ values were tested for significance at 1 and 5 per cent.

This was mainly due to more number of respondents had adopted the practices learnt during training. In general the respondents of Hulakoti were found to have more knowledge and also adoption. This was mainly due to timely follow up visits by the scientists to the farmers fields to provide guidance. A comparison of mean adoption scores of the respondents of training programmes studied supported above findings. The respondents of KVK, Hulakoti had significantly higher mean adoption scores than those of KVK, Hanumanamatti (Table 2).

Adoption of dairy management practices :

Data from Table 3 revealed that, the practices like improved breeds (60.00% and 46.67%), fodder (56.66% and 36.67%), artificial insemination (56.67% and 40.00%) and colostrum feeding (50.00% and 40.00%) were fully adopted by Hulakoti and Hanumanamatti KVK respondents, respectively.

Whereas, very meager percentage of respondents had fully adopted practices like disease management (33.33% and 13.33%) and umbilical cord treatment (10.00% and 6.67%), concentrate feeding (16.67% and 10.00%) and ectoparasite (20.00% and 13.33%).

Table 1: Adoption index of the respondents on dairy management **(n=60)**

Category	KVK Hulkoti, Dairy management (n_1=30)		KVK, Hanumanamatti Dairy management (n_2=30)	
	Adoption index			
	F	%	F	%
Low	9	30.00	14	46.67
Medium	12	40.00	9	30.00
High	9	30.00	7	23.33
Total	30	100	30	100
Mean	53.11		41.36	

Table 2 : Comparison of adoption level of KVK, Hulakoti and Hanumanamatti respondents about dairy management practices **(n=60)**

Enterprise	Mean adoption score		“t’ value
	KVK, Hulakoti	KVK, Hanumanamatti	
Dairy management	53.11	41.36	2.65**

* and ** indicate significance of values at P=0.05 and 0.01, respectively

Table 3: Adoption pattern of improved dairy management practices by the respondents (n=60)

Sr. No.	Practice	Trainees of KVK Hulakoti (n_1=30)						Trainees of KVK Hanumanamatti (n_2=30)					
		Full adoption		Partial adoption		Non adoption		Full adoption		Partial adoption		Non adoption	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1.	Improved breed	18	60.00	00	0.00	12	40.00	14	46.67	0	0.00	16	53.33
2.	Fodder	17	56.66	13	43.33	0	0.00	11	36.67	19	63.33	0.00	0.0
3.	Concentrate	5	16.67	18	60.00	7	23.33	3	10.0	12	40.00	15	50.00
4.	Artificial insemination	17	56.67	00	0.00	13	43.33	12	40.00	0	0.00	18	60.00
5.	Colostrum feeding	15	50.00	15	50.00	0	0.00	12	40.00	18	60.00	0	0.0
6.	Umbilical cord treatment	3	10.00	00	0.00	27	90.00	2	06.67	0	0.00	28	93.33
7.	Calf feeding	0	00.00	30	100.00	0	00.00	0	00.00	30	100.00	0	00.00
8.	Dehorning	0	00.00	0	00.00	30	100.00	0	00.00	0	00.00	30	100.00
9.	Ectoparasite	6	20.00	15	50.00	9	30.00	04	13.33	11	36.67	15	50.00
10.	Disease management	10	33.33	12	40.00	8	26.67	4	13.33	15	50.00	11	36.67

Practices like fodder (43.33% and 63.33%), concentrate (60.00% and 40.00%), colostrums feeding (50.00% and 60.00%), ectoparasite (50.00% and 36.67%), disease management (40.00% and 50.00%) were partially adopted by Hulakoti and Hanumanamatti respondents, respectively. Dehorning practice was not adopted by any of the participant. Similarly, calf feeding was partially adopted by all the participants.

The improved breeds, fodder, artificial insemination and colostrum feedings were adopted by over 50.00 per cent of the respondents of Hulakoti KVK, while, the adoption level was in the range of 40.00 to 50.00 per cent in case of KVK, Hanumanamatti. Higher adoption level by KVK, Hulakoti trained farmers might be due to visits organized to commercial dairy units. KVK, Hulakoti also maintained strong linkages with developmental departments and also KMF officials were used as resource persons during the training programmes, which might have helped in increased adoption of practices. Dehorning practice was not adopted in case of both the KVKs farmers. Similarly, majority of the respondents of both the KVKs did not adopt umbilical cord treatment. Probable reasons might be non-relevance of practices for small-scale dairy management unlike in case of commercial dairies and the respondents represented small-scale dairy operators.

As observed earlier, the majority of dairy respondents belonged to SHGs. They were able to adopt dairy enterprise as a viable income generation activity, and KMF was giving the services of artificial insemination and supply of concentrate to the dairy farmers. Hence they were able to adopt majority of dairy management practices learnt during the training programme. The above results were in accordance with the findings of Shreeshilaja (2000), Satiadas *et al*. (2003) and Chaudhari(2006).

Conclusion :

Dehorning practice was not adopted in case of both the KVKs farmers and majority of the respondents of both the KVKs did not adopt umbilical cord treatment. During the training programme the care has to be taken and educate the farmers about the practices like disease management, umbilical cord treatment, concentrate feeding and ectoparasite.

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