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Adoption of Improved Feeding and Health Management Practices in Dairy Cattle By Farmers from Kopergaon and Sangamner Talukas of Ahmednagar District in Maharashtra State

Lata Sharma, Manojkumar Aware, Jayant Khadse, Girish Sohani, Ashok Pande, Alok Juneja and Vijay Deshpande

*BAIF Development Research Foundation, Urulikanchan, Pune, Maharashtra
E-mail: sharmalata11078@gmail.com, lata.sharma@baif.org.in*

Abstract: A survey was undertaken in Kopergaon and Sangamner taluka in Ahmednagar district of Maharashtra for present study. The objective of the study was to know the adoption level of improved feeding and health management practices. Total 3371 farmers were selected from two talukas for the study. Data were collected by telephonic interview with the help of well-structured questionnaire and it was statistically analyzed. A tool was developed to measure the adoption level of farmers regarding selected dairy management practices i.e. housing, improved feeding and health management practices by individual dairy farmer. About 70 and 55 percent farmers were feeding readymade concentrate mixture to their cattle followed by 17.10 and 26.05 per cent were feeding mineral mixture in Kopergaon and Sangamner respectively. While in case of health management practices, 54.99, 78.37 percent and 50.67, 70.52 percent farmers were practicing vaccination and deworming in Kopergaon and Sangamner respectively. It indicated that most of the farmers were aware about dairy health management in Sangamner. Therefore, it revealed that adoption level of dairy farmers should be increased through providing technical knowledge about improved feeding and health management practices which will ultimately improve health of animals as well as the economics of dairy farmers.

Key words: Adoption; Dairy management practices; Health; Improved feeding; Livestock;

INTRODUCTION

Livestock production is backbone of Indian Agriculture and source of employment in rural areas for centuries. This sector has been the primary source of energy for agricultural operation and major source of animal protein for the masses. Dairy farming is one of the important activity of the rural population of our country. The importance of the dairy, as a subsidiary industry to agriculture, has stressed by the National Commission on Agriculture. Dairy Enterprise, next to agriculture, not only provides continuous income and improves dietary standards of family, but also supplements the income and reduces unemployment to a large number of the rural poor. India owns the largest livestock population in the world, accounting for nearly 56.70 per cent of the world Buffalo population and 16.00 per cent of the cattle population. The importance of Livestock in Indian socio-economic status is well recognized. However, per head productivity of Livestock is very low. It is mainly because of under feeding and under nourishment. India continues to be the largest producer of milk in world. India was the largest producer of milk and the production increased by 81.00 per cent over 2000-01 to 146.30 million tons during 2014-15 and aims to achieve the National Vision of producing 155 million tons by 2016-17. As per "19th Livestock Census-2012", Bovine population in Maharashtra has declined by about 5.00 per cent to 2.1 crore as against 2.2 crore in 2007. While crossbred's cattle increased by 19.00 per cent, local Cows and Buffaloes have shown 8 to 9 per cent decline. However, the indigenous cattle and Buffalo milch population declined by 5 to 7 per cent between 2007 and 2012, while there has been an impressive growth of 26.00 per cent in crossbred milch animals (Anonymous 2012). To prevent the suicide of farmer in the villages, dairy farming is the one of the avenues which adds the additional income to the family. Maharashtra state generate about 1.6 crore liters of milk every day. Adoption of improved

housing, feeding and health management practices involves a process in which awareness is created, attitude of cattle owneris changed and favorable conditions for adoption are provided. The technical knowledge of a dairy producer about various dairy management practices such as breeding, feeding and management of milch animals determines largely the success or failure of dairy farming (Gami et al., 2013). Keeping these views in mind, the present study was undertaken to investigate Adoption Level of cattle owner for improved feeding and health management practices in Ahmdnagar district of western Maharashtra.

METHODOLOGY

The study was conducted in Kopargaon and Sangamner taluka of Ahmadnagardistricts of western Maharashtra during 2017-18. Fifty- five villages from Kopargaon and twelve villages from Sangamner blocks were selected where BAIF is working and good number of dairy farmers are available. Study has covered total 3371 farmers from two talukas and each farmer was having on an average two to three milch animals. The data were collected by telephonic interview through BAIF call centre (Sanvadini) by using structured questionnaire from the respondents (Mooventhan *et al.*, 2016). Responses from individual dairy farmer were elicited on qualitative parameters regularly, in yes or no format. SANVADINI is an outbound farmer's call centre of BAIF operated by women at BAIF's Central Research Station, Uruli Kanchan, Pune, Maharashtra. The data pertaining to average herd size, housing type, feeding of concentrate & mineral mixture, health care practices such as vaccination & deworming were collected.

BAIF is providing technical support, inputs and services to the farmers through Cattle Development Centres (CDC) in studied area. Based on experiences of BAIF through field programmes, the soil-plant-animal relationship (mineral mapping under AICRP

Programme of ICAR) of macro and micro elements in different locations were studied to develop suitable mineral supplements for cattle and buffaloes. The product has received BIS certification for its quality. This mineral mixture was supplemented to the dairy animals in both the talukas. Vaccination and deworming as an important management activity for keeping animals healthy and free from diseases, BAIF is providing these services to the farmers in selected areas through CDCs.

RESULTS AND DISCUSSION

The following five practices viz. status of housing type, practicing feeding concentrate mixture, practicing feeding mineral mixture, vaccination and deworming for adoption in cattle management have been considered for finding out the adoption level by dairy farmers in these areas.

It was observed (Table 1) that average herd size ranges from 2.45 & 2.1 in Kopargaon and Sangamner respectively where in Kopargaon area herd size was found to be slightly larger than Sangamner.

It was found from the study (Table 2) that in Kopargaon taluka out of 2964 farmers, 1422 (48%) farmers have been adopted kaccha housing system whereas 1542(52%) farmers were having pucca concrete shed for their animals. Whereas in Sangamner taluka out of 407 farmers, 260 (64%) farmers have been adopted kaccha housing system whereas 147 (36%) farmers were having pucca concrete shed for their animals. Overall, 1682 (49.90%) and 1689 (50.10%) farmers have adopted a kaccha and pucca housing systems respectively for rearing their animals. It indicates that there is need to pay attention towards housing type from kaccha to pucca to improve animal productivity and providing them protection from rain and heat.

It was seen (Table 3) that in Kopargaon taluka out of 2964 farmers, 2074 (70%) farmers had been adopted a practice of feeding readymade concentrate mixture to their animals whereas 890 (30%) farmers

were not following this practice for their animals. Whereas in Sangamner taluka out of 407 farmers, 223 (55%) farmers have been adopted a practice of feeding readymade concentrate mixture to their animals whereas 184 (45%) farmers were not following this practice for their animals. Overall, 2297 farmers (68.14%) were following a practice of feeding readymade concentrate mixture to their animals.

Results of the study (Table 4) shown that in Kopargaon taluka out of 2964 farmers, 507 (17.10%) farmers have been adopted a practice of feeding mineral mixture (BAIF's Mineral Mixture) to their animals whereas 2457 (82.90%) farmers were not following this practice for their animals. Whereas in Sangamner taluka out of 407 farmers, 106 (26.05%) farmers have been adopted a practice of feeding mineral mixture (BAIF's Mineral Mixture) to their animals whereas 301 (73.95%) farmers were not following this practice for their animals. Overall, only 613 farmers (18.18%) have been adopted a practice of feeding concentrate mixture to their animals.

The study (Table 5) also reveals that in Kopargaon taluka out of 2964 farmers, 1630 (54.99%) farmers have been adopted a practice of vaccinating their animals regularly against the contagious and infectious diseases like Hemorrhagic Septicemia (HS), Black Quarter (BQ), Foot & Mouth Disease (FMD) etc. whereas 1334 (45.01%) farmers were not following this practice for their animals. Whereas in Sangamner taluka out of 407 farmers, 319 (78.37%) farmers have been adopted a practice of vaccinating their animals regularly whereas 88 (21.63%) farmers were not vaccinating their animals. Overall, 1949 farmers (57.82%) have adopted a practice of vaccinating their animals.

In present study (Table 6) it was also found that out of 2964 farmers from Kopargaon taluka, 1502 (50.67%) farmers have been adopted a practice of deworming their animals regularly against the ecto

and endo parasites whereas 1462 (49.33%) farmers were not following this practice for their animals. Whereas in Sangamner taluka out of 407 farmers, 287 (70.52%) farmers have been adopted a practice of deworming their animals regularly against the ecto

and endo parasites whereas 120 (29.48%) farmers were not deworming their animals. Overall, 1799 farmers (53.37%) out of 3371 have been adopted a practice of deworming their animals regularly against the ecto and endo parasites.

Table 1
Status of Herd Size

<i>Name of Taluka</i>	<i>No. of village</i>	<i>No. of farmers</i>	<i>No. of cows</i>	<i>Average herd size</i>
Kopargaon	55	2964	7264	2.45
Sangamner	12	407	856	2.1
Total	67	3371	8120	

Table 2
Status of Housing Type

<i>Name of Taluka</i>	<i>No. of village</i>	<i>No. of farmers</i>	<i>Kaccha shed</i>	<i>%</i>	<i>Pucca shed</i>	<i>%</i>
Kopargaon	55	2964	1422	48	1542	52
Sangamner	12	407	260	64	147	36
Total	67	3371	1682		1689	

Table 3
Status of practicing readymade Concentrate Mixture Feeding

<i>Name of Taluka</i>	<i>No. of village</i>	<i>No. of farmers</i>	<i>Practicing Feeding of concentrate mixture</i>	<i>%</i>	<i>Not Practicing Feeding of concentrate mixture</i>	<i>%</i>
Kopargaon	55	2964	2074	70	890	30
Sangamner	12	407	223	55	184	45
Total	67	3371	2297		1074	

Table 4
Status of practicing Mineral Mixture Feeding

<i>Name of Taluka</i>	<i>No. of village</i>	<i>No. of farmers</i>	<i>Farmers supplementing Mineral Mixture to their animals</i>		<i>Farmers not supplementing Mineral Mixture to their animals</i>	
			<i>Nos.</i>	<i>%</i>	<i>Nos.</i>	<i>%</i>
Kopargaon	55	2964	507	17.10	2457	82.90
Sangamner	12	407	106	26.05	301	73.95
Total	67	3371	613		2758	

Table 5
Status of practicing Vaccination

Name of Taluka	No. of village	No. of farmers	Farmers practicing Vaccination		Farmers not practicing Vaccination	
			Nos.	%	Nos.	%
Kopargaon	55	2964	1630	54.99	1334	45.01
Sangamner	12	407	319	78.37	88	21.63
Total	67	3371	1949		1422	

Table 6
Status of practicing Deworming

Name of Taluka	No. of village	No. of farmers	Farmers practicing Deworming		Farmers not practicing Deworming	
			Nos.	%	Nos.	%
Kopargaon	55	2964	1502	50.67	1462	49.33
Sangamner	12	407	287	70.52	120	29.48
Total	67	3371	1799		1572	

SUMMARY AND CONCLUSION

It can be concluded from this study that the dairy farmers from the Kopargaon and Sangamner have lack of adoption in practicing improved feeding practices in terms of mineral mixture supplementation and concentrate mixture feeding. This may result in lowering down performance of dairy cattle than their potential. Therefore, it is essential to promote improved management practices like pucca housing system, feeding readymade quality concentrate mixture, mineral mixture, regular vaccination and deworming etc. This may achieve through a strong networking system for delivery of inputs and services like awareness creation among dairy owners through farmers call centre as well as extension workers. This approach will definitely be very helpful in encouraging the farmers to adopt improved dairy husbandry practices through the concerned agencies by means of providing technical knowledge and educating them on appropriate feeding, breeding, health care and management practices. This will help the farmers in rearing their animals with best feeding and management practices that will ultimately affect the socio economic status of the farmers. Last but not least effective extension

practices are very important in bringing changes in farmer's attitude towards dairy cattle rearing as a dairy business.

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