

Milking Management Practices Followed In Selected Areas of the Kottayam District of Kerala State

Bimal P. Bashir¹ and Vinod Kumar G.²

*Department of Veterinary and Animal Husbandry Extension, Department of Livestock
Production and Management, Veterinary College and Research Institute,
Namakkal 637 002, Tamil Nadu, India*

¹E-mail: bimalpbashirdrvet@gmail.com

KEYWORDS Dairy Cattle. Milking Management. Clean Milk. Hygiene. Kerala

ABSTRACT A survey was conducted to study milking management practice followed by 60 dairy farmers with average herd size of 7.25, majority of them rearing crossbred cattle in the Kottayam district of Kerala state (2010 - 2011). Majority (73.33%) of dairy farmers were following full hand method, 18.33 per cent and 8.33 per cent were following knuckling and machine milking respectively as method of milking. All the dairy farmers were practicing two times milking a day; none of the dairy farmers was following three times milking schedule. About 68.33% of dairy farmers were practicing udder massaging and feeding concentrate and 31.66 percent were practicing calf suckle reflex for let down of the milk. Only 11.67% of the dairy farmers milking their animals in separate and dry places however all farmers were regularly cleaning milk utensils and washing udder before milking as clean milk production practice. The study indicates milking management practice in majority of the dairy farmers is satisfactory but there is a scope for further improvement in milk production practices by creating awareness.

INTRODUCTION

Advent of Operation Flood (1970–1996) has transformed India from a country of acute milk shortage to the world's leading milk producer, with an annual production of more than 121.8 million tonnes, per capita availability of 281 g per day (National Dairy Development Board 2012). But India's productivity per animal compared with the global average of 2038 kg per lactation is very low, at about 987 kg per lactation. Poor quality of milk and milk products are another concern and barrier to entry to the export market. Clean milk production is an important part of any dairy operation. Producing clean milk has many positive benefits to the dairy farmer. By adopting better milking practices milk quality and quantity can be improved significantly (Dang and Anand 2007). There are some scientific precautions for the production of clean milk like washing of udder, dipping of teat and proper sanitation of milking parlor that give obvious benefits to the farmers. Kerala along with Punjab have proportionately higher cross bred cattle, which require meticulous management to express their genetic potential. Keeping these things in mind the present study was designed to gather information on different aspects of milking management practices under field conditions of Kottayam district of Kerala.

MATERIAL AND METHODS

Present study was undertaken in the Kottayam district of Kerala. All data were collected from 60 farmers during the period January 2011 to September 2011. Three blocks from Kottayam district were selected by multistage stratified sampling procedure viz., Kanjirappally, Vazhoor and Lalam. These blocks were selected taking into account of presence of progressive dairy farming. Ten villages from each block were selected randomly and from each village two dairy farmers were selected. Selection of dairy farmers was done with the help of milk co-operative societies in the respective villages. Data regarding milking management practices followed by dairy farmers were collected and analyzed for interpretation through pre-tested and well structured interview schedule.

RESULTS AND DISCUSSION

Study result reveals that 53.33 per cent of the respondents were between 36 and 50 years of age, 41.67 per cent had gone to high school or more (Table 1). Average herd size among the sample population was 7.25, with 51.67 per cent of them had a herd size of 5 to 10. Agriculture was primary occupation for majority of the respondents (73.33 per cent). These findings are in agreement with Khode et al. (2009).

Table 1: Socio-personal characters of the dairy farmers (n=60)

<i>Socio-personal characters</i>	<i>No.</i>	<i>Per cent</i>
A. Age		
1) Young (up to 30 years)	09	15.00
2) Middle (36 to 50 years)	32	53.33
3) Old (above 50 years)	19	31.67
B. Education		
1) Illiterate	03	05.00
2) Primary schools	13	21.67
3) Secondary schools	19	31.67
4) High schools	16	26.67
5) Collegiate	09	15.00
C. Herd Size		
1. Less than 4	19	31.67
2. Between 5-10	31	51.67
3. Above 10	10	16.67
D. Occupation		
1. Agriculture + labour	05	08.33
2. Agriculture	44	73.33
3. Agriculture + Business	11	18.34
E. Extension Agency Contact		
1. High (>12.5)	47	78.33
2. Low (<12.5)	13	21.67
F. Mass Media Exposure		
1. High (>8.83)	49	81.67
2. Low (<8.83)	11	18.33
G. Scientific Orientation		
1. High (>11.02)	42	70
2. Low (<11.02)	18	30

It was also noted that the majority of the respondents had high level of extension agency contact, mass media exposure and scientific orientation on dairying. These findings are in line with that of Mande and Thombre (2009).

Perusal of Table 2 reveals that 73.33 per cent of farmers were following full hand method, 18.33 per cent and 8.33 per cent were following knuckling (wrong method) and machine milking respectively as method of milking. These findings are encouraging than report of Munish Kumar et al. (2011) but contrary with Malik et al. (2005) and Kumar et al. (2006). Farmers practicing machine milking also milk the animals by hand after machine milking to get the remaining milk in the udder.

It was found that 68.33 per cent of farmers were practicing udder massaging and feeding concentrate for letdown of milk, only 31.66 per cent were practicing calf suckle reflex for letdown of the milk by allowing calf suckle dam before milking. These findings are contrary to Garg et al. (2005), Kumar et al. (2006) and Rathore et al. (2010). Since most of the farmers were having cross-bred animals this might have reduced the dependence of calf suckle reflex for milk letdown (Akers 2002).

Table 2: Milking management practices followed by dairy farmers (n=60)

<i>S. No.</i>	<i>Characteristics/ Categories</i>	<i>Number</i>	<i>Per cent</i>
1.	Method of Milking		
	a) Full hand	44	73.33
	b) Knuckling	11	18.33
	c) Stripping	0	0.0
	d) Machine milking	5	8.33
2.	Place of Milking		
	a) Milking at the same place	53	88.3
	b) Separate and dry place	7	11.7
3.	Frequency of Milking		
	a) Two time	60	100
	b) Three time	0	0
4.	Practice for Letdown of Milk		
	a) Allow calf to suckle	19	31.66
	b) Feeding concentrates and udder massaging	41	68.33
5.	Regular Cleaning of Milk Utensils and Washing of Udder Before Milking	60	100
6.	Cleaning and Dipping of Udder and Teats Just After Milking	5	8.33

It was discouraging to note that only 11.67 percent of the farmers milking their animals in separate and dry places. These findings are lower than reports of Malik and Nagpaul (1999), Kumar et al. (2006) and Rathore et al. (2010). However all farmers were regularly cleaning milk utensils and washing udder before milking as clean milk production practice. Similar findings were reported by Garg et al. (2005) and Rathore et al. (2010). All the farmers were practicing two times milking a day, none of the farmers was following three times milking schedule. This is in line with the findings of Dubey and Kumar (1981) and contrary to Sarkar and Pal (1980) who suggested three time milking a day.

CONCLUSION

Milking management practices in majority of farmers were satisfactory but still there is some gap in adoption of scientific management practices. Still some farmers were using knuckling method of milking which is wrong and can make the animal prone to mastitis. Majority of the dairy farmers were found to be following scientific milking practice and take care of cleanliness as reflected by full hand milking practices and using clean milk utensils, etc. Dairy farmers should be educated regarding significance of complete milking and milking at separate

place. There is need for strong extension activities to increase awareness among the farmers regarding recommended scientific milking management practices.

REFERENCES

- Akers RM 2002. *Lactation and the Mammary Gland*. Iowa: Iowa State Press.
- Dubey VK, Kumar R 1981. Identifying existing animal husbandry practices as followed by cattle keepers in Karnal district. *Dairy Guide*, 3(2): 9.
- Garg MK, Jain LS, Chaudhary JL 2005. Studies on housing, feeding and milking management practices of dairy cattle in Baran district of Rajasthan. *Ind J Dairy Sci*, 58(2): 123-128.
- Khode NV, Sawarkar SW, Banthia VV, Nande MP, Basunathe VK 2009. Adoption of improved dairy cattle management practices under Vidarbha Development Programme Package. *Indian Res J Ext Edu*, 9(2): 80-84.
- Kumar U, Mehla RK, Chandra R, Roy B 2006. Studies on managerial practices followed by the traditional owners of Sahiwal cows in Punjab. *Ind J Dairy Sci*, 59(2): 100-105.
- Kumar M, Mehla RK 2011. Milking management practices of buffaloes in the rural areas of Punjab. *Indian Journal of Animal Production and Management*, 27(2): 23.
- Malik DS, Nagpal PK 1999. Studies on milking and calf rearing management practices of Murrah buffaloes in its home-track of Haryana. *Indian Journal of Animal Production and Management*, 15(2): 52.
- Mande JV, Thombre BM 2009. Adoption of cattle rearing practices by dairy cattle owners in Latur district. *J Dairying Foods and HS*, 28(3/4): 176-180.
- Rathore RS, Singh R, Kachwaha RN, Kumar R 2010. Existing management practices followed by the cattle keepers in Churu district of Rajasthan. *Ind J Ani Sci*, 80(8): 79.
- Sarkar AB, Pal RN 1980. Effect of frequency of milking on production and composition of milk in Murrah buffaloes. *Journal of Assam Agriculture University*, 1(1): 12.