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Management Practices Followed by Dairy Farmers in Rural and Urban Areas of Bathinda District in Punjab

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ABSTARCT

A field study was concluded to note down the various animal husbandry practices followed by the dairy farmers in rural and urban areas in Bathinda district of Punjab. It was found that about 75 per cent of respondents kept the animals in commercial type of housing system whereas 69 per cent animal sheds were nearby to the dwelling of the farmers and 83 per cent of the farmers provided concrete manger. Majority of the respondents (58%) followed the individual feeding system, cultivated fodder crops (68%) for feeding to dairy animals throughout the year and only 25 per cent of farmers produce non-legume fodder. Similarly, while use of mixed fodder (both legume and non-legume) restricted to only 15 per cent. The health status was maintained by using regular vaccination (91%), veterinary facilities (81%) and artificial insemination (65%) by the respondents. Majority of respondents in the study area felt the constraints of lack of capital, high cost of shed construction, high feed costs and occurrence of repeat breeding in cross bred cattle.

Key Words: Bathinda, Dairy farmers, Management, Rural, Urban area

INTRODUCTION

Management is a key factor for the success of any business and in dairy farming, the role of management is very important. Feeding, housing and health management plays a very significant role in exploiting the full potential of dairy animals. The management practices constitute about 75-80 percent of total cost incurred on milk production in dairy business (Verma and Sastry, 1994). Insufficient feeding of dairy cows results in poor growth, delayed maturity, late conception and poor production. Provision of comfortable and proper spacing is helpful in reducing the energy in maintaining thermo-neutral zone and also provides ideal, comfortable and hygienic conditions, which reduce the incidence of diseases, lower the pathogenic load, reduces the ecto and endo parasites and provides good environment for optimum milk production.

Dairy farm management should be sophisticated, particularly in the tropics with the added environmental stresses. However, smallholder and small dairy co-operatives often lack the necessary management skills. Co-operatives are not usually strong enough to manage proper health control and services for members.

Herd management practices in cow handling, nutrition, milking procedures, sanitation and housing play major role in predisposing the individual animal as well as herds to diseases. Health management improves the conditions of dairy animals by reducing the disease load and proper health status. Therefore, understanding of livestock management (feeding, housing, health) practices followed by the farmers is the key factors in identification of strength, weakness, opportunity and threat in livestock rearing. This helps in identification of appropriate intervention policy to optimize the production of dairy animals to benefit the farming community.

However, records from smallholders are seldom comparable to those of western dairy nations. In the tropics, climatic and environmental stress, particularly heat stress, could affect animal productivity (Matthewman, 1993). According to Akers (2002), a well-known lactation physiologist,

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the investment in milking management at farms where feed, breed and care for animal obviously are wasted if milking procedures and milk handling are not satisfactory. This means that attention must be focused on milking practice to promote optimal milk production and good udder health. The present study was designed to collect the information regarding the existing management practices i.e., feeding management, housing management and health management adopted by the rural and urban farmers of the Bathinda district of Punjab.

MATERIALS AND METHODS

The study was conducted in the Bathinda district of Punjab. District Bathinda is lying at Latitude of 30.2300 N and Longitude of 74.9519. This district constituted of seven blocks. For this study, one hundred farmers each from four blocks were selected randomly, thus making a sample size of 400. It is a known fact that the distribution of dairy units is scattered in both rural as well as urban areas, so the selection for rural:urban was based on 3:1 ratio. A well structured pre-designed and pre-tested questionnaire was used to collect the information on array of different management practices (feeding, housing and health) followed by dairy owners through personal interview. The collected data were classified by using appropriate statistical tools like percentage and frequency etc.

RESULTS AND DISCUSSIONS

Housing Management Practices

It was revealed that all the respondents (rural and urban) provided almost the same condition of rearing /housing to their dairy animals. Similar findings were reported by Swaroop and Prasad (2009). In rural areas, farmers keeping small to medium scale of dairy unit provided conventional type of housing (75%) and in urban areas (79%) which gives controlled environment for rearing the dairy cows. These sheds were built up with cheap and easily available local material. In some places, bamboo, sheets, local structure plastered with mud mixed with cow dung were also found. Similar findings have been reported by Sabapara e*t al* (2010) and Sharma *et al* (1996).

Table 1. Housing Management Practices followed by the farmers.

Sr. No.	Particular	Rural area (Percent)	Urban area (Percent)
1.	Conventional type	75	79
2.	Sharing of residential housing	69	39
3.	Concrete floor	53	91
4.	Wooden type	17	09

Rural families (69%) share their residence with the dairy cows and value is lower in urban areas (39%). Similar findings were reported by Rathore *et al* (2010) and Sohane *et al* (2004). Purpose of studying this practice was to see the cost of construction of sheds because of low income factor. In the rural areas, 53 per cent of the respondents provides concrete floor while 47 per cent used katcha area for rearing the dairy animals whereas these values in urban area were 91 and 9 per cent, respectively. However contradictory findings were reported by Sabapara *et al* (2010) and Singh *et al* (2009) where mainly katcha type of floor was observed. This was because of the reason that the dairy farmers are now more concerned about the hygiene and cleaning of dairy sheds which is achieved only by providing the concrete floor. It is general observation that the concrete floor is better than the katcha floor to keep the shed / animals worm free and hygienic point of view.

Further, the asbestos sheets, thatched material and galvanized iron sheets were used for construction of the dairy sheds by majority of the commercial dairy units and the respective values were 75, 10 and 15 per cent in rural areas and 80, 8, and 12 per cent in urban areas. In fact, prevailing climatic conditions, temperature, standard cost, economical condition of the farmers play a vital role in the selection of building material. Similar finding were reported by Patel *et al* (2005) and Singh *et al* (2009). Pucca and wooden assisted type of mangers were provided by 83 and 17 percent of

the respondents in rural areas, respectively whereas, this value was 91 and 9 percent in urban areas of the district.

Feeding Management Practices

The data (Table 2) show that around 85 per cent respondents of rural area and 58 per cent of urban areas preferred individual feeding system in conventional system of rearing while 15 per cent of the respondents of rural areas and 42 per cent of urban areas adopted group feeding in loose housing system. Similar findings were reported by Gupta et al (2008) and Singh et al (2007). However lesser number of individual feeding was observed in urban area because of common feeding manger to feed the animals.

Table 2. Feeding Management Practices followed by the farmers.

Sr. No.	Parameter	Rural area (Per cent)	Urban area (Per cent)
1.	Feeding system- individual	85	58
2.	Conventional system of rearing	15	42
3.	Leguminous feeding	25	22
4.	Leguminous + non-leguminous feeding	16	10
5.	Dry matter feeding- paddy straw	11	08
6.	Mixture of green fodder + dry fodder	94	89
7.	Local available feed ingredients	55	36

The legume fodder data revealed that 25 percent in rural areas and 22 percent in urban areas cultivate and purchase legume fodder for feeding to dairy animals. A small proportion of respondents used mixture of leguminous and non-leguminous green fodder for feeding to the dairy animals. The study showed that 15 per cent of respondents from rural areas and 39 percent of urban areas did not have land for cultivation of green fodder. They purchased the green fodder from local market to fulfill their green fodder requirement.

It was found that the dry matter requirement of dairy animals met out by feeding the wheat straw in whole district of Bathinda. Eighty nine percent of respondents in rural areas and 92 percent in urban areas used wheat straw to fulfill the requirement of dry matter. Rest of the respondents (11 percent from rural area and 8 percent of urban areas) used paddy straw and other brans to fulfill the dry matter requirement. Similar findings were reported by Deoras et al (2004). Majority of the farmer (94%) in rural area and 89 per cent in urban areas offer chopped green fodder mix with dry fodder for feeding to the dairy animals. Only 6 percent from rural area and 11 percent from urban area offer the fodder as such. This finding was in agreement with earlier findings of Chaudhary et al (2006) and Sabapara et al (2010). This may be due to lack of adequate knowledge of efficient utilization of feed and fodder

In rural areas, 55 per cent respondents used feed ingredients locally available while 36 per cent used the commercial cattle feed available in local markets and 9 per cent used the combination of both. In urban areas, 41 per cent farmers used the local feed input while 39 per cent used the compound cattle feed, 20 per cent used both. Rathore et al (2010) and Sabapara et al (2010) reported that dairy farmer feed concentrates to their dairy animals made from home produced ingredients along with the compound cattle feed in various proportion in different parts of the country. As for as the feeding of concentrates on the milk production basis was concerned, it was adopted by 65 per cent dairy farmers from rural areas and 85 per cent in urban areas while 35 per cent and 15 per cent respondents in rural and urban fed the animals without taking into consideration of milk produced.

HEALTH MANAGEMENT

To exploit the optimum potential of the livestock, it is essential to keep neat and clean, sanitation and health care management facility at the farm. About 91 per cent in urban and 87 per cent in rural areas, regularly vaccinate the stock while 9 per cent in

urban areas and 13 per cent dairy farmers in rural areas did not follow (Table 3).

Table 3. Health management practices followed.

Sr. No.	Parameters	Rural area (Per cent)	Urban area (Per cent)
1.	Regular vaccination	91	87
2.	Vaccination facility	63	81
3.	Artificial insemination	65	85

Around 85 per cent of urban respondents and 65 per cent of rural respondents used artificial insemination while 15 per cent of urban and 35 per cent of rural preferred the natural mating system.

CONCLUSION

Majority of respondents in the study area feels the constraints of lack of gross capital, high shed construction cost, high feed costs, incidence of repeat breeding, respectively. The co-operative milk union and animal husbandry department can provide financial credit with the help of banks / NABARD to the trainees of dairy farming through societies, dairy departments, KVK's and other agencies to uplift the socio economic status of these dairy farmers.

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