Indian J. Anim. Prod. Mgmt. Vol. 28 (3-4) 160–166 (2012)

PRIVATE DAIRY FARMS MANAGEMENT- A CASE STUDY

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Received : 20.12.2011, Accepted : 04.03.2013

ABSTRACT

This study was planned to investigate the present management condition and to identify the problems related to milk production of private dairy farms of Khanapara area of Guwahati. For about three months, door to door survey was conducted where 150 farm owners were interviewed. From the survey it was reported that about 60% farms belong to landless personal, 14% farms to service personal, 20% farms related to agriculture and 6% farms managed by others. The average number of cow per farm was 20. Almost all cows in the farms were crossbred. Most of the cow shed was constructed by galvanized iron sheet (50%), straw (26%), half building (20%) and only 4% building. Fifty three, thirty four & thirteen farm had closed, semi-closed and open house respectively for their cows with 60% proper ventilation and 40% proper drainage system .Ninety-eight percent farm was used as untreated paddy straw and the rest treated straw for feeding. Seventy percent of farmers do not cultivate fodder crops due to the lack of land and the rest lack of knowledge and awareness etc. The most important constraint of the dairy farming was scarcity of green fodder; good quality concentrates feed, unhygienic production of milk and capital. It is expected that if all these facilities and awareness campaign may be provided to them the very dense milk production area i.e. Khanapara will be improved.

Key words - Dairy farm, Management, Khannapara, Guwahati

Milk Production is an important rural activity in India providing supplementary income, employment and nutrition to million of rural people, this also provides subsidiary occupation to people living in hilly areas, tribal and drought prone areas (Rao et al.2006). With a value of output of about Rs. 62,829 crores at 1993-94 prices during 2003-04, Milk group ranked first, surpassing rice (Rs. 45,849 crores), in India's agricultural sector (CSO, 2005). The output of milk and milk products has increased faster than crops since 1970s. The breedable cows as percentage of total population was 34.03 % as per livestock census 2003 (Dairy india2006). Nearly 80% of Cattle in our country they are non-descript and they produce very less quantity of milk in a lactation. The Government of Assam is trying to expand pure Indian breeds of cow as well as cross bred cows by taking various livestock sector policy. The main limitation for dairy industry in the state is scarcity of feed, breeding, housing, healthcare and marketing. Because the availability of milk in north-eastern region is 92 gram per capita per day and it is less than 50% of the national average and ICMR recommendation, therefore the government has given priority on the development of dairying at farmer's level. In Khanapara area small and large scale dairy farms have been increasing day by day especially low income group of people has taken this type of farming as a profitable practice. The cause of these development are climatic condition which is very much suitable for dairy cows, available crossbred and other management facilities which are moderately better than any other areas of the Kamrup district of north-eastern part of our country.

From the above reason it is clear that to draw a picture of present status of large private dairy farms is essential to support for taking policy of dairy farming to Government where feeding, breeding, housing management & working etc must be under consideration to suggest the dairy farm owner/farmer for sustainable dairy development. Therefore, the present study was conducted with the following objectives at

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Khanapara area of Guwahati-

(i) To know the present management condition regarding feeding, breeding, housing, healthcare, milking system & marketing of milk etc. of private dairy farms.

(ii) To identify the problem & constraints related to dairy farming.

(iii) To know the economic status of dairy.

MATERIALS AND METHODS

The study was conducted at Khannapara surrounding areas for a period of three months (December to February 2006). A list of registered private dairy farms in Khannapara was collected from Livestock Office. One hundred fifty private dairy farms were selected from a total of 320 enlisted in record. The survey scheduled prepared based on basic information like owners, breed of cattle, housing system, availability of feed and fodders, feeding system, milk production system, breeding and other problems related to dairy farming etc. The data were collected through direct interviewing to the farm owners. Before starting the interview, each respond was given a brief description about the nature and purpose of the study. To attain accuracy and reliability of data the data collection from the farmer were compiled and tabulated. Tabulated data were arranged as percent value for easy understanding and to have definite conclusion.

RESULTS AND DISCUSSION

General information about farm owner:

There were two categories of farm one was small scale (10-15) another large scale (20-50) Highest percentage (57 %) of farmers had business as the principal occupation and the rest agriculture, service etc (Table – 1). The farmer having age group level were 18-25, 25-50 and above 50 years and the percentage of these age group level were 15, 72 and 13 respectively (Table – 1). Farmers were further, categorized based on land owner were below 0.5, 0.5-1 and 1-1.5 hectare and the percentage of these categories were 28, 64 and 8 respectively. It was revealed that monthly incomes of the owners were 0-5000, 5000-10,000 and above 10,000 rupees for 14, 38 and 52 % respectively (Table -1). On the basis of level of education the farmer were classified into five categories- uneducated, primary level, secondary level, higher secondary level and above. Twelve percent of farmers had no schooling compare to 32 % having primary education, 40 % secondary education, 12 % higher secondary level and only 4 % higher secondary and above.

Information about Cattle

It was observed that average number of milk cow per farm was 8.3, average number of total cattle per farm was 20.18 and percentage of milch cows was 41.13 out of total cattle.

Housing Management:

Only four percent of the farmers provide building and the rest 96% of the owners use to keep their cows in some other houses like- half-building, galvanized iron sheet and thatched make house (Table – 1). Fifty three percent dairy owners provided closed house, 34 % provide semi-closed and 13 % used open housing pattern. In case of floor type of cattle shed, 82 %were used brick floor and the rest have pakka floor. Forty percent of cow shed was proper drainage system while 60 % was improper. Proper ventilation of cowshed was provided in 58 % cases while the rest (42 %) were very less ventilation facility.Our findings is in accordance with Garg et al.2005 who observe in 84.4% of urban houses ventilation was in fairly good condition and this was 34.4 and 53.3 in rural and semi urban houses.

Feeding Management:

Different types of feeds were given to the cattle depending on their type and large variation was observed among the farmers. In the study area the farmers were not much attentive to cattle feeds. It was found that the farmers use paddy straw, green grasses, rice bran, wheat bran, pulse bran, oil cakes etc. The main livestock feed at the study area was paddy straw. The most of the farmers (98 %) used without treated straw. In the study area most of the farmers store paddy straw at once in a year i.e. at the time of harvesting only. Seventy percent of the study area dairy owners do not cultivate green grasses, while rest (30 %) cultivate green grasses like napier

(multicut), maize, paragrass, rice bean etc. their percentage was 50, 20, 10, 5, and 15 respectively (Table - 3).In an other study by Gangwar, 1988, he found that feeding management plays a very important role in exploiting real potential of dairy animals it constitutes about 75% of the total cost of milk production. Similarly almost same findings presented by Jain et al.1996 and Saha et al.1997, they found in his study that the optimum feeding and housing is the prerequisite challenge for increasing milk production in our country.

Breeding Management :

It was observed that very few numbers of indigenous cattle found in these surveys of private farms. Because most of the farm owners used artificial insemination technique for breeding of the cows, the reason of these huge numbers of cross-bred dairy cow available, for this reason a large number of Holstein Friesian, Jersey and Sahiwal cross – bred stock found in the area. The result showed that 95 % cows were inseminated artificially, 2 % naturally and 3 % both natural and artificial (Table - 3) (Ref) while in another study carried out by Dang and Singh, 1999 they observed that after first service the conception rate was only 25-40 %. In this study it was found the average conception rate per conception was 25-30 % this less percentage of conception rate my be due to untimely detection of heat and insemination.

Milk Production and Marketing :

In our study almost all dairy owners milked their cows manually. Most of the farm owners (72 %) used traditional equipment and only 20 % owner milked their Cow in a hygiene condition (Table – 4). Rao et al. also reported that the recommended practices in dairy farming at village condition are very lower performance of our cattle. All dairy owners of the study area milking carried out twice in a day. Container used for milking was 88 % by bucket and the rest were using milking pail (Table 4). The average milk production per cow per day was 6.3 and only 8 percent dairy owners were preserved their milk with presentation.

Majority of the farm owners gave their milk to nearby cooperative dairy plant (Table 4). Twenty two percent of owners dispose off their milk by home delivery. Some farmers (10%) sold their milk in open market as loose raw milk. Ten percent, three percent and two percent deliver their milk to Halwaies (sweet makers), vendors and neighbours respectively. Most of the farmers agreed that it is a profitable business, if the feed cost may under control. Yet there is a dairy plant very near to area but there was a complain from dairy owners that we are not getting actual price of milk timely. Due to unhygienic environment inside the dairy farm most of the cows they were suffering from mastitis. If this situation continued the dairy farm owner loose their interest to extend his business and also they restrict to establish other new dairy units.

From the above discussion it can be concluded that the present management condition of Khanapara area Guwahati is traditional and if they will not get government support on feed cost, marketing, loan and management training, in future there will be less or no development in private dairy farm sector in Khanapara area.

In order to develop the private dairy farm sector in Khanapara area, some recommendation is suggested-

(i) Priority should be given to private sector to establish small cattle feed factory by giving financial support by the government.

(ii) Some grazing land should be allotted by the government for grazing the animals.

(iii) Research and training should be given to dairy owners for the use of unconventional feed resources of local areas.

(iv) The price of milk should be fixed at a reasonable level and milk marketing system should be improved through intervention of the government.

(v) The government should provide more financial assistance with subsidy to all class and cost of dairy owners. The training programme related to dairy management such as housing, feeds and feeding, breeding and health care and management should be initiated by the state government in collaboration with non government organization.

Table 1: Farm owner's personal data and other related information.

Variables		Percentage
Occupation	Agriculture	20
	Business	57
	Service	14
	Others	19
Age Level	18-25 years	15
	25-50 years	72
	50 and above	13
Education Level	Uneducated	12
	Primary	32
	S.S.C.L	40
	H.S.C.L	12
	Above H.S.C.L	4
Monthly	0-5000	14
Income (Rs)	5000-10,000	38
	Above 10,000	52
Land size (ha)	Below 0.5	28
	0.5-1	64
	1-1.5	8
Farm Categories	Small Scale (10-15 no. of cattle)	66
	Large Scale (20-50) no of cattle	34
Nature of House	Building	4
	Half-Building	20
	G.I shed	50
	Thatch (straw)	26
Housing System	Open	13
	Close	53
	Semi close	34
Floor Type	Brick	82
	R.C.C	18
Drainage	Proper	40
	Improper	60

Table-2: Different categories of cattle on the dairy farms.

Cattle	Number	Percentage	Milch cow per farm
Cross bred milch	830	41.13	8.3
Dry	428	21.21	
Heifer	270	13.38	
Calf	470	23.29	
Bull	20	0.99	
Total	2018	100	

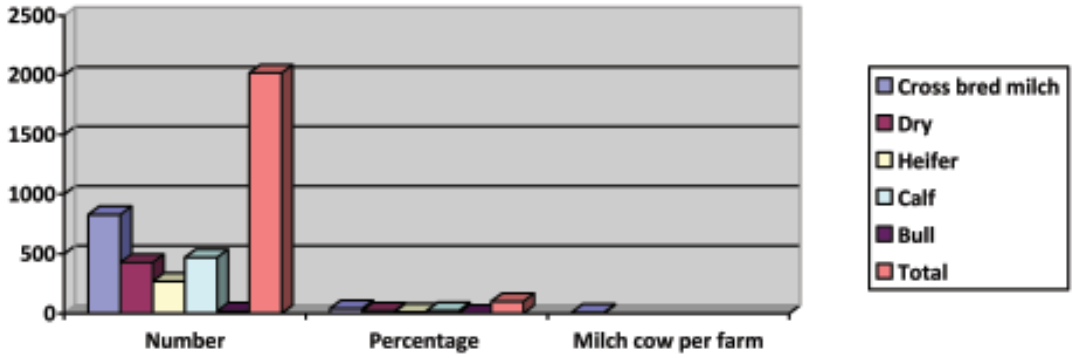

Figure 2. Different categories on the Dairy Farms

Table- 3: Availability of feed, fodder, feeding system and constraints of fodder production.

Information		Percentage
Fodder Cultivated	Napier (Multi-cut)	50
	Maize	20
	Para grass	10
	Rice bean	5
	Others	15
Straw used for feed	Untreated	98
	Treated	2
Concentrate Used	Rice bran	30
	Wheat bran	20
	M. oil cake	5
	Jaggery (Gur)	2
	Pulse bran	20
	Salt	2
	Readymade concentrate feed	21
Major constraints of Fodder cultivation	Scarcity of land	70
	Lack of knowledge	10
	Lack of awareness	18
	Others	2
Feeding system	Conventional	62
	Scientific	14
	Mixed	24
Breeding System	A.I	95
	Natural	2
	Bath AI & Natural	3
Breeding Choice for A.I	Holstein Friesian	91
	Jersey	8.7
	Others	0.3

A.I – Artificial Insemination

Table-4: Some relevant information from milking to marketing of milk.

Information		Percentage
Milking System	Manual	100
	Mechanical	0
Dairy Equipment used	Traditional	72
	Moderate	28
Septic Measure Taken during Milking	Hygienic	20
	Unhygienic	80
Number of milking Per day	Once	0
	Twice	100
	Thrice	0
Container used For milking	Bucket	88
	Milking pail	12
Preservation of milk	Without preservation	92
	Preservative	8
Milk marketing system	Dairy Plant	53
	Home delivery	22
	Open market	10
	Halwaies (Gur)	10
	Vendors	3
	Neighbour	2

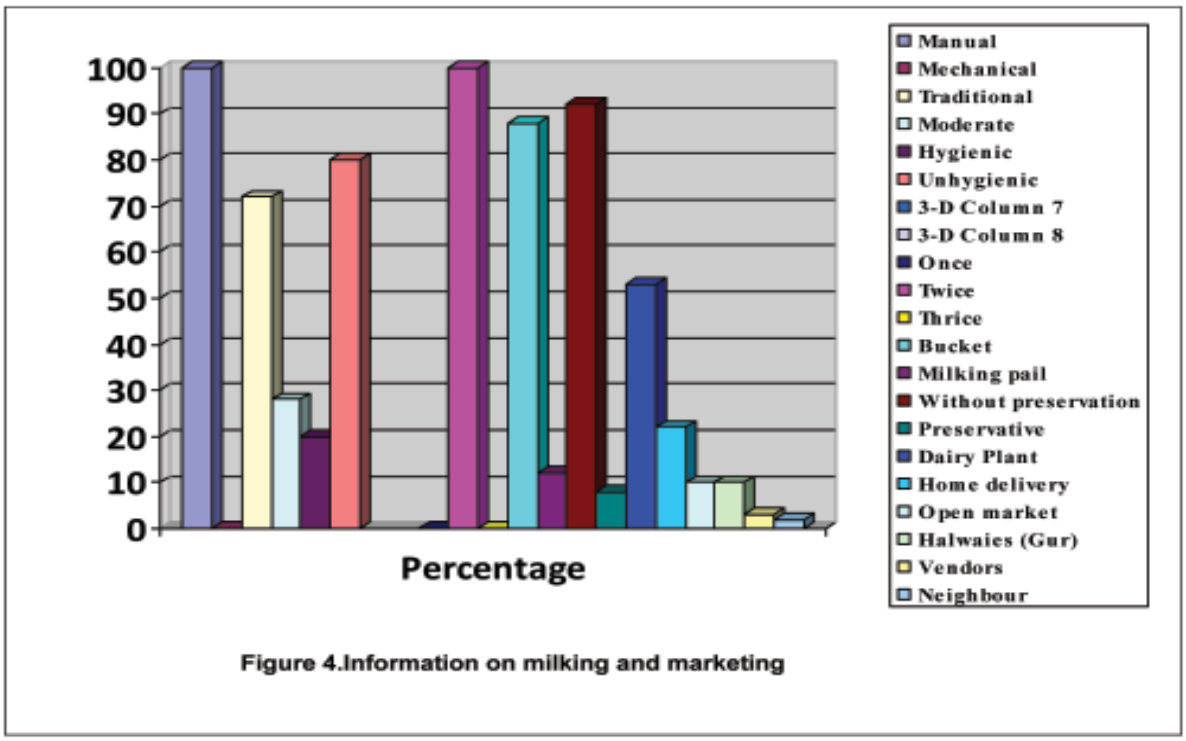

Figure 4.Information on milking and marketing

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