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Study on the Present Management Condition of Private Dairy Farm at Rangpur Sadar Thana in Bangladesh

Z.M.A. Hossain, S.M.J. Hossain, M.M. Rashid, ¹N. Sultana and M.H. Ali
Department of Livestock Services, Ministry of Fisheries and Livestock, Bangladesh
¹Bangladesh Livestock Research Institute, Savar, Dhaka, Bangladesh

Abstract: This study intended to investigate the present management condition and to identify the problems related to Milk Production of Private Dairy Farms of the Rangpur Sadar Thana. About 4 month, door-to-door survey was conducted where 100 farm owners were interviewed. From the survey it was reported that 51% farms belongs to business man, 24% to service personnel, 21% related with agriculture and 4% others. The average number of cows per farm was 15.19. Almost all cows in this farm were crossbred. Most of the cowshed was constructed by straw (48%), tin shed house (26%), half building (22%) and only 4% building. Sixty three, 34 and 3% farm had closed, semi-closed and open house, respectively for their animals with 73% proper ventilation and 33% proper drainage system. Ninety-five percent farm was used as untreated straw and the rest treated straw. Fifty one percent of farmers do not opined to grow fodder crops due to lack of land and the rest lack of seed, lacking of knowledge, lack of awareness and others. The most important constraint of dairy farming was scarcity of feeds and fodder, milk marketing facilities and capital. It is expected that if all these facilities are available dairy farming in Rangpur Sadar Thana will be improved.

Key words: Dairy farm, management, Rangpur

INTRODUCTION

Cattle play a vital role in Agricultural economy of Bangladesh because of their contribution to milk, meat, transport, manure, draft cooking fuel. The number of milking cow was 3.79 million^[1] out of 23 million cattle heads. Government is trying hard to expand dairy industry by-taking different policy. The main limitation for dairy industry is the scarcity of feed, breeding, housing and marketing. Because the availability of milk is only 13.9 ml milk head⁻¹ day⁻¹^[2]. Bangladesh Government has given the priority on the development of dairying at farmers level, to increase the supply of milk from small farm dairying. In Rangpur Sadar Thana areas small and large-scale dairy farm have been increasing day by day. Specially low income group of people has taken this type of farming as a profitable practice The cause of these development are climate condition which is very much suitable for dairy cow, available crossbred and other management facilities which are moderately better than any other district of northern part of Bangladesh.

From above discussion it is clear that to draw a picture of present status of large private dairy farm is essential to support for taking policy of dairying to Govt. Where feeding, breeding and housing management, marketing etc. must be under consideration to suggest the

farmer for proper dairy development. So the present study was conducted with the following objectives at Rangpur Sadar Thana.

- (i) To know the present management condition regarding feeding, housing, breeding, milking system and marketing of milk etc. of private dairy farms
- (ii) To identify the problems and constraints related to dairy farming
- (iii) To know the economic status of dairy

MATERIALS AND METHODS

The study was conducted at Rangpur Sadar Thana for a period of four months (February-May 1998). A list of registered private dairy farms in Rangpur Sadar Thana was collected from the Sadar Thana Livestock Office. One hundred private dairy farms were selected from a total of 150 enlisted in the registrar. The survey schedule prepared based on following key items: owners information, breed of cattle, housing system, availability of feeds, feeding system, milk production system, breeding, problems of dairying etc. The data were collected through direct interviewing to the farm owners. Before starting the interview, each respondent was given a brief description about the nature and purpose of the

study. Irrelevant questions were always avoided to safe time of both respondent and researcher. To attain accurate and reliability of data care and caution were taken in course of data collection. Data collection from the farmers 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 owners: There were two categories of farms one was small scale (10-15 cattle) another large scale (20-80 cattle). Highest percentage (51%) of farmers had business as the principal occupation and the rest agriculture, service etc. (Table 1). The farmers having age group 20-30, 30-50 and above 50 years and the percentage of these age level were 5, 63, 32, respectively (Table 1). Farmers were further categorized based on land owner were below 0.20, 0.2-0.4 and 0.4-0.8 ha and the percentage of these categories were 23, 28 and 49, respectively. It was revealed that monthly income of the owners were 0-3000, 3000-5000 and above 5000 taka for 11, 26, 63%, respectively (Table 1). On the basis of level of education the farmers were classified into five categories no schooling, primary level, secondary level, higher secondary level and higher secondary above. Nineteen percent of farmers had no schooling compare to 27% having primary education, 16% secondary level education, 21% higher secondary level and 17% higher secondary above.

Information about cattle: It was observed that average number of milch cow per farm was 6.28, average number of total cattle per farm was 15.19 and percentage of milch cows was 41.34 out of cattle (Table 2).

Housing management: Only 4% of the farmers provide building and the rest 96% of the farmers used to keep their cattle in some other house like half-building, tinshed and straw making house (Table 1). Sixty three percent farmers provided closed house, 34% provide semi-closed house and few people was used open housing pattern. As regard floor type of cowshed, 63% was used paved flock (with brick) and the rest unpaved floor 33% of cowshed were proper drainage system while 67% were improper. Proper ventilation of cowshed was provided 73% cases, the rest of 27% were improper. This result could not be compared with others because there was no related study has been done yet.

Feeding management: Different types of feeds were given to the cattle depending on their kind and large variation

Table 1: Farm Owners personal data and other related information

Variables	Percentage
Occupation	
Agriculture	21
Business	51
Service	24
Others	4
Age level	
20-30 Years	5
30-50 Years	63
50 above	32
Education level	
No education	19
Primary	27
S.S.C	16
H.S.C	21
Above H.S.C	17
Monthly income (Tk)	
0-3,000	11
3,000-5,000	26
Above 5,000	63
Land size (ha)	
Bellow 0.2 ha	23
0.20-0.40 ha	28
0.40-0.80 ha	49
Farm categories	
Small scale (10-15 no of cattle)	68
Large scale (20-80 no of cattle)	32
Nature of house	
Building	4
Half building	22
Tin shed	26
Straw	48
Housing system	
Open	3
Closed	63
Semi-closed	34
Floor type	
Paved (with brick)	63
Unpaved	37
Drainage	
Proper	73
Improper	27

Table 2: Different categories of cattle of the farmers

Cattle	Number	Percentage	Milch cow per farm
Crossbred milch	628	41.34	6.28
Dry	321	21.13	
Heifer	202	13.29	
Calf	355	23.37	
Bull	13	0.98	
Total	1519	100.00	

was observed among the farmers^[3]. In the study area the farmers were not much attentive to cattle feeds. It was found that the farmers used rice straw, green grass, rice bran, pulses bran, oilcake etc. The main livestock feed at the study area was dry rice straw. The most of farmers (95%) used untreated straw. In the study area, the farmers of all categories stored dry straw during harvesting period of rice as per productivity. Most farmers (77%) of the study area was cultivated green grass like as Napier, Maize and Para were 42, 30 and 5, respectively (Table 3). Major constraints of feed and fodder production are scarcity of land, scarcity of seed, lacking of knowledge and lack of awareness.

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

Information	Percentage
Fodder cultivated	
Napier	42
Maize	30
Para	5
Others	23
Straw used for feed	
Untreated	95
Treated	5
Concentrate used	
Rice bran	42
Wheat bran	21
Till oil cake	4
Molasses	2
Pulses bran	29
Fish meal	0
Salt	2
Feeding system	
Conventional	68
Scientific	11
Mixed	21
Major constraints of fodder cultivation	
Scarcity of land	51
Scarcity of seed/cutting	20
Lack of knowledge	7
Lack of awareness	5
Others	13
Breeding system	
AI	93
Natural	0
Both AI and Natural	7
Breeding choice for AI	
Friesain	88
Sahiwal	8
Sindhi	4
Jersey	-

AI – Artificial Insemination

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

Information	Percentage
Milking system	
Manual	100
Mechanical	-
Dairy equipment used	
Traditional	87
Moderate	13
Septic measure taken during milking	
Hygienic	33
Unhygienic	67
Number of milking d⁻¹	
1	6
2	87
3	7
Container used for milking	
Bucket	92
Milking pail	8
Preservation of milk	
Without preservative	89
Preservative	11
Milk marketing system	
Milk vita chilling centre	42
Home delivery	23
Open market	12
Sweet maker	8
Vendors	3
Restaurants	3
Neighbor	9

Breeding management: It was observed that very little number of indigenous cattle found in these survey of private farm. Because, most of farm owners used artificial insemination technique for breeding purpose, the cause of these huge numbers of crossbred dairy cow available. For this reason a good number of H.F, Shahiwal and Sindhi crossbred stock found in this area. The data showed that 93% cows were inseminated artificially and 7% both natural and artificial (Table 3). Slightly deviator had been observed with the deservation made by Shahjahan *et al.*^[4]. They showed that the percentage use of artificial insemination was 75.2% and artificial and natural was 31.03%. Present study showed the difference in opinion from that of ^[5] where he pointed out that farmers still prefer natural insemination practices to artificial insemination. In this study it was found that the average rate of service per conception of crossbred was 2.7. It contradicted with^[6]. He observed the rate of service per conception 1.39.

Milk production and marketing: From the observed data, 100% farmers milked their cows manually. Most of the farm owners (87%) used traditional equipment and thirty three percent farmers milked their cows hygienically (Table 4). Most of the farmers (87%) milking carried out twice a day in 7% cases three times a day and in 6% cases one time a day. Container used for milking was 92% by bucket and the rest was milking pail (Table 4). The average milk production per day per cow was 5.2 l and only 11% farmers was preserved their milk with preservatives.

Majority of the farm owner gave their milk to Milk Vita Chilling Center (Table 4). Twenty three percent of the farmers disposed their milked by home delivery. Some farmers (12%) sold their milk in open market by packing polythine bag. Some farm owner disposed their milk to tea stall, sweet maker, restaurant and their neighbors. Most of the farmers agreed that it was a profitable business, if the feed cost is under control. Real price of milk is a great problem. Yet there is a chilling plant in Rangpur Sadar Thana but farmers did not get actual price during the period of high production. Milk Vita did not want to keep more milk to their capacity. If this condition continued farm owner lost their interest to establish new dairy farm.

From the above discussion it can be concluded that the present management condition of Rangpur Sadar Thana is traditional and if we can not give Government support on feed cost, marketing, loan and management training, in future there will be no development in private dairy farm sector in Rangpur Sadar Thana.

In order to develop in private dairy farm sector in Rangpur Sadar Thana, some recommendation were suggested:

- (i) Priority should be given to private sector to establish small cattle feed industry by giving financial support by the Govt. The feed industry will sell the feed to the registered dairy farms in a fixed price recommended by the Govt. time to time. Fodder should be produced from cultivable land without affecting cash crops, making better use of non cultivable land (rode side), embankments and land bunds etc.
- (ii) The price of milk should be fixed at a reasonable level and milk-marketing system should be improved through the intervention of the Govt.
- (iii) The Govt. should provide financial assistance to the dairy cow owners. The training program concerning dairy farm management such as housing, feeds and feeding, breeding, disease control and prevention etc. should be initiated by the Directorate of Livestock Services in collaboration with NGO's.
- (iv) Breeding facilities for cows should be made adequate by setting up a few number of AI points in the Rangpur Sadar Thana.

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