

FACTORS RELATED TO SMALL SCALE CATTLE FATTENING IN RURAL AREAS OF BANGLADESH

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Abstract

The experiment was conducted to investigate the systems of management in small scale cattle fattening programs. The data were collected through an interview schedule from 215 respondents of 24 districts in 52 upazilla who were involved in small scale cattle fattening. In this study out of 215 respondents 70.4% were farmers, 11.7% businessman, 9.18% physicians, 2.04% doctors had own land and 8.8% respondents had no own land. About 40.9% respondents selected cattle on the basis of age and 14, 25.6 and 16.7% respondents selected on the basis of breed, age and sex, respectively. Most of the respondents (79.1%) fattened cattle for 3-6 months and rest fattened for a prolonged period. About 90.2% respondents used own capital for cattle fattening and 2.3, 4.2 and 3.3% respondents took bank loan, NGO loan and lending for cattle fattening, respectively. About 31.6% respondents provided existing traditional cattle shed. About 79.5% did not have any training on cattle fattening whereas about 20.5% respondents had taken short training on cattle fattening. About 63.7% respondents used cattle fattening tablets, 27% respondents used urea molasses straw (UMS) and 51% followed conventional feeding. About 72.6% vaccinate the cattle by themselves and about 76.3% took help from veterinary surgeon for treatment of their cattle. About 45% reported shortages of animal feed, 50% reported lack of credit and 95% reported high cost of feed as the major problems of small scale cattle fattening. The results of this study will be useful for farmers and researchers to identify the overall problems and their remedies on feeding, management and marketing related to small scale cattle fattening practices in Bangladesh.

Key words: Cattle fattening, Factors, Beef production, Bangladesh

Introduction

Cattle of Bangladesh are an inseparable and integral part of the agricultural farming and agribusiness system. Beef fattening is an emerging sector for employment and income generation for the rural poor, especially landless, destitute and divorced women. Cattle fattening is an effective tool for poverty alleviation for the rural poor. Cattle fattening for beef production has become an important business of the small farmers in Bangladesh. One of the advantages of the cattle fattening by the rural farmers is that they use locally available cattle feed resources during the Eid festival. In recent years the women farmers of

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Bangladesh have been involved and sustained beef fattening program in rural areas of the country. The information available in the literature on cattle fattening by small farmers in rural areas are few and sporadic (Hossain, 1986; Hossain *et al.*, 1996a; Huq *et al.*, 1997 and Hashem *et al.*, 1999). To develop a sustainable beef cattle production system in Bangladesh which starts at the farmers' level for production and ending at consumers' level for consumption, it is necessary to find out the existing beef cattle production, marketing, processing systems and consumers' perceptions. For this it is prime important to find out the existing cattle fattening system and those factors which are directly related with cattle in Bangladesh. Therefore, the present study was undertaken with the following objectives: (i) to investigate the feeding, management and marketing system of small scale cattle fattening. (ii) to identify the problems related to cattle fattening program and their potential solutions.

Methodology

The present study was conducted to investigate the cattle fattening program practiced by the rural farmers in different districts of Bangladesh. The data was collected through an interview schedule involving 215 respondents of 24 districts in 52 upazilla who were involved in cattle fattening before Eid-ul-Azha (December, 2008). The respondents were selected who rear cattle or bought cattle for fattening. Respondents were randomly chosen from each upazilla. In total 215 respondents were chosen for collecting data to address the objectives. The interview schedule was prepared based on the objectives of the study. In this study 215 respondents were interviewed to find out the socio economic condition of them. The selected characteristics included age, family size, land size and occupation. The age of the respondents ranged from 20 to 70 years. The respondents were grouped into three categories, young age (up to 35 years), middle age (36 to 50 years) and old age (above 50 years). Family size of the respondents ranged from 2 to 13 members. The family sizes of the respondents were classified into three categories. These were small (2-3 members), medium (4-6 members) and large (above 6 members).

Data were collected following the direct interviews and making frequent personal visits. Interviews were normally conducted in the market or in respondent's house during their leisure time. Secondary data were collected from BBS, journals, reports and various published articles. The interview schedule contained the following items of information. General information of the cattle fattening owners, livestock population, management of the fattening cattle, feeds and feeding cattle, indigenous knowledge on rearing cattle and marketing of cattle. The problems and probable solutions related to small scale cattle fattening were also identified.

The collected data were analyzed statistically by using simple statistical tools like average and Per centages as well as Chi-square through SPSS software.

Results and Discussion

Socio-economic background

Number and Per centage distribution of respondents according to their age group, family size and occupation are shown in Table 1.

Table 1. Distribution of respondents according to their age, family size and occupation

Parameters	Categories	Number of respondents	Per cent of total respondents
Age	Young age (up to 35 years)	48	22.3
	Middle age (36 to 50 years)	108	50.2
	Old age (above 50 years)	59	24.4
Family size	Small family (2-3 members)	1	0.5
	Medium family (4-6 members)	85	39.5
	Large family (above 6 members)	129	60.0
Occupation	Farmer	151	70.2
	Business	24	11.2
	Shop keeper	1	0.5
	Teacher	18	8.4
	Service	14	6.5
	Doctor	7	3.3

It is revealed that the majority (50.2%) of the respondents were in the middle age category, 22.3% and 24.4% of the respondents were in the young and old aged, respectively. In case of family size, 60.0% of the respondents belong to large sized family which was also a representative of typical family size of Bangladesh. Out of the 215 respondents 70.2% are involved in agriculture, 11.2% in business, 8.4% in Teacher, 6.5% in service and 3.3% in doctor. The total respondents were classified into six categories.

Number and Per centage distribution of respondents according to the land size are shown in Table 2. Land size was categories on the basis of the respondents' occupation. The major category (70.4%) of the respondents belongs to farmer categories which had own land and 11.7% businessman, 9.18% Teacher, 6.63% service holder and 2.04% doctor had own land. In total 91.2% respondents had own land and 8.8 had no own land. Distribution of respondents according to their own land differs significantly ($P < 0.01$). Almost all the respondents reported that one or more of their family member were involved in beef cattle rearing program. Not a single respondent is reported to hired labour for this purpose. The result of this study differed from Hossain *et al.* (2002) where he found that the average age of the farmers range from 27 to 40 years and they had a minimum land for cultivation, whereas

in this study the average age of the respondents ranged from 20 to 70 years and 91.2% respondents had a minimum land for cultivation.

Table 2. Distribution of respondents according to their land size

Categories (Occupation)	Own land	
	Yes (%)	No (%)
Farmer	138 (70.4)	13 (68.4)
Business	23 (11.7)	1 (5.26)
Shop keeper	0	1 (5.26)
Teacher	18 (9.18)	0
Service	13 (6.63)	1 (5.26)
Doctor	4 (2.04)	3 (15.7)
Total	196	19
Per cent	91.2	8.8

Chi-square test (P<0.01)

Factors associated with cattle fattening

Factors associated with cattle fattening by the respondents are shown in Table 3. About 40.9% respondents selected their cattle on the basis of age and 14, 25.6 and 16.7% respondents selected their cattle on the basis of sex, breed (indigenous or crossbred) and age & sex respectively. Most of the respondents fattened cattle for 3-6 months (79.1%) and rest fattened a prolonged period. About 90.2% respondents used own capital for cattle fattening and 2.3, 4.2 and 3.3% respondents took bank loan, NGO loan and lending for cattle fattening. About 31.6% respondents provided existing traditional cattle shed. About 79.5% respondents did not have any training on cattle fattening whereas about 20.5% respondents had taken short training on cattle fattening. About 63.7% respondents used cattle fattening tablets, 27% respondents fed UMS and 51% respondents used none of these in cattle fattening. About 72.6% respondents used vaccine against infectious disease regularly for their cattle and about 76.3% respondents took help from veterinary surgeon for treatment of their cattle.

Table 3 showed that 90.2% respondents used own capital for small scale cattle fattening and 72.6% respondents used vaccination for fattening programme. The result of this study was in agreement with Begum *et al.* (2007) where they reported that 86.7% farmers used own capital and 83.3% farmers used vaccination for cattle fattening. In this study about 79.1% respondents found that the fattening period of cattle suitable was 3-6 months before Eid-ul-Azha. While working with the farmers in rural areas of Bangladesh, Hossain (1986) and Hossain *et al.* (1996a) reported cattle fattening periods of 4-5 months and 5.7 months, respectively. In this study most of the respondents (68.4%) kept their animals in shed built for a batch, whereas the rest 31.6% respondents kept in existing traditional cattle shed. The result of this study was in agreement with Hossain *et al.* (1996a) where they reported that majority of the farmers kept cattle in separate houses for fattening purposes. Important

factors involved in small scale cattle fattening are capital, feeds and fodder, grazing land, availability of cattle and their marketing, labor and labor management, health care and treatment, training on cattle fattening and location of market found in this study.

Table 3. Factors associated with cattle fattening

Parameters	Categories	Numbers of respondents (n = 215)	Per cent of total respondents (n = 215)
Cattle selection	Age	88	40.9
	Sex	30	14.0
	Breed	55	25.6
	Age & Sex	36	16.7
	Other	6	2.8
Fattening period	<Upto 6 months	170	79.1
	6-12 months	10	4.7
	>Above 12 months	35	16.3
Source of money	Bank loan	5	2.3
	Own capital	194	90.2
	NGO loan	9	4.2
	Lending	7	3.3
Cattle housing	Existing traditional cattle shed	68	31.6
	Shed built for a batch	147	68.4
Training on cattle fattening	Taken	44	20.5
	Non taken	171	79.5
Technology used for fattening	UMS	27	12.6
	Cattle fattening tablets	137	63.7
	No technology at all	51	23.7
Govt. office support	Yes	38	17.7
	No	177	82.3
Vaccination	Regularly	156	72.6
	Irregularly	59	27.4
Treatment of cattle	By veterinary surgeon	164	76.3
	By quack (Unskilled village doctor)	51	23.7

Feeding system in cattle fattening

Both extensive and semi-intensive production systems were practiced reported by the respondents for cattle fattening. Extensive system consisted of grazing their own croplands

after harvesting crops and grazing on roadside grasslands. Semi-intensive system included cut and carry and stall-feeding system. During rainy season (March to August) rice straw, green grass, mustard oil cake, wheat bran, rice polish and molasses on the other hand during dry season (September to February) rice straw, green grass, mustard oil cake, wheat bran, rice polish, molasses, water hyacinth, tree leaves, weeds and kitchen waste were used by the respondents.

Rice straw was the main feed source in the study areas. In all the upazillas under study most of the respondents compulsorily bought rice straw as their cattle feeds. Chopped rice straw was offered mainly during stall-feeding with adequate supply of water. Respondents used ponds, wells, tube-wells as the source of water for their cattle. Traditional feed and water troughs were used for these purposes. Many respondents had knowledge on some of the feeding technologies and high quality fodder cultivation. In the study area the respondents found using Urea Molasses Straw (UMS) technology to fatten their cattle which was only 12.7% of the total respondents under study. None of them was found to cultivate fodder crops for this business owing to lack of own land. Distribution of respondents according to their feed availability for small scale cattle fattening differs significantly ($P < 0.01$). Out of the 215 respondents, 47% respondents said that feeds were available but 53% respondents said that feeds were not available (Table 4).

From this study 53% respondents reported that feeds are not available for small scale cattle fattening. The result of this study was in agreement with Rahman *et al.* (2001) where 70% respondents reported that feeds are not available. One of the advantages of the small scale cattle fattening by the rural respondents is that they used locally available feed resources. No improved feeding technologies, such as urea treated straw and Urea Molasses Block supplements were used by the farmers. Although they were trained but they did not follow this technology because they seemed that it was difficult and time consuming. Indigenous knowledge on cattle feeding like chopping of straw, mixing of green grass with straw, feeding tree leaves etc (Rahman *et al.*, 1998) practiced by the rural farmers of Mymensingh was more or less same to the feeding practices of the present study.

Marketing system of beef cattle

The channels of beef cattle marketing found in the study areas are shown in Figure 1. Before the festival of Eid-ul-Azha, animals are taken to local market for selling, on market days (*Hut*). Buying and selling are completed through bargaining practice. In the process of cattle marketing middlemen and butchers are involved.

It is the pipe line through which a product flows on its way to the consumers which is in agreement with Rashid (1969). He said that marketing channel referred to the sequential arrangement of various marketing intermediaries involved in the movement of products from production to consumers. In this study area intermediaries were involved in marketing cattle.

Table 4. Distribution of respondents according to the availability of feed for cattle fattening

Occupation	Does feeds are available	
	Yes (%)	No (%)
Farmer	67 (66.3)	84 (73.7)
Business	21 (20.8)	3 (2.63)
Shop keeper	1 (0.99)	0
Teacher	8 (7.92)	10 (8.77)
Service	3 (2.97)	11 (9.64)
Doctor	1 (0.99)	6 (5.26)
Total	101	114
Per cent	47.0	53.0

Chi-square test (P<0.01)

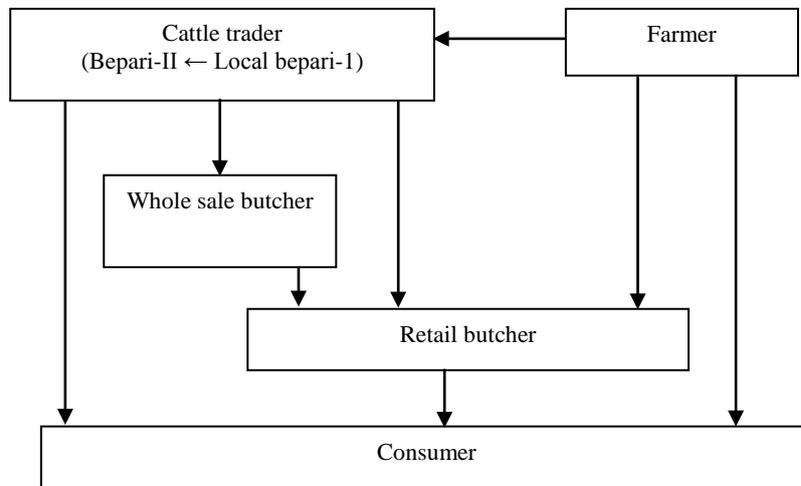


Fig. 1. Marketing channel of beef cattle in Bangladesh

Problems and suggestions on fattening and marketing of cattle

Table 5 shows that 95% respondents mentioned that high price of the cattle feeds is the greatest problem for small scale cattle fattening. The result of this study differed from Ali and Anwar (1987) where they found that shortage of animal feed was the greatest problem of the farmers for rearing cattle. Hashem *et al.* (1999) reported that lack of training, lack of credit facilities, price variation in different markets, disorganized marketing system were the problem for cattle fattening in Bangladesh. They also mentioned that about 98% farmers had the problem of transporting cattle for marketing. The result of this study was more or less similar to Hashem *et al.* (1999).

Table 5. Problems on fattening and marketing of cattle

Problems and Per cent of total respondents (n = 215)	Suggestions and Per cent of total respondents (n = 215)
<p>Fattening aspect:</p> <ol style="list-style-type: none"> 1. High price of feeds (95) 2. Lack of knowledge about fattening (90) 3. Lack of cattle shed (85) 4. Low capital investment (50) 5. Shortage of cattle feed (45) 6. Lack of sufficient green grass supply (40) <p>Marketing aspect:</p> <ol style="list-style-type: none"> 1. Unhygienic condition of market place (95) 2. Lack of place in the market (85) 3. No market rules and regulation (80) 4. Price fluctuation (75) 5. No grading system of cattle (73) 6. Higher transportation cost (71) 7. Unfair price from dalal (65) 	<p>Fattening aspect:</p> <ol style="list-style-type: none"> 1. Lowering the feed cost (85) 2. Need government support (70) 3. Training facilities to the people (70) 4. Providing bank loan facilities (65) <p>Increase production and preservation of cattle feeds & fodder (60)</p> <ol style="list-style-type: none"> 6. Feeding UMS is beneficial (58) 7. Preparation of balanced ration to reduce the cost (50) <p>Marketing aspect:</p> <ol style="list-style-type: none"> 1. Improvement of market facilities (96) 2. Government legislation on market price (91) 3. Price fluctuation should be checked (85) 4. Proper capital management (80)

The management, factors, marketing system, problems and potential solutions of small scale cattle fattening in rural areas of Bangladesh are identified in this study. The results of this study will be useful to farmers and researchers to identify the overall problems and their remedies on feeding, management and marketing related to cattle fattening. So the findings may be act as a prescription of proper management of small scale cattle fattening in rural areas of Bangladesh.

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