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PROSPECTS AND CHALLENGES OF BACKYARD CATTLE PRODUCTION IN THE VILLAGES OF SYLHET DISTRICT IN BANGLADESH

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ABSTRACT

A total of 68 livestock keeping households randomly selected the villages of Sylhet district in Bangladesh to explore knowledge about prospects and challenges of backyard cattle production on November-December, 2015. Backyard cattle were very poor milk producer (1.77±0.13 liter/day/cow) and rice straw, grass, rice gruel, broken rice and broken pulse were the ingredients of feed for the cattle. Majority (67.60%) of the households did not use vaccine and many households used anthelmintic for de-worming their cattle. Most of the respondents did not cultivate grass. Most of the respondents used village breeding bulls (75%) for insemination of their cattle but a few of them did use own breeding bull, though some farmers used artificial insemination system to inseminate their cows. Deshi cattle were popular to the villagers and hopefully agriculture was the main way of living in Sylhet district. Outstanding opportunity of backyard cattle production in the study site were for high demand of milk and milk products, participatory husbandry system and high demand and high price of beef. But some challenges were also there, like: lack of grazing land, high feed cost, vaccination worker not available, lower rate of milk price and lack of capital or loan in the study site for backyard cattle production. Backyard cattle developments initiatives considering the mentioned prospects and challenges might help to increase cattle production at the rural villages in Sylhet district of Bangladesh.

Keywords: *Backyard cattle production, village, prospects, challenges, Bangladesh.*

INTRODUCTION

Livestock, especially cattle among the large ruminant animal plays a very important role as a fundamental ingredient of rice based rural farming system in Bangladesh. Poor and well off rural villagers use to keep Deshi cattle as tradition and profession at their backyard. Livestock is a vital component of four subsectors of agriculture like crops, livestock, fisheries and forestry. This subsector of agriculture is contributing about 3.10% to gross domestic products (GDP) and more than 6% of total foreign exchange earnings (BER, 2015). In Bangladesh per capita availability of meat and milk are 102 gm/day and 120 ml/day respectively, but per head meat and milk requirement are 120 gm/day and 250 ml/day respectively (BER, 2013). There are a fewer exotic pure breeds of cattle in Bangladesh and the population cattle here in Bangladesh are mostly consists of non-descriptive indigenous type along with the crosses between indigenous and pure exotic breed (Afroz *et al.,* 2011). Small and large scale dairy cattle production and beef industry of today is an emerging sector to fight the poverty in Bangladesh. Majority of the households who are engaged in milk production are from the developing countries of the world, it is mentioned that about 150 million households are engaged in this sector (FAO, 2010). According to BBS (2012), cattle, buffalo and goat are considered as dairy animals in Bangladesh and about 90% milk production is coming from cattle. To boost up meat production in Bangladesh, a crossbreeding program has been undertaken using local zebu cows and American Brahman sire (Rashid *et al.,* 2016). According to Bhuiyan (2007), dairy cattle development could be done using both crossbred and indigenous cattle, because, the existing cattle breeding policy of the country permits, two-tier breeding system. Researchers and scientists designed experiment and published their findings in the field of cattle production in Bangladesh, considering the scientific thoughts and available knowledge among the scientists and concern learners and educators but a few of them designed their research work encompassing the livestock keepers at the rural villages. So, this experiment was designed to explore the indigenous thoughts and beliefs in cattle production at the backyard of rural villagers to explore the knowledge like prospects and challenges to design development initiatives for cattle development in Bangladesh through rural backyard cattle keepers.

METHODOLGY

A total of 68 livestock keeping households randomly selected from 20 villages of 3 upazilas like Surma, Guainghat and Sylhet sadar under the district of Sylhet in Bangladesh to explore knowledge about prospects and challenges of backyard cattle production from November 2015 to December 2015. Data like education, occupation of respondents, cattle type reared, husbandry practices, milk production, feed ingredients used, insemination system, prospects and challenges of backyard cattle keeping were collected through direct interviewing method using a pre structured questionnaire. The numbers of observation was unequal and the experimental design was unbalanced factorial in nature. All data were stored and edited on excel spread sheet, then edited data were analyzed for having frequency, mean and percentages using descriptive statistics menu under the Statistical Package for the Social Sciences version 14.0 (SPSS, 2005).

RESULTS

Household characteristics

Maximum cattle keeping farmers (64.70%) in Sylhet region had educational qualification at primary level but interestingly, all respondents were educated.

Livestock and poultry keeping status

About 52 households kept cattle, while all the households kept chicken and 41 households kept duck out of studied 68 households.

Milk production capacity and husbandry practices of backyard cattle

Backyard cattle were very poor milk producer (1.77±0.13 liter/day/cow) and this might be due to poor feeding and husbandry practices or it might be a genetic problem. Rice straw, grass, rice gruel, broken rice and broken pulse were the ingredients of feed for the cattle at the study site.

Majority (67.60%) of the households did not use vaccine for their cattle. However, many households used anthelmintic for de-worming their cattle. Most of the respondents did not cultivate grass.

Insemination system of Deshi cattle

Most of the respondents used village breeding bulls (75.00%) for insemination of their cattle but a few of them did use own breeding bull, though some farmers used artificial insemination system to inseminate their cows. It might be pointed that the natural insemination system was the main way of breeding at rural villages of the studied area.

Main occupation of backyard cattle keeping households was agriculture (64.70%). Most of the farmer (98.60%) reared Deshi cattle.

Table 1: Characteristics of backyard cattle keeping households

Characteristics	Category	Households
Educational qualification	Class five pass and below (Primary level)	44 (64.70%)
	SSC and below	19 (27.90%)
	HSC and below	5 (7.40%)
Occupation	Agriculture	44 (64.70%)
	Housewife	19 (27.90%)
	Business	3 (4.40%)
	Other (Teacher and Daily Laborer)	2 (2.90%)
Cattle type kept	Deshi cattle	67 (98.60%)
	Deshi and Red Sindhi cattle	1 (1.50%)

Table 2: Livestock and poultry kept per household

Species	Mean±SE (number of household rear livestock)
Cattle	4.25±0.40 (52)
Chicken	7.84±0.62 (68)
Duck	4.52±0.30 (41)

Cattle number per household was 4.25±0.40 in the villages of Sylhet district in Bangladesh.

Table 3: Husbandry practices and milk production of backyard cattle

Parameter studied	Category	Household
Vaccination practice	Yes	22 (32.40%)
	No	46 (67.60%)
De-worming practice	Yes	35 (51.50%)
	No	33 (48.50%)
Grass cultivation	Yes	9 (13.20%)
	No	59 (86.80%)
Feed ingredients used to rear backyard cattle		Rice straw
		Grass
		Rice gruel
		Broken Rice
		Broken pulse
Milk production per cow per day		1.77±0.13 liter

Table 5: Insemination system

Insemination type used	Household
Artificial insemination at upazila livestock development centre	14 (20.60%)
Natural Insemination using village breeding bull	51 (75.00%)
Natural Insemination using own breeding bull	3 (4.40%)

Table 6: Prospects of backyard cattle production

Prospects	Households
High demand of milk and milk products	1 (1.50%)
All members in the family can take part in husbandry process	1 (1.50%)
High demand and high price of beef.	3 (4.40%)
High demand of milk and milk products, all members in the family can take part in husbandry process and high demand and high price of beef.	48 (70.60%)
High demand of milk and milk products and all members in the family can take part in husbandry process	8 (11.80%)
All members in the family can take part in husbandry process and High demand and high price of beef.	7 (10.30%)

Table 7: Challenges of backyard cattle production

Challenges	Households
High feed cost in backyard cattle production	7 (10.30%)
Lower rate of milk price	9 (13.20%)
Lack of capital or loan	2 (2.90%)
Lack of grazing land, high feed cost, vaccination worker not available, Lower rate of milk price and Lack of capital	24 (35.30%)
Lack of grazing land, high feed cost, vaccination worker not available and Lower rate of milk price	7 (10.30%)
Lack of grazing land, high feed cost, vaccination worker not available and Lack of capital or loan	8 (11.80%)
Lack of grazing land, high feed cost and vaccination worker not available	4 (5.90%)
Lack of grazing land, high feed cost and Lack of capital or loan	7 (10.30%)

Prospects of backyard cattle production

Bright prospects of backyard cattle production were reported at present study. Most of the respondents (70.60%) were within an opinion that high demand of milk and milk products, participatory husbandry system and high demand and high price of beef pointed the outstanding opportunity of backyard cattle production in the study site were there.

Challenges of backyard cattle production:

About 10.30% farmers reported high feed cost in cattle production while 13.20% farmers found low milk price. Few farmers (11.80%) reported, lack of grazing land, high feed cost, unavailability of vaccination worker and lack of capital or loan were the challenges of backyard cattle production.

However, many of the respondents (35.50%) opined that lack of grazing land, high feed cost, vaccination worker not available, lower rate of milk price and lack of capital or loan were the major challenges in backyard cattle production in the villages of Sylhet district in Bangladesh.

DISCUSSIONS

Household characteristics

Maximum cattle keeping farmers (64.70%) in Sylhet region had educational qualification at primary level but interestingly, all respondents were educated. Similarly, Islam *et al.,* (2016) also found all of the respondents educated in a study in the villages of Chapainawabganj district in Bangladesh. Main occupation of backyard cattle keeping households was agriculture (64.70%). Most of the farmer (98.60%) reared Deshi cattle. In a study under small scale cattle fattening program Ahmed *et al.* (2010) found 70.2% respondents were farmer. The above discussion might be indicative that till the date Deshi cattle were popular to the villagers and hopefully agriculture was the main way of living in Sylhet district.

Livestock and poultry keeping status

About 52 households kept cattle, while all the households kept chicken and 41 households kept duck out of studied 68 households. Cattle number per household was 4.25±0.40 in the villages of Sylhet district in Bangladesh. Cattle number per household in the present study was higher than Islam *et al.,* (2016) and Islam and Oliuzzaman (1992) who found 2.06±0.21 and 3.21 cattle per household, respectively in the villages of Chapainawabganj and Mymensingh districts in Bangladesh. The study might be suggestive that more numbers of household were interested to keep cattle in the study area.

Milk production capacity and husbandry practices of backyard cattle

Backyard cattle were very poor milk producer (1.77±0.13 liter/day/cow) and this might be due to poor feeding and husbandry practices or it might be a genetic problem. Rice straw, grass, rice gruel, broken rice and broken pulse were the ingredients of feed for the cattle at the study site. Majority (67.60%) of the households did not use vaccine for their cattle and the result was similar to Rahman and Rana (2014) who, reported that, 68% farmers in Sylhet, faridpur, Pirozpur and Kishorgonj region did not use vaccine. However, many households used anthelmintic for de-worming their cattle. Most of the respondents did not cultivate grass and this finding was supported by Islam *et*

al., (2016) who found, most of the farmers (73.80%) did not cultivate grass to feed their cattle.

Insemination system of Deshi cattle

Most of the respondents used village breeding bulls (75.00%) for insemination of their cattle but a few of them did use own breeding bull, though some farmers used artificial insemination system to inseminate their cows. Similarly, Quddus and Amin (2010) found, 85.1% farmer used village breeding bull for inseminating their cows. It might be pointed that the natural insemination system was the main way of breeding at rural villages of the studied area.

Prospects of backyard cattle production

Bright prospects of backyard cattle production were reported at present study. Most of the respondents (70.60%) were within an opinion that high demand of milk and milk products, participatory husbandry system and high demand and high price of beef pointed the outstanding opportunity of backyard cattle production in the study site were there. Likewise Islam *et al.,* (2016) found most of the respondents (36.40%) reported that high price of beef and milk products, and easy and participatory husbandry practices made cattle rearing a lucrative small enterprise at homestead level in the villages of Chapainawabgonj district in Bangladesh.

Challenges of backyard cattle production

About 10.30% farmers reported high feed cost in cattle production while 13.20% farmers found low milk price. Few farmers (11.80%) reported, lack of grazing land, high feed cost, unavailability of vaccination worker and lack of capital or loan were the challenges of backyard cattle production. However, many of the respondents (35.50%) opined that lack of grazing land, high feed cost, vaccination worker not available, lower rate of milk price and lack of capital or loan were the major challenges in backyard cattle production in the villages of Sylhet district in Bangladesh. Similarly, Islam *et al.,* (2016) observed that, many of the respondents (22.40%) were reported that main constraints of cattle rearing at homestead were lack of grass land, high feed cost, vaccination worker not available and lack of reasonable price of raw milk.

CONCLUSION

Deshi cattle were popular to the villagers and hopefully agriculture was the main way of living in Sylhet district. More numbers of household were interested to keep cattle. Natural insemination system was the main way of breeding at rural villages of the studied area. Outstanding opportunity of backyard cattle production in the study site were for high demand of milk and milk products, participatory husbandry system and high demand and high price of beef. But some challenges were also there, like: lack of grazing land, high feed cost, vaccination worker not available, lower rate of milk price and lack of capital or loan in the study site for backyard cattle production.

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