PRESENT STATUS OF BUFFALO FARMING IN BANSKHALI UPAZILA OF CHATTOGRAM

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PRESENT STATUS OF BUFFALO FARMING IN BANSKHALI UPAZILA OF CHATTOGRAM

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The Author

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Present status of buffalo in Banskhali Upazila of Chattogram

Abstract

The study was conducted to know the present status of buffalo in rural areas (Saral, Khankhanabad, Raychota) of Chattogram district in Bangladesh. Data were collected randomly from 50 buffalo owners through direct interviews. A total number of 485 buffalos were included in the study where male were 263 and female were 222. The results indicated that about 54.33% are male and 45.77% are female. Average milk yield is 3.45 L per day. Highest body condition score(BCS) of the study is 4 (good) included 48% of buffalo whereas lowest body condition score is 2 (poor) included only 6% of the population. 65.31% animal's insemination is done by Artificial Insemination rest 34.69% are done by Natural insemination. Here most of the breed are river buffalo (68%) and swamp buffalo are 32%. About 64% buffalo rear at Saral Union and 16% at Khankhanabad, 20% at Raychota Union respectively. Most of the farm owners occupied medium scale farming (82%) rest are small scale (10%), large scale (8%). Here about 46% of the owner are secondary educated and primary passed are 26%, intermediate 16% rest of the owner are graduated. According to the study about 70% of buffalo rear in semi-intensive housing and 30% occupy extensive housing system.

Keywords: Artificial insemination, BCS, Semi-intensive, Extensive.

Introduction

Livestock is a crucial and important part of the rural economy of Bangladesh, an agricultural nation in South Asia where the economy is based primarily on agriculture. There are 1.457 million (Faruque et al., 1990) buffalo in the country overall, with roughly 40% of them living along the shore (Huque et al., 2012). Most of the populations are reverine type with the exception of some swamp type found in Bangladesh.

In Bangladesh, buffalo used primarily for draught purpose or dairy and meat production is a secondary option. There is no recognized breed of water buffaloes in Bangladesh and are mainly indigenous non descriptive types. Though total milk production of Bangladesh is about 6.09 Mt in 2014 out of which about 3-4% is produced by the buffalo in spite of the number buffalo growth rate are increasing during last 10 years (Faruque et al., 1990). Between 2005 and 2010, the consumption of milk and meat increased by 4.0 and 12.7%, respectively. While this was happening, rice consumption fell by 5.0%. Due to its white colour, high fat content, and flavour, buffalo milk is becoming increasingly popular. Consequently, there is a high demand for buffalo milk in the country but milk yield per dairy buffalo is very low which is 600-1000/L 250-270 days lactation period (Ahlawat et al., 2006). It shows that Bangladesh has great opportunity to produce buffalo milk because of its high consumer preference and demand. However, the sector is not poetically utilized yet due to many constraints.

In Bangladesh, buffalo has never been addressed and always neglected species despite their important role in the national economy (Ahlawat et al., 2006). According to the national health strategy an adult people need 250 mL milk and 120 g of meat every day. However, presently the availability is only 43.44 and 67.17%, respectively (Huque et al., 2012). Under these circumstances, to meet up the deficiency of milk and meat, the government and private organizations should put efforts together to enhance the present milk and meat production status. Recently, the demand for animal derived products such as milk, meat, butter, cheese, ice-cream, baby foods, locally made sweets are increasing which are heavily dependent on milk plus sugar. Although the buffalo is a crucial component of livestock in Bangladesh as well as in SAARC nations, there have been no

published studies that have examined the situation of buffalo production in SAARC nations to date. Through different scientific initiatives, Bangladesh and other South Asian nations are beginning to improve the performance of the buffalo breed in terms of reproduction and productivity. In order to develop buffalo production in Bangladesh as well as in SAARC countries, it would be worthy to know details about the scenario of buffalo production and reproduction, such as buffalo breeds, their population, their inheritance characteristics, production and reproduction performances, contribution of buffalo to milk and meat production, contribution of buffalo to national economy etc.

Objectives

1. To know the present scenario of buffalo farming at Banskhali , Chattogram.
2. To know buffalo farm management in rural area in Banskhali.

Materials and Methods

Study area

The farms were selected at Banskhali Upazila in Chattogram district of Bangladesh to complete the study. Selected area are Saral Union, Khankhanabad and Raychota union under Banskhali Upazila.

Sample Size

A total number of 50 farm selected randomly that are included 485 buffalos at Banskhali Upazila due to short study period where each farm has minimum 4 in number and maximum 16 buffalos.

Data Collection Period

The study was conducted using an appropriate pre designed Questionnaire during the period from 16th April to 8th June.

Data Collection

Interviews that are taken face to face with the farm owners were carried out using a questionnaire with multiple choice and semi closed questions to collect animal related indicators relevant to present scenario of buffalo. The interview coverd on following data…..

- Personal information of farm owner.
- Number of buffalo in each category.
- Breeding system.
- Housing system.
- Milk yield per day.
- Body condition of the animal.

Results

Location of the farm

Table 1. Frequency of the study area

Location	Frequency	Percent
Khankhanabad	8	16
Raychota	10	20
Saral	32	64
Total	50	100

Area that are covered for the study are Saral, Khankhanabad and Raychota under Banskhali Upazila in Chattogram district. Above result shows that the hightest number of buffalos rear in Saral union and lowest number of buffalos rear in Khankhanabad .It indicates that 64% in Saral, 20% in Raychota and 16% buffalos in Khankhanabad are reared.

Occupation

Table 2. Percentage of Occupation

Occupation	Frequency	Percent
Business	17	34
Farmer	14	28
Housewife	7	14
Shopkeeper	7	14
Teacher	5	10
Total	50	100

The above table shows us that about 34% of Businessman do buffalo farming where only 10% of teacher rear buffalo. Aaccording to the result buffalo rear by Farmer, Housewife, Shopkeeper are 28%, 14%, 14% respectively.

Education of farm owner

Table 3. Educational status of farm owner

Education	Frequency	Percent
Graduate	6	12
Intermediate	8	16
Secondary	23	46
Primary	13	26
Total	50	100

The study shows us maximum 46% of the people are seconday educated person whereas only 12% of the people are graduated. About 26% and 16% people of the selected area passed primary and intermediet respectively.

Breed of buffalo

Table 4. Percentage of buffalo breed

Breed	Frequency	Percent
River Buffalo	34	68
Swamp Buffalo	16	32
Total	50	100

The selected area having only two types buffalo breed where most of the breed are river type buffalo breed (68%) whereas 32% are swamp type buffalos. There are no mixed breed are reared in the study area.

Breeding system

Table 5. Percentage of breeding system of buffalos

Breeding System	Frequency	Percent
AI	32	65.31
Natural	17	34.69
Total	49	100

Breeding are performed by Artificial insemination or naturally. The study shows us that 65.31% of the breeding are done by AI and rest 34.69% of breeding of buffalos are done by natural insemination.

Body condition score (BCS)

Table 6. Frequency and percentage of buffalos basis on BCS

BCS	Frequency	Percent
2	3	6
3	23	46
4	24	48
Total	50	100

Above table indicates about 48% of the buffalos having body condition score is 4 and nearly 46% buffalos having BCS is 3. Only 6% of the selected population where BCS is just 2.

Housing System

Table 7. Percentage of various housing system

Housing System	Frequency	Percent
Extensive	15	30
Semi Intensive	35	70
Total	50	100

Buffalos are mainly rear on extensive and semi-intensive housing system. The selected population for the study having 70% of the buffalos rear on semi-intensive housing system where 30% of the population rear on extensive housing system. There are no buffalos that are reared on intensive housing system.

Daily milk yield

Table 8. Average daily milk yield per cow

Variable	Observation	Mean	Std. Dev.	Min	Max
Milk yield	50	3.45	0.777555	2	5

The study coverd 50 farm where average milk yield per day 5.45 Liter. Here, maximum milk yield per day 5 Liter where minimum milk yield on 2 liter. Standard Deviation of milk yield is about 0.78. The study area where daily one time milking is done.

Farm size

Table 9. Frequency and percentage of various scale farming

Farm	Frequency	Percent
Large	4	8.00
Medium	41	82.00
Small	5	10.00
Total	50	100.00

The study shows us that most of the farm owner do medium scale farming. About 82% of the farm are medium scale. Only 8% of the farm are large scale where 10% of the farm small scale farming.

Table 10. Average Farm size

Variable	Observation	Mean	Std. Dev.	Min	Max
Farm size	50	9.7	3.357903	4	16

Here, observed farm are 50 in number. Maximum number of buffalos are 16 where lowest number is 4. Average 10 buffalos rear in the selected area. Standard Deviation of the farm size is about 3.36.

Male and Female ratio

Table 11. Percentage of male and female ratio

Category	Frequency	Parcent
Male	263	54.23
Female	222	45.77
Total	485	100

Here, study population are 485 in number where 263 are male and 222 are female buffalos. It shows that 54.23% are male and rest 45.77% are female in selected population. It indicates nearly most of the farm rear buffalos for both and meat and dairy purpose.

Milk yield of River Buffalo

Table 12. Average daily milk yield of river buffalo

Variable	Observation	Mean	Std. Dev.	Min	Max
Milk yield	34	3.45588	0.8199007	2	5

The study contains 34 farm where rear only River buffalos. Average milk yield by river buffalos is 3.46 liter where milk yield per day highest is 5 liter lowest yield per day is 2 liter. Here standard deviation of milk yield is about 0.82.

Milk yield of Swamp Buffalo

Table 13. Average daily milk of swamp buffalo

Variable	Observation	Mean	Std. Dev.	Min	Max
Milk yield	16	3.4375	0.7041543	2	5

The study included 16 farm where rear only Swamp buffalos. Here maximum milk production is 5 liter per day and minimum milk yield is 2 liter. Average milk production per day is about 3.44 liter. Standard deviation 0f milk yield in case of swamp buffalo is 0.704. It shows us both river and swamp buffalo yield nearly same.

Discussion

Buffalo farming is not popular in Bangladesh as like as cattle, poultry or goat farming. Besides, buffalo farming in rural area is so old that there is no proper farm management protocol. According to previous study buffalo population per farm is 19 (S Islam et al., 2017) but in this study the selected area having average population is about 10 in number. Average milk yield per day was 3.32 L (MA Siddiki et al., 2015) which is almost similar in this study. Breeding system mainly occurs either natural or Artificial insemination. According to previous study approximately (95.7%) more prominent practice than AI (M Samad, 2018) which is different to this study where AI Percentage is 65.31 and natural breeding percentage is about 34.69. This due to introduction of AI in the strudy area. River buffalo is more common than swamp type buffalo. In previous study it was approximately 70% of the world buffalo population are river type buffalo (FAOSTAT, 2007). In this study about 68% of the study population are river type buffalo and rest is swamp type buffalo. This is almost similar to the previous study. According to prtevious study 100% of the buffalo farm owner are educated but no one found who completed graduation (MR.Amin et al., 2015). With the comparison of the present study all buffalo farm owner are educated and about 12% of the owner completed graduation. This is quite similar to the previous study of buffalo farming. In previous scenario of buffalo it is seen that almost 81% of buffalo population are adult. Among this percentage about 58% are male and and 23% of the population are female (BBS, 2008). According to the present scenario 54.23% are male whereas 45.77% are female. The percentage is quite dissimilar to the previous study. This may be happened due to purpose of buffalo farming. Milk is quite different both in river and swamp type buffalo. It was seen in previous study that average milk yield of swamp buffalo ranged from 1.0 to 1.5 L (Wejaratwimon et al., 1979) and milk yield of river type buffalo was 1.5 L to 4 L (FAO, 2007). But in this study milk production by swamp type buffalo per day is on average 3.4 liter and milk yield by river type buffalo is on average 3.6 liter. According to this study almost 70% of the buffalo farming rear on semi-intensive housing system whereas only 30% of the population rear on extensive housing system. The selected study area having mainly medium scale buffalo farming. The study area are Saral, Khankhanabad and Raychota under Banskhali in Chattogram district.

Conclusion

This study based on present stutus of buffalos in rural area included Saral, Khankhanabad and Raychota union under Banskhali Upazila in Chattogram district of Bangladesh. The study analized the data on farm owner status of the locality, breed, breeding system, housing system, milk production, farm size, body condition score etc. The study shows that maximum owners do medium scale farming. The farmers aren't well educated. Their farming system is not satisfactory for the farmers. They have a huge gap of knowledge about buffalo farming. Their farming system is also not profitable. Milk production of the study on average 3.45 L which is not significant for a profitable buffalo farming. Here, breeding system included about 65% is artificial where rest 35% of breeding is natural insemination. But this work was a preliminary study so it is obvious that comprehensive research is needed to further development of farming protocol. Besides training programmes, latest technology of buffalo farming should be familiarized to the farm owners. More awareness should create among farm owners.

Limitations

- Sometimes farm owners aren’t co-operative to collect the required information.
- Time availability for conducting the study is not sufficient.
- Lower study sample.

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Biography

I, myself Md. Mahim, the author of this production report would like to introduce as an Intern. DR of Chittagong Veterinary and Animal Sciences University (CVASU), has obtained four years academic career in Faculty of Veterinary Medicine and attended several clinical and Production training programs on Veterinary Medicine in Bangladesh. As a student of Veterinary science, the main mission and vision of my life is to do something better and creative job by dint of my academic knowledge and field experiences, for the development of livestock as well as development of the economic condition of our country. I strongly assure that I have done all the works in authentic way and furnished here, in this report information given here which are collected from different books, journal and websites.