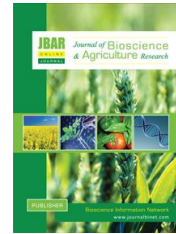


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Goat husbandry practices in Southern region of Bangladesh

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ABSTRACT

Data were collected from a total of 41 goat farmers in 26 different villages of Barguna and Patuakhali district of Bangladesh to explore knowledge about the goat husbandry practices. Most of the farmers reared goats in semi-intensive system, took winter care and took bath of their goats in the summer. Main feed item of goats were green grass, tree leaves and main water source was pond though some farmers supplied concentrate to their goats. However, most of goat farmers used vaccine against PPR disease and de-wormed their goats. Majority of goat keepers used village buck to inseminate their does and most of the farmers gave service charge to the buck keepers while most of them did not keep bucks for insemination. Moreover, the study reported that the litter size increased with the increase of parity number of goats.

Key words: Goat husbandry, rearing, feeding, breeding system and southern Bangladesh

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I. Introduction

Goat is a multi-functional animal and contributes greatly to the rural economy of Bangladesh. It plays an important role in the livelihood of a large proportion of small farmers particularly women, landless and marginal farmers inhabiting geographically isolated areas, who seldom have other means of survival (Choudhury et al., 2012). Bangladesh has the second highest population of goat among the Asiatic countries which accounts for about 60.60 million heads representing 57% of total ruminant livestock (FAOSTAT, 2009). Goat significantly contributes to the national GDP through the production of 130000 MT of meat (25% total meat), 1312000 of MT milk and 391000 of MT Skin each year (FAO, 2003). Goat population has increased at the rate of 10% per annum with a simultaneous reduction (0.21% per annum) of cattle numbers from 1970 to 2003 (FAO, 1970 and 2003). Goat plays an important role in livelihoods of smallholder farmers in Bangladesh as they serve as assets that can be easily liquidated to provide cash in times of need (Akhter et al., 2006). Goats are deeply embedded in almost all over Bangladeshi culture and are considered as true friends to the rural poor. The old saying that “the goat is the poor man’s cow” still holds true in the majority of developing countries. Goats play a unique role in supporting some of the poorest people in Bangladesh and can play a powerful role in lifting them out of poverty towards prosperity (Amin, 2000). With the growing demand for livestock

products, goat husbandry is becoming an attractive activity. Goat rearing being the main means of survival for many women in remote villages, there is a need to develop a scientific method of goat rearing without causing adverse impact on the environment (Choudhury et al., 2012). Among the middle and the upper middle classes people, goat rearing was most popular activity but it was most unpopular among the two lowest classes (Sato, 2011). There is a strong influence of environmental factors on the body weight of kids at birth and weaning. It is also noted that heritability for body weight and average daily gain of kids is low and variable (Petrovic et al., 2012). Moreover, good husbandry practices are the prerequisite of better exploration of genetic merit. Therefore, to explore knowledge about the goat husbandry practices in the Southern region of Bangladesh, this research work was designed and conducted.

II. Methodology

This questionnaire survey was conducted from June to July 2014. The study areas were Amtoli and Patharghata upazila under Barguna district and Kolapara upazila under Patuakhali district of Bangladesh where a large number of goats are raised. Data were collected through direct randomly interviewing method using pre-structured questionnaire. Survey sheet contain information like, rearing system, feeding system, feed type, watering system, de-worming, vaccination, occurrence of common diseases, source of buck, mating system, grazing, sex preference, family member participation in goat rearing, purpose of goat raising etc. The statistical design of the study was unbalanced factorial in nature because the numbers of observations in different traits were unequal. Obtained information was loaded and stored on to the Excel spread sheet. Then data were analyzed for having frequency and percentage through descriptive statistics menu under the Statistical Package for the Social Sciences version 14.0 (SPSS, 2005).

III. Result and Discussion

Rearing and feeding systems

Most of the farmers (80.5%) reared goats in semi-intensive system but few farmers (7.3%) used confinement system of rearing while 12.2% farmers used free range system. Pre weaning gain, weaning weight, final live weight at post-partum heat of does and milk production were higher in semi-intensive production (IP) than scavenging production (SP) while average litter size and kid mortality were higher in SP than IP (Islam et al., 2009). About 75.6% farmers kept goat at night in the goat house and 78% goat raisers took winter care to manage cold stress. All (100%) goat farmers took bath of their goats in the summer season but only 4.9% farmers took bath of their goats daily in the summer season. Pattamarakha et al. (1997) reported that most of the farmers did not have shelters for their goats.

Feed used by 61%, 19.5% and 19.5% goat farmers were green grass, green grass and straw; and green grass and concentrate respectively. During keeping inside house 65.9% of goat rearing farmers supplied to their goats green grass while 39% farmers supplied concentrate feed to their goats. Sources of drinking water were (46.3%) tube well, (51.2%) pond and (2.4%) supply water. Farmers supplied (46.3%) green tree leaves, (19.5%) green grass and (34.1%) green tree leaves and green grass to their goats during rainy season but 29.3% farmers grazed their goats during rain. Few farmers used improved pastures or concentrates to enhance the nutrition of their goats (Pattamarakha et al., 1997). It could be concluded that main feed item of goats were green grass, tree leaves and main water source was pond though some farmers supplied concentrate to their goats.

Medicine and vaccine management

Figure 01 showed that goats in the Southern region of Bangladesh were affected by (32%) Peste des petits ruminants (PPR), (17%) Bloat (accumulation of gas in rumen), Bloat, Anthrax (It is caused by *Bacillus anthracis*, a spore-forming bacteria) and PPR (27%); Bloat and PPR (19%). While figure 02 indicated that about 80.50% goat farmers vaccinated and 97.60% farmers de-wormed their goats. Most of (49%) farmers used vaccine against PPR and some farmers (25%) vaccinated goats against

Anthrax and PPR, and some of them even did not know the name of vaccine (Figure 01). According to Pattamarakha et al. (1997) most of the farmers did not apply proper health care for their goats in Southern region of Thailand.

Table 01. Rearing system and management of goat in the Southern region

Traits	Category	Farmers (%)
Rearing system	Confinement	3 (7.3%)
	Semi intensive	33 (80.5%)
	Free range	5 (12.2%)
Night shelter	Goat house	31 (75.6%)
	Cattle house	2 (4.9%)
	House holder house veranda	8 (19.5%)
Winter care to manage cold stress	Yes	32 (78%)
	No	9 (22%)
Summer season bath	Yes	41 (100%)
	No	0 (0%)
Summer season bath type	Daily	2 (4.9%)
	Not daily	39 (95.1%)
Winter season bath	Yes	18 (43.9%)
	No	23 (56.1%)

Table 02. Feeding system and management of goat in the Southern region

Traits	Category	Farmers (%)
Feed	Green grass	25 (61%)
	Green grass and straw	08 (19.5%)
	Green grass and concentrate	08 (19.5%)
Green grass supply during keeping inside the house	Yes	27 (65.9%)
	No	14 (34.1%)
Feed concentrate	Yes	16 (39%)
	No	25 (61%)
Particular feeder for concentrate feeding	Yes	13 (31.7%)
	No	28 (67.7%)
Watering daily	Yes	37 (90.2%)
	No	04 (9.8%)
Watering frequency per day	Once	23 (56.1%)
	Frequently	18 (43.9%)
Drinking water source	Tube well	19 (46.3%)
	Pond	21 (51.2%)
	Supply water	1(2.4%)
Rainy season feeding	Green tree leaves	19 (46.3%)
	Green grass	08 (19.5%)
	Both	14 (34.1%)
Grazing in rain	Yes	12 (29.3%)
	No	29 (70.7%)

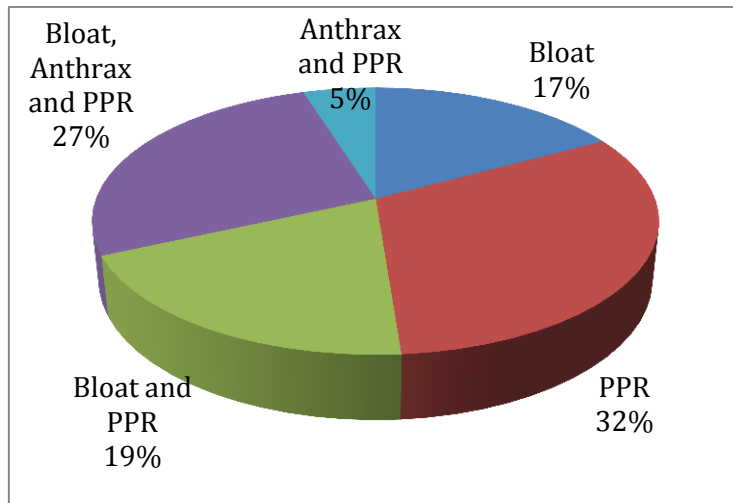


Figure 01. Diseases of goat in survey areas

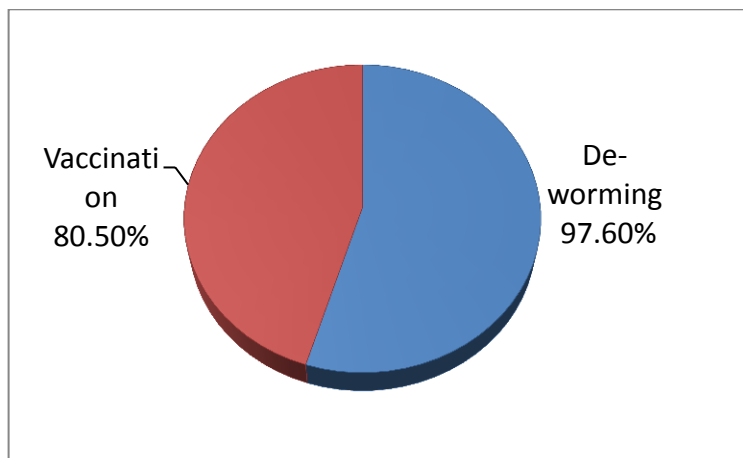


Figure 02. Vaccination and de-worming practiced by goat farmers

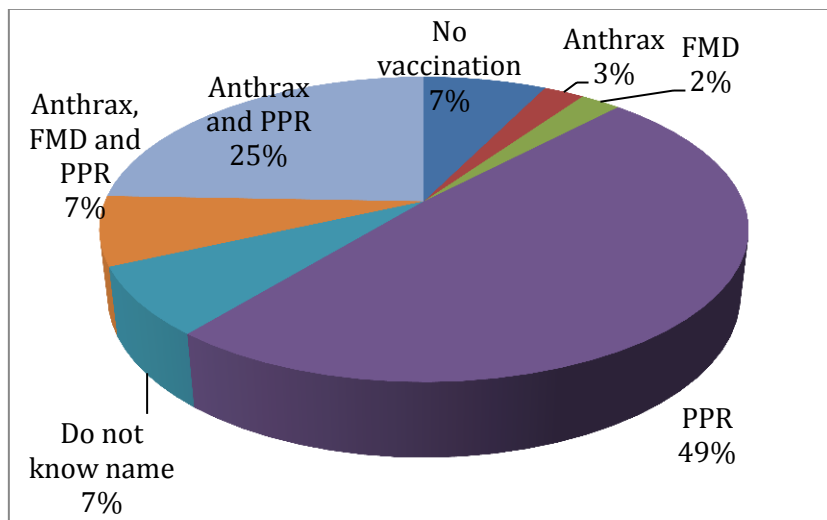
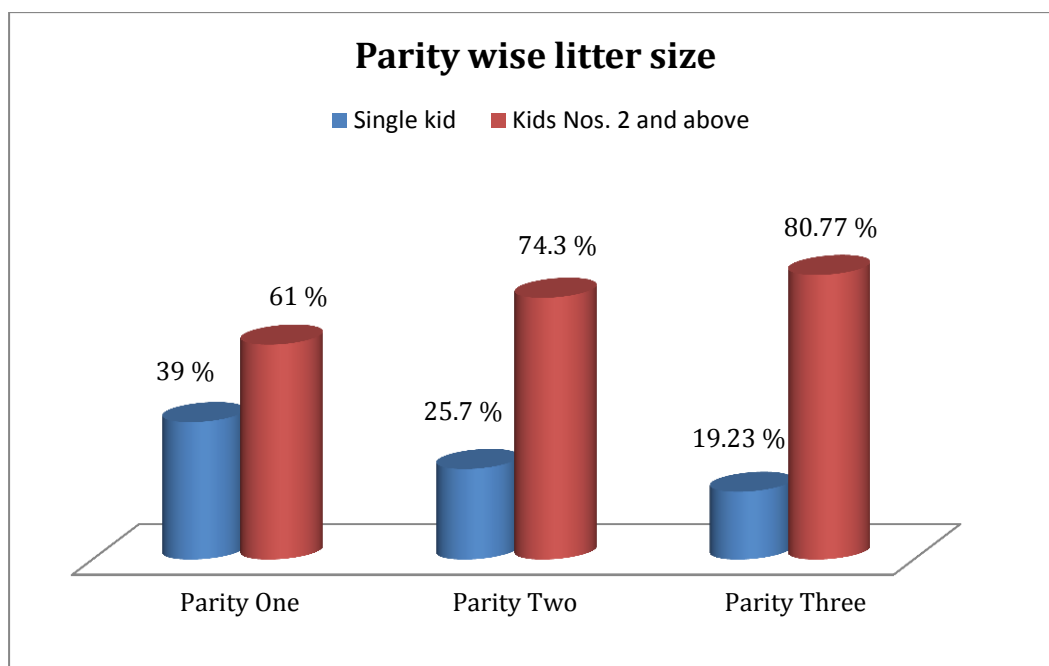


Figure 03. Vaccination against diseases of goat

Table 03. Breeding system of goat in the Southern region

Traits	Category	Farmers (%)
Buck keeping	Yes	08 (19.5%)
	No	33 (80.5%)
Service done by	Village buck	29 (70.7%)
	Farmers buck	08 (19.5%)
	Own buck	03 (7.3%)
	Artificial Insemination	01 (2.4%)
Service fee of village buck	Service charge received	30 (73.2%)
	No service charge taken	11 (26.8%)

**Figure 04. Parity wise litter size****Table 04. Contribution and purpose of goat rearing in the Southern region**

Traits	Category	Farmers (%)
House hold head's contribution in goat rearing	Yes	38 (92.7%)
	No	03 (7.3%)
Ownership	House hold head	05 (12.2%)
	Spouse	29 (70.7%)
	Daughter in law	07 (17.1%)
Purpose of goat keeping	Sell and earning money	41 (100%)
	Sacrifice	0 (0%)
	Consumption	0 (0%)
Sex preference of kids	Male	02 (4.9%)
	Female	11 (26.8%)
	Both	28 (68.3%)

IV. Conclusion

Most of the farmers reared goats in semi-intensive system, took winter care and took bath of their goats in the summer. Main feed item of goats were green grass, tree leaves and main water source was pond though some farmers supplied concentrate to their goats. However, most of goat farmers used

vaccine against PPR and de-wormed their goats. Majority of goat keepers used village buck to inseminate their does and most of the farmers gave service charge to the buck keepers while most of them did not keep bucks for insemination. Litter size increased with the increase of parity number of goats. Short practical training on goat husbandry and importance of breeding buck keeping at household level might help to increase goat productivity and income of goat keepers. These findings might be helpful for community goat development program at village level.

Acknowledgements

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V. Reference

- [1]. Akhter, S., Husain, S. S., Chowdhury, S. A., Munzur, M. M. & Dev, G. K. (2006). Estimation of variance components and prediction of breeding value for some economically important traits of Black Bengal goat. *Ban. J. Anim. Sci.*, 35, 20-26.
- [2]. Amin, M. R. (2000). Genetic improvement of production traits in selective breeding and crossbreeding. A Ph.D. Thesis. Dept. of Anim. Breeding and Genetics, Bangladesh Agricultural University, Mymensingh.
- [3]. Choudhury, M. P., Sarker S. C., Islam, F., Ali, A., Bhuiyan, A. K. F. H., Ibrahim, M. N. M. & Okeyo, A. M. (2012). Morphometry and performance of black Bengal goats at the rural community level in Bangladesh. *Bang. J. Anim. Sci.*, 41(2), 83-89.
- [4]. FAO (1970). FAO Production Year Book. 1970. Food and Agriculture Organization of United Nations, Rome, Italy.
- [5]. FAO (2003). FAO Production Year Book. 2003. Food and Agriculture Organization of United Nations, Rome, Italy.
- [6]. FAOSTAT (2009). <http://faostat3.fao.org/home/E>.
- [7]. Islam, M. R., Amin, M. R., Kabir, A. K. M. A. & Ahmed, M. U. (2009). Comparative study between semi-intensive and scavenging production system on the performances of Black Bengal goat. *J. Bangladesh Agril. Univ.*, 7(1), 79-86.
- [8]. Khandoker, M. A. M. Y., Apu, A. S., Husain, S. S. & Notter, D. R. (2011). A baseline survey on the availability of Black Bengal breeding bucks in different districts of Bangladesh. *J. Bangladesh Agril. Univ.*, 9(1), 91-96.
- [9]. Pattamarakha, K., Tanapanyarachwong, J. & Saithanoo, S. (1997). The use of recommended goat husbandry practices by farmers in Southern Thailand. *AJAS*, 10(6), 587-592.
- [10]. Petrovic, V. C., Ilic, Z., Muslic, D. R., Petrovic, M. P., Petrovic, M. M., Tomic, Z. & Marnikov. G. (2012). Analysis of environmental and genetic factors in growth characteristics of Balkan goat. *Biotechnology in Animal Husbandry*, 28(2), 275-28.
- [11]. Rahman, A. H. M. S., Khandoker, M. A. M. Y., Husain, S. S., Apu, A. S., Mondal, A. & Notter, D. R. (2008). Morphometric characterization and relationship of body weight with linear body measurements in Black Bengal buck. *Bang. J. Anim. Sci.*, 37(2), 8-16.
- [12]. Sato, K. (2011). Goat rearing practices and the limited effects of the SHG program in India: evidence from a Tamil Nadu village. *Southeast Asian Studies*, 49 (1).
- [13]. SPSS (2005). Windows for version-14. Release on 27.10.2005. (Microsoft Corp. 1998). Trends SPSS Inc., Michigan Avenue, Chicago, IL. 19-182.