

Goat management practices at Kabirhat Upazilla in the District of Noakhali

Abstract

Through a field study, the work was designed to look into the current state and future prospects of organic goat production in Bangladesh's Noakhali district. Data were gathered through an interview schedule personally from 37 goat farmers in 3 villages of Kabirhat upazilla who were involved in goat rearing. A greater portion of the farmers nursed their goats in a semi-intensive (49%) and free-range system (46%) took winter care (94.59%) and took a bath (86.45%) their goats in the summer. The premier feed items for goats were green grass and straw (54.04%), tree leaves and the main water source was a tube well (67.57%). Besides few of the farmers provided concentrate (24.32%) to their goats. However, most of the farmers used vaccines against PPR disease (60%) and de-wormed (78.38%) their goats. The majority of goat keepers (67.57%) used village bucks to inseminate their does and most of them gave charge for this work. In many farming systems in Bangladesh, raising goats is an essential component. The goat is likely the sole animal that is raised in Bangladesh for its meat, skins, milk, and dung. It offers one of the primary sources of revenue for Bangladeshi farmers. Goats are raised in Bangladesh using a traditional approach that involves the usage of various inorganic materials by the farmers. To meet the country's need for animal protein as well as to produce high-quality goat meat, Bangladesh has a lot of potential for or goat production. Since goat farming is a well-established, extremely lucrative business concept, demand for this enterprise is rising quickly in Bangladesh. A considerable and growing need for extra animal protein diets is being generated by the growing human population. Finding out the current situation and researching the potential for goat production in Bangladesh are of utmost importance in this regard.

Key-words: Goat rearing, feeding system, breeding system, vaccination status, breeding status and Southern part of Bangladesh.

Chapter I: Introduction

Livestock is an unabated part of agriculture and makes many facets. Livestock is a crucial part of agriculture and contributes in many different ways to the expansion and improvement of Bangladesh's agricultural industries. Besides, it contributes to the growth and development of the agricultural sectors of Bangladesh. The nation's health and prosperity are greatly enhanced by livestock. It offers the main dietary animal protein meat and milk to improve the state of the nation's health. The main livestock resources of Bangladesh are cattle, sheep, goats, buffalo and poultry. In Bangladesh, goats are recognized as a close and essential component of the rural farming system. Goats are Bangladeshi farmers' second-most important livestock. The goat is a multi-purpose animal producing meat, milk, hide, fiber and manure. In hilly areas, goats are also used for hauling light loads. Goats have very few demands for housing and management. They hardly need separate housing and happily share their homes with their owners. In the point of geographically, goats are highly adapted to hot climates. Goats are more tolerant to hot climates than other farm animals. They suffer from fewer ailments than other large animals. They have got increased digestibility of crude fiber. They are resistant to diseases and have less disease prevalence. They are highly prolific, short gestation period and low age of puberty. Goat farming under stall-fed is profitable. With 56.08 million goats, Bangladesh has the fifth-highest goat population among the Asian nations. About 26.07 million (DLS, 2020-21) goat heads are distributed throughout the country. The Department of Livestock Services reported that the contribution of livestock to the Gross Domestic Product (GDP) of Bangladesh is 1.44%, with the GDP growth rate of livestock at 3.80% (DLS, 2020-21). Goat significantly contributes to the national GDP through the production of 130000MT of meat, 1312000 MT of milk and 391000 of MT skin each year (FAO, 2003). However, exporting skin and byproducts brings in a sizable quantity of foreign currency. According to the report, the requirement of animal protein per head per day is 120 grams and the availability of meat is 136 grams per head per day (DLS, 2020-21). So, to full fill the animal protein requirement, goat farming can play an important role without religious obstacles to consume goat meat (Kumar et al, 2018). Now-a-days, everywhere a trend is spread; organic meat production. Organic standards regulate an animal from the state of its mother prior to birth, through feeding and housing practices, right to the abattoir and packaging, where no synthetic materials are used. In case of goat, heritability and fertility rate are also good. The goat has been a "poor man's cow" because of its immense contribution to the poor man's economy (JICA). They not only supply nutritious and easily digestible milk to their children but also a regular source of additional income for poor and landless or marginal farmers. Being small-sized animals, goats can easily be managed by women or children. Compared to cattle and sheep, goats have served humanity longer and sooner. The goat farming enterprise is in growing trend (JICA). Goats can be seen in considerable numbers in the Noakhali district. Women dominate goat farming, and they are the majority of goat farmers. Feeding, milking and care for goats do not require more equipment and hard work. The rearing of goats is mostly integrated with crop agriculture in Bangladesh. Capital investments are also quite low. Goats can be successfully reared in areas where fodder resources are limited and milch cattle do not thrive. Returns on capital of up to

50% and recovery of 70% of retail price are possible in goat farming. In drought-prone areas, the risk of goat farming is much less than in other livestock species. No religious taboo is against goat slaughter. A goat is termed a walking refrigerator. For both supplying animal protein needs and producing high-quality goat meat, goat agriculture has a lot of potential in Bangladesh. As a result, the current study was conducted to look into the situation now and consider what the future might hold for goat farming. In fact, well management practices are the pre-condition for better exploration of genetic merit.

Objectives

1. To find out the state of goat farming in Southern Bangladesh.
2. To see the financial state of the farmers.
3. To utilize properly grasslands of the study area.

Chapter II: Materials and Methods

The study was run from March to April 2022. The study was run on 37 farmers. The study area was Kabir hat upazilla under Noakhali district of Bangladesh. The data were collected from farmers thoroughly face to face while the questionnaire was designed. The goals of the study were carefully considered when creating a structured interview schedule. The questionnaire sheet holds diverse information such as rearing process, feeding method, feed sort, watering dictation, watering source, deworming, vaccination status, causes of common diseases, source of buck etc. The schedule's questions and statements were clear, concise, and basic enough for the respondents to understand. Respondent information was gathered using the one-on-one interviewing technique. Both interviewing and observation were used to get the relevant data from the respondents. These details were included in the interview schedule. Socioeconomic aspects of goat production that are include: Gender, age of farmers, number of households, occupation, quantity of land, training, capital source, and number of goats .Describe the goat's breed, age, sex, weight, the date of purchase, and the period from rearing the goat until marketing or killing. Due to unequal traits in the numbers of espial, the study design was unbalanced factorial in nature. Then the information was input and stored in a Microsoft Excel data-sheet. The acquired data were coded, assembled, tabulated, and analyzed after data collection was complete. Standard units were created from the local units. By using the proper scoring methodology, the qualitative data were converted into quantitative data. The information was then processed and examined to learn about many aspects of goat farming as well as farmers. Following that, the data were resolved using narrative statistics and the Statistical Package for the Social Sciences version 14.0 in order to acquire recapitulation. Using SPSS software, a tabular approach was used to analyze the data using straightforward statistical methods like frequency, average, and percentages.

Chapter III: Results and Discussion

Rearing management

Like other species, there are few systems of goat rearing. Majority of the farmers nursed their goats in a semi-intensive system (49%) where they are allowed a long time in the pasture/grazing land. But some of them reared their goats in free-range (46%) and a few of them followed a confinement system (5%). In case of semi-intensive system goat rearing is more suitable than other system. It is agreed with this research work (A). 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). A greater portion of the farmers (56.76%) kept their goat at night with them and about 94.59% of farmers accept winter care to handle cold stress. Besides, about 86.45% of farmers took a summer season bath on their goats but 21.62% of farmers took a bath on their goats daily in the summer season. (Pattamarakha et al, 1997) reported that most of the farmers did not have shelters for their goats. All rural farmers raise their goats using a semi-intensive approach. This study was run to see the goat management status of the Southern region (Noakhali) of Bangladesh. The study area was a coastal region which is preferable for goat rearing. Because usually these regions have a diverse field for goat rearing and the people those were lived. There another main source was goat rearing and selling. Many of them earned their livelihood by goat rearing due to getting green grass and tree leaves easily and the goat is a disease tolerable animal than other. In the study, we saw the goat farmer's status. There was enough good management system and most of them were encouraged.

Table 1: Rearing system of goat

Traits	Category	Farmers (%)
Rearing System	Confinement	5
	Semi intensive	49
	Free range	46
Night shelter	House holder house veranda	56.76
	Goat house	27.03
	Cattle house	16.21
Winter care to manage cold	Yes	94.59
	No	5.41
Summer season bath	Yes	86.45
	No	13.55
Summer season bath type	Daily	21.62
	Not daily	78.68
Winter season bath	Yes	27.03
	No	72.97

Feeding management

A ruminant's diet consists of roughages and concentrates. To encourage growth and production, goat feed needs to have a balanced diet, meaning it needs to contain protein, carbs, vitamins, and minerals. Roughages, or grasses, bourse plants, and fodder plants, make up the majority of a goat's diet. In order to give goats the necessary nutrients for rapid growth and high production, concentrate feeds can also be fed to them. The ability of goats to turn garbage from the home and kitchen into meat allows them to devour it. Goats will eat vegetable scraps from the kitchen and even plants that are poisonous to other animals, such as lantana. They can also graze and browse in areas that other livestock can't reach, such as rocky and mountainous areas. Goats will stand on their hind legs to browse on the low branches of trees. Some even climb low sloping branches (B). In order to achieve dietary needs for minerals, forages typically fall short, necessitating the use of supplements. Typically, salt is combined with calcium, phosphorus, and trace minerals. The farmers used 40.54%, 54.05%, 24.32% green grass, green grass and straw, green grass and concentrate respectively as feed items. It is agreed with this work while goat feed manly is roughage (C).When they kept their goats inside the house, they supplied 89.19% green grass while 24.52% of farmers provided concentrated feed to their goats. In addition to the roughage, grain mixes are required in the diet of growing and nursing goats though concentrate mixes

are the most expensive part of the diet. There were most of the farmers supplied tube well water (67.57%) whereas pond water and supply water was 16.22%. Water supply is critical for livestock, either in confinements or in the pasture. The water intake of goats may vary depending on the season of the year or ambient temperature (Solaiman et al, 2006). During the rainy season, the farmers provided (40.54%) green tree leaves, (54.05%) green grass and (10.81%) green tree leaves and green grass. There were 59.46% of farmers grazed their goats in the field during rainy season. Few farmers used improved pastures or concentrate to enhance the nutrition of their goats (Pattamarakha et al., 1997). The single most significant variable in any livestock operation is feed cost. It averages 45% of the variable cost of an operation including labor cost or is about 64% of the variable cost of an operation excluding labor. In a nutshell, it could be summarized the premier feed item for goats was green grass, and green tree leaves and the main water source was a tube well. Goats are fastidious about cleanliness and like frequent changes in the feed. They are very fond of leguminous fodder and they are inquisitive feeders and also good browsers. They prefer aromatic relish feed and do not prefer soiled feed by other animals. So, we are very careful about the feeding issues of goat due to they have peculiar characteristics. They are also tolerant to bitter feed and wide varieties of feed. In case of a semi-intensive system, we can follow stall feeding and grazing. Any management practice that can reduce feed costs will significantly improve profit. Goats are inclined to forage or browse from the top down on a plant and can selectively utilize a wide variety of shrubs, woody plants etc (Solaiman et al, 2006). But it should not be fed the forage and concentrates. Because the goat has different stages of their life. Such as kid, young, or pregnant. The goat needs a balanced ration though the farmer of the study area does not know about it. It's a big issue to train the farmer about goat rearing management then we can get the best result for the livestock sector which can play role in the GDP of Bangladesh.

Table 2: Feeding management of goat

Traits	Category	Farmers (%)
Feed	Green grass	40.54
	Green grass and straw	54.04
	Green grass and concentrate	24.32
Green grass supply during keeping inside the house	Yes	89.19
	No	10.81
Feed concentrate	Yes	24.32
	No	78.68
Particular feeder for concentrate feeding	Yes	24.32
	No	75.68
Watering daily	Yes	83.78
	No	16.22
Watering frequency per day	Once	35.14
	Frequently	64.86
Drinking water source	Tube well	67.57
	Pond	16.22
	Supply water	16.22
Rainy season feeding	Green tea leaves	40.54
	Green grass	54.05
	Both	10.81
Grazing in rain	Yes	59.46
	No	40.54

Disease status

In figure 1; we saw that the Southern part of Bangladesh was oppressed by (30%) PPR; (20%) Bloat (accumulation of gas in the rumen); (30%) Bloat, Anthrax and PPR; (15%) Bloat and PPR; (5%) Anthrax and PPR. One of the main issues facing goat raising in Bangladesh is goat mortality. Like other livestock; goats are also prone to numerous illnesses or ailments that cause debility and mortality, which result in significant financial loss. The main issue with goat rearing is the low kid survival rate (70%) brought on by illnesses and under nutrition. Parasitism, urolithiasis, and infectious diseases like PPR, goat-pox, enterotoxaemia, and pneumonia, among others are the most prevalent diseases that afflict

young or adult goats in Bangladesh and cause death. These diseases are the main obstacles to goat production in Bangladesh. Goats are generally resistant to disease and they have less disease prevalence. PPR was recorded at summer (4.58%) saw the highest prevalence rate of PPR in goats, followed by autumn (3.88%), winter (2.87%), and spring (1.66%). PPR disease developed after 12 month. Goats had a 2.65%, 1.15%, and 1.44% prevalence of bloat, FMD, and retained placenta, respectively. The annual prevalence rates for additional disorders (Tetanus, Posterior paralysis, Cataract, Pregnancy toxemia, Rheumatism, and Rabies) were less than 1%. Bloat is occurred due to overfeeding of CHO. PPR has occurred when animals get cold stress. About 80% of deaths in kids and lambs have been allowed due to non-infectious causes. These are starvation, mismothering behavior, nutritional and environmental stress, reproductive problem and predation. Helminthiasis can take on significant clinical importance in goats that are pastured and allowed to roam freely. Lungworm infections, GI nematodiasis, and liver fluke infestation are all possible. Goats have inadequate age-related parasite resistance compared to other ruminants. Clinical parasitism can also be detected in adults, albeit it tends to be more prevalent in yearlings during their first season on pasture. GI parasitism or liver fluke disease may cause poor growth, weight loss, diarrhoea, a scruffy hair coat, anemia symptoms, and intermandibular edema (bottle jaw). As goat populations continue to rise and facilities grow overcrowded, parasitism is a sneaky problem that can go undetected for years on hobby farms. Farmers frequently discover tapeworm proglottids in goat feces. Even while tapeworms are typically not thought to be clinically significant, their detection can be used to discuss helminthiasis with owners and create a comprehensive parasite control program. Coccidia are shed by adult goats in their feces, which contaminate the environment and infects the baby. Morbidity among children born later rises as infection pressure in the pens grows. Diarrhea or pasty feces, lack of fitness, general frailty, and failure to grow are symptoms. Children may pass away in acute cases without exhibiting any clinical symptoms. It's risky to move all the kids between a single or two pens. The babies should be placed in small, age-matched groups in outdoor, transportable cages that are periodically moved to clean ground in order to help avoid coccidiosis in artificially raised dairy goats. Although eradication is impossible, infection can be managed with effective management techniques. Coccidiostats administered to the water or feed are supplements not replacements, for a management control program. One of the main causes of kids poor growth is chronic coccidiosis, which is why it is uneconomical to delay breeding for a year until the goat has grown to an appropriate size.

The goat stalls and pens need to be cleaned and washed every day. Animals that are ill need prompt isolation and treatment. Animal carcasses ought to be buried. To get rid of ectoparasites, the goat should be soaked into soli containing chemicals. To prevent parasites, rotational grazing should be practiced. The surroundings should always be cleaned. In general, both infectious and non-infectious factors have harmed the goat. According to a well-known veterinarian, if proper management techniques are used, these disorders can be treated quickly and effectively.

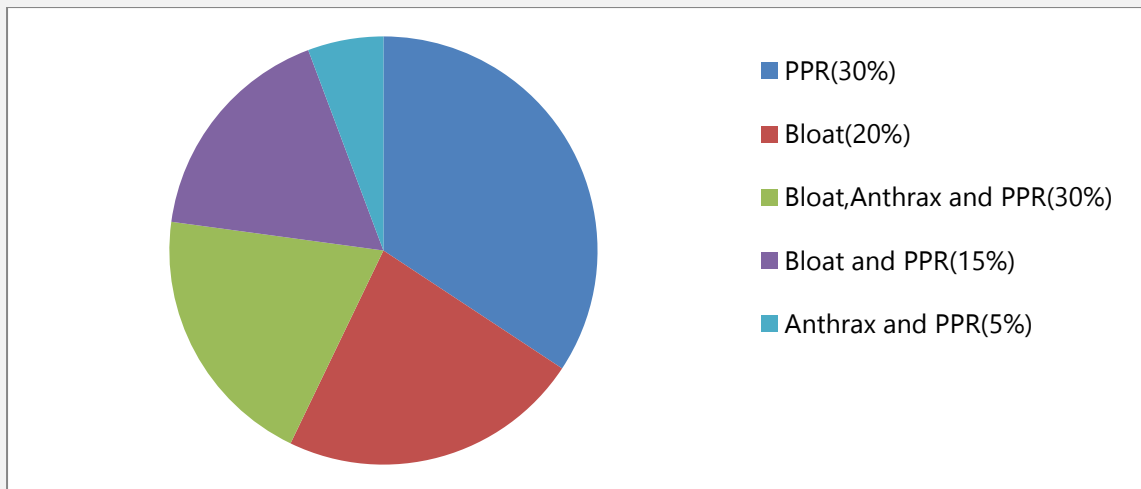


Figure 1: Disease status of the study area

Vaccination status

The vaccine is a biological preparation which induces immunity in the body. The majority of livestock vaccination and health maintenance procedures are based on the animal's stage of development. Prior to kidding, weaning, and breeding, vaccinations for goats are advised. Because every operation is different, producers must speak with their veterinarian before developing a particular immunization and health regimen. In figure 2; we saw that about 59.46% of farmers got vaccinated to their goats. The purpose of vaccination is to trigger an immune response that offers some degree of disease protection. Sadly, the majorities of immunizations do not completely protect against infection and associated disease. It is anticipated that vaccinations will lessen disease severity in affected animals or reduce illness occurrence in the herd. Vaccines are available against a wide range of infectious diseases that affect small ruminants, but they face the challenge that some individual animals may be of poor economic value, necessitating very low vaccination costs in order to be commercially viable. Because of this, these species have very few vaccination options. In addition, many small ruminant farms are run in a traditional manner and employ minimal technology. However, small ruminants are frequently the most important livestock species, particularly in underdeveloped or dry areas. An important technique for controlling infections, saving animals from death, and producing healthy food from animal resources is vaccination against communicable infectious diseases. The Livestock Research Institute (LRI) produces these type of vaccine. In figure 3; a greater portion of the farmers (60%) used the PPR vaccine and some of the farmers (30%) used other vaccines though some of them did not know the name of the vaccine. We could vaccinate for

- FMD (At every 4 months interval, 2 ml ,S/C)
- PPR (At every year, 1 ml ,S/C)
- Anthrax (At every year, 0.5 ml, S/C)
- BQ (At every 6 months interval, 2 ml, S/C)

- HS (At every year, 1 ml S/C)
- Goat pox (One dose, 1 ml, S/C)

[Source: Vaccination of LRI]

In general, caudolateral neck subcutaneous injection is recommended, however an injection behind the elbow over the ribs is an option as well. Avoid giving shots over the loin or hindquarters, which are where the expensive meat is cut. As always, animals must be secured correctly to prevent wriggling and to guarantee that the complete dose of vaccine is administered effectively. Needles that are above 0.5 inches long should not be used excessively, and they should be changed frequently. Keep in mind that you should not administer an injection with the needle used to remove the vaccine from the vial. Seventy percent of the rural population in Bangladesh has access to livelihood options through the smallholder livestock sector. However, the nation hasn't been able to keep up with the population's expanding need for milk and meat. The prevalence of infectious diseases, which is significant, is one of the main reasons limiting animal output. The most economical strategy to limit financial losses and reduce disease incidence in animals is through vaccination. For marginalized and female livestock producers, who are more resource-poor than other farmers, the effects of animal vaccination on nutrition and financial stability will be more obvious. Besides, good health does not only depend on vaccination but also depends on other factors. Factors are written below;

1. Biosecurity
2. Good nutrition
3. Early detection and treatment
4. Culling
5. Predator control

PPR is a very fatal disease. Many studies have been reported on it. The outbreaks of PPR caused 74.13% morbidity and 54.83% mortality in Black Bengal goats of Bangladesh (Islam et al, 2004). Assessment of the viability of using the vaccine to control PPR in small ruminants would be aided by sero-surveillance and immunization experiments in sheep and goats against PPR using a commercial PPR-VAC. The prevalence of PPR disease was higher in Black Bengal goats (54.93%) than in Jamunapari goats (31.78) % (Islam et al, 2010). This outcome is comparable to the findings of who found that Black Bengal goats are more vulnerable to PPR (67.24%) than Jamunapari goats (32.76%). Therefore, to eradicate the disease, appropriate surveillance and a regular immunization campaign should be implemented (Islam et al, 2010). So for controlling we should provide PPR and Anthrax vaccine as early as possible. It supports this research work (D).The effectiveness of vaccinations can be influenced by a variety of elements, such as nutrition, stress, and an animal's overall health. Vaccines should only be given to animals with a healthy immune system and in accordance with the label's instructions. When creating and implementing a herd immunization program, seek advice from the veterinarian. Create a space that is clean,

dry, and free from drafts. Drainage from the yard is provided. control mice, insects, and rats. Make clean, fresh water available. Weekly waterers cleaning during the summer. Reduce crowding, stress associated with travel, and handling in barns, provide ventilation. Prepare the barns before inclement weather. In order to reduce the spread and effects of infectious illnesses, vaccinations should only be used as a tool in conjunction with other management measures. Vaccines should not be expected to solve all disease problems. Besides, other infectious diseases of goats should maintain regularly because they can create fatal conditions for the goat.

Disease Control

Watch out for symptoms of disease including decreased feed intake, fever, odd discharge, or strange behavior. If sickness is thought to be present, get advice from the closest veterinary aid facility. Defend the animals from common illnesses. If a contagious illness epidemic occurs, separate sick animals from healthy ones right away and implement the essential disease prevention strategies. Periodically deworm the animals. Look for internal parasite eggs in the feces of adult animals and treat the animals with the appropriate medications. To reduce health problems, offer clean, untainted water and feed. Must adhere to the advised vaccination schedule (E).

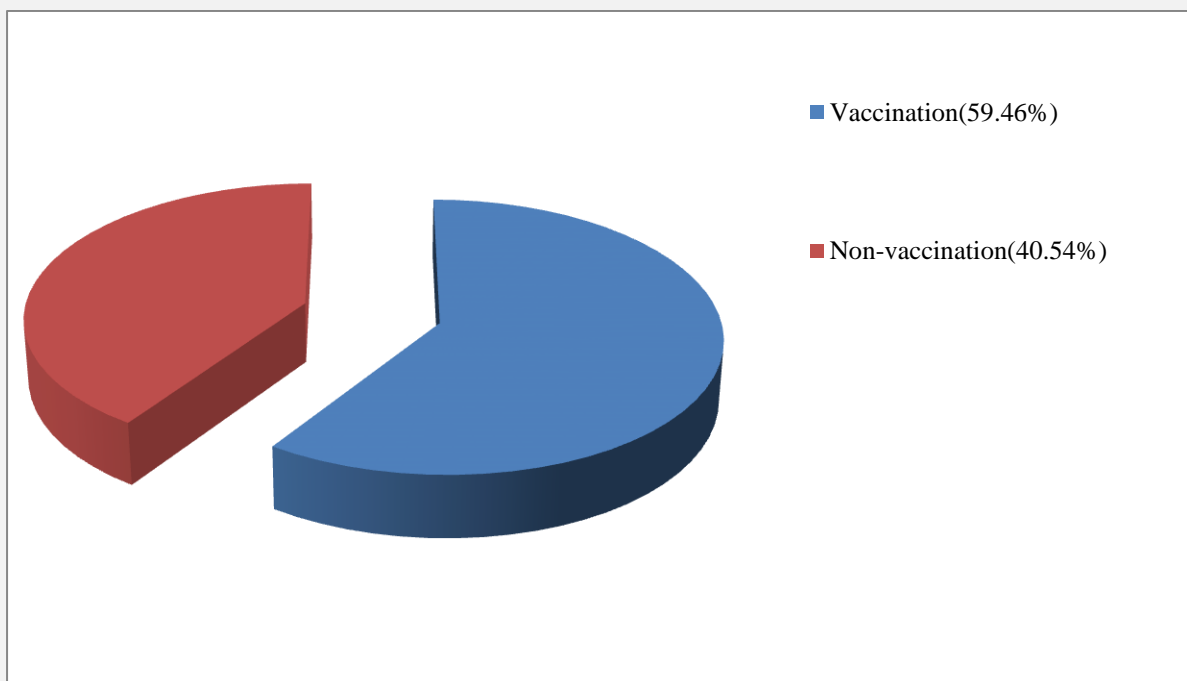


Figure 2: Vaccination status of the study area

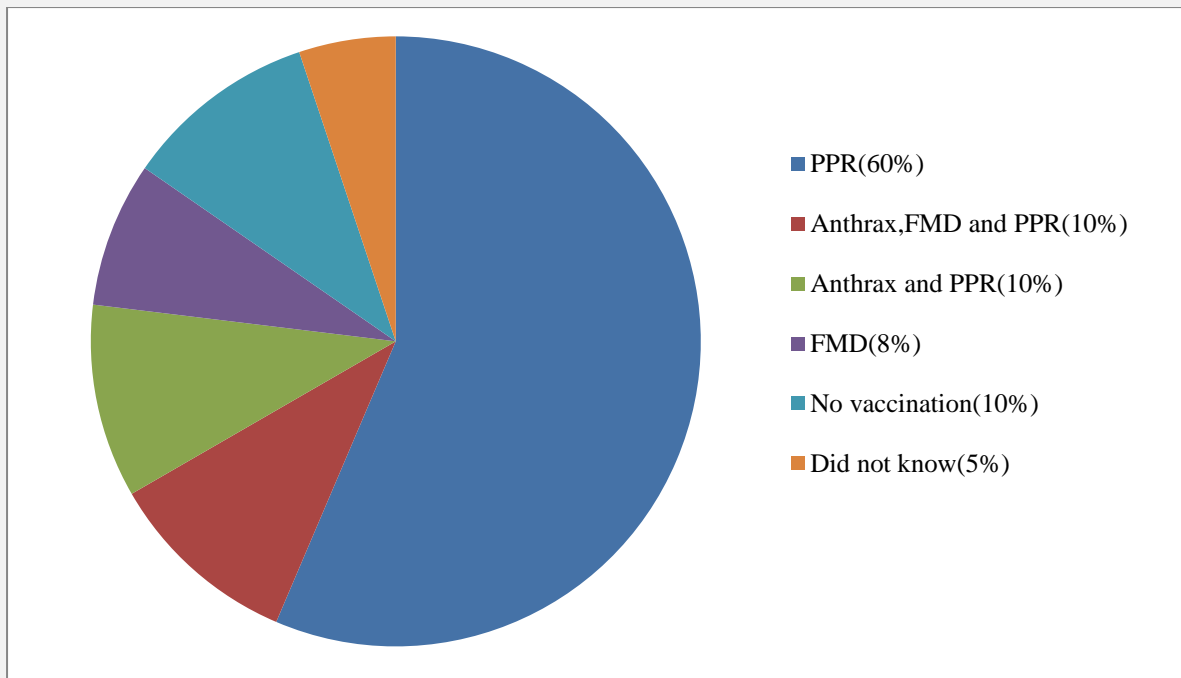


Figure 3: Vaccination against diseases of goat

De-worming status

In figure 4; 78.38% of farmers de-wormed their goats. The parasite is one of the biggest issues for any livestock population. Due to parasitic infestation, the farmers could not get a good result. Some name of parasitic diseases in goat is given below;

- Nematode infestation: Ascariasis, Stomach worm, Hook-worm, Lung-worm, Whip-worm, Eye worm.
- Tapeworm infestation: Monieziasis, Taeniasis.
- Trematode infestation: Liver fluke

Gastrointestinal (GI) parasitic infections impair the growth and productivity of the animal. It may ultimately lead to serious health problems even the death of the animals (Kagira and Kanyari, 2001). Different parasites have a different developmental stage that is why the dewormers cannot control all the parasites with conventional deworming techniques (A). According to the results of the current experiment, the animals' poor health had a substantial impact on the occurrence of GI parasitism in both sheep and goats. Adult goats had significantly higher GI parasitic infections where as female animals showed more susceptibility to infections. Sheep and goats' "health state" and "deworming status" are important inherent determinants in the development of GI parasite diseases. So we can follow this deworming General Deworming Schedule:

- Before turning goats onto a new spring pasture.
- Several weeks after turning onto a pasture.
- Early winter (broad spectrum medication)
- Another deworming may be necessary during long winters (F)

A fecal egg count should be performed to establish the level of infestation and potential anthelmintic resistance in order to provide the best possible parasite management. We can get help with this process from a veterinarian. It is now advised that we stick to the de-worming approach when treating for parasites. It's important to use the right dosage for each animal. Under-dosed animals are more likely to develop anthelmintic resistance. For preventing parasitic infestation, we can follow veterinarian treatment and advices. Goat health can be affected by a variety of internal and external parasites. Internal parasites include intestinal worms (Coccidia, cryptosporidium), liver flukes, lung worms, meningeal worms, tapeworms, and stomach worms (haemonchus, ostertagia). Lice, ticks, and mites are examples of external parasites. The impact of internal parasites on the herd's health and ability to produce is great. Depending on the level of infection, goats can get sick (diarrhea, fever, anemia), lose or maintain weight, and even pass away. The likelihood of becoming infected increases with the distance a goat grazes a pasture. Additionally, the number of parasites on pastures decreases with increasing aridity in hot or cold weather. Because of this, it is crucial to adjust grazing practices appropriately. One of the greatest management strategies to maintain low infection levels is rotational grazing.

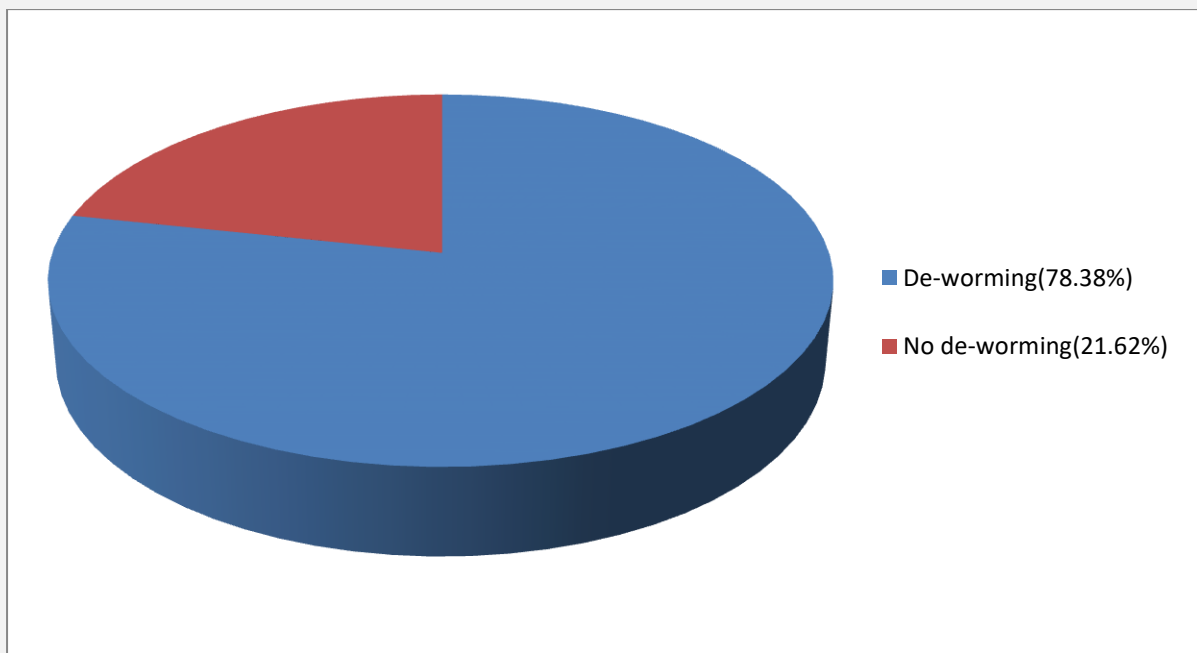


Figure 4: De-worming status of the study area

Breeding status

Breeding is the reproduction that is producing of offspring, usually animals. In the survey area, we saw that a greater portion of the farmers (78.38%) did not keep bucks for insemination of their goats. The farmers inseminate their goat by village buck (67.57%) and gave a fixed charge (67.57%) for it. Most of the goats were indigenous (70.27%) which means black Bengal goats and few of them were cross-bred (29.73%). The farmers purchased their goats from the local market (62.16%). Most of the goats were bought occasionally (62.16%) and few of them were less than 2 years. Farmers should inspect the well-grown, blended udder and thoroughly check for any form of faults before to purchasing. Native genotypes should not be mated at an early age because of the greater death rates they experience. Instead, they should be bred between 18 to 24 months. Buying a goat with two dental ages is preferable. Natural mating is the easiest and most common breeding system for goats. Goat farmers are using artificial insemination more frequently because it enables the spread of valuable genetics and the prevention of sexually transmitted illnesses. For increasing breeding efficiency, some factors should be maintained. These are frequency of pregnancy, age at first pregnancy, embryonic death, percentage of fertilization, longevity etc. For getting a good result, the farmers should take proper care of pregnant animals. If the farmers want good results, they will follow the guidelines of the breeding policy. So in this case farmers need training for a better understanding of goat rearing. The main task of any breeding program is to clearly and accurately identify the breeding objectives. Without a precise assessment of each animal's genetic worth, especially bucks, progress towards the specified breeding goals cannot be made. Additionally, the breeding program should be adaptable and permit the addition of new selection criteria and objectives. Developing breeding plans to enhance goat performance: The entire enhancement of goats for the production of meat, fiber, and milk includes an effective and implementable breeding strategy. The following criteria should be considered by the formulators as they create the breeding strategy for goat improvement: Breed flexibility to the particular agro-climatic conditions. Farmers' socioeconomic position who wants to start raising goats. Demand for live animals or milk in a certain location a supply of young bucks with excellent genetics and reliable reproduction

Utilizing genetically deficient or males of other breeds to preserve indigenous (descriptive) breeds and stop them from rapidly deteriorating genetically.

Table 3: Breeding status of goat

Traits	Category	Farmers (%)
Buck keeping	Yes	21.62
	No	78.38
Service done by	Village buck	67.57
	Own buck	32.43
Service fee	Yes	67.57
	No	32.43
Source of goat	Own source	32.43
	Purchase	67.57
Purchase time	Occasionally	62.16
	Not purchase	21.62
	Less than 2 year	16.22
Origin of goat	Indigenous	70.27
	Cross breed	29.73

Chapter IV: Limitations and Conclusion

Limitations

The study was time-bound. We could not meet all the farmers due to limited time. So, the accurate result was found very difficult. Due to a lack of funding, a large sample size or research in various areas of Bangladesh were not possible. This study can be conducted with a larger sample size to ensure livestock population because it is crucial for goat farmers. Besides, we collected the data randomly which was one of the biggest hindrances to getting an accurate result.

Conclusion

There was a greater portion of the farmers nursed their goats in a semi-intensive system, took winter care and also took baths in summer. Besides, there were premier feed items list were green grass, straw, green tree leaves and water was supplied from mainly tube well while few farmers were supplying concentrate. Vaccination against PPR disease and de-worming was done by the greater portion of the farmers. Few of the farmers used their own bucks to inseminate their goats while most of the farmers used village bucks for insemination and gave a fixed charge to the buck rearer. Feeds and fodder, medical attention, record-keeping, and the respondents' level of expertise regarding the production of goats were all unsatisfactory. Due to lacking husbandry practices knowledge of the farmers, the production level was not gained at the expect level. It is advised that the responsible authority conduct awareness campaign and build the farmers' capacity to practice goat farming in order to produce safe food for consumers, for animal welfare while minimizing environmental decay, to improve the socioeconomic conditions of rural masses, and also to enhance women's empowerment. So it's crying need to be trained the farmers for achieving a higher percentage of profit.

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Biography

Iqbal Hossain, the author, is Mohammad Yasin and Aradhoni Begum's son. He resides in Kabirhat, Noakhali. He earned his S.S.C. from Chaprashir hat High School in Noakhali in 2014 and his H.S.C. from Noakhali Govt College in Noakhali in 2016. He was accepted to the Doctor of Veterinary Medicine program at Chattogram Veterinary and Animal Sciences University for the 2016–2017 academic year. He is a veterinary medicine faculty intern student at the moment. He is really keen to become a researcher and an accomplished veterinarian in the future.