

## Cross-Breed Goat Marketing as a Strategy for Economic Growth in Bangladesh

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### Abstract

*Nowadays farming is very profitable business in Bangladesh. The prospect of commercialization of cross breed goat production and marketing in Bangladesh has been analyzed using primary data from 5 commercial goat farms in Rajshahi district. It has been observed that several large and progressive farmers, businessman and industrialists have adopted commercial goat farming. The entry of large and medium farmers having better access to technical knowledge, resources and market, would help in realizing the potential of goat enterprise. Most of the commercial goats' farms have been found profitable to operate these firms. In Bangladesh goat rearing has been found rewarding under both intensive and semi-intensive systems of management. In our country Intensification and commercialization of goat enterprise has been recorded very important because of shrinking of resources for extensive grazing. Commercialization of goat would help in increasing the goat productivity which can be bridge to the demand-supply gap. However, use of modern technologies, particularly prophylaxis, low cost feeds and fodders as well as innovative marketing and government help can be taken as the pre-conditions for successful commercial goat production and marketing.*

**Keywords:** Cross breed goat, marketing, goat marketing, Strategy

### Introduction

Bangladesh is a beautiful country having sea, rivers, land, forests, mountains and rocks. Different types of animals and birds are the ornaments that enhance the beauty of this country. Among those animals, goats are the one that can be a major source of income and can help to accelerate the income of our country. The type of goat that is mostly available in

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our country is called “Black Bengal”. It is a multi functional animal and plays a significant role in the economy and nutrition of landless, small and marginal farmers in the country. Goat rearing is an enterprise which has been practiced by a large section of population in rural areas. Black Bengal goats can efficiently survive on available shrubs and trees in adverse harsh environment in low fertility lands where no other crop can be grown. In pastoral and agricultural subsistence societies in Bangladesh, goats are kept as a source of additional income and as an insurance against disaster. Goats are also used in ceremonial feasting and for the payment of social dues. In addition to this, goat has religious and ritualistic importance in many societies. We get skin, meat and milk from it.

Goats are among the main meat-producing animals in Bangladesh, whose meat (chevon) is one of the choicest meats and has huge domestic demand. Besides meat, goats provide other products like milk, skin, fiber and manure. Goats are important part of rural economy, particularly in the arid, semi-arid and mountainous regions of the country. They provide food and nutritional security to the millions of marginal and small farmers and agricultural laborers. However, the productivity of goats under the prevailing traditional production system is very low (Singh and Kumar, 2007). It is because they are maintained under the extensive system on natural vegetation on degraded common grazing lands and tree lopping. Even these degraded grazing resources are shrinking continuously. Moreover, adoption of improved production technologies/ management practices in the farmers’ flock is very low. Therefore, rearing of goats under intensive and semi-intensive system using improved technologies for commercial production has become imperative not only for realizing their full potential but also to meet the increasing demand of mutton (goat meat) in the domestic as well as international markets.

In Bangladesh, since long time goats are used as domestic animals. Each and every day huge quantity of goat meat is required to meet the demand of the individual customers like you and me as well as to fulfill the demand of the hotels, Thai and Chinese restaurant, fast food etc.

Rising demand for goats-related products is a good incentive for venturing into and starting a goat farm. Before starting goat farming, there are some basic facts worth considering. We have to select between dairy goat farming and meat goat farming. The first relies chiefly on milk production, while the latter depends entirely on meat production. The overall size of the farm will decide the actual number of goats we may raise. An ideal location for goat farming can be with high and low areas, far from highways while boasting good fresh air on top of some tree shades. Goat housing need to be high enough to allow goats to stand tall, it must also have proper ventilation, sufficient feeding space and a good drainage system. Protection against wild animals and adverse climatic conditions must be provided. A single goat requires four square meters of space. If we want to start goat farming it can be a very promising investment.

### **Problems and prospects**

Responding to the market signals, the improved variety (High breed) of goat production and marketing system in Bangladesh has been slowly moving from extensive to intensive system. However, in the absence of any systematic study, there have been questions from the

entrepreneurs, progressive farmers and even researchers on the economic viability and sustainability of commercial goat farming under intensive system. No information was available on the socio-economic aspects of commercial goat farming under semi-intensive and intensive systems of production in the country. This study, probably for the first time, was planned to address issues related to commercialization of goat farming in the Bangladesh and to evolve a suitable policy framework for this otherwise neglected sector of the livestock economy. The present paper has thus analyzed the problems and prospects of commercialization of goat production in this country.

### **Importance of the study**

Bangladesh is an agro based country. Dairy firm, goat firm, poultry firm may contribute a lot to the economic development of Bangladesh. It is due to the existence of these types of firms the demand for leather, milk, meat and fertilizer is fulfilled. Agriculture and allied activities support livelihoods of nearly 70 percent of rural population of Bangladesh. In recent years, land based livelihoods of small and marginal farmers are increasingly becoming unsustainable, since their land has not been able to support the family's food requirements. As a result, rural households are forced to look at alternative means for supplementing their livelihoods. Apart from farm activities, farm community needs extra income from other occupations. Thus, they can earn much more income compared to other sectors. They are engaged with these activities when they are in adverse conditions, time not suitable for farming like more drought and flood conditions. At that time, this income will save their family needs and savings.

This study will assist the people of Bangladesh to know how cross breed goat marketing can be profitable by informing them the following information:

- 1) The initial investment needed for cross breed Goat farming is lower than the investment needed for improved (Cross breed) goat farming.
- 2) Due to medium body size and docile nature, housing requirements and managerial problems with goats are less.
- 3) Goats are friendly animals and enjoy being with the people.
- 4) Goats are prolific breeders and achieve sexual maturity at the age of 10-12 months gestation period in goats is short and at the age of 14-16 months it starts giving milk. Twinning is very common and triplets and quadruplets are rare.
- 5) In drought prone areas risk of goat farming is very much less as compared to other livestock species.
- 6) Unlike large animals in commercial farm conditions both male and female cross breed goats have equal value.
- 7) Goats are ideal for mixed species grazing. The animal can thrive well on wide variety of thorny bushes, weeds, crop residues, agricultural by-products unsuitable for human consumption.

- 8) Under proper management, goats can improve and maintain grazing land and reduce bush encroachment (biological control) without causing harm to the environment.
- 9) No religious taboo against goat slaughter and meat consumption prevalent in the country.
- 10) Slaughter and dressing operation and meat disposal can be carried without much environmental problems.
- 11) The goat meat is more lean (low cholesterol) and relatively good for people who prefer low energy diet especially in summer and sometimes goat meat (chevon) is preferred over mutton because of its "chew ability"
- 12) Goat milk is easy to digest than cow milk because of small fat globules and is naturally homogenized. Goat milk is said to play a role in improving appetite and digestive efficiency. Goat milk is non allergic as compared to cow milk and it has anti-fungal and anti bacterial properties and can be used for treating uro genital diseases of fungal origin.
- 13) Goats are 2.5 times more economical than sheep on free range grazing under semi arid conditions.
- 14) Goat creates employment to the rural poor besides effectively utilizing unpaid family labor. There is ample scope for establishing cottage industries based on goat meat and milk products and value addition to skin and fiber.
- 15) Goat is termed as walking refrigerator for the storage of milk and can be milked number of times in a day.
- 16) Goat cheese is nowadays drawing much popularity because it contains good nutrition's. All in all, goats are valuable for their milk, meat and fat. As such, starting a goat farm can be a valuable and contributing source to any family's health.

### **Objectives of the study**

- a) To analyze the overview of cross breed goat marketing in northern zone of Bangladesh.
- b) To analyze the existing marketing pattern of cross breed goat marketing in Bangladesh.
- c) To identify problems for conducting cross breed goat marketing.
- d) To provide some suggestion for the improvement of cross breed goat marketing in Bangladesh.

### **Methodology of the study**

The nature of the study is empirical one. Primary as well as secondary data have been used to conduct this study. Four sets of questionnaire have been used for the study. First category is for the producers of cross breed goat, second category is for the marketer, third category is for those people who rear them as a hobby and the last one is for the regular and occasional customers. From Rajshahi division 10 different firms have been selected from 5 different districts. Basically we have selected two firms from each district. Those districts are Pabna, Nator, Chapai Nawabganj, Bogra and Naogaon.

### Literature Review of the Study

**M. Asadujjaman *et. al* (2009)** thinks that Black Bengal and crossbred goats thrive in the western part of Bangladesh for comparative evaluation of their carcass yield and meat quality. Thirty male goats (15 Black Bengal and 15 crossbreds) slaughtered in the slaughter house of Rajshahi City Corporation were evaluated for carcass quantity and quality. The average slaughtering age was 12.60 and 12.40 months, and dressing percentage 43.71% and 45.86% for Black Bengal and crossbred goats, respectively. Crossbred goats had significantly ( $P<0.01$ ) higher dressing percentage than the Black Bengal goats. The total edible and non edible portions of Black Bengal and crossbred goats did not differ significantly ( $p>0.05$ ). The percentage of moisture, crude protein, ether extract and ash contents were 72.79, 21.90, 3.72 and 1.15 for Black Bengal goat and 73.46, 20.85, 4.51 and 1.08 for crossbred goats, respectively. There was no significant difference ( $p>0.05$ ) among moisture, crude protein, ash content (%) of Black Bengal and Crossbred goats. However, the carcass of crossbred goats contained more fat (ether extract) ( $p<0.05$ ) compared to the Black Bengal goat. The higher carcass yield and dressing percentage observed in crossbred goats reflected to yield more meat compared to the Black Bengal goat.

**S. A. Siddiqua and M. Ruhul Amin (2009)** studied that the distribution pattern, morphometric characteristics, production and reproduction peculiarities of White, Silver Bezoar and Black coated types of Black Bengal goat in Sylhet, Mymensingh and Bogra region of Bangladesh. Live weight, body measurements, hair diameter and density per unit area were directly obtained from animals. Milk production, life span, number of kidding and other behavioral data (0-5 score) were collected by interviewing farmers. The proportion of White type linearly decreased from east (30% in Sylhet) to west (18% in Bogra) but an erratic fashion was observed in Silver Bezoar type. White type was significantly ( $p<0.001$ ) heavier at 3, 6, 9 and 12 month among the groups. Body length behaved similarly although heart girth and height at wither showed irregular pattern between groups. White goat possessed coarser but Black goat had more dense ( $p<0.01$ ) hair at flank and thigh. Herding tendency, resting in crowded place, grazing habit ( $p<0.001$ ) of White type was higher than its contemporaries. Average milk yield (g/day) was higher ( $p<0.05$ ) in White type (366.84) than Black (248.83) and Silver Bezoar types (274.16). Above findings suggest that White and Silver Bezoar types of Black Bengal goat are superior to Black coated goats and thus demand due attention in order for their conservation. Further study is needed for genetic characterization for final recommendation.

**S. A. Chowdhury *et. al*** observed that ninety pre-pubertal (6-7 months) female and 15 pre-pubertal male Black Bengal goats were collected on the basis of their phenotypic characteristics from different parts of Bangladesh. Goats were reared under semi-intensive management, in permanent house. The animals were vaccinated against Peste Des Petits Ruminants (PPR), drenched with anthelmintics and deeped in 0.5% Melathion solution. They were allowed to graze 6-7 h along with supplemental concentrate and green forages. Concentrates were supplied either 200-300 g/d (low level feeding) or quantity that supply NRC (1981) recommended nutrient (high level of feeding). F and light Different physiological, productive and reproductive characteristics of the breed were recorded. At noon (temperature=95F and 35 to 115 intensity=60480 LUX) rectal temperature and respiration rate of adult male and female increased from 100.8 to 104.8 breath/min, indicated

a heat stress situation. Young female attain puberty at an average age and weight of 7.20.18 months and 8.890.33 kg respectively. Mean age and weight at 1st kidding were 13.50.49 months and 15.30.44 kg respectively. It required 1.24-1.68 services per conception with an average gestation length of 146 days. At low level of feeding the postpartum estrus interval was 372.6 days, which reduced ( $p<0.05$ ) with high feeding level to 216.9 days. Kidding interval also reduced ( $p<0.05$ ) from 192 d at low feeding level to 177 d at high feeding level. On an average there were two kiddings/doe/year. Average litter sizes in the 1st, 2nd, 3rd and 4th parity were 1.29, 1.71, 1.87 and 2.17 respectively. Birth weights of male and female kids were 1.24 and 1.20 kg respectively, which increased ( $p<0.05$ ) with better feeding. Although kid mortality was affected ( $p<0.05$ ) by dam's weight at kidding, birth weight of kid, milk yield of dam, parity of kidding, season of birth, but pre-natal dam's nutrition found to be the most important factor. Kid mortality reduced from 35% at low level of feeding to 6.5% at high level of feeding of dam during gestation. Apparently, this was due to high ( $p<0.05$ ) average daily milk yield (334 vs. 556 g/d) and heavier and stronger kid at birth at high feeding level.

### Major Findings of the study

The way by which the information has been collected involves the persons who are related to production and marketing of goats. The main source of this study is relevant field level data. It is worthy of mentioning here that the research is not based on laboratory work. However, the analysis of the various field levels and secondary data reveals the following observation:

Table: 01

Varieties of goats	Firms	Percentage
Cross breed	01	10
Black Bangle	09	90
Total	10	100

### Findings of the objective 1:

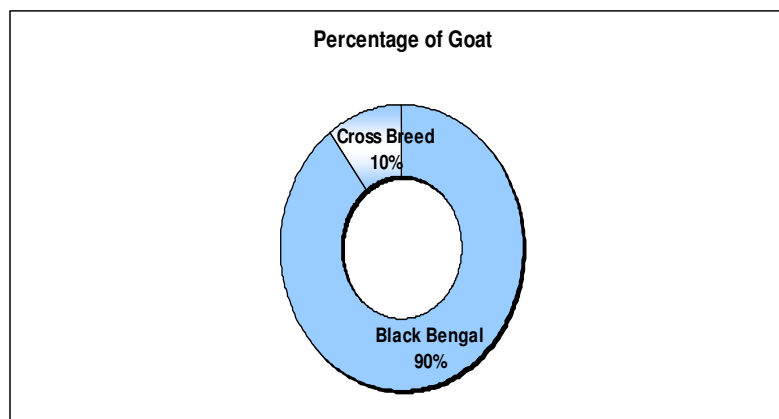


Fig. 01: Percentage of goat on the basis of its originality

**Production:**

There are about 300 breeds and varieties of goats domesticated in this subcontinent. The majority of goat varieties are found in the tropics and sub-tropics. There are about 30.33 million goats in Bangladesh. Black Bengal Goat comprises more than 90% of the total goat population; the remaining ones include the Jamunapari and their crosses. More than 90% of the goats in Bangladesh are kept by rural people. The goat ranks second in position in terms of meat, milk, and skin production, representing about 28, 23, and 28 percent respectively of the total livestock in Bangladesh.

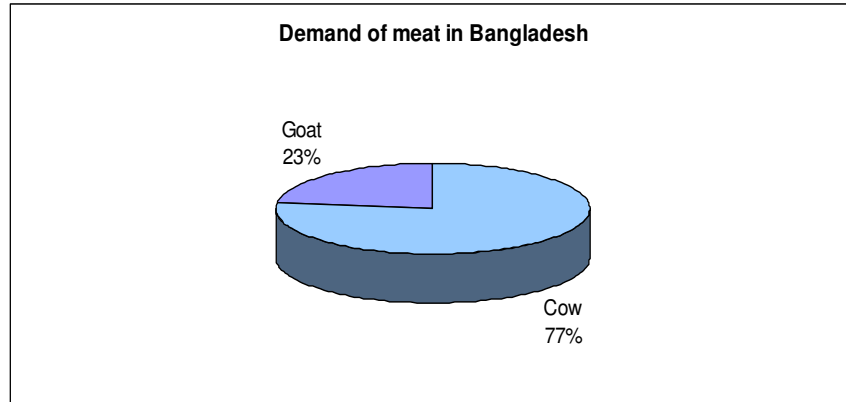


Fig. 03: Demand of meat on the basis of Popularity.

**Demand:**

Though there is a huge demand of meat, leather, milk in the market but the marketers have lack of knowledge about the actual and potential market. Everyday fast foods, Thai and Chinese restaurants, community centers and individual customers require goat meat (mutton) to conduct their business and for personal consumption. During the Eid-ul-Azha and Kali Puja we slaughter as to sacrifice huge number of goats for religious purpose. There are so many leather industries in our countries where there is huge demand of goat leather. Day by day goat milk is becoming famous because goat milk is as close to a perfect food as possible in nature. Its chemical structure is amazingly similar to mother's milk. It is a complete protein containing all the essential amino acids without the heavy fat content and catarrh producing materials of cow's milk.

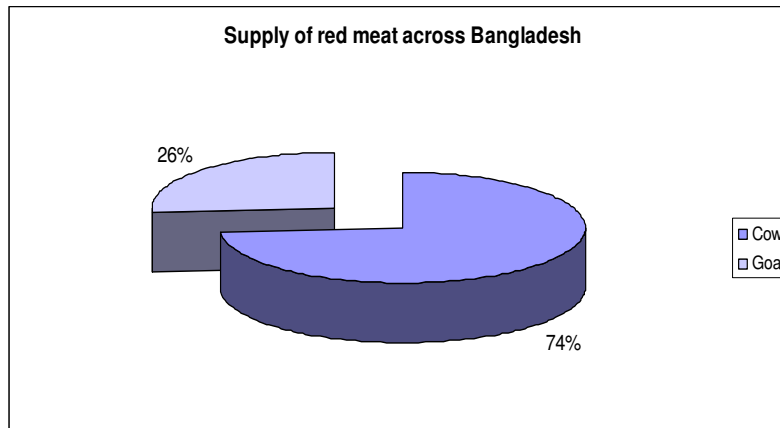


Fig. 04: Supply of red meat across Bangladesh.

### Supply:

Since most of the producers and marketers involved with goat farming are not well educated as a result they are unable to realize the demand of mutton, leather, milk and goat's dung and become failure to supply these according to demand. That's why the overall price of these is too high.

### Findings of the objective 2:

Marketing activities of cross breed goat are mainly based on marketing mix that means product, price place and promotion.

**Product:** Meat, leather, milk and goat dung are the product of goat which is offered to the market to satisfy the needs, wants and demands of the target customers.

**Price:** Price of the black Bengal meat and cross breed goat meat is equal. Since the supply is not sufficient that's why price is high, about 500 tk per kg. The size of the skin of cross breed goat is larger than that of black Bengal goat and as a result the price it is high about 250-300 tk. Goat milk is sold in the market at tk 70-80 per liter. The practice of goat dung selling has not been started yet but it has the power to enhance the fertility of soil. If its benefits can be informed to its target customers like farmer, then it will obviously have a potential market.

**Place:** In cross breed goat marketing place refers to the means by which its customers acquire their product. This includes the actual place it is purchased (the firm, hat, website) as well as the actual route of distribution. Middle man earns more profits than the producer since most of the producers are not well aware about the market.

**Promotion:** Because of lack of knowledge in marketing and its promotional activities, there are no suitable tools that are used to promote the business of cross breed goat and to accelerate the sale of it. No advertising, sales promotion, public relation or publicity is used to make people know about the benefits of cross breed goat marketing.



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**Findings of the objective 3:****Problems faced by the producer:**

- Technically trained personnel in integrated goat farming system are very limited.
- Lack of sincerity and consciousness during pregnancy period as well as after delivery of goat.
- Since lack of research and development has been occurred in this field as a result supply of genetically improved goat is limited and quality of breeding stock is low.
- Poor nutrition, feeding, housing, herd management and health program and other husbandry practices for the small holder production system.

**Faced by the Marketer:**

- Lack of transport facilities to handle live goat and goat milk.
- Since in our country there is no adequate or effective training program to train those who are involved with production and marketing of goats as a result they make so many mistakes which may be the cause of great loss.

**Faced by the Consumer:**

- Marketing channel is not organized that's why customers do not get the product (meat, leather and milk) at the right time and at the right place.
- Demand of goat related product is more than the supply as a result customer has to purchase those products at a higher price.

**Recommendations**

- Since marketers are not well aware about the benefits of cross breed goat so the first step should be to inform about the benefits of cross breed goat.
- Knowledge about the actual and potential market should be given to the marketer as there is a huge demand of meat, leather and milk in the market
- Research and development sectors must be improved to supply genetically improved goat and to ensure improve quality of breeding stock.
- System of nutrition, feeding, housing, herd management and health program and other husbandry practices for the small holder production should be developed.
- Adequate and effective training program should be started to train those who are involved with production and marketing of goats to minimize mistakes done by the marketer as well as producers of cross breed goat.
- Marketing channel and price control system should be organized so that customers get the product (meat, leather and milk) at the right time and at the right place and at the right price.
- Transportation system should be developed for handling and transporting meat, leather and milk properly.

- Quantity of technically trained personnel in integrated goat farming system must be improved in order to run the business smoothly.
- Sincerity and consciousness should be increased during pregnancy period as well as after delivery of goat as because it is very crucial moment.
- Last and the most important point is, initiative should be taken by the government to encourage and motivate the marketer as well as producers of cross breed goat by providing them their required facility to run their business smoothly.

### Conclusion

Rising demand for cross breed goats-related products is a good incentive for starting a goat farm. Responding to the market signals, the cross breed goat production system in Bangladesh has been slowly moving from extensive to intensive system of management for commercial production. However, in the absence of any systematic study, there have been questions from the entrepreneurs, progressive farmers and even researchers on the economic viability and sustainability of commercial goat farming under intensive system. No information was available on the socio-economic aspects of commercial goat farming under semi-intensive and intensive systems of production in the country. This study, probably for the first time, was planned to address issues related to commercialization of goat farming in the country and to evolve a suitable policy framework for this otherwise neglected sector of the livestock economy. The present paper has thus analyzed the problems and prospects of commercialization of goat production and marketing in Bangladesh. But it should be taken as a basis for further research to be initiated for the development of this promising sector to fight poverty.

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Web Sites with Useful Goat Information :

<http://www.sheepandgoat.com/>

This site provides links to wide variety of educational sites.

<http://www.ces.ncsu.edu/lenoir/staff/jnix/Ag/Goat/>

This site hosted by North Carolina State University has a wide variety of information and research on market goats.

<http://www.jackmauldin.com/medication.htm>

This site is very helpful when selecting treatments for your meat goat.

<http://www.ansci.cornell.edu/4H/meatgoats/meatgoat4H.htm>

This site allows you to select topics of study about market goats.

<http://www.goatmarket.com/index2.htm>

This is an excellent site on market goat marketing.

<http://www.ansci.cornell.edu/extension/esmgpa.html>

This site hosted by Cornell Cooperative Extension connects you to current goat information.

<http://www.npga-pygmy.com/>

This site gives excellent information on the pygmy goat. It provides a record book for youth and a pygmy goat reference manual.

<http://www.ansci.cornell.edu/extension/meatgoat3.html#cal>

This site offers excellent marketing information, including dates, weights, and special considerations needed to market goats.