

PIGEON FARMING AT BANSHKHALI UPAZILLA IN CHATTOGRAM DISTRICT



A Production Report submitted by

Sahab Uddin

Intern ID: 64

Roll No.: 14/103

Reg. No.: 01215

Session: 2013-2014

Report presented in partial fulfillment for the Degree of
Doctor of Veterinary Medicine (DVM)

Faculty of Veterinary Medicine
Chattogram Veterinary and Animal Sciences University,
Khulshi, Chattogram-4225

PIGEON FARMING AT BANSHKHALI UPAZILLA IN CHATTOGRAM DISTRICT



A Production Report submitted as per approved style and content

Signature of the Author

Sahab Uddin

Intern ID: 64

Roll No.: 14/103

Reg. No.: 01215

Session: 2013-2014

Signature of the Supervisor

Prof. DR. Omar Faruk Miazi

Department of Genetics and Animal
Breeding

Faculty of Veterinary Medicine,
Chattogram Veterinary and Animal
Sciences University, Khulshi, Chattogram-
4225.

Faculty of Veterinary Medicine

Chattogram Veterinary and Animal Sciences University,

Khulshi, Chittagong-4225

INDEX

Chapter	Content	Page No.
	Acknowledgement	4
01	Abstract	5
02	Introduction	6-7
03	Materials and Method	8-10
04	Result and Discussion	11-15
06	Common diseases of pigeon	16
07	Conclusion	17
	Reference	17-18
	Biography	19

Acknowledgement

All praises due to “Almighty Allah” who enabled the author to complete this report successfully.

The author express his deep sense of gratitude, heartfelt respect and immense indebtedness to his supervisor Prof. DR. Omar Faruk Miazhi. Department of Genetics and Animal Breeding, Chattogram Veterinary and Animal sciences University for his valuable advice, scholastic guidance, suggestions, inspiration and who was involved with this report through its inception.

I would like to express my deep sense of gratitude and thanks to Prof. A. Ahad, Dean, Faculty of Veterinary Medicine, Chattogram Veterinary and Animal Sciences University for his valuable suggestion & inspiration.

The author is deeply owe to all pigeon farmer who are helping during collection information and data collection.

The author wishes to express his gratitude to the Professor and Director of External Affairs, Dr. A. K. M Saifuddin, Chattogram Veterinary and Animal Sciences University, for his supervision and kind co-operation during the period of internship.

I also express thank to my friends for their help and co-operation during the tenure of writing of this report. The author is immensely grateful to all of them, although it is not possible to mention every one by name.

The Author

June 2020

Abstract

A survey was conducted using a pretested interview schedule in the village of Chanua under Banshkhali upazilla in Chattogram district to study the present status, problems and prospects of pigeon production in rural area of Bangladesh. Data were collected from 10 pigeon farmers. In this study housing cost TK 105, duration of house 5.5 years, quantity of feed supplied to each pigeon/day 36.5g, marketing age 25 days, marketing weight 230gm, price of squab TK 75, male female ratio 1.09, production of squab/year/pair of pigeon 17.5, price of each pigeon TK 115 and mortality 6% were detected. Most of the farmers rear pigeon in small Scale scavenging system with supplementary feeding. They have no idea about breed and variety of Pigeon and prevention of diseases. There is a lot of demand of squab meat in the market due to eats delicacy and taste. The pigeon farming may be increased with government initiative providing training to farmers and extending loans. Introduction of meat breeds, good flock size and balanced feed need to be ensure for improving income and employment opportunity. Most of the farmer of rural area have no scientific knowledge of rearing system of pigeon. So the have no idea about disease outcome, prevention, prevalence system. By gaining proper training about pigeon farming they will earn more profit. Common diseases were ND, Pox, Salmonellosis and mineral deficiency affected pigeons, which may caused economical lose in the farm. Common pigeon food like rice, paddy, oat, wheat, etc. Some of the farmer offered feed two times daily and some also offered three or four times daily with adequate water.

Keyword: Pigeon, Production, Scavenging, Banshkhali, Chattogram

Introduction

Mankind has practiced with pigeon keeping about 10,000 years in almost every part of the world (Levi A, 1977). Probably pigeon is the first bird species to have been reared by humans (Johnston and Janiga 1995). The white pigeon or dove appears as an object of a symbol of peace. The pigeon was first domesticated in the Middle East around 3,000 BC (Levi B, 1977). After domestication, it would produce fresh meat during the winter months. Commercial squab production started in USA (Levi A, 1977) then it gained popularity in European countries, Australia and Indian subcontinents. Pigeons are used for meat production, ornamentals, sports and experimental animals (Rahman, 1999). Chinese people consider the meat of pigeons as having medicinal value and squab is a part of celebratory banquets for holiday such as Chinese New Year (Hsiung et al., 2005). Egyptians raised pigeon for food (Levi, 1972). Pigeons were popular in Romans, France and England as a means of livelihood to produce squab (Goodwin, 1967). Squab meat is very lean, easily digestible, and richer in protein, mineral and vitamin. It is also used as tasty, delicate and fancy meat (Aliza, 2005; Jane, 2005; Richard, 2006; Morgan, 2006). Pigeon farming has been practiced in Bangladesh from the time immemorial. Many people of this country are engaged in different poultry rearing where pigeon is one of them. More than 80 percent of the rural households rear poultry (Haque 1987 and Ahmed 1988). The contributions of pigeon have not yet been considered in relation to the contribution of livestock sub-sector and whole poultry production though the pigeons provide alternative source of animal protein. Comparatively low investment, care less, less feed and housing cost involved, easy and economic husbandry practices, short reproduction cycle and less disease occurrence are observed for pigeon farming. Pigeons are used in natural beautification and ornamental birds as source of recreation, source of palatable, delicious and easily digestible animal protein, sources of bio-fertilizer especially for family gardening and used as the laboratory animal in case of genetic and hormonal studies. Hence profitable pigeon farming may be an easy and reliable source of employment opportunity, way of family labour utilization and cash income. Sustainable and increasing rate of pigeon farming may enhance the rate of reducing the gap of animal protein consumption/deficiency; increase the rate of poverty reduction and it may improve the socio-economic status of the rural poor community.

Pigeons are monogamous. Eight to 12 days after mating, the females lay 1 or 2 eggs which hatch after 18 days. The male provides nesting material and guards the female and the nest. The young are fed pigeon milk, a liquid- solid substance secreted in the crop of the adult (both male and female) that is regurgitated. The young leave the nest at 4 to 6 weeks of age. More eggs are laid before the first

clutch leaves the nest. Breeding may occur at all season, but peak reproduction occurs in the spring and fall. A population of pigeons usually consists of equal number of males and females. In captivity, pigeons commonly live up to 15 years and sometimes longer. In rural populations, however, pigeons seldom live more than 3 or 4 years. Natural mortality factors, such as predation by mammals and other birds, diseases, and stress due to lack of food and water, reduce pigeon populations by approximately 30% annually (David and Robert, 1994).

The pigeon is able to consume simple feeds consisting of grains and a little good grit; the pigeon also needed clear water (Anggorodi, 1995). Drevjany (2001) also reports that pigeon could be fed with feed that was made up of crumble ration or mixed of grains, minerals, grit and water. Among the feeds, pigeon liked grains such as corn, soyabean, peanut and wheat grain (Alwazzan, 2000). Though pigeons are reared in Bangladesh from the very beginning but total statistics is still unknown. In Bangladesh pigeon production in the rural areas is of great importance to the supply of meat and as source of income especially to the young energetic peoples. Pigeons reared in Bangladesh are predominantly belongs to Gola breeds for squab production (Rahman, 1999). The pigeon is being reared by both urban and villagers people across the country. The system of rearing pigeon in either area of pigeon rearing is almost similar, but farming condition might vary from urban to village areas. Most of the people follow traditional system to rear pigeon under large and small scale in order to meet their family income, hobby, protein need and so on. But the actual data of pigeon farming in the rural areas still scarce or not available.

Objective of the study:

1. To identify some problems of pigeon farming and limitation of this study.
2. To determine feeding system and availability of feed for raising pigeon in Banshkhali upazilla under Chattogram district.

Materials and Method

The selected area was village Chanua under Banskhali upazilla of chattogram district. The area and farmer selected purposefully and randomly. The farmer of this village has been rearing pigeon since long time. The interview schedule was carefully designed and schedule contained both open and closed questionnaire. Most easy, simple and direct question are asked to obtain information. The question was about their personal information, housing System, feeding, management system, marketing system, diseases outcome and prevalence.

Duration of collecting data was about 5 months. The area were khudukkhali, Katibpara, Amanullahpara, Modhukhali, Ampara, Abakhali, Sagorpar, Konakhali. pigeon were reared in both intensive and extensive system. Among the ten households, I found four intensive and six intensive system of rearing pigeons, meaning that 40% intensive and 60% extensive system of rearing. The dovecotes size varies from 2 to 2.5 sq. ft. per bird in intensive system and 0.6 to 1sq. ft. per bird in extensive system.



Fig1: Examination and collection of Data



**Chila
Lakha**

**Deshi
Meghraj**



**Red king
Peshwary**



**Homer
Racer**



Fig2: Different pigeon breed



Fig3: Housing system of pigeon



Fig4: Feeding system of pigeon

The housing materials were mainly iron, wood and canister. In 50% households, the dovecotes were made of iron cage, in 30% made of wood and 20% of households had canister dovecotes. The pigeon were categories into 3, that are low, medium, high.

Table1: Name of pigeon farm owners, location, breed number of pigeon reared by the farmers.

No	Owner name	Name of pigeon breed	No.of Bird	location
1	Tanvir	Lakha, Chila, Deshi	18	Amanullah para
2	Hamid Ahmed	Giribaz Deshi	25	Khudukkhali
3	Sajeed	Siraji, Racer, Deshi	20	Katib para
4	Hasan Hanif	Giribaz	12	Aba Khali
5	Manik Mia	Deshi, Lakha, Giribaz	24	Modukhali
6	Abdul Halim	Meghraj, Deshi	42	Ampara
7	Abu Kalam	Kalduma, Giribaz	82	Kudukkhali
8	Forhad	Siraji, Red king, Lakha	50	Konakhali
9	Asma Khatun	Racer, Homer, Deshi	52	Konakhali
10	Rajia Khatun	Chila, Peshwary, Egyptian swift	50	Sagor par

In case of intensive system, the pigeons were feed in individual method which common in 40% of household, and in case of extensive system feed were given in group which common in 60% households. In 70% households feeds were given two times, morning and evening. On the other hand 30% households gave three or four times morning, evening and night. The feed ingredients given were mainly rice, wheat, maize, different types of pulse. Among with the feed different types of calcium and vitamin supplement were also given. Clean drinking water were also provided. A well formed questionnaire was used to collect extra data about the pigeon farming.

Result and Discussion

Age of the pigeon farmers ranged from 26 to 60 years. The farmers were graded into 3 age categories, which are presented in Table 2. It is evident that 20% were young, 50% were middle age and rests 30 % were old.

Table 2: Age of farmer, housing cost, Duration of house, quantity of feed supplied to pigeon is give below.

Categories	Pigeon farms		Range		Average
	No	%	Max	Min	
<u>Age (year)</u>					
A=26-30	02	20	60	26	43
B=31-50	05	50			
C=51-60	03	30			
Total	10	100			
<u>Housing cost(tk)</u>					
Low (60-70)	04	40	150	60	105
Mid (90-100)	03	30			
High (120-150)	03	30			
Total	10	100			
<u>Duration of housing (year)</u>					
Low (2-3)	06	60	09	02	5.5
Mid (4-6)	03	30			
High (7-9)	01	10			
Total	10	100			
<u>Quantity of feed supplied(g)</u>					
Low (30-35)	03	30	43	30	36.5
Mid (36-40)	06	60			
High(41-43)	01	10			
Total	10	100			

In the table 2, there is seen that average age of pigeon farmer age 43 years, average housing cost 105 TK/house, duration of house 5.5 years and average quantity of feed supplied 36.5 gm/day.

Male female ratio of the farm

Usually, Pigeon are reared as pair. Therefore male female ratio should be 1.0. In this study the ratio appears to be different. Male female ratio different form 1.0 obtained was in agreement with Darwin (1874) and Cole and Kirkpatrick(1915). Darwin reported that more male squab are produce than female, whereas Cole and Kirkpatrick reported that male female ratio 1.05. However Levi (1957) indicated that male female ratio varies in the different breed and varieties. The ratio was 0.92 in red and yellow Carneau X, 1.0 in red and white Carneau X, 1.01 in Homers and red X, 0.92 silver king X with white Carneau. There is also death percentage also more in female than male.

Table 3: Male female ratio of the pigeon farm.

Parameter	Pigeon farms		Range		Average
	No	%	Max	Min	
<u>Number of male</u>					
Low (2-3)	03	30			
Medium (4-5)	04	40			
High(6-10)	03	30	10	02	06
Total	10	100			
<u>Number of female</u>					
Low (1-2)	05	50			
Medium (3-4)	02	20			
High (5-10)	03	30	10	01	5.5
Total	10	100			

Male female ratio =6/5.5=1.09

Management of pigeon and squab

Table 4: Marketing age, Weight, price and Production of Squab

Parameter	Pigeon farms		Range		Average
	No	%	Max	Min	
<u>Marketing age of squab (day)</u>					
18-22	03	30	32	18	25
23-27	04	40			
28-32	03	30			
Total	10	100			
<u>Weight of squab(gm)</u>					
180-200	02	20	280	180	230
210-240	03	30			
250-280	05	50			
Total	10	100			
<u>Price of squab(TK)</u>					
Low (50-60)	03	30	100	50	75
Medium (65-80)	03	30			
High(85-100)	04	40			
Total	10	100			
<u>Production of squab/ year/pair of pigeon</u>					
Low (15-16)	04	40	20	15	17.5
Medium (17-18)	05	50			
High (18-20)	01	10			
Total	10	100			

In the table 4, there is seen that average marketing age of pigeon 25 days, Average weight of squab 230gm, Average price of squab 75 TK, Average production of squab/year/pair of pigeon 17.5.

Price and mortality of pigeon

Table 5: Price and mortality are given below

Parameter	Pigeon farms		Range		Average
	100	%	Max	Min	
<u>Price (TK)</u>					
Low (90-100)	03	30	140	90	115
Mid (105-120)	04	40			
High(125-140)	03	30			
Total	10	100			
<u>Mortality (%)</u>					
Low (5)	03	30	07	05	06
Medium (7)	04	40			
High (5)	03	30			
Total	10	100			

From table 5, it is shown that the average price of pigeon in 115 TK and average number of mortality/farm/Year 6%

Discussion

In village area, Both male and female are rearing pigeon in a small scale scavenging system. Most of them are non educated, so they do not know the scientifically rearing system of pigeon. About 53.5% farmer were illiterate, 33.4% farmer were class one pass and 13.3% farmer were class two pass. Most of pigeon house were making by wood, bamboo or a container of plastic. Levi (1957) observed housing cost per pigeon only TK 14.00 when they used fish boxes which was much lower than the present study. In this current study, pigeon were reared in scavenging condition and nest are used as a night shelter for protection against predator. Nest was made strong and was placed at a reasonable height using strong support, which may be the reasons for higher housing cost. In confinement, simple and cheaper nest is possible to use because they are inside the confined house were predator problem is not prevalent. The average feed cost per day per pigeon is about 1.88 TK. During the marketing, pigeon generally sell in a pair. Farmer carry their pigeon and squab in a special type of bamboo made cage called "pingira". Some of the farmer carry their pigeon in a banana tree made "Khol". In village area pigeon farming not used to take facility of ventilation system. So in hot season pigeon take passing most time in the house or shelter.

Common diseases of pigeon

Common diseases I observed during this report writing time were:

Major diseases;

1. pigeon pox
2. Newcastle diseases
3. Lice infestation

Some other diseases;

4. Coccidiosis
5. Trichomoniasis
6. Ornithosis (caused by chlamydia)
7. Mycoplasma
8. Salmonellosis
9. Colibacillosis
10. Hexamiatis(Caused by infected Feeding)
11. Necrotic enteritis

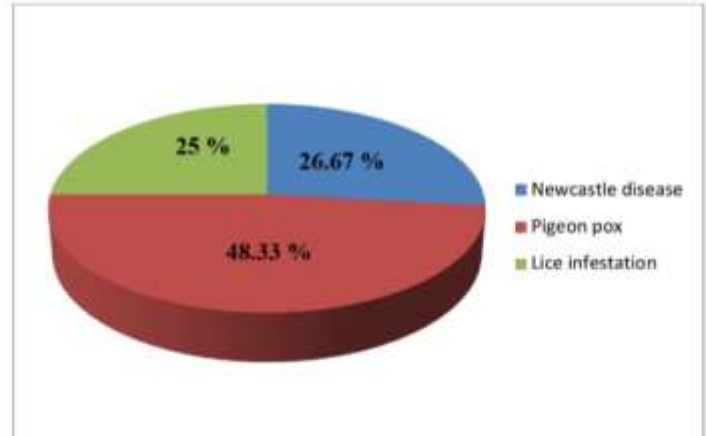


Fig5: Pigeon pox, Newcastle diseases, Coccidiosis, Diarrhoea

Conclusion

Pigeon farming in rural areas of Bangladesh is not well organized. Most of the villagers rear pigeon in small scale following scavenging system and provide supplementary feeding only. The farmers rear deshi (Indigenous) pigeon and having no idea about standard variety of pigeon. It is a profitable business and the price of pigeon meat is high. Pigeon farming may be increased in future provided government initiative to train farmers on management and extension of loans are ensured. Introduction of improve breeds and varieties may ensure better income and employment opportunity.

REFERENCES

1. Ahmed, S. (1988) Role of farming system research in identification of problems of poultry production. Proceeding of the workshop on Livestock Component of Farming System Research in Bangladesh, 21st December 1988, Bangladesh Agricultural Research Council, Dhaka, Bangladesh. (Accessed 5 July 2020)
2. Anonymous (1901) the only pigeon ranch in the world. The Strand Magazine. April, pp. 534–535. (Accessed 19 March 2020)
3. Bolla, G. (2007) Squab rising, Primefact 601, Replaces Agfact A5.0.4 (6th edi). (Accessed 22 July 2020)
4. Bretton, P. (1914) Pigeons for profit. London: C, Arthur Pearson Ltd. (Accessed 25 July 2020)
5. Haque, Q.M.E. (1987) Characteristics of two villages for farming system research. Farming System Research Programs, Bangladesh Livestock Research Institute, Savar, Dhaka, Bangladesh. (Accessed 27 July 2020)
6. Hofstad, M.S. (1978) Diseases of poultry (7th edi). Iowa State University Press, Ames IA. (Accessed 28 July 2020)
7. Khashaba, A.H.A. and Ibrahim, M.A. (2007) Nutritional and management studies on the pigeon: effect of protein, metabolizable energy level and/or season on productive performance of pigeons. Egypt PoultSci, 29, 923-945. (Accessed 30 July 2020)
8. Kigir, E.S., Sivachelvan, S.N. and Kwari, H.D., Sonfada, M.N., Yahaya, A., Thilza, I.B. and Wiam, I.M. (2010) Gross and microscopic changes in the gonads of male and female

- domestic pigeon (*Columbia Livia*). *New York Sci J*, 3(10), 108-111. (Accessed 1 August 2020)
9. Levi, W.M. (1969) *The pigeon*. Levi Publishing, Sumter SC. (Accessed 3 August 2020)
 10. Lewis, E.C., Charles, J.W., Edward, T.M. and Elton, I.J. (2003) *Homemade comfort cages for small poultry flocks*. Maryland Cooperative Extension, Factsheet 429. (Accessed 6 August 2020)
 11. Mellot, J.L. and Hilliker, A. (2008) *4-H Pigeon and Dove project*, Oregon State University, 4-H 154. (Accessed 8 August 2020)
 12. Miller, W.J. (1972) *Reproductive success in pigeon*. Iowa State University, Ames, Iowa. (Accessed 9 August 2020)
 13. Schock, R.C. and Cooper, R. (1978) *Internal parasitisms in captive birds* *Mod Vet Pract*, 59(6): 439. (Accessed 11 August 2020)
 14. Sturtevent, J. and Hollander, W.F. (1978) *Breeding pigeons at the lab*. *Pigeon science and genetics newsletter* 8 (suppl.), 7. (Accessed 13 August 2020)

Biography

Name	Sahab Uddin
Present position and affiliation	Intern student, 20th Batch, FVM, Chattogram Veterinary and Animal Science University.
Educational background and year	Doctor of Veterinary Medicine in 2019 (appeared), Chattogram Veterinary and Animal Science University. I completed my S.S.C with G.P.A 4.69 from Puichari Izzatia Ideal High School, Chattogram and H.S.C with GPA 5 from Blue Bird School and College, Sylhet.
Research interest	Pet and companion animal.
Aim	Be a Veterinary Surgeon.