

PIGEON FARMING IN GOURIPUR UPAZILLA OF MYMENSINGH DISTRICT

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Abstract

A survey was conducted using a pre-tested interview schedule in the village Charnelukhia under Gouripur upazilla of Mymensingh district to study the present status, problems and prospects of pigeon farming in the rural areas of Bangladesh. Data were collected from 15 pigeon farmers. Housing cost, height of house, duration of house, quantity of feed supplied to each pigeon/day, male female ratio, marketing age, weight, price of squab, number of squab/pair of pigeon, production of squab/year/pair of pigeon, price of each pigeon and mortality of pigeon were Tk. 113.33, 3.50m, 5 years, 34.50g, 1.07, 26.66 days, 258g, Tk. 51, 1.67, 19.53, Tk. 113.33 and 6.67% respectively. Most of the pigeon 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 its 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 ensured for improving income and employment opportunity.

Key words: Pigeon, Pigeon farming

Introduction

Bangladesh has a long historical record of raising poultry under backyard system. The weather and vast areas of crop field along with housing premises of Bangladesh are suitable for pigeon farming. The contribution 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-

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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. The ability of pigeon to carry messages has been reliably exploited in the warfare, trade, friendship maintenance and political administration. But now a day, the pigeons have also been mainly reared for family nutrition and recreation.

The current study was conducted to record present status, problems and prospects and to formulate some suggestions about pigeon farming in Gouripur upazila, Mymensingh, Bangladesh.

Materials and Methods

The selected area was village Chornelukhia under Gouripur upazila of Mymensingh district. The areas and farmers were selected purposefully and randomly. Keeping in view the objectives of the study, the village was also chosen on information that people of this village has been rearing pigeon since long time. The researcher had perception about better cooperation from the pigeon farmers and short distance from the authors residing place.

The interview schedule was carefully designed keeping the objectives in view. The schedule contained both open and closed form questions. Most easy, simple and direct questions were asked to obtain information. The interview schedule was pre-tested with 3 farmers for judging suitability of the pigeon farmers. After necessary modifications, the schedule was finalized. The parameters recorded are farmers personal information (age and education level), housing, feeding, management and marketing of pigeon and squab, consumption of pigeon meat by the rural farmer, some observations, problems and prospects in pigeon farming by the farmers. Authors also took some measurement himself such as the measurement of house; height and nest space and weight of squab on pigeon farming.

Collected data were compiled, tabulated and analyzed. Qualitative data were converted into quantitative forms by means of suitable score whenever needed and the local units were converted into standard unit scales. Simple tabular techniques were used to explain the data. Minimum, maximum, mean, standard deviation and percentage were used mainly to illustrate the results.

Results and Discussion

Farmers personal information

Age of pigeon farmers

Age of the pigeon farmers ranged from 20 to 70 years. The farmers were graded into 3 age categories, which are presented in Table 1. It is evident that 26.7 % were young, 53.3 % were middle age and rests 20 % were old. The mean and standard deviation of age of the pigeon farmers were 44.46 and 12.68 respectively.

Table 1. Farmer personal information

Categories Age (year)	Pigeon farmers		Range		Mean \pm SD
	No.	%	Maximum	Minimum	
Age					
A = 20-35	4	26.7			
B = 36-50	8	53.3	70	20	
C = 51-70	3	20			
Total	15	100			44.46 \pm 12.68
Education level					
Illiterate (Score-0)	8	53.3			
Class I (Score-1)	5	33.4	2	0	
Class II (Score-2)	2	13.3			
Total	15	100			0.63 \pm 0.60
House construction costs					
Low (Tk. 70-90)	3	20			
Medium (Tk. 91-100)	4	26.7	150	70	
High (Tk. 101-150.)	8	53.3			
Total	15	100			113.33 \pm 24.39
Height of house					
Minimum (1.8-3.1 m)	7	46.7			
Medium (3.4-4.7 m)	6	40	6.4	1.8	
Maximum (4.7-6.4 m)	2	13.3			
Total	15	100			3.50 \pm 1.30
Duration of house					
Low (3-4 years)	6	40			
Medium (5-6 years)	6	40	8	3	
High (7-8 years)	3	20			
Total	15	100			5 \pm 1.46
Feed supplied to pigeon					
Low (32-33 g)	7	46.7			
Medium (34-35 g)	5	33.3	37	35	
High (36-37 g)	3	20			
Total	5	100			34.50 \pm 8.42

A = Young, B = Middle aged, C = Old

Age of the pigeon farmers observed (44.46) coincide with Khanum (1997) but contradict with the observation of Rahman (2002). The differences could possibly be explained by the year and area of study.

Education level of pigeon farmers

Level of education is an important indicator for pigeon farming. Score was ranged from 0 to 2, with an average of 0.63. The standard deviation was 0.60. The farmers were classified into 3 categories on the basis of their level of education. Data presented in Table 1 showed that most of the farmers (53.3%) were illiterate, 33.4% farmer were class one pass and 13.3% class two pass.

Results revealed that pigeon farmers had lower education level (53.3% illiterate and 46.7% literate) in the context of Bangladesh. According to BBS (1999-2002), illiterate and literate people were about 54.7 and 45.3%, respectively which coincide with the present findings

Housing of pigeon

House construction cost

Maximum construction cost of pigeon house was Tk.150, while minimum cost was Tk. 70 and the average cost was Tk. 113.33. The standard deviation was 24.39. The pigeon farmers were classified into 3 categories. Among them, 20.0% farmers need low cost housing (Tk. 70-90), 26.7% farmers used medium cost housing (Tk. 91-100) and rest 53.3% used high cost housing (Tk.101-150) for pigeon rearing (Table 1).

Levi (1957) observed housing cost per pigeon only Tk. 14.00 when they used fish boxes which was much lower than the present study (Tk. 113.33). In the current study, pigeons were reared in scavenging condition and nests 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 placed inside the confined house where predator problem is not prevalent. However, the housing cost of pigeon is about Tk.2.00/month/pair of pigeon appears to be very cheap and reasonable. Construction materials used for pigeon house were wood and bamboo.

Height of house

The height of the pigeon house ranged from 1.8-6.4m. The average being 3.5 m and standard deviation 1.3 (Table 1). Based on the height, pigeon house was classified into 3 categories namely minimum height (1.8-3.1m), medium height (3.4-4.7m) and maximum height (4.7-6.4m). In the current study, maximum height of house was noted 6.4m and minimum was 1.8m for pigeon. The height appears to be 3.45m which is reasonably fair because farmers try to protect their pigeon from predators by placing nest at a height where it is difficult for predator to reach.

Duration of house

It is evident (Table 1) that 40% pigeon farmers found duration of pigeon house 3-4 years, 20% found 7-8 years and rest 40% found 5-6 years. In the present study, maximum duration of pigeon house was 8 years and minimum duration was 3 years.

Feeding of pigeon and squab

Quantity of feed supplied to pigeon

Table 1 shows that the quantity of feed supplied to pigeon ranged from 32g/day to 37g/day, with an average 34.5g/day. Feed was classified into 3 categories on the basis of supply. Among the pigeon farmers, 46.7% supplied 32-33g/day, 33.3% supplied 34-35g/day and 20% supplied 36-37g/day feed to pigeon.

Pigeon feed cost was Tk. 28.00 per kg. Therefore, spending on feed (34.5g/day) for each pigeon was Tk. 1.00 per day. Feeding one pair of pigeon requires about 69g of feed which costs about Tk. 2.00 per day. Monthly cost of feeding for a pair of pigeon stands at Tk. 60.00. Spending on feed for each pigeon was much lower (Tk. 1.00/day) than that reported (Tk. 1.33/day) by Strand Magazine (1901) and Bretton (1914). They reported feed intake per pigeon per day was 47.35g which was higher than the present observation. The differences have possibly been arisen because in the present study, pigeons were reared in scavenging system and farmers supplied only supplementary feeding whereas, in other studies the pigeons were reared in confinement. However, in the present study, the feed supplied by farmers is kitchen waste which practically got no value. Scavenging ability of pigeon is higher than that of chicken because pigeon can travel long distance in search of feed. Information was collected on supplementary feeding only. But the total feed intake was not possible to record by the farmers because amount of feed collected by scavenging could not be ascertained.

Number of male pigeon

Based on the population, male pigeon ranged from 1 to 10 with an average and standard deviation of 3.07 and 2.46 respectively (Table 2). On the basis of male number, the pigeon farmers were classified into 3 categories. Majority (46.7%) farmers were in low category i.e., reared 1-2 pairs of pigeons, 33.3% were medium and 20% were high category.

Number of female pigeon

The number of female pigeon scores ranged from 1 to 10, the average being 2.86 and the standard deviation 2.00 (Table 2). The pigeon farmers were classified into 3 categories. 46.7% reared 1-2 number of female, 40% reared 3-4 number of female and rest 13.3% reared 5-10 female pigeon.

Usually, pigeons are reared as pairs. Therefore, male female ratio should be 1.0. In this study, the ratio appears to be different (1.07). Male female ratio different from 1.0 obtained was in agreement with Darwin (1874) and Cole and Kirkpatrick (1915). Darwin reported that more male squabs are produced than female, whereas, Cole and

Kirkpatrick documented male female ratio as 1.05. However, Levi (1957) indicated (information from Palmetto Pigeon Plant, 1938) that male female ratio varied in different breeds and varieties. The ratio was 0.97 in Red and Yellow Carneaux, 1.0 in White Carneaux, 1.01 in Homers and 0.92 in Silver Kings X White Carneaux. Some of this information coincides with present study while some others contradict. Death, infertility or barren problem more in female than male, may be the reason why ratio differed from equity.

Table 2. Management of pigeon and squab

Parameters	Pigeon farmers		Range		Mean \pm SD
	No.	%	Maximum	Minimum	
Number of male pigeon					
Low (1-2)	7	46.7			
Medium (3-4)	5	33.3	10	1	3.07 \pm 2.46
High (5-10)	3	20			
Total	15	100			
Number of female pigeon					
Low (1-2)	7	46.7			
Medium (3-4)	6	40.0	10	1	2.86 \pm 2.00
High (5-10)	2	13.3			
Total	15	100			
Marketing age of squab					
20-24 days	2	13.33			
25-29 days	6	40	35	20	26.66 \pm 3.62
30-35 days	7	46.67			
Total	15	100			
Weight of squab (g/squab)					
200-230	3	20.0			
240-250	7	46.7	300	200	258 \pm 30.75
260-300	5	33.3			
Total	15	100			
Price of squab (Tk./squab)					
Low (Tk. 40-45)	4	26.7			
Medium (Tk. 46-50)	6	40.0	60	40	51 \pm 6.04
High (Tk. 51-60)	5	33.3			
Total	15	100			
Production of squab/year/pair of pigeon					
Low (18-20)	4	26.7			
Medium (20-22)	7	46.6	24	18	19.53 \pm 1.51
High (22-24)	4	26.7			
Total	15	100			

Marketing of pigeon and squab

Marketing age of squab

Marketing age of squab was grouped into 3 categories i.e., 20-24 days, 25-29 days and 30-35 days. Most of the pigeon farmers (46.6%) sold their squab within 30-35 days, 40% sold during 25-29 days and the rest 13.3% sold in 20-24 days (Table 2). The range of marketing age was 20-35 days and The average marketing age was 26.66

As per definition, theoretically age of marketing should be 28 days. Practically, marketing age varied from 20 to 35 days with an average of 26.67 days. The results disagree with Levi (1957). He reported marketing age varying from 25 to 35 days with an average of 30 days. People choice varied from country to country regarding squab consumption by consumers. Farmer attitude, variation of village market days, selling for emergency need of money and to entertain guest with squabs are either sold or consumed earlier or later. During marketing, farmers carry their pigeon and squab in a special type of bamboo made cage called “pingira”. Some others carry them in a banana tree made “khol”.

Weight of squab (g/squab)

It is evident that the squab weight ranged from 200 to 300g with an average of 258g (Table 2). On the basis of squab weight, they were classified into 3 categories. Majority of the squabs (46.7%) were 240-250g, while 33.3% were 260-300g and 20% were within 200-230g weight in the current study, average weight of squab was found 258g which disagreed with the observation of Levi (1957). He reported weight of squab to be about 340.91g to 454.55g. The variation in weight of squab may be due to difference in breed, variety and marketing age.

Price of squab (Tk./squab)

It is evident that the maximum, minimum, mean and standard deviation of squab price were Tk. 60, Tk. 40, Tk. 51 and 6.04 (Table 2). The price of pigeon was categorized into 3 categories i.e., low price (Tk. 40-45/squab), medium price (Tk 46-50/squab) and high price (Tk. 51-60/squab) which accounted 26.7%, 40% and 33.3% respectively.

The price of squab is high because it is sold as fancy meat bird consumed as delicacy. As per record of this study, squab is sold at a calculated price of Tk. 197.67/kg which appears to be too high in comparison with that of other poultry meat. Therefore, it appears that pigeons are purchased as a fancy meat bird considering their palatability, delicacy and taste.

Production of squab/year/pair of pigeon

Based on the production of squab/year/pair of pigeon, pigeon farmers were classified into 3 categories; low (18-20), medium (20-22) and high (22-24) which accounted 26.7%, 46.6% and 26.7% respectively (Table 2). Maximum production of squab was 24 numbers/year/pair and minimum production was 18 numbers/year/pair.

There is a belief that a good commercial pair of pigeon should produce 18 to 20 squabs/year (Levi, 1957). The number of squab produced in the study area for each pair of pigeon was 19.53 which is very close to the figure as per general belief (Levi, 1957) but it contradicted the findings of Delhauer (1934) and Platt and Dare (1937). Delhauer (1934) documented 9.47 squabs per pair per year and he also reported 16+ squabs/pair/year from White Carneaux. Platt and Dare (1937) recorded 11.4 squabs/pair/year. They also found 15+ squabs squab/pair/year in White Kings. Pigeon are fairly prolific breeder. They are supposed to produce 24 squab/pair/year. Poor hatchability, homosexuality of pairs and diseases has been reported by farmers as reasons to deplete prolificacy in pigeon.

Price of pigeon

From Table 3, it is shown that pigeon price was minimum at Tk. 80 and maximum at Tk. 140. Its mean and standard deviation were Tk. 113.33/pigeon and 18.77 respectively. Most of the pigeon farmers (53.3%) sold their pigeon at Tk. 91-120/pigeon, 20% sold at Tk. 80-90/pigeon and 26.7% sold at Tk. 121-140/pigeon.

Table 3. Price of and mortality of pigeon

Parameters	Pigeon farmers		Range		Mean \pm SD
	No.	%	Maximum	Minimum	
Price					
Low (Tk. 80-90)	3	20			
Medium (Tk. 91-120)	8	53.3	140	80	113.33 \pm 18.77
High (Tk. 121-140)	4	26.7			
Total	15	100			
Mortality of pigeon					
Low (5)	10	71.4			
Medium (10)	2	14.3	15	5	6.67 \pm 4.08
High (15)	2	14.3			
Total	14	100			

Rahman (1999) reported each loton pigeon was sold at Tk. 150-200, whereas, Levi (1957) observed the price of each commercial pigeon was Tk. 175.00 which is higher than that recorded in the present study (Tk. 113.33). Lower price in the current study, may be for non-descriptive pigeon reared are much cheaper than the standard commercial variety.

Mortality of pigeon

Mortality of pigeon ranged from 5 to 15% (Table 3). The total pigeon farmers were categorized in three groups as low (5), medium (10) and high (15). Among the pigeon farmers, 71.4% reported low mortality, 14.3% farmers reported medium to high mortality in pigeon.

Most of the mortality occurs from the attack of predators and disease. Mortality appeared to be very negligible (6.67 %). Usually the predator for pigeon and squab are palm civet (*Paradoxuruf hermaphrodites*), weasels (*Herpestes edwardsi*) and wild cat (*Felis chaus*). In rare cases, some squabs are killed by domestic cats (*Felis domestica*). Transportation mortality was negligible in case of pigeon and squab. This may be an advantage over chicken. In broiler, 1-2% mortality was found during transportation by Veerkamp (1978).

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 *desi* (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.

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