

# WORLD JOURNAL OF GASTROENTEROLOGY, HEPATOLOGY AND ENDOSCOPY



## Management Practices of Pigeon Farming in Selected Areas of Bangladesh

Akter MTD<sup>1</sup>,  
Sarder MJU<sup>1</sup>,  
Islam MH<sup>1\*</sup> and  
Md Nahid Alam<sup>2</sup>

<sup>1</sup>Department of Veterinary and Animal Sciences, Faculty of Agriculture, University of Rajshahi, Bangladesh

<sup>2</sup>Eskayef Pharmaceuticals Limited, Dhaka, Bangladesh

### Article Information

<b>Article Type:</b>	Research Article	<b>*Corresponding Author:</b>	<b>Citation:</b>
<b>Journal Type:</b>	Open Access	JMd Hemayatul Islam,	Islam MH (2021). ACE2 Up-Regulated Expression and DNA Methylation in Gastric Diseases Associated with Helicobacter Pylori Infection: Implications for COVID-19. World J Gastroenterol Hepatol Endosc. 3(5); 1-6
<b>Volume:</b>	Issue: 5	Department of Veterinary and Animal Sciences, Faculty of Agriculture, University of Rajshahi, Bangladesh,	
<b>Manuscript ID:</b>	WJGHE-3-136	E-mail: hislam.islam@gmail.com	
<b>Publisher:</b>	Science World Publishing		
<b>Received Date:</b>	19 May 2021		
<b>Accepted Date:</b>	09 June 2021		
<b>Published Date:</b>	14 June 2021		

**Copyright:** © 2021, Islam MH, *et al.*, This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 international License, which permits unrestricted use, distribution and reproduction in any medium, provided the original author and source are credited.

### ABSTRACT

The research was conducted to determine the management practices of pigeon farming in selected areas of Bangladesh. The data were collected directly from the pigeon farmers through questionnaires and by observing the management practices including rearing system, housing pattern, feeding quality, water source, feed supplement, cleaning practices, treatment pattern, vaccination and deworming programme of pigeon farming in Bangladesh. The data were compiled to incorporate the computer software SPSS package for analysis. In this experiment two types of pigeon housing system observed in the selected areas. Among 45 selected pigeon farm 33% farm using traditional housing system and 67% were found modern housing system. In case of rearing system three types of pigeon rearing system found in study areas 12(26.66%) scavenging, semi-scavenging 8(17.77%) and 25(55.55%) intensive rearing system. During this study period among 45 pigeon farm 82% farmer used additional feed supplement to their pigeon diet on the other hand 18% farmer did not supplied any feed additives to their pigeon diet in research areas. In this aspect of source of water supply from selected farm 21(46.67%) used tape water, 16(35.56%) tubewell water and 8(17.78%) used other source of water were recorded. In current study we observed 15.56% farm-

er used poor quality feed, 22.23% farmer used medium and good quality feed supplied to their pigeon 62.22% farmer in the study areas. The present research activities also stated that there is 28.89% farmer had no consultation for their pigeon treatment in the study areas. About 44.45% followed village doctor services and only 26.67% farmer maintain veterinary doctor consultation. Among 45 selected pigeon farm 51.12% farmer regularly clean their farm, 26.67% irregular and 22.23% did not maintain cleaning practices in their pigeon farm. In relation with vaccination programme of pigeon farm. On the other hands 40% regular, 33.33% irregular and 26.67% none farmers were maintained vaccination schedule in their farming of pigeon and in case of deworming 46.67% regular, 26.67% irregular and 26.67% none. In the current study in a modern or commercial pigeon farm found different feed ingredients supplied in average like 30% wheat, maize 14%, anchor pulse 4%, mousari pulse 12%, green pea 4%, black pea 4%, red pea 4%, chickpea 4%, kosum ful 6%, Australian duple 12% and arohor pulse 6%. Feed ingredients are differing from availability of feed ingredient, season and areas of the study.

**KEYWORDS:** Rearing system, housing pattern, feeding quality, water source, feed supplement, cleaning practices, treatment pattern, vaccination and deworming and pigeon

## INTRODUCTION

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. Pigeons live side by side with human used as pets, cultural and religious symbols and they also have value as a source of food, hobby and experimental purposes [1] (Sari *et al.*, 2008). 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. Recently, the fancy pigeon has been introduced in Bangladesh and people are cordially interested in fancy pigeon rearing. The pigeon population in Bangladesh is approximately 11.0 million [2] (Sarder, 2014). Although commercial broiler and layer farm fill up present requirement of protein, but people feel monotonous with chicken meat and they desire another safe meat. So many people begin pigeon farming to fulfill public demand and become economically enriched [3] (Paul *et al.*, 2015). The farmers reared the local breed for squab production (meat purpose) and keep exotic & fancy pigeons breed for commercial intention. The pigeons were reared in scavenging, semi-scavenging and intensive condition and nests were used as a night shelter for protection against predator. Each pair of pigeon was kept in nest separately. 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 [4] (Asaduzzaman *et al.*, 2007). The current study was conducted to management practices of pigeon farming in selected areas of Bangladesh.

## METHODOLOGY

In these research activities 45 selected pigeon farms of three dis-

tricts (City corporation of Rajshahi, Sadar upazilas of Natore and Pabna) of Rajshahi division have been visited and the different breeds and varieties of pigeons were observed. The data were collected directly from the pigeon owners/farmers/attendant by using questionnaires. The management of pigeon viz. housing, feed habit and feeding, breeding, watering, hygienic management, vaccination and deworming programme were observed individual groups and data collected from farm with regular interval by own visit or over phone. After collecting the questionnaire and information with related data then data were analyzed.

## RESULTS

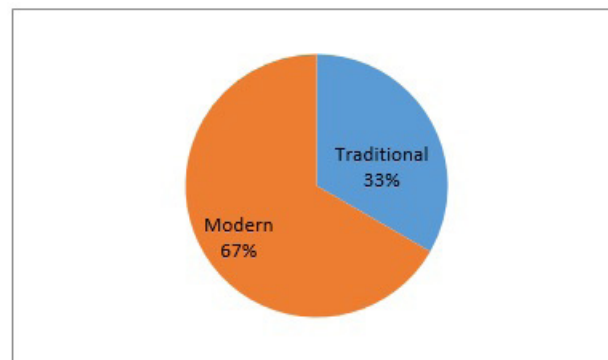
The management of pigeon viz. housing, feed habit and feeding, breeding, watering, hygienic management, vaccination and deworming programme were observed individual groups and data collected from farm with regular interval by own visit or over phone. The results are described as bellows-

In this experiment observed two types of pigeon housing system in the selected areas. Among 45 selected pigeon farm 33% farm using traditional housing system and 67% were found modern housing system which graphically represent in (figure 1).

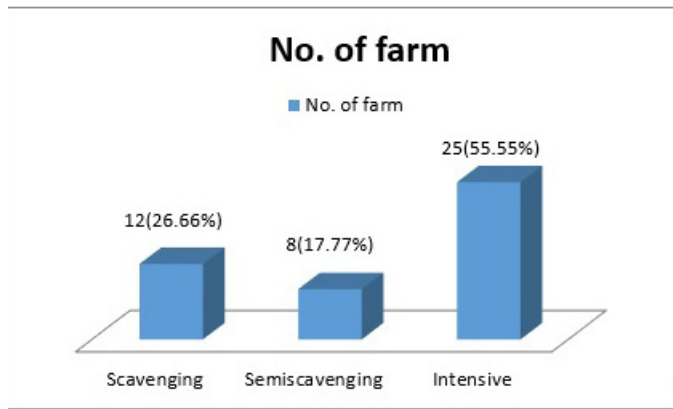
In case of rearing system three types of pigeon rearing system found in study areas. A total of 45 farm 12(26.66%) scavenging, semi-scavenging 8(17.77%) and 25(55.55%) intensive rearing system were observed (Figure 2).

During this study period among 45 pigeon farm 82% farmer used additional feed supplement to their pigeon diet on the other hand 18% farmer did not supplied any feed additives to their pigeon diet in research areas (Figure 3).

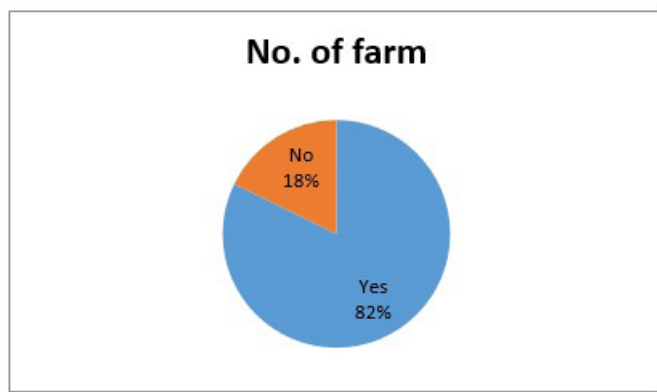
In this aspect of source of water supply among 45 farm 21(46.67%) used tape water, 16(35.56%) tubewel water and 8(17.78%) used other source of water were recorded during study period (Figure 4). (Table 1,2,3,4) .



**Figure 1:** Graphical representation of Housing system of pigeon found in study area

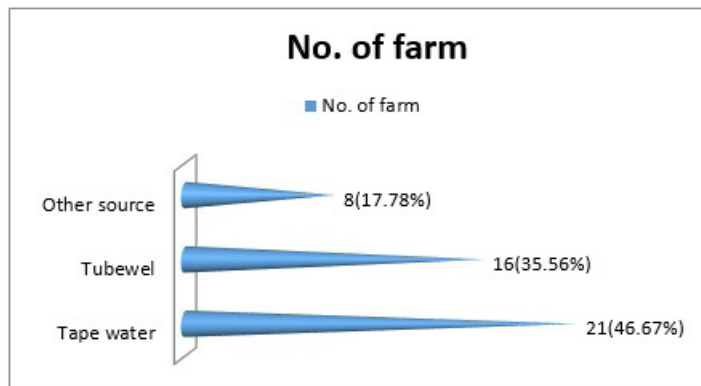


**Figure 2:** Graphical representation of Rearing system of pigeon found in study area



**Figure 3:** Additional feed supplements supplied by the farmer found in study area in graph.

**Figure 5:** Housing pattern of traditional pigeon farm



**Figure 4:** Graphical presentation of source of water supplied by the farmer found in study area





Figure 6: Modern pigeon housing pattern



Figure 7: Housing pattern of commercial pigeon farm

Table 1: Quality of feed of pigeon farm in study area

Quality of feed	No. of farm	Percentage (%)
Poor	7	15.56
Medium	10	22.23
Good	28	62.22
Total	45	100

During this study observed 15.56% farmer used poor quality feed, 22.23% farmer used medium and good quality feed supplied to their pigeon 62.22% farmer in the study areas (Table 1).

Table 2: Vaccination & cleaning programme of pigeon farm in study area

Legend	Vaccination programme		Cleaning practice		Deworming	
	No. of farm	Percentages	No. of farm	Percentages	No. of farm	Percentages
Regular	18	40	23	51.12	21	46.66
Irregular	15	33.33	12	26.67	12	26.67
None	12	26.67	10	22.23	12	26.67
Total	45	100	45	100	45	100

In the present study 40% regular, 33.33% irregular and 26.67% none farmer was maintained vaccination schedule in their farming of pigeon observed from table 2. Whereas 51.12% & 46.66%, 26.67% & 26.67% and 22.23% & 26.67% of pigeon farmers regular, irregular and none respectively was practiced cleaning and deworming. (Table 2)

Table 3: Veterinary services in pigeon farm in study area

Veterinary services	No. of farm	Percentage (%)
Veterinary doctor	12	26.67
Village doctor	20	44.45
No consultation	13	28.89
Total	45	100

In the present research activities stated that there was 28.89% farmer had no consultation for their pigeon treatment in the study areas. 44.45% followed village doctor services and only 26.67% farmer was maintained veterinary doctor consultation.

Table 4: Feed composition for commercial/modern pigeon farm

Name of ingredients	Percentage (%)
Wheat	30
Maize	14
Anchor pulse	4
Mousari pulse	12
Green Pea	4
Black Pea	4
Red pea	4
Chickpea	4
Kosum ful	6
Australian Duple	12
Orohor pulse	6
Total =	100

## DISCUSSION

In this experiment two types of pigeon housing system observed in the selected areas. Among 45 selected pigeon farm 33% farm using traditional housing system and 67% were found modern housing system. In the similar studies Ahamed *et al.* (2019) [5] stated that three types of housing systems were identified and these were metal mesh single tier type (7.3%); wooden multiple tier type (83.6%) and wooden + metal mesh multiple tier type (9.1%). Standard shelf size required for a pair of pigeons 60 x 60 x 60 cm<sup>3</sup> was provided by 61.8 % of the farmers. Prasad *et al.* (2017) [6], observed six main housing systems based on the type of material used for cages. Most of the farmers was found to use Wooden + metal mesh multiple tier system of housing as it was cheaper and easy for maintaining hygiene and durable. Metal mesh only type was the next most used type of housing, it was commonly used by large scale production owners and was most durable type of housing among all other cages. In case of rearing system three types of pigeon rearing system found in study areas. A total of 45 farm 12(26.66%) scavenging, semi-scavenging 8(17.77%) and 25(55.55%) intensive rearing system were observed. Ireen Sultana (2015) [7] and Asaduzzaman *et al.* (2009) [4] recorded pigeon was reared in scavenging condition and nests are used as night shelter for protection against predator. For intensive of semi-intensive rearing most of the pigeon showed fight to each other Kabir (2018) [8] was found in his studies so, be very careful mainly after laying and hatching. The pigeons were reared in modified poultry cages Ghosh *et al.* (2013) [9] stated that on his research work. During this study period among 45 pigeon farm 82% farmer used additional feed supplement to their pigeon diet on the other hand 18% farmer did not supplied any feed additives to their pigeon diet in research areas. 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 Asaduzzaman *et al.* (2009) [4] observed in his studies. Used as feed additives the selenium content of pigeon diets plays an important role and significantly affects the most important reproduction traits. Feeding high selenium diets increases number and weight of weaned squabs stated by Khashaba *et al.* (2009) [10]. In this aspect of source of water supply among 45 farm 21(46.67%) used tap water, 16(35.56%) tubewell water and 8(17.78%) used other source of water were recorded during study period. Kabir (2013) suggested that through his research fresh tubewell water was available everywhere for the pigeons use and as a result no production was hampered. There was very limited or in some cases no related research could be found for comparisons with current research activities. In current study was observed 15.56% farmer used poor quality feed, 22.23% farmer used medium and good quality feed supplied to their pigeon 62.22% farmer in the study areas. Feed was classified into 3

categories on the basis of supply. Asaduzzaman *et al.* (2009) [4] reported that 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. In the present study 40% regular, 33.33% irregular and 26.67% none farmer-maintained vaccination schedule in their farming of pigeon. In the present research activities also stated that there is 28.89% farmer had no consultation for their pigeon treatment in the study areas. 44.45% followed village doctor services and only 26.67% farmer maintain veterinary doctor consultation. Among 45 selected pigeon farm 51.12% farmer regularly clean their farm, 26.67% irregular and 22.23% did not maintain cleaning practices in their pigeon farm in study areas. Kabir (2013) [11] reports have shown that the cage trays are cleaned twice a day and this keeps the pigeons free from all the diseases. In relation with vaccination programme of pigeon farm the results revealed that 40% regular, 33.33% irregular and 26.67% none farmer-maintained vaccination schedule in their farming of pigeon and in case of deworming 46.67% regular, 26.67% irregular and 26.67% none farmer practices. In the current study in a modern or commercial pigeon farm found different feed ingredients supplied in average like 30% wheat, maize 14%, anchor pulse 4%, mousari pulse 12%, green pea 4%, black pea 4%, red pea 4%, chickpea 4%, kosum ful 6%, Australian duple 12% and orohor pulse 6%. Different type of feed ingredients was supplied to the pigeon like yellow corn (33.75%), hard wheat (18.75%), peas (20%), rapeseed (4%), cowpeas (2.5%), hilled oat (3%), polished rice (4.747%), Milo (16.25%) reported in a similar study by Ireen Sultana (2015) [7]. Feed ingredients are differing from availability of feed ingredient, season and areas of the study.

## CONCLUSIONS

According to the results and discussion the present experiment concluded that the proper management practices of the pigeon farm was helped for better production and growth performance of pigeon. Regular cleaning, vaccination, deworming and proper treatment services was also useful for control measures of the prevalence of pigeon diseases in the farms.

## REFERENCE

1. Sari B, Karatepe B, Karatepe, M and Kara M. Parasites of domestic pigeon (*Columba livia domestica*) and wild (*Columba livia livia*) pigeons in Niğde, Turkey. *Bulletin of the Veterinary Institute in Pula*. 2008; 52: 551-554.
2. Sarder, MJU. Present and future prospects of pigeon farming in Bangladesh. Bangladesh Society for Veterinary Education and Research (BSVER), Bangladesh Agricultural University, Mymensing, BSVER Publication. 2014; 39. P-48.
3. Paul TK, Amin MR, Alam MA, Rahman MK, Sarker YA and Rizon MK. Occurrence of Pigeon Diseases at Khulna Sadar, Bangladesh. *Bangladesh Journal of Veterinary Medicine*. 2015; 13 (2): 21-25.

4. Asaduzzaman M., Mahiuddin M., Howlider M. A. R., Hossain M. M. and Yeasmin T. Pigeon farming in Gouripur upazilla of My-mensingh district. *Bangladesh Journal of Animal Science*. 2009; 38(1&2): 142-150 ISSN 0003-3588.
5. Ahamed S A. and Mufeeth Mohammathu M.M. The housing system of pigeon (*Columba livia*) farming in selected areas of Sri Lanka, *Proceedings of the 8th Annual Science Research Sessions-2019*.
6. Prasad K, Deepandita B, Asif M and Abraham J. Pigeon farming practices and constraints in Kerala, *Global Journal of Bio-science and Biotechnology*. 2017; 6 (1): 86-88.
7. Ireen Sultana. Socioeconomic study on backyard pigeon farming system in some selected area of Chittagong district, thesis paper. 2015.
8. Kabir M A. Necessary steps to establish a first-time pigeon farm, *Journal of Dairy, Veterinary & Animal Research*. 2018; 7 (6): 248-251.
9. Ghosh KK, Sikder S, Chowdhury S, Ray MK, Sarker A and Chanda GC (2013). A study on management system of an intensive pigeon farming at Chittagong, *Wayamba Journal of Animal Science* – ISSN: 2012-578X; P623-P628. 2013.
10. Khashaba HA, Mariey YA, and Ibrahe MA. Nutritional and management studies on the pigeon: effect of selenium source and level on pigeon's performance, *Egyptian Poultry Science Journal*. 2009; (29) (IV): 971-992.
11. Kabir M. A. Productivity, management and marketing of pigeons in petshop, *Journal of Agricultural Economics and Development*. 2013; Vol. 2(4), pp. 147-153.