

Grading and Color Genetics of Gorra Pigeons (*Columba livia domestica*) in Bangladesh: A Study on Their Phenotypic Variations and Inheritance Patterns

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ABSTRACT

Gola/Golla/Rajgolla and gorra pigeons are confusingly described in Bangladesh to everybody. Basically, gorra pigeons are completely different than others. This is a colorful highflying pigeon in the country. In order to make this breed as exclusive pigeon breed of Bangladesh, this paper will carry out an impact. Imagine Loft of Uttara, Dhaka was the main studied loft to know the overall management of various gorra pigeons. From 2016 to date, at regular basis impatient observation by own or from the owner of this loft, the overall loft management, plumage and eye color, and feather genetics were observed. A register of this loft helped a lot to compile information especially on genetic parameters. Out of 125 gorra pigeons, 9 types of colors were noted where 40 were found red due to dominancy, 30 black, 15 blue, 15 khaki/silver, and others 25. Putul gorra was specially mentioned with some different characteristics. Due to some non-judicious breeding in gorra pigeons, some plumage colors were confusing with the bookish information or online snaps. On the basis of the grading of gorra pigeon, out of 100 marks, a fresh-bird got 92 which indicated its purity thus establish as an exclusive pigeon breed of Bangladesh.

Keywords: Gorra Pigeons, Imagine Loft, Grading, Color Genetics, Phenotype, Dhaka, Bangladesh.

INTRODUCTION

In Bangladesh, there are significant number of pigeon markets where all types of pigeons are available [1]. In the world, most of the pigeons are included in the highflyer group [2]. From the Indian highflyer pigeon, through selective breeding [3], gorra pigeons have been evolved. Since there is no sufficient written history about this breed but pigeon breeders focused adequate evidences on this issue. Gorra pigeon breeders are habituated to fly their pigeons and are not interested to see them tumbler pigeon. This pigeon does perform from 2 to 7 hours flying in the sky

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(Table 3). These pigeons are used in race (till now 101 km). Like some other non-tumbling tumblers [4] gorra pigeons do not tumble in the sky. Pigeon flying was a significant hobby of the breeders in the world [5]. Its appearance is somewhat tumblers. Perspective Bangladesh, now this is only the best colorful highflyer fancy pigeon to everybody. Till now, true or actual marking of this pigeon is not completed by the experts. Some breeders are trying to establish this breed as an exclusive breed of Bangladesh in the next international pigeon show. Besides, in Bangladesh, there are other pigeons named gola/golla/rajgolla (golla of Rajshahi Bangladesh) (Plate 5) is somewhat gorra pigeons but their body structure is slightly different with narrow body and long beak and are mostly crested whereas most gorra pigeons are plain-headed. Like other beautiful pigeons of Bangladesh [6], gorra pigeons can be an addition. At the initial stage [7] or

for commercial breed [8], gorra pigeons are the best for its overall productivity. Bald-head is a traditional marking in highflyer and tumbling breeds and also found in jacobins with their pearl eyes [9]. The objective of this write-up is to focus this breed as an exclusive pigeon breed of Bangladesh after fulfilling a standard marking system.

MATERIALS AND METHODS

Gorra pigeons in Imagine Loft: For this study, 125 gorra pigeons from the Imagine Loft of Dhaka Bangladesh (Plate 1) were reared for several years, and this loft was the main target to focus this breed to everybody as an exclusive breed of the country. There were two sections of this loft—flying zone and breeding loft. The breeding loft is measured with 8 feet length, 10 feet width, and 9 feet height as well.

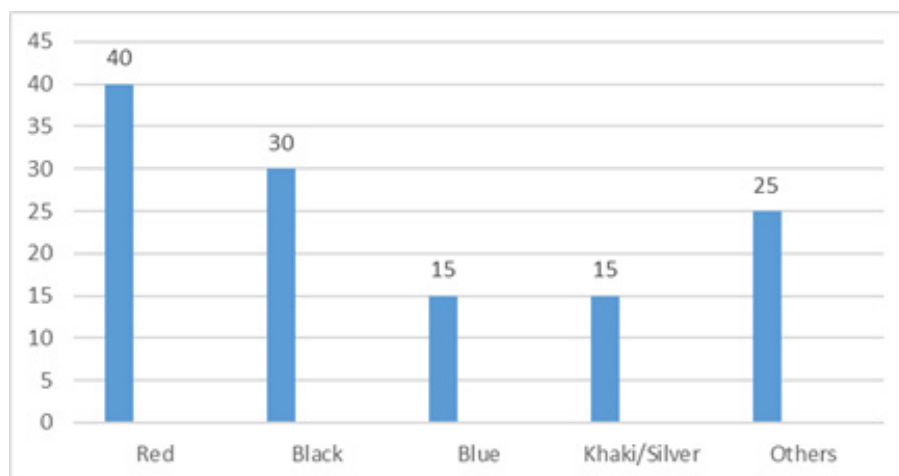


Figure 1. Number of colorful gorra pigeons in Imagine Loft of Dhaka.



Plate 1. Roof of the Imagine Loft with remarkable gorra pigeons.

Feed ratio: Like other fancy pigeons, gorra pigeons were got same type of feed ratio as their daily requirements. Pigeons were provided as usual feed from the local market. Feed was changed according to the availability of the feedstuff on the basis of various seasons of Bangladesh. To achieve better productivity of pigeons, feed ratio at different stages need to provide strictly [10].

Impatient remarks: In order to observe the entire productivity and management of gorra pigeons, observation by the owner and accumulated information from the register helped to understand these pigeons. Breeding performance showed a significant output on these findings. Owner of

Imagine Loft Imran Hossain took squab from the breeding pairs twice in a year, rest of the months, both male and female birds were separated from each other (Plate 1). This type of management was significant for the fitness of gorra pigeons.

RESULTS AND DISCUSSION

Grading points: The book of Levi [11] was the main indicator to grade this pigeon. Out of 100 marks, the maximum score was noted 92 (Plate 2). Sometimes, from the fresh-marking parents, few individuals showed mismarked especially on head and wings (Plate 3). Grading system is important to rear pigeons in order to get profit from the breeds [12] (Table 1).

Table 1. Features and marking points of gorra pigeon

Features	Points	Given score
Body, breast, construction	22	20
Carriage, symmetry	8	8
Head	7	7
Eyes	3	2
Irises	3	2
Beak	5	5
Cere	2	1
Neck	5	5
Wings	5	5
Tail	3	2
Color in general	20	20
Feather condition	5	4
Legs	4	4
Claws	3	3
Overall condition	5	4
Total	100	92

Source: [11]



Plate 2. Perfectly marked red gorra pigeon.

Following disqualifications could be implemented during judging –

1. Off-color;
2. Excessive parasites;
3. Too large or too small;
4. Ill body;
5. Split or less tail feathers;
6. Wing below the tail;
7. Showing illegal temper;
8. Deformed keel;
9. Beak and claws will be black-white mixed (serious issue to produce mismarked squab).



Plate 3. Mismarked gorra (phata in Bangla).

Color genetics: Colors are nothing but the spreading of pigments. Basically, the amount of pigment showed the actual plumage color of pigeons. Phenotypically, some pigeons are confusing to understand their colors (Table 3). In the case of pigeons, same pigments are involved for the color blue and black. Genetically, blue color of rock-pigeons is wild-type (dominant) but black is actually wild-type with spread. According to the owner of Imagine Loft, Imran Hossain shared his findings about the color genetics of his pigeons (Table 2). Due to dominancy, out of 9 colors, red was found the highest (Figure 1). To study of plumage




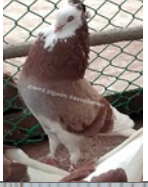


color, body structure, and behavior [13], these pigeons are of course an ideal bird at all. Various types of white-headed and head-marks of pigeons [9,14] could enhance the affection to continue this pretty bird in the loft. Compared to the bald-heads of English short-faced tumblers [15], and also most monk-marked breeds, the cut (the mark-off between white head and color) is lower and similar to West of England Tumblers. Bald-head trait is a combination of different pied traits and the white head might be isolated, thus producing colored birds with white head or cap only [16].

Table 2. Color genetics of gorra pigeons

Pigeons	Male	Female	Offspring (%)
Breeding pair 1	Red	Black	Red was 80-90; black 10-20
Breeding pair 2	Black	Red	Black was 60-80; red 10-20

Source: Imran Hossain (field study)

Table 3. Nine colorful gorra pigeons in Imagine Loft

Colors	Head, Primaries, Belly, Tail	Legs	Claws	Pigeons
Blue (base color)	White	Red	Black	
Black (base color)	White	Red	White	
Dun (dilute)	White	Red	Black	
Red (base color)	White	Red	White	
Yellow (dilute red)	White	Red	White	
Ash-yellow bar	White	Red	White	
Ash-red bar	White	Red	White	
Dilute blue bar/Dilute red bar (with some kind of bronze)	White	Red	White	
Bronze (probably black color base and a bronze trait)	White	Red	White	

Source: Imran Hossain (field study)

Color concepts of Bangladeshi breeders: In the case of gorra pigeons, dun color is recognized as khaki/silver. Khaki color is known as genda or somebody says chocolate. Checkered is well-known as maksii, bronze/brander is chila, ash-red is surma, and yellow color is ghia (Table 3).

Putul gorra: In the country, there is a special type of gorra

pigeon in common gorra pigeons' group known as putul gorra. Its head-throat will be white (not up to the breast); eye ring is red; legs are pink; tail feathers will be 12; primaries will be 10 in both sides; small and massive beak is white or pink; body shape is somewhat fatty or rounded. Normally, putul gorra is black but other colors may produce with other characteristics (Plate 4).



Plate 4. Putul gorra pigeon.

Eye colors: Gorra pigeons have pearl eyes and few have bull eyes. Sometimes cracked or odd-eyes could be found but this was rare. In Bangladesh, there are another similar type of

pigeons named gola/golla/rajgolla, has narrow body with long beak, and red eyes (Plate 5).



Plate 5. Gola/Golla/Rajgolla pigeon of Rajshahi, Bangladesh.

Feather genetics and types: Like other pigeons, gorra pigeons are found plain-headed with grouse-legged, plain-headed with clean-legged, crested with clean- or grouse-legged as well. Out of 125 pigeons, there were no muffed in these pigeons.

CONCLUSIONS

In Bangladesh, golla and gorra pigeons are not clearly different breed to everybody. For this reason, this gorra pigeon is not known to all. Moreover, much number of gorra pigeons are not available to a single breeder, so breeders cannot get adequate knowledge to rear this breed. Through

this work, it would be possible to introduce this breed with actual markings in our upcoming international pigeon show in order to get a recognition as an exclusive pigeon breed of Bangladesh.

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cordial to deliver his constructive knowledge about these gorra pigeons. Additionally, he gave permission to use all of the snaps of his pigeons. His facebook page [17] is very active and informative for all. Finally, his reviewed comments provided the full assurance to publish this paper.

CONFLICT OF INTEREST

None declared.

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