

## Analyses on Colour, Structure, and Behaviour of Fancy Pigeons

**Ashraful Kabir\***

*Department of Biology, Saidpur Cantonment Public College, Nilphamari, Bangladesh*

**\*Corresponding Author:** Ashraful Kabir, Department of Biology, Saidpur Cantonment Public College, Nilphamari, Bangladesh.

**Received:** November 11, 2019; **Published:** December 05, 2019

### Abstract

For calculating the profit from the pigeon farms of Bangladesh, quality pigeons are important. Each breed has specific identifying points on every part. In Bangladesh Cropper, Helmet/Nun, Capuchine, Satinette, Lotan, Tumbler, and Fantail were found in good conditions. Within these the highest scoring were found in Cropper (92 points, out of 100) and the lowest in Lahore (69). Mirpur-1, Gulistan (Kaptan Bazar) and Tongi are the major pigeon market in Dhaka city of Bangladesh. Fantail pigeons were very common and attractive found in all markets and pet-shops. Tail feathers or rectrices of Fantail pigeon were counted the lowest number 23 and the highest 34. In pet shop, the highest costing was noted in King, Pouter, and Runt breed. A report by Kabir [1] showed 13 types of white fancy breed are available in Bangladesh. White pigeons were most acceptable birds and rearers normally do not cross these with other breeds. A study suggested that in Bangladesh out of 24 random selective breeding (not judicious breeding) only 4 were viable. For selective breeding, pigeons in fancy and sporting group were remarkable. In Bangladesh, there are lots of tumbler pigeons with their excellent characteristics. Not only in pigeons but also the breeding record of domesticated Barbary Dove is good in Bangladesh. It was found with white, mixed, and wild type. Sometimes, they were crested. Another report by Kabir [2] found that some rearers already crossed between white dove and wild type (fawn dove) and found piebald and rosy coloured squab.

**Keywords:** *Pet; Colour; Structure; Behaviour; Fancy Pigeon; Fantail Pigeon; Preferences; Rectrices; White Dove; Selective Breeding; Barbary Dove; Bangladesh*

### Introduction

From early times Rome (Italy) and Paris (France) were famous for pigeon keeping. Pigeon flying was the great amusements in emperor Akbar's time [3]. Charles Robert Darwin [4] mentioned that all fancy breeds were evolved from Rock Dove through artificial selection. In Egypt, first selective breeding of pigeons were seen. Due to selection, hybridization, and mutation loss of plumage colour may occur. Ringneck doves have been domesticated for 2000 to 3000 years ago. They are easily kept and long-lived in captivity. Collared Dove is not migratory but is strongly dispersive. A range of different species of pigeons originates from Asia [5]. In Bangladesh, most pigeon rearer collects their pigeon on the basis of colour and structure. Basically, they are not well known about pigeons' markings. Wendell Mitchell Levi [6] mentioned 14 grading points of fancy pigeons in his famous book 'The Pigeon'. For a new pigeon rearer it is important to collect a better pair for good output [7]. In Dhaka city more than two decades bird lover gathers in Gulistan (Kaptan Bazar) pigeon market. There are more than 2000 pigeon rearers in Dhaka city with scattered 20000 or more across the country especially in Chittagong, Barishal, and Dinajpur. Breeders who buy pigeon for racing purpose they observe flight muscle, feather, and eye. From earlier days, pigeon rearing existed in Bangladesh as hobby of upper class people only. For maximum production in pet-shop dry place and good ventilation are must. Mating between high producing female and younger male is more productive. Many pigeon breeders separate their pigeon in the month of October and in April when weather is cooler they remate those pairs. This method is good for a pigeon's overall health and fitness.

From history we have found the fantail pigeon in India then UK collected and produced their English breed through selective breeding. English Fantails are small in size, no crest, huge tremulous activity, and clean legged. In India, this Fantail pigeon before 1600 were less improved variety at all. White coloured feather is epistatic in pigeons. Albinism in 116 species of wild birds has been found by Ruthven [8-10]. Probably pigeon is the first bird species to have been reared by human [11]. Chinese people consider that pigeon meat as having medicinal value [12]. Higher profitability could be possibly obtained by rearing heavier breeds. Victorian Crowned Pigeon and White King is the major squab producing breed in Australia. Completely fancy breeds are not commercially viable.

### Materials and Methods

#### Pet-shop

Exotic fancy pigeons are nearly about 50 types in Bangladesh. Each breed's feed cost 1.50 taka per day, after hatching this is 3 taka in average. Total cost for one pigeon is 200 taka per month. Shop-keepers always maintain their birds off color, awry and split feather, deformed keel, wing below the tail, and excess temper all are considered their disqualifications. Within 3 - 6 months it may bring a double profit than early selling. In our pet-shop most costly breed is Pouter and the lowest Lahore. In Bangladesh, Indian fantail has good score and is easily sold; it is an attractive breed. In Bangladesh, residence adjacent pet-shops rear top quality of pigeons [13].

#### Pigeon market

Average 40% people go to the market for selling or buying pigeons whereas 60% are simply observers. Visitors or pigeon rearers are aged 10 - 55 years. Few quality pigeons are found in Gulistan, Dhaka, Bangladesh. For rearing or business purpose, rearer choices adult pigeon. Pigeon lovers are always concerned about pigeons' origin, its parents and grandparents as well as physical conditions. For racing pigeons their flight muscle, flying capability, feathers, and eyes are more important. Some researcher (ICDDR, B) and journalist go to Kaptan Bazar for observing the situation. With the pigeons other exotic cage birds like lovebird, budgerigar, and dove are available [14]. Very short-beak pigeons are not good for breeding purpose because sometime it produced beakless chick [15]. For selling purpose Fantail was the highest (85%) and Frillback (A grade) and Strasser (B<sup>+</sup> grade) was the lowest. Selling record of Lahores (70%) and Pouters (A grade) were found in second position [16]. In the months of March, May, June, and August were the highest peak of sales in those markets.

#### Characteristics of pigeons for the selective breeding

Most rearers collect low-graded pigeons and rear different types of pigeons and automatically mixed pigeons are produced which is sometimes exhibit good foster. For breeding the selection with exceptional feather, endurance of flying, chick caring, availability, and size all are important. Other characteristics like hood, muff, fanned tail, very short beak, tumbling, and swollen crop are not good for getting productive breed because these are the barriers for breeding. Ringneck Dove has no homing ability and dies in any adverse conditions of the environment. It has severely restricted vision in bright light where flight is almost impossible.

#### Breeding within different breeds

In most fancy pigeons their parental care is very less. Most of the time, those pigeons do not incubate or feed their chicks. Moreover their fighting tendency is very serious after hatching. Alternative use of that pair can bring a good result. In Bangladesh, tumbler pigeons are commonly used in most breeding. A study showed that out of 24 crosses only 4 crosses were viable [17]. Wild type of head, clean leg, and bright coloured feather are dominant characteristics. When there is no relationship in previous five generations this is cross-breeding. In-breeding is defined as cross between father to daughter, mother to son, and brother to sister. Crosses between sports and fancy and fancy and fancy pigeons are very common in Bangladesh. As male pigeon carries 80 chromosomes so that in most cases male characteristics are shown in chicks. After Fantail and Jacobin their half breeds are Capuchine and Mookee [18]. By understanding the molecular mechanism it is possible to produce new variety of pigeons [19]. Homer and Tumbler is the best foster pigeon and available everywhere. Some fanciers collect the pigeons only by observing the colour and body shape [16]. When Fantail is crossed with Lahore then their progenies are devoid their size, tremulous activity, and arrangement of tail feathers.

## Results and Discussion

### Plumage colour

Albino doves were first imported from Japan in 1967. Collared doves have 40 color combinations; 38 colour patterns are presented by Professor Bob Lockhart in 1999 [20]. Homozygous albino Collared Dove pair always produces albino squab. In case of this dove its color pattern is wild type > rosy > albino. If albino dove is crossed with another albino 100% albino squab is produced, if wild type and albino and rosy with albino then each 50% and for rosy and wild type its squab are 46% rosy and 54% wild type [2].

### Tail feathers

Indian White Fantail pigeon is very common in Bangladesh. This breed is found in most of the shops or in houses. For its excess tail feathers and expansion it looks nice. This is a running breed in the country. Its price is reasonable everywhere. The breeding of this breed is normal. A study suggests that if 36 tail feathered pigeon is crossed with same number it produces 34 in squab, if 26 with 26 then 23 or 28 and if 32 is crossed with 32 then 31 tail feathers occur [21].

Breeding schedule	Squab	Parental care	References
Homer x Tumbler	Mixed colour and different in structure	Good	[17]
Capuchine x Tumbler	Mixed colour and different in structure	Less	
Lotan x Tumbler	Mixed and 50% both	Less	
Short-faced Tumbler x Tumbler	Mixed colour	Less	
Fantail x Tumbler	Slight expanded tail	Less	
Tumbler x Satinette	Mixed colour, 50% both	Good	
albino dove x albino dove	100% albino	Good	[2]
Albino dove x rosy	50% both	Good	
Albino dove x wild type	50% both	Good	
White (any breed) x white (any breed)	100% white	Good/Bad	[1]
White Fantail (36 rectrices) x white Fantail (36 rectrices)	100% white (34 rectrices)	Good	[21]
White Fantail (32 rectrices) x white Fantail (32 rectrices)	100% white (31 rectrices)	Good	
White Fantail (26 rectrices) x white Fantail (26 rectrices)	100% white (23 and 28 rectrices)	Good	

Table 1: Summary of the reviewed articles on selective breeding.

## Conclusion and Recommendations

For better output during starting a pigeon farm we should buy good quality parents by applying necessary grading systems. Pigeon keeping is a nice hobby which fulfills our enjoyment. Pigeon farms can be a profitable bird farm after poultry. Pigeon is an excellent lab bird and a good material for genetical study. Broiler pigeons (King, Strasser, Maltese, Lahore, Runt, Homer etc.) can be a source of protein. The breeding of Fantail Pigeon in Bangladesh is remarkable. People normally prefer those fancy pigeons which have white feather. White Parvin (derived from the Australian Red variety) and Lahore Pigeon are still unknown of their breeding pattern of origin. Homer and Tumbler are the best for fostering. Great stamina, feather quality, body structure, and parental care are the precursor for better selective breeding. Biological approaches of pigeons or doves are really interesting for their genetic studies. Through purchasing pure pigeon breed, or fantail tail feather, homer and tumbler for selective breeding other than domestic dove may play a distinct role in avian study.

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Volume 5 Issue 1 January 2020

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