



## PIGEON FARMING PRACTICES AND CONSTRAINTS IN KERALA

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### ABSTRACT

Pigeon farming is an emerging enterprise in Kerala. It is one of the beneficial sector for income generation as well as hobby. A study was conducted to assess the pigeon farming systems and constraints by conducting survey and sample collection for laboratory examination. The owners were classified according to the number of birds reared as <10, 10-50, 50-100, >100 and there were 19.44%, 30.55%, 41.67% and 8.33% respectively among the 36 owners studied. The system of housing were studied and identified into 6 types. The disease prevalence in relation to the type of housing was assessed. It is found that the incidence of blood parasitism, gastrointestinal and ecto-parasitic infestation were more common in wooden type of housing followed by wooden with mesh type and was lowest in full mesh type. Only 2% of the respondents were practicing regular vaccination. 58% of them were practicing regular deworming, 24% are doing irregular deworming and 18% are not deworming at all. Lack of scientific information, non-availability of vaccines, lack of veterinary facilities and difficulty in sexing of young birds are the major constraints of the owners. The training programmes pertaining to pigeon farming and propagation of scientific management are needed to overcome the disease outbreaks and constraints of pigeon farming in Kerala.

**KEY WORDS:** Pigeon farming, constraints, housing, disease prevalence.

### INTRODUCTION

Pigeons (Order Columbiformes) are ubiquitous birds and can be found in virtually every town and city around the globe (Marques et al., 2007). Pigeons are related to human since ancient time (BC. 3000-5000). They live side by side with human as a source of food, hobby and experimental purposes (Sari et al., 2008). In addition they have many qualities that make them useful for laboratory and research purposes. It has a long productive life and a short reproduction cycle besides its high disease resistance. Because of the aforementioned advantages, pigeon is considered as a ready cash source of income during hard time and provides employment opportunities for villagers especially for poor women and educated unemployed youth (El-Hanoun et al., 2008). There exists many breeds in Kerala both exotic and indigenous mainly used for fancy purpose as a pet as well as for sports. Pigeon farming in Kerala is increasing day by day due to profitable income and hobby of pigeon keeping as a pet. This study is conducted to assess the system of management and the constraints faced by the pigeon keepers by conducting survey among 36 keepers with the help of pre structured questionnaire as this is one of the emerging livestock enterprises in Kerala.

### MATERIALS & METHODS

A field study was carried out on 36 randomly selected households keeping pigeon in Kerala. Data were collected during the year 2015. Data was collected through semi-structured interview with questionnaire. The farmers were classified according to the holding of number of birds.

Then six types of housing patterns were identified in the study area and were classified accordingly. The disease pattern and hygiene in relation to the system of housing is assessed by collecting the information and also laboratory diagnosis of the collected samples. The data collection was done by personal interview method with the help of interview schedule. The collected data were analysed by using frequencies and percentages.

### RESULTS & DISCUSSION

#### Classification of pigeon holders

In general, socio-economic and agro-ecological factors as well as management practices have a significant influence on flock sizes owned by rural households. Larger flock sizes are likely to be found in households with better standard of living than their poorer counterparts and those with larger families (Aboe et al., 2006). Where as in our study we classified the owners according to the number of birds holding by the owners and found that around 41.67 % of the owners are having 50-100 birds and 30.55% are having 10-50 birds, 19.44% are having below ten and only 8.33% of the owners are having above 100 birds.

**TABLE 1:** Classification of pigeon holders

Sl no.	No. of birds	Holders	Percentage
Total	-	36	100%
1	< 10	07	19.44%
2	10-50	11	30.55%
3	50-100	15	41.67%
4	>100	03	8.33%

**Types of housing**

According to objective of the pigeon owner (either for business purpose or as a pet) and housing system (cages), the pigeon housing systems in study area can be classified into six main systems based on the type of material used for cages. Most of the farmers found to use Wooden + metal mesh multiple tier system of housing as it is cheaper and easy for maintaining hygiene and durable. Metal mesh

only type is the next most used type of housing, it is commonly used by large scale production owners and is most durable type of housing among all other cages. Deep litter type of housing is found only in the farms having more than 100 birds as the cost of construction is comparatively more. By this we found that the pigeons can adapt to living under a variety of conditions.

**TABLE 2:** Type of housing systems practiced

Sl No	Type	Description (according to use of cage materials)	No. of holders	Percentage
1	Type 1	Metal mesh only single tier	2	05.50 %
2	Type 2	Metal mesh only multiple tier	8	22.22 %
3	Type 3	Wooden only multiple tier	3	08.33 %
4	Type 4	Wooden + metal mesh single tier	5	13.80 %
5	Type 5	Wooden + metal mesh multiple tier	16	44.44 %
6	Type 6	Deep litter with concrete floor	2	05.50 %

**Disease prevalence**

Several health problems can affect pigeons but parasite infections play a major role. They constitute a major source of infection and transmission of diseases (Marques et al., 2007). *Haemoproteus columbae*, is a common haemoprotozoan infection in them (Powers, L. 2002). It is transmitted by *Pseudolynchia canariensis*, a Hippoboscid vector fly. In India a higher prevalence of *H. columbae* parasitaemia in pigeons has been reported from Uttar Pradesh and Mumbai (Jahan et al., 2011). Heavy mortality is also seen in severely affected compromised pigeons. In our study a total of thirty eight young pigeons (below 24 weeks old) including 17 males and 21 females and Sixty four adult pigeons including 31 males and 33 females were examined for ecto, gastrointestinal and haemo parasites. We found that the prevalence of *Haemoproteus columbae* was significantly higher (P 0.01) in adults (60.93%) than young ones (28.95%). Pigeon fly *Pseudolynchia*

*caraniensis* (vector for *H. columbae*) was observed in 23.68% of young and 60.93% adult pigeons. Overall prevalence of gastrointestinal parasites was significantly higher (P 0.05) in adult pigeons (65.6%) than in young ones (26.32%). Among the GI parasites, *Ascaridia galli* was reported only in adult pigeons (13.72%), but *Capillaria spp.* and *Raillietina spp.* were demonstrated in both young ones(8.8%; 0.9%) and adults (21.5%;8.8%).

**Disease prevalence in relation to type of housing**

The blood parasitism and ecto-parasitic infestation is more in wooden only type of housing system followed by wooden with metal mesh type. The disease incidence is lowest in full metal mesh type of housing as there will not be breeding space for the parasites in the cage and it will be clean and hygienic, easy for cleaning and disinfecting. The wooden type of housing will provide wet environment which is helpful for breeding of the parasites and acts as a source of infection for transmission of diseases.



**FIGURE 1:** Wooden only multiple tier type of housing



**FIGURE 2:** Metal mesh only multiple tier type of housing



**FIGURE 3:** Wooden + metal mesh single tier type of housing



**FIGURE 4:** Deep litter with concrete floor type of housing

**Regular health care practices adopted**

Only 5.50 % of the owners among the respondents are doing regular vaccination. Among the respondents 58 % of the owners are doing regular deworming practices, 18%

are doing irregularly and 18 % of them are not practicing at all.

**Constraints faced by pigeon owners**

Sl no.	Constraints	Respondents	Percentage
1	Lack of scientific knowledge	31	86.11
2	Non-availability of vaccines	30	83.33
3	Lack of veterinary facilities	28	77.77
4	Difficulty in identifying breeds	23	63.89
5	Difficulty in feeding the birds	06	16.67
6	Difficulty in sexing of young birds	28	77.78
7	Disease outbreaks	34	94.44
8	Difficulty in breeding	26	72.22
9	Difficulty in hatching eggs	28	77.78
10	Lack of organised marketing system	34	94.44

As there are no scientific training programmes the pigeon keepers lacking the knowledge of general management, housing, hygienic practices and feeding. These are the major constraints of the owners.

**CONCLUSION**

There is a lack of information on raising pigeon in rural sector, especially traditional dovecotes and little researches have been carried out regarding only about the diseases but only few studies have been carried out regarding its feeding, breeding and management systems and the overall parasitic infestation was significantly higher in adults compared with young ones and females were more susceptible to parasitic infection than males in our study. There is no enough information about the prevalence of avian parasites in Kerala. Furthermore studies regarding the pigeon diseases and the training programmes pertaining to pigeon farming and propagation of scientific management are needed to overcome the disease outbreaks and constraints of pigeon farming in Kerala.

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