# Backyard Poultry Rearing and Adoption of Management Practices in Hassan District of Karnataka

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**Abstract**

*An attempt was made to analyse the adoption of poultry rearing and management practices by the backyard poultry farmers. The study was conducted in ten villages of Hassan district of Karnataka. The respondents had admirable knowledge about backyard poultry rearing. However, majority of the farmers are maintaining local birds compared to improved back yard poultry birds. The study also revealed that, the incidence of Ranikhet disease was severe when compared to fowl pox. The respondents had very fair knowledge regarding local practices to counteract the diseases. Though the farmers had better knowledge on disease management, the adoption level of practices recommended by the agriculture and veterinary universities was very poor. It is implied that suitable awareness programs should be organized for backyard poultry farmers on vaccination and other scientific methods for effective management of Ranikhet and other diseases.*

Poultry is one of the fastest growing enterprises in India today. Poultry production remained as a backyard venture till 1960. Later on, it has emerged as an encouraging enterprise for small farmers, landless labour, educated unemployed youth and also for big entrepreneurs maintaining birds on a large scale. Backyard poultry production is an age old practice in rural India. Most of the backyard poultry production comprises rearing of indigenous birds with poor production performance (Singh, 2000). The potentiality of indigenous birds in terms of egg production is only 70 to 80 eggs/ bird/ year and meat production is also very less. However, backyard poultry production can be easily boosted up with improved varieties of chicken and can promise a better production of meat and egg. To improve the socio-economic status of the traditional farmers, backyard poultry is a handy enterprise with low-cost initial investment, but high economic return along with guarantee for improving protein deficiency among the poor. Backyard poultry rearing is no more considered a low prestige occupation fit only for weaker

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sections of the society (Khan, 2000). In recent years all round progress in the area has taken place, but frequent disease outbreak and severe mortality has made the backyard poultry sector suffer to a great extent. Keeping this in view a study was conducted with the following specific objectives; (i) To study the incidence of disease in backyard poultry and extent of damage caused, (ii) To study the extent of knowledge and adoption of housing management practices by the farmers in backyard poultry. (iii) To identify the local practices adopted by the farmers in managing the diseases in backyard poultry and (iv) To know the knowledge level of farmers about disease and use of vaccination in backyard poultry.

## Methodology

The study was conducted in Hassan district of Karnataka during 2013. Two Taluks *viz.*, Hassan and Belur were purposefully selected looking into the interventions of KVK and the Department of Animal Husbandry & Veterinary services. Five villages from each taluk were selected and 10 farmers from each village were selected following proportionate random sampling technique thus making the total sample size of 100 farmers from ten villages. Backyard poultry disease management practices like de-worming, quarterly vaccination and proper housing management practices recommended by the Agriculture & Veterinary Universities were considered for the present study. The adoption level of backyard poultry disease management practices by the respondents was analyzed based on the index and expressed in percentage. A structured interview schedule developed for the study was used to collect the data from the respondents.

## Results and Discussions

The data presented in Table 1 depicts the profile of backyard poultry farmers. A great majority of the poultry owners (52 per cent) belonged to young age group, while 36 per cent of poultry farmers were from middle age group and only 12 per cent of them belonged to old age group. Education is the process, which brings desirable changes in behavior and plays an important role in growth and development of the enterprises undertaken by the farmers. It is evident from the table that there was even distribution of farmers among all the categories of education and more number of farmers (19%) had obtained high school level of education and an equal number could read and write. This implies that educational approaches could be adopted to educate farmers on scientific poultry keeping. The time available for keeping poultry birds depends on the number of members in a family as well as

the type of family. Majority of the respondents (88%) belonged to nuclear type of family and medium size of family (56%).

**Table 1. Personal Profile of Backyard Poultry Bird Rearing Farmers**

| Variables | Category | Percentage |
|---|---|---|
| Age | Young (less than 32 yrs) | 52 |
| | Middle (32-47 yrs) | 36 |
| | Old (more than 47 yrs) | 12 |
| Education | Illiterate | 15 |
| | Can read only | 17 |
| | Can read and write | 19 |
| | Primary | 12 |
| | Middle | 15 |
| | High school | 19 |
| | Graduate and above | 3 |
| Religion | Hindu | 87 |
| | Muslim | 12 |
| | Christian | 1 |
| Caste | General | 6 |
| | Scheduled caste | 12 |
| | Scheduled tribe | 4 |
| | Other backward caste | 78 |
| Family type | Nuclear | 88 |
| | Joint | 12 |
| Family size | Small (less than 5 members) | 10 |
| | Medium (5-8 members) | 56 |
| | Large (more than 8 members) | 34 |
| Occupation | Animal Husbandry alone | 8 |
| | Agriculture & Animal Husbandry | 69 |
| | Service & Animal Husbandry | 2 |
| | Business & Animal Husbandry | 5 |
| | Labour & Animal Husbandry | 16 |
| Land holding | Landless | 16 |
| | Marginal | 24 |
| | Small | 52 |
| | Large | 8 |
| Experience in poultry farming | Less than 3 years | 1 |
| | 3-4 years | 5 |
| | 5-6 years | 8 |
| | More than 6 years | 86 |

With respect to occupation, a great number (69%) of respondents practiced both agriculture and animal husbandry and owned small sized land holding (52%). It is interesting to note that 86 per cent of the farmers had more than six years of experience in backyard poultry rearing. Understanding the profile of farmers in the given region helps to formulate suitable educational strategies to improve the enterprises undertaken.

Many chicken breeds are impeccably suited for backyard flocks. Choosing the right breed for the backyard flock solely depends on the needs of farmers (Merrill, R. J. N., 2004). Chicken breeds can be divided into two basic categories *viz.*, birds for meat and birds for eggs. The details of different types of backyard poultry birds reared by farmers presented in Table 2, revealed that 35 per cent of the farmers maintained 6-10 number of birds, 27 per cent of them maintained 11-15 number of birds, 20 per cent of them maintained more than 15 birds and the remaining 18 per cent of them had less than 5 birds. Simultaneously, majority of the farmers (61%) are maintaining local birds compared to improved backyard poultry birds. Only 15 per cent of the farmers maintained Giriraja along with local birds while only 7 per cent of the farmers maintained improved birds of Swarnadhara along with local birds. This infers that educative disseminative approaches are to be intensified for speedy adoption of improved birds in backyard poultry. Maintaining Giriraja bird would be a ready source of income, was the main reason quoted by a great majority of the farmers (65%), while 45 per cent of farmers reared local birds for home consumption.

**Table 2. Types of Backyard Poultry Birds reared and Reasons for keeping Poultry by the Farmers**

| Type of bird | Numbers | | | | Total | Reasons for Keeping Poultry |
|---|---|---|---|---|---|---|
| | *<5* | *6-10* | *11-15* | *>15* | | |
| Local | 12 | 22 | 14 | 13 | 61 | Easy to manage & for home consumption (45) |
| Swarnadhara | 02 | - | - | - | 02 | For Gift (13) |
| Giriraja | 04 | 07 | 02 | 02 | 15 | Ready source of Income (65) |
| Giriraja + local | - | 04 | 07 | 04 | 15 | Income & Home consumption (54) |
| Swarnadhara + local | - | 02 | 04 | 01 | 07 | Income & gift (24) |
| Total (%) | 18 | 35 | 27 | 20 | 100 | |

** Data in parenthesis indicates percentage*

The poultry house should protect the birds from sun, rain and predators and no elaborate housing is required for backyard poultry farming. Normally, free range system is practiced wherein the birds are let loose in the day time for foraging and

at night sheltered in the shed. However, for better production gains, farmers have to adopt certain practices for higher returns. An attempt was made to analyse the housing management practices adopted by farmers in backyard poultry rearing. The data in Table 3 indicates that only 34 per cent of farmers had correct knowledge of having brooder house with ventilation and wire netting for open air ventilation and only 20 per cent of farmers adopted the important practice. Only 23 per cent of farmers had their poultry house built in east-west orientation though 74 per cent of the farmers had high knowledge about the direction of housing. This could be due to non-availability of suitable space for the farmers. Cent per cent of farmers had correct knowledge about using low cost housing material and due to availability of cheaper material locally, a great majority of the farmers (81%) adopted the practice of utilising low cost housing material like wood, bamboo, grass, thatch etc,. and also avoiding direct sun light to reduce the stress in birds during summer (62 %).

**Table 3. Housing Management Practices adopted in Backyard Poultry by Farmers**

| Sl. No. | Management practice | Knowledge Level (%) | Adoption level (%) |
|---|---|---|---|
| 1 | The poultry house in east-west orientation | 74 | 23 |
| 2 | Avoiding direct sun light to reduce the stress in birds during summer | 98 | 62 |
| 3 | Utilising low cost housing material like wood, bamboo, grass, thatch etc. | 100 | 81 |
| 4 | Flooring in elevated place or above ground level (minimum 2ft) and free from water, cracks & rat proof | 73 | 54 |
| 5 | Free air movement in upper part of the shed to reduce gas formation inside | 53 | 33 |
| 6 | Brooder house with ventilation and wire netting for open air ventilation | 34 | 20 |
| 7 | Provision of bulb fitted above the ground so as to keep the chicks warm | 77 | 69 |

Backyard poultry is an important source of income for many of the small farmers but is constrained by the presence of diseases. Like dogs and cats, poultry may become ill from many causes. There are many diseases that are commonly noticed in backyard poultry. Disease incidence decides the net profit. An attempt was made to analyze the occurrence of diseases. The results indicated that the Ranikhet disease incidence was more (48%) in backyard poultry compared to fowl pox

**Table 6. Information Seeking Behavior of Backyard Poultry Farmers**

| Sl. No. | Source of information | Per cent |
|---|---|---|
| 1 | University of Agricultural Sciences (UAS) | 13 |
| 2 | Department of Animal Husbandry & Veterinary Services (AH & VS) | 55 |
| 3 | Both UAS and Dept. of AH & VS | 05 |
| 4 | Written publications like posters, leaflets, news papers, etc. | 08 |
| 5 | Electronic media – radio, television, video | 23 |
| 6 | Capacity building programs by department & KVK | 12 |
| 7 | Meetings & Programs of KVK and the Department | 16 |
| 8 | Never consulted | 22 |

A complex array of production and health constraints are associated with varying level of technical and management practices for obtaining higher production. An attempt was also made to analyze the constraints faced by farmers in obtaining higher returns which would facilitate the different stakeholders to initiate action in the desired direction. The data depicted in table 7 reveals that a very high percentage of farmers (76%) expressed that they find difficulty in rearing poultry birds in the backyard because of the complaints by neighbors and that the birds disturb them during various post-harvest operations of agriculture. High cost of inputs (67%), high incidence of diseases (63%), lack of knowledge about improved practices (56%) were the other constraints, expressed by farmers, coming in the way of effective rearing of poultry in their backyard. Absence of appropriate germplasm (15%) and predators problems (36%) expressed as constraints by the farmers need to be given attention for strengthening backyard poultry rearing in rural areas.

**Table 7. Constraints faced by Backyard Poultry Farmers**

| Sl. No. | Constraints | Percentage | Rank |
|---|---|---|---|
| 1 | Predators attack | 36 | VI |
| 2 | Lack of credit facilities | 46 | V |
| 3 | High incidence of diseases | 63 | III |
| 4 | High hatching mortality | 35 | VII |
| 5 | Absence of appropriate germplasm | 15 | X |
| 6 | Lack of knowledge on improved practices | 56 | IV |
| 7 | Unhygienic conditions | 25 | IX |
| 8 | High input cost | 67 | II |
| 9 | Insufficient place for rearing | 33 | VIII |
| 10 | Difficulty in rearing because of complaints by neighbours | 76 | I |

## Conclusion and Recommendations

It can be inferred that, farmers rear both improved birds as well local birds in the backyard. A considerable percentage of them have good knowledge on diseases and use of vaccines but adoption level was found very poor. Hence it is necessary that, suitable awareness programs be organized for backyard poultry farmers on vaccination and other scientific methods to manage Ranikhet and other diseases effectively (Meena and Dheeraj Singh 2013; Sharma *et al.,* 2005 and (Anonymous, 1992). Intensified educational efforts should be made to increase the adoption of some of the crucial and easy house management practices like free air movement in the upper part of the shed to reduce gas formation and brooder house with ventilation and wire netting which are vital for hygiene and in turn disease management. There is a need for developing and training a local resource person (LRP) at the village level who can cater to vaccination requirements of animals in general and poultry birds in particular. The absence of complete production management practices coupled with health extension package aimed at backyard poultry producers is the need of the hour. However, adoption of sustained management practices and the commitment of the producer would be the key factor for success in backyard poultry.

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