Some Aspects of Backyard Poultry Management Practices in Rural Areas of District Rawalpindi, Pakistan

F. Sarwar*, M. Usman, S. Umar¹, M. Hassan², A. Rehman and A. Rashid
Poultry Research Institute Shamsabad Rawalpindi, Pakistan

¹Department of Pathobiology, PMAS Arid Agriculture University, Rawalpindi, Pakistan
²O/O DDLO Poultry Production, Sargodha, Pakistan

*Corresponding author: ummebh@gmail.com

**Abstract**
Backyard poultry plays an important role in the livelihood of rural families in developing countries. In spite of a source of cash income, it also satisfies their social needs. This paper is based on a study conducted in 8 villages from different zones of Rawalpindi, Pakistan to present an overview of different managerial practices in those areas. The questionnaires were filled after open discussions with respondents. The survey indicated the existence of few birds in the study area with an average flock size of 5-6 birds per household. Egg production was about 55 eggs per bird per year. Diseases, predators and lack of veterinary services were the most quoted reasons for mortality there. Only 18% families were vaccinating their birds. 40% rural women were keeping their birds in coops or under woven baskets. Daily protein consumption was low in birds as scavenging was the only feed source for most of them.

**Key words:** Backyard Poultry, Rearing Practices, Rural Household

**Introduction**
Poultry refers to a category of birds kept and valued for their eggs and meat. The importance of poultry as readily available meat source for human use is accepted throughout the world (Ogunlade and Adebayo, 2009). Poultry farming is of great importance to a country, as it offers a source of cheaper and accessible animal protein. Poultry industry acts as the fastest means for coping up with the protein deficiency in a country (Ikpi and Akinwumi, 1979). In order to decrease the gap of protein deficiency (Atteh, 1990) encouraged poultry farming at all possible levels.

The term rural poultry or backyard poultry in most developing countries is indicative of the traditional domestic poultry with low input that are typically maintained by rural families (Akinola and Essien, 2011). Rural poultry was defined as any improved or unimproved genetic stock, that is raised in relatively small numbers extensively or semi extensively (Pederson, 2002). They are classified as dual purpose chickens which produce low to moderate levels of both meat and eggs (Majumder, 1989). In most of
developing countries, rural poultry make up of about 80% of the world’s poultry. In Africa too, free range indigenous birds make up more than 80% of the continent’s poultry (Gueye, 1998). Generally, these birds are kept by rural households using family labour and occasionally use commercially and locally available feed resources (Larbi et al, 2013).

Despite of its low production performance, it’s a valuable asset for local human population. Rural families keep their poultry on a small scale within a limited area in their backyards (Adebayo and Fayeye, 2013) which significantly adds to their livelihood by providing cash income and satisfying religious, socio-cultural and nutritional needs.

Birds are mostly reared by scavenging in the backyard where they eat anything available to them like insects etc (Atunbi and Sonaiya, 1994). Housing may not be provided and if provided, local materials are used (Huchzermeyer, 1994) otherwise they rest wherever they find safe and suitable place especially on trees (Atunbi and Sonaiya, 1994). Despite of the efforts to develop intensive poultry farming, backyard poultry rearing is still very important and a common practice in many developing countries. In most of the developing countries, backyard poultry keeping has been practiced for many generations. Although rural poultry farming doesn’t produce a large income, it doesn’t require any extra skill and assist rural families a lot in taking them out of poverty (Jensen and Dolberg, 2003).

More than 90% of rural families keep one or more species of poultry birds (Gueye, 2005). Literature on backyard poultry farming shows its positive impact on the economy of rural families. Rural poultry has a remarkable contribution in the development of rural families and overall development of the poultry sector (Mack et al, 2005). Rural families having different income and occupation are involved in poultry keeping (Mahbub et al, 1991). A large number of those families keep poultry as part of a long tradition. On comparing the number of birds kept by rural families with the land size it was concluded that number of poultry birds kept at rural level increase along with the size of land holding (Haque et al, 1986).

During a study in 1992 different production systems regarding backyard poultry in Bangladesh were sought out. Along with chicken rearing, 37% practiced mixed farming with chicken, duck and pigeon. Chicken and ducks used to scavenge for food around the houses. They recorded 72% egg hatchability and 84% mortality. The income had directly benefited the women and small farmer for purchasing daily essentials etc.

Pakistan is an under developed country. It is trying hard to accelerate its economic growth and grab up with the pace of the fast growing economies of the region. The economic survey of Pakistan 2010-2011 shows that out of 180.71 million population of the country, about 113 million is living in rural areas
Since beginning, Pakistan has been involved in backyard poultry farming, which has a major contribution in the total poultry production in Pakistan. Rural poultry farming is one of the important livelihoods of rural families and has a strong potential for generating income for them by the sale of eggs or chicken.

Therefore this paper aims at studying different aspects of backyard poultry farming and status of rural chicken in district Rawalpindi of Punjab, Pakistan.

**Materials and Methods**

Present study was planned to assess how rural families keep their poultry birds. Certain aspects were studied like their housing, feeding, vaccination, causes of mortality in the focused area etc.

**Description of study areas**

An informal field survey was conducted with objective of exploring the knowledge about rural poultry. The study was conducted in 8 villages selected from 4 union councils in district Rawalpindi (2 villages from each union council). The study engaged about 30 households each from the 8 selected villages thus giving the total sample size of about 240 respondents (Table 1).

**Table 1: Distribution of Respondents by Union Council And Village**

<table>
<thead>
<tr>
<th>Union councils</th>
<th>Villages</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thatta Khalil</td>
<td>Dhok Noor Mohammad</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Dhok Nawab</td>
<td>30</td>
</tr>
<tr>
<td>Sagri kallan</td>
<td>Majeedabad</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Ramiyal</td>
<td>30</td>
</tr>
<tr>
<td>Wah</td>
<td>Wah village</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Askari</td>
<td>30</td>
</tr>
<tr>
<td>Taxilla</td>
<td>Bhir dargai</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Dibian</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>240</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Approach for data collection**

The households were selected randomly. Random open ended discussions were held with the farmers at their households. Assessment was based on the administration of a well-structured questionnaire which sought information on management practices, flock size, rearing systems, vaccination, feeding practices and causes of mortality etc. The obtained data were subjected to statistical analysis and presented as percentage.
Results and Discussion

Baseline data on Rural Poultry Production

The study discovered that rural poultry is still at subsistence level and supporting rural families in the study area. Number of cocks, hens and chicks were counted. 84% houses were keeping poultry birds out of which 74% were chicks, 22% were hens and 4% were cocks. The totals of poultry number are mentioned (Table 2).

Table 1: Tabular Representation of Obtained Data

<table>
<thead>
<tr>
<th>Birds Distribution</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of Houses Visited</td>
<td>240</td>
<td>-</td>
</tr>
<tr>
<td>No of houses having birds</td>
<td>201</td>
<td>84%</td>
</tr>
<tr>
<td>No of houses without birds</td>
<td>39</td>
<td>16%</td>
</tr>
<tr>
<td>No of Birds in 201 houses</td>
<td>2825</td>
<td>-</td>
</tr>
<tr>
<td>Number of Cocks</td>
<td>113</td>
<td>4%</td>
</tr>
<tr>
<td>Number of Hens</td>
<td>622</td>
<td>22%</td>
</tr>
<tr>
<td>Number of Chicks</td>
<td>2090</td>
<td>74%</td>
</tr>
<tr>
<td>Scavenging</td>
<td>201</td>
<td>100%</td>
</tr>
<tr>
<td>Supplementation</td>
<td>45</td>
<td>22%</td>
</tr>
<tr>
<td>Vaccination</td>
<td>36</td>
<td>18%</td>
</tr>
<tr>
<td>Mortality due to diseases</td>
<td>120</td>
<td>60%</td>
</tr>
<tr>
<td>Mortality due to predators</td>
<td>72</td>
<td>36%</td>
</tr>
<tr>
<td>Mortality due to lack of veterinary services</td>
<td>9</td>
<td>4%</td>
</tr>
</tbody>
</table>

Housing

Housing is important for the birds as it protects them from varying temperatures, rain, wind and predators etc. In the study area families who used to keep their birds openly were higher in number. The percentage ranged between 60% for those houses who kept their birds openly and 40% for keeping in darbas (coops) respectively. The probable reason perceived was the manufacturing cost involved in making darbas. Mostly the birds were left to scavenge during day and confined at night.

Feeding

Birds of all ages used to scavenge together during day times. After hatching, chicks roam freely with their mothers. Drinking water was irregularly provided in clay pots. Only 22% of respondents supplement their birds once a day with grains like wheat and millet etc.
Vaccination

Newcastle disease was the most prevalent disease in study area. It may be due to exposure of birds to natural environment, birds of multiple ages kept and non-adherence to vaccination. In rural areas, people have rare practice to immunize and vaccinate their birds against different viral diseases. Only 18% (N=36) of the houses vaccinate their birds against New Castle Disease. Table 3 shows the feeding and vaccination practices being adopted by rural families in study area.

Egg production

Egg production was not uniform. In some houses it was about 63-64%. The reason was the high education level of those families and their interest in keeping birds. While in others it was 33-34% due to lack of interest and aged birds. The average egg production recorded per house was about 49-50% and per bird, it was about 10%.

Mortality

The mortality among rural birds in the target area recorded was due to three major reasons as diseases, predators and unavailability of veterinary services as mentioned in Table 2.

Poultry production is constantly moving towards modernization due to introduction of modern intensive farming system. But in spite of that backyard poultry farming is a common practice in rural areas due to significant proportion of rural population in developing countries. The number of birds kept depends upon the area of household and the economic status of the family. Stress factors from environment, disease and predators etc have a major impact on egg production, body weight and mortality of birds. Low productivity was due to poor nutrition, housing and lack of health care e.g. lack of vaccination etc. Apart from scavenging Supplementation plays role in better egg production. Rather than kitchen scrap only, chickens need a well-balanced diet to produce eggs. Suitable poultry housing is important for successful poultry farming. It helps keeping the birds safe from adverse weather conditions like hot sun, cold and rain. It also provides shelter for egg laying hens. In order to protect birds safe from predators and harsh weather housing is an important factor. The rural environment is conducive to many diseases which affect the livability of rural chicken. New castle disease is one of the major threats faced by birds specifically during the changing weather (Awan, 1993 & Yongolo, 1996). Vaccination is vital in backyard chickens to control diseases. Vaccines mimic natural infection allowing the birds to develop immunity against the disease without any harmful effects in chickens. There is therefore a need to create awareness among rural poultry farmers regarding balanced feed, importance of housing, different diseases, dangers caused
by them and importance of vaccination. Majority shared that lack of training and awareness is one of the major barriers in the development of their household poultry. They desired that training programs in the rural areas for women may be arranged regularly. Facilities for immunization of rural poultry should be made available.

There is no doubt that backyard poultry farming should be encouraged as it is a valuable asset due to its numerous contributions to rural livelihood. It’s a way of improving rural income and also empowering women as rural poultry is the only aspect whose income directly comes in the hands of rural women. It should be supported by inputs regarding management, feeding and disease control. Preparation and implementation of plans for backyard poultry rearing should be ensured for poverty reduction in developing countries.

References

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