

## **BACKYARD POULTRY REARING PRACTICES IN RURAL AREAS OF KADAPA DISTRICT, ANDHRA PRADESH**

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**Abstract:** The term rural poultry in most developing countries is indicative of domestic poultry with low inputs that are typically maintained by rural families in their backyards which significantly adds to their livelihood by providing cash income and satisfying religious socio-cultural and nutritional needs. Present study was planned to assess how rural families keep their poultry birds. Certain aspects were studied like housing, feeding, vaccination, protein intake in focussed areas. An informal field survey was conducted with objective of exploring knowledge about rural backyard poultry. Study was conducted in 6 villages around Kadapa district, Andhra Pradesh. Assessment was based on administration of a well structured questionnaire which sought information on management practices, flock size, rearing system, vaccination, mortality, feeding practices. The obtained data were subjected to statistical analysis and presented as percentage. The study revealed that rural poultry is still a subsistence level and supporting rural families in the study area. In study area 63% of rural women are rearing backyard poultry birds with average of 3-4 birds per household who used to keep their birds openly were higher in number than in coops or woven baskets. Birds of all ages used to scavenge together during day times with uneven egg production. Only 40-50 grams of feed was provided as a supplementation once a day per bird with grains. The backyard poultry production helped women in these villages to get more income to lead their families happy. It was therefore recommended that if desi birds and vaccinations made available along with training to women will attain empowerment.

**Keywords:** Backyard poultry, rural household, rearing practices, Scavenging, supplementation, Mortality.

### **Introduction**

Poultry refers to category of birds kept and valued for their eggs and meat. The importance of poultry as readily available meat source is accepted through out 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.

Rural poultry was defined as any improved or un improved 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 worlds poultry (Gueye, 1998). In Africa too, free range indigenous birds make up more than 80% of the continents poultry. 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, its a valuable asset for local human population. Rural families keep their poultry on a small scale with in a limited area in their backyards (Adebayo and Fayeye, 2013).

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 (Huchzemeyer, 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 does not produce a large income, it does not 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 the 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. 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 system 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.

India is a developing country. It is trying hard to accelerate its economic growth and grab up with the pace of the fast growing economics of the region. The economic survey of India

2010-2011 shows that out of 1342.5 million population of the country, about 939.7 millions live in rural areas (almost 70%).

Since beginning, India has been involved in backyard poultry farming, which has a major contribution in the total poultry production in India. Rural poultry farming is one of the important livelihood of rural families and has a strong potential for generating income for them by the sale of eggs or chicken

### **Objectives**

This paper aims at studying different aspects of backyard poultry farming and status of rural chicken in district Kadapa of Andhra Pradesh, India.

### **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 area**

An informal field survey was conducted with objective of exploring the knowledge about rural poultry. Study was conducted in 6 villages selected from 4 union councils in Kadapa district. The study engaged about 80 households each from the 6 selected villages thus giving the total sample size of about 480 distributed with 303 respondents (Table 1). 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-structure questionnaire which sought information on management practice, flock size, rearing systems, vaccination, feeding practices and causes of mortality etc. The obtained data were subjected to statistical analysis and presented as percentage.

**Table 1: Tabular representation of houses with poultry rearing**

| <b>Name of Village</b> | <b>Distributed</b> | <b>Responses</b> |
|------------------------|--------------------|------------------|
| Sunnapurallapalle      | 80                 | 48               |
| Gopavaram              | 80                 | 49               |
| Rajupallem             | 80                 | 50               |
| Nakkaladinne           | 80                 | 52               |
| Korlapadu              | 80                 | 51               |
| Parlapadu              | 80                 | 53               |
| <b>Total</b>           | <b>480</b>         | <b>303</b>       |

## 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. The table 2 shows that totals of poultry number are mentioned.

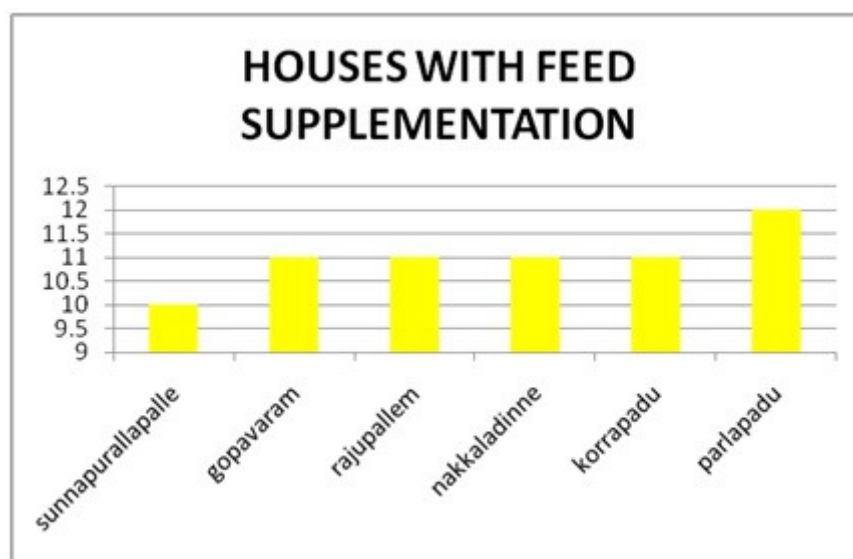
**Table 2: Tabular representation of obtained data**

| <b>Birds Distribution</b>                   | <b>Frequency</b> | <b>Percentage</b> |
|---|------------------|-------------------|
| No of houses visited                        | 480              | -                 |
| No of houses having birds (N)               | 303              | 63.2%             |
| No of houses without birds                  | 177              | 36.85             |
| No of birds in 303 houses                   | 1062             | -                 |
| Scavenging                                  | 303              | 100%              |
| Supplementation                             | 67               | 22.11%            |
| Vaccination                                 | 97               | 32%               |
| Mortality due to diseases                   | 180              | 59.4%             |
| Mortality due to predators                  | 108              | 35.6%             |
| Mortality due to lack of Veterinary service | 13               | 4.2%              |

### 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 (Huchzemeyer, 1994). The percentage ranged between 60% for those 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



**Figure 1: Houses with feed supplementation to birds**

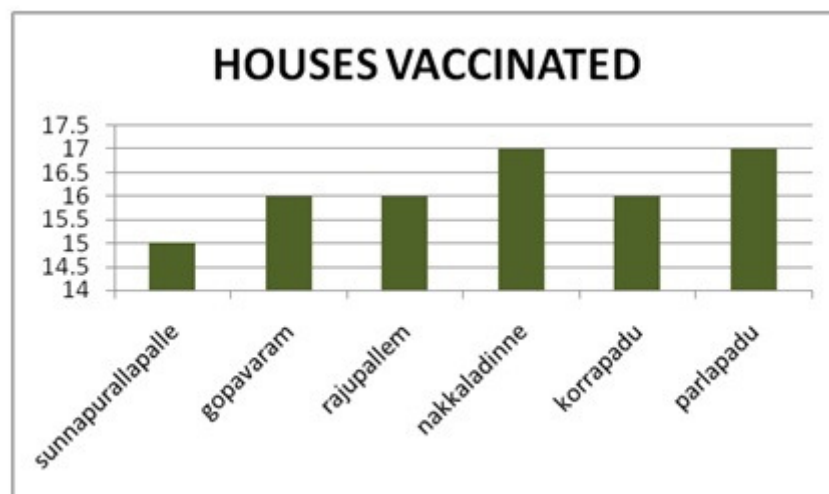
Birds of all ages used to scavenge together reveals Figure 1,2 during day times (Atunbi and Sonaiya, 1994). After hatching, chicks roam freely with their mothers. Drinking water was irregularly provided in clay pots. Only 22 % of respondents supplement their birds once a day with grains like wheat and millet etc.



**Figure 2: Images showing scavenging of backyard poultry birds**

## Vaccination

New castle 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 32% of the houses vaccinate their birds against new castle diseases. Table 2 shows the feeding and vaccination practices being adopted by rural families in study area (Figure 3).



**Figure 3: Houses with vaccinated birds in each village.**

### **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 of rural birds in the target area recorded was due to three major reasons as diseases, predators and unavailability of veterinary services as mentioned in Table2.

Poultry production is constantly moving towards modernization due to introduction of modern intensive farming system (Atunbi and Sonaiya, 1994). But inspite of that back yard 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 family. Stress factor from environment, disease and predator etc has 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 a 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 condition 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 effect thelivability or rural chicken. New castle disease is one the major threats faced by birds

specially during the changing weather. 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 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.

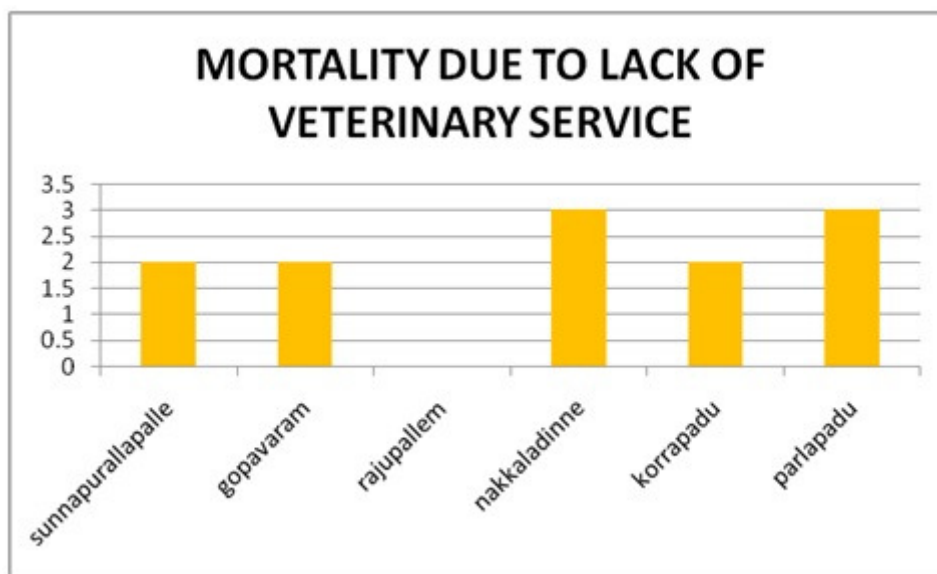
There is no doubt that backyard poultry farming should be encouraged as it is a valuable asset due to its numerous contributions to rural livelihood. It's a way of improving rural income and also empowering women as rural poultry is the only aspect whose income directly comes in hands of rural women. 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 (Figure 4,5,6).



**Figure 4:** Graphical representation of mortality In birds due to diseases.



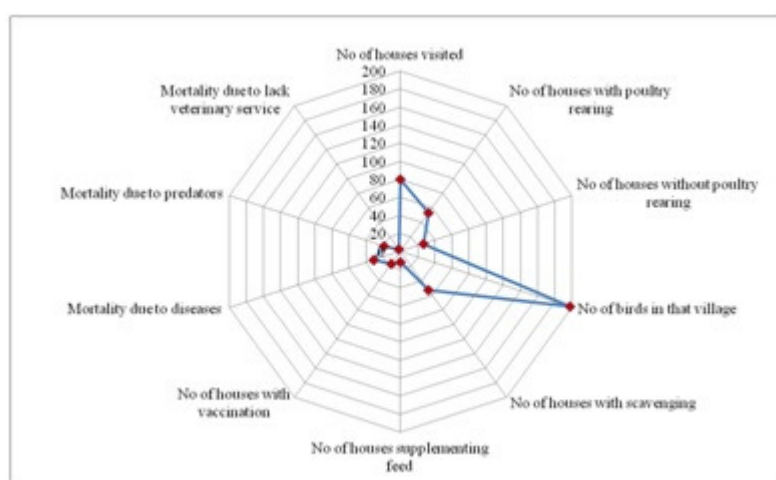
**Figure 5:** Graphical representation of Mortality in birds due to predators.



**Figure 6: Mortality in birds due to lack of Veterinary service**

#### Overall comparison of Radar graph

The following Figure 7 represents the overall comparison from 6 villages of Kadapa district, Andhra Pradesh. It includes the number of houses visited, houses with poultry rearing, houses without poultry rearing, number of birds in each village, houses with scavenging, houses providing supplementation, birds vaccinated, mortality under a single graph from each village.



**Figure 7: Overall comparison of managerial practices of backyard poultry birds in these villages.**

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