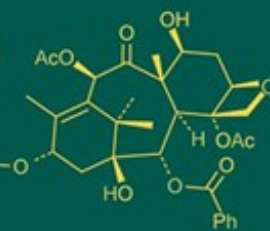
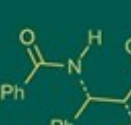


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Managemental practices in backyard poultry farming at Garo Hills district of Meghalaya, India

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ABSTRACT

Research study was performed to assess the level of adoption different practices with respect to backyard poultry rearing in west Garo hills Districts of Meghalaya. 40 houses were randomly selected and interviewed with the help of a semi structured interview schedule. It was found that backyard poultry rearing was an important activity. Poultry reared were mostly non-descript in nature that were procured and reared by owners themselves. Housing system were not as per recommended the scientific practices - they have different type of houses made from bamboo, wood, tin, net. Feeding system, 75 per cent of the farmers have provided feeds and 25 per cent were scavenging, 32.5 percent have provided water and 67.5 per cent were drink from available sources. Natural hatching was the main source of chicks. Health care and disease had no systematic care was taken and vaccination of the birds was also not carried out in all the villages surveyed. Majority of the farmers keeps their birds and eggs for their own consumption rather than selling.

Keywords: Backyard Poultry, Management Practices

Introduction

In India poultry farming under backyard system is as old as its civilization (Randhawa, 1946) [1]. Backyard poultry farming is mostly popular in rural and resource-poor areas of India and provides rural families with income, nutritionally rich food sources (meat and eggs), boosts up women and unemployed youth, and reduces the gap between demand and supply of poultry eggs and meat (Kumar *et al.*, 2019) [2]. It is essential to understand the perceptions of the farmers towards rearing of backyard poultry and also the value of their products under the prevailing production systems so as to boost backyard poultry productivity and sustainability in rural areas (Samantaray *et al.*, 2020) [3].

In Meghalaya, backyard poultry farming is one of the important components among the tribal farmers (Das, 2020) [4]. It forms a part of livelihood culture in the state and almost each household rears 10 to 15 desi hens in backyard for self-consumption and emergency cash needs [5]. In the rural villages of Meghalaya, it is not an uncommon sight to see backyards rearing poultry. Poultry rearing is one of the most common practices in Meghalaya. This is accounted to favourable weather conditions for rearing birds. Apart from the usual agricultural practices, certain allied services such as poultry rearing give additional income to families. Most people in rural areas find it hard to access banks and financial institutions, hence they turn to other activities such as this as this is a way by which they can invest their savings and also make extra money. It acts as a way of ensuring that when they are in dire economic needs, they have a nest egg secure [6]. Family backyard poultry is rarely the sole means of livelihood for the family but is one of a number of integrated and complementary farming activities contributing to the overall wellbeing of the household. Poultry provide a major income-generating activity from the sale of birds and eggs. Occasional consumption provides a valuable source of protein in the diet. Poultry also play an important socio-cultural role in many societies. Poultry keeping uses family labour, and women (who often own as well as look after the family flock) are major beneficiaries [7].

Materials and Methods**Study area**

West Garo Hills is one of the largest district of Meghalaya located in the western part of the state. The West Garo Hills district lies on the western part of the state of Meghalaya bounded by the East Garo Hills district on the east, the south Garo Hills on the southeast, the Goalpara district of Assam on the north and northwest and Bangladesh on the south. The district is situated approximately between the latitudes 90° 30' and 89° 40'

E, and the longitudes of 26° and 25° 20' N. The average rainfall is 330 cms. of which more than two-thirds occur during the monsoon, winter being practically dry.

Collection and analysis of data

The study was conducted in Rongram and Gambegre block in West Garo Hills district of Meghalaya. The present study was conducted at randomly selected tribal villages of two blocks, 40 households were selected from four villages (Adugre, Asanang, Bolchugre, Boldogre) to make a sample size of respondents selected from the villagers by applying proportionate random sampling technique based on backyard poultry. The data were collected through questionnaire and respondent's personal interviews were also employed. Data were collected, tabulated and analysed for meaningful conclusion.

Backyard poultry

Table 1. Backyard poultry rearing practices

Features	Percentage (100%)
Housing system	40
Bamboo	32.5
Wood	12.5
Tin	7.5
Net	7.5
Tree	
Feeding system	25
Scavenging	75
Feeds and kitchen waste	0
Commercial feed	32.5
Drinking system	67.5
Provide water	
Available water	
Breeding	100
Hatching of eggs naturally at home	
Health care	90
Cleaning of poultry house	85
Control of parasites	25
Deworming	80
Self-treatment of birds	15
Local treatment	5
Treatment of birds by Veterinary doctor	
Marketing channel	67.5
Own consumption	12.5
Doorsteps	20
Market	

Housing system

During the present study, it was found that all the farmer's rear backyard poultry in extensive system where they provide night shelter to their birds. Among them 40% % respondents constructed a separate house with bamboo, wooden 32.5 %, tin 12.5 %, net 7.5 %, and tree 7.5 % where the owners not provided any house for birds and the birds sleep on the branches part of the tree. The floor was made of bamboo and wooden and the roof were covered by wooden, bamboo and tin. The well ventilated shelter was provided by a small number of farmers. The only few farmers supplied electricity in poultry houses. The similar findings were also reported by Khandait *et al.* (2011) [8].

Feeding/ drinking practice

According to the study, the owners provided feeds for their birds twice in the morning and the evening. Some respondents used broken bowls or small containers to give grains and some owners they just throw down on the ground where the birds come and eat. Few birds

were left for scavenging in the open fields. The respondents were not purchased feeds from markets. Generally, 67.5% of the owners did not provide water, and the bird drinks from available sources like from drains, collected water. These observations are in confirmation with the observations reported by Mandal *et al.* (2006) [9].

Breeding practise

In the study, the hen matures and begins to lay eggs between 6-7 months of age and lay 3-4 clutches per year and it was found that 100% of all the respondents allowed eggs to hatch at home under broody hen naturally for chicks and also made use of other source for procurement of chicks. The owners prepared proper laying box with dry bedding materials in shallow and roomy bamboo basket along with straw and kept in the corner of house for a mother to lay eggs without effecting the eggs from cracking, stealing and falling. The family of the mother checked the hen and provide feeds after mother hen laid. The majority of the respondents keep the eggs with a mother to raise the chicks. Once the chicks comes out from shell, the mother herself started protecting her chicks from predators and gradually chicks started following the mother. Respondents purchase poultry chicks from the local market and few purchased from Government or private hatchery.

Health care

Poor health management resulting in high mortality rates and compromised productive performance characterize most smallholder chicken production systems (Kusina *et al.*, 2001) [10], (Pedersen, 2002) [11]. In Table 1 the majority of 90% respondents were cleaned the poultry houses. The controls of ecto-parasite were practiced by 80% of the respondent, 25% were practicing the deworming at their houses. Diseases are the number one problem limiting the birds in Meghalaya. It was revealed that the majority of the respondents were not have enough knowledge about the treatment and most of their birds die due to lack of knowledge. During the time of disease infection, respondents used their own method and 80% were involved in self-medication and some of them 15% approached local expert for treatment. Only 5% respondents were taking help from veterinary doctors for treating the birds.

Marketing channel

The different marketing channels adopted by the farmers in the study area was for the purpose of selling backyard poultry which mainly consists of eggs and sale of birds. Not all the respondents sell their birds and eggs mostly 67.5 % keep for own consumption, 12.5 % backyard poultry owners sell their birds at their doorsteps, and 20 % respondents sell in village market when their birds attain a specific weight gain of 1.5 to 2 kg. They started selling the birds according to the size of the birds. It was considered the local birds was high demand in village because of good taste comparing to the broilers birds. And the birds were being sold on specific occasion, on demand of customers and requirement of money. The respondents expressed that the care of backyard poultry was taken by female.

Local eggs are highly demand in the markets because of good taste, nutritious. The poultry owners did not sell birds and eggs throughout the year, they sell when it comes in needs of selling and requirement of money.

Conclusion

The backyard poultry rearing is common in west Garo Hills, but the adoption of improved backyard poultry are poor, therefore there is need to provide the facilities and educate the farmers in improved backyard poultry rearing practices. On-farm training and awareness of rural is necessary to bring about the changes in the practices. Bio-security measures should be enhanced to reduce disease outbreak. Good bio-security will pave way for clean environment. Bio-security will not only maintains the good environment but also minimize infectious and zoonotic diseases and subsequently enhance public health. Proper raising and feeding for birds and providing basic health care facilities

can bring a significant improvement in sustainable backyard poultry in Garo Hills people.

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