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Present scenario and constraints in the rural backyard Poultry Production in Cuddalore district of Tamil Nadu, India

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Abstract

Rural poultry production has played an important role to meet the domestic as well as socio-cultural needs of the rural people. However, the conventional backyard poultry farming in villages has suffered a setback in the wake of commercialization in the recent years. Contextually, the present study had been conceptualized with the overall objective to study the existing status of rural poultry production and to identify the constraints perceived by poultry owners in Cuddalore district of Tamil Nadu, India. The investigation was conducted in randomly selected fifteen villages of three divisions of Cuddalore district of Tamil Nadu. Data were collected through a structured interview schedule from 240 respondents i.e. 80 each from the three Divisions. The analysis of data revealed that respondents were predominantly young, had low level of education in backyard chicken production. Agricultural labour was the major occupation; they had marginal land and medium livestock holding with more than 6 years of poultry farming experience. The average flock size was 5 birds and they reared birds in free-range/backyard system with little supplementary feeding. No systematic care was taken with regard to the avian diseases and even vaccination of the birds was not carried out in any of the villages surveyed. The major constraints identified were high incidence of poultry diseases, lack of suitable germplasm and attack by predators.

Key words: backyard chicken, constraints, cuddalore , present scenario, rural production.

Introduction

The Poultry industry in India represents a major success story in the present era of agricultural production arena. Poultry production has been a household activity in India since time immemorial with backyard chicken production being an integral constituent of rural economy of India. However, scientific poultry production in India gained momentum during the last four decades due to concerted efforts of the Government of India through policies, institutional training and focused research besides the initiatives taken by the private sector. India ranks 3rd in egg production

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and 7th in chicken meat production in the world (Watt Executive Guide, 2015). Though, India has a vast poultry population, around 40 per cent of the birds in the country are in the backyard (Annual Report of Dept. of Animal Husbandry, 2012). In India, most of the commercial poultry production is focussed in urban and peri urban areas. India has 72.22 per cent of its population living in rural areas and about 89 per cent rural livestock householders' rear poultry as an important supplementary source of cash income (Khandait *et al.*, 2011). Much of the eggs and meat produced are consumed by the urban or semi urban population while the rural and tribal areas have little access therefore the villages must have to be independent in the poultry production to meet their need. The rural populace has less purchasing power. They can take upper hand in backyard poultry rearing to fulfill their needs. The demand of eggs and meat of rural areas to be met by backyard poultry rearing (Gayatri *et al.*, 1998; Nandi *et al.*, 2007; Panda *et al.*, 2008). The cage rearing of poultry are no more encouraging from the welfare issue point of view. Backyard poultry rearing also finds an important role to fulfill the need of stress free and harmful residues free birds (Khandekar, 2003; Mandal *et al.*, 2006).

Requirement of small space, low capital investment, quick return from outlay and well distributed turn over throughout the year make poultry farming remunerative in both rural and urban areas. The rearing of backyard poultry provides an excellent opportunity for gainful employment to idle or unemployed members of rural communities. Additionally, chicken meat consumption is a significant protein source which helps to cover the nutritional needs of the rural population (Pathak and Nath, 2013). Besides reduction of poverty it will help in nutritional improvement especially in vulnerable groups (Rath *et al.*, 2015).

Traditional / backyard poultry farming plays a major role in the rural economy and women empowerment. Though, still it is contributing 30% to the national egg production, the rural backyard poultry is the most neglected one (Tajane and Vasukar, 2004). The major limiting factor in the way of increasing consumption of egg and poultry meat in the rural area is the poor availability. The rural people can take the advantages of this poor availability and divert them towards this rural poultry farming. High rise of feed cost, unavailability of good germplasm, high disease incidence and mortality, predation, shortage of scavenging area, resistance from the neighbours, malnutrition in birds, low egg production, lack of veterinary assistance in the villages, lack of awareness and knowledge about poultry practices often become major hindrance in rural poultry production. In view of the above, the present study was an attempt to find out the existing status of rural chicken farming and identify the constraints perceived by poultry owners in Cuddalore district of Tamil Nadu, India.



Materials and methods

Locale of the study

The study was conducted in three divisions of Cuddalore district of Tamil Nadu, India. The District is located along the Eastern Coastal Region of the State. The District Of Cuddalore is bordered by the district at Viluppuram, Nagapattinam and Perambalur. The district is also bordered by the Bay of Bengal on the Eastern side. It lies in the Agro Climatic zone II (East Coast Plains and Hills) and the Geographic Coordinates of the district are: Latitude is 150 511 /110 1111 and 120 3511 N, Longitude is 780 38II to 800 0011 and Altitude 4.6m MSL. The fertile soil and good water potential provide ample scope for livestock rearing in the district. There are 3.50 lakh cattle, 3.56 lakh goat, 0.60 lakh sheep and poultry population is 11.00 Lakhs. The livestock rearing provides ample employment and income generating activities to small farmers, marginal farmers and agriculture labourers. More than hundred veterinary institutions are present in this district to take care of the health of the livestock population. According to the soil and geographical condition, the Cuddalore district has been divided into three divisions, viz., Cuddalore, Chidambaram and Virudhachalam divisions.



Figure 1. Location of the Study

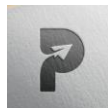


Table 1. Revenue administration of Cuddalore District

Name of the Division	Name of the Taluk	No. of villages
Cuddalore	Cuddalore	82
	Panruti	99
	Kurinjpadi	71
Chidambaram	Chidambaram	120
	Kattumannarkoil	123
	Bhuvanagiri	73
	Srimushanam	51
Vridhachalam	Vridhachalam	124
	Titakkudi	109
	Veppur	53
Total no. of villages		905

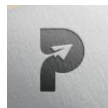
Sampling procedure

Selection of villages: Fifteen villages were selected randomly from each division of Cuddalore district. Thus, a total of 45 villages were selected for the study.

Selection of respondents: Initially, an exhaustive list of poultry owners was prepared from the selected villages where backyard poultry farming is being practiced. Then from each division 80 poultry owners were selected on the basis of random proportionate sampling (RPS) method. Thus, the final sample comprised of 45 villages and 240 respondents.

Data collection and analysis

Keeping in view the objectives of the study, a structured interview schedule was developed for the purpose of data collection. The schedule was initially pre-tested in the actual field situation at a place other than the locale of the present study. On the basis of experience gained through pre-testing appropriate modifications were made accordingly in the construction and sequence of questions. In order to get logical interpretation, the data were compiled, tabulated and subjected to appropriate statistical analysis.



Results and discussion

Profile of respondents

Table 2. Distribution of respondents according to profile (N=240)

Variables	Category	No. of respondents	Percentage
Age	Young (less than 32 yrs)	153	63.75
	Middle (32-47yrs)	47	19.58
	Old (more than 47 yrs)	40	16.67
Occupation	Agriculture	54	22.50
	Animal Husbandry	35	14.58
	Service	7	2.92
	Business	17	7.08
	Labour	127	52.92
Land holding	Landless	65	27.08
	Marginal	115	47.92
	Small	48	20.00
	Large	12	5.00

The backyard poultry owners according to their age were categorized into three groups, i.e., young, middle and old. The data presented in Table 2 reveals that majority of the poultry owners (63.75%) belonged to young age group, while (19.58%) poultry owners were middle age group and (16.67%) hailed from the old age group. A cursory look at Table 2 indicates that majority of the poultry owners (52.92%) were labourers. Agriculture provided occupational livelihood to 22.50 per cent poultry owners, whereas, 14.58 per cent respondents earned through animal husbandry. Service and business provided occupational livelihood to 2.92 and 7.08 per cent families, respectively. In perusal of Table 2 it was learnt that 27.08 per cent of the poultry owners had no land. The majority of the respondents (47.92%) possessed less than 1 hectare of land and belonged to marginal farmers' category while 20 per cent of the families had 1-2 hectare of land and fell in the small farmers' category. Only 5 per cent poultry owners were having more than 2 hectare of land and belonged to large farmers' category. The findings are in consonance with various parts of the country (Vetrivel and Chandrakumarmangalam, 2013). Rural poultry production has also been considered to be an excellent subsidiary occupation for the small and marginal farmers and landless labourers of rural people.



General Information about backyard poultry farming
Poultry farming experience

Table 3. Distribution of respondents according to their poultry farming experience and flocks size (N=240)

Variables	Categories	No. of respondents	Percentage
Poultry farming experience	Less than 3 years	15	6.25
	3-4 years	32	13.33
	5-6 years	78	32.50
	More than 6 years	115	47.92
Flock size	Small(less than 5 birds)	25	10.41
	Medium(5-8 birds)	175	72.92
	Large(more than 8 birds)	40	16.67

It showed that majority of the poultry owners (47.92%) had been rearing poultry for more than 6 years, followed by 32.50 per cent and 13.33 per cent with 5-6 years and 3-4 years of poultry farming experience, respectively. Only 6.25 per cent poultry owners replied that they had been rearing poultry for less than 3 years. These findings are in concurrence with the findings of Saha (2003). It is therefore, evident that, poultry farming under the backyard system also follows a cyclic trend like the intensive system. The study showed that all the respondents reared coloured non-descript birds, which are readily available at their doorstep. The data presented in Table 3 indicates that majority of the respondents (72.92%) had a medium flock size, followed by 16.67 per cent with a large flock size. Only 10.41 per cent poultry owners had a small flock size. The average flock size reported in the study area was 4.69 birds which are contrary to the earlier reports (Pathak and Nath, 2013; Rath *et al.*, 2015). All the poultry owners did not receive any training in rural poultry production. The poor production of village birds is a fact which reflects the poor knowledge of the rural people. This needs to be rectified.



Health Care

Table 4. Distribution of respondents according to treatment of birds (N=240)

Treated by	No. of respondents	Percentage
Self	240	100
Quacks	11	4.58
Veterinary Doctor	4	1.67

The rural poultry owners were not much bothered about disease aspect of the birds, Table 4 clearly shows that, all the respondents treated their sick birds by themselves, while, only 4.58 and 1.67 per cent consulted quacks (local expert) and veterinary doctor, respectively.

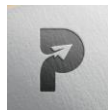
The study revealed that mortality rate in desi birds due to Ranikhet disease was highest, followed by Fowl pox, Coccidiosis, respiratory problems and other miscellaneous diseases, which corresponds with the earlier reports (Jagannath Patra and Singh., 2016; Singh and Jilani, 2012). The study also shows that, the death rate was high in chicks followed by growers and adult birds and diseases contributed markedly to high flock mortalities recorded during rainy season (Mapiye and Sibanda, 2005). All the poultry owners did not know the importance of vaccination and had hardly vaccinated their birds.

Constraints in backyard poultry farming

Table 5. Constraints in backyard poultry farming (N=240)

Sl. No.	Constraints	Frequency	Percentage	Rank
1	High incidence of diseases	240	100.00	I
2	Lack of suitable germplasm	219	91.25	II
3	Attack of predators	208	86.67	III
4	High hatching mortality	204	85.00	IV
5	Lack of financial support	162	67.50	V
6	High cost of inputs	131	54.58	VI
7	Unhygienic	58	24.17	VII
8	Lack of knowledge	46	19.17	VIII
9	Shortage of place	45	18.75	IX
10	Complaints by neighbours	23	9.58	X

It revealed that mortality due to high incidence of disease was the major constraint which was reported by all the respondents, followed by lack of suitable germ-plasm (91.25%), attack of predators (86.67%), hatching mortality (75.00%), lack of financial support (67.50%) and high cost of



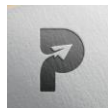
inputs/chicks (54.56%). Inadequate knowledge, shortage of space, complaints by neighbours and hygiene menace was also reported as constraints by 19.17, 18.75, 19.58 and 24.17 per cent of the poultry owners, respectively. These findings are in consonance with the earlier reports (Singh and Jilani, 2012; Sudhir Kumar Rawat *et al.*, 2015) that improper implementation of programs, illiteracy, poor marketing system, lack of scientific knowledge and farms mechanization are the major constraints to uplift socioeconomic of the farmers. In order to overcome the constraints there is a need for creating awareness, providing knowledge and proper planning and implementation of strategies for backyard poultry farming (Mahendra Singh *et al.*, 2017; Hussain *et al.*, 2017).

Conclusion

Rural poultry production plays a significant role in rural development by providing cash income, have nutritional, cultural and social functions. The results of this study revealed that young people involved in rural poultry production and they had low level of education in management of chicken. Agricultural labour was the major occupation; they had marginal land and medium livestock holding with more than 6 years of poultry farming experience. The average flock size was 5 birds and they reared birds in free-range/backyard system with little supplementary feeding. No systematic care was taken with regard to the diseases and vaccination of the birds was also not carried out in any of the villages surveyed. The major constraints identified were high incidence of poultry diseases, lack of suitable germ-plasm and attack by predators. As most of the poor and marginal farmers have very limited capital assets and they mostly depend on poultry farming for their livelihoods, growth of the rural poultry sector can definitely contribute to poverty alleviation in India. Perhaps there is poor awareness among the governments on the potential of small scale poultry production in sustaining poor people's livelihoods. Because of this government support towards improvement of rural poultry farming system is trivial. Therefore it is very much necessary to raise awareness about this activity. Besides reduction of poverty it will help in nutritional improvement especially in vulnerable groups. It not only gives employment to the rural small scale and marginal farmers but can also play a pivotal role in women empowerment.

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