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## Socio-economic constraints of rearing Giriraja chicken in Bagalkot district of northern Karnataka

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### Abstract

Data on profile characteristics of farmers, priorities for adoption, household nutritional security, gender issues, socio-economical contribution and constraints involved in rearing Giriraja chicken, collected from 600 respondents in Bagalkot district of Karnataka was analyzed. Majority of the respondents were middle aged, women, literates, nuclear families with average family size of 5.64 and belong to other backward classes. Majority of them were marginal farmers followed by small farmers with agriculture and animal husbandry as primary and subsidiary occupations, respectively. The overall adoption behavior of Giriraja chicken was medium with significant ( $p < 0.0001$ ) difference in change in flock size. Non availability of Giriraja chicks at nearest place, unawareness about proper brooding technique were the major constraints and training on Giriraja chicken rearing, regular chick supply, provision of low cost feed supplements on subsidy and extending mini-incubator facilities to the farmers at subsidy cost were the major suggestions perceived by the respondents.

**Keywords:** socio economic constraints, Giriraja and Bagalkot districts

### Introduction

Livestock sector is an important sub-sector of agriculture in the Indian economy. It grew at CAGR of 8.24 per cent during 2014-15 to 2018-19 and it contributed about 4.2 per cent of total GVA in 2018-19. The people of India are blessed with a variety of agricultural resources of which chicken rearing is considered to have potential both for poverty alleviation and food production. Poultry production in India has taken a quantum leap in the last four decades, emerging from use of unscientific farming practices to commercial production systems with state-of-the-art technological interventions. According to FAOSTAT production data (2019), India ranks 3rd in egg production in the world. The egg production in the country has increased from 78.48 billion in 2014-15 to 114.38 billion in 2019-20.

The development owes to various factors which include growth in income and urbanization, progresses in processing technology and improvements along the marketing chain. Though India has shown a tremendous growth in poultry production over decades, rural poultry farming is still lagging behind and always found neglected. In developing countries, backyard poultry represent approximately 80 per cent of poultry stock, often consisting of indigenous breeds of various ages, with various species mixed in the same flock still today. Present poultry industry gives more emphasis on supplying meat and egg products majorly to urban, peri urban areas. So, the poultry products are still costly in rural areas (10-40%), hence people in villages give more scope on backyard poultry rearing, to meet their necessities.

Bhurtel (1996) <sup>[1]</sup> reported that majority of the rural poultry farmers were illiterates. Lasoda *et al.* (1997) <sup>[5]</sup> concluded in their study that the level of education of majority of backyard poultry farmers was predominantly of primary and secondary level and up to 16 per cent were reported to be illiterate. Prakash *et al.* (2000) <sup>[8]</sup> reported in their study that most of the backyard poultry farmers (61.66 per cent) were illiterate.

Conroy *et al.* (2004) <sup>[2]</sup> conducted study at Peruganur village of Trichy district and Udaipur villages of Rajasthan and concluded that rural poultry keepers expressed their main reason for keeping poultry was to generate income and also for self consumption.

Kumtakar (1999b) <sup>[4]</sup> revealed that the tribal backyard poultry farmers in Jabalpur district of Madhya Pradesh were aware of and had knowledge of few identified common diseases. The rural households (66%) attribute major causes of mortality due to outbreak of diseases like Kata (Ranikhet/ New Castle disease) Fafundi (fungus leading to toxicity) by four per cent and 30 per cent were unable to identify the diseases.

Semmaran (2007) <sup>[9]</sup> who found majority of farmers in Karnataka were in the category of medium level with respect to scientific practices recommended for rearing Giriraja birds. Prakash *et al.* (2000) <sup>[8]</sup> reported in their study conducted at three hills of Meghalaya that about 85 per cent of respondents did not provide proper housing for their birds. Mandal *et al.* (2002) <sup>[6]</sup> found in their study conducted at tribal villages of West Bengal state that all the tribal backyard poultry farmers (100) reared birds under backyard or free-range system and the birds were protected from predators by providing night shelter only.

### Materials and Methods

The research was conducted in Bagalkot district of north Karnataka. It consists of five major parts, they include

- 1) Research design.
- 2) Sampling procedure.
- 3) Variables and their empirical measurement.
- 4) Instruments and methods used for data collection.
- 5) Statistical tools used for analysis of data.

**Research Design:** The design of research done on type of variables, size of respondents and phenomena to be studied. The research will be done to know the socio-economic profile, adoption pattern, household food security, gender issues and constraints of farmers rearing Giriraja bird in Bagalkot district of Karnataka.

**Sampling procedure:** A simple random sampling process will be used to select the farmers from study area (Bagalkot district). There are six talukas in Bagalkot district. Ten villages will be randomly selected from each taluka and ten farmers from each village will also be selected randomly.

**Variables and their empirical measurement:** The variables for the study will be selected on the basis of a) Age b) Education c) Gender d) Family type e) Family size f) Caste g) Type of house h) Land owned i) Main occupation j) Subsidiary occupation k) Informational sources l) Attitude towards Giriraja poultry farming m) Flock size n) Employment generation o) Work distribution pattern p) Income utilization q) Source of chicks r) Production parameters s) Adoption pattern of the Giriraja bird.

i. Instruments and methods to be used for data collection :

- a) Interview test in non sample area
- b) Data will be collected from selected respondents in the study area

- c) Construction of interview schedule
- d) Establishing rapport with respondents
- e) Methods of data collection

### Statistical tools to be used for data analysis: Following statistical tools to be utilized

- a) Frequency
- b) Percentage
- c) Mean
- d) Paired t- test
- e) Chi square test
- f) Rank

### Results and Discussion

The results indicated that the major constraints reported by farmers rearing Giriraja chicken were in order of non-availability of Giriraja chicks at nearest place (80 per cent), problem of predators (79 per cent), laying eggs outside shelter (72 per cent), mortality of chicks (71 per cent), non-availability of timely vaccine (51 per cent), lack of awareness about brooding technique (41 per cent), lack of funds for initial investment (40 per cent), non-availability of scavenging area (35 per cent), lack of awareness about disease control (34 per cent), lack of knowledge to access bank for loan (22 per cent), destroys agricultural crop in surrounding area (18 per cent), worried about zoonotic diseases like bird flu (13 per cent), marketing problem (5 per cent). The results obtained are presented in Table 1.

This was due to the fact that there was no regular supply of Giriraja chicks at nearest places. Predator problems could be attributed to the low flying capacity of Giriraja chicken due to heavy body weight. Mortality of chicks was due to lack of brooding and vaccination knowledge among farmers and lack of supplementary feeding of chicks.

The results were in affirmation with the study conducted by Nath *et al* (2012) <sup>[7]</sup> who observed that non-availability of chicks, non-availability of medicine, high incidence of diseases, lack of knowledge about scientific practices, lack of market, attack of predators etc., were the major constraints of faced by backyard poultry farmers.

The results of the study were partially in confirmation with the study conducted by Kothandaraman *et al* (2019)<sup>(3)</sup> who concluded that mortality due to high incidence of disease were the major constraints, followed by lack of suitable germplasm, attack of predators, hatching mortality and lack of financial support.

**Table 1:** Constraints involved in rearing Giriraja chicken

S. No	Constraints	Frequency (f)	Percentage (%)
1	Non availability of Giriraja chicks at nearest place	80	80
2	Problem of predators	79	79
3	Laying eggs outside shelter	72	72
4	Mortality of chicks	71	71
5	Non availability of timely vaccine	51	51
6	Lack of awareness about brooding technique	41	41
7	Lack of funds for initial investment	40	40
8	Non availability of scavenging area	35	35
9	Lack of awareness about disease control	34	34
10	Lack of knowledge to access bank for loan	22	22
11	Destroys agricultural crops in surrounding area	18	18
12	Worried about zoonotic disease	13	13
13	Marketing problem	5	5

## Conclusion

The study was based on the hypothesis that backyard poultry with Giriraja chicken form the basis for improving the livelihood security in terms of nutritional, social and economic benefits. The findings of the study conclusively proved this hypothesis. The distributional benefits of income earned through backyard poultry with Giriraja chicken are wide and well recognized. Overall backyard poultry with Giriraja birds helped the respondents as a tool in poverty alleviation, income generation and gave nutritional security besides empowering them economically. The redressal of constraints at rural level can be a boon for the farmers and allow further diffusion Giriraja chicken into social system for the benefit of the wide section of rural population.

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