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## Marketing Practices and Employability in Traditional Backyard Poultry Rearing in Bastar District of Chhattisgarh, India

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### Abstract

The present study was carried out in the Bastar district of Chhattisgarh with the specific objective to assess the marketing practices and employability related to backyard poultry production of *desi* birds during February to April, 2014. A total of 120 poultry rearers (12 respondents from each village) were randomly selected from two blocks (Bakawand, Jagdalpur) of Bastar district of Chhattisgarh. The data was collected from the selected poultry rearers through a structured interview schedule after initial pre-testing. The findings of the study revealed  $131.01 \pm 0.81$  man days employment year<sup>-1</sup> was generated through backyard poultry rearing to the total family members. The employment was highest for adult female members ( $69.10 \pm 0.99$  man days year<sup>-1</sup>), followed by  $42.20 \pm 1.10$  man days year<sup>-1</sup> for youths and  $19.71 \pm 0.34$  man days year<sup>-1</sup> for adult male members of the family. 23.33% poultry rearers marketed their eggs directly to consumer followed by 20.00% at village market, 5.83% poultry rearers sold their eggs to the middleman and 5.00% to *feriwalla*. Majority (41.67%) of them marketed their live birds directly to consumers followed by *feriwalla* (22.50%), at village market (19.17%) and 13.33% poultry rearers sold their birds to the middleman. Present study concluded that in traditional backyard poultry rearing adult female and youths had more man days employment in Bastar district and most of the tribal poultry rearers market their eggs and birds directly to the consumers due to their social nature of livelihood.

**Keywords:** Employability, marketing practices, backyard poultry

### 1. Introduction

In India, commercial farms are concentrated more in urban and semi urban areas. 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 to these products (Abdulkadir et al., 2012). Therefore, the villages must have to be independent in the poultry production to meet their needs (Singha et al., 2012). The demand of eggs and meat in rural areas has to be met by backyard poultry rearing (Adeyemo and Onikoyi, 2012). 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). Backyard poultry helps in enhancing the food and nutrition security of the poorest households and in the promotion of gender equality (Anonymous, 2004). Smallholder poultry production cannot generate sizeable income as the operational units are small. However, it represents a known skill to most of the poor women and can help them into a positive spiral of events that may move them out of poverty (Fasina et al., 2016).

The market and production context of poultry production has been changed rapidly with varying economic growth

and urbanization in India (Khaleda, 2013). There has been fast expansion of industrial, large-scale, vertically integrated and poultry production. Opportunities have also expanded for small-scale poultry enterprises due to improved market access and infrastructure, and a preference structure may still favor free range birds and eggs (Akinola and Essien, 2011). As a result, there has been increased market orientation even among small-scale poultry enterprises. But tribal areas are still lacking market facilities, health care and management practices. Hence there is ample scope for development of backyard poultry regarding market opportunities in tribal areas of Chhattisgarh. Backyard poultry rearing is popular in tribal areas of Bastar district in Chhattisgarh. It also helps in accelerating the pace of poverty reduction including direct benefits from poultry rearing, employment generation, promote gender equality and reaching out to the poorest of the poor in the society. In this context, the study was undertaken to investigate the existing marketing practices, level of economic contribution and employment generation through backyard poultry rearing by farmers.

### 2. Materials and Methods

The present study was purposively conducted in Bastar district



of Chhattisgarh because Bastar remains the land of tribes and about 70% of the total population comprises of tribals, which is 26.76% of the total tribal population of Chhattisgarh. Bastar has poultry population of about 0.69 millions. The Bastar district comprises of 7 blocks out of which two blocks (Bakawand and Jagdalpur) were chosen randomly. From each block five villages were selected randomly and from each village, 12 poultry rearers were selected randomly making a total 120 poultry rearers were selected for the study during the period from February to April, 2014. The data was collected using well-structured and pre tested interview schedule by covering all the dimensions of marketing, consumption and employability practices i.e. selling weight and age of birds, marketing, consumption of egg and meat, employment generation and level of economic contribution. Relevant data pertaining to the study was collected, analyzed using frequency, percentage, standard error and interpreted.

### 3. Results and Discussion

#### 3.1. Selling age and weight of live birds

It was evident from Table 1 that 56.67% respondents sold

Table 1: Distribution of respondents according to selling age and weight of birds

	Bakawand (n=60)		Jagdapur (n=60)		Total (N=120)	
	F	%	F	%	F	%
Selling age of birds (in wk)						
45–55 wk	11	18.33	14	23.33	25	20.83
55–65 wk	33	55.00	35	58.33	68	56.67
65–75 wk	16	26.67	11	18.33	27	22.50
Mean±SE	60.52±0.92		58.33±0.86		59.43±0.68	
Selling weight of birds (in kg)						
1.2-1.6 kg	16	26.67	12	20.00	28	23.33
1.6-2.0 kg	19	31.67	23	38.33	42	35.00
2.0-2.5 kg	25	41.67	25	41.67	50	41.67
Mean±SE	1.88±0.04		1.98±0.02		1.93±0.02	

F: Frequency; %: Per cent

their birds at the age of 55–65 weeks, whereas 22.50% sold between 65–75 weeks and 20.83% respondents sold their birds at age between 45–55 weeks. The average age for selling of birds in Bastar was 59.43±0.63 weeks. The weight of selling birds varies from 1.2–2.5 kg with the average was 1.93±0.02 kgs. Due to low feed conversion ratio (FCR) and unavailability of specified feed in backyard poultry rearing the growth rate of birds was poor.

#### 3.2. Marketing of egg and birds

Table 2 revealed that majority (95.00%) respondents reported they sold their live birds in market with the average price of ₹ 310.21±2.06 kg<sup>-1</sup> live bird whereas, only 54.17% respondents sold eggs of their birds at average price of ₹ 7.01±0.07 egg<sup>-1</sup>. 23.33% poultry rearers marketed their eggs directly to consumers followed by 20.00% at village market, 5.00% to *feriwala* and 5.83% sold to the middleman. Majority (41.67%) of them marketed their birds directly to consumer followed by *feriwala* (22.50%), at village market (19.17%) and 13.33% poultry rearers sold birds to the middleman and similar findings were reported by Khan et al. (2008) in Uttar Pradesh. The birds were being sold on specific occasion, on demand of customers, on religious function and on requirement of money. 45.83% respondent did not sell any egg in market or neighborhoods because they kept them for breeding purposes or own consumption, whereas only 5% respondent reported that poultry birds are reared for their own consumption. Majority (98.33%) respondents did not use litter and thrown on waste land and 1.67% respondents reported that they used the litter as fertilizer along with cow dung. No one respondent has undergone for the backyard poultry training. The reason might be they were interested in traditional methods of management and health care because it does not require much care, labour, time and investment.

#### 3.3. Consumption of egg and meat

Table 3 reflected that majority (50.00%) of the respondents consumed 20–24 eggs year<sup>-1</sup>, 30.83% respondents consumed 24–28 eggs year<sup>-1</sup> and only 19.17% respondents consumed 16–20 eggs year<sup>-1</sup> with an average of 22.03±0.26 eggs person<sup>-1</sup> year<sup>-1</sup>. Meat consumption in study area revealed majority

Table 2: Distribution of respondents according to marketing of egg and meat

Placer for selling	Egg				Meat				Egg		Meat	
	Bakawand (n=60)		Jagdalpur (n=60)		Bakawand (n=60)		Jagdalpur (n=60)		Total (n=120)		Total (n=120)	
	F	%	F	%	F	%	F	%	F	%	F	%
Direct to consumer	15	25.00	13	21.67	27	45.00	23	38.33	28	23.33	50	41.67
At village market	13	21.67	11	18.33	13	21.67	10	16.67	24	20.00	23	19.17
<i>Feriwala</i>	4	6.67	2	3.33	11	18.33	16	26.67	6	5.00	27	22.50
Middlemen	2	3.33	5	8.33	6	10.00	10	16.67	7	5.83	16	13.33
Not sold	26	43.33	29	48.33	4	6.67	2	3.33	55	45.83	6	5



Table 3: Distribution of respondents according to egg and meat consumption (person<sup>-1</sup> year<sup>-1</sup>) and Income utilization from poultry.

Consumption and income utilization	Bakawand (n=60)		Jagdapur (n=60)		Total (N=120)	
	F	%	F	%	F	%
Eggs for domestic consumption (Eggs person <sup>-1</sup> year <sup>-1</sup> )						
Low (16–20)	14	23.33	9	15.00	23	19.17
Medium (20–24)	31	51.67	29	48.33	60	50.00
High (24–28)	15	25.00	22	36.67	37	30.83
Mean±SE	21.6±0.361		22.45±0.359		22.03±0.257	
Meat consumption (Eggs person <sup>-1</sup> year <sup>-1</sup> )						
Low (2–3.5)	35	58.33	27	45.00	62	51.67
Medium (3.5–5)	21	35.00	25	41.67	46	38.33
High (5–6.5)	4	6.67	8	13.33	12	10.00
Mean±SE	3.17±0.137		3.43±0.143		3.3±0.099	
Income utilization from poultry						
Education	15	25.00	20	33.33	35	29.17
For household	51	85.00	54	90.00	105	87.50
Recreation	41	68.33	48	80.00	89	74.17
Medicine	22	36.67	30	50.00	52	43.33
Agriculture	7	11.67	5	8.33	12	10.00
Poultry production	45	75.00	48	80.00	93	77.50
Livestock purchasing	5	8.33	2	3.33	7	5.83

(51.67%) of the respondents consumed 2–3.5 kg meat year<sup>-1</sup>, 38.33% consumed 3.5–5 kg meat year<sup>-1</sup> and only 10.00% consumed 5–6.5 kg meat year<sup>-1</sup> with the average meat consumption in Bastar district was 3.3±0.01 kg person<sup>-1</sup> year<sup>-1</sup>.

Further Table 3 revealed that income utilization from poultry that majority (87.50%) of the respondents utilising their income for household, 77.50% for poultry production, 74.17% for recreation, 43.33% for medicine, 29.17% for education of children, 10.00% for agriculture and allied purposes and only 5.83% utilising their income for livestock purchasing according to the use of money at that time. In backyard system, the poultry rearers spend their money mostly on household, poultry production and recreation depending upon need at the time of sell. So, families have enhanced their capabilities and able to cope with threats that are common to poor tribal families such as human diseases, hidden hunger or a depletion of their assets and weak social networks, poor child health and keep them in school. Smallholder poultry is only one of the ways that can be used to reverse poverty among tribals (Sarwar et al., 2015).

### 3.4. Employment generation

Employment generated for activities in terms of man days was calculated on a relative basis taking into consideration, the total flock size and taking the labour unit equivalents into consideration. According to the FAO standards, the labour unit equivalent for adult persons with an age of 15+ year up to 59 was 1 whereas, for youths (age 9–15 years) and old persons (age 59 or more), the labour unit equivalent is 0.5 (Animal Husbandry Statistics Manual, 2011). As pointed out in Table 4 that in backyard poultry rearing overall 131.01 man days per year employment was generated through poultry activities, 69.10 man days year<sup>-1</sup> for female, 42.20 man days year<sup>-1</sup> for youths and 19.71 man days year<sup>-1</sup> for male. In backyard system, female and children had more man day's employment in Bastar district; similar result was also reported by Islama et al. (2015) in Bangladesh. So, backyard poultry rearing acts as a tool for poor women and their families to take the first steps out of poverty and subsequently helps in gender equality (Bagnol, 2009).

Table 4: Distribution of respondents according to man days' employment generation (man days year<sup>-1</sup>)

Employment generation	Bakawand (n=60)	Jagdarpur (n=60)	Total (N=120)
Male	19.14±0.478	20.28±0.475	19.71±0.339
Female	68.63±1.416	69.58±1.396	69.10±0.982
Children	41.06±1.782	43.34±1.295	42.20±1.097
Total	128.82± 1.22	133.12±1.06	131.01± 0.81

### 3.5. Level of economic contribution

Total annual family income of respondents varies from ₹ 13500–125000/- with average family income of ₹ 42954.2±2197.88 whereas annual income from poultry varies from 1500–6600 with average income of 3957.5±117.23. So majority of the poultry farmer belonged to below poverty line (BPL) category.

Table 5 revealed that majority (67.50%) poultry rearers from low level of economic contribution category, followed by

Table 5: Distribution of respondents according to extent of economic contribution from poultry (%)

Extent of economic contribution	Bakawand (n=60)		Jagdarpur (n=60)		Total (N=120)	
	F	%	F	%	F	%
Low (2.88–13.75)	41	68.30	38	63.30	79	65.80
Medium (13.75–24.62)	13	21.70	17	28.30	30	25.00
High (24.62–35.48)	6	10.00	5	8.30	11	9.20
Mean±SE	10.98±0.97		12.13±0.95		11.56±0.68	



medium (25.00%) and only 9.20% respondents have high level of economic contribution from poultry. This may be because of the majority of respondents being either landless or marginal farmers and possessing small flock size. The average extent of economic contribution from poultry of Bakawand and Jagdalpur block was  $10.98 \pm 0.97\%$  and  $12.13 \pm 0.95\%$ , respectively and overall average in Bastar district was  $11.56 \pm 0.68\%$  of total family income. Backyard poultry, a tool that can be used as an entry point to help poor women and their families increase their human, social, physical, financial and natural capital. However, once they have experienced some positive initial steps with the backyard poultry rearing they may well prefer to start other enterprises and, ideally, policies and strategies should be in place that will facilitate them.

### 3.6. Perceived challenges and opportunities in backyard poultry rearing

- Backyard poultry production systems in tribal areas have poor linkages with formal value chains. Therefore there is immense potential and opportunity for linking of these small backyard producers to larger markets via more formal value chains.
- Lack of integration of backyard poultry production systems into expanding value chains and the required policy interventions, it can be overcome by promotion of farmer organizations (cooperatives, NGOs, producer companies, contract growers, etc) to improve quality conscious market and status of small poultry producers.
- Lack of extension and public health support systems on issues like disease prevention, predation and improving hatchability. In this perspective, significant investment in capacity-building and empowerment of village communities can promote change and technology adoption and establish the foundation for village-based, farmer-to-farmer, livestock extension mechanisms.
- Lack of research on entire production system, market chain, profitability and suitability of resources in backyard poultry rearing in tribal areas. So, it is important to focus on research on the aspects of the market and institutional environment that are changing and on how these changes are likely to affect the tribal poultry rearers.

## 4. Conclusion

In tribal areas, people still prefer local eggs and bird because of their brown shells, dark yellow yolk and believed to have more power of *desi* birds in traditional ceremonies, therefore, usually sell for higher prices in local market or neighbourhood. Efficient marketing is an essential prerequisite for successful backyard poultry production, so dissemination of market information by extension technique can help poultry rearers to get fair price of their poultry products and ultimately help in improving livelihood of tribal families.

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