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Study of socio- economic factors and constraints faced by farmers in backyard poultry rearing in Jammu district of Jammu and Kashmir

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Abstract
The study was conducted to find out the socio-economic profile of poultry owners and the constraints perceived by the farmers in raising the poultry under backyard system. The data was collected from 120 respondents belonging to 10 randomly selected villages of Jammu district. The analysis of the data revealed that the majority of the respondents (48.33%) were middle aged and had medium sized nuclear family (59.17%). Respondents had medium level of education. They had agriculture as their main occupation (32.50%) though majority of the respondents (52.50%) possessed marginal land holdings. Majority of the respondents reported lack of protection against predators, lack of knowledge of schedule of vaccine and high cost of treatment as the major constraints.

Keywords: Backyard poultry, management practices, constraints, rural poultry

1. Introduction
Since time immemorial poultry has influenced man's civilization in many ways. Many people in developing countries are involved in poultry keeping. Poultry employs about 2 million people and many among them are engaged in backyard poultry (Draft National Poultry Policy, 2005) [8]. The poultry farming has helped the farmers, both small and marginal in uplifting their socio-economic status through supplementary income, self-employment and production of nutritive food (Bagherwal, 1989) [3]. In addition to the stable supply of the high quality animal food, backyard poultry production promotes income opportunities, particularly for the weaker sections in the rural areas. More than 50% of the landless and marginal farmers at the bottom end of small holder spectrum eke out their living from poultry and small ruminants. Poultry thus help in supplementing income of the farmers. Backyard poultry hardly requires any infrastructure and is potent tool for upliftment of the poor. Hence, poultry rearing can enhance household food security and contributes to poverty reduction through provision of food, income and employment.
Jammu district is most populous district of Jammu and Kashmir and agriculture is the main occupation of people. Due to small land holding, it has become imperative to diversify agriculture activities and go for allied activities like poultry farming in the district. Keeping this in view, the study was carried out with the objective to study socio-economic status of farmers and the constraints perceived by the farmers in raising the poultry under backyard system.

2. Methodology
The study was conducted in Jammu district of Jammu and Kashmir state. Two blocks were randomly selected. The selected blocks were Bishnah and Marh. Five villages were selected randomly from each of the two selected blocks. Thus, a total of ten villages were selected. Twelve backyard poultry owners were selected from each village, through systematic random sampling technique. Thus a total of 120 respondents were selected in all as the sample. Interview schedule with selected variables and constraints perceived by the farmers was prepared and data was collected by direct but free and formal interview of the selected farmers. After collection, the data was systematically arranged, tabulated and analysed using standard statistical methods.

3. Results

3.1 Socio-economic profile of farmers

3.1.1 Age

The present study indicated that majority (48.33%) of the poultry farmers were from the middle age group. Approximately, 34% of the respondents were from young age group and only 17.50% percent respondents were from old age group. They were involved in the backyard poultry rearing because they found poultry rearing as the way to supplement their income and improve their family's nutritional security. These findings are in accordance with the findings of (Kanwat *et al.* 2012) [10] but contrary to the findings of (Singh and Jilani 2005) [16] and (Mandal *et al.* 2006) [11] as these workers found that majority of poultry owners belonged to either old age group or young age group.

3.1.2 Education

The present study indicated that majority of the respondents (29.17%) had education upto high school and10+2 level, followed by middle pass (23.33%). About 22.50% were illiterate, 20% were educated upto primary level and a low percent (5%) of the respondents had education upto graduation or above. It is evident from the present study that majority of the backyard poultry farmers had a medium level of education. (Saha 2003) [13] also revealed in his study in North 24 Parganas district of West Bengal, that majority of the respondents had education above primary level (59.3%). The findings of (Chandrakumarmangalam and Vetrivel 2011) [5] in Namakkal district are also in agreement with the findings in the present study. Contrary to this, (Yhome *et al.* 2011) [17] reported that in Kohima and Dimapur district, majority of the respondents had formal education upto high school/secondary level.

3.1.3 Occupation

The present study revealed that majority of the respondents (32.50%) were having agriculture as their main occupation for their livelihood, 30% were doing labour job, 15.10 % were engaged in government service, 13% adopted business, and only 10% were engaged in animal husbandry practices. (Saha 2003) [13] and (Mandal *et al.* 2006) [11] also identified agriculture labour as the main occupation of poultry owners.

3.1.4 Type and size of the family

Majority (59.17%) of the poultry farmers in backyard poultry rearing system belonged to the nuclear type family. Only 40.83% of the respondents belonged to the Joint family. It was also found that majority of the respondents (37.50%) belonged to the medium category of family size followed by small (35%) and large (27.50%) category of family size respectively. The medium family size was relevant to the family poultry because family labour constituted the bulk of the labour supply in family poultry production. In a study on backyard poultry farming in Garhwal, Himalayas conducted by (Singh and Jilani 2005) [16], it was observed that majority of the respondents belonged to the medium size family.

3.1.5 Material Possession

Majority of the respondents (60%) were having access to television, whereas (50%) of the respondents were having LPG connection followed by telephone (46.67%), bicycle (33.33%), radio (28.33%) and motorized vehicle (18.33%). Material possession of TV, telephone and radio enhances communication. These findings were in the line with those of (Shahidullah and Islam 1989) [14] in a study done on poultry production behaviour of farmers of bioler Union in Mymensingh district (Bangladesh).

3.1.6 Land holdings

Majority of the respondents (52.50%) in the present study were marginal farmers (0-1 acres land holding), 35% respondents were landless, 9.16% respondents were small farmers, and 3.33% of the respondents were semi-medium (2-4 acres of land holding). It was found that majority of the respondents possessed marginal land holdings. It might be due to the sub-division of land because of the separation of families. (Chatterjee *et al.* 2004) [6] and (Mandal *et al.* 2006) [11] also observed that farmers involved in backyard rearing were small and marginal. However, (Ahire *et al*. 2007) [1] in a study on the adoption of poultry management practices in Solapur district are different from the findings of the present study as they reported that majority of the respondents were having medium size of land holding.

3.1.7 Livestock holding

Majority (60%) of the respondents in the present study were possessing livestock along poultry. Cattle were owned by 35.83% of the respondents. Other livestock holding were horse or mule, goat and sheep as reported by 11.67%, 8.33% and 4.17% of the respondents respectively. However, it was observed that livestock holding of the respondents was small. (Sharma 2000) [15] in his study on livestock development scenario in India found that animal husbandry was an excellent subsidiary occupation for small and marginal farmers and landless labourers. (Saha 2003) [13] also found that poultry owners were having marginal land and small livestock holding.

3.1.8 Family income (yearly)

In the present study, majority of the respondents (53.33%) were from low income group, having a total family income less than 50,000. Nearly 40% of the respondents were found to have family income more than 50,000 but less than 1lakh and remaining 6.67% were earning more than 1 lakh per annum. It was also revealed that majority of the respondents (60%) were earning annual income in the range of 2000- 4000 from backyard poultry, followed by earning less than 2000 by 29.16% respondents. Only 10.83% of the respondents annual income from poultry was more than ` 4000. It was found that farmers obtained most of their income from agriculture as it was the main occupation for their livelihood and backyard poultry was subsidiary source of income. Similar findings have been observed by (Panda and Nanda 2000) [12], (Biswal *et al.* 2011) [4].

3.1.9 Constraints

Lack of production against predators was reported by 90% of the respondents. It was classified as the major constraint of the poultry farmers. (Conroy *et al.* 2005) [7] also ranked predation as most important constraint. Lack of knowledge of schedule of vaccine was second major constraint reported by 87.5% of farmers and hence majority of the farmers had not vaccinated their birds resulting in high incidence of disease. Similarly Mandal *et al.* 2006 [11] identified high incidence of poultry diseases and attack by predators as the major problems in their study on backyard poultry. High cost of treatment was identified as third major constraint as reported by 85% of the respondents. Lack of knowledge of deworming schedule (79.16%) was the fourth major constraint. Again, lack of knowledge of sanitation was identified as fifth

constraint and lack of knowledge of contagious disease was sixth (77.50%) constraint. Inefficient treatment of birds was seventh (75%) constraint, whereas lack of knowledge about services provided by government was placed at ninth (73.33%) position. Complaints from the neighbours was reported by 37.5% of the respondents. Inadequate space for scavenging was reported by 20.83% of the respondents as a least serious constraint. (Saha 2003) [13] also reported similar major constraints. However, (Singh and Jilani 2005) [16] and (Durgga and Subhadra 2009) [9] study was not in consanguine with the present study. Similarly, (Ahmed *et al*. 2012) [2] study in Bangladesh revealed that major constraints in production were superstition, shortage of male and more feed requirement.

Tables

Table 1: Distribution of the respondents according to their age

Age (Years)	Bishnah (n=60)		Marh (n=60)		Total (N=120)	
	No.	Percent	No.	Percent	No.	Percent
Young (Upto 30)	19	31.67	22	36.67	41	34.17
Middle (30-50)	30	50.00	28	46.67	58	48.33
Old above 50	11	18.33	10	16.67	21	17.50

Table 2: Distribution of the respondents according to their educational status

Educational status	Bishnah (n=60)		Marh (n=60)		Total (N=120)	
	No.	Percent	No.	Percent	No.	Percent
Illiterate	15	25	12	20	27	22.5
Primary	10	16.66	14	23.33	24	20.00
Middle	18	30	10	16.66	28	23.33
High &10+2	15	25	20	33.33	35	29.167
Graduate & above	2	3.33	4	6.66	6	5.00

Table 3: Distribution of the respondents according to their Occupation

Occupation	Bishnah (n=60)		Marh (n=60)		Total (N=120)	
	No.	Percent	No.	Percent	No.	Percent
Agriculture	22	36.67	17	28.33	39	32.50
Animal Husbandry	7	11.67	5	8.33	12	10.00
Business	7	11.67	9	15.00	16	13.00
Labour	17	28.33	19	31.67	36	30.00
Service	7	11.67	11	18.00	18	15.00

Table 4: Distribution of the respondents according to their Size of the family

Size of the family	Bishnah (n=60)		Marh (n=60)		Total (N=120)	
	No.	Percent	No.	Percent	No.	Percent
Small (1-4)	20	33.33	22	36.67	42	35.00
Medium(4-6)	24	40.00	21	35.00	45	37.50
Large(6-8)	16	26.67	17	28.33	33	27.50

Table 4: Distribution of the respondents according to their Material Possession

Material Possession	Bishnah (n=60)		Marh (n=60)		Total (N=120)	
	No.	Percent	No.	Percent	No.	Percent
Tv	40	66.67	32	53.33	72	60
Radio	24	40.00	10	16.67	34	28.33
Bicycle	24	40.00	16	26.67	40	33.33
Motorized vehicle	12	20.00	10	16.67	22	18.33
Gas	32	53.33	28	46.67	60	50.00
Telephone	28	46.67	28	46.67	56	46.67

Table 5: Distribution of the respondents according to their Land Holding

Land Holding	Bishnah (n=60)		Marh (n=60)		Total (N=120)	
	No.	Percent	No.	Percent	No.	Percent
Landless	20	33.33	22	36.66	42	35.00
Marginal	32	53.33	31	51.66	63	52.60
Small	6	10.00	5	8.33	11	9.16
Semi –medium	2	3.30	2	3.33	4	3.33

Table 6: Distribution of the respondents according to their Livestock Holding

Livestock Holding	Bishnah (n=60)		Marh (n=60)		Total (N=120)	
	No.	Percent	No.	Percent	No.	Percent
No livestock	26	43.33	22	36.67	48	40.00
Goat	6	10.00	4	6.67	10	8.33
Sheep	2	3.33	3	5.00	5	4.17
Cattle	20	33.33	23	38.33	43	35.83
Others	6	10.00	8	13.33	14	11.67

Table 7: Distribution of the respondents according to their Family Income

Family Income	Bishnah (n=60)		Marh (n=60)		Total (N=120)	
	No.	Percent	No.	Percent	No.	Percent
Low (Rs 0-50,000)	30	50.00	34	56.67	64	53.333
Rs 50,000 –Rs 1,00,000	25	41.67	23	38.33	33	40.00
Above Rs 1,00,000	5	8.33	3	5.00	8	6.67

Table 8: Constrains in raising poultry under Backyard

Constrains	Bishnah		Marh		Total	
	No.	Percent	No.	Percent	No.	Percent
Dirty source as drinking water	34	56.66	38	63.33	72	60
Lack of supplements	55	91.66	54	90	109	90.83
Inadequate space for scavanging	10	16.66	15	25	25	20.83
Lack knw of sanitation and hygiene	55	91.66	54	90	109	90.83
High cost of treatment	55	91.66	57	95	112	93.33
Inefficient treatment of birds	53	88.33	55	91.66	111	92.5
Not knowing services provided by govt	45	75	43	71.66	88	73.33
Lack of knowled ge of schedule of deworming	55	91.66	57	95	112	93.33
Lavk of knowledge of schedule of vaccine	58	96.66	57	95	115	95.85
Vaccination services are not timely available	58	96.66	58	96.66	116	96.66
Lack of knowledge of contagious disease	57	95	58	96.66	115	95.83
Lack of protection against predators	58	96.66	57	95	115	95.83
Complains of neighbours	20	33.33	25	41.60	45	37.5

4. Conclusion

Lack of protection against predators, lack of knowledge of schedule of vaccination, high cost of treatment were considered as serious constraints in raising poultry in the backyard system. Complaints from neighbours and inadequate space for scavenging were perceived as the least serious constrains by the respondents. Efforts are needed to improve socio-economic condition of the farmers along systematically eliminating identified constraints.

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