

Comparative Study on the Knowledge Level and Constraints Faced by the Backyard Poultry Farmers of Two Villages in Andaman and Nicobar Islands

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Abstract: *The present study examined the skill level of 49 backyard poultry farmers in Dukenagar and Govindpur villages of North and Middle Andaman. In this study, questionnaire consisting of a total of twelve different questions related to best practices in backyard poultry farming were used to assess the skill level of the participants. Primary data collected through personal interviews and observations taken at the farmer's field were analysed using descriptive statistics. In the present study, upon comparison of skill level of respondents in Dukenagar and Govindpur villages revealed differences. It was observed that few respondents (8%) in Dukenagar village possessed improved Vanaraja breed compared to number of respondents of Govindpur village (44%). Artificial incubation technique was not implemented by any of the respondents in Dukenagar whereas 24% in Govindpur were using the technique for hatching of eggs. For different parameters studied results revealed that insufficient technology input (96%), infectious diseases (86%), predation problem (84%) and non availability of training programmes (80%) were the severe constraints affecting farmers to adopt scientific practices for backyard chicken rearing in the villages.*

Keywords: Backyard Poultry, Constraints, Knowledge level, North and Middle Andaman, Technology, Vanaraja

1. Introduction

Backyard poultry production is an old age profession of rural families of India. It is the most potent source of subsidiary income for landless and poor farmers. It is an enterprise with low initial investment but higher economic returns. It can be easily managed by women, children and old age persons of the households. Villagers who cannot afford to maintain the stock of cattle or goat can presumably maintain few backyard chickens [1]. Village backyard poultry are often considered as the starter capital to move out of poverty as these provide high value food and a small cash income [2]. Apart from contribution towards food and income, poultry products in rural India contribute to social bonding as poultry meat and eggs are used to entertain guests and are also given as gifts. Rural poultry production is being recognized as an important component for socio economic improvement among the weaker section of society; especially landless labour, small and marginal farm households.

2. Literature Survey

In Andaman & Nicobar Islands, total backyard poultry population is 7.79 lacs out of which 1.25 lacs belong to

improved varieties [3]. There is shortage of eggs and chickens in this Island, though very large population of birds is available [4]. It has been noted that about 89% of rural livestock households rear poultry and the average number per household is 6.8 [5]. A large proportion of these households in the rural areas rear desi non-descript birds with low production potential and usually women and children are involved in taking care of these birds. In rural areas, it serves nutritious food for the family and is an important source of immediate income to meet household expenditure. The rural households do not have much knowledge on different aspects of poultry management. Hence, sufficient knowledge on backyard poultry rearing or management is required. Till date no studies have been conducted regarding knowledge and skill level of farmers in rural areas of North and Middle Andaman on different management practices in backyard poultry farming. Keeping this in view, the present study was undertaken to know the knowledge level of backyard poultry farmers and constraints faced by them related to backyard poultry farming in the two mentioned villages of Mayabunder tehsil, North & Middle Andaman.

3. Material and Methods

3.1 Location of study

The study was conducted in Dukenagar and Govindpur villages coming under Mayabunder tehsil, North and Middle Andaman district of Andaman and Nicobar group of islands, India (Fig. 1). The villages were purposely selected according to some characteristics such as geographical location, the ownership of backyard chicken farming and the confidence with which response comes from respondents. It was actually based on the experience from previous studies and projects which facilitated data collection and farmers participation in the study.

3.2 Selection of respondents

A total number of 49 respondents raising backyard chickens were selected from the two villages. The numbers of the surveyed respondents were: 24 covering the main areas in Dukenagar village and 25 representing backyard chicken owners in Govindpur village; based on their willingness to participate in the study.

3.3 Designing of interview schedule

Structured questionnaires were used to collect the information from the backyard poultry owners. The first part of the questionnaire was related to the demographic characteristics of the backyard chicken owners in the village. The second part of the questionnaire was designed to evaluate the skill level of respondents on scientific backyard poultry farming practices. Twelve questions on different aspects of backyard poultry farming were given to the selected farmers. The third section contained questions regarding information on the constraints faced by them during backyard chicken production.

3.4 Data collection and statistical analysis

Data was collected using mentioned questionnaire. The approach was to collect primary data from individuals through personal meetings; Further housing facilities and state of the birds was monitored personally. Descriptive statistics such as frequency distribution, percentages, mean, average and standard deviation were used for categorization and description of the variables.

4. Results and Discussion

4.1 Profile of respondents

The personal details of respondents are presented in Table 1. A large proportion of respondents were in the age group of 20-54 years in Dukenagar (87%) and Govindpur (88 %). The mean±SD age was 41.14± 9.61; minimum and maximum age ranging from 27 to 62 years. From this it could be inferred that there is high percentage of young and middle age (under 55 years) people among backyard poultry farmers in the villages. Almost all the respondents were married women in both the villages. This study shows that married women farmers were

involved more in backyard farming than unmarried households.

In case of education level, the percentage of respondents having secondary level education was highest in Dukenagar (46 %) while most of the respondents (60 %) in Govindpur had primary level education. Overall the education level of the backyard poultry owners was less (below degree level) in the Govindpur area. The mean±SD family size was 4.16± 1.23 in Dukenagar and 3.88± 1.12 in Govindpur, with a range of 2-6 members (including husband, wife, children and dependents) in a family in the selected villages. The result also showed that majority of the respondents in Dukenagar (96%) and Govindpur (88%) had less than 1 hectare of land and belonged to small land holding farmer category. In the present study, most of the respondents were dependent on other occupations for their source of income. Majority of the respondents in Dukenagar (87 %) and Govindpur (72%) did not receive any training program for back yard chicken production practices.

4.2 Level of skill on best practices in backyard poultry farming

The management practices adopted by the backyard poultry farmers in the Dukenagar and Govindpur village were studied and given in Table 2. The level of skill was observed to be less among respondents in Dukenagar village when compared to respondents of Govindpur village. It was also observed that there were few respondents (8%) in Dukenagar village who had improved Vanaraja variety compared to respondents (44 %) of Govindpur village. In Dukenagar none of the respondents and 24 % in Govindpur were using the technique of artificial incubation method for hatching of eggs. A few percent of chicken owners were practicing artificial brooding and using litter material for 0-6 wk old chickens. Nearly, 71 % of the respondents in Dukenagar and 76 % of respondents in Govindpur had separate night shelter prepared from locally available materials like forest produce, tin, bamboos, and palm leaves (Fig. 2). About 54 % and 68 % of the backyard poultry farmers had placed nesting material in the night shelter. Moreover, the constructed night shelter were lacking the basic facilities such as feeders and watering equipments, source of light, ventilation, and proper litter material.

Majority of selected respondents allowed the birds to scavenge in the farm surrounding the house. During scavenging, the backyard chickens fed on earthworms, ants, green grass and kitchen waste. In addition to scavenging, birds were offered handful of broken rice/ wheat/ paddy seeds to the birds twice or thrice a day (morning, afternoon and evening (Fig. 2). Few of the farmers (20%) in Govindpur were supplementing the backyard poultry with balanced feed prepared from locally available ingredients, whereas in Dukenagar village none were practicing.

In case of disease prevention measures, 21 percent of the respondents of Dukenagar village and 52 percent in Govindpur village were practicing vaccination protocol. Deworming technique was practiced by 13 percent of the

farmers in Dukenagar compared to 40 percent in Govindpur. Separation of sick birds practice was adopted more (52%) in Govindpur compared to farmers (13 %) of Dukenagar. Regarding management of eggs, only 17 % of respondents of Dukenagar village were found to be storing the eggs in refrigerator or well ventilated space while 48 % of respondents in Govindpur were storing eggs in refrigerator for higher shelf life. The probable reason for the difference in the skill level between the two villages may be due to availability and awareness of training programs from experts of KVK Nimbudera in Govindpur village and also the respondents had interest in the subject of poultry rearing. Hence better management practices have been adopted.

Constraints in backyard poultry production

The challenges faced by the backyard poultry owners are presented in Table 3. Out of the ten problems identified, ranking of the problem was as follows, insufficient technology/ input (96 %) was ranked highest. Infectious diseases (86 %) and problem from predators (84 %) was mentioned as the other major constraint faced by the respondents. Non availability of training programmes was observed to be 80%. This may be the reason for the lower level of skill among the respondents of Dukenagar village. This indicated the need for the implementation of training programs for improvement of backyard chicken production practices. About 78 % indicated high cost of feed while 73 % reported less income as the constraint. None of the farmers reported problem with respect to sale of backyard poultry products.

5. Conclusion

It may be concluded that high percentage of young and middle aged farm women rear backyard poultry in the villages. The knowledge level of these farmwomen was found higher for provision of night shelter and provision of nest in the shelter. The knowledge level was found lower with respect to use of artificial incubation for hatching of fertile eggs, preparation of balanced poultry feed using locally available ingredients and artificial brooding of day old chickens. The major constraints were insufficient technical inputs, infectious diseases, and problem of predator and non availability of training program about scientific management of backyard poultry. Hence further steps should be taken to improve the knowledge / skill level of farmers of Dukenagar village.

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Table 1: Personal details of respondents in Dukenagar and Govindpur village of Mayabunder tehsil

Particulars	Dukenagar (n=24)		Govindpur (n=25)	
	No.	(%)	No.	(%)
Age				
Young (<35)	08	33	07	28
Middle (35 to 54)	13	54	15	60
Old (>54)	03	13	03	12
Marital status				
Single	01	04	0	0
Married	23	96	25	100
Education Level				
Illiterate	06	25	02	08
Primary	07	29	15	60
Secondary	11	46	08	32
Graduate	0	0	01	4
Family Size				
Small (≤5)	21	88	23	92
Large (>5)	03	13	02	8
Family Type				
Single	16	67	21	84
Joint	08	33	04	16
Land Holding				
>1ha	23	96	17	68
1-2 ha	0	0	02	8
>2 ha	01	4	06	24
Training attended	03	13	07	28

Disease	42	86	2
Bad weather conditions	25	51	9
Unavailability of Veterinary services	32	65	8
Predators	41	84	3
Insufficient technologies/ inputs	47	96	1
Insufficient extension services	34	69	7
Unavailability of training programmes	39	80	4
Low income sources	36	73	6
Marketing problems	NIL		NIL
High Feed cost	38	78	5

Table 2: Distribution of respondents according to different aspects of backyard poultry farming practices in Dukenagar and Govindpur villages of Mayabunder tehsil

Sl. No.	Practices	Dukenagar (n=24)		Govindpur (n=25)	
		No.	(%)	No.	(%)
1.	Rear improved rural poultry	02	8	11	44
2.	Use artificial incubation for hatching of eggs	00	0	06	24
3.	Perform artificial brooding	02	8	07	28
4.	Provide litter material	02	8	06	24
5.	Provide night shelter	17	71	19	76
6.	Provide nest in shelter	13	54	17	68
7.	Protect birds in early stages.	04	17	09	36
8.	Prepare balanced feed using locally available ingredients	00	0	05	20
9.	Vaccinate the birds	05	21	13	52
10.	Separate sick birds	03	13	13	52
11.	Perform de-worming of birds	03	13	10	40
12.	Store eggs in well ventilated space/ refrigerator	04	17	12	48
	Average	4.58	19.1	10.6	42.6

Table 3: Constraints related to backyard poultry production among the respondents in Dukenagar and Govindpur villages of Mayabunder tehsil

Constraints	Severe (%)	Order Rank
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a.



b.

Figure 1: Geographical location of the study in the North and Middle Andaman district. (a) Google satellite images of Mayabunder tehsil; (b) Map suggesting the location of Mayabunder tehsil in North and Middle Andaman



Figure 2: Images depict practices of backyard poultry farming in the Dukenagar and Govindpur village