J Krishi Vigyan 2020, 8 (2) : 199-204 DOI : 10.5958/2349-4433.2020.00042.2

Knowledge and Adoption Level of Poultry Farming Practices in Raigad District of Maharashtra State

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ABSTRACT

The study was conducted in Raigad district of Maharashtra State. Out 100 trained farmers, 33 farmers who actually started poultry farming were selected as a respondent of the present study. Data were collected by interview method with the help of questionnaire comprising general information, background of the farmers, poultry profile, poultry farming practices like brooding management, ventilation and lighting, water management, feed management etc and also data on employment and income generation were studied. Study revealed that there was good knowledge with respect to brooding management and ventilation and lighting, water management and feed management to the respondents. In case of adoption maximum respondents following brooding management followed by cleaning of poultry house and equipments. More than 75 per cent respondents followed proper ventilation and lighting. In feed management and health care practices more than 66.00 per cent respondents used balanced feed and followed vaccination schedule. Maximum respondents got employment for more than 181 days per year from poultry farming. Lack of timely veterinary facility at taluka level was the major constraints in poultry farming followed by non availability improved breed on demand.

Key Words: Constraints, Employment, Income, Poultry, Training.

INTRODUCTION

The main aim of Krishi Vigyan Kendra (KVK) is to develop entrepreneurship amongst the rural people especially the farmers, farm-women, rural youth and the entrepreneurs in different areas of agriculture. In Raigad district, KVK Roha had conducted various need based and skill oriented training with a special emphasis on poultry farming by KVK scientist during last five years. It was expected that the participants after being trained will translate the acquired knowledge and skill into action.

The poultry industry has rise from what was purely a backyard activity to a well organized, scientifically oriented and technologically driven industry. Globally we stand fourth in the production of eggs and fifth in the broiler sector. Present per capita availability of animal protein is 14 gm from fish,egg, meat which is makes 11.00 per cent of the total requirement. However, aim is to produce 55 gm of animal protein from poultry per day (30 from eggs and 25 gm from meat). this means that availability should be 180 eggs and 9 kg of chicken per capita per year.(Prasad 2013). To provide high quality protein and supplemental income to rural/ tribal areas rural poultry farming was concentrated. Adopting rural poultry farming in backyards of rural household can ensure the availability of eggs and meat in rural and under developed areas; which will help in alleviating the incidence of protein deficiency in the susceptible groups (women, children, expectant mothers, etc.) in rural areas.

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Keeping in view the different species of poultry being reared by the farmers, the improved poultry farming practices were transferred to the end users through training programmes, farm and home visit, personal contact, diagnostic visits, exposure tour etc.

The present study was conducted to know the post training performance of recipients of poultry farming organized by Krishi Vigyan Kendra, Roha-Raigad with the objectives to study the socio-personal and livestock profile of trainees, to know the knowledge and adoption status of technologies learned during training, to know the employment and income generation and the constraints in poultry farming.

MATERIALS AND METHODS

The study was conducted in Raigad district of Maharashtra state. A list of 100 farmers who attended vocational training on poultry farming organized by Krishi Vigyan Kendra, Roha- Raigad during the year 2011-12 to 2015-16 and technological interventions provided to poultry farmers was made available. A total of 33 farmers who started poultry farming were selected as a respondent of the present study. The data were collected by interview method with the help of questionnaire comprising general information, background of the farmers such as their age, education, occupation, land holding, livestock profile etc. The data regarding knowledge about poultry management practices after training were recorded as full knowledge and partial knowledge. Also, regarding adoption of poultry management practices after training the data were recorded as full adoption, partial adoption and no adoption. A data on employment and income generation in poultry farming were also collected by observing the records kept by the respondents. The collected data were analyzed by using suitable statistical tools.

RESULTS AND DISCUSSION

Socio-personal profile of the respondents

The data (Table 1) showed that 42.42 per cent respondents were in middle age group who can physically look after the poultry birds. More than fifty per cent of trainees educated up to high school level (51.51 %) and had farming and animal husbandry occupation (54.54 %). Regarding land holding, it was seen that 45.45 per cent possessed less than 1.0 ha land (Lenka and Bibhu, 2015). It was noticed that trainees were from middle age group and therefore maximum respondents (60.60 %) were having medium farming experience. In case of experience in poultry farming 42.42 per cent respondents had less experience about poultry farming.

Livestock kept by the respondents

The data (Table 2) revealed that the total number of poultry birds at the time of interview with all the respondents was 30000. Out of total broiler/ improved birds population, maximum share was broilers strains i.e. 10 farmers having average 2500 birds followed by Kaveri and DP Gavran birds. In

Table 1 Socio-personal profile of the respondents.

Sr. No.	Characteristic	Category	Average	Respondents(n=33)	
				No.	Percentage
1	Age(yr.)	Middle	41	14	42.42
2	Education(Std.)	High School	10^{th}	17	51.51
3	Occupation	Farming + animal husbundry	-	18	54.54
4	Land holding (ha)	< 1.0 ha	1.14	15	45.45
5	Farming Experience (yr.)	Medium	12	20	60.60
6	Poultry farming experience (yr.)	1 to 3 yr	2.5	14	42.42

Table 2. Livestock (poultry)profile of the respondents .

Sr. No.	Type of poultry bird	No. of farmers	Total no. of poultry birds
A.	**Broilers/ improved birds**		
i.	Broilers – starins of venky, premier, godrej co.	10	25000
ii	Kaveri	06	1800
iii	DP Gavran	06	1500
iv	Giriraja + Vanaraja	01	600
v	Vanraja + Kadaknath	01	300
	Total A	24	28200
B.	Layers/ improved birds		
	Giriraja	04	800
	Vanaraja	03	600
	Suvarnadhara	02	400
	Total B	9	1800
	Total A+B	33	30000

layers Giriraja, Vanaraja and suvarnadhara breeds were reared by 9 respondents having average 200 birds per respondents.

Status of poultry farming practices

The data (Table 2) depicted that, 81.81 per cent of the respondents had constructed the permanent poultry shed whereas, 18.19 per cent respondents poultry shed was temporary structure. Maximum respondents (78.79 %) followed semi-intensive feeding management and using commercial feed for poultry birds. The results were in line with Saha (2003).

Knowledge and adoption of poultry farming practices by the respondents

Knowledge is one of the components of behavior. It plays an important role in the covert as well as over behaviour of an individual. The data (Table 4) depict that under the head brooding management practices, cleaning of poultry house and cleaning of the equipment's more than 90.00 per cent respondents were having full knowledge whereas, the adoption was 66.67 and 72.73 per cent, respectively. Regarding preparation of brooding unit

Table 3. Status of Poultry farming practices.

Sr. No.	Particular	Respondents(n=33)	
		No.	Percentage
A.	**Poultry shed**		
	Permanent structure	25	81.81
	Temporary structure	08	18.19
B.	**Feeding management**		
	Intensive (Deep litter- broilers)	26	78.79
	Semi-intensive (DP Gavran, Kaveri breeds)	7	21.21
C.	**Use of feed**		
	Commercial feed	26	78.79
	Homemade feed	07	21.21

Table 4. Distribution of the respondents according to knowledge and adoption of poultry management practice.

Sr. No.	Poultry Management Practices	Knowledge (N=33)		Adoption (N=33)		
		Full knowledge	Partial knowledge	Full adoption	Partial adoption	No adoption
A.	**Brooding management**					
1.	Cleaning of poultry house	30 (90.91)	03 (9.09)	22 (66.67)	11 (33.33)	00 (0.00)
2.	Cleaning of the equipments	30 (90.91)	03 (9.09)	24 (72.73)	9 (27.27)	00 (0.00)
3.	Preparing the brooding unit	22 (66.67)	11 (33.33)	20 (60.60)	4 (12.12)	9 (27.27)
4.	Use of brooders	24 (72.73)	9 (27.27)	24 (72.73)	0 (0.00)	9 (27.27)
B.	Ventilation and lighting	30 (90.91)	03 (9.09)	25 (75.76)	8 (24.24)	00 (0.00)
C.	Water management	20 (60.61)	13 (39.39)	19 (57.58)	14 (42.42)	00 (0.00)
D.	**Feed management and Health care practices**					
1.	Use of balanced feed	25 (75.76)	8 (24.24)	25 (75.76)	8 (24.24)	00 (0.00)
2	Vaccination schedule	24 (72.73)	9 (27.27)	22 (66.67)	11 (33.33)	00 (0.00)
3..	Management of ecto and endoparasite	12 (36.36)	21 (63.64)	8 (24.25)	15 (45.45)	10 (30.30)
4.	Debeaking of birds	33 (100.00)	0 (0.00)	8 (24.25)	11 (33.33)	14 (42.42)
E.	Litter management	24 (72.73)	9 (27.27)	18 (54.55)	15 (45.45)	00 (0.00)

66.67 per cent respondents having full knowledge and full adoption was 60.30 per cent. The results were similar to Ravindra (2004). Further, it was observed that use of brooders was well known to 72.73 per cent respondents and all of them are adopting the practice. No adoption regarding brooding practices was by the respondents who are rearing layer birds.

In case of ventilation and lighting it was found that 90.91 per cent respondents were having full knowledge and 9.09 per cent having partial knowledge. However, more than 75.00 per cent adopting the practice fully. With respect to water management 60.61 per cent respondents having full knowledge and almost all of them (57.58 %) adopting the practice to full extent.

Table 5. Distribution of respondents according to employment generation through poultry farming.

Sr. No.	Employment generation (Man Days)	Broiler poultry farming (n=24)	Layers poultry farming (n=9)	Total (n=33)
1.	Up to 90	3 (12.50)	0 (0.00)	3 (9.09)
2.	91 to 180	8 (33.33)	2 (22.22)	10 (30.30)
3.	More than 181	13 (54.17)	7 (77.78)	20 (60.61)

Regarding feed management and health care practices it was seen that 75.76 per cent and 24.24 per cent respondents were having full and partial knowledge, respectively and same percentage was seen in case of adoption. Regarding vaccination schedule 72.73 per cent respondents having full knowledge and full adoption was 66.67 per cent. (Ahire *et. al.* 2007) In case of management of ecto and endoparasite maximum respondents (63.64 %) were having partial knowledge.

The full adoption was followed by only 24.25 per cent respondents whereas 30.30 per cent respondents not adopting this practice. With respect to debeaking of birds, despite of all the respondents known the practice fully 42.42 per cent respondents not following the practice. Regarding litter management, though 72.73 per cent respondents had full knowledge but complete adoption was followed by 54.55 per cent respondents.

Employment and income generation through poultry farming

Employment generation

From Table 5, it was seen that maximum (60.61 %) respondents got employment for more than 181 days per year from poultry farming followed by 91 to 180 days per year (30.30 %). Only, 9.09 per cent respondents got employment up to 90 days per year.

Income generation

The data with respect to income generation through poultry farming was analysed with respect to cost of rearing, income and net profit as per large scale and small scale broiler poultry rearing and layer poultry birds rearing.

Table 6. Average cost, income and net profit through poultry farming.

Sr. No.	Income generation (Rs.)	Broiler poultry farming (n=24)		Layers poultry farming (n=9)
		Large scale (N=10) Av. Batch 2500 birds* for *6 weeks*	Small scale (N=14) Av. Batch 300 birds** *For 8 weeks*	Av. Batch 200 birds*** *for 1 year*
1.	Average cost(Rs.)	2,12,500	32,600	1,75,000
2.	Average Income(Rs.)	2,50,000	60,000	2,80,000
3.	Net profit (Rs.)	37,500	27,400	1,05,000

*Average rate- Rs.100 for 1 Kg body wt of bird)** Rs. 200 for 1 kg body wt of bird)

*** Average rate Rs. 8 per egg (150 eggs/yr/bird) and Rs.200 per bird(culling price)

Table 7. Constraints experienced by the respondents in poultry farming.

Sr. No.	Constraint	Respondents(N=33)	
		Number	Percentage
1.	Lack of timely veterinary facility at village level	14	42.42
2.	Non availability of improved breed on demand at Taluka level	13	39.39
3.	High cost of commercial feed	11	33.33
4.	Lack of finance	10	30.30

It was found that net profit from large scale broiler poultry farming from the period of 6 wk was Rs.37,500/- and Rs. 27,400/- from small scale broiler poultry farming from the period of 8 Wk yet. Though the net profit from small scale broiler farming was giving good returns, yet there was limited market for the poultry birds like giriraja, vanaraja, DP Gavaran and Kaveri etc. The net profit from layer poultry farming was Rs.1,05,000/- per year.

Constraints experienced

In the present study the efforts were also made to know the constraints faced by poultry farmers during poultry farming. The data (Table 6) show that lack of timely veterinary facility at village level was the major constraint reported by 42.42 per cent respondents. Non availability of improved breed on demand at Taluka level and high cost of concentrate feed were the constraints reported by 39.39 and 33.33 per cent respondents, respectively. The problem of lack of finance was reported by 10.00 per cent respondents.

CONCLUSION

The respondents were middle aged and their occupation was farming and animal husbandry indicating natural background. There was good knowledge to the respondents with respect to brooding management and ventilation and lighting, water management and feed management. The respondents had partial knowledge about management of ecto and endoparasites. In case of adoption maximum respondents following brooding management followed by cleaning of poultry house and equipments. More than three fourth respondents followed proper ventilation and lighting. Maximum respondents got employment for more than 181 days per year from poultry farming. The net profit from small scale broiler farming was good but there is limited market for the poultry birds like giriraja, vanaraja, DP Gavaran and Kaveri etc. Lack of timely veterinary facility at taluka level was the major constraints in poultry farming followed by non availability improved breed on demand.

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Received on 09/04/2020 Accepted on 15/05/2020