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**Nutrition security & income generation through
poultry farming**

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Abstract

Poultry farming is an important source of supplementary income and it also contributes towards nutrition security particularly to landless & small farm families specially women. The poultry rearing provides a renewable asset as a ready source of cash & quality nutrients in the human diet. The major positive part of poultry farming is that it's a less capital intensive and livelihood oriented enterprise. Therefore, the adoption of this enterprise by rural households will certainly contribute towards increasing family income and overall socio-economic development. With this background, a study was conducted in Jehanabad district of Bihar to assess the knowledge of farmers about various poultry rearing practices, impact of training provided by the Krishi Vigyan Kendra and to know the gender role in backyard poultry & constraints faced. Participants enriched with sound knowledge were provided chicks of local breed under demonstration programme of KVK as well as by the district level Agency ATMA. The findings indicated that majority of the respondents possessed medium level of knowledge about selected poultry husbandry practices. It was also observed that poultry keeping was a gender friendly technology as in many cases women often control the whole process of backyard poultry keeping right from feeding to marketing contributing towards women empowerment by economic independence & nutrition security. From economic point of view, requirement of small space, low capital investment, quick return from outlay and well distributed turnover throughout the year make poultry farming remunerative and viable enterprise. However, high mortality rate, low egg production and weight gain due to unhealthy management practices and lack of knowledge constitute major constraints in poultry farming that has to be addressed further through proper training and capacity building programmes.

Keywords: Poultry, nutrition security, knowledge, gender role, constraints

Introduction

Livestock and poultry provide a major contribution in India's economy. (Nath *et al.*, 2012) [2]. Nowadays, Poultry production has emerged as one of the key segments of the livestock economy especial with regard to socio-economic development of the weaker section of the society as a source of supplementary income and liquid cash in villages. Protein. Scavenging poultry birds normally maintained by women, sometimes contribute as much as 80% of annual income to household. Successful farmers are saving Rs. 15-20 per bird through boiler selling. It generates self-employment, provides supplementary income and supplements protein rich diet. There is a greater demand for poultry meat as one of the best sources of high quality protein. Livestock and poultry is an imperative factor for improving the nutritional security of rural people in India (Pathak & Nath, 2013) [3]. Backyard poultry farming offers great opportunities for socio-economic development through income generation and enhanced nutritional security particularly to landless and small farmers and especially women. They generally rear local birds with production 50 eggs/ day where each egg costs Rs. 15/ egg due to being deshi in nature. We can say that, the poultry rearing provides a renewable asset as a ready source of cash and quality nutrients in the human diet. Requirement of small space, low capital investment, quick return from outlay and well distributed turnover throughout the year make poultry farming remunerative and viable enterprise.

The present study was undertaken to assess the knowledge of poultry farmers regarding various poultry management practices, to know the Gender role in Poultry farming and to identify the constraints faced by them in Poultry farming

Methodology

Several batches of farmers from all the seven blocks of Jehanabad district namely Madanganj, Kako, Ghoshi, Hulasganj, Makhdumpur, Jehanabad and Ratni were imparted skill based training on various aspects of poultry farming at Krishi Vigyan Kendra, Jehanabad. As a result, considerable number of poultry farms have grown up in the district. The present study was conducted on 120 poultry farmers selected randomly amongst the trainees who are practicing this less capital intensive and livelihood oriented enterprise in the district. Data collection was done with the help of structured interview schedule. Sufficient probing and clarifications were made to make clear understanding.

The training included different areas of poultry management practices as mentioned below:

Areas of Training

- Care & Management of poultry farm
- Feeding & housing Mgt. of poultry
- Poultry management
- Vaccination schedule
- Brooding of chick Mgt.
- Disease Mgt. of poultry
- Latest trend of layer farming
- Govt. support & Marketing

Results & Discussion

Table 1: Year wise distribution of trainees on Poultry Farming

SL. No.	Years	Male	Women	Total
1.	2013-14	125	88	213
2	2014-15	179	29	208
3	2015-16	138	83	221
4	2016-17	199	64	263
5	2017-18	101	155	256
Total		742	419	1161

A perusal of Table 1 indicates that a total of 1161 participants involving 742 males and 419 females were trained about poultry farming at Krishi Vigyan Kendra, Jehanabad within a duration of five years since 2013-14 to 2017-18.

Table 2: Distribution of respondents according to knowledge about poultry farming (n= 120)

Category	Pre training		Post training	
	Frequency	Percentage	Frequency	Percentage
Low (1-11)	68	56.67	3	2.5
Low-Medium (12-22)	31	25.8	40	33.3
High-Medium (23-33)	15	12.5	58	48.3
High (34-45)	6	5.0	19	15.8

Table 4: Constraints in Poultry farming n = 120

Constraints	Frequency	Percentage	Ranks
Disease outbreak and mortality in birds due to diseases, climate etc.	98	81.6	1
Poor availability of quality chicks	60	50.0	4
Difficulty in availability of inputs like feeds, medicines etc.	35	29.2	7
Lack of organised marketing system/ Cooperatives)	85	71	2
Difficult procedure involved in getting financial help from Government or concerned agency	70	58.3	3
Lack of awareness & knowledge about Govt. schemes and support services	49	41.0	6
Lack & difficult access to veterinary services	53	44.2	5
Lack of knowledge about improved practices	31	26.0	8

With regard to knowledge of the respondents in different areas of poultry farming, (Table-2) it was found that at Pre training phase, majority of the respondents (56.67 percent) were having low level of knowledge followed by 25.8 & 12.5 percent) respondents in low- medium and high- medium category respectively. Only 5.0 percent respondents possessed high level of knowledge. But, after the training the knowledge level improved and it was observed that at Post training phase, 48 percent of the respondents possessed knowledge scores of high- medium level followed by 33 percent in low – medium level that means more than 80.0 percent of the respondents could gain knowledge scores of medium level. It was remarkable that at Post training phase, almost 16 percent trainees could attain knowledge scores of high level and only 2.5 percent of them were in low level of knowledge.

Table 3: Gender Role in Poultry Farming (n= 120)

Activities	Male	Female
Cleaning of poultry shed	42(35%)	102(85%)
Housing management	84(70%)	50(42%)
Feeding	78(65%)	57(48%)
Watering	54(45%)	78(65%)
Vaccination	108(90%)	36(30%)
Brooding	90(75%)	30(25%)
Disease management	108(90%)	18(15%)
Marketing	96(80%)	51(43%)

Table 3 clearly indicated that while major works of poultry management were carried out by males but female members were also involved in many of the activities such as cleaning of poultry shed (85%), watering to birds (65%), feeding (48%), decision about housing management (42%) and marketing (43%) etc. More time was spent in feeding and watering the animals which was a routine work. The other activities which consumed considerable time of women were cleaning of Poultry shade and removal of litter, cleaning the utensils used for collection and transportation. These activities have to be properly carried out to keep the environment clean which is having a direct bearing on the health of poultry birds. Overwhelming majority of the respondents was involved in cleaning the shed and washing the utensils whereas the housing management including construction of shed being labourious has lesser involvement. The actual involvement in marketing of chicks, meat and eggs was meagre due to the dominance of men over financial matter. The participation of farm women in disease control was least compared to other activities. It was also observed that females were mostly involved in managing smaller units with less number of birds at household level where every activity of poultry was done by women only But, with regard to larger units, almost 55% of the operations were carried out by the women like housing arrangement, cleaning the house, feeding, watering, care of sick birds, deworming, collection of birds etc. While males were involved mostly in purchase of raw materials, arrangement of feeds, vaccination, purchase of medicines for treatment of sick birds, selling & marketing etc.

With regard to constraints (Table-4) as reported by almost 82.0 percent poultry farmers, the problem of disease outbreak and high mortality in birds due to diseases, climate etc. was the most serious constraint and hence ranked as first while lack of organised marketing system was the second major constraint faced by the respondents (71.0%). It was followed

by the problem of difficult procedure involved in getting financial help by Government or concerned agency expressed by 58.3 percent of respondents. Likewise the constraints namely, poor availability of quality chicks and lack & difficult access to veterinary services were on the fourth and fifth position respectively.

Table 5: Suggestions as expressed by the respondents to overcome the constraints. n=120

Suggestions	Frequency	Percentage	Ranking
Timely vaccination & regular health checkup services to avoid disease outbreak and higher mortality.	110	91.6	2
Timely availability of quality chicks locally at cheaper rates	94	78.3	4
Availability of regular veterinary extension & advisory services as para vet.	115	95.8	1
Facility of organised marketing network	98	81.6	3
Organisation of awareness programmes at grass root level about Govt. schemes and support services	89	74.2	5
Creation of more brooding units	75	62.5	6

As per the Table-5, it is imperative that Availability of regular veterinary extension & advisory services as field level functionaries was most needed followed by Timely vaccination & regular health checkup services to avoid disease outbreak and higher mortality and Facility of organised marketing network for adoption and sustainability of poultry farming practices for livelihood security.

Conclusion

Poultry farming has a strong potential as an income generating activity for resource poor people at all levels of rearing, weather eggs, chicks or chicken and has great contribution towards nutrition security. Furthermore, poultry keeping is a gender friendly technology as in many cases women often control the whole process of backyard poultry right from feeding to marketing contributing towards 'women empowerment' in terms of economic independence and by nutrition security. Therefore, more training is required for women specially about care & management of Poultry in hygienic way however with regard to constraints, high mortality due to various diseases and unhealthy management practices constitute one of the greatest constraints in poultry farming that has to be addressed further through regular extensive training and capacity building programmes so that farmers should be made aware for timely vaccination, deforming and other health related aspects. In addition to this, the vaccination & health check up programmes on regular basis must be taken on top priority by the concerned field level functionaries also. Besides these, the procedure for getting financial support by the Govt. must be simplified and made easier for easy access to different related schemes. The marketing system should be strengthened so that the poultry farmers could get right price of their products (chicks or eggs) timely.

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