



E-ISSN: 2320-7078

P-ISSN: 2349-6800

www.entomoljournal.com

JEZS 2020; 8(6): 1177-1180

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Received: 20-08-2020

Accepted: 28-09-2020

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Backyard poultry farming: A tool for tribal women empowerment in west Godavari district of Andhra Pradesh

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Abstract

Backyard poultry is an important livelihood component of rural and tribal folks, providing valuable animal protein sources through egg and meat besides aids in economic improvement by providing subsidiary income. KVK, VR gudem has provided the improved backyard poultry variety i.e., Rajasri birds to the tribal women under Tribal Sub Plan (TSP). A multi-stage random sampling procedure was used to select 120 respondents from 12 adopted tribal villages of three mandals i.e. Buttaiahgudem, Jeelugumilli and Polavaram, West Godavari District, Andhra Pradesh. A semi-structured interview schedule was used to elicit the information from the respondents. Agriculture and horticulture was noticed as primary occupation (80.00%) and poultry as a secondary occupation (70.83%) in these villages. It was found that joint type and medium-size families and the majority of poultry rearers have less education to the primary level of education. The egg productivity of Rajasri birds was a mean of 146 eggs and selling price @ Rs. 8/egg in the local market whereas the average body weight of hen was 1.7 Kg/bird/year and a cock was 2.37 Kg/bird/year and selling price @ Rs.200/Kg live bird. The involvement of women was more in housing, feeding, watering, healthcare, and breeding which were contributed to a larger extent in increasing the household income of the family. The income was generated from backyard poultry rearing was invested for household celebrations, recreation purpose, as a gift to relatives and also to extend the poultry flock production depending upon the felt needs. The participation of tribal women in the backyard poultry rearing is of great importance and played major role in the economic empowerment of tribal women in the West Godavari district of Andhra Pradesh.

Keywords: Poultry rearing, tribal women, women empowerment, chicken meat and eggs

Introduction

The tribal farmers in the district mostly depend on the red fed agriculture and cashew is one of the primarily dominated crop as mono cropping and followed by cotton, maize, paddy, sugarcane and vegetable crops like chili, tomato, beans, ridge gourd, IVY gourd. Etc. However, small landholdings, low agricultural productivity and low income has resulted in the migration from villages to cities for their livelihood. The main reason for the tribal farmers due to the lack of awareness on the sustainable agriculture and allied sectors for improvement for their livelihood. Backyard poultry rearing is one of the well-known practices followed in India by the rural and tribal people for their subsidiary income generation activity. Chicken meat and eggs are having high biological value and also prevents malnutrition in the rural people. After some time in India, the backyard poultry farming activity has changed into the lively agri-based industry. Market-driven backyard poultry enterprise is being recognized as a stepping stone for the poorest households enabling them to take the first step towards breaking out of the vicious circle of deprivation and poverty^[1].

In rural areas, backyard poultry rearing activity is considered to be one of the women exclusive work and the women are liable for the care and management of the birds^[2]. Perhaps it is the only resource exclusively owned and managed by women from the moment of the bird's collection to the sales/purchase and management of the bird's profits^[3, 4]. Tribals are well aware of the taste of desi chicken and accept it widely and are in much demand. From the commercial point of view, good egg yielding capacity, negligible feed cost, gain fine bodyweight and very easy to manage are a few unique features of Rajasri poultry breed and hence were selected for backyard poultry in the district^[5].

Because of the above gaps, to supplement the livelihood and nutritional security of tribals in the district, Krishi Vigyan Kendra, Venkataramannagudem under ICAR-Tribal Sub Plan (TSP) scheme has established Rajasri backyard poultry units among tribal families.

Materials and Methods

We conducted the study in tribal areas of West Godavari district (160 07' N Latitude and 810 01' E Longitude) where farmers gained subsistence income through backyard poultry rearing. Reared Rajasri variety chicks of unsexed day old in deep litter house at Poultry unit, Krishi Vigyan Kendra, Venkataramannagudem, up to 6 weeks on the balanced diet and vaccinated as per the recommended protocol. The criteria for selection of beneficiaries were adopted for rearing of Rajasri birds on the basis of their income, knowledge aspects involved in the rearing and management of poultry birds. A total of 2400 number of eight weeks old Rajasri variety chicks (20 number to each beneficiary) were distributed to 120 identified women beneficiaries of adopted tribal villages in Buttaihgudem,

Jeelugumilli, and Polavaram mandals of West Godavari district during 2017-2018 and 2018-19 and also provided capacity building to strengthen their livelihood improvement, knowledge and economic empowerment. We collected data from the beneficiaries through a semi-structured interview schedule. The questions were asked methodologically with enough time and explanations were made for better understanding and interpretations. Statistical tools were used on the basis of data.

Results and Discussion

Profile characteristics of respondents

Distribution of respondents according to their profile characteristics are presented in Table 1. The study showed that majority were middle-aged (64.16%) had no education (57.50%) to a primary level of education (31.66%) with medium (61.66 %) family size of 4-6 members with joint family system (70.84%) while agriculture and horticulture as a main occupation (80.00%) with poultry farming as a subsidiary occupation with medium experience in poultry farming (79.16%).

Table 1: Distribution of respondents according to their profile characteristics of respondents (n=120)

S. No.	Characteristic	Category	Frequency	Percentage
1.	Age	Young (Below 35 years)	27	22.50
		Middle (Between 35-50 years)	77	64.16
		Old (Above 50 years)	16	13.34
2.	Education	Illiterate	69	57.50
		Primary school	38	31.66
		Up to middle school	10	08.33
		Up to high school	03	02.50
		Intermediate	00	0.00
		Degree and above	00	0.00
3.	Family size	Small (1-3)	35	29.17
		Medium (4-6)	74	61.66
		Large (7-9)	09	07.50
		Very large (>9)	02	01.67
4.	Family type	Nuclear	35	29.16
		Joint	85	70.84
5.	Occupation	As Primary occupation		
		Poultry farming	19	15.83
		Agriculture & Horticulture	96	80.00
		Others	05	04.17
		As secondary occupation		
		Poultry farming	85	70.83
		Agriculture & Horticulture	24	20.00
		Others	11	09.17
6.	Experience in poultry farming	Low (< 5 years)	11	09.17
		Medium(5-25years)	95	79.16
		High (>25 years)	14	11.67

Adoption and participation of tribal women in backyard poultry management practices

The beneficiaries were trained on the aspects of housing, brooding management, feeding, disposal and replacement of litter, routine medication, deworming and vaccination of birds, incubation, and marketing. The pre and post adoption level of beneficiaries on the backyard poultry management practices is represented in the figure 1.

Housing

Housing is important for the birds as it protects them from varying temperatures, rain, wind, and predators, etc. In the study area, 79.16 percent of respondents provided housing facilities to their birds after implementation of scheme

whereas before scheme only 21.66 percent of the respondents provided the chicken house separately, remaining (78.34%) did not provide shelter to their birds at all and let their birds overnight on the roofs and trees. Most of the household's chickens have no separate houses in rural areas^[6, 7].

Preparation for the brooding activities

The majority (80.00%) of the respondents have participated in preparation for the brooding activities such as cleaning, washing and disinfection of the brooding area, the arrangement of feeders, drinkers, and setting of lighting, spreading of litters and arrangement of chick guard. Most of the respondents showed that they require this operation for thorough handling, skillful and careful planning. Therefore,

most women preferred to handle this operation by themselves. Farmers were very conscious and concerned in the preparation of suitable nest boxes for incubation of broody hen [6].

Feeding of birds

About 95.83 % of the respondents were regularly involved in the practices of feeding and ensured that the properly fed by the each and every bird in the flock. They also opined that the health condition and performance of the birds in the flock. The present findings are in lieu with the earlier findings were reported by Ahuja *et al.* [8] and Reddy *et al.*, [9].

Disposal and replacement of poultry litter

Replacement and disposal of poultry litter was regularly cleaned by most of the respondents of about 90.00 percent. In order to do this tedious job, the most of the women were performed with the help of their family members. These results are in line with the findings of Reddy *et al.* [9]

Routine medication, deworming and vaccination program

The data is presented in Figure 1 showed that 93.33 percent of the respondents were involved in medication, deworming and vaccination of their birds after implementation of scheme. This operation also requires the route of drug administration, skillful handling of tools and understanding of the disease symptoms. Similar results were reported by Mathialagan [10].

Incubation

Regarding egg incubation for hatching into chicks previously only 28 farmers had the experience of the egg incubation process. At the end of the scheme, out of 120 beneficiaries, 98.33 percent of them were successful in poultry rearing and incubation of eggs into chicks. The remaining 1.67 percent of the beneficiaries were unable to maintain the birds due to predators, road accident and stolen by others. In the study of village chicken production system reported that about 50% and 51.8% of the eggs produced were incubated to replace the old flock respectively [11, 12].

Marketing

The sale of birds or eggs was the responsibility of women. Most women said that there was no problem in selling birds or eggs. About 69.16 percent of respondents involved in the marketing of birds or eggs, the majority of women sold birds in the village itself and some were sold birds in nearby markets. Rural women's role in backyard poultry production has significant importance [13]. They are performing most of the activities in backyard poultry rearing with utmost care and interest.

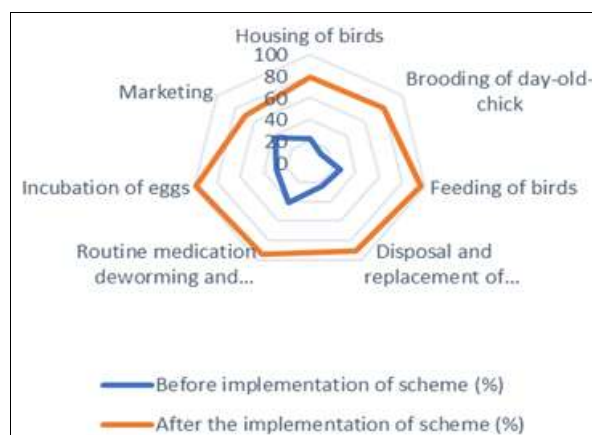


Fig 1: Adoption of backyard poultry management practices by tribal women beneficiaries before and after implementation of scheme

Productive performance of Rajasri backyard poultry

A unit consisting of twenty Rajasri chicks (6 weeks old) was supplied to the tribal women of adopted tribal mandals after deworming and vaccination against Marek's disease (MD), Ranikhet disease (RD) and Infectious bursal diseases (IBD). The data presented in Table 2 showed that the average body weight gain of Rajasri variety of female birds and male birds were 1.70 Kg and 2.37 Kg respectively. The average egg yield increased compared to the pre-implementation of the scheme was also substantial from 56 to 146. Similar findings were also reported by Mathialagan [10] and Kumari [14].

Table 2: Productivity indicators of backyard poultry

Impact indicator	Before implementation of scheme (Desi birds)	After the implementation of scheme (Rjasri birds)
Bodyweight gain (Kg) (Female bird)	1.20	1.70
Bodyweight gain (Kg) (Male bird)	1.80	2.37
Egg production	56	146
Incubation of eggs	23.33%	98.33%

Income generation after the intervention of Rajasri birds as backyard poultry

Under the ICAR-Tribal Sub Plan scheme, each beneficiary was supplied with 20 Rajasri chicks. The birds were marketed at the rate of Rs.200/- per kg of live body weight and eggs at the rate of Rs.8/- per egg. They have learned about the art of selling by developing entrepreneurship qualities and thereby aware of market information with the assistance of Krishi Vigyan Kendra and also through self-help group meetings. The income generated through sale of eggs is Rs.21,024/- and birds (after 10% mortality) is Rs.6,388/-. The total gross income generated from the sale of birds and eggs is Rs.27,412/-. The miscellaneous expenditure towards the feed, medicines, chemicals etc toward rearing of each unit is about Rs. 6,300/-. Each woman beneficiary generated about net income of Rs.21,112/- per unit of 20 birds. The income generated from this backyard poultry revealed that tribal

women can generate income in villages to sustain their family and also to develop self-employment.

In backyard poultry system, the women poultry growers spent their money mostly on household celebrations, recreation purpose, as a gift to relatives and also to extend the poultry flock production depending upon the felt needs which showed the active participation of women's in income generation from the backyard poultry rearing and ultimately helped in empowering women. A similar finding was also reported by Reddy *et al.* [9] in Andhra Pradesh and Saha [15] on backyard poultry rearing in West Bengal.

Conclusion

The present investigation shows that knowledge empowerment of women beneficiaries on backyard poultry production technology, the productivity performance of backyard poultry and income generation through backyard

poultry rearing have clearly shown that the ICAR-tribal sub-plan scheme had a noteworthy impression towards socio-economic development of the tribal women folk. They have been motivated by technological abilities to follow the diverse innovations of backyard poultry rearing. Because of numerous contributions of backyard poultry farming in the lives of rural poor, it can be encouraged widely through the promotion of improved varieties, which will be a valuable asset. Further, it can act as a means of increasing rural income and also provide family nutrition for tribal and rural families. In the future, further such attempts will also be made in other places for the eventual progression and growth of tribal and rural India.

Acknowledgment

Authors are thankful to authorities of ICAR-ATARI, Zone X and Dr YSR Horticultural University for financial and physical support under the Tribal Sub Plan (TSP).

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