



## **Impact of Extension Interventions on Capacity Building of Tribal Backyard Poultry Owners in Mandla of Madhya Pradesh**

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### **Authors' contributions**

*This work was carried out in collaboration between first two authors and remaining two authors managed the literature searches. All authors read and approved the final manuscript.*

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### **ABSTRACT**

The study investigates the impact of extension interventions on capacity building of tribal backyard poultry owners in randomly selected six villages of Narayanganj and Niwas blocks of Mandla district by Random proportionate sampling (RPS) method. Data were collected through a structured interview schedule from 60 respondent's (30 from each block) tribal poultry owners by personal interview method and they were analysed using percentage frequency and chi-square. Suitable extension interventions like group discussion, awareness cum animal health treatment camps, exposure visits, training programmers were applied in the study areas. The capacity building of poultry owners were measured on the basis of improvement in knowledge and change in attitude towards scientific poultry farming practices. The chi-square test was applied 'before' and 'after' interventions of various extension strategies. The study showed a significant improvement in the knowledge and attitude of tribal poultry owners after extension interventions. It concluded that the capacity building of poultry owners were increased on the basis of improvement in knowledge and scientific farming practices.

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## 1. INTRODUCTION

Poultry farming is possible in widely different agro-climatic environment as the fowl possesses marked physiological adaptability. Requirement of small space, low capital investment, quick return from outlay and well distributed turn over throughout the year make poultry farming remunerative in both rural and urban areas. The rearing of poultry provides an excellent opportunity for gainful employment to idle or unemployed members of rural communities. The adoption of BYPF as an entrepreneurial activity among resource poor tribal women [1]. Traditionally, the village poultry in tribal areas is based on non-descript varieties of poultry stock and their productivity is also very low as compared to improved backyard poultry. Rural poultry farming with improved birds provide a solution to food security to the needy villagers paving a way for sustainable agriculture in rural areas of India [2].

Several studies show that these poor tribal people have not been enriched by the knowledge emanating from the research institutions or extension centre. Because of this the tribal people are not able to exploit the potential of their birds and sometimes suffer from the loss of their flocks, leading to poverty, that the famers with large flock size were having more knowledge than the small flock size holders [3]. Training and development leads to improved profitability and more positive attitudes towards profit orientation [4].

The use of appropriate information by poor livestock owners will help them to improve knowledge enabling them to obtain more output from their animals, thereby helping them to move out from the poverty [5]. With all the aforementioned, the study examined the impact of extension interventions on capacity building of tribal backyard poultry owners in Mandla district of Madhya Pradesh.

### 1.1 Objectives

- i. To develop extension strategies for improvement of backyard poultry farming
- ii. To study the impact of backyard poultry farming on empowerment of tribal poultry owner

## 2. MATERIALS AND METHODS

The present study was conducted in Narayanganj and Niwas blocks of Mandla District of Madhya Pradesh. Three villages were selected randomly from each block (i.e. Narayanganj and Niwas) for the study. Data were collected through a structured interview schedule from 60 respondent's tribal poultry owners in Mandla district. On the basis of existing status and constraints perceived by tribal poultry owners suitable extension strategies was developed in active consultation with the scientists of All India Co-ordinated Research Project on Poultry Breeding, Animal Nutrition, Veterinary Medicine, Livestock Production Management and Veterinary Gynaecology departments of the university to improve the backyard poultry farming practices in Mandla district. The various extension interventions like group discussion, awareness cum animal health treatment camps, exposure visits, training programmers were applied in the study areas.

### 2.1 Knowledge about Poultry Farming Practices

The knowledge about poultry farming was measured through interview schedule containing thirty statements prepared for the purpose of the study. To measure the level of knowledge for each statement score 1 (yes) was given while the score 0 (no) was assigned for each poultry rearing practices. The summation of scores over the statements constituted the knowledge score of the respondent. The respondents were categorized into three equal groups on the basis of minimum and maximum knowledge scores as low, medium and high.

Low	:	(<10 scores)
Medium	:	(10-20 scores)
High	:	(> 20 scores)

### 2.2 Attitude towards Poultry Farming Practices

The scale developed by [6] was used to measure the attitude of respondents towards poultry farming practices. The statements were rated into three point continuum. The assigned scores for positive statements were 3, 2, and 1 for agree,

undecided and disagree, respectively and for the negative statements, the reverse order of scoring was used. Thus the maximum achievable score was 45 and minimum was 15. The respondents were categorized into three equal groups on the basis of minimum and maximum attitude scores as low, medium and high.

Low	:	(<15 scores)
Medium	:	(15-30 scores)
High	:	(> 30 scores)

### 3. RESULTS AND DISCUSSION

#### 3.1 Extension Strategies for Improvement of Backyard Poultry Farming Practices

The following extension strategies were adopted in all the selected villages of the study areas.

#### 3.2 Awareness Campaigns

Table 1 revealed that there are six awareness campaigns in different selected villages of Narayanganj and Niwas blocks were organized to aware the tribal people regarding the housing, feeding, management, healthcare, vaccination and marketing of improved backyard poultry farming. The details of different awareness campaigns.

**Table 1. Awareness campaigns conducted in Narayanganj and Niwas block of Mandla District (n= 60)**

District	Blocks	Villages	Total no. of poultry owners	No. of selected respondents
Mandla	Narayanganj	Khapa	45	10
		Ghughri	40	10
		Moiyanala	25	10
		<b>Total</b>	<b>110</b>	<b>30</b>
	Niwas	Gadra	40	10
		Bhajia	35	10
		Dala	30	10
		<b>Total</b>	<b>105</b>	<b>30</b>

**Table 2. Exposure visits of the tribal poultry owners**

Particular	Blocks	Villages	Date	No. of participants
Exposure visits	Narayanganj	Ghughri	19/9/2014	30
		Khapa Moiyanala		
	Niwas	Gadra	24/10/2014	30
		Bhajia		
		Dala		

#### 3.3 Exposure Visits

Table 2 shows that two exposure visits was organized at All India Co-ordinated Research Project on Poultry Breeding, Nanaji Deshmukh Veterinary Science University, Jabalpur to motivate the tribal poultry owner. The number of participants in each visit was 30. These are the details of two exposure visits.

#### 3.4 Trainings

Table 3 revealed that two training programmes (3 days) to tribal poultry owner were organized at All India Co-ordinated Research Project on Poultry Breeding, Nanaji Deshmukh Veterinary Science University, Jabalpur and village level to improve the knowledge and skills of the poultry owner. The details of training programmes are presented in Table 3.

#### 3.5 Improvement in Knowledge

Table 4 shows the improvement in knowledge gain among the poultry owner 'before' and 'after' extension interventions. A cursory look at Table 4 indicates that before applying the extension interventions majority (96.67%) of the respondents had low level of knowledge whereas, after extension interventions majority of the respondents (75.00%) had medium level of knowledge.

**Table 3. Training programmes organized to tribal poultry owner**

Particular	Blocks	Villages	Date	No. of participants
Training	Narayanganj	Ghughri Khapa Moiyanala	05 <sup>th</sup> -07 <sup>th</sup> November, 2014	30
	Niwas	Gadra Bhajia Dala	4 <sup>th</sup> -6 <sup>th</sup> December, 2014	30

**Table 4. Distribution of respondents according to knowledge level 'before' and 'after' extension interventions (n=60)**

Variable	Category	Before	After	Chi-square value
Knowledge	Low	58 (96.67)	15 (25.00)	64.67**
	Medium	02 (03.33)	45 (75.00)	
	High	00	00	
<b>Total</b>		<b>60</b>	<b>60</b>	

Values in parentheses indicate percentage

\*\*Significant (P<0.01)

**Table 5. Distribution of respondents according to attitude level 'before' and 'after' extension interventions (n=60)**

Variable	Category	Before	After	Chi-square value
Attitude	Low	55 (91.67)	11 (18.33)	65.19**
	Medium	05 (08.33)	49 (81.67)	
	High	00	00	
<b>Total</b>		<b>60</b>	<b>60</b>	

Values in parentheses indicate percentage

\*\*Significant (P<0.01)

Chi-square test was applied to find out the test of significance between 'before' and 'after' knowledge of the respondents. The Table 4 shows that, the chi-square value is highly significant at 1 per cent level which is a clear indication of improvement in knowledge among poultry owner in the study areas. Similar study was reported by Kirar et al. [7].

### 3.6 Change in Attitude

The attitude change among the poultry owner 'before' and 'after' extension interventions is presented in Table 5 which indicates that before applying the extension interventions majority of the respondents (91.67%) had low level of attitude but after the extension interventions majority of the respondents (81.67) had medium level of attitude. The attitude change was significantly high after the intervention of the extension personnel.

The Chi-square value is highly significant at 1 per cent level which is an obvious sign of change in

attitude of respondents towards poultry farming practices. Similar study was reported by Kirar et al. [7].

## 4. CONCLUSION

From the finding the importance of extension interventions on capacity building of tribal poultry owners in Mandla district has the knowledge and attitude level of poultry significantly improve with the help of different extension interventions. The extension educational efforts are very successful for promoting backyard poultry farming practices and improving livelihood of poor farmers. There is need for capacity building of poultry owners by exposing them to Knowledge and extension interventions in order to enhance high productivity.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

## REFERENCES

1. Mandal MK, Khandekar N, Khandekar P. Backyard poultry farming in Bareilly District of Uttar Pradesh, India. *Livestock Research for Rural Development*. 2006;18:45-67.
2. Pathak PK, Nath BG. Rural poultry farming with improved breed of backyard chicken. *Journal of World's Poultry Research*. 2013;3(1):24-27.
3. Senthilkumar R, Khandekar N, Narmatha N. Knowledge level among poultry entrepreneurs on scientific layer farming. *Tamilnadu Journal Veterinary and Animal Sciences*. 2009;5(3):94-98.
4. Singh H. Training and development: A prominent determinant for improving HR productivity. *International Conference on management and education innovation*. PEDR. 2012;37.
5. Ramkumar S, Rao SVNC, Garforth, Ganesan R. Cattle health information system of the landless cattle owners in the peri-urban regions of Pondicherry. In: *Workshop on cattle health issues in the peri-urban regions: Potentials of information in coping with poverty*, Pondicherry, 20-21, March, Rajiv Gandhi College of Veterinary and Animal Science, Pondicherry. 2003;14-33.
6. Mandal MK, Gautam, Dalal RS, Khandekar N. A scale to measure the attitude of farmers towards backyard poultry farming. *Journal of Research, SKUAST-J*. 2004; 3(1):43-51.
7. Kirar N, Mandal MK and Sant S. Impact of extension interventions on goat farming in Jabalpur, MP. *Envn. Eco*. 2013;31(1):1-2.

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