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Training Needs Assessment of Poultry Farmers in Imphal West and Imphal East of Manipur, India

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ABSTRACT

Keywords

Training needs, Feeding, Watering, Vaccination Practices and Scientific Equipments practices.

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Commercial poultry farming has become one of the viable and proven enterprises all over the world due to its adaptability to varied agro-climatic conditions, low investment per unit, rapid growth rate and short generation interval. Since time immemorial poultry farming has played an important role to meet the domestic as well as socio-cultural needs of the rural people. The present study was conducted in Imphal East and Imphal West District of Manipur, Where were selected purposively on the poultry farmers rearing more than 200 birds' size and above. Fifty poultry farmers were selected randomly from each district totaling a size of 100 respondents. Total 100 respondents (Poultry farmers) were selected based on proportional random sampling method. The study concluded that majority of the farmers had medium training needs assessment on different aspects of poultry production practices. Age, Family size, Annual average income, Innovation proneness, Attitude toward poultry rearing, Utilization of mass media, Contact with extension staff and Marketing facilities were the important factors which have contributed to the training needs assessment by the poultry farmers.

Introduction

In developing countries, poultry represents an appropriate system to feed the fast growing human population and to provide income particularly to landless and small farmers, especially women. It makes one of the best uses of locally available resources. Although requiring low resource inputs and generally considered secondary to other agricultural activities by smallholder farmers, this type of production has an important contribution in supplying local populations with additional income and high quality protein. Poultry are also valued in religious and socio-cultural lives. However, high mortality, due to various diseases, constitutes one of the greatest constraints on poultry farming.

Other problems are related to breeding, feeding and marketing. Over the last decade, poultry population has grown spectacularly throughout the world, 23 per cent in developed and 76 per cent in developing countries, respectively. In India poultry farming under backyard system is as old as its civilization. Randhawa (1946) reported that numbers of terracotta have been discovered from Mohenjo-Daro and Harappa, which indicated that, the people domesticated number of birds and the domestic fowl (*gallus gallus domesticus*) originated in India and its ancestor's, the red jungle fowl (*gallus gallus*) is still found in northern India from Kashmir to Assam and in Madhya Pradesh, West

Bengal, Orissa, Visakhapatnam and parts of Godavari district of Andhra Pradesh. He also reported that the Indus valley people kept the fowl only for sports, and that its breeding for flesh occurred later. Poultry production in India has increased six fold in ten years; it ranked 4th in egg production and 18th in broiler production in the world (Singh and Jilani, 2005). The contribution of poultry sector to India's GDP has remained below 1 per cent, but its share in the livestock sector is continuously rising. The government of India is well aware of the growth opportunities of the national poultry sector, and the eleventh five year plan 2007-2012 sets a target growth rate for the sector at 10 per cent per year, which is above the envisaged 9 per cent annual growth rate for total GDP (Anonymous, 2007). This achievement was due to tremendous efforts of research on housing, feeding, breeding, and disease prevention. According to the 2006 National Sample Survey's (NSS) "report on livestock ownership" (Anonymous, 2006), the landless, marginal and small scale farmers, which account for about 90 per cent of the 107 million agricultural households in India, keep about 85 per cent of the poultry stock of the country. While the production of agricultural crops has been rising at a rate of 1.5–2% per annum, eggs and broilers has been rising at a rate of 8–10% per annum (Mehta *et al.*, 2003). National annual consumption is 37 billion eggs and one billion broilers. Estimates of income elasticity for meat and eggs strongly suggest that consumption of these products can be expected to continue to grow strongly. Per capita consumption of eggs in rural areas is less than half of the consumption in urban areas (Mehta *et al.*, 2003). Among the north-eastern state of India, Manipur stands third in poultry production next to Assam and Tripura and in meat production it stands in fourth position. The total poultry population is 29.41 lakhs in 2003 as compared to 30.57 lakhs in

1997(Anonymous, 2007). But there have been increases from 22.28 tons in 2003-04 to 24.26 tons during 2008-09 (Anonymous, 2008-09). Poultry farming in the state were found to be one of the important sources of income, particularly for landless agricultural labourers. But poultry production under modern technologies needs high expenditure which is very difficult to adopt for the rural farmers of Manipur. Few resource rich farmers are involved in this venture. Some rural youths are also running their farm and earning a handsome amount with contractual basis and solely depend upon the resource rich farmer. Hence, another way to fulfil out the increasing demand of egg and chicken in state and to boost up the economic condition of the farmer is to adopt scientific poultry farming using locally available resources. Poultry farmers should essentially possess the scientific knowledge on farming to take preventive action, identify the disease condition, and various poultry management practices, etc. This knowledge could be acquired through experience or through contact with extension agencies and input suppliers. Knowledge is the totality of understanding of information possessed by a person. Knowledge is defined as those behaviour and test situation which emphasized the remembering either by recognition or recall of ideas, material or phenomenon (Bloom *et al.*, 1956). Hence, a study was carried out to assess the commercial poultry farmers' knowledge on scientific poultry farming. It has been observed that considerable number of poultry farms has grown up in Imphal East and Imphal West District. Imphal being the main commercial centre of the state, availability of inputs like superior chicks, feeds, scientific equipments and labours has added momentum to the poultry business. Moreover veterinary services are also readily available with the establishment of veterinary hospital and private veterinary clinics in and around the

Imphal city. Hence, there is a great scope for poultry rearing so as to fulfil the egg and meat requirement of the state and also to generate employment opportunities for unemployed youth in general and women section in particular. Thus, every effort should be made to utilize the proven poultry technology so as to increase the efficiency of poultry business in Manipur state. The present study was carried out with following specific objectives to study the personal, socio-economic and psychological characteristics of poultry farmers and analyze the training needs assessment of poultry farmers.

Materials and Methods

The present study was conducted in Imphal East and Imphal West District of Manipur, Where were selected purposively on the poultry farmers rearing more than 200 birds' size and above. Fifty poultry farmers were selected randomly from each district totaling a size of 100 respondents. Total 100 respondents (Poultry farmers) were selected based on proportional random sampling method. An interview schedule was prepared to collect information from the respondents. To check its validity the interview schedule was pre-tested on 10 poultry farmers (except sample) from Imphal East and Imphal West District. The schedule was finalized after making necessary amendments (by adding more demography parameters and erasing some doubted questions) in the light of pre testing experience. Training needs assessment of each specific area were assessed using a five point rating scale *i.e.* most needed, needed, somewhat needed, less needed and not needed and were qualified by assigning the scores as 5,4,3,2,and 1 respectively. The data thus collected were coded and fed to the computer for analysis. Statistical package for Social Sciences (SPSS) was used for analysis of the data and simple percentage, mean and standard deviations simple correlation

coefficient and multiple regressions was counted.

Results and Discussion

The data presented in table 1 indicates that majority of the respondent belong to middle aged group (57.00%) followed by young age group (32.00%) and old categories (11.00%). The result of the present study indicates that majority of the respondent belonged to middle age group. The possible reason for this would be that middle aged group usually engaged poultry rearing as a ready source of cash and learning experience. It was found that out of 100 respondents, 39 per cent were found to be from small size family which maintained nuclear norm, while (61.00%) of the poultry farmers were from large size category maintaining joint family norm. Table 1 shows that (33.00%) of the poultry farmers studied up to middle school, followed by (28.00%) up to high school, (22.00%) up to graduate and above, (4.00%) up to primary school, and (5.00%) belongs to read and write category whereas, 6.00 per cent are in illiterate category. Majority (77.00%) of the respondents fell in the category of low income group, earning annual average income below Rs.50,000; followed by (20.00%) in medium category earning between Rs.50,000 to Rs.1,00,000; and (3.00%) with high income category above Rs. 1,00,000. The possible reason for this could be that lack of income source from land and unemployment.

Table 1 reveals that majority (60.00%) of the respondents fell in the category of medium group, followed by (27.00%) in high category and (13.00%) of the respondents belonged to low socio-economic status. Majority (52.00%) of the respondents was found to own medium flock size holding, followed by (38.00%) with a large flock size and, only (10.00%) poultry owners had a small flock size. It was evident from the result, that

majority (44.00 per cent) of the respondent had high access of innovation proneness followed by (30.00%) having low access and, (26.00%) with medium access to innovation proneness.

Table 1 results revealed that majority (41.00%) of the respondents' possessed favourable attitude towards poultry farming followed by (38.00%) which might be due to the fact that the respondents were convinced with the benefits reaped from the poultry rearing. However, only (21.00%) of the respondents do not expressed apprehension on its advantages. Majority (63.00%) of the respondents were in category of medium level of economic motivation which is followed by high (21.00%) and, (16.00%) with the low level of economic motivation category.

The table 1 indicates that majority 59.00 per cent of the respondents were having medium utilization of the information on poultry farming, followed by (23.00%) with high utilization, and only (18.00%) have low utilization of information. It was found that (59.00 %) of the respondents had medium contact with extension staff, followed by 22.00 per cent with low contact and, only 19.00 per cent of the respondents have high contact. Majority (43.00 %) of the respondents was having medium marketing

facilities followed by 35.00 per cent with high facilities and only 22.00 per cent were having low marketing facilities.

Training needs assessment in housing practices

There is evident from table 2 that on the basis of mean scores and the extent of important training need against each component of poultry farming. The results explicate that the respondent perceived most important training need in the area of housing practices with mean score of ventilation system (3.36) followed by Roof management system (3.33), lighting system (3.27) and in housing practices shed sanitization had a mean score (3.00).

Training needs assessment of in brooding of chicks

It is evident from table 2 indicate the mean training need scores and the extent of importance of training need against each component of poultry farming. The results revealed that the respondents perceived most important training needs in the area of brooding, proper lighting system had a mean score of 2.84 followed by brooding period (2.71), scientific methods (2.33) and traditional methods (2.2).

Table.1 To study the personal, socio-economic and psychological characteristics of poultry farmers

N=100

S. No.	Category	Frequency	Percentage	Mean Score & Standard Deviation
1.	Age			
	Young(25-40 Years)	32	32.00	1.79
	Middle(40-50 Years)	57	57.00	
	Old(50Year Above)	11	11.00	
2.	Family size			
	Small size (below 5 member)	39	39.00	1.61
	Large size (5 member and above)	61	61.00	

3.	Educational Status			
	Illiterate	6	6.00	
	Can read only	2	2.00	
	Can read and write only	5	5.00	
	Primary	4	4.00	
	Middle school	33	33.00	
	High school	28	28.00	
	Graduate	22	22.00	
4.	Annual Average Income			
	Low (Below Rs.50,000)	77	77.00	1.26
	Medium (Rs.50,000-1,00,000)	20	20.00	
	High (Above Rs.1,00,000)	3	3.00	
5.	Socio-economic status			
	Low (Mean-SD)	13	13.00	M= 23.28 S.D.= 3.64
	Medium(Mean_ +SD)	60	60.00	
	High (Mean+SD)	27	27.00	
6.	Flock size(no. of birds)			
	Small(50-250)	10	10.00	Mean=2.28 S.D.=0.63
	Medium(251-500)	52	52.00	
	Large(above 501)	38	38.00	
7.	Innovation proneness			
	Low (Mean-SD)	30	30.00	Mean=5.59 S.D.= 1.56
	Medium(Mean_ +SD)	26	26.00	
	High (Mean+SD)	44	44.00	
8.	Attitude toward poultry rearing			
	Low (Mean-SD)	21	21.00	Mean=24.71 S.D.= 2.60
	Medium(Mean_ +SD)	41	41.00	
	High (Mean+SD)	38	38.00	
9.	Economic motivation			
	Low (Mean-SD)	16	16.00	Mean=14.30 S.D.= 2.50
	Medium(Mean_ +SD)	63	63.00	
	High (Mean+SD)	21	21.00	
10.	Utilization of Mass Media			
	Low (Mean-SD)	18	18.00	Mean=9.90 S.D.= 2.54
	Medium(Mean_ +SD)	59	59.00	
	High (Mean+SD)	23	23.00	
11.	Contact with extension staff			
	Low (Mean-SD)	22	22.00	Mean=5.79 S.D.= 3.55
	Medium(Mean_ +SD)	59	59.00	
	High (Mean+SD)	19	19.00	
12	Marketing facility			
	Low (Mean-SD)	22	22.00	Mean=8.37 S.D.=1.20
	Medium(Mean_ +SD)	43	43.00	
	High (Mean+SD)	35	35.00	

Table.2 To analyze the training needs assessment of poultry farming

S No.	Training Needs Assessment of Poultry Farming	Degree of Training needs					Total obtained score	Mean Score	Rank
		Most needed (5)	Needed (4)	Somewhat needed (3)	Less needed (2)	Not needed (1)			
1.	Housing Practices								
i)	Shed Sanitization	14	31	19	13	23	300	3.00	IV
ii)	Lighting System	11	42	22	13	12	327	3.27	III
iii)	Roof Management System	16	38	20	15	11	333	3.33	II
iv)	Ventilation System	16	38	22	14	10	336	3.61	I
2.	Training need in Brooding of chicks								
i)	Traditional methods	4	19	10	27	40	220	2.20	IV
ii)	Scientific methods	13	11	12	24	40	233	2.33	III
iii)	Proper lighting system	14	27	12	22	26	284	2.84	I
iv)	Brooding period	9	29	14	20	28	271	2.71	II
3.	Training need in Feeding of Balanced ration								
i)	Locally processed feed	19	18	17	1	45	265	2.65	IV
ii)	Branded feed	16	41	24	10	9	345	3.45	I
iii)	Feeding period	17	42	20	12	9	342	3.42	II
iv)	Feeding pattern	13	45	21	11	10	340	3.40	III
4.	Training need in Debeaking								
i)	Locally available machinery	4	6	3	7	80	147	1.47	III
ii)	Scientific equipments	5	7	6	4	78	157	1.57	II
iii)	Age of Debeaking	7	6	8	4	75	160	1.60	I
5.	Training need in Deworming								
i)	Deworming period	2	7	9	5	77	152	1.52	III
ii)	Days of Deworming	4	8	6	3	79	155	1.55	II
iii)	Care after Deworming and Management	9	7	8	4	72	177	1.77	I
6.	Training need in Vaccination								
i)	Vaccination period	25	52	11	4	8	382	3.82	I
ii)	Vaccine handling	23	53	12	3	9	378	3.78	IV
iii)	Procurement before vaccination	22	54	13	4	7	380	3.80	II
iv)	Care after vaccination and Management	23	52	13	5	7	379	3.79	III

Table.3 Correlation coefficient of selected independent variables (x) and with the dependent variable (y) (Training needs assessment of poultry farmers)

Sl. No.	Independent variable	'r'
X1	Age	.248*
X2	Family size	-.204*
X3	Educational status	-.132NS
X4	Annual average income	.738**
X5	Socio-economic status	-.067NS
X6	Flock size (no. of poultry birds)	.163NS
X7	Innovation proneness	-.364**
X8	Attitude toward poultry rearing	-.566**
X9	Economic motivation	.139NS
X10	Utilization of mass media	.547**
X11	Contact with extension staff	.606**
X12	Marketing facilities	.591**
X13	Supervision of poultry farm	-.099NS

** Significant at the 0.01 level * Significant at the 0.05 level NS= Non Significant

Table.4 Regression analysis of independent variables (x) with the dependent variable (y)

S. No.	independent variable	Regression Co-efficient 'b'	Standard error (S.E)	't' value
X1	Age	.091	2.248	1.304
X2	Family size	-.047	2.899	-.662
X3	Educational status	.060	1.679	.910
X4	Annual average income	.312	4.453	2.799**
X5	Socio-economic status	-.060	.200	-.934
X6	Flock size (no. of poultry birds)	.131	2.130	1.944
X7	Innovation proneness	-.026	.984	-.336
X8	Attitude toward poultry rearing	-.198	.639	-2.405
X9	Economic motivation	-.117	.538	-1.571
X10	Utilization of mass media	.130	.660	1.568
X11	Contact with extension staff	.186	.543	1.939*
X12	Marketing facilities	.199	1.536	2.171**
X13	Supervision of poultry farm	.051	.650	.730

* Significant at the 0.05 < p, R² = 0.681, F = 14.111*

** Significant at the 0.01 < p, NS = Non significant

Training need assessment in feeding of Balanced ration

It was found that table 2 indicate that on the basis training need mean score the feeding of balanced ration such as branded feed (3.45) followed by feeding period (3.42), feeding pattern (3.40) and locally processed feed

(2.65) were rated as more required training need.

Training needs assessment in debeaking

A perusal of data presented in table 2 reveals that on the basis of mean score, the debeaking such as age of debeaking (1.60) followed by

scientific equipments (1.57) and locally available machinery (1.47) were rated as more required training needs.

Training need assessment in deworming

The result in table 2 explicate that the respondents perceived most important training need in care after deworming and management with mean score (1.77) followed by days of deworming and deworming period with the mean score 1.55 and 1.52 respectively.

Training need assessment in vaccination

It is evident from table 2 that on the basis of mean score, the vaccination such as vaccination period (3.82) followed by procurement before vaccination (3.80), care after vaccination and management (3.79) and vaccine handling (3.78) were rated as more required training needs.

This section deals with the nature of relationship between selected dependent variables and independent variables. For ascertaining the relationship correlation coefficient was calculated between dependent variable and the thirteen independent variables separately for Training needs assessment of poultry farmers. Correlation coefficients between Age, Family size, Annual average income, Innovation proneness, Attitude toward poultry rearing, Utilization of mass media, Contact with extension staff and Marketing facilities were found highly positive and significant of personal, psychological, socio-economic and communication characteristics with Training needs assessment of poultry farmers. (Thammi *et al.*, 2007), (Saha *et al.*, 2010), (Bhushan *et al.*, 2012), (Ezeh *et al.*, 2012), (Oyeyinka *et al.*, 2011) and (Senthilkumar *et al.*, 2009) (Table 3). Whereas Educational status, Socio-economic status, Flock size (no.

of poultry birds), Economic motivation and Supervision of poultry farm was found to be negative significance of personal, psychological, socio-economic & communication characteristics with Training needs assessment of poultry farmers.

The determinants of Training needs Assessment of the poultry farmers in Imphal West and Imphal East District of Manipur production are presented in table 4 the result of the analysis indicated that out of total 13 independent variables only four of them *i.e.* annual average income, attitude towards poultry rearing, contact with extension staff and marketing facilities were found to be significant at 0.01 and 0.05 level of significant respectively. The estimated coefficient for annual average income, Contact with extension staff and Marketing facilities were found positive and has 't' value (2.799), (1.939) and (2.171) respectively that implies Training has positive impact on each variables, every one per cent increase in training would lead to 31.2 per cent increase in income (Ezeh *et al.*, 2012; Effiong, 2005). Attitude towards poultry rearing has negative coefficient of (-0.198) and has 't' value (-2.405) which indicated that increase in attitude toward poultry rearing reduces the level of training need assessment to the poultry farmer. The R² value (0.681) indicated that 68.1 per cent was contributed towards the training need due to independent variables. These four variables (*i.e.* annual average income, attitude towards poultry rearing, contact with extension staff and marketing facilities) could be term as good predictor of training need assessment of the poultry farmers.

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