

# KNOWLEDGE LEVEL AMONG POULTRY ENTREPRENEURS ON SCIENTIFIC LAYER FARMING

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## ABSTRACT

*A study was conducted to know the knowledge level of commercial poultry (layer) farmers on scientific poultry farming among the farmers of Namakkal district in Tamil Nadu. It was revealed that the famers with large flock size were having more knowledge than the small flock size holders. This could be due to their higher socio-economic status, more mass media exposure, cosmopolitaness, etc*

**Key words:** Poultry entrepreneurs, Knowledge test

## INTRODUCTION

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. It is one of the important avenues for providing employment to the under employed and unemployed farmers particularly those living in rainfed areas where the well-water is not sufficient for efficient agricultural farming. Further, poultry farming also provides off-farm employment opportunities like transportation, distribution and processing. It provides employment to more than seven million people directly or indirectly. In Tamil Nadu, the rapid stride in commercial egg production was achieved during past three decades and now it stands second in egg production next to Andhra

Pradesh. According to the 14th livestock census in 1994, the poultry population of the state was 238.54 lakhs. As reported by integrated sample survey report of the Department of Animal Husbandry, Government of Tamil Nadu for the year 2001-2002 there were more than 2.5 crores of commercial layers producing annually two crores of eggs. According to the policy note No. 22, (Animal Husbandry, 2000-01) of the Department of Animal Husbandry of the State Government, the average annual per capita availability of egg in Tamil Nadu, that was 54 eggs in 1995-96.

Poultry entrepreneurs should essentially possess the scientific knowledge on layer farming to take preventive action, identify the disease condition, alleviation of effects of harsh climatic

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condition, etc. This knowledge could be acquired through experience or through contact with extension agencies and input suppliers. Hence, a study was carried out to assess the commercial poultry farmers' knowledge on scientific poultry farming.

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). According to English and English (1958) knowledge is a body of understood information possessed by an individual or culture. Knowledge in this study is operationalised as the degree of internalization of the facts and concepts related to poultry farming enterprise by the respondent which gets reflected in his cognitive behaviour. The variable indicated the extent of knowledge the respondent possessed at the time of the interview as evident from his response to a set of questions scientifically prepared for this purpose. This test is called as knowledge test.

## METHODOLOGY

The study was conducted in Namakkal district of Tamil Nadu state. The district was selected since it stands second in egg production in India, more number of poultry farmers and accessibility of the study area to the researcher.

Purposive sampling procedure was adopted to select the study area from the Namakkal district. Two talukas having more poultry population were selected, namely Namakkal and Rasipuram. Two blocks each from two talukas were selected based on the same criteria followed for selection of talukas. Using stratified random sampling with proportionate allocation, treating each block as a stratum, a total of 200 respondents were selected (Table.1).

The extent of knowledge possessed by the respondent at the time of the interview was measured using a set of questions scientifically

prepared (Table.2) for this purpose. The items were collected in relation to various management practices, disease prevention, feeding etc. The questions were like, correct / incorrect/ not known, yes/ no/ not known, involving impersonal and objective assessment. The summation of scores for correct replies over all the items included in the final format of the knowledge test of a particular respondent indicated his level of knowledge. The range of scores for commercial poultry farming was from 0-32 and based on these scores the respondents categorized into low, medium, high and very high.

Delinious-Hodges cumulative  $\sqrt{f}$  method, as explained by Delinious and Gurney(1951), was used to categorize the respondents into different flock size and level of knowledge. Having arranged data into ascending or descending order, several arbitrary classes were formed depending on the number of classes to be finally obtained. The upper limit of each class was obtained using the formula

$$U = l + \frac{Nk - m}{\sqrt{f}} \times C$$

Where,

U = upper limit of the new class

k = quartile number

l = lower limit of the quartile class

m = cumulative frequency below the quartile class

f = frequency of the quartile class

C = class interval of the arbitrary classes

$$N = \sum \sqrt{f}$$

## RESULTS AND DISCUSSION

The data in Table 3 shows that majority of respondents with <10,000 flock size had low to medium level of knowledge of commercial poultry farming, whereas, four-fifth of respondents with

10,000<20,000 flock size had medium to high knowledge level. In the case of respondents with a flock size of 20,000 and above, almost all of them had high to very high level of knowledge. In totality more than half of the respondents had high to very high level of knowledge on commercial poultry farming.

Majority of respondents with medium and large flock size had high to medium level of knowledge on commercial poultry farming while majority of small flock size respondents had low to medium level of knowledge. As insufficient knowledge will result in managerial inefficiency and loss to the enterprise the entrepreneurs with large flock size, who had invested huge capital in poultry farming and took more risk compared to the small flock size holders, might have had more knowledge of farming innovation. It is interesting to note that their knowledge had been acquired through no formal training as indicated in their training profile (Table 4) and hence it could be due to their cosmopolitaness, better access to information sources, change agents contact and more social participation ( Rogers, 1995)

### SUMMARY

A study was carried out to assess the scientific knowledge level of the poultry entrepreneurs regarding commercial poultry (layer) farming. It was revealed that farmers with large

flock size had better knowledge than the farmers with small flock size. It implies that, as stakeholders in poultry production, institutions such as State Animal Husbandry Department, veterinary colleges / university, private hatcheries etc. might find out the limitations of these groups and give priority to these disadvantaged entrepreneurs while formulating training programmes.

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**Table 1: Selection of respondents from the study area**

Talukas selected							
Namakkal				Rasipuram			
Number of poultry farmers from Blocks				Number of poultry farmers from Blocks			
Namakkal		Puduchatram		Rasipuram		Vennandur	
Present	Selected	Present	Selected	Present	Selected	Present	Selected
168	105	74	47	41	26	34	22

**Table 2: Knowledge Test**

1	Optimum temperature within a poultry house is 16-30°C	True \ False
2	Peak in egg production during	27-42 wks. \ 40-50 wks
3	Deformity in eggshells due to	Calcium \ Sodium
4	Average adult layer consume feed daily	100 –120 \ 80 -100 gm
5	Very large or very small eggs do not hatch well	True \ False
6	Moisture content of the litter should be 20-25 %	True \ False
7	Brooder heat should be given up to	2 weeks \ 4 weeks
8	Average weight of birds during the start of egg production 1.2 – 1.4 kg	True \ False
9	Spraying of disinfectant is needed only during infection	True \ False
10	Best drinking water for birds should be from	Open well \ bore well
11	Best time to vaccinate laying birds	Early morning \ evening
12	Best time to transfer birds from grower to layer house during	18-20 wks. \ 20-24 wks
13	For better feed efficiency birds should be fed in a day	Several times \ fewer times
14	Lighting during laying period should be 16-17 hours	True \ False
15	Fishmeal is a source of protein.	True \ False
16	There is more calcium in	Oyster shell \ Maize
17	Debeaking is being done to reduce feed wastage	True \ False
18	Increased temperature increases feed intake	True \ False
19	IBD is caused by	Bacteria \ Virus
20	Lassota vaccine is to control	Ranikhet \ IBD
21	Vitamin related to bone formation is	Vitamin D \ vitamin B
22	Aflatoxin is caused by	Fungus \ Bacteria
23	Incubation period for chicken eggs is 21 days	True \ False
24	Humidity within a poultry house should be	55-60 % \ 65-80 %
25	Panting of birds indicate	Increased temperature within poultry house \ noise within poultry house
26	Brooder house should be nearer to layer house	True \ False
27	The bulbs within a poultry house should be	White \ any colour
28	Denailing reduce wing rot	True \ False
29	The best way to dispose birds is	Incinerating the dead bird \ dispose off in far places
30	During summer the best watering system in cages	Nipple \ Water channel
31	To protect birds against diseases the safe vaccine is	Live \ Killed
32	In summer eggs can be stored up to 20 days in room temperature	True \ False

**Table 3: Distribution of respondents according to knowledge of commercial poultry farming**

Category	Flock size						Overall	
	<10,000		10000 - <20,000		20,000 & above		n=200	
	f	%	f	%	f	%	f	%
Low	28	36.36	2	3.23	0	0.0	30	15.0
Medium	28	36.36	17	27.42	5	8.20	50	25.0
High	15	19.48	33	53.22	17	27.87	65	32.5
Very high	6	7.80	10	16.13	39	63.93	55	27.5
Total	77	100	62	100	61	100	200	100

**Table 4: Profile of respondents according to training received**

Category	Flock size						Overall	
	<10,000		10,000- <20,000		20,000 & above		n=200	
	f	%	f	%	f	%	f	%
Attended	-	-	-	-	-	-	-	-
Not attended	77	100	62	100	61	100	200	100
Total	77	100	62	100	61	100	200	100