

## KNOWLEDGE OF POULTRY FARMING PRACTICES AMONG POULTRY FARMERS OF JAMMU

Narinder Paul<sup>1</sup> & V. P. Sharma<sup>2</sup>

### ABSTRACT

The study conducted in Kathua district of Jammu and Kashmir reveals that the poultry farmers had varying degrees of knowledge regarding the important practices of poultry farming. It was found that they possessed excellent degrees of knowledge regarding reasons for gentle and quick unloading of day old chicks from the boxes. However they had poor knowledge regarding optimum weight of day old chicks to be reared. Likewise they were found to have excellent knowledge about the proportion of dextrose and water to be offered to the chicks, effect of dry litter on birds, temperature of poultry house during the first week of age of birds, ratio of poultry concentrate and grinded maize, precautions while serving water to the chicks, floor per bird required during first week of age, common symptoms of Ranikhet, age for vaccination against Ranikhet and proper cleaning the shed before starting a lot. Further the respondents were found to possess low level of knowledge regarding the practices concept, preparation and removal time of chick guard; percentage of moisture to be maintained in the litter, height on the wall from the floor at which the thermometer is to be placed, percentage of nutrients in poultry feed, feeder space per bird required during the different ages, symptoms and management of Mareks and fowl pox diseases and spreading the layer of lime or foot pad soaked in phenyl at the door of the shed.

**Key Words :** Poultry farming, Vaccination

### INTRODUCTION :

India is one of the countries which have seen remarkable growth in the field of poultry. It is not only in the production but also in the productivity. Profitability in any business depends upon the knowledge, use and adoption of various inputs of quality and quantity parameters. The status of poultry production in Jammu and Kashmir is quite different from the rest of the country. Before nineties, J&K state had a crucial position with respect to egg production. Probably beginning of nineties witnessed the reduction in the egg production due to wide spread closure of layer farms and shifting to broiler keeping. This might have happened as farmers could have visualized a quick return from the broiler with less initial investment and due to increase in the demand of broilers as the general awareness was in favour of lean meat. Moreover, the margin of profit was more per unit investment in broilers than in the layers. The future of poultry activities in this state mainly depends on removal of constraints through proper planning and monitoring the plans so made. It has been observed that the required level of knowledge has not been found in the farmers of the state. They lack proper and scientific knowledge on the various aspects of poultry keeping which overtly or covertly hampers the production and productivity.

Dana *et.al.* (1995) found that majority of the poultry farmers had low level of knowledge about poultry health control measures. Sapkota and Ray (1997) reported that farmers having small size farms were more interested to expand their knowledge on poultry farming. Sapkota and

Ray (1998) revealed that majority of the respondents had the lowest level of awareness regarding poultry keeping. Khandekar and Sharma (2000) revealed that majority of the farmers were aware of the fact that the poultry birds are to be fed different rations at different ages and for different breeds. Parkash *et.al.* (2000) found that caging and disease management aspects were quite unknown to the poultry farmers. Rohilla *et.al.* (2000) found that only 30 percent poultry farmers were aware of improved poultry rearing practices. Sharma *et.al.* (2000) found that about one-half of the poultry farmers had knowledge about use and preparation of balanced ration.

With the prevailing scenario in the background, the present study was undertaken with the objective to study the existing level of knowledge of the poultry farmers about the important aspects of poultry keeping on the scientific lines. This was essential to be undertaken so as to abridge the existing knowledge gap among the farmers.

### METHODOLOGY :

The present investigation was conducted purposively in Jammu Division of Jammu and Kashmir State. Jammu division consists of six districts of which Kathua district was purposively selected from among other poultry producing districts. The said district has made remarkable progress in the poultry development in the last four decades. Kathua district is divided into four tehsils viz., Kathua, Hiranagar, Basoli and Billawar. These tehsils are further divided into eight blocks viz.; Kathua, Barnoti,

1. Field Assistant, DEE, SKUAST, Jammu (J&K). 2. Prof. & Head, (Ext.Edu.), RCA, MPUAT, Udaipur (Raj.).

Hiranagar, Ghagwal, Basholi, Bani, Billawar and Lohi Malhar. For conducting the present investigation, Hiranagar, Ghagwal, Kathua and Barnoti blocks were selected based on maximum number of registered and un-registered poultry farms in these blocks. After completing the lists, the poultry farmers in each block were categorized into two groups viz.; peripheral poultry farmers i.e. with in the radius of 10 Km distance from the block Poultry Demonstration Center of Department of Animal Husbandry, J&K Government and distant poultry farmers i.e. situated at the distance of more than the radius of 10 Km from the Poultry Demonstration Center of the concerned block. Further from the separate lists so prepared, 30 poultry peripheral farmers and 30 distant poultry farmers from each of the selected blocks were randomly chosen. Thus, the study sample consisted of 120 peripheral and 120 distant poultry keepers i.e. a total of 240 respondents.

To determine the extent of existing knowledge of the poultry farmers, a suitable knowledge test was developed and standardized particularly for the present study. The items under each knowledge category were assigned ranks. One mark was assigned for each correct reply and zero to wrong or no reply. The Mean Percent Scores for individual items were calculated and ranked accordingly.

## RESULTS & DISCUSSION :

Knowledge of the respondents was assessed under ten major aspects of poultry keeping. The results have been presented under the following heads:

### (a) Knowledge of the respondents regarding recommended brooding practices :

A perusal of data incorporated in table 1. explicate that the selected poultry farmers had very rich knowledge of the exact ratio of dextrose and water to be offered to the brooding chicks (MPS 93.75) which was placed at first place in rank hierarchy. Also, the respondents had excellent knowledge of number of days for which brooding is done (MPS 88.12) followed by method of providing feed to the brooding chicks (MPS 86.25) and knowledge and reason of providing plenty of water to chicks kept for brooding before offering feed to them (MPS 70.83), On the other hand, they were reported to have very poor knowledge of the practices like duration of heating brooder house before letting in the chicks to brood (MPS 19.58), types of brooding systems (MPS 17.91), concept of chick guard (MPS 7.50) and time for removal of chick guards from the brooder base (MPS 6.46).

A further glance at the data included in table 2 visualizes that method of providing feed to the chicks got second rank in case of peripheral (MPS 90.41) whereas, knowledge regarding same item was placed at third position by the distant poultry farmers (MPS 82.08). Simi-

larly, knowledge regarding number of brooding days was accorded third rank by the peripheral (MPS 87.08) and second rank by the distant poultry farmers with obtained MPS of 89.16. In rest of the items, both the categories of respondents got similar ranks with minor variations in their mean percent scores.

**Table 1. Knowledge of the respondents regarding recommended brooding practices (n = 240)**

S. No.	Knowledge item	Peripheral Distant Total					
		MPS	Rank	MPS	Rank	MPS	Rank
1.	Duration of heating brooder house before letting chicks to brood	21.67	VI	17.50	VII	19.58	VI
2.	Number of brooding days	87.08	III	89.16	II	88.12	II
3.	Types of brooding system	15.41	VII	20.41	VI	17.91	VII
4.	Thickness of bedding material on which chicks are kept to brood	62.08	V	50.42	V	56.25	IV
5.	Method of providing feed to the brooding chicks	90.41	II	82.08	III	86.25	III
6.	Offering plenty of water to chicks before offering feed	72.91	IV	68.75	IV	70.83	IV
7.	Concept of chick guard	8.33	VIII	11.67	VIII	10.00	VIII
8.	Purpose of chick guard	6.67	IX	8.33	IX	7.50	IX
9.	Time of removal of chick guards	6.25	X	6.67	X	6.46	X
10.	Ratio of dextrose and water to be offered to the brooding chicks	95.41	I	92.08	I	93.75	I

MPS : Mean Percent Score = Sample Size

### (b) Knowledge of the respondents regarding litter management practices :

It can be made vivid from data contained in table 2. that nearly all the respondents (MPS 94.58) had knowledge of ill effects of dry litter on the birds followed by the treatment of wet litter and hard crust formed on it (MPS 88.33) and appropriate thickness of litter material which is spread at the time of starting a lot (MPS 87.28). They were also found fairly acquainted with the basic qualities which litter material must possess (MPS 65.42) with placement of this item at fourth rank. However, they were found to have poor knowledge regarding time and duration of replacement of litter from a viable poultry unit (MPS 37.08) and thickness of litter material to be added every month (MPS 28.12). It is a matter of grave concern that very poor knowledge was found to be possessed by the respondents with respect to practices viz., period of regular and slight hoeing of litter in a viable shed (MPS 14.37) and percentage of moisture to be maintained in the litter (MPS 5.83).

Besides, knowledge regarding thickness of litter material spread at the time of starting a lot was found to be of second order in case of peripheral (MPS 89.16) and of third order for distant poultry farmers (MPS 85.41). Similarly, peripheral respondents possessed third order knowledge regarding treatment of wet litter and hard

crust formed (MPS 87.08). However, same item was assigned second rank by the distant poultry farmers (MPS 89.58). Other practices were placed at same ranks by both the categories of respondents.

**Table 2. Knowledge of the respondents regarding litter management practices (n = 240)**

S. No.	Knowledge item	Peripheral Distant Total					
		MPS	Rank	MPS	Rank	MPS	Rank
1.	Basic qualities of the litter material	62.08	IV	69.16	IV	65.62	IV
2.	Thickness of litter material spread at the time of starting a lot	89.16	II	85.41	III	87.28	III
3.	Thickness of litter material to be added every month	24.16	VI	32.08	VI	28.12	VI
4.	Period of regular and slight hoeing of litter in a viable shed	12.08	VII	16.67	VII	14.37	VII
5.	Percentage of moisture to be maintained in litter	5.42	VIII	6.25	VIII	5.83	VIII
6.	Effect of dry litter on birds	96.25	I	92.91	I	94.58	I
7.	Treatment of wet litter and hard crust formed thereon	87.08	III	89.58	II	88.33	II
8.	Replacement of litter from a viable poultry unit	41.67	V	32.50	V	37.08	V

MPS : Mean Percent Score, n = Sample Size

**(c) Knowledge of the respondents regarding feeding practices :**

A perusal of data presented in table 3. reveals that almost all the respondents had fairly an excellent knowledge of ratio of poultry concentrate and grinded maize to be offered to birds (MPS 92.50) which was placed at the first position in the rank hierarchy of feeding practices. Moreover, they had an excellent knowledge about percentage of total expenditure that is incurred on cost of feed (MPS 88.75) followed by knowledge regarding quantity of feed on an average a chick consumers in its life to attain the required level of maturity and weight (MPS 83.33). However, poor knowledge was reported by the respondents with regards to the practices viz., level to which feeders should be filled with feed (MPS 36.25), quantity of feed (in grams ) to be given to 1-3 days old chicks (MPS 32.70), sources of protein in the feed (MPS 28.96), feed in grams per chick offered during fifth week of age (MPS 21.87), grams of feed per chick given at the age of 4-7 days (MPS 21.45), quantity of antibiotic mixed per quintal of poultry feed (MPS 21.25) and quantity of feed per chick to be given during 8-15 days of age which were placed at IVth, Vth, VIth, VIIth, VIIIth, IXth, Xth and XIth ranks respectively by the respondents. The quite discouraging outcome of the queries on feeding practices is that they possessed very poor knowledge regarding quantity of feed to be given per chick at the age of 16-21 days (MPS 18.95), quantity of feed to be given during sixth weeks of age and onwards (MPS 14.58),

source of minerals in feed (MPS 12.91), sources of carbohydrates in feed (MPS 10.62), percentage of minerals in poultry feed (MPS 9.58) and percentage of carbohydrates in the feed (MPS 6.25) which were placed

**Table 3. Knowledge of the respondents regarding feeding practices (n = 240)**

S. No.	Knowledge item	Peripheral Distant Total					
		MPS	Rank	MPS	Rank	MPS	Rank
1.	Percentage of total expenditure incurred on cost of feeds	95.83	II	81.67	II	88.75	II
2.	Percentage of protein in poultry feed	5.41	XIX	6.25	XVIII	5.83	XIX
3.	Percentage of carbohydrates in poultry feed 6.67	XVII	5.84	XIX	6.25	XVII	
4.	Percentage of minerals in poultry feed	10.41	XVI	8.75	XVI	9.58	XVI
5.	Percentage of vitamins in poultry feed	5.83	XVIII	6.67	XVII	6.24	XVIII
6.	Source of protein in feed	32.08	IV	25.84	VII	28.96	VI
7.	Source of carbohydrates in feed	12.08	XIV	9.16	XV	10.62	XV
8.	Source of minerals in feed	14.58	XIII	11.25	XIV	12.91	XIV
9.	Ratio of poultry concentrate and grinded maize	95.84	I	89.16	I	92.50	I
10.	Quantity of antibiotic mixed per quintal of poultry feed	23.34	IX	19.16	X	21.25	X
11.	Quality of feed (in grams) to be given to 1-3 days old chick	27.08	VI	38.33	V	32.70	V
12.	Grams of feed per chick given at the age of 4-7 days	18.75	XII	24.16	VIII	21.45	IX
13.	Quantity of feed per chick given to 8-15 days old chick	24.58	VII	17.08	XIII	20.83	XI
14.	Quantity of feed to be given per chick at the age of 16-21 days	19.16	XI	18.75	XI	18.95	XII
15.	Quantity of feed per chick given during fourth week of age	24.17	VIII	28.34	VI	26.25	VII
16.	Feed in grams per chick offered during fifth week of age	21.67	X	22.08	IX	21.87	VIII
17.	Quantity of feed given during sixth week and onwards	10.83	XV	18.33	XII	14.58	XIII
18.	Quantity of feed on an average a chick consumes during its life	87.91	III	78.75	III	83.33	III
19.	Level to which feeders should be filled with feed	31.25	V	41.25	IV	36.25	IV

MPS: Mean Percent Score n: Sample Size

at XIIth, XIIIth, XIVth, XVth, XVIth and XVIIth ranks respectively in the rank hierarchy. Likewise extremely poor knowledge was also observed regarding percentage of vitamins in poultry feed (MPS 6.24) and percentage of proteins in the poultry feed which were placed at second last and last ranks respectively by the poultry farmers under study.

A further perusal of data reveals that knowledge regarding sources of protein in feed was accorded fourth rank by the peripheral (MPS 32.08) while it was accorded seventh rank by the distant poultry farmers (MPS 25.84).

Similarly, knowledge regarding level to which feeders would be filled with feed got fifth rank by the peripheral (MPS 31.25) and fourth rank (MPS 41.25) by the distant; knowledge of quantity of feed (in grams) to be given to 1-3 days old chicks was placed at sixth place by the peripheral (MPS 27.08) and fifth place by the distant (MPS 38.33); knowledge of quantity of feed per chick given to 8-15 days old chicks was graded at seventh standard by the peripheral (MPS 24.58) and thirteenth level by the distant (MPS 17.08) poultry farmers.

Likewise, knowledge pertaining to quantity of feed per chick given during fourth week of age got eighth rank in case of peripheral (MPS 24.17) and sixth rank in case of distant (MPS 28.34); knowledge about quantity of antibiotic mixed per quintal of poultry feed obtained ninth rank for peripheral (MPS 23.34) and tenth rank by the distant (MPS 19.16); knowledge about feed in grams per chick offered during fifth week of age secured tenth rank for peripheral (MPS 21.67) and ninth rank for distant (MPS 22.08) poultry farmers.

However, knowledge pertaining to grams of feed per chick given at the age of 4-7 days secured twelfth rank in case of peripheral (MPS 18.75) and eighth rank in case of distant (MPS 24.16); source of minerals in poultry feed obtained thirteenth rank by peripheral (MPS 14.58) and fourteenth rank by the distant (MPS 11.25); source of carbohydrate in feed obtained fourteenth rank by the peripheral (MPS 12.08) and fifteenth rank by the distant (MPS 9.16) farmers; quantity of feed given during sixth week and onwards got fifteenth rank by the peripheral (MPS 10.83) and twelfth rank by the distant (MPS 18.33) farmers; percentage or proportion of carbohydrates in poultry feed secured seventeenth place for the peripheral (MPS 6.67) and nineteenth place for the distant (MPS 5.84) farmers; percentage of vitamins poultry feed was placed at eighteenth rank by the peripheral (MPS 5.83) and seventeenth rank by the distant (MPS 6.67) farmers and; lastly, knowledge regarding percentage or proportion of protein in the poultry feed was assigned nineteenth rank by the distant (MPS 5.41) and eighteenth rank (MPS 6.25) by the distant poultry farmers.

These results might be due to the basic reasons that the poultry farmers generally don't prepare feeds by themselves. They purchase grinded maize and prepared poultry concentrate, mix it in different ratios at different ages of birds and serve them accordingly. That is why the respondents for those practices which were practically performed by them possessed higher knowledge. However, for the composition part of feed they possessed poor knowledge.

#### (d) Knowledge of the respondents regarding vaccination :

Data incorporated in table 4 reveal that almost all

respondents had exact knowledge of the age at which broilers are vaccinated against Ranikhet disease (94.58) which was placed at first rank in the category of vaccination. The poultry farmers also had an excellent degree of knowledge about mode of administration of IB vaccine (MPS 92.50) followed by knowledge about age of birds at which they are vaccine against Infectious Bronchitis (MPS 90.83) and dose of Ranikhet vaccine for its administration (MPS 84.58). Further, the respondents possessed good knowledge of dose of IB vaccine (MPS 71.67).

**Table 4. Knowledge of the respondents regarding vaccination in poultry n=240**

S. No.	Knowledge item	Peripheral Distant Total					
		MPS	Rank	MPS	Rank	MPS	Rank
1.	Age at which broilers are vaccinated against Ranikhet	95.83	I	93.34	I	94.58	I
2.	Dose of Ranikhet vaccine	85.83	IV	83.33	IV	84.58	IV
3.	Age at which broilers are vaccinated against Infectious Bronchitis (IB)	91.66	III	90.00	III	90.83	III
4.	Dose of IB vaccine	70.83	V	72.50	V	71.67	V
5.	Mode of administration of IB vaccine	93.34	II	91.67	II	92.50	II
6.	Rate of coccidiostat for mixing with feed	45.34	VII	49.16	VI	47.49	VII
7.	Age of birds at which administration of coccidiostat is started	54.16	VI	46.67	VII	50.42	VI
8.	Medicine used to kill internal parasites	15.00	VIII	12.50	IX	13.75	VIII
9.	Age at which vaccination against Mareek's disease is done	12.50	IX	11.67	X	12.08	IX
10.	Age at which vaccination against fowl pox is done	7.50	X	14.16	VIII	10.83	X
11.	Dose of fowl pox vaccine	4.16	XII	9.16	XI	6.67	XI
12.	Mode of administration of fowl pox vaccine	5.83	XI	7.50	XII	6.66	XII

MPS : Mean Percent Score n : Sample Size

However, a fair degree of knowledge was found to be possessed by the respondents with regards to the age at which administration of coccidiostat is started (MPS 15.42) and rate of coccidiostat for mixing with feed (MPS 47.49). Contrary to it, respondents possessed very poor knowledge of medicine to kill internal parasites (MPS 13.75), age at which vaccination against Mareek's disease is done (MPS 12.08), age at which vaccination against fowl pox is done (MPS 10.83), dose of fowl-pox vaccine (MPS 6.67) and mode of administration of fowl-pox vaccine (MPS 6.66).

Further, it can be seen from in-depth analysis of data included in the same table that knowledge regarding rate of coccidiostat for mixing with feed obtained sixth rank by the peripheral (MPS 54.16) and seventh rank by the distant poultry farmers (MPS 46.67). However, knowledge about rate of coccidiostat for mixing with feed obtained reciprocal ranks to as obtained above i.e. seventh

in case of peripheral and sixth in case of distant poultry farmers with MPS 45.83 and 49.16 respectively. Similarly, knowledge about medicine used to kill internal parasites was placed at eighth rank by the peripheral (MPS 15.00) and ninth rank by the distant poultry farmers (MPS 12.50); age at which vaccination against Mareek's disease is done obtained ninth rank for peripheral (MPS 12.50) and tenth rank for distant (MPS 11.67) farmers. Likewise, knowledge pertaining to the age at which vaccination against fowl pox is done obtained tenth rank in case of peripheral (MPS 7.50) and eighth rank in case of distant (MPS 14.16) poultry farmers, mode of administration of fowl-pox vaccine obtained eleventh rank in case of peripheral (MPS 5.83) and twelfth rank for distant poultry farmers (MPS 7.50) and; dose of fowl-pox vaccine obtained reciprocal ranks i.e. twelfth rank in case of peripheral and eleventh rank for distant poultry farm-

ers with MPS 4.16 and 7.50 respectively.

This might have happened because only those practices which were being practically practiced had resulted in high knowledge of the farmers regarding very common modes of disease management.

#### CONCLUSION :

The poultry farmers possessed poor knowledge of optimum weight of day old chicks, time for removal of chick guards, percentage of moisture to be maintained in litter, height from the litter at which thermometer is fixed on wall, percentage of protein in poultry feed, distance at which chick drinkers are placed, distance at which chick required during 1-4 days of age, symptoms of gumboro, mode of administration of fowl-pox vaccine, and knowledge regarding spreading layer of lime or foot-pad soaked in phenyl at the door .

#### REFERSENCES

1. Dana, S.S.; Khandekar, Nita and Sinha, S.P. (1995). "Factors associated with tranees' knowledge about poultry health control measures". *Indian Journ. of Poultry Science.*, Vol. XXX (1) : 92-93.
2. Sapkota, D. and Ray, M.N. (1997). "Socio-economic variables for poultry meat and egg consumption in the farmers of Lakhimpur district of Assam". *Indian Journ. of poultry science*, XXXII (2): 159-163.

