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Knowledge level of backyard poultry farmers towards improved breeding, health care and marketing strategies in Bihar

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Abstract
Poultry keeping is being practiced mostly by poor and marginalized rural households as one of the promising subsidiary occupation all over India. Due to its adaptability to varied agro-climatic conditions, low investment per unit, rapid growth rate and short generation interval it is a proven enterprise all over the world. Under the existing underlying systems, farmers are struggling to improve their backyard poultry productivity and sustainability owing to many reasons. Hence present study was done with the objective to find out the knowledge level of the backyard poultry farmers and their determinants. The present study was conducted in three purposively selected districts. Two blocks were selected out of which 50 respondents were randomly selected. Total 300 respondents were selected for the research study. The study indicated that majority (63.00%) of the respondents had low knowledge level regarding breeding management followed by 26.00 per cent had medium level and 11.00 per cent had low knowledge level. It was found that majority (35.33%) of respondents had low knowledge level in health care management followed by 34.00 per cent had medium knowledge level and 30.67 per cent had high knowledge level. It was also found that majority (42.67%) of respondents had low knowledge level in marketing strategies followed by 33.33 per cent had medium knowledge level and 24.00 per cent had high knowledge level. The extension agencies, public and private organisations and various self –help groups etc. should concentrate on these variables for bringing about improvement in knowledge level of backyard poultry farmers.

Keywords: Backyard poultry farmers, knowledge level, breeding, health care, marketing strategies

1. Introduction
With the recent and updated estimated population of 14, 000, 00 birds, poultry constitute the largest group of livestock share, mostly chicken, duck, and turkey (FAO, 1999) [7]. According to 20th Livestock census, total poultry population in our country is 851.81 million in which backyard poultry population contributed to only 3 per cent. Desi fowl shares 30.00 per cent in layer population in India. Total egg production in India is around 89139 million in which backyard poultry contribution is 25 per cent of total egg production. The total meat production is estimated to be about 8.80 million tonnes (2020-21) and poultry contributed 49.01 per cent of total meat production. (BAHS, 2019)

Poultry keeping in backyard is an old age practice in rural India. It is being adopted by many of the poor and marginalized rural households all over India. Most of the backyard poultry production comprises rearing of indigenous birds with poor production performance. The potentiality of indigenous birds in terms of egg production is only 70 to 80 eggs/bird/year and meat production is also very less. However, the backyard poultry production can be easily boost up with adoption of improved varieties of chicken and can promise a better production of meat and egg. To improve the socio-economic status of the traditional farmers, backyard poultry is a handy business with low-cost initial investment, but high economic return along with providing nutritional security for underprivileged community through good quality animal protein for eggs and meat. Backyard poultry farming by and large is a low input or no input venture and is characterised by indigenous night shelter, scavenging system, with little supplementary feeding, natural hatching of chicks, poor productivity of birds, local marketing (Saha, 2003) [10].

Under the existing production systems, farmers are struggling to improve their backyard poultry productivity and sustainability owing to many reasons. For backyard poultry production to be effective and efficient, farmers need to be equipped with the necessary

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knowledge about poultry production, poultry by products and their economic importance as well as information on poultry marketing. Hence, the present study was taken with the objective to find out the knowledge level of the backyard poultry farmers of Bihar.

2. Materials and Method
The present study was conducted in three randomly selected district *viz*; Muzaffarpur, Darbhanga and Nalanda. Two blocks were randomly selected out of which 50 respondents were selected from each block, thus totalling a sample size of 300 respondents. An interview schedule was prepared to collect information from the respondents. To check its validity the interview schedule was pre-tested on 10 respondents randomly selected. The schedule was finalised after making necessary amendments in the light of pre testing experience. The data thus collected were coded for the precise conclusion.

3. Result and Discussion
The purpose of this study was to analyse the knowledge level regarding breeding management, health care management and marketing strategies respectively of the backyard poultry farmers in aforesaid districts. The basic objectives of this study were to identify the knowledge level of poultry farmers possessed required level of knowledge and construct some suitable suggestions for poultry farmers.

Table 1: Knowledge level of Poultry Farmers towards improved breeding practices in selected districts. (N-300)

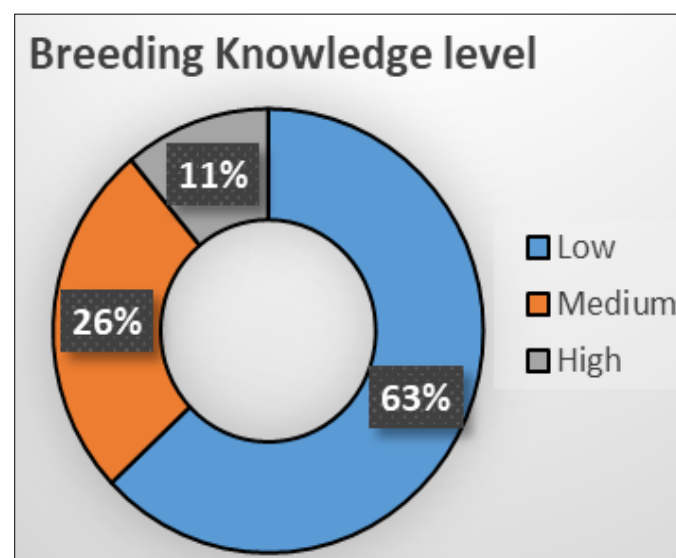| Sl. No.	Breeding knowledge	Muzaffarpur (n=100)	Darbhanga (n=100)	Nalanda (n=100)	Total (n=300)
1.	Low (0-3)	67 (67)	69 (69)	53 (53)	189 (63.00)
2.	Medium (4-6)	27 (27)	21 (21)	30 (30)	78 (26.00)
3.	High (7-10)	06 (06)	10 (10)	17 (17)	33 (11.00)

Fig 1: Figures in parenthesis shows percentage

The data in above Table 1. Indicates the distribution of breeding practices knowledge level of the respondents. It revealed that about 63.00 per cent of the respondents were found to have low level of knowledge level in breeding area followed by 26.00 per cent had medium level and only 11.00 per cent had high level of breeding practices knowledge

respectively. Collectively about more than 85.00 per cent of the respondents had low to medium knowledge level. It might be due to the lack of knowledge regarding brooding of hen, hatchability of eggs, culling of non- brooding hens and selection of breeds etc. However Nalanda district's respondents possess considerable medium to high level of knowledge amongst the other district might be due to its location near to Patna city, Bihar veterinary college etc. from where they often get institutional support for rearing of backyard poultry. The findings are in accordance with Mandal *et al*. (2006) [8].

Table 2: Knowledge level of Poultry Farmers towards improved health care management practices in selected districts. (N=300)

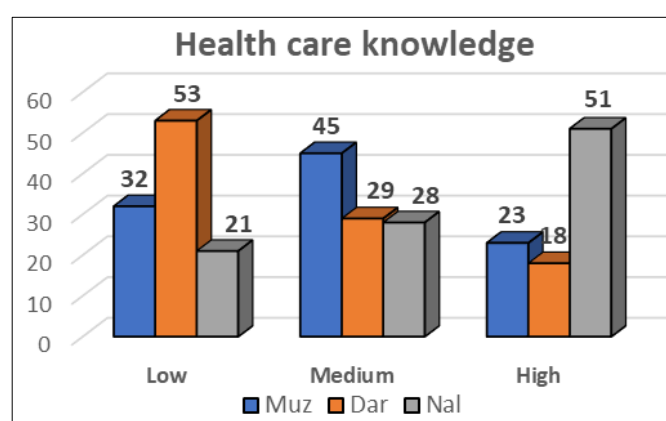| Sl. No.	Health care knowledge	Muzaffarpur (n=100)	Darbhanga (n=100)	Nalanda (n=100)	Total (N=300)
1.	Low (0-3)	32 (32)	53 (53)	21 (21)	106 (35.33)
2.	Medium (4-6)	45 (45)	29 (29)	28 (28)	102 (34.00)
3.	High (7-10)	23 (23)	18 (18)	51 (51)	92 (30.67)

Fig 2: Figures in parenthesis shows percentage

The data in the Table 2 clearly indicates the distribution of health care knowledge level of the respondents. Pooled data revealed that the about 35.33 per cent of the respondents were found to have low level of health care knowledge followed by 34.00 per cent had medium level and 30.67 per cent had high level of health care knowledge respectively. Collectively about 70.00 per cent of the respondents had low to medium knowledge level. It might be due to the lack of knowledge regarding vaccination schedule, prophylactic measures for control of severe problems such as high chick mortality rate reduced production etc. However, Nalanda district respondents had high knowledge level in health care amongst the other districts might be due to its location near to Patna city, Bihar veterinary college, Livestock research institutes etc. from where they often get institutional services and health care assistance. Similar findings were found by Deka P. *et al* (2013) [6].

Table 3: Knowledge level of Poultry Farmers towards improved marketing strategies practices in selected districts. (N=300)

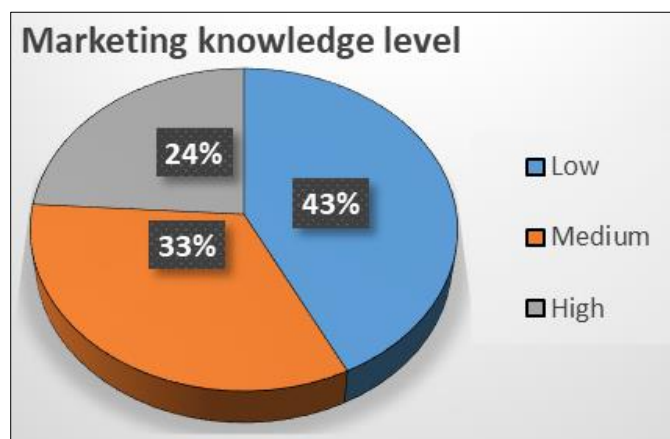| Sl. No.	Marketing knowledge	Muzaffarpur (n=100)	Darbhanga (n=100)	Nalanda (n=100)	Total (N=300)
1.	Low (0-3)	34 (34)	57 (57)	37 (37)	128 (42.67)
2.	Medium (4-6)	44 (44)	27 (27)	29 (29)	100 (33.33)
3.	High (7-10)	22 (22)	16 (16)	34 (34)	72 (24.00)

Fig 3: Figures in parenthesis shows percentage

The above Table 3. depicts the knowledge level of the respondents in marketing area of the backyard poultry practices. The pooled data reveals that the majority (42.67%) of the respondents had low marketing knowledge level followed by 33.33 per cent of the respondents had medium knowledge level and 24.00 per cent had high knowledge level in marketing area. Collectively it is revealed that about 75.00 per cent of the respondents had low to medium knowledge level in marketing strategies of the backyard poultry. It might be due to the reason that the respondents lack the knowledge regarding the nutritional value of the eggs and the meat products while deciding the market price of the products. Eventually they sell their products at very minimal price and are unable to make profit from the products. The findings coincides with findings of Saha D. (2003) [10].

4. Conclusions
The study revealed the knowledge level of the backyard poultry farmers. It was observed that the majority of the poultry farmers have low knowledge level in breeding and health care aspects. Majority of the respondents found moderate to high knowledge level in marketing strategies. Thus we can conclude that the knowledge level demonstrate the training needs requirement of the respondents and likewise training needs should be focoused upon.

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