



Assessing the knowledge level on scientific managerial practices adopted by backyard poultry farmers of Nadathara panchayat, Thrissur, Kerala[#]

K. Sai Siva Kumar¹, S. Sankaralingam^{2*}, P. Anitha³,

S. Harikrishnan⁴ and P. Reeja George⁵

Department of Poultry Science
College of Veterinary and Animal Sciences, Mannuthy, Thrissur-680651
Kerala Veterinary and Animal Sciences University
Kerala, India

Citation: Kumar, K.S.S., Sankaralingam, S., Anitha, P., Harikrishnan, S. and George, P.R. 2024. Assessing the knowledge level on scientific managerial practices adopted by backyard poultry farmers of Nadathara panchayat, Thrissur, Kerala. *J. Vet. Anim. Sci.* **55**(1):212-216
DOI: <https://doi.org/10.51966/jvas.2024.55.1.212-216>

Received: 14.10.2023

Accepted: 27.11.2023

Published: 31.03.2024

Abstract

A study was conducted in Nadathara grama panchayath between March 2022 to June 2023 among beneficiaries of the All India Coordinated Research Project (AICRP) - Scheduled Caste Sub plan (SCSP) scheme to evaluate the knowledge level of backyard poultry farmers on recommended practices in poultry production. A survey design was prepared for this purpose and collected data from 60 randomly selected beneficiaries of the scheme. An arbitrary knowledge schedule was prepared for this purpose. The schedule consisted of 15 closed ended scientific practices relating to practices on which farmers need to have correct knowledge. Each item carried a score of one for a correct response and a score of zero for an incorrect response by the respondent. The results of this study indicated that 46.67 per cent of farmers had high level of knowledge on recommended practices in backyard poultry rearing. However, the results also revealed that the knowledge of respondents on crucial areas such as chick vaccination, common diseases of backyard poultry and precautionary measures to be followed in cases of disease outbreaks was very low indicating the need for implementing effective extension programmes to overcome these knowledge gaps and ensure the viability of the backyard poultry production system among scheduled cast farmers.

[#]Part of MVSc thesis submitted to Kerala Veterinary and Animal Sciences University, Pookode, Wayanad, Kerala

1. M.V.Sc Scholar
2. Assistant Professor and Senior Scientist, AICRP on Poultry Breeding, Mannuthy
3. Professor and Head, Department of Poultry Science, CVAS, Mannuthy
4. Assistant Professor and Special Officer, Department of Poultry Science, CASM, Thiruvazhamkunnu, Palakkad
5. Professor, Department of Veterinary and Animal Husbandry Extension, CVAS, Mannuthy

*Corresponding author: sankaralingam@kvasu.ac.in. Ph.9447688783

Copyright: © 2024 Kumar et al. This is an open access article distributed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Keywords: Knowledge, scientific practices, adoption and scheduled cast farmers

In India Poultry sector is a fastest growing industry. Backyard poultry farming is a profitable venture, both in rural and urban regions because of the minimal space requirements, inexpensive capital investment, rapid return on investment and an evenly distributed turnover throughout the year. It provides an ideal opportunity for unemployed individuals to do productive work. Furthermore, chicken meat is a major source of protein that contributes to the nutritional demands of the rural population (Ann *et al.* 2022). Considering the availability of cheap sources of protein in the form of eggs and meat coupled with the employment that this enterprise offers, backyard poultry farming is increasingly recognised as a powerful tool for the socioeconomic as well as nutritional improvement of the society. In rural households ensuring the availability of eggs helps in reducing the deficiency of protein in venerable groups (Lavania and Bairwa, 2022).

However, the lack of scientific understanding on poultry rearing coupled with inadequate adoption of recommended technology and weak marketing structures have been recognised as major barriers to the improvement of the socio-economic status of farmers. Backyard poultry farmers are lacking in knowledge on poultry management and in many cases may also be unaware of how to control infections in poultry (Sultana *et al.* 2012). It is important to design need-based extension programmes that are based on the actual knowledge needs of the farming community to overcome barriers for optimum production and resultant income arising from backyard poultry production ventures (Billah *et al.*, 2013). The present study was performed to assess the knowledge of backyard poultry farmers from the scheduled caste community, who were beneficiaries of the All India Coordinated Research Project (AICRP) - Scheduled Caste Sub plan (SCSP) scheme so as to address any knowledge gaps through appropriate extension strategies.

This study was conducted in the Nadathara grama panchayath of Thrissur

district of Kerala state between March, 2022 and June, 2023. The list of poultry farmers who were beneficiaries of AICRP-SCSP scheme formed the sampling frame for the study from which 60 farmers were selected by simple random sampling. Data on the knowledge of respondents about various scientific poultry production practices were collected using an arbitrary knowledge test that was prepared for the purpose and the most important practices was selected based on the relevancy rating. The arbitrary knowledge test contained 15 dichotomous closed end scientific practices that reflected the universe of content with regard to knowledge about native poultry production practices. Each correct answer was assigned a score of one and an incorrect answer was assigned a score of zero. Thus, the maximum score that a respondent could score was 15 and the minimum score was zero. The test was administered to the respondents of the study and the total scores of the respondents were obtained by summing up their responses to each of the 15 scientific practices. The respondents were then classified into three categories, those with high, medium and low knowledge scores. The total number of respondents who had knowledge about each of the 15 scientific practices was also calculated and expressed as a percentage of the total number of respondents to arrive at the item wise extent of knowledge of respondents about poultry production practices.

The results of this study indicates that (Table 1) 46.67 per cent of the respondents had high level of knowledge on scientific poultry production practices, while 33.33 per cent of the respondents were having medium level of knowledge and only 20 per cent of them were having low knowledge level. The finding of this study is contrary to those reported by Raju *et al.* (2007) among poultry farmers of Andhra Pradesh and Kannadasan *et al.* (2017) among farmers of Tamil Nadu where the authors observed that the most of the farmers had medium knowledge level about scientific poultry production practices. Higher knowledge level in this study might have come from the interaction of the AICRP-SCSP project team with the individuals which facilitated the exchange of information. Lwoga *et al.* (2010) also stressed

Table 1. Distribution of respondents based on overall knowledge of scientific poultry production practices

S.No.	Category	Frequency (f)	Per cent (%)
1	Low (0-5)	12	20.00
2	Medium (6-10)	20	33.33
3	High (11-15)	28	46.67
	Total (n)	60	100.00

Table 2. Distribution of respondents' percentage on the knowledge level of scientific managerial practises in backyard poultry production (n=60)

S. No.	Practice	Frequency (f)	Per cent (%)
1	What are the ingredients being fed other than the balanced diet to the native chicken? (Starter/ Layer mash)	43	71.67
2	Name the feed given to the chicks during brooding phase? (Chick mash/Starter)	37	61.67
3	When do native chicken attain sexual maturity? (5m/6m/7m)	60	100.00
4	For how long can table eggs be stored? (7-15 days)	60	100.00
5	Name the vaccination given to the chicks at 7 days of age? (Lasota)	10	16.67
6	Name one common ectoparasitic infesting chicken? (Lice/Flea)	30	50.00
7	Name one common disease of backyard poultry? (Ranikhet/Fowl pox/CRD)	10	16.67
8	How can you differentiate fertile from an infertile egg? (Candling)	0	0.00
9	Name a major problem that a farmer venturing in to backyard poultry rearing? (Predator attack/theft/insufficient feed)	60	100.00
10	Name one precautionary measure to be followed in disease outbreak among chicken? (Isolation/burial)	0	0.00
11	What is the colour of the native chicken egg? (Light brown/Brown/Creamy)	60	100.00
12	Name any one vice of chicken? (Pecking/cannibalism)	40	66.67
13	What is the incubation period of chicken egg? (21 days)	26	43.33
14	Name a first aid measure for ailing birds? (Ayurvedic treatment/herbal treatment)	48	80.00
15	Frequency of cleaning feeders and waterers? (Weekly once/daily)	50	83.33

the significance of face-to-face interactions of extension agents and farmers in meeting the information needs of poultry farmers.

Data on the knowledge of the farmers with regard to the scientific poultry production practices (Table 2) indicates that almost all the studied farmers knew the age sexual maturity of native chicken, how long table eggs could

be stored, the major problems that a farmer venturing in to backyard poultry rearing and the colour of the native chicken eggs. Further, 83.33 per cent of the farmers also knew the correct frequency of cleaning feeders and waterers, 80 per cent of farmers had correct knowledge on ethno veterinary practices to be followed at the time disease outbreak and 71.67 per cent of the farmers knew the ingredients that could be

fed to native chicken other than the balanced diet. In disagreement to the above finding, Tandan *et al.* (2019) observed that only 12.50 per cent of broiler farmers of Chitwan, Nepal knew the various ingredients that can be used in poultry feed. It is clearly evident from the data in Table 2 that 66.67 per cent knew the vices commonly encountered in native chicken and 61.67 per cent knew the type of the feed that could be fed to the chicks during the brooding stage. However, none of the respondents knew how to differentiate between fertile and infertile eggs and precautionary measures to be followed in cases of disease outbreaks. In agreement to the present findings, Rashmi *et al.* (2023) also reported that 60 per cent of the studied farmers in Dakshina Kannada district of Karnataka state had high knowledge about brooding and hatching of eggs. The results of this study also revealed the fact that only 16.67 per cent of respondents were aware of the chick vaccination protocol at seven days of age. Contrary to the present finding, Tandan *et al.* (2019) observed that 44.23 per cent of the broiler farmers had correct knowledge on vaccination schedule of broilers.

The knowledge on above parameters is crucial to ensure that the farmer does not suffer losses on account of chick mortality due to disease outbreak which can be controlled by appropriate vaccination. Similarly lack of knowledge on precautionary measures to be taken at the time of disease outbreak among the respondents of the present study is also an area of concern. The results of this study point to the need for remedial extension education programmes in this direction to determine the viability of these livelihood systems.

Summary

The knowledge of respondents on crucial areas such as chick vaccination, common diseases of backyard poultry and precautionary measures to be adopted in case of disease outbreak was relatively very low which suggests the need to design and carry out effective extension education programmes in the target area of the scheme so as to overcome these knowledge gaps and ensure the viability of the backyard poultry production system.

Conflict of interest

The authors declare that they have no conflict of interest.

References

- Ann T.J., Sathu, T., Sunil, B. Vasudevan, V.N. and Uma, R. 2022. Effect of different levels of mayonnaise on the physicochemical and sensory attributes of chicken meat spread. *J. Vet. Anim. Sci.* **53**: 458-463.
- Billah, S.M., Nargis, F., Hossain, M.E., Howlider, M.A.R. and Lee, S.H. 2013. Family poultry production and consumption patterns in selected households of Bangladesh. *Social Development*, **3**: 1p.
- Kannadhasan, M.S., Sudeep Kumar, N.K. and Rajini, R.A. 2017. Adoption of recommended feeding practices in Backyard poultry farming. *Int. J. Sci. Environ. Technol.* **6**: 1175-1181.
- Lavania, P. and Bairwa, K.C. 2023. Growth performance of Pratapdhan chicks supplemented with fresh Azolla in backyard system under arid condition of Rajasthan. *J. Vet. Anim. Sci.* **54**: 30-34
- Lwoga, E.T., Ngulube, P. and Stilwell, C. 2010. Information needs and information seeking behaviour of small-scale farmers in Tanzania. *Innovation: Journal of appropriate librarianship and information work in Southern Africa*, **40**: 82-103.
- Raju, D.T., Rao, B.S. and Gupta, B.R. 2007. Knowledge level of commercial poultry farmers. *Indian J. Anim. Res.* **41**: 51-54.
- Rashmi, L., Rudraswamy, M.S. and Suresh Patel, D.J. 2023. Impact of training programmes as part of farmers field school on the adoption of Swarnadhara (Backyard poultry variety) poultry farming in Dakshina Kannada district of Karnataka state. *J. Pharm. Innov.* **12**: 298-301.
- Sultana, R., Nahar, N., Rimi, N.A., Azad, S., Islam, M.S., Gurley, E.S. and Luby,

S.P. 2012. Backyard poultry raising in Bangladesh: a valued resource for the villagers and a setting for zoonotic transmission of avian influenza. A qualitative study. *Rural and Remote Health*, **12**: 1-14.

Tandan P., Shrestha, A., Khanal, A., Shrestha, S. and Lamsal, D. 2019. Status of knowledge and management skills among the broiler farmers in the vicinity of AFU, Chitwan, Nepal. ■