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Adoption behaviour of backyard poultry farming among flood-affected farmers in S.A.S. Nagar District of Punjab

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Abstract

The study was undertaken in S.A.S. Nagar (Mohali) district of Punjab with the objective of assessing the adoption behaviour of backyard poultry farming practices among farmers affected by floods. To support livelihood restoration, four flood-affected villages were randomly selected, and ten farmers from each village were provided with fifty chicks along with feed. Adoption behaviour related to housing, feeding, watering, and health care practices was assessed using a structured questionnaire. Adoption levels were categorized as full adoption, partial adoption, and non-adoption. The findings indicated complete adoption of night shelter by all respondents. More than half of the farmers fully adopted the provision of separate housing (51.42%), while moderate adoption was observed for litter material and waterers (45.71% each). Feeding practices such as scavenging and kitchen waste utilization were universally followed. However, adoption of scientific health care measures including vaccination, deworming, and ectoparasite control remained limited.

Keywords: Backyard, feeding, poultry, adoption, scavenging

Introduction

Livestock and poultry play an important part in strengthening India's economy (Nath *et al*., 2012) [5]. Farmer generally reared local breeds whose production and growth potential is very low. Mandal *et al*., (2006) [4] characterized backyard poultry farming a low input or no input business. This system serves as an affordable option for generating supplementary income, improving family nutrition through eggs and meat, and providing opportunities for women's empowerment. It typically involves rearing native or improved breeds under free-range conditions, supported by simple housing and basic health practices like vaccination and deworming. The role of backyard poultry farming in sustaining and enhancing poor peoples' livelihoods in developing countries is well recognized among the developed community (Ahuja *et al*., 2007) [1]. It plays a significant role in enhancing food and nutrition security, reducing vulnerability, and promoting gender equity among the poorest families. Although income from such small-scale poultry units may not be high, they remain a crucial source of dietary protein. Eggs and meat support household consumption needs, while occasional sales offer small but meaningful financial returns, thus strengthening rural livelihood systems. In recognition of these benefits, the Krishi Vigyan Kendra, S.A.S. Nagar extended support to forty farmers affected by floods by distributing RIR crossbred chicks, helping them rebuild their livelihood during a challenging period.

Materials and Methods

This study was conducted in S.A.S Nagar (Mohali) district of Punjab to help the flood affected farmers. For this four flood affected villages of district S.A.S Nagar were selected with the aim of helping them rebuild their livelihood during a challenging period. From each village ten farmers were selected and given fifty chicks and feed to each farmer. So in total 40 farmers were selected. Due to overcrowding and eaten by predators, five farmers did not continue the backyard poultry farming. So, adoption behaviour were evaluated by taking number of farmers 35. The adoption behaviour of poultry farming and certain aspects like housing, nutrition, vaccination etc were studied in terms of full adoption, partial adoption and not adopted. The study was conducted by preparing a well structured questionnaire from the rural families of S.A.S Nagar district.

Adoption is the psychological journey in which a person moves from first learning about a new idea or product to ultimately deciding to adopt it.

The study was conducted by preparing a well structured questionnaire from the rural families of S.A.S Nagar district. The responses obtained from backyard poultry farmers were compared and quantified using a scoring system as shown in Table 1. Score 2 was assigned for full adoption, 1 for partial adoption, and 0 for no adoption. Full adoption referred to complete adherence to the recommended practices, partial adoption indicated deviations from the standard recommendations, and no adoption denoted the absence of

recommended practices.

Table 1: Shows items and score

Items	Score
Full adoption	2
Partial adoption	1
No adoption	0

Results and Discussion

Adoption of specific management practices by backyard poultry farmers

Housing: With regard to housing practices adopted by backyard poultry farmers, it is clear from the data presented in the Table 2 that all the farmers fully adopted provision of night shelter, followed by provision of separate house (51.42%), provision of waterer (45.71%), provision of litter material (45.71%) and provision of feeder (22.86%). It might be due to the reason birds were raised under a free-range scavenging system and housed at night in shelters constructed from locally available materials such as mud, wood, and wire mesh. Paddy husk, sand, and gunny bags were commonly used as litter materials. Similar trends have been reported by Kumaresan *et al.* (2008) [3] and Ahuja and Sen (2007) [1], who observed that night shelter is a universally adopted practice in backyard poultry systems to protect birds from predators and adverse weather conditions. The predominance of night shelters may be attributed to the fact that birds were reared under a free-range scavenging system and housed only during the night in structures made from locally available materials such as mud, wood, and wire mesh, as also reported by Mandal *et al.* (2006) [4] and Pathak and Nath (2013) [8, 5]. The use of paddy husk, sand, and gunny bags as litter materials aligns with the findings of Singh *et al.* (2015) [10], who noted that backyard poultry farmers prefer low-cost, locally available litter resources. Lower adoption of feeders and waterers among small flock holders may be due to reliance on scavenging and household waste feeding, a pattern similarly documented by Islam *et al.* (2014) [2].

Feeding and watering: It is observed from the Table 3 that all the backyard poultry farmers fully adopted feeding practices like scavenging and providing additional kitchen waste. Similar observations were reported by Kumaresan *et al.* (2008) [3] and Islam *et al.* (2014) [2], who noted that scavenging supplemented with household leftovers is a common practice among rural poultry keepers. While, 28.57 per cent farmers and 71.42 per cent of the backyard poultry farmers fully adopted additional feed and drinking water provision. The partial adoption of supplementary feeding may be attributed to the low-input nature of backyard poultry farming and the dependence on natural feed resources, as also reported by Mandal *et al.* (2006) [4] and Ahuja and Sen (2007) [1]. Higher adoption of drinking water provision could be due to increased awareness of its importance for bird health and productivity, which is consistent with the findings of Pathak and Nath (2013) [8, 5] and Singh *et al.* (2015) [10].

Health care practices: As the Table 3 depicted that only 14.28% farmers fully adopted vaccination against disease and 17.14% control of ectoparasite whereas 22.86% farmers practiced deworming of birds. The low adoption of health management practices may be attributed to limited awareness, inadequate access to veterinary services, and the low-input nature of backyard poultry farming, as reported by Mandal *et al.* (2006) [4] and Kumaresan *et al.* (2008) [3]. Similar findings were documented by Islam *et al.* (2014) [2], who observed that rural poultry farmers often rely on traditional remedies rather than scientific disease prevention measures. Additionally, Pathak and Nath (2013) [8, 5] highlighted that irregular vaccination and deworming practices in backyard poultry systems contribute to higher disease incidence and mortality. These findings emphasize the need for strengthening extension services and awareness programs to improve the adoption of scientific health management practices among backyard poultry farmers, as suggested by Singh *et al.* (2015) [10].

Table 2: Distribution of backyard poultry farmers according to their specific adoption of poultry management practices (N=35)

S. No.	Particulars	Fully adopted		Partially adopted		Not adopted	
		F	%ge	F	%ge	F	%ge
Housing							
1.	Provision of separate house	18	51.42	0	0	17	48.57
2.	Provision of night shelter	35	100	0	0	0	0
3.	Provision of litter material	16	45.71	10	28.57	9	25.71
4.	Provision of feeder	8	22.86	0	0	27	77.14
5.	Provision of waterer	16	45.71	0	0	19	54.28
Feeding and watering							
6.	Available in scavenging	35	100	0	0	0	0
7.	Kitchen waste	35	100	0	0	0	0
8.	Additional feed provision	10	28.57	14	40.00	11	31.42
9.	Provision of clean water	25	71.42	0	0	10	28.57
Health care practices							
10.	Vaccination against disease	5	14.28	18	51.42	12	34.28
11.	Ectoparasite	6	17.14	9	25.71	20	57.14
12.	Deworming	8	22.86	0	0	27	77.14

Conclusion

The present study highlights the significant role of backyard poultry farming as a low-input, livelihood-supporting activity for flood-affected rural households in S.A.S. Nagar (Mohali) district of Punjab. The findings reveal that while awareness and partial adoption of backyard poultry practices

were relatively high, full adoption remained limited among farmers. Most respondents practiced essential components such as night shelter, scavenging-based feeding, and use of locally available resources, reflecting the traditional and low-cost nature of the system. However, adoption of improved management practices—particularly scientific feeding, housing accessories, and healthcare measures such as vaccination and deworming was notably low.

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