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Entrepreneurial challenges and solutions in backyard poultry farming among rural women: A study under the ICAR farmer first

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Abstract

The study was carried out in four villages of Rahuri tehsil, Ahilyanagar district of Maharashtra under the ICAR Farmer FIRST Programme implemented by MPKV, Rahuri. Using an ex-post-facto research design, data were collected from 200 purposively selected rural women entrepreneurs engaged in backyard poultry farming through personal interviews with a structured schedule. The findings revealed that women faced multiple challenges in poultry management, including predator attacks, seasonal fluctuations in egg prices, high feed costs, labor constraints, market instability, chick mortality, cannibalistic behavior, crop damage, disease outbreaks and theft. To overcome these issues, respondents suggested practical interventions such as government support for predator-proof housing, provision of healthy chicks at affordable rates, promotion of alternative feed resources and reliable electricity supply to reduce stress-related behavior in birds. Other recommendations included the adoption of low-cost automatic feeders and waterers to ease management and the establishment of poultry houses at the taluka level for assured markets. Overall, the study emphasizes the importance of predator control, disease prevention, feeding innovations and market infrastructure as critical interventions to strengthen backyard poultry as a sustainable livelihood option for rural women.

Keywords: Backyard poultry, Rural women entrepreneurship, ICAR Farmer FIRST Programme, Poultry management

Introduction

Entrepreneurship is widely recognized as a driver of innovation, risk-taking, and wealth creation, with small and medium enterprises increasingly serving as engines of growth in modern economies (Kuratko & Hodgetts, 2001) [7]. Women entrepreneurs, in particular, play a crucial role in fostering inclusive development by generating income, creating employment, and enhancing community well-being. In developing economies, even small-scale ventures offer women a pathway to socio-economic empowerment, improved household welfare, and greater participation in decision-making (Gupta, 2025) [3]. Despite persistent structural barriers, rural women continue to demonstrate resilience and innovation through micro-enterprises that integrate livelihood generation with household responsibilities.

Agriculture remains central to women's entrepreneurship in rural India, where backyard poultry farming has emerged as a viable livelihood strategy. Poultry meat and eggs provide affordable protein, addressing nutritional insecurity, while poultry husbandry supports rural employment and income diversification (Rath *et al.*, 2015; Islam *et al.*, 2021) [11, 4]. Backyard poultry is especially significant for women, as it requires minimal investment, relies on household labor, and can be managed alongside domestic tasks (Ogunlade *et al.*, 2013) [8]. Recent evidence highlights its contributions to women's economic independence and decision-making power (Ruchi *et al.*, 2024) [12]. However, widespread challenges persist, including high chick mortality, predator attacks, feed costs, disease outbreaks, and market fluctuations, which limit profitability and discourage long-term engagement (Jahanara *et al.*, 2023; Rajini & Senthilkumar, 2022) [6, 10]. Addressing these barriers through training, infrastructure support, and market linkages is essential to unlock the full potential of women-led backyard poultry enterprises.

Against this backdrop, the present study was conducted under the ICAR Farmer FIRST Project to examine the entrepreneurial challenges faced by rural women engaged in backyard poultry farming and to document their practical solutions. By capturing women's lived experiences and their context-specific recommendations, the study seeks to inform targeted interventions that strengthen backyard poultry as a sustainable livelihood option and enhance the role of women in rural entrepreneurship.

Methodology

The study was conducted in four villages Chinchvhire, Kangar, Tambhere, and Kanadgaon of Rahuri tehsil,

Ahilyanagar district, Maharashtra, where the ICAR Farmer FIRST Programme has been implemented by MPKV, Rahuri since 2016–17. An ex-post-facto research design was adopted. This design was considered appropriate for systematically examining the factors influencing entrepreneurial challenges and solutions in backyard poultry farming. A purposive sample of 200 rural women entrepreneurs was drawn, comprising 50 respondents from each selected village. Data were collected through personal interviews using a structured interview schedule, supplemented with direct observations to ensure accuracy and reliability of responses.

Results and Discussion

Table 1: Distribution of the respondents according to constraints faced by them backyard poultry

Sr. No	Constraints	Respondents =200	
		Frequency	Percentage
1.	Attack by predators (dogs, snakes, birds of prey)	173	86.50
2.	Low egg price during summer	165	82.50
3.	High cost of feed	156	78.00
4.	Inability to pay constant attention towards poultry birds management	153	76.50
5.	Higher mortality in chicks	144	72.00
6.	Price fluctuation of eggs and meat	123	61.50
7.	Cannibalism activity due to irregularity of electricity at initial stage and crowding	108	54.00
8.	Destruction of garden crop	102	51.00
9.	High disease incidence (Mareks disease, Fowlpox etc)	57	28.50
10.	Losses due to theft	45	22.50

Form the table 1 data reveals that majority of respondents (86.50%) reported predator attacks (dogs, snakes, birds of prey) as a major constraint. This finding is consistent with earlier studies highlighting the absence of proper poultry housing or fencing systems, which makes birds highly vulnerable to outdoor threats (Prashant & Kumar, 2021) ^[9]. 82.50 per cent of the respondents mentioned that egg prices drop significantly in summer, reducing profitability. This seasonal market fluctuation affects income stability and discourages sustained efforts in poultry farming. Feed expenses were another critical constraint, as feed constitutes the largest component of poultry production costs, and any increase in prices directly reduces profitability, particularly for small and marginal farmers. 76.50 per cent of respondents indicated difficulty in continuously managing poultry birds. This could be due to competing household responsibilities or lack of labour assistance, leading to mismanagement and poor bird health. Fluctuating market prices were noted by 72.00 per cent respondents. This

inconsistency creates uncertainty in returns and may reduce motivation for entrepreneurship among rural women. 61.50 per cent of respondents experienced high chick mortality. This is likely caused by inadequate brooding facilities, poor hygiene, or lack of timely vaccinations. While 54.00 per cent of respondents reported cannibalistic behavior among poultry birds, attributed to lack of light during early stages and overcrowding often caused by irregular electricity supply or poor housing design. 51.00 per cent of respondents faced crop loss due to poultry roaming freely, highlighting the need for better fencing and separation of farming zones. Attack of Marek's and Fowlpox disease reported by 28.50 per cent of respondents, while 22.50 per cent reported theft of poultry, indicating weak security measures at household or farm level. These findings are consistent with Thomas and Balamurugan (2020) ^[13], who noted theft and poor farm security as common issues in backyard poultry systems.

Table 2: Distribution of the respondents according to suggested interventions to overcome the constraints in backyard poultry

Sr. No	Suggestions	Respondents =200	
		Frequency	Percentage
1	Government should provide shelter house on subsidy basis have one feet height from ground to protect from predators	167	83.50
2	Farmer should be provided with one month old poultry bird at low price to reduce mortality	159	79.50
3	Use of alternative feed sources (kitchen waste, Rice bran)	136	68.00
4	Electricity should be provided with 24 hr in village region to avoid cannibalism where backyard poultry practiced in large scale	124	62.00
5	Install low-cost automatic feeders and waterers that can operate for 2-3 days without intervention	113	56.50
6	Government should provide backyard poultry house at taluka level so that poultry entrepreneur will have immediate and assured market for eggs.	87	43.50

The present study documented several suggestions offered by backyard poultry women entrepreneurs to address critical

challenges in the sector. The most widely endorsed intervention (83.50%) was the provision of subsidized

poultry shelters elevated one foot above the ground to reduce losses from predator attacks. This finding reflects the urgent need for improved protective housing, as predator-related mortality is consistently reported as a major constraint in rural poultry systems (AESAs, 2020). The second most common recommendation, supported by 79.50% of respondents, was the supply of one-month-old poultry birds at affordable prices. Providing chicks beyond their most vulnerable early stage is a proven strategy to reduce mortality and ensure flock survivability (Frontiers in Sustainable Food Systems, 2022). Further, 68.00% of women emphasized the use of alternative feed resources such as kitchen waste and rice bran. Feed cost is widely recognized as one of the largest constraints in backyard poultry production, and the use of locally available feed substitutes has been highlighted as a sustainable solution (ICAR, 2020). Ensuring 24-hour electricity supply in rural areas, supported by 62.00% of respondents, was another prominent recommendation. 56.50% of women suggested installing low-cost automatic feeders and waterers that could operate for 2–3 days without human intervention. This innovation reduces labor intensity and improves flexibility in management practices, echoing earlier research on labor-saving technologies in smallholder poultry systems. 43.50% of respondents recommended that the government establish backyard poultry markets at the taluka (sub-district) level. Localized markets can strengthen income security by ensuring assured and immediate sale of eggs, while also reducing dependence on intermediaries (AESAs, 2020).

Conclusion

The study highlights that backyard poultry is an important livelihood source for rural women but is constrained by predator attacks, high feed costs, chick mortality, labor shortages, and market instability. Women suggested solutions such as predator-proof shelters, affordable healthy chicks, alternative feed use, reliable electricity, automatic feeders, and local markets. These findings emphasize the need for targeted policy and extension support to strengthen backyard poultry as a sustainable and profitable enterprise for rural women.

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