



ISSN Print: 2664-844X
ISSN Online: 2664-8458
NAAS Rating (2026): 4.97
IJAFS 2026; 8(3): 395-400
www.agriculturaljournals.com
Received: 20-01-2026
Accepted: 23-02-2026

A Amet Keikung
Ph.D. Research Scholar,
Department of Livestock
Production and Management,
School of Agricultural Sciences,
Nagaland University,
Medziphema, Nagaland, India

Ramesh Pandey
Professor, Department of
Livestock Production and
Management, Sam
Higginbottom University of
Agriculture, Technology and
Sciences, Prayagraj, Uttar
Pradesh, India

Samar Thakuria
Ph.D. Research Scholar,
Department of Agricultural
Extension Education, School
of Agricultural Sciences,
Nagaland University,
Medziphema, Nagaland, India

Wangpon Konyak
Ph.D. Research Scholar,
Department of Entomology,
School of Agricultural Sciences,
Nagaland University,
Medziphema, Nagaland, India

Kivishe
Ph.D. Research Scholar,
Department of Soil and Water
Conservation, School of
Agricultural Sciences,
Nagaland University,
Medziphema, Nagaland, India

Mriganka Barman
Ph.D. Research Scholar,
Department of Agricultural
Economics, College of
Agriculture, Assam
Agricultural University,
Jorhat, Assam, India

Corresponding Author:
Samar Thakuria
Ph.D. Research Scholar,
Department of Agricultural
Extension Education, School
of Agricultural Sciences,
Nagaland University,
Medziphema, Nagaland, India

Constraints faced by women poultry farmers in backyard poultry rearing: A case study of Dimapur district, Nagaland, India

A Amet Keikung, Ramesh Pandey, Samar Thakuria, Wangpon Konyak, Kivishe and Mriganka Barman

DOI: <https://www.doi.org/10.33545/2664844X.2026.v8.i3e.1273>

Abstract

India is primarily an agrarian country that depends largely on agriculture, animal husbandry and allied sectors for livelihood. Among these, poultry farming has emerged as a significant agribusiness activity contributing to poverty alleviation, food security and employment generation in rural areas. In addition to providing a reliable source of nutrition in the form of eggs and meat, it also serves as an important source of income for millions of people. The present study was undertaken to assess the 'Constraints faced by women poultry farmers in Dimapur district of Nagaland, India. A field survey was conducted in Chumukedima block and Dhansiripar block of Dimapur district, covering a total of 100 respondents (50 from each block) selected randomly. Primary data were collected through personal interviews using a structured schedule and analyzed using descriptive statistics and ranking methods. The findings revealed that a majority of the respondents (51.00%) belonged to the middle-aged group and 35.00% had a graduate level of formal education. All respondents (100%) were female, confirming the study's focus on women poultry farmers. Most respondents (41.25%) belonged to medium-sized families (5-9 members) and (54.00%) had a medium level of farming experience. Regarding occupation, (40.00%) of the respondents were engaged in business, while (33.00%) pursued poultry farming as their primary occupation. The majority (76.00%) maintained a small flock size and (56.00%) reared poultry in single-level sheds. Furthermore, (68.00%) of the respondents had kuccha or temporary sheds and a large proportion (81.00%) raised poultry primarily for meat production. Analysis of constraints showed that the most serious problem faced by women poultry farmers was attack by predators followed by unavailability of improved chick varieties, high chick mortality, lack of vaccination facilities and inadequate technical support. Lack of easy access to veterinary services was found to be a relatively minor constraint.

Keywords: Women empowerment, poultry farming, constraints, Dimapur district, Nagaland

Introduction

According to the agriculture diary, poultry refers to a wide variety of domesticated birds such as chickens, ducks, turkeys, geese, guinea fowl, pigeons, quails, ostriches and other game birds, which are reared either for consumption or for commercial purposes in both live and processed forms. These birds are generally classified on the basis of their utility and economic importance into meat type, egg type, dual-purpose, game and ornamental categories. In recent years, the poultry sector has witnessed rapid expansion due to several driving factors such as changing dietary patterns, increasing demand for animal protein, globalization, industrialization, urbanization and rising income levels, which have collectively created a favorable environment for its growth (Rao, 2020) [8]. Poultry production has become a vital component of the agricultural and livestock sector across the world as it provides a reliable and affordable source of high-quality protein in the form of eggs and meat. Additionally, poultry farming contributes significantly to integrated farming systems by producing nutrient-rich manure, which contains essential elements such as nitrogen, phosphorus and trace minerals that enhance soil fertility, improve soil structure and promote higher crop yields (Hamidu, 2022) [4]. In India, poultry farming is a well-established and rapidly growing industry, with the country ranking third in egg production and among the top global producers of poultry meat.

States such as Tamil Nadu, Andhra Pradesh and Maharashtra have emerged as leading contributors to poultry population, egg production and meat output, reflecting the sector's economic importance and growth potential.

The North Eastern region of India is known for its unique cultural diversity, ecological richness and traditional farming practices, where poultry rearing is an integral part of rural livelihoods. Farmers in this region commonly rear indigenous breeds of poultry under traditional backyard systems, which require low investment and are well adapted to local conditions. The region as a whole has a considerable poultry population, contributing significantly to household nutrition and income. Nagaland, one of the states in this region, is characterized by hilly terrain, geographical inaccessibility, diverse tribal communities and relatively low levels of agricultural productivity. The state, comprising 16 districts and inhabited by multiple tribes with distinct cultural practices, relies heavily on small-scale farming and livestock activities for livelihood. Poultry farming in Nagaland plays a crucial role not only in providing meat and eggs but also in supporting socio-economic and cultural practices. In recent years, broiler poultry farming under semi-intensive and closed housing systems has gained popularity as a viable small-scale enterprise, largely supported by private agencies that provide day-old chicks, feed, vaccines and technical guidance. However, the expansion of commercial poultry farming has been uneven and lacks strong institutional coordination, with many farmers still depending on traditional backyard systems. Despite slower growth, backyard poultry continues to offer advantages such as low input cost, adaptability and sustainability. Considering the growing importance of poultry farming and the active involvement of women in this sector, the present study was undertaken to examine the constraints faced by women poultry farmers in Dimapur district of Nagaland, with the aim of identifying key

challenges and suggesting measures for improving productivity, income and livelihood security.

Methodology

Nagaland lies between 93°20'E and 95°15'E longitude and between 25°6'N and 27°4'N latitude. It is largely a mountainous state. The Naga Hills rise from the Brahmaputra Valley in Assam to about 610 meters (2,000 ft.) and rise further to the south east, as high as 1,800 meters (6,000 ft). It is one of the smaller states of India. Nagaland is bounded by the Indian states of Arunachal Pradesh to the northeast, Manipur to the south, and Assam to the west and northwest and the country of Myanmar (Burma) to the east. The state capital is Kohima, located in the southern part of Nagaland. It is also popularly known as the "land of festivals" and every tribal festival is celebrated with pomp and gaiety, adorned with rich and colorful traditional attires. Nagaland has 16 districts.

The present research work has been conducted to study the — Constraints Faced by Women Poultry Farmers in Dimapur District of Nagaland, India. The research work has been conducted from 1st of April, 2023 to 10th of June, 2023. Dimapur is the largest District of the state. Two blocks were selected randomly for the present investigation in all the directions of Dimapur district. The study was conducted in Chumukedima Block and Dhansiripar Block of Dimapur District of Nagaland. There are 59 villages in Chumukedima block out of which 50 respondents were selected and interviewed. Likewise, Dhansiripar Block consists of 39 villages out of which 50 respondents were selected and interviewed. Thus, the entire sample consists of 100 respondents from these two blocks of this district.

The data were collected through face-to-face interview and by direct observation method. Descriptive statistics such as frequency counts and percentages were used to present the data which were further analyzed while using MS excel software.



Fig 1: Map of India with Nagaland in Red

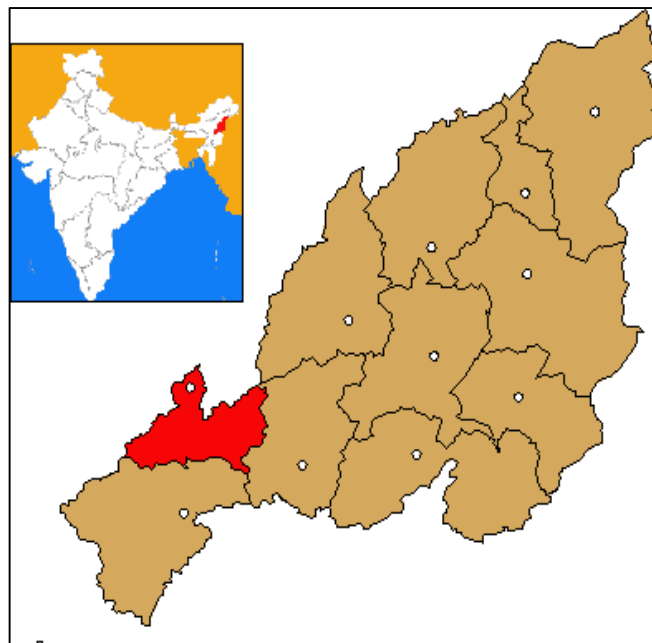


Fig 2: Map of Nagaland with Dimapur District in Red

Results and Discussion

Distribution of the respondents according to their profile

The distribution of respondents according to their profile characteristics revealed that a majority (51.00%) belonged to the middle age group (36-50 years) followed by 40.00% in the young age group (up to 35 years) and only 9.00% above 51 years, which is in line with findings of Shinde *et al.* (2020) ^[10], Thakuria *et al.* (2025) ^[11], Barman *et al.* (2004) and Toppo (2005) ^[7], indicating dominance of middle-aged participants in farming activities. All respondents (100%) were female highlighting the significant role of women in poultry-related activities despite contrasting observations by Rakesh and Naik (2022) ^[7], where male participation was higher. In terms of family size, the majority (60.00%) had 5-9 members followed by 36.00% with up to 4 members and only 4.00% with more than 10 members, which partially aligns with Hussain (2023) ^[5] and Sonowal (2012) ^[12]. Most respondents (64.00%) belonged to joint families, while 36.00% had nuclear families, supporting the findings of Patel (2005) ^[6]. Regarding education, 35.00% were graduates, 32.00% had secondary education, 23.00% had primary education and 10.00% were illiterate, which is comparable with studies by Thakuria *et al.* (2024) ^[16] and Singh (2007) ^[11]. Occupational status showed that 40.00% were engaged in business, 33.00% in poultry-related activities and 19.00% were government employees, which is somewhat consistent with Shanaz *et al.* (2010) ^[9]. With respect to experience, the majority (54.00%) had up to 5 years of experience followed by 43.00% with 6-10 years and only 3.00% with more than 11 years, which contrasts with findings by Thakuria *et al.* (2024) ^[16] and Trivedi (2000) ^[18]. The analysis of flock size indicated that most respondents (76.00%) maintained small flocks followed by 16.00% with large flocks and 8.00% with medium flocks, similar to findings Gazi *et al.* (2014) ^[3]. In terms of infrastructure, 56.00% had a single shed, 18.00% had double sheds and 26.00% had more than three sheds, while the majority (68.00%) used Kucha or temporary sheds, followed by 19.00% with semi-cemented and 13.00%

practicing free-range systems. Training status revealed that a large proportion (89.00%) of respondents were untrained, with only 8.00% trained through state government programmes and 3.00% through private integrators, which differs from findings of Thakuria *et al.* (2025) ^[11] and Christian (2001) ^[2]. Finally, the purpose of poultry rearing showed that the majority (81.00%) reared poultry primarily for meat production, while 19.00% practiced dual-purpose rearing, indicating a clear preference for income-oriented production systems.

Constraints faced by women poultry farmers

The major constraints faced by the women farmers in poultry farming were ranked by respondents according to their severity. The results revealed that “attack by predators” was perceived as the most critical constraint, being ranked first by 75 respondents, followed by 20 respondents ranking it second and 5 respondents ranking it third, respectively. The “unavailability of improved varieties of chicks” was also a major concern, with 64 respondents ranking it first, 25 respondents ranking it second, 5 respondents ranking it third and only 6 respondents ranking it fourth, respectively.

Another important issue faced by the women poultry farmers was the “high mortality rate of chicks”, which was ranked first by 63 respondents, second by 22 respondents and third by 15 respondents. The “lack of technical support” was similarly significant problem faced by the women poultry farmers with 61 respondents ranking it first followed by 28 respondents second, 5 respondents third and only 6 respondents fourth. The “lack of vaccination facilities” was also highlighted as a constraint by the women poultry farmers being ranked first by 50 respondents, second by 30 respondents, third by 15 respondents and fourth by 5 respondents.

Interestingly, “lack of easy access to veterinary services” was not ranked by respondents in any position, indicating that this factor was perceived as relatively less constraining compared to the others.

Table 1: Profile of the Respondents

Sl. No.	Variable	Frequency	Percentage (%)
1	Age Group		
	Young (Upto35 Years)	40	40.00
	Medium (36-50 Years)	51	51.00
	Old (Above51 Years)	9	9.00
	Total	100	100
2	Gender		
	Female	100	100
	Total	100	100
3	Family Size		
	4 Members	36	36.00
	5-9 Members	60	60.00
	10 Members	4	4.00
	Total	100	100
4	Type of Family		
	Joint Family	64	64.00
	Nuclear Family	36	36.00
	Total	100	100
5	Educational Status		
	Illiterate	10	10.00
	Primary	23	23.00
	Secondary	32	32.00
	Graduate	35	35.00
	Total	100	100
6	Occupational status		
	Govt. Employee	33	33.00
	Poultry Business	19	19.00
	Business	48	48.00
	Total	100	100
7	Level of experience (In years)		
	Low (2-5 Years)	43	43.00
	Medium (6-10 Years)	54	54.00
	High (11-15Years)	3	3.00
	Total	100	100
8	Flock Size		
	Small (Upto-100)	76	76.00
	Medium (101+-200)	8	8.00
	Large (Above201+)	16	16.00
	Total	100	100
9	Number of Sheds		
	Single Shed	18	18.00
	Double Sheds	56	56.00
	Above 3 Sheds	26	26.00
	Total	100	100
10	Type of Sheds		
	Kucha & Temporary	68	68.00
	Free range	13	13.00
	Semi-Cemented	19	19.00
	Total	100	100
11	Training Status & Source of Training		
	Pvt. Integrator	3	3.00
	State Govt. Department Seminar	8	8.00
	Untrained	89	89.00
	Total	100	100
12	Purpose of Rearing Poultry		
	Meat Purpose	81	81.00
	Dual Purpose	19	19.00
	Total	100	100

Table 2: Constraints faced by the women poultry farmers

Sl. No	Constraints
1	High mortality rates of chicks
2	Lack of vaccination facility
3	Lack of technical support
4	Unavailability of improved variety of chicks
5	Lack of easy access to veterinary services
6	Attack by predators

Constraints	Rank and Percentage				
	1 st	2 nd	3 rd	4 th	5 th
High mortality rates of chicks	63	22	15	-----	-----
Lack of vaccination facility	50	30	15	5	-----
Lack of technical support	61	28	5	6	-----
Unavailability of improved variety of chicks	64	25	5	6	-----
Attack by predators	75	20	5	-----	-----
Lack of easy access to veterinary services	-----	-----	-----	-----	-----

Women poultry farmers faced several major constraints that require targeted interventions. To address frequent predator attacks farmers should be supported to build secure, predator-proof poultry houses and trained in proper housing management. The shortage of improved chick varieties can be solved by establishing local hatcheries and linking women to reliable suppliers. High chick mortality rates call

for better training on feeding, hygiene and disease control, along with access to quality feed and brooding equipment. Strengthening technical support through extension services, mobile advisory programs and community demonstration farms will enhance farmers' skills. Improved access to vaccination and veterinary services can be achieved through mobile clinics and training local vaccinators.

**Fig 3:** Shown in the pictures are the most commonly used housing system in majority of small women poultry farmers**Fig 4:** Broiler chicken reared with housing attached ready to be sold

Conclusion

The study on the constraints faced by women poultry farmers in Dimapur district of Nagaland revealed that poultry farming serves as an important source of livelihood

and supplementary income for rural women. The results indicated that the majority of respondents (51.00%) belonged to the middle-aged category, with 35.00% having graduate-level formal education. All respondents (100%)

were women, reaffirming the gender focus of the study. Most respondents (41.25%) belonged to medium-sized families consisting of 5-9 members and 54.00% had a medium level of farming experience. With respect to occupation, 40.00% of respondents were engaged in business, while 33.00% identified poultry farming as their main occupation. A majority (76.00%) maintained small flock sizes and 56.00% reared poultry in single-level sheds. Furthermore, 68.00% of respondents had kuccha or temporary sheds, and 81.00% raised poultry primarily for meat production. In terms of constraints, the study found that attack by predators was the most serious problem faced by women poultry farmers followed by unavailability of improved chick varieties, high mortality rates of chicks, lack of vaccination facilities and inadequate technical support. Lack of easy access to veterinary services was perceived as a relatively minor issue. These constraints highlight the pressing need for improved infrastructure, disease prevention measures and technical guidance in the poultry sector of the district. As poultry farming in the study area is predominantly managed by women, their participation should be the central focus of poultry development programs. Strengthening women's involvement through training, demonstrations and vocational education on low-cost and efficient poultry rearing practices can significantly improve the adoption of advanced technologies. Encouraging farmers to increase flock size, adopt improved breeds and implement scientific management practices will enhance productivity and income levels. Overall, promoting technological innovations, continuous extension support and locally relevant vocational training can improve the economic well-being of women poultry farmers and ensure sustainable poultry production, ultimately enhancing their livelihoods.

The limitation of the present study lies in the fact that due to constraints of time and resources, only one district of Nagaland was covered. Future studies may consider a larger sample size and include more districts to gain a broader understanding of the socio-economic conditions and constraints of women poultry farmers across the state.

References

- Barman M, Baruah A, Baruah N, Thakuria S, Chutia S, Devi S, *et al.* Adoption of climate resilient agriculture under NICRA: Farmers' socio-economic dimensions and institutional challenges in Lakhimpur, Assam, India. *J Sci Res Rep.* 2025;31(10):861-869. doi:10.9734/jsrr/2025/v31i103630.
- Christian BM. A study on extent of adoption of IPM strategy by cotton growers of Vadodara district of Gujarat state. Anand: Gujarat Agricultural University; 2001.
- Gazi AM, Goswami A, D M, Pal B. Backyard poultry farming system: Women and its role. *Int J Dev Res.* 2014;4(5):1122-1124.
- Hamidu JA, Osie-Adjei A, Oduro-Owusu AD. Poultry waste management. In: Reference Module in Food Science. 2022.
- Hussain I, Das PK, Hazarika B, Dutta P, Gogoi M. Socio-economic profile characteristics of the members of farmer producer company with reference to potato production in Assam. *Int J Agric Ext Soc Dev.* 2024;7(9):861-866. doi:10.33545/26180723.2024.v7.i9l.1157.
- Patel HB. A study on management efficiency and economic performance of banana growers in Anand district of Gujarat state. Anand: Anand Agricultural University; 2005.
- Rakesh K, Naik RM. Characteristics of the farmers using private biofertilizers. *Asian J Agric Ext Econ Sociol.* 2022;40(11):219-225.
- Rao KR. Introduction to poultry farming. *Poultry*; 2020.
- Shanaz S, Banday M, Bhat GA, Akand A, Raquib M. Adoption of managerial practices by commercial broiler farmers in Jammu and Kashmir. *Indian J Poult Sci.* 2010;45:196-201.
- Shinde V, Shambharkar YB, Tekade VS, Rewendrasahu. Correlation of profile of Bt cotton growers with involvement in feedback management. *J Pharmacogn Phytochem.* 2020;9(3):11-13.
- Singh B. Knowledge and adoption of tobacco growers about recommended tobacco production technology in Anand district of Gujarat state [MSc (Agri) thesis]. Anand: Anand Agricultural University; 2007.
- Sonowal M. Documentation of cultivation practices in bhut jolokia (*Capsicum chinensis*) followed by farmers of Assam. Jorhat: Assam Agricultural University; 2012.
- Thakuria S, Das PK, Longkumer J, Sharma S, Odyuo MN, Thakuria D. Determinants of adoption of recommended litchi production technology in Assam: Evidence from Agnigarh Producer Company Limited. *J Sci Res Rep.* 2025;31(9):671-683. doi:10.9734/jsrr/2025/v31i93532.
- Thakuria S, Das PK, Longkumer J, Sharma S, Odyuo MN, Barman M, *et al.* Knowledge of the members of Agnigarh Producer Company Limited towards improved litchi cultivation practices in Sonitpur district of Assam, India. *Arch Curr Res Int.* 2025;25(10):18-33. doi:10.9734/acri/2025/v25i101544.
- Thakuria S, Das PK, Longkumer J, Sharma S, Odyuo MN, Thakuria D. Practice-wise adoption of recommended litchi production technology by the members of Agnigarh Producer Company Limited in Sonitpur district of Assam, India. *Int J Agric Ext Soc Dev.* 2025;8(5):614-620.
- Thakuria S, Das PK, Talukdar N, Seyie S, Hussain I, Thakuria D. Managerial ability of the members of Agnigarh Producer Company Limited in Sonitpur district of Assam with reference to commercial litchi production. *J Sci Res Rep.* 2024;30(11):792-800. doi:10.9734/jsrr/2024/v30i112606.
- Toppo A. A study of participation and decision making of farm women in dairy occupation. Anand: Anand Agricultural University; 2005.
- Trivedi MK. A study on adoption of floriculture in Anand district of Gujarat state. S.K. Nagar: Gujarat Agricultural University; 2000.