

International Journal of Agriculture Extension and Social Development

Volume 7; Issue 8; August 2024; Page No. 477-484

Received: 05-06-2024
Accepted: 11-07-2024

Indexed Journal
Peer Reviewed Journal

Profitability and marketing of backyard poultry enterprise: A study in south Bengaluru

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DOI: <https://doi.org/10.33545/26180723.2024.v7.i8g.991>

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Abstract

This study investigates the socio-economic characteristics, land holding patterns, livestock possession, profitability, and marketing practices of backyard poultry rearers in South Bengaluru, with a focus on understanding the dynamics that drive this sector. The research involved 40 backyard poultry farmers, revealing that 55 percent of them are over the age of 50, indicating a demographic that is both experienced and conservative in their farming practices. Additionally, 55 percent of the participants were illiterate, while 85 percent belonged to nuclear families, reflecting the urbanization trend in Bengaluru. The land holding pattern shows that the average farm size among the respondents is 2.1 acres, with 57 percent of the land being dryland, 31.9 percent irrigated land, and 10.96 percent garden land. Due to limited land holdings, these farmers have adopted backyard poultry as a supplementary source of income. The average flock size for poultry was found to be 28 birds, alongside livestock such as sheep (average flock size of 6), goats (5), and cattle (3). Indigenous poultry breeds like Giriraja and Swarnadhara, along with local breeds of sheep, goats, and cattle, are predominantly reared. The profitability analysis highlights that the annual cost of rearing 28 birds is Rs. 8,711.02, with net returns amounting to Rs. 12,288.98 per year, yielding an average income of Rs. 438.89 per bird. The study also found that marketing practices are primarily direct, with 35 percent of the farmers retaining birds for household consumption, 27.5 percent selling directly to consumers, and 20 percent selling through traders. Overall, the study concludes that backyard poultry farming is a financially viable enterprise, particularly in regions with limited agricultural productivity, providing essential supplementary income and contributing to the socio-economic stability of rural households in South Bengaluru.

Keywords: Backyard poultry farming, birds and eggs, livestock, profitability analysis, marketing

Introduction

Agriculture sector is the backbone of the Indian economy. the agriculture sector's contribution to total Gross Value Added (GVA) is 20.2 percent, the services sector accounts for 53.89 percent and the industry sector makes up 25.92 percent of the GVA in 2020-2021 (www.indiabudget.gov.in). As per the 20th Livestock Census 2019, the total livestock population was 536.76 million comprising of cattle (36.00%), goats (27.70%), buffaloes (20.50%), sheep (13.80%), and pigs (1.70%). Yaks, mithun, mules, horses, ponies, donkeys, and camels taken together contribute 0.30 percent of the total livestock population and about nine percent of the workforce in the nation is employed in the livestock sector.

The livestock industry in India expanded at a Compound Annual Growth Rate (CAGR) of 8.24 percent from 2014-15 to 2018-19. The estimated GVA contribution of cattle to the entire agricultural and allied industry at constant prices has increased from 24.32 percent in 2014-15 to 28.63 percent in 2018-19 as per the estimates of National Accounts Statistics (NAS) 2020. In 2018-19, the cattle industry made up 4.19 percent of the total GVA. In 2017-18 livestock sector

contributed 4.11 percent to GDP and 25.6 percent to total agriculture GDP (www.vikaspedia.in).

Poultry is an important sub-sector of livestock in India and has played a crucial role in both creating jobs and significantly boosting the country's Gross Domestic Product (GDP). In India, there are primarily two sub-sectors of the poultry industry: one has a highly structured commercial sector that accounts for about 80 percent of the entire market share, and the other has an unorganised sector that accounts for about 20 percent of the total market share.

Backyard poultry, a part of the unorganised sector that contributes significantly for improving the socio-economic and dietary circumstances of the poor. Approximately 30 million farmers raise backyard chickens according to the 19th Livestock Census. About 18 percent (18.41 billion) of India's total egg production (103.32 billion) comes from backyard poultry reported by Basic Animal Husbandry Statistics (Anonymous, 2019) ^[2]. In backyard poultry farming, small numbers of native chickens are reared with or without inputs under the free-range scavenging conditions, natural hatching, low bird output, regional marketing, and lack of medical care Dhaka *et al.*, (2017) ^[5].

Backyard fowls provide a high-quality food source with vital macro and micronutrients as well as vitamins in the form of meat and eggs and they are always valued for their flavor and texture in both rural and organised developed markets, even though the majority of poultry products are made from commercially raised improved breeds Rawat *et al.*, (2016) ^[10].

As per the 20th Livestock Census, the total poultry population has increased from 729.21 million in 2012 to 851.81 million in 2019 by the rate of 16.81 percent and the total population of backyard poultry has increased from 217.49 million to 317.07 million by the rate 45.79 percent and the total population of commercial poultry increased by 511.72 million to 534.74 million by the rate of 4.50 percent. More than 50 percent of India's backyard poultry population are found in five states; West Bengal, Assam, Andhra Pradesh, Maharashtra and Tamil Nadu. Karnataka has 3.90 percent backyard population in India. As per the 20th Livestock Census, Karnataka has about 30.34 million livestock population. The total poultry population was 61.81 million and total population of backyard poultry was 10.98 million comprising of 2.56 million cocks, 4.27 million hens and 4.14 million chickens below five months.

The marketing system was simple and direct and only in some cases involved the middlemen. Eggs and birds were sold by farm households directly at higher prices. The farmers were found to purchase chickens from other farmers and sold them to the traders at the market centers or directly to traders. Besides the village itinerant traders, backyard poultry traders also sourced chickens and eggs directly from the community backyard poultry producers Asem-Bansah *et al.*, (2012) ^[3]. The birds were being sold on specific

occasion, on demand of customers, on religious functions and to meet requirement of money Khandait *et al.*, (2011) ^[7].

Methodology

The present study was confined to analyse the profitability and marketing of backyard poultry birds and eggs. Bengaluru South taluk of Bengaluru Urban district and Ramanagara taluk of Ramanagara district were purposively selected for the study. The data / information collected pertained to the year 2021-22. Purposive sampling method was adopted for selection of 40 backyard poultry farmers, five butcher and five traders of the backyard poultry birds and eggs to collect the primary data. In order to determine the profitability of backyard poultry farmers, cost and returns analysis was used. Cost and return were calculated by considering the variable cost, fixed cost, and gross returns for production corresponding to the average size of the backyard poultry birds. Variable cost includes the feed, labour, electricity charges, veterinary care, chick cost, water charges and interest on working capital. The Shepherd's approach was used to determine the marketing efficiency of backyard poultry birds and eggs in the study area. Shepherd suggested that the ratio of the total value of goods marketed to the marketing cost may be used as a measure of marketing efficiency. The higher the ratio, the higher efficiency and vice versa. Descriptive statistics such as mean and percentages were used for analyzing the data pertaining to the study.

Results and Discussion

Socio-economic characteristics of backyard poultry rearers

Table 1: Socio-economic characteristics of backyard poultry rearers in South Bengaluru, (n = 40)

Sl. No.	Particulars	Number	Percent
1.	Age (years)		
	a. 20 to 30	8.00	20.00
	b. 30 to 50	10.00	25.00
	c. Above 50	22.00	55.00
2.	Education level		
	a. Illiterate	22.00	55.00
	b. Primary school	11.00	27.50
	c. SSLC	7.00	17.50
3.	Family type		
	a. Nuclear family	34.00	85.00
	b. Joint family	6.00	15.00
4.	Family composition (nos.)		
	a. Men	2.00*	40.00
	b. Women	2.00*	40.00
	c. Children	1.00*	20.00
5.	Occupation		
	a. Backyard poultry farming as main occupation	8.00	20.00
	b. Backyard poultry farming as subsidiary occupation	32.00	80.00

Note: * rounded-off averages

The research conducted among 40 backyard poultry rearers in South Bengaluru highlights several significant socio-economic characteristics that influence their farming practices. The majority of these rearers, accounting for 55 percent, are over the age of 50, indicating a seasoned and experienced demographic that largely adheres to traditional farming practices. This age distribution suggests a conservative approach to farm management, where

decisions regarding investments and resource distribution are influenced by years of accumulated experience similar results were found in Amos (2006) ^[1].

Education levels among these rearers reveal that 55 percent are illiterate, with the remainder having only primary or SSLC level education. This low educational attainment suggests potential challenges in adopting new technologies and innovations in poultry farming, reinforcing their

reliance on age-old methods passed down through generations.

Family structure plays a crucial role in the management of these farms. The study found that 85 percent of the families are nuclear, comprising an average of five members - typically two men, two women, and one child. This family composition reflects the urbanizing nature of Bengaluru, where smaller family units are becoming more common. The nuclear family setup, however, places a greater burden on each member to contribute to farm activities, as these tasks are predominantly handled by family members.

In terms of occupation, 80 percent of the backyard poultry rearers engage in this activity as a subsidiary occupation, with only 20 percent considering it their main occupation. This indicates that backyard poultry rearing serves as a supplementary source of income for most families, helping to support their livelihoods and meet nutritional needs. The findings underscore the importance of backyard poultry as a critical, albeit secondary, enterprise within the broader agricultural landscape of South Bengaluru.

Land holding pattern of backyard poultry rearers

The land holding pattern of 40 backyard poultry rearers in South Bengaluru revealed an average farm size of 2.1 acres, with 57 percent being dryland, followed by 31.9 percent irrigated land, and 10.96 percent garden land. Limited land holdings led respondents to adopt backyard poultry as a supplementary income source. Major crops grown include ragi, maize, and cowpea. Ragi, a drought-resistant crop, is used for both livestock feed and human consumption. Maize serves dual purposes as food and fodder, making it ideal for dryland farming. Cowpea, suitable for double and intercropping, is utilized for its green pods and as cattle feed. Rainfall and borewell groundwater are the primary irrigation sources, with about half of the farm area being rainfed. The small garden land holdings are optimized for fruit crop cultivation.

Table 2: Land holding pattern of backyard poultry rearers in South Bengaluru, (n = 40)

Sl. No.	Particulars	Land holding (in acres)	Percent
1.	Dryland	1.20	57.14
2.	Irrigated land	0.67	31.90
3.	Garden land	0.23	10.96
	Total	2.10	100

Livestock possession by backyard poultry rearers

The livestock possession of backyard poultry rearers in the study area, as shown in Table 3, indicates that in addition to poultry, these farmers also raise sheep, goats, and cattle as supplementary enterprises. On average, the flock size for backyard poultry was 28 birds, while the numbers for sheep, goats, and cattle were six, five, and three, respectively. The rearers predominantly kept indigenous breeds such as local or non-descript poultry, Giriraja, and Swarnadhara. Similarly, they raised local sheep breeds like Bannur and Deccani, goat breeds including Sirohi, Osmanabadi, and Jamunapari, and cattle breeds such as Jersey and Holstein Friesian. In dry, arid, and semi-arid regions, where crop farming yields are low and income from agriculture is often

insufficient, sheep and goat husbandry provide a critical source of livelihood, particularly for landless, marginal, and small farmers. These livestock enterprises help improve the financial stability and living conditions of these farmers.

Table 3: Livestock possession by backyard poultry rearers in South Bengaluru, (n = 40)

Sl. No.	Particulars	Number
1.	Sheep	6.00*
2.	Goat	5.00*
3.	Cattle	3.00*
4.	Backyard poultry birds	28.00*

Note: * rounded-off averages

Composition of backyard poultry flock reared by sample respondents

The composition of the backyard flock reared by sample respondents is presented in Table 4. As mentioned earlier, the average size of the backyard flock maintained by farmers was 28. Majority (64.29%) of the flock comprised of hens followed by cocks (21.43%), pullets (10.71%), and cockerels (3.57%). For optimum production of chicks, a cock: Hen ratio of 1:8 is recommended. However, the sample farmers have not maintained the recommended cock: hen ratio on their farms.

During fifth and sixth weeks, chicks will go through visible growth changes and then birds are referred to as pullets and cockerels. Pullets are young female chicks under one year of age and young males under one year of age are called cockerels.

Table 4: Composition of backyard poultry flock reared by sample respondents in South Bengaluru, (n = 40)

Sl. No.	Particulars	Number	Percent
1.	Pullets	3.00*	10.71
2.	Cockerels	1.00*	3.57
3.	Cocks	6.00*	21.43
4.	Hens	18.00*	64.29
	Total	28.00*	100.00

Note: * rounded-off averages

The hen is the female bird, which starts laying its first egg around 18 weeks of age and continues up to five years, the annual egg production on an average is 130 eggs per annum, and the male bird is called cock. The average weight of backyard poultry hen will be around 1.5 kg, whereas, cock weights around 2 kg.

Profitability of backyard poultry rearing

Cost of backyard poultry rearing

The costs and returns structure of backyard poultry rearing is presented in table 5. The average number of backyard poultry birds in the study area was found to be 28 birds, with flock size ranging from 20 to 28 birds. The total cost incurred per annum for rearing a flock size of 28 birds was estimated to be Rs. 8,711.02, out of which, fixed cost and variable costs accounted for 5.36 percent (Rs. 467.17), and 94.64 percent (Rs.8,243.85), respectively similar findings have observed in the study of Sumy *et al.*, (2010)^[11].

Table 5: Cost and returns of backyard poultry rearing in South Bengaluru, (per annum)

Sl. No.	Particulars	Amount (Rs.)	Percentage
Variable costs			
1	a. Feed	1369.85	16.62
	b. Labour	5490	66.6
	c. Veterinary care	385	4.67
	d. Cost of chicks	300	3.64
	e. Water charges	159.69	1.94
	f. Interest on working capital @ 7%	539.31	6.54
	Sub-total	8,243.85	100
Fixed costs			
2	a. Depreciation on cage / shed	320.74	68.66
	b. Depreciation on equipment	96.38	20.63
	c. Interest on fixed capital @ 12%	50.05	10.71
	Sub-total	467.17	100
	Total cost	8,711.02	
Returns			
3	a. Sale of backyard poultry birds		
	i. Hen	1650	7.85
	ii. Cock	8400	40
	b. Sale of eggs	9600	45.71
	c. Sale of manure	1350	6.43
	Gross returns	21000	100
	Net returns	12,288.98	

Note: Average backyard poultry birds flock size - 28

Among the variable costs, labour was the major cost accounting for 66.60 percent of the total variable cost, followed by feed (16.62%), veterinary care (4.67%), cost of chicks (3.64%), and water (1.94%). Fig. 1 presents the variable cost incurred in backyard poultry rearing.

Backyard poultry rearing needs a substantial amount of human care such as feeding, watering, supervision of chicks, maintenance of temperature, and miscellaneous works. In the case of sample backyard poultry rearers, the requirement of labour was predominantly met by family labour. Based on the prevailing wage rate (Rs. 4,500 per month) labour cost was imputed by considering the opportunity cost of labour *i.e.*, time spent on rearing backyard poultry birds was hardly one hour a day, which amounted to Rs. 5490.00 for rearing an average flock size of 28 birds and these findings are similar with the Daida *et al.*, (2012)^[4].

The main source of feed for the sample rearers for rearing backyard poultry bird was rice, ragi, jowar, *etc.* Under free range conditions, backyard poultry birds meet their feed requirement through scavenging along with handful of kitchen waste in the morning and evening. The birds are also fed with extra feed such as rice, ragi, and jowar, which is locally available and helps in gaining weight. As most of the rearers grow these crops on their own land, this leads to low investment in rearing of backyard poultry birds. The feed cost was imputed based on the prevailing market prices, and accordingly, the cost was worked out which accounted for Rs. 1369.85.

The other variable costs of backyard poultry rearing were expenses incurred towards veterinary care, cost of chicks, and water charges. In the study area, the average cost incurred for veterinary care amounted to Rs. 385.00. Backyard poultry birds need negligible veterinary care. However, the rearers visited veterinary hospital when they observed diseases in the birds such as Marek's disease, Ranikhet disease, Fowl pox, *etc.* The cost incurred for purchasing the chicks was Rs. 300.00. The chicks were

purchased from local traders, nearby households, and some rearers also purchased improved backyard poultry breeds from Hesaragatta and Hebbal.

The main source of water for the backyard poultry rearers was from municipal water, common property resource (water troughs constructed by Gram Panchayath), and their own farm (borewell). Birds need constant access to fresh, clean drinking water based on different seasons. The water charges were imputed based on the prevailing market prices and accordingly, the cost was worked out which accounted to Rs. 159.69 similar findings have observed in the study of Dhaka *et al.*, (2017)^[5].

Among the fixed costs, depreciation on cages / sheds was the major cost accounting for 68.66 percent of total fixed cost, followed by depreciation on equipment (20.63%), and interest on fixed capital constituted (10.71%).

In the study area, it was found that some of the rearers used cages / sheds to provide shelter to birds during night time. Sheds are prepared by using locally available materials such as wire nets, wood, mud, metal sheets, *etc.* The depreciation on cages / sheds accounted to be Rs. 320.74, and equipment such as feeder, waterer, and bamboo basket coop were used for feeding and managing of birds, which accounted to Rs. 96.38.

The above findings are similar to the study conducted by Nirmala *et al.*, (2020)^[9] in assessing the backyard poultry farming in West Godavari district of Andhra Pradesh. The sample respondents were able to generate a net income of Rs. 21,112 per unit of 20 Rajasri birds reared by them, and sustained the tribal family with adequate income.

Returns from backyard poultry rearing

The returns realized from backyard poultry rearing included hen and cock, sale of eggs and sale of manure which accounted for 7.85 percent, 40.00 percent, 45.71 percent and 6.43 percent of the gross returns, respectively. The annual gross returns obtained from rearing a flock size of 28 birds was Rs. 21,000, resulting in net returns of Rs. 12,288.98,

and the net returns per bird was estimated to be Rs. 438.89. Fig. 2 represents the returns incurred from backyard poultry rearing analogues results were found with Jha and Chakrabarti (2017).

Cocks are sold to higher price when compared to hen *i.e.*, almost double the price of the hen mainly during the festival season where each cock costs around Rs. 800 to Rs. 1,000. Birds are sacrificed to the goddess in the villages. Rearers prefer selling cocks much before hens as they require more feed when compared to hens. Rearers retain hens for egg production and breeding purposes. However, once their egg laying capacity decrease, the hens are sold at around Rs. 450 to Rs. 550 similar findings have observed in Kaine and Chukwuma (2017) [6]. In the villages, after meeting the household consumption, eggs are sold to nearby households and retailers based on the prevailing prices in the market. Hence, the null hypothesis that “backyard poultry is financially viable” has been accepted.

The above findings are similar to the study conducted by Tufail *et al.*, (2012) [12] in their economic analysis of backyard poultry farming in Tehsil Matta district of Pakistan. The study found that gross revenue generated per bird was Rs. 227.89, from which Rs. 219.23 was earned from eggs which was about 96.2 percent of the gross income. The annual total cost per bird was Rs. 79.23, and the annual net revenue per bird was Rs. 148.66.

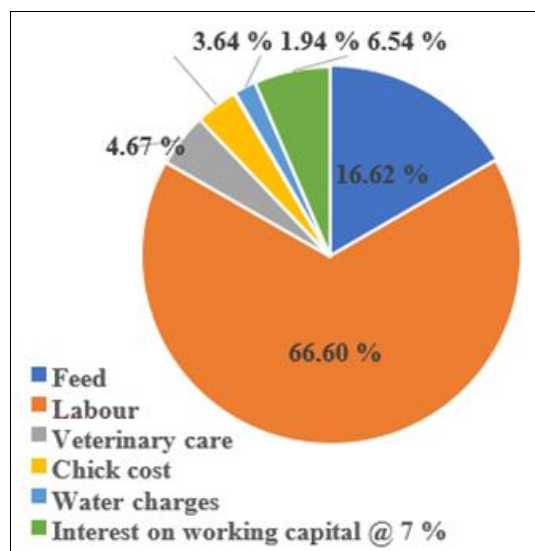


Fig 1: Variable cost incurred in backyard poultry rearing

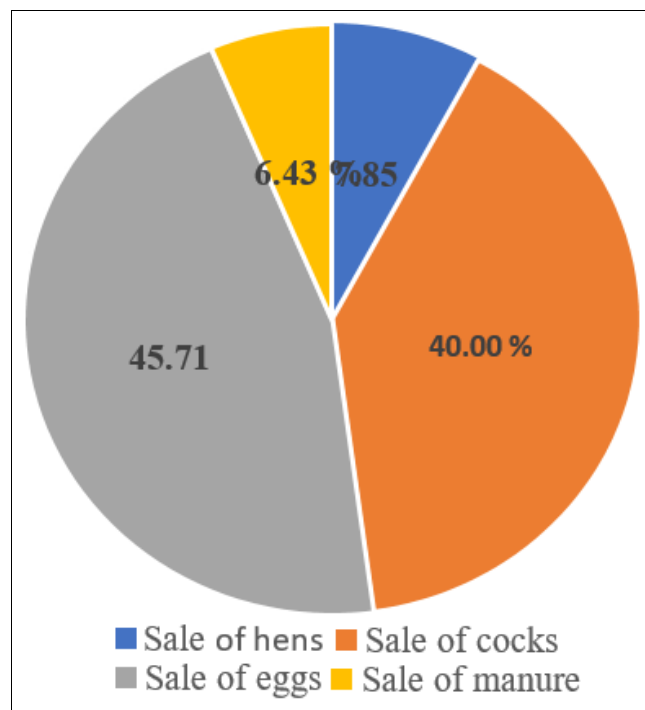


Fig 2: Returns incurred from backyard poultry rearing

Marketing of backyard poultry birds and eggs

Marketing of backyard poultry birds

The marketing channels for backyard poultry birds in the study area are as follows.

- **Channel I:** Farmer – Consumers.
- **Channel II:** Farmer - Trader – Consumers.
- **Channel III:** Farmer - Trader - Butcher – Consumer.

The marketing of backyard poultry birds is presented in Table 6. Backyard poultry rearing is mainly practiced to meet the family consumption. Majority of the respondents (35%) exclusively retained the birds for household consumption, followed by 27.50 percent who marketed the birds directly to consumers at their doorstep, 20.00 percent of the respondents marketed their birds through traders, and the rest 17.50 percent respondents sold birds through middlemen *i.e.*, trader and butcher. Fig. 3 represents the share of different marketing channels for birds used by backyard poultry rearers in South Bengaluru similar findings found with Mandal *et al.*, (2006) [8].

Table 6: Marketing of backyard poultry birds in South Bengaluru, (n = 40)

Sl. No.	Channels	Number of farmers	Consumer price (Rs. / bird)	Marketing Cost (Rs. / bird)	Marketing Efficiency
1.	Farmer - Consumer	11 (27.50%)	542	-	-
2.	Farmer - Trader - Consumer	8 (20.00%)	573	20	28.65
3.	Farmer -Trader – Butcher - Consumer	7 (17.50%)	592	32	18.50
4.	Household consumption	14 (35.00%)	-	-	-

Note: Figures in the parenthesis indicate percentage share in the total channel

In channel I, the respondents sold their birds directly to consumers, especially when the demand for chicken is high during social and religious events. In the case of Channel II, traders bought poultry birds from farmers and sold to consumers. Further, in the case of Channel III, traders purchased the birds directly from the farmers in the village,

and then they sold it to butchers in weekly market. The traders bought few birds as per their requirement based on the demand by the consumers similar finding were found with Khandait *et al.*, (2011) [7].

The marketing efficiency of backyard poultry birds was calculated in Channel II and Channel III. The marketing

costs include transportation, weighing, and feeding costs, which adds up to a total of Rs. 20 and Rs. 32 on per bird basis in Channel II and Channel III, respectively. The price paid by the ultimate consumer in Channel II was Rs. 573 per live bird with a marketing efficiency of 28.65 while in Channel III, the price paid by the ultimate consumer was Rs. 592 per live bird with a marketing efficiency of 18.50. The marketing efficiency was found to be higher in Channel II as compared to Channel III because the number of middlemen were low in Channel II.

The above findings are similar to the study conducted by Khandait *et al.*, (2011)^[7] in their analysis of backyard poultry rearing at Bhandara district of Maharashtra and found that majority of farmers sold the birds at their own doorstep and village market.

Marketing of backyard poultry eggs

Marketing of backyard poultry eggs is presented in Table 7.

Majority of the respondents (50%) utilized eggs for household consumption, followed by sale of eggs at their doorstep (20%) through Channel I, and sale to village shopkeeper / retailer (30%) in Channel II Tripathy and Agarwal (2020). Majority of the farmers rear backyard poultry to meet the nutritional requirement and family consumption with low-cost investment, while the rest sell excess eggs specially to meet the monetary benefits accrued by sale of eggs. Fig. 4 represents the share of different marketing channels for eggs used by backyard poultry rearers in South Bengaluru Asem-Bansah *et al.*, (2012)^[3].

Backyard poultry market is unorganized market, marketing on the basis of net weight instead of flock selling should be encouraged. The approaches like Self-Help Groups and Farmer Producer Organization can help farmers in taking chick production unit, since there is high demand for backyard poultry chicks and rearing seems to be the best option to farmers to fetch better prices.

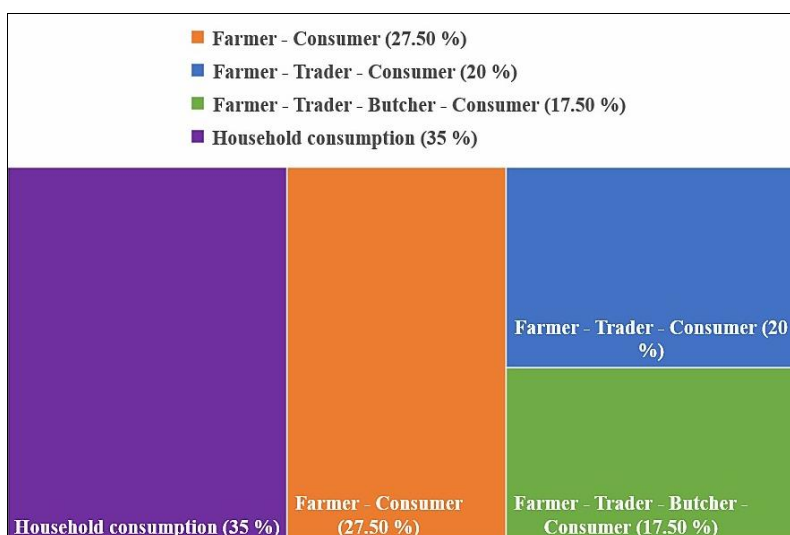


Fig 3: Share of different marketing channels of birds by backyard poultry rearers in South Bengaluru

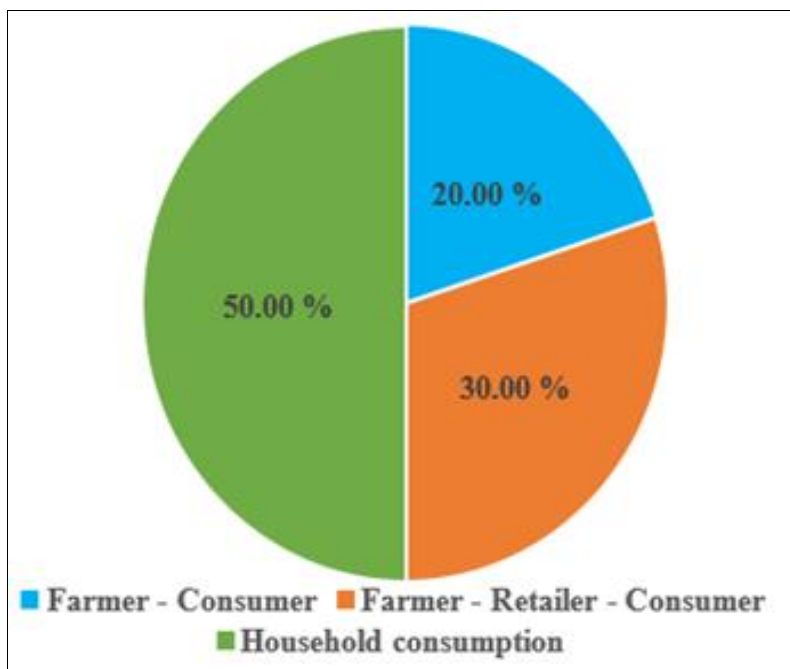


Fig 4: Share of different marketing channels of eggs by backyard poultry rearers in South Bengaluru

Table 7: Marketing of backyard poultry eggs in south Bengaluru, (n = 40)

Sl. No.	Channels	Number of farmers	Price paid by consumers (Rs. / Egg)	Eggs sold per annum
1.	Farmer - Consumer	8 (20.00%)	10	950
2.	Farmer - Retailer - Consumer	12 (30.00%)	12	700
3.	Household consumption	20 (50.00%)	-	-

Note: Figures in the parenthesis indicate percent share in total channels

Hence, the null hypothesis that “backyard poultry birds and eggs are sold in the village itself” has been accepted. The above findings are similar to the study conducted by Mandal *et al.*, (2006) ^[8] who analyzed the marketing of backyard poultry in Bareilly district of Uttar Pradesh and found that majority of the farmers did not sell the eggs and used them for domestic consumption, while the rest sold the surplus eggs. About (89%) of the poultry farmers marketed the eggs near the place of rearing, followed by consumer doorstep and village shopkeepers.

Conclusion

The study on backyard poultry rearers in South Bengaluru provides significant insights into the socio-economic dynamics, land holding patterns, livestock possession, and marketing strategies employed by these farmers. The findings highlight that the majority of the rearers are elderly, with over 55% being above 50 years of age, and most are illiterate. These demographic characteristics influence the traditional and conservative approach to farm management, making it challenging to adopt new technologies and innovative practices. The land holding pattern reveals that most farmers own small plots of land, with an average size of 2.1 acres, predominantly comprising dryland. This limited land availability drives the adoption of backyard poultry as a supplementary income source, which is crucial for sustaining livelihoods in the region. The rearing of indigenous poultry breeds, along with sheep, goats, and cattle, further enhances the economic stability of these households.

The profitability analysis shows that despite the small scale of operations, backyard poultry farming offers substantial financial returns. With a net annual income of Rs. 12,288.98 from an average flock size of 28 birds, it is evident that this enterprise plays a vital role in supporting the livelihoods of marginal and small farmers. The study also underscores the importance of livestock rearing in dry and semi-arid regions where crop farming is less viable.

The Marketing practices among these farmers are predominantly direct, with eggs and birds sold to consumers or retained for household consumption. The simplicity and directness of these marketing channels contribute to higher marketing efficiency, especially when fewer intermediaries are involved. The study concludes that backyard poultry farming is not only financially viable but also a critical component of the rural economy in South Bengaluru, providing a reliable source of income and food security.

Future Scope

The findings of this study open several avenues for future research and development in the field of backyard poultry farming. First, there is a need to explore the potential of integrating modern technologies and innovations into backyard poultry farming practices. This could include the introduction of improved poultry breeds, enhanced feed

management techniques, and better disease control measures, which could significantly boost productivity and profitability. Further research could also focus on the development of sustainable marketing channels that can connect backyard poultry farmers with larger markets. This could involve the establishment of cooperatives or farmer producer organizations that can collectively market eggs and poultry birds, thereby increasing the bargaining power of individual farmers and ensuring better prices for their products.

Another area for future research is the exploration of value-added products from backyard poultry farming. This could include the processing and packaging of eggs and poultry meat, which could open up new markets and provide additional income streams for farmers. The development of organic and free-range poultry products could also cater to the growing demand for healthier and ethically produced food, providing a niche market for backyard poultry farmers. Additionally, the impact of backyard poultry farming on food security and nutritional outcomes in rural areas warrants further investigation. Studies could assess how this enterprise contributes to the dietary diversity and nutritional status of farming households, particularly in regions with high levels of food insecurity.

Finally, there is scope for policy-level interventions that support backyard poultry farming through subsidies, training programs, and access to credit. Future research could evaluate the effectiveness of such interventions and recommend strategies for scaling up backyard poultry farming as a viable and sustainable rural livelihood option.

Acknowledgment

The author would like to express gratitude to all the backyard poultry farmers in South Bengaluru who participated in this study and provided invaluable insights into their farming practices.

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