



Dynamics responsible for women involvement in layer bird production in katsina metropolis, katsina state Nigeria

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Abstract

This study was steered in Katsina Metropolis on the dynamics responsible for women involvement in layer bird production. The Primary data used were obtained using structured questionnaires administered to 51 women poultry farmers in the study area. Descriptive Statistics, Net Farm Income, Profitability Index, Rate of Return on Investment, Capital Turnover and 5 Point Likert Scale were used to analyze the data. The result showed that 58% of the women were between 20 – 30 years, 100% were females and 80% were married. Most of the women (72%) had a family size of between 1 and 10 persons. Also 100% of the women had one form of education. On years of experience, 86% of the women had 1-15 years of experience; also 71% of them were rising between 50 – 500 birds. On extension services accessibility 71% of the women don't have access to extension services, 56% of the women have met with extension agent(s) only once in a year. Also 75% of the women don't have access to credit and 26% of them have acquired their lands through purchase. The income obtained from the production was what motivates the women to go into production. Also 92% of the women stated that land was the most accessible resources in poultry production. The profitability Analysis revealed that poultry production was profitable with a Net Farm Income of N794,477, N18,738,962 and N29,347,661; Profitability Index of 0.24, 0.76 and 0.5; Rate of Return on Investment of 30.98, 256.23 and 99.06 for Small, Medium and Large Scales respectively. High input cost was perceived as important problem due to the fact that it covers 70-75% of the total production cost in layer birds' production.

Keywords: women, participation, layer bird, problems, katsina, metropolis

Introduction

Woman is sometimes used for female humans regardless of age, as in phrases such as “women rights.” Throughout human history traditional gender roles have often defined and limited women's activities and opportunities; many religious doctrines stipulate certain roles for women. With restrictions loosening during the 20th century in many societies women have gained access to career beyond the traditional home makers, and the ability to pursue higher education, violence against women, whether within families or in communities, has a long history and is primarily committed by men. Some women are denied reproductive right. The movement and ideologies of feminism have a shared goal of achieving gender equality.

Women form the majority of rural areas and are responsible for about 80% of all food items produced [2]. Many women believe that the agricultural industry is mostly for men. However, what most women do not realize is that the percentage of women in the agricultural industry continues to increase almost every day [8].

Poultry farming is a form of animal husbandry which raises domesticated birds such as layers, broilers duck fowls, turkeys, quails, etc. for food and other purposes. The birds are reared mainly for meat, egg and manure. Poultry is a non-ruminant animal and can be managed in three systems; Intensive, Semi-intensive and Extensive Systems. These systems indicate the extent to which birds are exposed to sunshine, pasture, housing pattern and also level of technical and routine management attention given to them [1].

Poultry farming is important because the meat and eggs are excellent protein for humans. Raising of birds serves as hobby for some people, the feathers are used for making

pillows and mattresses, eggs are used for producing various vaccines, poultry manure is a source of plant food in the soil, employment is provided by poultry industries through rearing, processing, transportation, marketing etc. of birds, and their products.

Domestic birds and even jungle birds are explored primarily for their meat due to their nutritional benefits but domestic birds are reared for meat and eggs. Demand for meat and eggs are influenced by culture, income, population, religious belief, production levels and locations. The consumption pattern is not uniform between urban and rural areas with higher consumption in income, but dwells better on knowledge of health and nutritional benefits of poultry meat. Among the dressed chickens, 70% are sold as dressed or chilled or frozen whole carcass, while remaining 30% as cut up parts and further processed products [13].

This study was aimed at analyzing the dynamics responsible for women participation in layer bird production in Katsina metropolis, Katsina State Nigeria. It also identified the socio-economic characteristics of women poultry farmers, determined motivational factors influencing women's participation in layer bird production, ascertained the women's access to production and management resources required for poultry production, determined the probability of layer bird production and identified the constraints involved in layer bird production.

Methodology

Sampling Procedure

Katsina is a Local Government Area and the State capital of Katsina State in Northern Nigeria. Katsina is positioned approximately 260 Kilometers (160mi) east of the city of

Sokoto and 135 Kilometers (84mi) Northwest of Kano, close to the border with Niger. It lies between latitude 12°59'N and longitude 7°36'E. In 2019 Katsina Local Government Area has an estimated inhabitant of 429,400 [5]. There are One hundred and Twenty Eight (128) women layer birds' farmers (registered) in Katsina Local Government Area. The names of the women poultry farmers were extracted from a comprehensive list compiled by Poultry Association of Nigeria [11].

A Multi-stage sampling technique was employed for the study; first Forty percent (40%) of the women layer bird farmers were proportionately selected. Secondly, Simple Random sampling technique was used to select the areas; it was also used to select the women. Therefore a total of 51 women were selected for the study.

Data Collection

Primary data were collected in this study; it was sourced from women layer birds farmers in the study area through a face to face interview using structured questionnaire administered with the assistance of trained enumerators.

Data Analysis

Descriptive statistics (Frequency, Percentages, Means), 5-points Likert scale, Net Farm Income, Profitability Index, Rate of Return on Investment and Capital Turnover were used to analyze the data used to achieve all the objectives

Outcomes and deliberations

Table 1: Socio-economic Characteristics of the women poultry farmers

Variables	Categories	Frequency	Percentage
Age (Years)	20 – 30	21	58
	31 – 40	20	22
	41 – 50	7	14
	51 and above	3	6
	Total	51	100
Gender	Male	0	100
	Female	51	0
	Total	51	100
Marital Status	Married	41	80.4
	Single	10	19.6
	Total	51	100
Household Size	1 – 5	21	42
	6 – 10	15	20
	11 – 15	10	26
	16 and above	5	12
	Total	51	100
Educational Accomplishment	Qur'anic	12	36
	Primary	15	30
	Secondary	18	24
	Tertiary	6	10
	Total	51	100
Years of experience	1 – 5	18	35
	6 – 10	12	24
	11 – 15	14	27
	16 and above	7	14
	Total	51	100
Flock Size	50 – 200	17	33
	201 – 400	12	24
	401 – 500	7	14
	501 and above	15	29
	Total	51	100

Source: Field Survey, 2022

Table 1 shows that Fifty Eighty percent (58%) of the women were between 20 years to 30 years, of age while 6% of the women were above 51 years. This denotes that the women in this area were youths and can supply an excellent amount of labour which are open to innovation and are Creative. The result was contrary to the findings of [7] who reported a range of 41-50 years for women poultry producers in Toro Local Government Area of Bauchi. It also shows that all of the poultry farmers (100%) were females. This indicates that poultry farming in the study area was a female conquered activity.

The table also revealed that, an enormous section (80%) of the poultry farmers in the study area were married while 20% were single. Married farmers may incline to be more

dedicated and possibly have a greater overbearing for higher productivity in order to meet family demands for food, income and other things. The findings conforms to that of [4] who asserted that married women tend to be more committed to tasks and so highly productive. It also coincided with the findings of [5] in his study, where he revealed that 80% of the respondents were married. It also matched with the findings of [6].

Similarly it shows that majority (72%) of the poultry farmers had a family size of between one to ten (10) people. This finding tallied with [9] who observed that family size determines the volume of household production and consumption, especially in developing countries, positively. It also agrees with the findings of [3] and [12] who conveyed

that majority (70% and 91%) of the maize farmers in Bichi Local Government Area of Kano State, Nigeria and Bakori Local Government Area of Katsina State, Nigeria had number of dependents ranging from 1-10 persons.

The result also reveals that all (100%) of the women poultry farmers have accomplished one form of education. This implies that all the women poultry farmers were literates and had basic understanding of poultry management practices. This result defer from that of [11] who reported 55.0% of women in Agriculture in Egbedore Local Government Area of Osun State have no formal education attainment.

On years of experience, the result revealed 86% of the poultry Farmers had one to fifteen years poultry farming experience, whereas 14% of them had Sixteen years and above (16> years) poultry farming experience. This means that greatest number of the farmers do have enough understanding of poultry farming. These findings coordinated with the findings of [6].

Also on flock sizes, the result shows that 71% of the women were raising 50 – 500 birds.

Table 2: Extension Services, Access to Credit and Land Title

Variable	Frequency	Percentage
Extension Contact		
Yes	15	29.4
No	36	70.6
Total	51	100
Frequency of Extension Contact		
Weekly	5	13.8
Monthly	11	30.6
Annually	20	55.6
Total	36	100
Access to Credit		
Yes	13	25
No	38	75
Total	51	100
Land Ownership		
Purchase	13	25.5
Leasehold	8	15.7
Gift	10	19.6
Inheritance	9	17.6
Others	11	21.6
Total	51	100

Source: Field Survey, 2022

Table 2 indicates that majority (71%) of the women had no contact with extension agent while 29% indicated that they had contact with extension agent. This result is in line with the findings of [11] who reported inadequate extension services delivery.

Table 5: Profitability Analysis of layer Birds’ Production

Production Scale+	Net Farm Income (NFI) ₦	Profitability Index (PI) ₦	Rate of Return on Investment	Capital turnover (CTO)
Small Scale	794,477	0.24	30.98	1.31
Medium Scale	18,738,962	0.72	256.23	3.56
Large Scale	29,347,661	0.50	99.06	1.99

Source: Field Survey, 2022

Result from table 5 shows that the poultry farms operating at large scale is the strongest having the highest Net Farm Income average of ₦29,347,661 but Farms operating at medium scale reported highest profitability index of 0.72 as

The result also shows that majority (56%) of the women indicated that they only meet with extension agent once in a year. This signpost that the frequencies of farmer – extension contact is very low. This also agrees with the findings of [11] who reported inadequate farmer-extension contact. Findings to this study also shows that majority (75%) of the women had no access to credit facility. This is truly because of religious factor that prohibits usury and partly due to high interest rate charged by commercial banks. It also shows that 26% of the women acquired land through purchase. This result is contrary to that of [11] who reported 79% of women in agriculture do not have land tenure rights.

Table 3: Motivational Factors influencing women Participation in Poultry layer birds’ Production

Variable	Frequency	Percentage
Income obtained from poultry production	50	98
Source of employment	46	90
Egg Production	48	94
Leisure	28	55
Meat production	36	71
Total		

Source: Field Survey, 2022

*Multiple Responses

Table 3 shows that 98% of women specified that they were inspired by the income obtained from poultry production, 90% were motivated by looking at it as a basis of employment, while 71% were stirred by the meat obtained from the birds. This result was in line with the findings of [7] who reported similar factors that motivate women to participate in layer production in Toro Local Government Area of Bauchi State.

Table 4: Access to Production and Management Resources 5

Variables	Frequency	Percentage	Ranking
Land	46	92	1 st
Labor	40	78	6 th
Credit facility	40	78	6 th
Good source of water	44	86	4 th
Improved breed of chicken	43	84	5 th
High quality feeds	45	88	3 rd
Extension Services	36	71	8 th
Veterinary Services	47	90	2 nd

Source: Field Survey, 2022

*Multiple Responses

Table 4 revealed how resources were ranked in order of accessibility; it shows that land is the first most accessible resource among the women while extension services are the least accessible resource.

against small and large scale farms with profitability index of 0.24 and 0.50 respectively. The result went further to analyze the rate of returns on investment and it was found that farms operating at medium scale recorded highest rate

of return on investment of 256.23 as against 30.98 and 99.06 for small and large scale farms respectively. also, the result computed from the capital turnover indicated that farms operating at medium scale recorded highest CTO of 3.56 as against 1.31 and 1.99 for small and large scale farms, even though all the farms operating at three scales were found to

be profitable as their ratios are greater than one in all cases. Therefore, all the poultry farms operating in either of the three scales is profitable, worthwhile as the RRI is greater than interest rate on fixed deposit and generate above ₦1 for each Naira invested for a production cycle. CTO ratio is greater than 1 in all cases hence layer birds' production is profitable.

Table 6: Constraints to women participation in layer birds' production

Constraints	Mean score	Rating
Insufficient funds	2.2	Not important problem
High cost of inputs (feeds, drugs, labour & utility bill)	4.8	Important problem
Domestic & household work	1.8	Not a problem at all
Cultural/traditional belief	1.0	Not a problem at all
Poor management skills	2.0	Not important problem
Poor access to extension services	3.8	Less important problem
Inadequate veterinary services	2.0	Not important problem
Susceptibility to disease & sensitivity to environmental conditions	2.1	Not important problem
Poor quality Day Old Chicks	2.2	Not important problem
Lack of Storage facilities (cold rooms, cold van, freezers)	1.4	Not a problem at all
Bottle neck in marketing of products	2.4	Not important problem

Source: Field Survey, 2022

Table 6 shows that all the constraints highlighted were perceived by the women as either not important hitches or not a problem at all except for High cost of inputs which was considered as important problem and poor access to extension services which was considered as less important problem to women participation in layer birds' production. High input cost was perceived as important problem due to the fact that it covers 70-75% of the total production cost in layer birds' production were as other constraints were perceived not important problem or not at all perceived as problem due to availability of quality day old chicks, availability of ready market for egg and meat at all time which does not necessitate the use of storage facilities. Also availability of drugs and vaccine programmes make susceptibility to disease and sensitivity to environmental conditions to be perceived as not important problem.

Conclusion

It can be concluded that age, years of farming experience and household size are important factors determining women participation in layer bird production. The study reported that Income obtained from poultry production, egg, meat, employment and to a lesser extent leisure derived were found to be motivational factors influencing women's participation in layer bird production. The study further concludes that women have access to production and management resources required for layer bird production, layer production is profitable but the most profitable scale is medium scale production and high cost of input was perceived as important problem among the constraints highlighted by the researcher.

Recommendations

The following recommendations were made based on the findings of the study

1. More efforts from all poultry stakeholders should be geared towards empowering women through training to build the capacity of new and existing women poultry farmers as a means of alleviating poverty.
2. Women should be enlightened to work in group so as to increase access to finance/interventions from Governments and development partners both National and International.

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