



Socio-Economic Characteristics Analysis of Backyard Poultry Farming in Etsako Central Local Government Area, Edo State, Nigeria

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ABSTRACT: The study analyzed the Socio-Economic Characteristics of Backyard Poultry Farming in Etsako Central Local Government Area, Edo State, Nigeria using multi-stage sampling technique to select three out of six districts in the Local Government Area with a well structure questionnaire administered to 150 randomly selected respondents while only 107 were retrieved. Data collected were analyzed using descriptive statistics tools. The results revealed that majority (72%) of the respondents were female with most (65.4%) of them not older than 40 years in age. Most (86%) of them has one formal education or the other and are involved in only poultry rearing (58.9%) while 41.1% rears both poultry and small ruminants with 68.2% of them rearing local breeds of poultry. The result revealed that majority (72.9%) of the respondents practice extensive system of rearing with no fewer than 49.5% having flock size of between 1 and 10 birds. Most respondents (84.1%) engaged in backyard poultry rearing for income purpose. Inadequate funding (79.4%) and activities of predators (77.6%) remain the most reported severe constraints to backyard poultry rearing in the study area. It is recommended that Stake holders should make financial supports in terms of grants and single digit loan available to the respondents while the farmers too could group themselves into cooperative and thrift societies to enable them create avenue for soft loan among themselves.

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Poultry are domesticated birds majority of which are members of the sub-order Galloanserae (fowl), especially the order Galliformes which includes chickens, quails, and turkeys. In sub-Saharan Africa, most households in rural communities keep smallholder poultry (Bamidele and Amole, 2021). According to Oladunni and Fatuase (2014) poultry production is one of the important agricultural activities carries out in all rural communities in Africa with most of the birds scavenging on available local resources. In Nigeria, poultry sector offers the quickest returns to investment outlays in livestock enterprise by virtue of its short gestation period, high feed conversion ratio alongside being one of the cheapest, commonest and best sources of animal protein in the countries (Ojo, 2002). In developing countries, poultry are usually kept by humans for their eggs, meat and feathers and according to Fadimu *et al.*,

(2020) poultry production has a great potential in bridging animal protein gap, create employment for the people, generate sufficient income for the poultry farmers and increase food security in our society. The smallholder poultry is largely a subsistence-oriented poultry keeping of unimproved or improved dual-purpose (i.e. for eggs and meat) chicken breeds raised under scavenging or semi-scavenging production systems, using family labour and locally available feed resources (Bamidele *et al.*, 2020). According to Desta (2020), indigenous village chickens rearing greatly contribute to food security and rural development, covers incidental expenses, economically empower women, and support the livelihood of disadvantaged groups. Alabi *et al.*, (2020) however submitted that in Nigeria, smallholder poultry accounts for between 65 and 77% of total poultry holdings and women are the primary keepers and main actors within the value

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chain. This study therefore analyzed the socio-economic characteristics of backyard poultry farming in Etsako Central Local Government Area, Edo State, Nigeria with a view of examining management practices adopted and constraints of backyard poultry farming in the study area.

MATERIALS AND METHODS

Study area: The study was carried out in Etsako Central Local Government Area of Edo State. The local government share boundaries with Etsako West, Etsako East, Esan south east and river Niger. The local government has 6 districts out of which 3 were selected namely, Okpekepe, Fugar-Avianwu, and Ekperi. In Etsako Central Local government Area, farming is the predominant livelihood. Yamane's Formula was used to calculate the sample size. Yamane's Formula (Israel 2013) which is normally used to calculate smaller household population size was used for this study. A 95% confidence level and P = 5%, 7% and 10% are also assumed for different population size by the equation 1.

$$n = \frac{N}{[1+N(e)^2]} \quad 1$$

Where: n is the sample size, N is the population size and e is the level of precision.

The estimated total population of Etsako central local Government Area is 123,400 (NPC, 2006). According to the formula, the sample size derived was 210 households with the respondent not younger than twenty-one years old.

Data collection and analysis: Data for this study were collected using questionnaires. A total of 150 well-structured questionnaires were administered to 3 districts out of the 6 districts in the study area, this was due to the concentration of respondents practicing backyard farming in the study area.

Fifty (50), sixty (60) and forty (40) questionnaires were administered to randomly selected respondents in Ekperi, Fugar and Okpekepe districts respectively. Only 107 questionnaires were retrieved and data collected were analyzed using descriptive statistics.

RESULTS AND DISCUSSION

Personal Characteristics of Respondents: The result in table 1 reveals that most (72%) of the respondents were female with majority (65.4%) of them not older than 40 years in age. This result agrees with the previous findings (Ekunwe *et al.*, 2009; Oladunni and Fatuase, 2014; Win *et al.*, 2018; Abanigbe *et al.*, 2018) who reported that women are more in backyard

livestock farming than men but contrary to the submission of Maikasuwa and Jabo (2011). The result is also similar to those of Ekunwe *et al.*, 2009; Oladunni and Fatuase, 2014; Saleh *et al.*, (2015) who reported majority of respondents to be of ages below 50 years but differs from Win *et al.*, (2018) who reported most participants between forty and sixty years of age. This suggests that location may contribute to the age status of participants in backyard poultry farming.

Table 1 also shows that the respondents were well-read as not less than 70% of the respondents completed secondary education. This is in agreement with past studies (Maikasuwa and Jabo 2011; Mugisa *et al.*, 2017; Abanigbe *et al.*, 2018).

Table 1: Socioeconomic Characteristics of Respondents

	Frequency (n=107)	%
Gender		
Male	30	28
Female	77	72
Age range (Years)		
21-30	15	14.0
31-40	55	51.4
41-50/51 and above	370	34.60
Educational Status		
No formal education	15	14.0
Completed primary school	17	15.9
Completed Secondary school	44	41.1
ND/HND/Degree	31	29.0
Marital Status		
Single	15	14.0
Married	92	86.0
Years of experience in Backyard poultry farming		
1-5 years	48	44.9
6-10 years	30	28.0
11-15 years	15	14.0
16 years and above	12	11.2

Source: Field Survey, 2022

Table 2: Distribution according to involvement in backyard poultry farming by respondents

	Frequency (n=107)	%
Type of livestock kept		
Poultry Only	63	58.9
Poultry and Small Ruminants	44	41.1
Management system used		
Extensive	78	72.9
Intensive	22	20.6
Semi-intensive	7	6.5
Which breed of poultry do you keep		
Local chicken	46	43.0
Exotic chicken	34	31.8
Local turkey	10	9.3
Local duck	17	15.9
How many bird do you have		
1-10 birds	53	49.5
11-20 birds	22	20.6
21-30 birds	20	18.7
31-40 birds	7	6.5
41 birds and above	5	4.7

Source: Field Survey, 2022

The table also reveals that majority (86%) was married with most (50.5%) having a household size average of six members. This supports most of the studies that confirmed large household size among the farming households where they see family size as a work force that supply the most needed labour requirement for production activities in the study area (Ekunwe *et al.*, 2009; Maikasuwa and Jabo, 2011; Emaikwu *et al.*, 2011; Oladunni and Fatuase, 2014). The study revealed that majority of the respondents has below 5 years of backyard poultry farming.

Analysis of involvement in backyard poultry farming by respondents: Table 2 shows that most (58.9%) of the respondents are into only poultry rearing while about 41.1% rears poultry and small ruminants. Most of the respondents (72.9%) operate extensive system of rearing with flock sizes varying from an average of 1-10 chicken of indigenous poultry (43.0%) per rural household which are left to scavenge around the homesteads during daytime feeding on household leftovers, waste products and environmental materials such as insects, worms, seeds and green forages. This agrees with previous findings (Ahmed and Egwu 2014; Abanigbe *et al.*, 2018; Adoligbe *et al.*, 2020) but differs from the report of Oladunni and Fatuase, (2014) who reported that majority of their respondents practiced semi-intensive. Figure 1 shows that majority

(68.2%) of the respondents kept chicken followed by local ducks (15.9%) while only 9.3% of them keep local turkey. This is in line with the submission of Abanigbe *et al.*, (2018) who reported that most of the backyard chicken farmers kept other poultry species alongside their chicken.

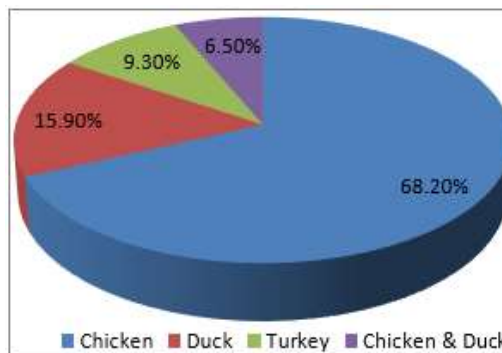


Fig. 1. Poultry species kept by the respondents

Management practices adopted by backyard poultry farmers in the study area: Table 3 shows that feeding remains one of the most important aspects of poultry production at any level. The result of this study shows that majority (67.3%) of the respondents provide supplementary feeding to their flocks while only 4.7% do not provide supplementary feeding to their birds..

Table 3: Distribution according to management practices by backyard poultry farmers in the study area.

	Always	Sometime	Never
Provision of Housing	45(42.1)	52(51.4)	10(9.3)
Provision of supplement feeding	72(67.3)	30(28.0)	5(4.7)
Provision of healthcare	30(28.0)	38(35.5)	39(36.4)
Keeping of farm Records	37(34.6)	22(20.6)	48(44.9)
Prompt response to sick animal	53(49.5)	39(36.4)	15(14.0)
Engage service of veterinary doctor	0(0)	52(48.6)	55(51.4)

Source: Field Survey, 2022

Table 4: Distribution according to constraints in backyard Poultry farming in the study area

Constraining Factors	Severe Freq. (%)	Mild Freq. (%)	Nil Freq. (%)
High cost of feeding	29(27.1)	47(43.9)	31(29.0)
Inadequate water	44(41.1)	63(58.9)	0(0)
Market location	22(20.6)	15(14.0)	70(65.4)
Change in climate	22(22.8)	0(0)	85(79.4)
High cost of disease management	7 (6.5)	78(72.9)	22(22.8)
Inadequate access to credit facility	85(79.4)	22(22.8)	0(0)
Inadequate access to Extension agents	54(50.5)	46(43.0)	7 (6.5)
Activities of middle-men	7 (6.5)	15(14.0)	85(79.4)
Activities of predators	83(77.6)	24(22.4)	0(0)
Loss of livestock to road accident	14(13.1)	46(43.0)	47(43.9)

Source: Field Survey, 2022

Table 5: Distribution according to benefits derived from backyard poultry farming by respondents

Constraining Factors	No Freq. (%)	Undecided Freq. (%)	Yes Freq. (%)
Provision of animal protein for the family	23(21.5)	14(13.1)	70(65.4)
Provision of additional animal protein for the family	7(6.5)	35(32.7)	65(60.8)
Source of additional income for the family	0(0)	17(15.9)	90(84.1)
Provision of farm yard manure for sale	92(86.0)	10(9.3)	5(4.7)
Provision of farm yard manure for family use	7(6.6)	91(85.0)	9(8.4)
Serves as prestige for the family	101(94.4)	6(5.6.4)	0(0)

Source: Field Survey, 2022

This agrees with Oladunni and Fatuase, (2014) who also reported that local farmers provide feed for their flock. Most (51.4%) of the respondents do not engage the service of veterinary doctors as they complained that they cannot afford the cost of engaging them

Major constraints in backyard Poultry farming in the study area: Table 4 reveals that access to credit facility remains the most severe (79.4%) constraint to backyard poultry rearing followed by activities of predators (77.6%). This agrees with previous findings (Ekunwe *et al.*, 2009; Oladunni & Fatuase, 2014; Abanigbe *et al.*, 2018) in similar studies. The observation on high activity of predators could be as a result of practicing extensive system management that allows the livestock roaming about on free range.

Benefits derived from backyard poultry farming by respondents: Table 5 shows that majority (84.1%) of respondents engaged in backyard poultry rearing for additional income for the family the report shows that good percentage 65.4% rear backyard poultry to increase their family protein consumption only. This revealed that the backyard livestock rearing is very important source of livelihood in the study area. This reported in the study was similar to those of Ahmed and Egwu (2014); Saleh *et al.*, (2015); Abanigbe *et al.*, (2018).

Conclusion: Backyard poultry farming is one of the most important sources of livelihood among the married women in the study area. It was determined that many young individuals in the study area are involved in backyard poultry farming at various levels with local chicken being the most kept poultry by majority in the study area. Funding, activity of predators as well as high cost of feeding are most reported constraints among the backyard poultry farmers in the study area. Stake holders should make financial supports in terms of grants and single digit loan available to the respondents while the farmers too could group themselves into cooperative and thrift societies to enable them create avenue for soft loan among themselves.

REFERENCES

Abanigbe, SA; Adesina, A, Jibodu, A; Jaji, MFO (2018). Characteristics of Free-Range Chicken Production in Ogun State, Nigeria. *J. Agric. Extent.* 22 (1):79-90

Adoligbe, C; Fernandes, A; Osei-Amponsah, R; Adje, ND; Robert, G; Marie-Christelle. F; Guilherme, JMR; Souaibou. FS (2020): Native chicken farming: A tool for wealth creation and food

security in Benin. *Inter. J. Livestock Product.* 11(4): 146-162

Ahmed A; Egwu GO (2014): Management Practices and Constraints of Sheep Farmers in Sokoto State, Northwestern Nigeria. *Inter. J. Sci. Environ. Technol.* 3 (2): 735 – 748

Alabi, OO; Ajayi, FO; Bamidele, O; Yakubu, A; Ogundu, EU; Sonaiya, EB; Ojo, MA; Hassan, WA; Adebambo, OA (2020). Impact assessment of improved chicken genetics on livelihoods and food security of smallholder poultry farmers in Nigeria. *Livestock. Res. Rural.* 32: 77.

Bamidele, O; Sonaiya, EB; Adebambo, OA; Dessie, T (2020). On-station performance evaluation of improved tropically adapted chicken breeds for smallholder poultry production systems in Nigeria. *Trop. Anima. Health Prod.* 52: 1541–1548.

Bamidele, O; Amole, TA (2021). Impact of COVID-19 on Smallholder Poultry Farmers in Nigeria. *Sustainability* 13, 11475

Desta TT (2020). Indigenous village chicken production: a tool for poverty alleviation, the empowerment of women, and rural development. *Trop Anima. Health Prod.* 3; 53(1):1.

Ekunwe, PA; Fabge O; Oyedeji JO; Emokaro CO (2009). Economics of backyard poultry production in Akure South Local Government Area of Ondo State, Nigeria. *Ghana J. Agric. Sci.* 42. 15-23.

Emaikwu, KK; Chikwendu, DO; Sani, AS (2011). Determinants of flock size in broiler production in Kaduna State, Nigeria. *J. Agric. Extent. Rural. Develop.* 3(11). 202–211.

Fadimu, BO; Akinyemi, IG; Ogundimu, OA; Lawal, MO; Adeyomoye, GA; Akinlabi, TJ (2020). Problems and Prospects of Poultry Rearing in Lagelu Local Government Area of Oyo State, Nigeria. *J. Appl. Sci. Environ. Manage.* 24 (9) 1569-1573.

Israel, GD (2013) Determining Sample Size. Institute of Food and Agricultural Sciences (IFAS), University of Florida, PEOD-6, 1-5.

Maikasuwa M.A and Jabo M.S.M (2011). Profitability of backyard poultry farming in Sokoto

- metropolis, Sokoto State. *Nig. J. Appl. Sci.* 19(1):111-115
- Mugisa, IO; Fungo, B; Adur, SO; Ssemalulu, O; Molly, A; Atim, J; Nakyagaba, W; Kizza, T; Kabanyoro, R; Sseruwu, G; Akello, BO. (2017): Urban and peri-urban crop farming in Central Uganda: Characteristics, constraints and opportunities for household food security and income. *Afr. J. Plant. Sci.* 11(7), 264-275
- National Population Commission (NPC) (2006). Provisional 2006 Nigeria Census Figures.
- Ojo, SO (2002). Analysis of the three risk factors in commercial poultry production in Osun State, Nigeria. Proceedings of the 27th Annual Conference of Nigeria Society for Animal Production, March 17-21, 2002, Federal University of Technology, Akure, Nigeria.
- Oladunni, ME; Fatuase, AI (2014). Economic Analysis of Backyard Poultry Farming in Akoko North West Local Government Area of Ondo State, Nigeria. *Global J. Bio. Agric. Health. Sci.* 3(1):141-147.
- Saleh, I; Hudu MI Ojo, AO; Makama, SA; Tukur, AM; Yusuf, M.A. (2015). Characteristics of Backyard Livestock Production in Kiyawa Local Government, Jigawa State. Proceedings, 20th Annual National Conference of the Agricultural Extension Society of Nigeria held at the National Agricultural Extension and Research Liaison Services (NAERLS), Ahmadu Bello University, Zaria [17th – 15th May, 2015] ISSN: 1595 – 1421.
- Win TZ; Campbell A; Magalhães RJS; Kyaw NOO; Joerg H (2018): Characteristics of Livestock Husbandry and Management Practice in the Central Dry Zone of Myanmar. *Trop. Animal. Health. Product.* <https://doi.org/10.1007/s11250-018-1738-9>