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PROFILING THE COPING STRATEGIES OF POULTRY FARMERS DURING COVID 19 LOCKDOWN IN SOUTHWESTERN NIGERIA (EKITI STATE A CASE OF STUDY)

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ABSTRACT— This study was used to profile the coping strategies of poultry farmers in the Southwestern Nigeria during the outburst of the dreaded disease called COVID19.The entire world was put on halts and many businesses and farming were paralyzed. Ikole, Ijero, Ado, Oye, Ifaki LGAs all in Ekiti State Southwestern Nigeria was used for the study. A multistage sampling technique was used in the study. 100 respondents were interviewed. The data collected were analyzed using inferential statistics tools, descriptive statistics as means, frequency tables, etc., were used to describe the socio-economic characteristics and the coping strategies of poultry farmers during COVID-19. The mean age of the respondents is 40.59 years, male gender is (67%), while37% are the female farmers. It was also shown that 61.0% of the respondents were married, and only 9% had no formal education. Study showed that 88% of the poultry producer used early marketing strategy to prevent over feeding of the birds, reduction in cost of production, 84% sells to consumer in lieu of retail, 80% reduced stock of production because there was no way to market the bird, so as to avoid lost, a lot of people reduce the number of stock they rear to a little quantity they can sell within their environment since people movement has been restricted, The farmers used dry fish silage as protein, private feed milling and use of fruits and fruits co-product during the period under review.

KEYWORDS: COVID19, Poultry, Socio Economics, lockdown, Inferential., LGA.

1. INTRODUCTION

1. Background of the Study

Poultry meat and eggs offer considerable potential for meeting human needs for dietary animal supply [8]. The poultry industry has become a diverse industry with a variety of business interests such as egg production, broiler production, hatchery, poultry equipment business and general logistics. Poultry is reportedly the most commonly kept livestock and over 70% of poultry farmers are reported to be keeping chickens (Mazimpaka, *et al.*, 2018). Poultry production is a commercially viable enterprise contributing significantly, 10% to Gross Domestic Product (GDP) of Nigeria (Anosike, *et al.,* 2018). Egg production involves the use of good layer birds for the purpose of table egg production. Broiler production involves the keeping of chickens of heavy meat breeds for the purpose of getting good quality meat products usually sold live or processed. Alternative poultry breeds kept in Nigeria include pheasant (*Phasianus colchicus*), quail (*Coturnix coturnix japonica*) and Guinea fowl (*Numida meleagris*), which have a great potential and demand in markets of developing countries.

The meat from these poultry species has numerous advantages such as higher protein level, lower fat content, reduced calories and higher amount of some essential vitamins, fatty acid and amino acids (Lopez-Pedrouso et al., 2019). [21] opined that over 95% of poultry meat and 90% of eggs are produced commercially. In spite of this significant growth in poultry sub sector, countries of sub-saharan region continues to import more than 40% of its needs for poultry meat (United States Department of Agriculture, 2014). There is a steady growth in demand for poultry meat and eggs worldwide with an average annual consumption growth of 2%. Poultry are good converter of feed to egg and meat within a short period of time. The need to improve the provision of protein for human consumption cannot be over-emphasized. Protein sourced from animal is one of the essential nutrients of human diets.

In order to prevent the spread of the COVID-19 virus, government developed a strategy to prevent and control the situation; it includes the cancellation or closure of flights, the closure of restaurants and hotels, closure of all non-essential services as defined by the respective state and federal government, mandatory quarantine for infected people or people suspected to be infected, among many other measures which resulted in partial lockdown of the economy. Thus, agricultural sector and others were affected. The COVID-19 virus threatened the activity of poultry subsector thereby impacting greatly the production of poultry in Nigeria. The impact of COVID-19 and the associated lockdown on livestock and poultry sectors in the country has been phenomenal. It is further envisaged that the impact would continue to be long-standing and will have great bearing on the livelihood, employment, and overall economy of the sector.

Globally, the COVID-19 pandemic caused major disruptions to several agricultural (livestock, crop, and horticulture) activities across different production systems. Consequent upon this, a significant hardship and economic losses were experienced by households, poultry farmers and other agricultural enterprises. The impact of COVID-19 on smallholder poultry households in sub-Saharan Africa is of particular importance because over 80% of all households keep poultry as a source of livelihood and food security [13]. These households are predominantly keeping poultry at small scale level in most cases hawking poultry products by roadside. However, due to the COVID-19 pandemic, access to such markets and the hawking of live birds along highways were restricted. In addition, at the community level, extension and animal husbandry information services offered by farmer groups were interrupted due to social distancing. All of this threatened smallholder poultry production, and expose vulnerable, resource-poor, rural households to increased food insecurity and loss of livelihood. Poultry industry was a profitable venture before the pandemic situation, but a downward trend is observed now.

The world is passing through a horrible situation that has no prediction previously. The rumors of poultry birds as the likely carrier of the COVID-19 virus widely circulated in social media had led to reduced demand of the chicken meat in several parts of the country. The COVID-19 is not linked with poultry or its products alone in Nigeria; it is expected to influence the global poultry trade due to lockdown and restrictions that is applied to control the spread of the virus [14]. Poultry immunity, health, and production are several factors that challenge the future growth of the poultry industry. Consumer confidence, product quality and safety, types of products, and the emergence and re-emergence of diseases may continue to be major challenges to the current situation and the strategic future of the industry. Foodborne and zoonotic diseases are strictly linked with poultry. While all associated issues are being addressed with a strong might, a holistic understanding of the overall impact would help in drawing appropriate policies and revival strategies.

The Study Area

This study was carried out in Ekiti State, Nigeria. The state lies in the rain forest zone of Nigeria. Ekiti State is bounded in the north by Kwara State, west by Osun State, south by Ondo state and in the east by Kogi State.

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Ekiti State lies between Latitude $7^{0}40^{1}$N $5^{0}15^{1}$E and longitude 7.667^{0}N 5.250^{0}E occupying 6,353km^{2} (2,453sq m) of land and ranked 31st of the 36 states in the federal republic in terms of land mass. The projected population of the state is 3,270,798 (NBS, 2017). Furthermore, the population distribution shows that youths within the age range 20 – 24 years are about twelve percent (12%) of the total population. The State has 16 local councils. The state is credited as having a high level of educated citizens in the country and education is highly regarded and prioritized in the state. There are two distinct seasons which are wet and dry seasons. The dry season lasts from November to March. The area is blessed with 12 diurnal sunshine hours and a moderate year-round temperature of 25^{0} C. Annual rainfall averages at 200mm. A large percentage of the inhabitants of the state engage in agriculture. The major food crops include, rice, maize, yam, cocoyam, cassava, pepper, tomatoes and varieties. The main cash crops are cocoa, kola nut, oil palm. Other tree crops are citrus fruits, coconut, mango, sugar cane, guava and pineapple. As the state is within the ecological belt known for abundant forest resources the state produces high quality woods which are raw materials for wood-based industries within and outside the state. Ekiti is home to a number of poultry farms. Backyard production of poultry is also prominent in the state.

Source: Field Survey, 2021.
Figure 1: Map of Ekiti State showing the sixteen Local Governments Areas

3.2 Population for the Study
The population for the study comprised all poultry farmers in Ekiti State, Nigeria.

3.3 Sampling Technique
A multi-stage (two stages) sampling technique will be used to select samples for the study. Firstly, a purposive sampling technique will be used to select four (4) Local Governments in the study area; Ikole LGA, Oye LGA, Ijero LGA, Ado LGA and Ifaki LGA. Lastly, a simple random sampling will be used to select 20 respondents from each Local Goverment making at total of 100 respondents.

3.4 Sample Size
Simple Random Sampling will be used to select a total number of 100 respondents. A well-structured questionnaire will be administered for the purpose of the study.

3.5 Instrument of Data Collection
Data collection will be done with the aid of a questionnaire. The questionnaire will be sectioned A to D based on the objectives of the study. Section A will be designed to elicit information on the socioeconomic characteristics of the respondents. Section B will be used to determine the major effects of COVID-19 lockdown on the poultry farming activities in terms of production while section C will be used to determine the cost and returns of the poultry farmers during the COVID-19 lockdown and section D will examine the coping strategies of poultry farmers during COVID-19 lockdown in Ekiti State, Nigeria.

3.6 Analytical Techniques
This section presents information on socioeconomic characteristics of poultry farmer's, cost and returns of poultry farmers during the COVID-19 lockdown in the study area, the effects of COVID-19 lockdown on the poultry farming activities in terms of production in the study area, the coping strategies of poultry farmers during COVID-19 lockdown in Ekiti State, Nigeria. The results for the study were obtained from the research questions answered through questionnaire.

3.1 Socioeconomic Characteristics of poultry Farmers

Socioeconomic characteristics of poultry farmers in the study area were examined with respect to age, gender, level of education, occupation, marital status; household size, income level and poultry farming experience.

3.1.1 Age distribution of the respondents.

Age plays important role in agricultural production. The average age of poultry producers is 40.59

The table showed that majority (33%) of the poultry producers fall within the age bracket of 20-30, followed by a close age range of 31-40 (25%), 16% Ranges from 41-50 years of age, while 26% are between 51-and above. this indicated that poultry production as an occupation provided job opportunity to people within the age bracket of 20-40, implying young school leavers, graduates, have greater strength to tackle labour intensive farm works like poultry production. This explained why older farmers (between 41-50years or 16%) were not major producers. Also, the age range of 51 and above (26%) engaged in the production after their retirement just to keep themselves busy and earn little income.

Table 1: Frequency Distribution of Respondents According to their Age

Age	Frequency	Percentage%
20-30	33	33.0%
31-40	25	25.0%
41-50	16	16.0%
51 and above	26	26.0%
Total	100	100%

Source: field survey 2022

3.1.2 Gender of the Poultry farmers

The table 2 below gives the distribution of respondents by gender. Results obtained from the survey shows that 67.0% of respondents are male while 33.0% are female. indicated that participation by females is very low compared to their male counterparts. Conversely, the high level of men involvement may also be due to high demand for labour in terms of feeding and medication which women may not be able to combine with household activities.

Table 2: Frequency Distribution of Respondents According to their gender

Gender	Frequency	Percentage%
Male	67	67.0%
Female	33	33.0%
Total	100	100.0%

Source: field survey 2022

3.1.3 Marital status of poultry farmer

Results revealed that majority of poultry farmers were married; indicating that poultry production in the study area is most common among couples. This may be for income generation and food. 61% are married while

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39% are (either single, divorced or widow).

Table 3: Frequency Distribution of Respondents According to their marital status

Marital status	Frequency	Percentage
Married	61	61.0%
Others	39	39.0%
Total	100	100.0%

Source: field survey 2022

3.1.4 Level of education of the respondent

Education is a vital tool to the farmers as it helps them to react sharply and constructively to changes in their environment (Sevier and Lee,2003). Education enhances/promotes rate of adoption of innovation by the farmers. 9.0% have no formal education while 91.0% have formal education (primary education 13%, secondary education 15%, OND/HNC 24%, HND/university 39%). The more an individual is exposed to any form of education, the more he will have a better understanding of his environment.

Table 4: Frequency Distribution of Respondents According to their level of education

Level of education	Frequency	Percentage %
No formal	9	9.0 %
Primary	13	13.0 %
Secondary	15	15.0 %
OND/ HNC	24	24.0 %
HND/University	39	39.0 %
Total	100	100.0%

Source: field survey 2022

3.1.5 Household Size of the poultry famers

Families with good number of productive adults will spend little on hired labour. On the other hand, large sized families have negative impact on resource allocation as income might be diverted to consumption needs (Arene and Mbata, 2008). The study also revealed that majority of poultry farmers had household size of 1 – 5 persons. This indicated that most of poultry producer in the study area have responsibilities of family on them. This implied that those with small household size have limited supply of family labour compared to those with large household size.

Table 5: Frequency Distribution of Respondents According to their household size

Household size	Frequency	Percentage
1-5	54	54.0%

6-10	44	44.0%
11-15	2	2.0%
Total	100	100.0%

Source: field survey 2022

3.1.6 Occupation of respondent

Poultry production can either be taken up as a full-time activity or part-time activities. This table indicated that 32 percent of the respondents had taken up poultry production as their primary occupation. while the remaining percentage (68%) engage in poultry production as their secondary production (trading, civil service, artisan, etc.), which will serve as an additional means of generating income for the family.

Table 6: Frequency Distribution of Respondents According to their Occupation

Occupation	Frequency	Percentage
Full-time farming	32	32.0%
Part-time farming	68	68.0%
Total	100	100.0%

Source: field survey 2022

3.1.7 Member of an association

This table revealed that 34.0% of the respondent are member of an association while 66.0% of the respondent does not belong to any association. Majority of the farmers that join association are those that took it as their primary occupation and also because of the benefit they get from it like access to loan, land, technical assistance, subsidized input etc.

Table 7: Frequency Distribution of Respondents According to their member of association

Member of association	**Frequency**	**Percentage**
Yes	34	34.0%
No	66	66.0%
Total	100	100.0%

Source: field survey 2022

3.1.8 Years of experience of the respondent

As depicted in table 8 below, data obtained from the survey indicates 46.0% of the respondents have poultry experience of 1-5 years, 24.0 % of the respondent had 6-10years of poultry experience while 13.0% have 11-15 years, 6.0% have 15-20 years and 11.0% of respondent have more than 20 years' experience respectively, the mean year of experience is 2.10, this shows that majority of the respondent have low experience in poultry production, The results of this present study corroborate the findings of Enoch et al. (2010), which opined that poultry farmers have a comparatively low experience in poultry farming which is a consequence effect of shift of government policy in favour of agriculture, which has brought new entrants into poultry production

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business.

Table 8: Frequency Distribution of Respondents According to their member of association

Years of experience	Frequency	Percentage %
1-5	46	46.0%
6-10	24	24.0%
11-15	13	13.0%
16-20	6	6.0%
>21	11	11.0%
Total	100	100%

Source: field survey 2022

3.1.9 Labour employed by the respondent

Table 9 shows that 56.0% used family labour, while 20.0% employed hired and 24.0% used both family and hired labour. the survey showed that majority have 1-5years experience so the labour in the production is still small and can be handled by the family members

Table 9: Frequency Distribution of Respondents According to their labour employed

Labour Employed	**Frequency**	**Percentage %**
Family	56	56.0%
Hired	20	20.0%
Family and Hired	24	24.0%
Total	100	100.0%

Source: field survey 2022

3.1.10 Acquisition of land by the respondent

This is the method through which the respondents acquire their farm land; the distribution of respondents according to their means of farm land acquisition is shown in Table 4.1.10

Table 10: Frequency Distribution of respondent by acquisition of land

Land acquisition	**Frequency**	**Percentage %**
Rent	30	30.0%
Inheritance	46	46.0%
Lease	8	8.0%
Purchase	16	16.0%
Total	100	100.0%

Source: field survey 2022

Table 10 shows that 46.0% of the respondents acquired their land through inheritance which predominantly is a means of acquiring farm lands in Nigeria, 30.0% of the respondents acquired theirs through rent, while

16.0% and 8.0% of the respondents acquired theirs through purchase and lease respectively.

1	Early marketing	88	88.0%	1st
2	Sales to consumers in lieu of retailers	84	84.0%	2nd
3	Reduction in stock rate	80	80.0%	3rd
4	Reduction in litter size	76	76.0%	4th
5	Use of organics in place of vaccine	73	73.0%	5 th
6	Biosecurity to prevent disease outbreak	58	58.0%	6 th
7	Use of locally sourced cereal	56	67.0%	7 th
8	Substituting local feed ingredients	54	54.0%	8 th
9	Warehousing of key ingredients	53	53.0%	9 th
10	Use of dry fish silage as protein source	36	36.0%	10 th
11	Private feed milling	33	33.0%	11 th
12	Use of fruits and fruit co-product	23	23.0%	12 th

Source: field survey 2022

4. CONCLUSION AND RECOMMENDATION

It is indeed a very terrible and frustrating period for everyone throughout the world and the poultry farmers were not left out of this hazard. COVID 19 really affected virtually all the activities in the poultry farming. This lead to mass shortages in egg, poultry produces. Anumerous numbwr of birds were lost due to no movements around this time.

Most of the poultry farmers are still not out of the calamity brought by this universal outbreak.

It is recommended that farmers must learn a strategic local ways of rearing the birds as an alternative to the modern way. In case there is another form of outbreak the government the day must be able to allow movement order for poultry farmers. Farmers must be compensanted for the government in terms of palliatives or even as aids in grants

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