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ANALYSIS OF SOCIO-ECONOMIC AND INSTITUTIONAL FACTORS INFLUENCING POULTRY FARMERS' PRODUCTION IN SABON-GARI LOCAL GOVERNMENT AREA, KADUNA STATE

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ABSTRACT

The study was carried out to analyze the socio-economic and institutional factors influencing poultry production in Sabon-Gari Local Government Area, Kaduna State. Data were collected through the use of structured questionnaire. A multistage sampling procedure was applied. In the first stage, 5 villages were randomly selected: Bomo, Samaru, Jushi, Chikaji and Muchia. The second stage involved the random selection of 118 poultry producers from a list of 236 poultry producers identified by the researcher during reconnaissance survey of the study area. Statistical analyses employed were descriptive (Percentages and Mean presented in Tables and Graphs) and inferential statistics (Linear regression). The linear regression model was used to determine the socio-economic and institutional factors influencing income of poultry producers. Results from the study showed that majority (58.5%) were female, majority (60.2%) were married, the mean age was 46, the mean household size was 7, the mean number of years spend on education was 8 and the mean year of experience in poultry was 16, The largest number (43.2% and 34.8%) of flock size owned was for broiler 251-500 and layers 501-750 respectively. The linear regression result showed that factors such as Sex, marital status, education, extension contact, land ownership, and production cycle were significant at (P≤ 001) level. The major constraints faced by the poultry producers were poor pricing and inadequate market (76.3%). It was recommended that: significant researches be conducted by scientists and feed-mills to reduce the cost of production also, there is the need for government and the private sector to work to reduce the ratio of extension to farmer.

Key Words: Poultry, Production, Farmers, Socio-economic, Institutional, Sabon-Gari

INTRODUCTION

Livestock production constitutes an important component of the agricultural economy in developing countries and it is an instrument of socio economic change, improved income and quality of rural life in Nigeria (Okumadewa, 1999 and Aromolaran, *et al.* 2013).

Nigeria has the highest number of poultry farms in Africa, despite the great numbers of farms in Nigeria, a parallel record from Poultry Association of Nigeria (PAN) indicates that Nigeria produces presently above 553 million tons of egg and 708 million tons of broiler meat per year, despite this volume Nigeria is far from meeting her domestic demands in broiler production (Food and Agricultural Organization, 2010). According to Amos (2006), poultry accounts for 58.2 % of the total livestock production which signifies the importance of the sector. Poultry production as an aspect of livestock production is important to the biological needs, economic and social development of the people in any nation (Oladeebo and Ambe-Lamidi 2007).

The poor are often considered more vulnerable to shocks because of the assumed lack of diversification in their income (International Food Production Research Institute, 2010). In the limited livelihoods diversification that poor households tend to have, livestock constitutes an important source of income and, in general, is the most important asset (FAO, 2002).

In poultry production, small scale poultry production represents one of the few opportunities for saving, investment and security against risks. It accounts for approximately 90% of total poultry production (Branckaert 1999). Mbanasor (2002) showed that about 10 percent of the Nigerian population is engaged in poultry production, mostly subsistence and small or medium sized farms. The most common livestock production practiced in rural areas of Nigeria is poultry keeping (Okoli *et al.*, 2004)

Despite the acknowledged importance of poultry production Akanni (2007) opined that it is characterized by low production level due to limited finance for the procurement of basic poultry equipment and materials. Poultry production has the capacity to contribute to the social and economic status of the producers, however, it is affected by seasonal production system and part time engagement by most poultry producers in the study location. It is for these reasons that the study sought to analyze the socio-economic and institutional factors influencing poultry farmers production in the study areas.

OBJECTIVES

i. describe the socio – economic and institutional status of poultry farmers in the area.

ii. examine the prevailing types and scales of poultry production by poultry farmers in the area.

iii. determine the socio-economic and institutional factors influencing poultry farmers' production in the area.

iv. describe the constraints faced by poultry farmers in the area.

METHODOLOGY

The study was carried out in Sabon-Gari Local Government Area (L.G.A) of Kaduna Sate. Sabon-gari LGA shares boundaries with Soba, Zaria, Giwa and Makarfi L. G. As. to the (east, south, west and north) respectively. Sabon-Gari is an important sector of urban Zaria. The city is the second largest in Kaduna State. It is located at latitude 11º3'N and longitude 7º 42'N. The city lies on the high plains of Northern Nigeria, in the Sub-Saharan Africa. It is about 643.7 kilometers from the coast of Nigeria. The city has become a nodal point by virtue of its location in Northern Nigeria and in terms of its rail and road transport. The population of the town has been growing rapidly in recent time. The space economy of Sabon-Gari comprises of commercial, industrial, educational transportation and residential land uses (Ubogu, 2008). The LGA as at 2014 has a projected population of about 418,714 people using a 3.2% annual growth rate. The Local Government is cosmopolitan in nature. The major tribes are Hausa/Fulani, Igbos and Yorubas. The major profession is agriculture; however, there exist large number of civil servants, public servants, artisans and traders. There are large numbers of poultry farmers in the L.G.A. involved in either small, medium or large scale production. Poultry farmers in the area produce both local and exotic birds with women being more involved in the raising of local birds.

A multi-stage sampling procedure was used in the study to achieve the sample size. Sabon Gari Local Government Area was purposively selected due to being a major poultry production area in the State. The first stage involved the random selection of 5 communities (Bomo, Samaru, Jushi, Chikaji and Muchia) from the 5 districts in the Local Government

Area. At the second stage 118 poultry farmers from the 236 respondents profiled during reconnaissance survey by the researcher were selected using the ballot method as follows: Bomo 30, Samaru 29, Jushi 22, Chikaji 14 and Muchia 23. Information was collected through a well-structured questionnaire. Data was collected in 2015. Analysis of data made use of descriptive statistics (Frequency, Percentage, Mean, Figures and Tables) to analyze objectives 1, 2 and 4 of the study and inferential statistics (Linear regression) used to analyze objective 3 of the study. The linear model is presented thus:

$$Y= b_0 +b_1 X_1 +b_2 X_2 +b_3 X_3 +b_4 X_4 +b_5 X_5 +b_6 X_6 +b_7 X_7 +b_8X_8+b_9X_9+b_{12}b_{12}+U_i$$

y= Gross Income realized in production (Naira)

X_1 = Sex of respondent (Male = 1 and Female = 2)

X_2 = Age (years)

$X_{3=}$ Marital status (Single = 1, Married = 2, Separated = 3, Divorced = 4 and Widow = 5)

$X_{4=}$ Household size (number)

$X_{5=}$ Educational (years of formal schooling)

X_6= Main Occupation (1 = farming, 0 = otherwise)

$X_{7=}$ Cooperative Membership (dummy variable)

X_8=Extension contact (number of times visited)

$X_{9=}$Land Ownership

$X_{10=}$ Poultry production Experience (years)

$X_{11=}$ Production cycle (number of times)

$X_{12=}$ Total Flock size (number)

U = Error term

Where b = Intercept or constant o

B = Parameter estimates i

RESULTS AND DISCUSSIONS

Socio-economic status and institutional factors of poultry farmers

The result on sex in Table 1 showed that 58.5% were female. The fact that majority of the family poultry keepers were women is consistent with 56% found in earlier studies by (Sonaiya, 2000). Poultry is categorized as domestic animals and most domestic activities are within the domain of women. The study further showed that the mean age was 46. This finding varies with that of Lawal *et. al.* (2009), which identified in their studies of poultry farmers that majority were between 21-40 years old. This is an indication that the farmers represented were middle aged and well experienced in poultry business corroborated by the finding in the study that showed that the mean years of experience in poultry farming was 16. The result in Table 1 also, showed that majority (60.2%) of the poultry farmers were married. This result agrees with the 70% found by Lawal, *et. al*. (2009). The mean household size presented was 7. This is an indication of a large family size which implies that household labour could be deployed to supplement the paid labour required in poultry farming, thereby

subsidizing the labour cost. The result also reflected that poultry farmers studied had a mean education of 8. This suggests a low educational level, and implies that many of the poultry farmers may not be able to take clear and rational decisions as it affects their farm operations. Education has been associated with awareness and adoption of changed practices (Ejembi, 2009). The mean years of experience of poultry farmers in the study was 16. This shows that most of the respondents have enough experience in poultry production. The result indicated that 50.0% of the poultry farmers investigated practiced poultry production as their main occupation. This agrees with similar findings by Lawal, *et. al*. (2009) that found poultry farmers as majority (53.4%) The result showed that 52.5% of the poultry farmers did not belong to any cooperative association. Membership of cooperative association is expected to enhance an individual's chances to benefit from jointly held resources (credit) which can be used to improve their poultry farming activities. The result again showed that the mean number of contacts with extension agents by poultry farmers was 2. Even though the number of visits is poor.

Table 1: Distribution of poultry farmers according to socio-economic and institutional factors (n=118)

Variables	Frequency	Percentage	Minimum	Maximum	Mean
Gender					
Male	49	41.5			
Female	69	58.5			
Age			21	70	46
Marital Status					
Single	33	28.0			
Married	71	60.2			
Divorced	9	7.6			
Widowed	5	4.2			
Household size			1	12	7
Education			0	16	8
Poultry experience			1	30	16
Occupation (major)					
Poultry	59	50.0			
Civil Servants	29	24.6			
Artisans	17	14.4			
Traders	13	11.0			
Cooperative membership					
Yes	56	47.5			
No	62	52.5			
Number of Extension visits			1	3	2

Types of poultry production practiced

The result in Figure 1 show that 35.0% of the poultry farmers kept broiler birds. This was due to the fact that broiler bird's production cycle is faster than layers. Hence, it is easier for it to be converted to money or meat within six to eight weeks.

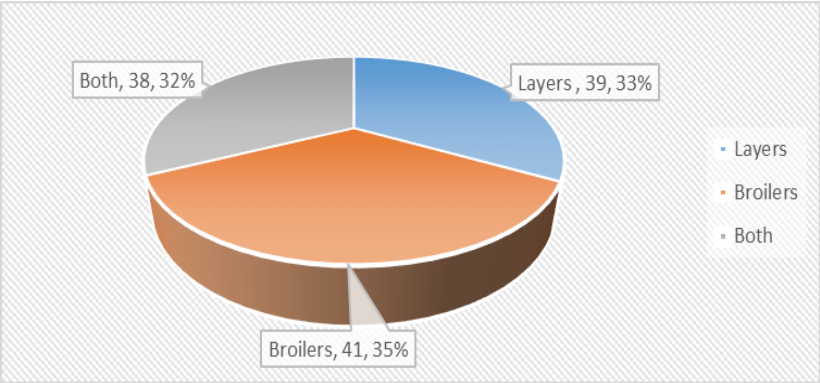


Figure 1: Types of poultry production practiced by farmers

Flock sizes owned by Poultry Farmers

The result in figure 2 shows that many 43.2% of broiler farmers kept between 251-500 birds and 34.8% of poultry farmers that kept layers had between 501-750 birds. These indicate that the farmers do had medium sized farms.

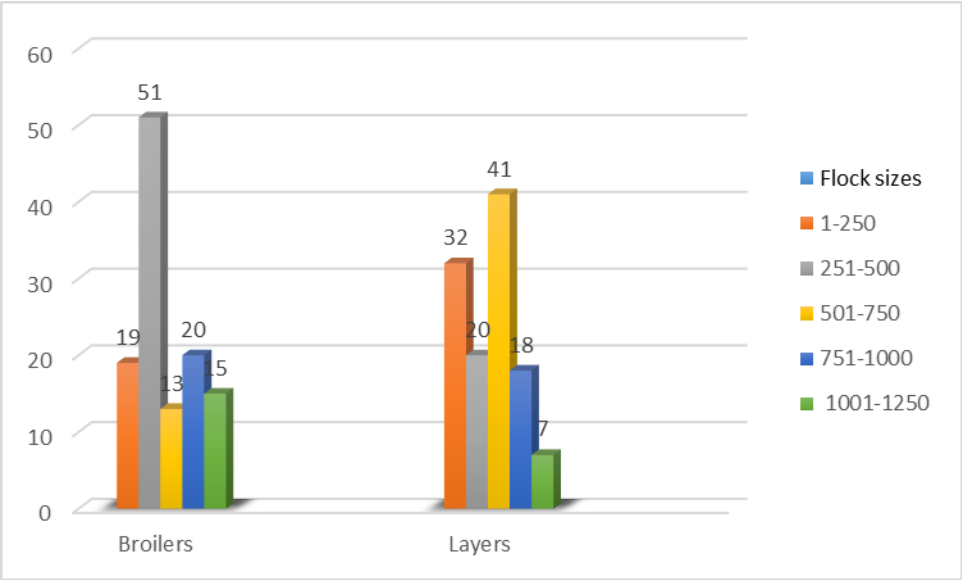


Figure 2: Distribution of poultry farmers based on total flock size owned

Socio-economic factors influencing poultry farmer's production

The result in Table 2 shows the parameters measuring the goodness of fit of the estimated linear regression model. These implied that there was significant relationship between the probability of poultry production and the explanatory variables included in the model. The R-square value (44.7%) showed the contributions of the included variables to the model. Twelve variables were included in the model with six being statistically significant. Sex (-331.957), marital status (233.496), education (188.834) and production cycle (0.050) were statistically significant at (P≤ 001) while extension contact (--356.279) and land ownership (--473.968) were significant statistically at (P≤ 005). The coefficient of sex was significant but negatively related. This implied that more women were involved in the production of poultry in the study. This is contrary to the *a priori* expectation which suggests that more men are involved in poultry production than women due to the labor-intensive nature of the production. The coefficient of marital status was positive which implies that it has a direct relationship with income. This implies that the more people become married; there is the

likelihood that their income can as well increase since they can pool their resources together. The coefficient of education shows that it has a linear relationship with income. This implies that a unit increase in level of education would lead to similar increase in the income of the poultry farmers. The coefficient of extension contact also, shows a linear relationship, which implies that improvement in extension contact to farmers, would lead to better access to information which invariably would lead to better improved practices and more income to farmers. The coefficient for land ownership was also negative and inversely related to income. Land is one of the major requirements for poultry production as well as a collateral for credit. If a poultry farmer have unhindered access or own the production site, it will improve the income in the long run. However, it becomes consequential if a poultry producer has to depend on rented land for production, it can threaten the future of the investment. The coefficient of production cycle shows that it has a linear relationship with income. This implies that a unit increase in the production cycle would result in more income for the poultry farmers. Therefore, the more broiler or layer cycles completed the more possible income the poultry farmer may make from their sales.

Table 2: Result of regression analysis of the socio-economic factors influencing poultry production

Variables	Coefficients	Standard Error	t-values
(Constant)	818.990	392.989	2.084
Sex	-331.957	91.172	-3.641***
Age	-5.436	5.388	-1.009
Marital Status	233.496	67.916	3.438***
Household size	-142.517	84.230	-1.692
Educational Qualification	188.834	41.731	4.525***
Main Occupation	26.511	33.901	.782
Cooperative membership	157.564	117.849	1.337
Extension contact	-356.279	152.126	-2.342**
Land ownership	-473.968	197.899	-2.395**
Poultry production experience	-2.254	9.392	-.240
Production cycle	0.050	0.172	.292***
Total Flock size	-.244	.221	-.108
R Square	44.7		
Adjusted R Square	35.6		

*** = Significant at 1% level of probability **= Significant at 5% level of probability

Constraints faced by respondents

Figure 3 shows the constraints experienced by the poultry farmers. The result showed that constraint such as poor pricing and marketing, disease outbreak and inadequate capital and credit facilities (76.3%, 75.4% and 75.4%) respectively were the major constraints faced by poultry producers.

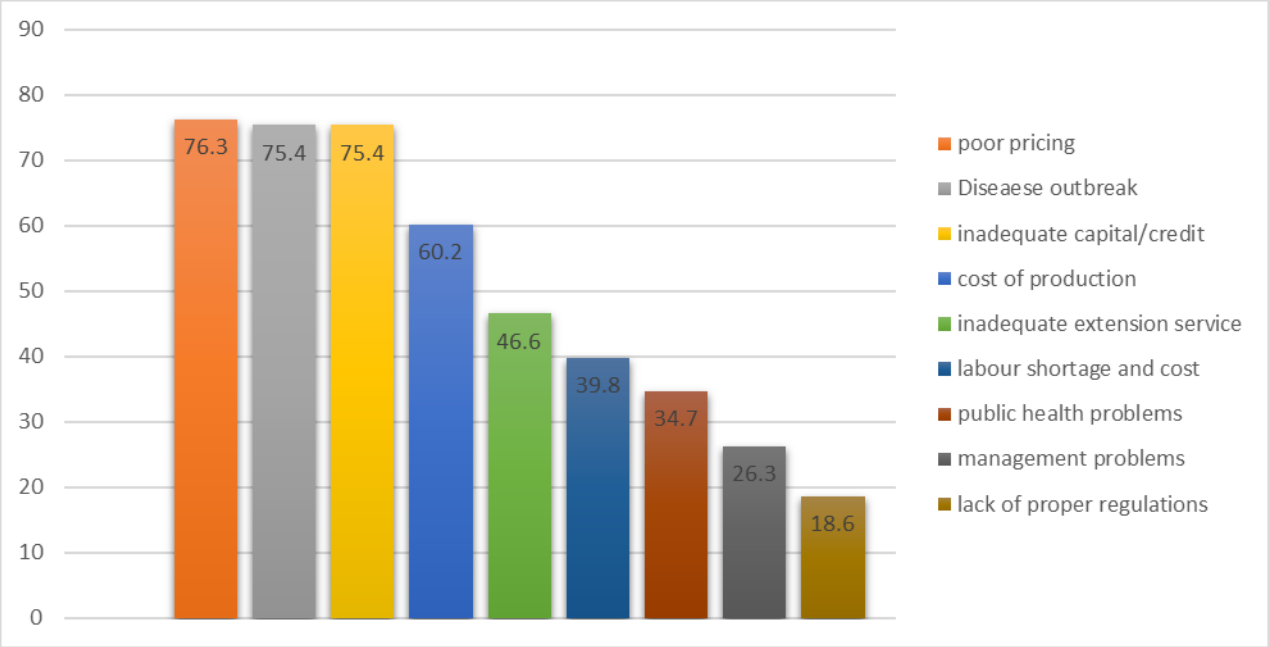


Figure 3: Constraints faced by Poultry Farmers

CONCLUSION

Socio-economic and institutional factors have profound effect on poultry production as determined by the study. In particular, ensuring access to education and contact to extension institutions are aptly required if poultry farmers are to raise their productivity and maximize their potentials.

RECOMMENDATIONS

1. Access to education should be encouraged by government, private sector, religious institutions and Non-Governmental Organizations (NGOs). This will help poultry farmers to acquire the basic knowledge needed to improve their understanding of the technicalities involved in poultry production management.
2. Inadequate extension services are one of the constraints mentioned in the study. There is the need for government and the private sector to work to reduce the ratio of extension to farmer by recruiting more extension personnel in order to ensure more visits to farmers by extension.
3. Government should support research organizations, development experts, private sector experts and Non-Governmental Organizations (NGOs) to collaborate with poultry farmers to ensure poultry market development and price stability.
4. Finally, it is recommended that cooperative systems and commercial banks/lending institutions should increase the volume of credit to poultry farmers and at rates that would not affect the profitability of the business.

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