



Analysis of Constraints to Poultry Production Among Poultry Farmers In Delta State, Nigeria

¹MOMAH, Lilian Nkemdilim & ²EZE, Maryann Ogochukwu

Department of Agricultural Education,
School of Vocational Education,
Federal College of Education (Technical) Asaba, Delta State, Nigeria

¹lilianmomah@gmail.com; 08039103433;

²ezeogochukwu2015@gmail.com ; 07037288771

ABSTRACT

The study investigated the constraints to poultry production in Delta State, Nigeria. Data were collected using structured questionnaire from 109 poultry farmers selected from the twenty-five (25) Local Government Areas of Delta State using simple sampling technique. Percentage and mean were used in data analysis. The poultry farmers reared predominantly the domestic fowls with greater emphasis on layers managed mainly in deep litter system of intensive production. The major constraints to poultry production were high cost of feeds and ingredients (M = 4.66), high interest on loan (M = 4.57), inadequate finance (M = 4.47, unsteady power supply (M = 3.32), scarcity of farm credit (M = 4.19), absence of grandparent stock for quality day-old chicks (M = 4.11), inadequate livestock extension agents contact (M = 4.11). Other constraints were short term loan re-payment period (M = 3.80), poor quality of commercial feeds (M = 3.71), absence of requisite training (M = 3.68), absence of collateral (M = 3.61), absence of processing and storage facilities (M = 3.61), high cost of vaccines and medication (M = 3.53), influence of climate (M = 3.52), losses due to predators, thieves and management hazards (M = 3.50), mortality due to poor management (M = 3.48), incidence of diseases and parasites (M = 3.46) and poor and inaccessible public veterinary service delivery system (M = 3.33). Recommendations for sustainable poultry production in Delta State and elsewhere were made.

Keywords: Constraints, poultry production, Delta State, Nigeria, Africa

INTRODUCTION

In Africa, agriculture and agro-industries account for more than 30% of national incomes on average, as well as the bulk of export revenues. Nearly three-quarters of the African population depend on agriculture for their livelihoods (Oram 2012; Connolly 2014). Within agriculture, a high priority is placed on livestock rearing by developmental groups and individuals due to the large role it plays in the nutrition and economy of the country.

Livestock production constitutes a very important component of the agricultural economy of Nigeria. It contributes directly to the production of food in the form of meat, milk and eggs, capital accumulation and 2.7 percent of the Gross Domestic Production (GDP) of the nation (Okagbare, 2009). Currently, animal protein intake of Nigerians is put at 10 grams per caput per day as against the required 36 grams. Governments at various levels have made concerted effort to bridge the protein gap through the development of the livestock sub-sector. Federal Ministry of Agriculture and Rural Development (2001) emphasized in the 2011 Agricultural policy the need to enhance the nutritional status of the populace.

The Nigerian poultry industry in particular has been rapidly expanding in recent years and is therefore one of the most highly commercialized (capitalized) subsectors of Nigerian agriculture (USDA 2013; Adene and Oguntade 2006). The popularity of poultry production can be explained by the fact that poultry has many advantages over other livestock. Poultry birds are good converters of feed into useable protein in meat and eggs. Their production costs per unit remain relatively low, and the return on investment is high. Therefore, farmers need a relatively small amount of capital to start a poultry farm. Poultry meat is very tender and highly acceptable to consumers, regardless of their religious beliefs. Also, the production cycle is quite short; hence capital is not tied up over a long period. More significantly, poultry eggs are one of the

major products of poultry production; they are affordable for the most common person than other sources of animal protein (Ojo 2003; Aboki et al. 2013).

Though, due to the high population growth in Africa (World Health Organization 2010) and growing income, the demand for eggs and poultry meat has significantly increased in recent years across large parts of the continent. According to estimates by the USAID (United States Agency for International Development), this trend is very likely to continue over the next few years. Therefore, the consumption of poultry and eggs will increase by 200% between 2010 and 2020 for at least some countries in sub-Saharan Africa (Obi 2003; USDA 2013). Regardless of these positive aspects, poultry production has not been keeping pace with rapid increase in domestic consumption. The domestic shortfall is estimated at 25,000 MT per annum (Rothschild 2002).

Consequently, in pursuance of this objective, the Delta State Council on Agriculture recommended the enhancement of meat and egg production in the state. To achieve these targets, the state government under Dr. Ifeanyi Okowa administration in June 2015, initiated a number of livestock development and empowerment programmes, among which is the Youth Agricultural Entrepreneurship Programme (YAGEP), a programme set to create job opportunities, boost self employment, skill impartation, boost the economy as well as empowerment for all Deltans (Pointer news, 2019). poultry farmers rearing broilers were each given 400 birds of day-old chicks, 150 bags of feed comprising starters and finishers mash and medication needed to get the birds survive harsh weather conditions; while those rearing layers were given 400 points of lay and 60 bags of feed, comprising growers and layers mash (Business a. m,2019).

In spite of the effort of the state government and individuals to increase poultry production in the state and thus enhance the nutritional status of Deltans, the poultry industry continues to witness decline in recent time due to myriads of constraint; high cost of feeds and ingredients, high interest on loans, high cost of grains, oil seeds and feedstuffs of animal, consequence of competition with humans (Obinne, 2007b). inadequate Finance, absence of grandparent stock for quality day-old chicks, inadequate livestock extension agents contact, unsteady power supply, Incidence of disease and parasites, Inability to afford private veterinary service, among others (Aromolabran, Ademiluyi and Itebu, 2013). This study therefore was necessitated by the need to urgently investigate the constraints to poultry production among farmers in Delta State with a view to making recommendations for sustainable production.

Objectives of the Study

The goal of this study was to examine constraints to poultry production in Delta State. The specific objectives were to identify;

- Species of poultry reared by the farmers
- Rearing systems employed and
- Common constraints to poultry production

MATERIALS AND METHODS

Study Area

The study was carried out in Delta State, Nigeria. Delta State is an oil and agricultural producing state. It is situated in the region known as the South-South geo-political zone with estimated population of 4,112,445 comprising of males: 2,069,309 and females: 2,043,136 (National Population Commission (NPC), 2006). It has 25 Local Government Areas, which cut across the three existing Agricultural zones in the state; they include Delta north, Delta south and delta central. The state covers a land area of 16,842 square kilometers of which more than 60% is land. Delta state lies roughly between longitude 5 0 00' and 6 0 45' East and Latitude 5 0 00' and 6 0 30' North. The average annual rainfall in the coastal areas is about 266.5mm and 190.5mm in the extreme north. However, in the month of July, rainfall is always heavier. In the Northern fringes of the state, the temperature is high ranging between 20 0 C and 34 0 C with an average temperature of 30 0 C (80 0 F). Delta State shares common boundaries with Edo and Ondo States to the North West, Imo and Anambra to the north east, Rivers and Bayelsa States to the southeast. In the southwest and south, it has approximately 122 kilometers of coastline bounded by the Bight of Benin on the Atlantic Ocean. Delta State has a tropical climate marked by two distinctive seasons: the rainy and dry seasons. The rainy season begins in April and lasts till October. The average annual rainfall in the coastal areas is about 266.5cm and 190.5cm in the northern fringes of the state. The temperature is high ranging from between 28°C with an average temperature of 30°C. The vegetation of Delta State varies from the mangrove swamps along the evergreen forests and savannah in the north.

Data were collected by the use of questionnaire. A five-point Likert type of rating scale was used to measure the constraints. The scale was coded; Strongly agreed (SA) = 5, Agreed (A) = 4, No opinion (NO) = 3, Disagreed (d) = 2, Strongly disagreed (SD) = 1. Constraints with mean value of 3.5 and above were regarded as agreed while those below 3.5 were not agreed. Moreover, acceptable level of data analyzed using percentage was fifty percent (50%). 109 poultry farmers were selected from the twenty-five local government areas using simple sampling technique. Data were analyzed by the use of percentage and mean.

RESULT AND DISCUSSION

Poultry species

Table 1 presents the poultry species reared by the farmers. Results showed that 100, 16.5, 01, and 01% of the farmers reared domestic fowls, turkeys, ducks and guinea fowls respectively. The findings of this study revealed that the farmers reared mixed poultry species comprising in order the domestic fowls, turkeys, ducks and guinea fowl. The result is an indication that the domestic fowl was the poultry species predominantly reared in the state. This finding is similar to the reports of Obinne (2007a) and Obinne et al., (2008) that the domestic fowl was the main farm animal kept by the farmers in Aniocha South Local Government Area of Delta State. However, the Ending is not in agreement with the report of M.A.N.R. (2000) that the domestic fowls, ducks and turkeys were the major breeds of poultry in Delta State. Among the chickens, 22.94, 47.71 and 98.91% of the farmers reared cockerels, broilers and layers respectively. The result clearly showed that most of the poultry farmers engaged mainly in layers production. From this result, it could be inferred that only the target of supplying pullets to the farmers by the Delta State Government Farmers Support Programme for egg production was met. The twin objective of supplying broilers to farmers to enhance meat production has not been fully realized. This can be attributed to the numerous constraints identified by this study.

Table 1. Poultry species

Species	Frequency	Percentage
Chickens	109	100.0
Turkeys	18	16.5
Duck	1	0.92
Guinea fowl	1	0.92
Quail	-	-
Geese	-	-
Pheasant	-	-
Pigeon	-	-

Table 2. Types of domestic fowls

Species	Frequency	Percentage
Cockerels	25	22.94
Broilers	52	47.71
Layers	98	89.91

Systems of Poultry Production

The system employed for rearing the birds are shown in Table 3. Majority of the poultry farmers (52.29%) engaged in deep litter system of intensive poultry production. The use of the deep litter system may have been necessitated by the need to keep the birds under strict control and to protect them from thieves and vermin (Obinne, 2011).

However, the cage system was not popular among the farmers probably because of the capital intensive nature (Ovwigho, 2009).

Table 3. Systems of rearing poultry

Rearing systems	Frequency	Percentage
Extensive systems		
• Free running system	03	2.75
• Range system	01	0.92
Semi-intensive system		
• Run system	02	1.83
• Fold system	-	-
Intensive system		
• Deep litter	57	
• Wire floor	-	
• Staffed system	04	
• Battery cage system	18	
• Deep litter cum Battery Cage	30	27.52

Constraints to poultry production

The constraints facing poultry production in Delta State is presented in Table 4. Among the most prevalent constraints was high cost of feeds and ingredients ($M = 4.66$). This can be attributed to high cost of grains, oil seeds and feedstuffs of animal origin as well as the consequence of competition with humans (Obinne, 2007b). Financial related constraints were high capital requirements ($M = 4.47$), scarcity of farm credit ($M=4.19$), high interest rate on loan ($M = 4.57$), absence of collateral ($M = 3.61$) and short term loan repayment period ($M = 3.80$). These constraints have been reported by Dayo (2010) that banks with large loan funds were generally difficult to access and that issues of collateral and high interest rates screen out most rural stake holders. Lack of finance was a common constraint to the extensive, semi-intensive and intensive poultry farmers in Delta State (Alabi and Isah, 2002). Unsteady power supply ($M = 4.32$) was found to have impeded poultry production. It is possible that inadequate provision of power contributed to high cost of generating energy on private basis. It is likely that inadequate livestock extension agents contact ($M = 4.11$) found in this study was caused by the fact that the extension system was implemented with a huge bias in favour of cropping activities. Similar finding has been reported by Dayo (2010). The study further showed that well organized parent stock breeder farms for obtaining quality day - old chicks were not readily available ($M = 4.11$). This is an indication that the farmers might find it difficult to procure high performance breeds. This finding agreed with the reports of Dayo (2010) that there was complete absence of grandparent stock, and Obinne (2011) that the quality of chicks with regard to genetic composition and health status of chicks obtained from the few existing farms are not guaranteed thus manifesting slow growth rate, less weight at maturity and poor egg yield. Major health management and other constraints were incidence of disease and parasites ($M = 3.46$), inability to afford private veterinary service ($M = 3.33$), inaccessibility of the public veterinary service ($M = 3.29$), poor public veterinary service delivery system ($M = 3.39$), high cost of vaccines and medication ($M = 3.53$), poor quality of commercial feeds ($M = 3.71$), fear of uncertainty and risk ($M = 3.39$), influence of climate and climatic change ($M = 3.52$), difficulty with land acquisition ($M = 3.39$), inadequate processing and storage facilities ($M = 3.61$) and loss of birds and eggs due to predators, thieves and management hazards ($M = 3.50$). Low demand for poultry meat and eggs was not a serious constraint ($M = 2.74$).

Most of these constraints are similar with those identified. Alabi and Osifo (2004) found the conditions militating against commercial production to include lack of inputs such as poultry drugs, vaccines, feeds, improved birds, equipment, skilled man power and incidence of diseases. The problem of land acquisition has been reported. Dayo (2010) found that restriction on land sales limits access to formal credit since the farmer cannot use land as collateral and this causes decline in productivity.

Table 4: Constraint to poultry production

Constraints	No. of Responses	Freq	Mean (M)	Decision
High cost of feeds and ingredients	508	109	4.66	Agreed
High capital requirement	487	109	4.47	Agreed
Scarcity of farm credit	457	109	4.19	Agreed
High interest rate on loan	498	109	4.57	Agreed
Absence of collateral	394	109	3.61	Agreed
Short-term loan repayment period	414	109	3.80	Agreed
Unsteady power supply	471	109	4.32	Agreed
Inadequate livestock extension agents contact	448	109	4.11	Agreed
Parent stock breeder farms are not easily available	448	109	4.11	Agreed
Incidence of disease and parasites	377	109	3.46	Agreed
Inability to afford private veterinary service	370	109	3.39	Agreed
Inaccessibility of public veterinary service	359	109	3.29	Agreed
Poor public veterinary service delivery system	370	109	3.39	Agreed
High cost of vaccines and medication	385	109	3.53	Agreed
Poor quality of commercial feeds	404	109	3.71	Agreed
Fear of uncertainty and risk	369	109	3.39	Agreed
Influence of climate and climatic change	384	109	3.52	Agreed
Difficulty with land acquisition	370	109	3.39	Agreed
Inadequate processing and storage facilities	393	109	3.61	Agreed
Loss of birds and eggs due to predators, thieves and management hazards	382	109	3.50	Agreed
Low demand for poultry meat and eggs	299	109	2.74	Disagreed

M = Mean

CONCLUSION

The findings of this study revealed that the poultry farmers reared predominantly chickens with greater emphasis on layers managed in the deep litter system of intensive production. Poultry production is seriously bedeviled with multiple constraints.

RECOMMENDATIONS

Based on the responses of the poultry farmers, the following have been recommended for sustainable poultry production in Delta State.

1. Government should provide credit facilities with low interest rate and moratorium to enable poultry farmer procure basic equipment and facilities.
2. Government and Non - Governmental organizations (NGOs) should come to the aid of the poultry farmers by subsidizing production resources such as grains, drugs and vaccines among many others.
3. The Delta State Ministry of Agriculture and Natural Resources should set up training centres in the three agricultural zones in the state where periodic seminars and workshop will be organized for practicing and potential poultry farmers.
4. The public veterinary service delivery system should be equipped and made functional and effective.