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IMPEDIMENT OBSERVED IN POULTRY FARMING IN KATSINA STATE, NORTHERN NIGERIA

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Abstract

The study investigates some of the impediment in poultry farming that were found in Katsina state, Nigeria. The researcher observed that if care is not be taken the issue of poultry farming in northern Nigeria may come to an end due to those impediment. Some of the impediment occur naturally; while some are human induce factors. But the major ones were grouped in to bacteria, fungal, viral, protozoa and helminthic. In due course the research work intended to use the research sample of 100 poultry farmers were selected based on the random sampling technique. The data was analyzed by using descriptive statistics such as standard deviation and percentages to analyze the constraints to poultry production in the study area. The multiple linear regression models were employed to analyze the productivity of poultry production i.e. economic impact. The empirical findings based on the regression results indicated that, backyard poultry had a positive coefficient and statistically significant in influencing output. In other way round, costs of labour and feeds had a negative coefficient and significant in explaining output. The R^2 -value of 0.678 implied that the regress or accounted for 67.8% of the variations in the output, while the F-value (4.57) was significant and therefore implies that all the predictors considered for the analysis jointly exerted significant influence on the output , However, the result of the respondents based on the challenges facing by the backyard poultry owners revealed that out of ten (10) problems identified, inadequate fund (98.0%) was ranked highest as the problem encountered by the sampled respondents therefore the research recommended that government should establish agricultural banks close to the farmers with minimum interest rate and as well help the poultry farmers in stabilizing the price and create conducive market environment most especially during the festive periods.

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1. INTRODUCTION;

Any bird reared or hunted for useful purpose is a member of the bird group collectively known as poultry. Most of these birds are domesticated and are managed on the same basic principles as the domestic fowl. Most of them also belong to three orders of the avian classes. Poultry farming is the raising of domesticated birds such as chickens, turkeys, ducks, and geese, for the purpose of farming of meat or eggs for food. Poultry production farmed in great numbers with chickens being the most numerous More than 50 billion chickens are raised annually as a source of food, both their meat and eggs (Ademosun, et al., 1979).

Poultry production is an important and diverse component of any country agriculture .poultry products including eggs, chickens and turkey meat are healthy part of diet of most in Nigeria. In 2009, nearly 145,615 farms were producing poultry and its products (broilers and turkey, NASS USDA) while broilers chickens production is concentrated primarily in the western and southern part of the country. Turkey production occurs primarily in northern part of the country while eggs production is distributed throughout the country.

Modern poultry production occurs primarily in enclosed building to protect the bunds from wild birds. This has allowed farmers to greatly increase production efficiency which significantly reducing the amount of labour regard. As with pork production, this has resulted in environment changes with production of layer volumes of manures in much smaller areas. (United state environmental protection agency UEPA, 1992)

The term poultry refers to all species of domestic birds. They include chicken, duck, turkey, gunea fowl, pigeon and geese. These birds are kept by farmers to serve different purposes. Poultry are kept by farmers to serve different purposes. Poultry are raised mainly for meat and egg production. Other poultry products are faeces as manure, manure, feathers etc. poultry has been known to contribute about 10% of the total national meat production and experts have discovered that poultry production among other livestock is the fastest means of reducing protein deficiency in Nigeria.

Also, it provides a flexible financial reserve for the rural population. Scot, (1999) explained that proper management and feeding are necessary for efficient production of poultry products like egg and meat at low cost in all part of the world. Poultry production like most farm animals needs constant seven days a week care if they are to do well and perform their function in creating employment opportunity, provision of cash income and as a means of animal protein supply for consumption (Benabdeljelie et al, 2005). Intensive poultry production is based on the special poultry breeds and constitutes almost about 30% of the chicken in Africa. In intensive management system, producers aim at using recommended practices such as breed of choice, appropriate housing, feeding, and health and disease control. (Katalyi, 1998). The gap between the present research and the present was not mention any concerning the Economic Impact but this research is trying to discuss how this issues was been discuss. The systems involved in intensive poultry production include; slated floor, deep litter and battery cage systems.

HINDERANCE OF POULTRY FARMING IN NIGERIA

Poultry is facing many problems that can attack the poultry faming in Nigeria, but we emphasize on the one that we are more familiar with which is the diseases which can be states as follows:

Poultry Diseases**:** Disease is a deviation from normal health, a condition where all the organ systems and the body structures are working in full harmony. In disease, functions of organs and body structures are upset and normal life is disturbed. In most cases, poultry diseases manifest by clinical signs and these may include; reduced feed intake, reduced egg production, high mortality, isolation from other birds and retarded growth. The management decision made by the owner and the implementation by the stock person are reflected in the health of the flock especially in birds kept intensively (Pattison, 1993).The diseases that commonly affect chicken are grouped into bacterial, viral, protozoa, helminthic and fungal.

1. **Bacterial Diseases**

i) Salmonella infections

They are caused by bacteria of genus salmonella. The infections are categorized into salmonella pull rum, fowl typhoid and paratyphoid infections.

ii) Pull rum Disease

The disease is caused by salmonella pull rum and usually causes high mortality in young chicks and occasionally in adult chicken. The disease is chiefly transmitted through the egg, but also occurs by direct or indirect contact. Poultry visitors and buyers may also carry the infection on their clothes and footwear.

Pull rum disease is controlled by establishing a breeding stock free from S. pull rum, hatch and rear the progeny directly or indirectly avoiding contact with infected chicken and turkey.

iii) Fowl Typhoid

The causal agent is salmonella gallinarum. This infection is similar to pull rum disease. The disease is egg transmitted and has greater tendency of spread by direct or indirect contact in among growing and adult flocks. Mortality is high in all ages. Older birds may get dehydrated, anaemic and develop enteritis.

Clinically fowl typhoid mainly affects growing adult birds. Signs shown include; reduced appetite, ruffled feathers, pale shrunken comb, reduced egg production, fertility and hatchability, fever, diarrhoea and dehydration. Death occurs within 1-5 days (Sainsbury, 1993). The disease is prophylactically controlled and treated using sulphonamide drugs as in Porum disease. Fowl typhoid is controlled by establishing a breeding stock free from S. gallinarum, hatch and rear the progeny directly or indirectly avoiding contact with infected chicken and turkeys.

iv) Helminhosis

This affects birds on free range and deep litter systems. The disease is mainly caused by tape worms such as; Rallietineechinobothrida, R. tetragena, round worms such as; acarida galli, caeca worms like Heteroecism gallinae, thread worms like the capillaries species. Generally the chicks are droopy; there is failure to gain weight, low egg production in layers, diarrhoea and inflammation of the gut wall. Helminthiasis can be prevented by practicing good litter management, rotation of the range and routine deworming.

Affected birds should be treated with piperazine, Benzimidazole for nematodes and niclosamide from tape worm.

2) Fungal Infection

i) Brooder's pneumonia

It's caused by fungal organisms of genus Aspergillums. These are; Aspergillums flatus and A fumigates. The disease occurs in two forms; the acute form characterized by severe outbreaks in young birds and high mortality. Chronicaspergillosis occurs in adult breeder birds. A spergillosis is common in birds which are confined on mouldy litter or when given mouldy feeds.

The organisms are transmitted by inhalation especially if litter or feed is heavily contaminated with aspergillums.

Clinically there is dyspnoea, increased rate in chicken breathing, gasping and coughing, in older chicken there is anorexia, ruffled feathers emaciation and dysphagia in case the oesophageal mucosa is affected . Some birds have serious nasal and ocular discharges. There is reduced egg production and torticollis.

Control of aspergillosis depends on strict hygienic practices and removal of affected birds; frequent removal of water and feed troughs, daily cleaning and disinfection of water and feeding utensils to eliminate the infection. Sick individuals should be given aqueous solution of copper sulphate to prevent spread of infection, treat litter with and cooper sulphate, amphotericin B and crystal violet. Neomycin can be used to control outbreaks in chicks, Amphotericin b and phenyl mercuric dinaphthylmethane, disulfonate, controls infection in embryos. Dimethyldithiocarbamate, given subcutaneously is effective against the infection in chicks of 5 to 10 weeks of age.

3) Viral Diseases

i) Newcastle Disease

It is an acute viral disease, usually of birds characterized by sudden onset and rapid spread of respiratory symptoms. Nervous signs usually present in chicks, there is high mortality and majority of the flock are affected. The disease attacks chicken, turkey and wild species of birds.

The disease is caused by a paramour virus which has several strains. The disease is transmitted via aerosols and faeces. The incubation period of the virus varies from 2-15 days or longer with an average of 5-6 days.Clinically the disease is characterized by respiratory and nervous signs and in some cases Diarrhoea and swelling of the head. Birds appear listless, weak, have an

increased respiratory rate. There are numerous signs prior to death such as muscle tremor, torticollis, and paralysis of the wings, circling, walking backwards, and opisthotonas and there is reduction in egg production (Sainabury, 1993).

The disease can be prevented by vaccination using Bactch1 and Lasota vaccines in the first 1-4 days of life, 2 weeks, and 4 weeks. In layers vaccination is again done at 10 weeks of age and just before laying. Thereafter, revaccination is done every 5 months during the laying season. In endemic areas and also maintain good sanitation (Sainabury, 1993). Sick individuals should be isolated. At the moment there is no specific cure for the disease.

ii) Fowl pox

It's a disease growing on adult birds caused by DNA Avian pox viruses of family paramyxoviridae. It's transmitted by mosquitoes of genera culex and aedes and contact through abrasion of skin.

The disease presented in two forms; the cutaneous and diphtheritic forms. In the cutaneous form the comb, wattle eyelids and other unfeather parts of the body are lacrimation, loss of eyes in case of secondary bacterial infections. In diphtheritic form, there are yellow lesions on the oral mucosa, larynx oesophagus and trachea. There may also be cutaneous lesions firmly adhered on to the mucosa.

This disease can be prevented and controlled by stocking clean birds, isolating and treating infected birds, observing strict sanitary measures, vaccination using pigeon pox vaccine for laying birds and fowl pox adopted vaccine for growers. The vaccine is administered either by wing or by feather follicles. Infected birds should be isolated and treated by scrapping and painting of affected area using iodine solution.

Input is term denoting either an entrance or changes which are inserted into a system and which activate or modify a process, it is an abstract concept, used in the modelling, system design and system exploitation. It usually connected with other terms, e.g. input field, input variables, input Para meter. Input value signal, input port, input device and input file.

Input refers to advice (opinion), on the recommended measures offered as a guide to action; conduct (Wassily, et al. 1986).Input can also be defined as a something put in a system or expanded in its operation to achieve output or a result especially energy work, or power used to drive a machine(Wassily, et al1986), he use the Input concept in conceptual framework and he define it as an denoting terms to an entrance or changes . But the Current study use Input as economic variables that a Researcher can use to determine the Economic Impact of poultry production achieve by the individual Respond

Record keeping:The key to good business and management is records. Records are kept to provide information from which the poultry business may analysed so that the operator may develop more effective plans to develop the enterprise, to provide profit and loss accounts, to provide net worth statement showing financial progress throughout the year, to keep production records on birds and to keep a complete historical record of financial transactions for future reference (Ensminger, 1992).

Issues recorded by most farmers include; total number of birds housed, the cost of birds or the cost of rearing birds if it's done by the owner, eggs collected daily, sales made, feed consumption, mortality and labour costs (Sainabury, 1993). Records should not be elaborated otherwise they may not be kept properly by workers (Smith,1993).

Marketing: In Africa and other tropical areas, marketing of eggs and poultry is not highly organized. Sale of eggs and poultry depends on the farmer's initiative. Efforts to establish market schemes in different areas have not yet succeeded and there are few commercial parkers thus making it a problem to farmers and acts as a brake to poultry production. In a glut, price cutting becomes acute and farmers have to sale off their product at lower price to reduce the stock.

While, in the poultry industry there is no room for unplanned and uncoordinated production therefore it's important for the producers to make advance arrangements for the disposal of their birds and eggs at an appropriate time. The more control the poultry industry gains over the marketing and distribution of its produce, the better it becomes for each individual producer.

The way in which the poultry meat is presented is important if sales are to increase. The repacked carcasses whether frozen or fresh must have an eye appeal. Processing of poultry involves killing the bird, bleeding, hanging for reflex action to cease and plucking. This is followed by evisceration, washing, grading, parking and freezing. Many producers take no step to find the most appropriate market for their products nor do they study the requirements for the prospective buyers sufficiently. It's only in the broiler industry where it has been considered.

The various sales outlets for poultry and its products are; consumers at farm gate (carcasses are dressed), retail outlets, hotels and other catering establishments, parking stations, traveling dealers and large central markets.On the side of eggs, its future lies in promoting egg dish suited for the local dish. After eggs are collected at the poultry farm, they should be graded. This is to make sure that the eggs reach the consumers with the least possible loss of their original quality. The quality of commercial eggs is measured by; cleanliness, shape, colour, size and weight. Cracked, misshapen and broken eggs are always rejected. Eggs with chalk heads, sand heads of body checks are disqualified even if the defects are minor. Egg size and weight should be uniform. Double Yolk and jumbo eggs are rejected and sold locally to overcome transport problems very eggs are discarded. According to African classification, large eggs are 65g and above. Medium eggs are (55-64g) while small eggs are (40-55g).

According toEuropean classification, class 1 eggs are 70g and above, class 2 eggs are (65-70g,) class 3 eggs are (60-65g,) class 4 are (55-60g), class 5 are (50-55g), class 6 are (45-50g) while class 7 are 45g and below.

Internally, egg quality is measured by the size of the air space, condition of the yolk and the egg white, presence of blood and meat spots or other abnormalities in the egg white. This is done by candling.

Veterinary Health Care

The veterinary health care for chickens is one of the most important factors affecting poultry production. The periodical veterinary control is necessary to discover any kind of poultry disease at its early. This is necessary to save poultry production through the veterinary treatment of the chicks against these diseases. To protect and increase the immunity of the poultry lives-stock

against death or against the decreases of chicks' body weight, all necessary disease chicks at the right time, all types of vaccines should be veterinarystation should be available and sufficient in the different regions in which the poultry farms do exist.

Moreover, all types and methods of sanitation such as poultry house sanitations, Hatcher and cages sanitation etc. This should be fulfilled by cleaning the hatcheries between hatches and the waste disposal, is very important.As a regards to what happen in the country in the previous time that is divining military era the country faced some difficulties in the field of veterinary services where there was an acute shortage in the supply of vaccines and sanitation materials.

This was due to the economic blockade imposed on Nigeria by the western countries and their allied. It was very difficult to import vaccines and chemicals for sanitation, therefore vaccines and chemical sanitation materials reached the country so late, and the validity of these vaccines. The situation had left its negative impact upon the level of poultry production in Nigeria.

Environmental Factor

These environmental factors are summarized in table and its' include nutrition, age, temperature, humidity, period and ventilation. Other factors are management systems and management conditions to which the birds are exposed. Irrespective of the potentialities and environmental conditions, the layer fallow an age pattern in egg production as previously discussed. The variations in the lengths of different phases and performance during each layered eggs between white and brown lines. The basis of the variation in performance of the fowl might occur.

In-adequate funding:poultry farmer in Nigeria most of them are small scale poultry farmers. And they have not been able to expand their farms because of the lack of funds, for running their poultry farms. The farmer needs to have enough money to fund the business, because, it's capital intensive. The bird need to be feed on daily basis in order to have good products and this does not leave out the money spent on buying vaccines to prevent the outbreak of diseases, which can be disastrous for the farmer when it happens went on to highlight that; the amount of money that farmers have to spend on feed is continuously rising. There is either an increase in the price of maize or groundnut or other ingredients used in processing the feeds. Most of the farmers are

new funding alternatives feeding means for their birds while others are getting out of the business.

The lack of loan to survive in the environment is also not encouraging and this has been, affecting the production capacity of most farmers because the bulk of birds consumed in the country or in the state and local government are either from other places that have a big farms or imported outsides the country. Small scale farmers have not been able to contribute much to bird production and other poultry product with egg and meat because of the lack of access to loan facilities.

Another poultry farmer said the poultry sector is underdeveloped and will remain as it is so for so that long time investment should be made by government. He further emphasized that, farmers are yet to recover from the loss recorded during the outbreak of avian flu in 2007, which lead to the loss of many birds and eggs especially in the northern part of the country.

i) **Illiteracy**:Lack of knowledge for the farmers on how they can get assets to loan from the micro finance banks. Because the banks claim that their farming standard does not meet the normal farming standard required by the bank. This has in turn affected the turnout of bird productivity. In due course, the small scale farmers end up not producing enough birds for local consumption. This has a negative effect on eggs production in the state and country in general.

The government is serious about its bid to revive agricultural policy in the state and the country at large, it should allocate loans to small scales farmers in livestock farming, especially the poultry sector but not only the crop farmers.

Ii) **Temperature**

This factor appears to be very important as it partly accounts for differences of the fowl between these in the temperature regions and those in the tropics. The mechanism for the control of body temperature has been discussed earlier. The thermo neutral zone of the adult fowl within which the performance of the fowl is not adversely affected by temperature is from 12.8^{0}c to $26.^{0}$c. This temperature range supports the highest egg qualities. The temperatures and relative humidity

obtained in an experiment convening the period of two years at the University of Ibadan are shown in table 3 below.

Table 1: Environmental conditions that determining the performance of poultry production.

	Age in weeks from point of lay of 25 to 50 hen day production
Condition of poultry under:	No. of weeks 1 2 3 4 5 6 7 ……..11
(1)Light period	
- Tropic regions	12 12.5 13 13.5 14 14.5 15 17
- Temperature regions	6.0 6.5 7.0 7.5 8.0 8.5 14 or 17
(2)Light intensity	0.5 lux (5 foot candles)
	Not less than 0.05 lux (0.5 foot candle)
	Rate (m^3/h per bird) at

AdoptedfromthetropicalAgriculture**,**1975**.**

Research Questions

The study was designed to answer the following questions

- What are the impediments of poultry production in northern Nigeria?
- What are the level of it occurrences?

Research Objectives

The study is designed the following objectives to achieve

- To determine the levels of poultry production, inputs and output.
- To describe the level poultry production inputs and output.

Methodology

The research studyused the sample of 100 respondents and the tool of analysis used was descriptive analysis. This analysis provides an insight into the distribution of the participants' information.

Finding and discussion

Table 2:

The table below, showed the distributionof the respondents level of awareness on the impeding factors of poultry production in Katsina state, Nigeria.

Constraints/impeding factors	Frequency	Percent	Rank
Inadequate of funds	98	98	1st
Expensive medication, failure of veterinary drugs and vaccines	53	53	6th
Expensive feeds and irregularity in supply	68	68	4th
Diseases out break	44	44	7th
Lack of access to extension service and government support	93	93	3rd
Price instability and market	97	97	2nd
Theft	43	43	8th
Cannibalism	23	23	10th
Extreme weather	59	59	5th
Change of litter materials	40	40	9th

Source: Computed from field survey data, 2014.

The impeding factors on backyard poultry production

The distribution of the respondents based on the challenges facing by the backyard poultry owners was shown in the Table 2 above summarize the impeding factors against the back yard poultry production and list of such problems was gathered from the field and relevant literature to support the research study. Out of ten (10) impeding factors identified, in adequate fund has the majority of (98%) from the sampled respondents. It was observed during the interview that, all of them were emphasized on lack of loan and there is no enough financial institution in the communities that are ready to lend out money, as a result, this is affecting the business.

Instability of price and market problem was ranked second and it said that price of birds always fall after the festive periods (“eldilfitr and eldilakbr”) period and there is no ready market for the birds in the study area. Lack of extension service and government support was ranked third in the

list. They complained that government does not make the environment conducive for the rearing of backyard poultry production and hardly do they see extension agents that are supposed to be intermediary between the farmers and government. Expensive feeds and irregularity in supply, extreme weather and high costs of medication were ranked fifth, sixth and seventh in the identified problems. Theft (8th) was said to rampant during the festive periods most especially the local birds. Litter materials (9th) were scarce because the wood shavings that were using are now used for cooking; therefore make it not available and competitive. Cannibalism was the least problem mentioned and this category belongs to those that keep birds in deep litter house.

Conclusion and Recommendation

Result of this study shown that, there was a impediment related to lack of fund, instability of price and market problem, good medical care and health personnel. Therefore, government and non-governmental organization should try to improve and ameliorate these problems ofpoultry production for economic growth.

Government should provide the qualified extension workers, for regular checking and vaccine application for the chickens.

More so, the findings indicated that, poultry farmersfaced challenges on funds, prices and market, and extension services, it is therefore recommended that government should establish agricultural banks close to the farmers with minimum interest rate and as well help .

Result of this study shown that, there was a problems related to lack of fund, instability of price and market problem, good medical care and health personnel. Therefore, government and non-governmental organization should try to improve and ameliorate these problems for farmers and country economic growth.

REFRENCES

Ademosun, A.A. et al (1979). Constraints and Prospects for Small Ruminant Research.

Benabdeljelie, k. Arfaoui.T. karari.E. (2005).Economic Analysis of Gender and Credit Supply for Poultry Farming Programme.

Ensimiger, (1992).Marking a Market the Instructional Transformation of an African Society.

Kataly, (1998).Assessment of Local Farming Activities and Disease Control.

Pattison (1993).Pastorla in an Age of Uncertainty.

Sainabury, (1993).Annual Report and Account of poultry production.

Smith, .M. (1993).Wikipedia the Free encyclopedia.

United State of America Environmental Protection Agency (UEPA), Annual Report (1992).

Wassily, .W. Leontief Books, Biography Blog the Future. Impact of Automation on Workers (1986)