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Poultry Production Methods and Common Diseases Associated With Poultry in Kogi Central

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Abstract

The study was conducted to study the common diseases associated with poultry in Kogi central (Adavi, Okehi and Okene Local Government Areas), Kogi state, North Central Nigeria. Data were collected with the aid of a structured questionnaires administered with direct or verbal interview on 120 farmers in the study area. Data collected includes poultry diseases prevalent in the area, causes of mortality, mortality rates as well as vaccination schedules. The socio-characteristics of the respondents include; 71.7% male and 28.3% female made up 89.2% literate while 10.8% had no form of education (religious or western). The results showed that majority of the respondents (30.8%) were involved in poultry production, (49.2%) of the respondents spent about 10 years and above in poultry production. Most of the respondents (47.5%) turned to banks for loans to serve as capital to start up their poultry business. Majority (59.2%) respondents reported that diseases were the major causes of mortality among the birds of which 54.2% of respondents' recorded moderate mortality. Chronic respiratory disease was the most common disease (41.7%) recorded by the respondents. Majority (57.5%) of the diseases occurred during the dry season; wet season recorded only 42.5% occurrences. It is noteworthy that most farmers (55.0%) observed proper vaccination on their birds which enhanced production. Therefore, poultry production is a good form of enterprise that create employment for farmers but measures such as proper vaccination and good management should be done to improve productivity.

Keywords: Diseases, respondents, poultry, vaccination, North Central Nigeria

Introduction

Continued persistency of diseases exert severe impacts on food security, nutrition, health and financial costs at various level from producer, local, regional, national economy. Similarly, Owen *et al.* (2009) reported that growth in the livestock industry in Nigeria has recently fallen below expectation due to diseases, shortage of feed supplies and improper management. Family chicken production is an appropriate system that makes the best use of locally available resources (Sonaiya, 2000).

Data on livestock populations in Africa show that chicken population is the highest (Sonaiya and Olori, 1998). In sub-Saharan Africa, 85% of all households keep chicken under free range/extensive system, with women owning 70% of it, providing scarce animal protein in the form of meat and eggs as well as being a reliable source of cash income (Abubakar *et al.*, 2007). Chicken production in particular plays an important socioeconomic roles in developing countries. Nearly all rural and peri-urban families in developing countries keep a small flock of free range chicken (Riise *et al.*, 2004). Approximately 80% of the chicken populations in Africa are reared in free scavenging systems.

According to Sonaiya (2000) smallholder farming families, landless laborers and people with incomes below the poverty line are able to raise chicken with low inputs and harvest the benefits of eggs and meat via scavenging feed resources. In most African countries, the rural chicken population accounts for more than 60% of the total national chicken population (Sonaiya, 1990). The proportional contribution of poultry to the total animal protein production of the world by the year 2020 is believed to increase to 40%, the major increase being in the developing world (Delgado *et al.*, 1999). However, most communities lack the required husbandry skills, training and opportunity to effectively improve their household chicken production (Mlozi *et al.*, 2003).

The study was conducted to study the common diseases associated with poultry in Kogi State, North Central Nigeria.

Materials and Methods

This survey was carried out in Kogi central which comprises Adavi, Okene and Okehi local government area in the central senatorial district of Kogi State. Kogi state is located in the guinea savannah ecological zone with an average annual rainfall of 1046 mm. It is characterized by moderately high temperature require a minimum of 37°C temperature and a maximum temperature of 39°C (Ovimap, 2012).

The sampling size of one hundred and twenty (120) subjects was selected for the purpose of the study, to minimize cost of information, the random sampling technique or method was used in order to make it representative of the entire population. The random sampling technique was utilized (distribution of questionnaires) to select the sample from the target population of the study. The questionnaire was administered randomly to respondents on the common diseases and causes of mortality in poultry production. This ensures that all members of the target population has equal chances of being selected and is

a representative of the entire population. For the purpose of this research work, the percentage method was employed to interpret or analyzed the data. It is one of the simplest statistical techniques available for researchers for the interpretation of numerical data, general conclusion and to make prediction (under certain conditions).

Results and Discussion

From Table 1 above, eighty six percent (86%) of the respondents representing 71.7% were male, while only 28.3% were females. 76.7% of the respondents were married and 23.3% not married. Majority (51.7%) of respondents had education of up to the tertiary level. Only 10.8% did not attend school of any sort. This implies that the farmers may be able to read and follow simple instructions that can improve their level of production. This is in contrast with the findings of Akpan *et al.* (1995) and Abubakar *et al.* (2007) which reported that majority of farmers in northern Nigeria did not have western education

Table 1: Characteristics of Respondents

Parameters	No. of Respondents	Percentage
Sex		
Male	86	71.7
Female	34	28.3
Marital Status		
Single	28	23.3
Married	92	76.7
Level of Education		
Never been to school	13	10.8
Religion school	17	14.2
Primary school	0	0.0
Secondary school	8	6.7
Tertiary education	62	51.7
Vocational education	20	16.7
Sub-total	120	100.0

The major occupation of respondents, years spent in the poultry business and source of capital are shown in Table 2. Majority of the respondents (30.8%) were involved in poultry farming. In other words, most of the respondents took to poultry farming. Similarly, majority of the respondents (49.2%) spent 10 years and above in the poultry business, followed by those (27.5%) with below 10years experience. Most of the respondents (47.5%) turned to banks for capital to start their poultry businesses. This implies that since majority of the respondents were educated, they were well informed of the existence of credit facilities in the banks. They therefore utilized the opportunity to access their starting capitals from those banks including Agricultural Cooperative Bank which loaned them day-old chicks to start up with.

Table 2: Occupations of respondents, years spent in the poultry industry and source of capital

Parameters	No. of Respondents	Percentage
Occupation		
Poultry farming	37	30.8
Veterinary services	8	6.7
Teaching	22	18.3
Studentship	20	16.7
Trading	7	5.8
Politics	26	21.7
Years spent in poultry business		
Below 5 years	28	23.3
6-10 years	33	27.5
10 and above years	59	49.2
Source of capital		
Personal savings	48	40.0
Borrowed	15	12.5
Bank loan	57	47.5
Sub-total	120	100.0

Common diseases of poultry, periods of high frequency of their occurrences and extent of conduction of vaccination schedules to birds is presented in Table 3. Chronic respiratory disease is the most (41.7%) common diseases faced by poultry birds in the study area, distantly followed by Newcastle diseases (22.5%) and coccidiosis (16.7%). Majority of the diseases occurred during the dry season (57.5%). Wet season recorded only 42.5% of the diseases. This could be explained by the fact that during the wet season poultry birds were not faced with problems of lack of adequate feeds which gives adequate immunity to diseases. Majority (55.0%) of respondents observed proper vaccination schedules on their birds up to 16 weeks of their age. Some farmers (25.0%) vaccinated their birds up to 8 weeks of age, while other (20%) only vaccinated their birds up to 14 days old.

Table 3: Common diseases of poultry in the study area, the frequencies of their occurrences and extent of observation of vaccination schedules among respondents

Parameters	No. of Respondents	Percentage
Most common diseases		
Coccidiosis	20	16.7
Newcastle diseases	27	22.5
Fowl pox	13	10.8
Chronic respiratory diseases	50	41.7
Fowl typhoid	10	8.3
Frequency occurrences of diseases		
Dry season	69	57.5
Wet season	51	42.5
Observation of vaccination schedules		
First 14 days	24	20.0
First 8 weeks	30	25.0
First 16 weeks	66	55.0
Sub-total	120	100.0

As shown in Table 4, majority (of the respondents (59.2%) reported that diseases were the major causes of mortality among birds kept by them, followed by lack of adequate nutrition (22.5%). Birds lost through accident account for 10% of the total. 54.2% of the respondents recorded moderate mortalities among their flocks, 31.7% obtained low mortality rates while 14.2% incurred high mortalities among the birds kept.

Conclusion and Recommendations

The respondents listed coccidiosis, Newcastle disease, fowl pox, chronic-respiratory diseases and fowl typhoid and as well as financial constrain as most affecting the poultry Production enterprises. Other precaution measures suggested by the respondents include the provision of credit facilities by the government and financial institution at a subsidy and finally, the vaccination schedule should be in proper routine management.

Table 4: General causes of mortality and mortality rates among birds kept by respondent.

Parameters	No. of Respondents	Percentage
Causes of Mortality		
Nutrition	27	22.5
Diseases	71	59.2
Accidents	12	10.0
Others	10	8.3
Mortality rates		
High	17	14.2
Moderate	65	54.2
Low	38	31.7
Sub-total	120	100.0

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