

**NSAP****47th Annual Conference**
(JOS 2022)**CONFERENCE PROCEEDINGS**THEME
SECURING ANIMAL
AGRICULTURE AMIDST
GLOBAL CHALLENGES**ASSESSMENT OF FARMER'S USAGE OF ANTIBIOTICS FOR POULTRY PRODUCTION IN SOKOTO METROPOLIS, NIGERIA**S. Abubakar¹, A. I. Bukar², M. B. Bislava³, U. M. Kolo³, A. U. Abdullahi¹, S. Garba¹ and A. Bello¹¹Department of Animal Science, Usmanu Danfodiyo University Sokoto, Nigeria² Department of Animal Science, Federal University Dutse, Nigeria³ Department of Animal Science, University of Maiduguri, Nigeria

Corresponding Author's Email and Phone Number: mbbislava@unimaid.edu.ng., +2347033490151

ABSTRACT

The study assessed farmers' usage of antibiotics for chicken production in Sokoto metropolis. Thirty (30) farmers were purposively sampled and administered a structured questionnaire and data collected were subjected to descriptive statistics. The results revealed that a majority (46%) of the respondents raised layer birds and very few (3%) raised both layer and broiler birds. The result also showed that most (73.0%) farmers had 2-8 years of experience and only a few (3.3%) had more than 15 years and above. It also revealed that 40.0% had birds between 1,001-3,000, and 37.0% had birds of less than 1,000, and few (13.0%) had birds above 5,000. It also revealed that all (100.0%) farmers had administered drugs and vaccine at a point and a majority (70.0%) used Oxytetracycline as one of the types of drugs. 43.0% of the respondents used antibiotics for health management only, while 20.0% used antibiotics for growth improvement and 37.0% of the respondents used antibiotics for both purposes. Survey results showed that a majority (87.0%) had never produced birds without antibiotics.

Keywords: Farmers, Antibiotics Usage, Poultry Production, Sokoto metropolis**INTRODUCTION**

The use of antibiotics as feed additives has been a stick down of modern animal husbandry; however, this widespread practice is not without condemnation (Butaye, 2003). Concerns were raised that the use of antibiotics as therapeutics and for growth promotion could lead to a problem of increasing resistance in bacteria of human and animal origin, particularly regarding resistance in gram-negative bacteria (*Salmonella* spp. and *Escherichia coli*). Furthermore, the non-prescription use of antibiotics in poultry feeds has been a problem in many countries because of concerns related to the development of antibiotic resistance to human pathogenic bacteria and legislative action that limit their usage (Cervantes, 2006). The indiscriminate use of antibiotics in animal production is an important factor contributing to the menace of antibiotic resistance. Even though the world health organization (WHO) identified antibiotics resistance as one of the major health challenges (FAO/WHO, 2015). In developing countries, Nigeria inclusive, the use of antibiotics in the animal production sector remains unregulated, leading to inappropriate use of the drugs and a widespread increase in antibiotics resistance in humans. Mostly, antibiotics are administered for the treatment of infections, prevention of diseases, and growth promotion. The commonly used antibiotics today in poultry industries in developing countries like Nigeria include the following; Tylosine, Neomycin, Gentamycin, Tetracycline, (Chlortelvacycline, Oxytetracycline), Sulfonamides, Penicillin (Ampicillin), Arsenicals (Roxarsone), Enrofloxacin and Erythromycin (Alhendi *et al.*, 2000). Furthermore, it is highly recommended that whichever type of antibiotics a farmer uses, care should be taken to stick or abide by its withdrawal period before consuming either meat or eggs obtained from the animal the drugs were administered to. Therefore, this study absorbed to assess Farmer's usage of antibiotics used for poultry production in Sokoto Metropolis.

MATERIALS AND METHODS***Experimental location***

The study was carried out in Sokoto metropolis. Sokoto is located between latitudes 13°0'21.1428" N, Longitudes 5°14' 51.1872"E in the northern part of Nigeria, and lies at an altitude of 350 m above the sea level (Mamman *et al.*, 2000). The state falls within the Sudan Savannah vegetation zone with alternating short rainfall

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and long dry season. A dry period (harmattan) occurs between October and February (Malami *et al.*, 2001). The annual rainfall is about 700 mm. The rainy season starts from June to early October with a peak in August, Potential evapotranspiration has been reported to be 162 mm. A maximum temperature of 41°C has been reported in April and a minimum of 13.2°C in January (SEPP, 1996).

Study Plan

The study was conducted in Sokoto metropolis, where 30 farmers (poultry producing farmers) were purposively sampled and administered with a structured questionnaire that examined antibiotics usage for poultry production. Data obtained were analyzed using inferential statistics.

RESULTS AND DISCUSSION

Antibiotics usage for poultry production in sokoto metropolis

Table 1 shows the results of a field survey conducted to examine the antibiotic usage for poultry production in sokoto metropolis.

Category of birds kept

The survey result showed that from the 30 respondents sampled, 10.0% (3) kept laying birds, 47.0% (14) kept only broilers while 43.0% (13) keep both layers and broilers. Many of the respondents in the study area raising broilers which represent about 90.0% (27).

Production experience (years)

Survey results on the years of experience in broiler production by the respondents showed that the highest percentage (73.0%) is constituted by farmers in the 2-8 years category and the percentage declined with the increase in production period to (23.0%) at 9-15 years and finally only (4.0%) at years above 15.

Stocking capacity (number of birds)

The result of the survey on the production capacity of the respondents showed that 40.0% (12) had birds between the ranges of 1001-3000, and 36.7% (11) had birds of between 1000 and below, 13.3% (4) from the percentage of the respondents that have birds above 5000 and finally 10.0% (3) form the percentages of the respondents that had between 3000 -5000.

Drugs and vaccine usage

The result of the survey on drugs and vaccine usage among broiler producers in the study area showed that all the respondents (100%) gave or administered antibiotics and vaccines to their birds.

Types of drugs used

The result of the survey on the type of drugs used showed that 70.0% (21) of the respondents used Oxytetracycline as one of the types of drugs they administered to their birds, the percentage declined to 16.7% (5) for those that do not care about the type of drugs they administered and only 13.3% (4) form the percentage of the respondents that do not use Oxytetracycline.

Reasons for use of antibiotics

The survey results showed that 43.3% (13) of the respondents used antibiotics for health management only, while 20.0% (6) used antibiotics for growth improvement and 36.7% (11) of the respondents used antibiotics for the two purposes, which are health management and growth improvement.

Oxytetracycline usage

The majority of the respondents (70.0%; 21) reported using oxytetracycline as one of the antibiotics they used in their production. Few of the respondents (16.7%) (5) Did not care to know if oxytetracycline is one of the antibiotics they use in their production and finally only 13.3% (4) of the respondents do not use oxytetracycline as one of the antibiotics in their production.

Drugs free production

Survey results showed that the majority of the respondents 86.7% (26) have never produced birds without antibiotics, only a few of the respondents 13.3% (4) were reported to have produced antibiotics-free birds.

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Parameter	Frequency	Percentage (%)
Category of birds kept		
Layers	3	10.0
Broiler	14	47
Both	13	43
Years of production		
2-8 years	22	73
9-15 years	7	23
16 years and above	1	4
Production capacity		
≤ 1000	11	37.0
1001-3000	12	40.0
3001-5000	3	10.0
≥ 5000	4	13.0
Drugs and vaccine usage		
Yes	30	100.0
No	0	0.0
Reason for the usage of antibiotics		
Health management	13	43.0
Improve growth	6	20.0
All of the above	11	37.0
Oxytetracycline as one of the antibiotics used		
Yes	21	70.0
No	4	13.0
I don't care	5	17.0
Production drug-free		
Yes	4	13.0
No	26	87.0
The stage of administering antibiotic		
At brooding	3	10.0
At finishing	1	3.0
At both stage	26	87.0
Types of drugs used		
Multivitamins	27	90.0
non	3	10.0
Antibiotics	29	96.7
non	1	3.3
others	21	70.0
non	9	30.0

Source: Field Survey (2019).

Antibiotics usage and production capacity of farmers

From the result of the survey conducted, few (10%) of the respondent are layer farmers, 47.0% of the respondents keep only broilers while 43.0% of the respondents keep both layers and broilers. The majority (73.0%) of the

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respondents are experienced farmers because they spent 2-8 years in production. From all the respondents sampled, it was clearly observed that 40.0% of them keep between 1,001-3,000 birds which is an indication that, they form average producers, with 36.0% keeping less than 1,000 birds, which form small and mostly backyard producers. Most of the farmers sampled 43.3% of the respondents used antibiotics for health improvement. All the respondents administered antibiotics and vaccines (100.0%), while 70% of them use oxytetracycline as one of the antibiotics used in their production. The majority of the respondents (87.0%) have never grown broiler birds without antibiotics, the same percentage of 87.0% administered antibiotics at both stages of growth (starter and finisher). Almost all the respondents (90.0%) use multivitamins, antibiotics for their production.

CONCLUSION

Based on the results of the study, it was therefore concluded that most of the farmers are using antibiotic for poultry production.

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