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ANALYSIS OF RABBIT PRODUCTION PRACTICES BY FARMERS IN OGUN STATE, NIGERIA

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ABSTRACT

Rabbit production is a socio-economic activity that could lead to improved income and living standard of Nigerians. This study was conducted to determine the analysis of rabbit production practices by rabbit farmers in Ogun State, Nigeria. A total of ninety-one (91) respondents were sampled with the aid of a well-structured questionnaire. Data obtained were subjected to both descriptive and inferential statistics using Statistical Package for Social Science (SPSS, 2020). The highest number of respondents were within 31- 40 years age bracket (39.56%); about 52.70% were Christians while 84.60% had formal education up to tertiary level, with 64.83% having Bachelors degree. There were no significant associations between sex (χ^2 = 49.48, df = 1), religion (χ^2 = 151.1, df = 2), educational status (χ^2 = 88.50, df = 4), academic qualification (χ^2 = 334.4, df = 4), ethnicity (χ^2 = 122.56, df = 2), marital status (χ^2 = 57.51, df = 3) and production level. There was a positive relationship between respondent's years of experience in rabbit farming and level of production. Rapid growth rate (P=0.013) significantly influenced production level. The study concluded that the level of rabbit production in Ogun state is still low and poor access to credit and poor public acceptability towards rabbit farming constitutes the major constraints to rabbit production in the state.

Keywords: Rabbit, farmers, social characteristics, -economic factors, rearing activities, Ogun State

INTRODUCTION

Larger percentage of human population depends mostly on plant sources of protein which are deficient in essential amino acids needed for growth and development due to inadequate animal protein sources in the developing countries, in terms of quality and quantity (Odunsi, 2003). Nigerians remain among the least consumers of animal protein in the world. Average consumption of animal protein is estimated at 4.5g/head/day as against a minimum requirement of 35g/head/day recommended by the Food and Agricultural Organization of the United Nation (Atsu, 2002). Hence, there is advocacy for short gestation animals such as rabbit that can bridge animal protein deficiency gap in Nigeria (Ajala and Balogun, 2004). There has been increased awareness

of the importance and benefits of rabbit meat in Nigeria as a means to alleviate food shortages (Iheukwumere *et al.,* 2018). This is largely due to rabbit's high rate of reproduction, early maturity, small body size and rapid growth rate comparable to that of broiler chicken (Baruwa, 2014). They also possess high genetic selection potential, efficient feed and land space utilization, high quality nutritious meat, limited competition with humans for conventional cereals and leguminous grains (Arijeniwa *et al*., 2000). Rabbit has the ability of turning forage into high protein and yet remains within the investment range of the poorest families (Ahaotu *et al.,* 2008; Lakabi *et al*., 2004).

However, rabbit farming in Nigeria is faced with myriads of problems (Nworgu, 2007). According to the Presidential Taskforce on Alternative Formulation of Livestock Feeds (1992), Nigeria can boast of 13 million cattle, 34.5 million goats, 22.1 million sheep, 1.7 million rabbits and 0.5 million guinea pigs. These figures reveal that the population of rabbits is low when compared with other livestock in the country. This low population figure must be as a result of numerous constraints, which hinder its adoption and its subsequent production to augment the protein intake in the populace diets. Among widely identified and major constraints to rabbit keeping are the association of rabbits as pet rather than food-producing animals, limited marketing opportunities in the tropics, insufficient promotion, erratic product supply, unreasonable price competition from other meats and lack of product diversification (Oluwatusin, 2014).

Information on the challenges and prospects of rabbit farming in Nigeria is scanty (Adedeji *et al.,* 2015) while few of the information available are unable to elucidate the major intricacies involved in rabbit farming (Mailafia *et al.,* 2010). The preponderant nature of smallholder rabbit production units and their contributions to food security are cardinal reasons to design a clientele-based approach to Research and Development for such units (Oseni *et al*., 2008). An assessment of critical factors affecting such units will help to design appropriate intervention measures to boost and enhance their contributions to food security.

It was reported by Abu *et al.,* (2008), that data on status and promotional strategies for rabbit production in Nigeria were lacking and rabbit production offers a great potential for the attainment of food security in terms of provision of high-quality animal protein intake. Adoption of Rabbit farming as a form of mini-livestock production is a way of increasing animal protein production, sale and income, improvement in the living standard of farmers as well as providing basis for more scientific discovery and technological advancement. It is a corrective measure for animal protein shortage and increased meat source to augment family feed budget and sustain families under the most economic situation.

The belief system of the farmers may also be of significance. The perception analysis of rabbit production in Ogun state will among other benefits contribute to knowledge and provide data needed by relevant agencies for policy formulation and intervention strategies. This study therefore evaluated rabbit production practices in Ogun state to determine the level and profitability of rabbit rearing in Ogun State, Nigeria.

METHODOLOGY

Study Area

The study was carried out in Ogun State in southwestern Nigeria. The state lies approximately within latitude 7^{o} 3.5' and 9^{o} 12' north and longitudes 3^{o} 35' and 5^{o} 27' east with the population of 3,751,140 people (NPC, 2006). It is bounded in the west by Benin Republic; in the south by Lagos State and Atlantic Ocean; in the east by Ondo State and in the north by Oyo State. It covers a land area of 16,409.28 km^{2}, less than two percent (2%) of the country's landmass (Olaoye *et al.,* 2007). The rainy season starts around middle of March and continues until late October. The dry season starts in November and lasts until February in most locations in the state. Rainfall ranges between 1600 and 900 mm annually. The state is warm throughout the year with a temperature of between 28 and 35°C. Humidity is between 85 and 95% (Oloruntoba and Adegbite, 2006).

The northern part is mainly of derived savannah; the central part of rain forest belt and southern part of mangrove swamp. The greater part of the state however lies in the tropical rainforest zone. The main occupations of the people in the state are: agriculture, fishing, clothing, textiles and civil service. The state has four agricultural extension zones (Figure 1) namely: Abeokuta, Ilaro, Ijebu-Ode and Ikenne (OGADEP, 2005). Ogun State is known for Agriculture, due to its natural resources which include an extensive fertile soil suitable for Agriculture and mineral deposits.

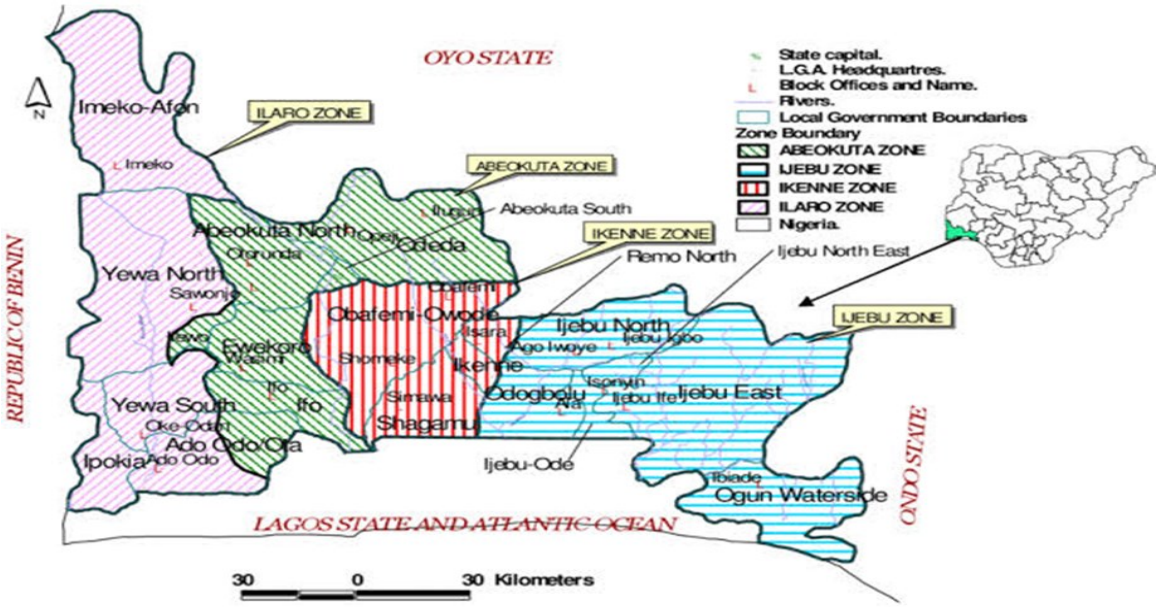

Figure 1: Map of Ogun State Agricultural Development Project Zones

Population and Sampling Techniques of the Study Area

The population of the study comprised of rabbit farmers in Ogun State within the four (4) Agricultural zones which are: Abeokuta, Ilaro, Ikenne and Ijebu Zone. Purposive sampling technique was adopted in selecting 91 rabbit farmers in the study area, within the four (4) agricultural zones. Thirty-five (35) rabbit farmers were sampled from Abeokuta zone, twenty (20) from Ijebu zone, eighteen (18) from Ilaro zone and eighteen (18) from Ikenne zone. The variation in sample size was due to disparity in concentration of rabbit farmers in the zones.

Data Collection

Primary data were collected from field survey using well-structured questionnaire which was administered to rabbit farmers in the study area. Face validity and construct validity were employed in testing the instrument (questionnaire) that was used for the study.

Data Analysis

Data collected were analysed using the Statistical Package for Social Science (SPSS, 2020) to obtain both descriptive and inferential statistics. Descriptive statistical tools such as frequency counts, percentages and means were used. Inferential statistical tools such as Pearson Product Moment Correlation (PPMC) and Chi-square were also used. The significance of the relation was determined at 0.05 level of probability.

RESULTS AND DISCUSSION

The highest number of respondents were within 31-40 years age bracket (39.56%), followed by the age group of 21-30 years (22.10%). The least was the <20 years group that was 4.39% (Table1). Average age of the rabbit farmers was 34.60 years, indicating that young people were actively involved in

rabbit production in the study area and because they are in their active and productive years, they are more flexible in decision-making, risk-taking and can easily adopt innovations that could enhance rabbit production. This is similar to the findings of Jatto (2005) who found that high percentages of poultry farmers were in their active ages; Iheukwumere *et al.,* (2018) also stated that age of rabbit farmers has an important bearing on the effectiveness in performing management functions and therefore affects its productivity.

The result also revealed that 52.70% of the respondents were Christians while 45.10% were Muslims. This implies that rabbit production does not have religious implication. Hence irrespective of one's religion, rabbit production is a business which everyone can venture into (Adedeji *et al.,* 2012). About 85% of the respondents had formal education up to tertiary level with 64.83% of them having Bachelor degree. This implies that mainly educated people were involved in rabbit production; an attribute that can enhance their ability to obtain relevant information unguided (Iheukwumere *et al.,* 2018). USAID (2010) observed that the more educated the farmer is, the more the chances that the farmer would adopt innovations. Adedeji *et al.,* (2012) reported that education has an important influence on managerial ability and decision making, therefore it may be concluded that producers will be able to understand and adopt new technologies. About 71.40% were married, with mean household size of 5 persons while 28.60% were single (Table 1). This finding contradicts the assertion by Ekong (2010) that early marriage is practiced more in rural areas than in urban centers, due to low levels of education, lower aspiration and dependence on agriculture for livelihood.

Table 1: Socio-Economic Characteristics of Rabbit Farmers in Ogun State

Parameters	Frequency	Percentage	Mean
Age (Years)			
≤ 20	4	4.39	34.60 years
21 – 30	27	29.67	
31 – 40	36	39.56	
41 – 50	12	13.19	
51 & above	12	13.19	
Religion			
Christianity	48	52.70	
Islam	41	45.10	
Traditional	1	1.10	
Realist	1	1.10	
Level of Education			
Primary education	1	1.10	
Secondary education	13	14.30	
Tertiary education	77	84.60	
Educational status			
OND	10	10.98	
NCE	1	1.10	
HND	7	7.69	
Bachelor degree	59	64.83	
PGD	3	3.30	
Master's degree	8	8.80	
Ph.D.	3	3.30	
Marital status			
Married	65	71.40	
Single	26	28.60	

Source: Field survey, 2020

OND: Ordinary National Diploma, NCE: Nigeria Certificate in Education, HND: Higher National Diploma, (*Bachelor Degree)* PGD: Postgraduate Diploma, Ph.D.: Doctor of Philosophy

Income generation was the greatest motivation of most (96.70%) of the farmers in rabbit production while others were motivated by festivity, cultural and spiritual factors (Figure 2). Motivation is one of the essential reasons most farmers venture into rabbit business, and it also aids the quantity of rabbit produced. Majority of the respondents were motivated into rabbit production because it serves as source of income generation. This might be due to various advantages of rabbit production such as prolificacy, low production cost and side business with good returns which results in profit maximization.

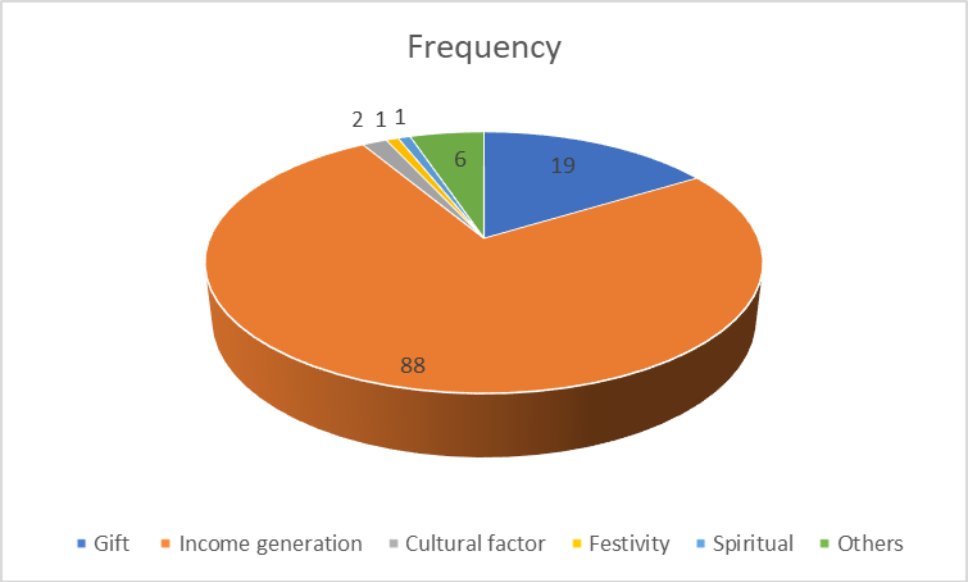

Figure 2: Motivation score of rabbit farmers in Ogun State

Rabbit farmers in the study area engage in rabbit farming as their secondary occupation, as reported by 82.42% while 17.58% had rabbit farming as primary occupation (Figure 3). Some of the farmers are involved in other occupations (24.19%), followed by civil service (19.78) and trading (15.38). This indicates that the majority of the respondents engaged in rabbit production as side business not as full-time business.

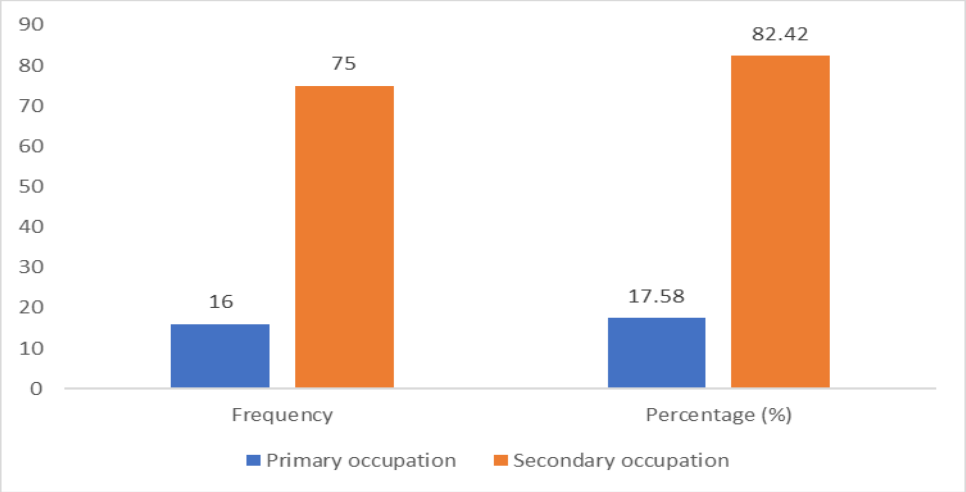

Figure 3: Livelihood status of rabbit farmers in Ogun State

Majority (87.90%) of the farmers produce rabbit all year round while 9.90% produce rabbits during the raining season only and 2.20% produce during dry season only (Figure 4). The production cycle of the rabbit farmers shows that the farmers produced rabbits all year round so as to meet the demand for rabbit meat. This corroborates the findings of Baruwa (2014) who stated that the reason for going into rabbit production was that rabbits are highly prolific in terms of offspring (kg/year/doe) and will breed all year round if well-managed. It requires little space than large livestock due to its small body size.

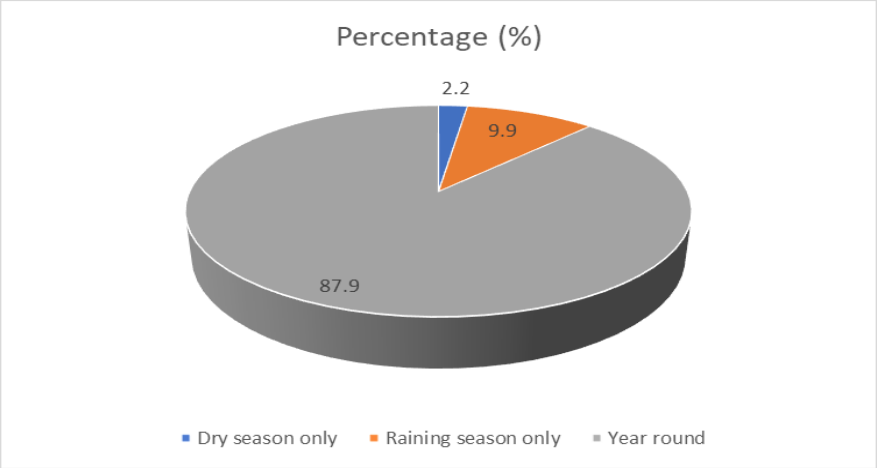

Figure 4: Production cycle of rabbit farmers in Ogun State

Higher number of females (does) were kept by farmers than males (bucks), 16.48% and 3.3%, respectively (Table 2). This result is similar to the report of Marcus and Onyeonoro (2018) who reported that there is preference for keeping young and more productive female animals in the herd for reproduction and multiplication. The findings further revealed that 38.46% of the rabbit farmers possessed 11 - 20 weaners while 64.84% possessed 1 – 10 growers. The mean number of bucks, does, weaners and growers in this study shows that rabbit production is still more of a smallholder business. It is evident that the number of weaners and growers kept by rabbit farmers are higher than that of bucks and does, indicating good prospects for rabbit production in the area. This could be associated with litter size at birth per doe, number of weaned fryers, post weaning mortality. Similar observations were made by Iheukwumere *et al.,* (2018) who stated that mean flock size of rabbit farmers was 34 in their studies on benefits and problems of rabbit production in Abia State. This signifies that farmers in the area of study were at commercial level of production.

The results also revealed the breeds of rabbit reared by rabbit farmers in the study area in which majority (84.60%) raised Hyla, 70.45% raised New-Zealand white, Dutch (52.80%), Chinchilla (51.70%), Others (39.60%), Angora (23.10%), Harlequin (20.90%) and California (18.70%). The two most reared breed by farmers were Hyla and New-Zealand white in this study (Table 2). This could be attributed to the fact that both breeds possessed white colour and high growth rate. This corroborates the findings of Baruwa (2014) who stated that New-Zealand and Carlifornian breeds are popular in the study area because they combine white coat colour (preferred by processors) and good growth characteristics just like broiler chickens.

The system of production practised by rabbit farmers shows that majority (96.70%) adopted intensive system, 2.20% practised semi-intensive system while 1.10% adopted extensive system. The reason for adoption of total confinement (intensive system) by majority of the respondents might be due to better performance of rabbits which in turn will affect profit margin of the farmers when compared to other system of production. This finding is in accordance with the report of Marcus and Onyeonoro (2018) who indicated that rabbits reared under intensive system of production raises hope of the farmers in terms of profitability.

Table 2: Stock and System of production by Respondents in Ogun State

Number of bucks	Frequency	Percentage	Rank	Mean
1 – 10	80	87.91		8.0 bucks
11 – 20	6	6.59		
21 – 30	3	3.30		
31 – 40	1	1.10		
41 – 50	1	1.10		
Number of does				
1 – 10	44	48.36		7.0 does
11 – 20	26	28.57		
21 – 30	15	16.48		
≥ 31	6	6.59		
Number of weaners				
1 – 10	19	20.88		13.0 weaners
11 – 20	35	38.46		
21 – 30	19	20.88		
31 – 40	7	7.69		
41 – 50	8	8.79		
≥51	3	3.30		
Number of growers				
1 – 10	59	64.84		6.0 growers
11 – 20	22	24.17		
21 – 30	6	6.59		
≥31	4	4.40		
Breeds of rabbit reared by rabbit farmers*				
New-zealand white	64	70.40	2nd	
California	17	18.70	8th	
Chinchilla	47	51.70	4th	
Dutch	48	52.80	3rd	
Hyla	77	84.60	1st	
Angora	21	23.10	6th	
Harlequin	19	20.90	7th	
Others	35	39.60	5th	
System of production				
Intensive system	88	96.70		
Extensive system	1	1.10		
Semi-intensive system	2	2.20		

Source: Field survey, 2020
*Multiple responses are applicable

Feed quality has been a major limiting factor of production in many rabbit farms. It was observed that majority (85.70%) of the respondents fed their rabbits on forage and concentrate (pellet or mash), while 11.00% fed their rabbits on concentrate only, 4.40% fed their rabbits with kitchen waste and 3.30% fed their rabbits on forage only (Table 3). The use of forage and concentrate combination by majority of the farmers in the study area is to improve growth rate, aid gut motility and reduce cost of feeding thereby achieving better production and enhancing profit maximization. According to Samkol and Lukefahr (2008), a balanced diet containing adequate fibre (20 – 25%), minimal starch and optimum protein concentration is important to prevent gastrointestinal distress and improve rabbit production (Irlbeck, 2001).

Coccidiosis was the disease of major concern to the rabbit farmers with 50.50 and 57.10% of them experiencing this at the rainy and dry season, respectively (Table 3). Other diseases encountered by the farmers at both seasons include diarrhoea and bloat. About 28.60 and 22.00% of farmers revealed that mange disease affect rabbit both in the dry and rainy seasons, respectively. Seasonal variations do not influence disease infection as both coccidiosis and mange can affect rabbit health during wet and dry seasons. Many (48.36%) of the respondents managed rabbit diseases using both conventional and ethno-veterinary method, while 45.05% of rabbit farmers managed rabbit diseases using only the conventional method and 6.59% of respondents managed rabbit diseases using the ethno-veterinary method. The reasons for selection of health management revealed that majority (87.90%) of rabbit farmers was due to the effectiveness/ efficacy of the treatment, while 57.10% was due to the accessibility of the treatment and 45.10% economical. Rabbit farmers that managed disease using the ethno-veterinary methods used majorly (53.80%) leaves, (15.40%) roots and (21.10%) stem (Table 3).

This is similar to the findings of Abu *et al.,* (2008) who stated that rabbit do not suffer from any peculiar diseases. Frequent attack of skin disease (mange) is common and this is often treated locally by rubbing a mixture of discarded engine oil and salt or kerosene. Leaves of *Aspilia africana* and *Carica papaya* are fed to rabbits for their medicinal properties against diarrhoea.c

Table 3: Feeding and Health Management Practices employed by Respondents in Rabbit Production

Type of feeds*	Frequency	Percentage	Rank
Green leaves (forage) only	3	3.30	4th
Concentrate only	10	11.00	2nd
Green leaves (forage) & Concentrate	78	85.70	1st
Kitchen waste	4	4.40	3rd
Others	1	1.10	5th
Common disease to rabbit farmers flock*			
Mange (dry)	26	28.60	5th
Mange (rain)	20	22.00	6th
Coccidiosis (dry)	46	50.50	2nd
Coccidiosis (rain)	52	57.10	1st
Others(dry)	35	38.50	3rd
Others(rain)	33	36.30	4th
System of health management			
Conventional	41	45.05	
Ethno-veterinary	6	6.59	
Both	44	48.36	
Reason for selection of health management*			
Economic	41	45.10	3rd
Cultural	1	1.10	4th
Accessibility	52	57.10	2nd
Efficacy/effectiveness	80	87.90	1st
Plant part used for ethno-vet system of heath management*			
Leaves	49	53.80	1st
Root	14	15.40	2nd
Stem	11	12.10	3rd

Source: Field survey, 2020
*Multiple responses are applicable

For rabbit housing construction and type, majority (85.70%) of rabbit farmers considered space availability, while 73.60% considered materials availability, 50.50% considered temperature and 30.80% considered rainfall direction (Table 4). According to Onyinyechi (2015), housing constitutes an important factor to a successful rabbit production. It was revealed in the study that the major factor considered for rabbit housing in Ogun State by rabbit farmers were space and materials availability.

Majority (59.30%) of rabbit farmers make use of outdoor housing, while 57.10% of rabbit farmers make use of indoor housing for their rabbits. Majority (72.53%) of respondents used both (wooding and galvanized iron) for construction, while 19.78% of respondents used wooding only and 7.69% of respondents used galvanized iron only for rabbit housing (Table 4). This shows that most rabbit farmers live very close to where their rabbit housing is located. Complaints by farmers about the use of wood materials is that rabbits will eventually chew the wood and escape or weaken the hutch structure, making rabbits more susceptible to predation. Kaplan-Pasternak and Lukefahr (2011) noted that special consideration must be given to the choice of hutch materials for rabbit housing stressing on the attribute of rabbits to gnaw at any cage materials used to house them.

Concrete feeder was the commonest medium of feeding the rabbits (59.34% respondents), while 9.89 and 2.20% used plastic and earthen feeders respectively. 28.57% of farmers combined the use of the different feeders. Many (53.85%) of rabbit farmers used concrete drinkers, while 21.98, 13.18, 9.89 and 1.1% makes use of combination of drinking materials (concrete, earthen, plastic and nipple), nipple drinkers, plastic materials and earthen drinking materials, respect tively (Table 4). This indicates that majority of the respondents make use of the concrete feeding and drinking materials due to its durability and also prevent wastage of feed and water.

All the respondents believed that rabbit reproductive potential, low cholesterol, high protein and low-fat content are major determinants to rabbit production (Table 5). About 98.90% of the respondents believed rabbit prolificacy is a determinant to their production, while short gestation (96.70%), effective space management (95.60%), forage utilization (95.60%), rapid growth rate (94.50%) and efficient conversion forage (90.10%) are determinants to rabbit production. The least determinants to rabbit production were low production cost (52.70%), small body size (52.70%) and market availability (78.00%) – Table 5. This is in line with the findings of Onyinyechi (2015) who stated that rapid growth rate, high reproductive potential and ability to utilize forage make rabbits an important livestock contributing to meat and protein in Nigeria.

Table 4: Housing System and Equipment employed by Rabbit Farmers in Rabbit Production

Factors considered for rabbit housing*	Frequency	Percentage	Rank
Materials availability	67	73.60	2nd
Temperature	46	50.50	3rd
Slope	4	4.40	6th
Rainfall direction	28	30.80	4th
Wind direction	19	20.90	5th
Space availability	78	85.70	1st
Type of housing*			
Indoor	52	57.10	2nd
Outdoor	54	59.30	1st
Materials used for rabbit housing construction			
Wooden only	18	19.78	
Galvanized iron only	7	7.69	
Both	66	72.53	
Type of feeders			
Concrete	54	59.34	
Earthen	2	2.20	
Plastic	9	9.89	
Combined	26	28.57	
Type of drinkers			
Concrete	49	53.85	
Earthen	1	1.10	
Plastic	9	9.89	
Nipple	12	13.18	
Combined	20	21.98	

Source: Field survey, 2020
*Multiple responses are applicable
Combined: Combination of two or more of concrete, earthen, plastic and nipple drinkers or feeders

Table 5: Evaluation of Determinants to Rabbit Production in Ogun State

Determinants to rabbit production*	Frequency	Percentage	Rank
Rabbit is prolific	90	98.90	2nd
Low production cost	48	52.70	8th
Efficient conversion of forage	82	90.10	6th
Effective space management	87	95.60	4th
Market availability	71	78.00	7th
Rabbits have small body size	48	52.70	8th
Rabbits have short gestation period	88	96.70	3rd
Rabbits have reproductive potential	91	100.00	1st
Rabbits have rapid growth rate	86	94.50	5th
Rabbits have ability to utilize forage	87	95.60	4th
Rabbit meat has low cholesterol	91	100.00	1st
Rabbit meat has high protein	91	100.00	1st
Rabbit meat has low fat content	91	100.00	1st

Source: Field survey, 2020

*Multiple responses are applicable

Majority of the (91.20%) respondents believed that poor access to credit is a major challenge to rabbit production in the study area (Table 6). Other constraints were scarcity of forage during dry season (90.10%), inadequate extension contact (83.50%), inadequate capital (81.30%), heat stress (75.80%) and high cost of building materials (70.30%). 63.70% of respondents also believed that high cost of feed is one of the constraints to rabbit production. Other constraints as rated by the respondents are poor public acceptability (58.20%), disease infection (46.20%), marketing problems (36.30%), feeding problem (25.30%), pest problem (24.20%), scarcity of commercial feed (23.10%), poor quality of available feed (20.90%), high mortality (15.40%), high cost of labour (8.80%) and taboo (8.80%). This agrees with the findings of Odinwa *et al.,* (2016) who stated that lack of proper awareness, lack of capital, lack of incentive and attitude of farmers towards rabbit constitute the major problems in rabbit production. It is also similar to the findings of Sogunle *et al.,* (2009) who emphasized that knowledge of rabbit genetics and production techniques still lag behind when compared with other livestock.

Table 6: Evaluation of Constraints to Rabbit Production in Ogun State

Constraints to rabbit production*	Frequency	Percentage	Rank
Poor access to credit	83	91.20	1st
Pests' problem	22	24.20	12th
Diseases infection	42	46.20	9th
Marketing problem	33	36.30	10th
Feeding problem	23	25.30	11th
High mortality	14	15.40	15th
High cost of building materials	64	70.30	6th
Inadequate extension contacts	76	83.50	3rd
High cost of labour	8	8.80	16th
High cost of feed	58	63.70	7th
Scarcity of commercial feed	21	23.10	13th
Scarcity of forage during dry season	82	90.10	2nd
Poor quality of available feed	19	20.90	14th
Inadequate capital	74	81.30	4th
Taboo	8	8.80	16th
Poor public acceptability	53	58.20	8th
Heat stress	69	75.80	5th

Source: Field survey, 2020
*Multiple responses are applicable

The association between demographic characteristics and production level was tested using chi-square for variables measured at nominal level and ordinal level while Pearson product moment correlation (PPMC) was used for variables measured at interval levels. The chi-square statistical analysis showed that there were no significant associations between sex (χ^2 = 49.48, df = 1), religion (χ^2 = 151.1, df = 2), educational status (χ^2 = 88.50, df = 4), academic qualification (χ^2 = 334.4, df = 4), ethnicity (χ^2 = 122.56, df = 2), marital status (χ^2 = 57.51, df = 3) and production level (Table 7). This shows that none of these variables have influence on the production level in rabbit production. The correlation analysis showed that there was a positive relationship between rabbit farmers years of experience in rabbit farming and their level of production. This shows that the number of years spent by the rabbit farmers may influence their rabbit production level. This result is expected as rabbit farmers well-advanced in years vis-à-vis rabbit farming enhanced their production level.

Table 7: Test of Association between demographic characteristics and Production Level

Variables	Chi-square	Df	P-value	Decision
Sex	49.48	1	0.779	NS
Religion	151.1	2	0.89	NS
Educational status	88.5	4	0.99	NS
Academic Qualification	334.4	4	0.184	NS
Ethnicity	122.56	2	0.320	NS
Marital status	57.51	3	0.49	NS
Variables	**r-value**		**P-value**	**Decision**
Age	0.140		0.188	NS
Years of experience	0.335		0.001	S
Household size	0.172		0.103	NS

S: Significant
NS: Not Significant

Rapid growth rate (P = 0.013) significantly influenced production level (Table 8), indicating the ability of rabbits to mature and reach market weight in a short period of time which in turn improves production level.

Table 8: Test of Association between Determinants to(*of*) Rabbit production and Production Level

Variable	B	Std. Error	t-value	Sig	Decision
Constant	372.02	111.0	3.349	0.002	S
Rabbit is prolific	-5.550	9.506	-0.584	0.502	NS
Low production Cost	-14.89	10.07	-1.479	0.146	NS
Efficiently convert fodder to food	-43.02	22.48	-1.913	0.062	NS
Effective space Management	-19.25	19.50	0.981	0.329	NS
Market availability	10.64	12.51	0.850	0.399	NS
Rabbits have small body size	-5.37	10.74	-0.500	0.619	NS
Short gestation Period	55.40	35.43	1.507	0.124	NS
High reproductive Potential	-9.49	20.84	-0.45	0.651	NS
Rapid growth rate	-79.16	30.56	-2.590	0.013	S
Ability to utilize Forages	-59.85	37.37	-1.602	0.116	NS

S: Significant NS: Not Significant

CONCLUSION

The study concluded that the level of rabbit production in Ogun State is still low.
Poor access to credit, high cost of feed and poor public acceptability towards rabbit farming constitute the major constraints to rabbit production in the state.

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