

Challenges of Rabbit Farming in Ogba/Egbema/Ndoni Local Government Area of Rivers State

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Abstract

This study was carried out to investigate the challenges of rabbit farming in Ogba/Egbema/Ndoni Local Government Area of Rivers State. A total of 40 farmers which were randomly selected were used in this study. The following results were obtained: Rabbit farming has been introduced in the study area by the extension agencies to only contact farmers (M=2.78), but its adoption as a business to earn a living is very low both in terms of production (M=1.34) and in marketing (M=2.09). Lack of proper awareness (M=4.86), lack of interest in the enterprise (M=4.71), lack of capital (M=4.57), and poor marketing channels (M=4.47) were identified as major challenges plaguing rabbit enterprise in the area. The study therefore, recommended that: Extension agencies in the study area should create proper awareness (wide publicity of rabbit enterprise including its economic potentials, nutritional values, rearing and marketing as well as value-chain additions) as a viable business to generate income for farmers in the area, and that Government and non-governmental organizations should encourage farmers who are willing to go into rabbit farming through timely grants and feasible credit facilities.

Introduction

Livestock production is a socio-economic activity that could lead to improved income and raise the quality of living of Nigerians (Chukwuigwe, Week & Owen, 2008 and Akinola, 2009). There is a global awareness on the level of shortage of animal protein supply in the tropic (Adekunle & Ajani, 1990). Nigeria remains among the least consumers of animal protein in the world (Egbunike, 1997). Average consumption of animal protein in this country 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).

The need to increase livestock production as a means of alleviating the overwhelming shortage of animal protein is very vital to humanity (Fielding, 1981). The demand for protein of animal origin in Nigeria is greater than the supply (Akinmutimi & Onwukwe, 2002). This acute shortage of animal protein in Nigeria demands effort to be directed to livestock that are prolific and have short gestation interval.

Animal protein production can be increased if the potentialities of some micro-livestock such as snails, grass-cutters and rabbit can be exploited when reared and managed at least cost under intensive system of production (Odunaiya & Akinyemi, 2008). Micro-livestock are small bodied animal reared for meat and other by products. It plays important role in meeting the protein requirement of man. These animals are also called non-conventional animals.

Adoption of Rabbit farming as a modern farm practice and a form of mini livestock production is a sure way of attaining high agricultural productivity, increase in sale and income, and improvement in the living standard of farmers as well as providing basis for more scientific discovery and technological advancement. They are corrective measures for animal protein supplementation and increased meat source to augment family feed budget and sustain families under the most economic situation. In the past, series of works have been carried out by many authors on rabbit farming in line with the prevailing and changing technologies. Also many writers have made some attempts showing the reason for, and against the adoption of Rabbit farming practices.

Rabbits are small, furry, growing mammals which have long ears and stumpy tails. Rabbit belong to the family *Leporidae* of the order *Lagomorphs*, the genus *Oryctolagus* and the specie *Oryctolagus cuniculus*. Its common name is rabbit (Omole, Ajasin, Oluokun & Tiamiyu, 2007). The rabbit meat is nearly white, fine grained, palatable, mild flavoured, high in good quality protein content, low in fat and caloric contents, contains a higher percent of minerals than other meats, nearly of the same nutritive value as beef meat and comparable to that of broiler chicken, of good meat-to-bone ratio and is acceptable to the general consumer in most countries of the world (Reddy et al., 1977 and Lukefahr et al., 1989).

Rabbit farming which is known as cuniculture is the agricultural practice of breeding and raising domestic rabbits, usually for their meat, fur, or wool. According to Anyanwu, Anyanwu and Anyanwu (2001) the keeping of rabbit as a domestic animal is not yet popular in West Africa probably because its potentialities as a rich source of protein have not been recognized by many. Or because enough awareness of their economic importance and as a business have not been created. Few people keep rabbits as pet animals.

Rabbit Farming offer numerous advantages, which are derived from its attributes. These advantages make rabbit farming profitable to farmers. They have a very short gestation period (27-33 days) and can re-breed immediately after littering such that does (female rabbit), if well managed under simple conditions, can produce at least 5litters/year with an average of 6 kids/litter, which is 30kids/doe/year. The productive efficiency of the rabbits is measured by the number of young raised to weaning or slaughter per unit time. The domestic rabbit when compared with other livestock is characterized by early sexual maturity, high prolificacy, relatively short gestation period, short generation interval, high productive potentials, rapid growth, good ability to utilize forages and fibrous plant materials and agricultural by-products, more efficient feed conversion, low cost per breeding female and by its profitability for small-scale system of production and in backyards (Cheeke, 1986; Finzi, & Amici, 1991). Kpogio (2004), Oyenike (2004) and Omole et al (2007) also identified the followings as advantages of Rabbit farming:

- Rabbits are cheap sources of animal protein for human consumption.

- They can be maintained cheaply on grass, kitchen waste, etc.
- They do not require much space as cattle, sheep, goat and pig.
- They reproduce rapidly and have the ability to produce many litters which can be as high as 10.
- Rabbit skins are in demand for making hand bags, slippers, toy and gloves linings
- The generation interval is short. A female rabbit (doe) may bear at 6-8 months old and the young ones can be marketed at 8-12 weeks at 1.5kg to 2kg each. Thus, there is rapid turnover of investment.
- Rabbit waste products can be used to increase the soil fertility.
- Rabbit meat is also medicinal.
- Low capital intensive with high potentials for huge returns with low input.
- High price of meat in hotels and restaurants

The meat is palatable and nutritious while the manure provides rich nutrients for vegetable production. Its meat is mild and savory, never gamy. It is extremely lean, making it perfect for cholesterol-reducing diets (Asikadi, 2008). Rabbit meat is of medical importance, it is low in sodium, fat and cholesterol but contain high amount of protein, iron and calcium, hence it is useful in the treatment of arteriosclerosis, anaemia, diabetes, epilepsy, measles, chicken pox, Hypertension, High blood pressure and other fat-related ailments, Asthma and poor eyesight. According to Kpogio (2004), Rabbit farming is an aspect of agriculture that is still new in West Africa. It is a corrective measure for animal protein supplementation and increased meat source to augment family feed budget and sustain families under the most economic situation. Rabbit farming will go a long way to supporting animal husbandry, fish farming and other animals caught from the wild forest. It is a good source of protein and income to several households in countries where the awareness has reached a vintage level.

Following the directives of the Federal Government of Nigerian in 1986 to all Foreign Oil Companies to engage in Agricultural development Programmes within their areas of operation, Green River Project (GRP) and Sustainable Community Development Programme (Seed Multiplication Centre) were established by Nigerian Agip Oil Company (NAOC) Ltd, at Obrikom/Obie in 1987 and TOTAL E&P Ltd at Oboburu in 1994 respectively, all in Ogba/Egbema/Ndoni Local Government Area (ONELGA) of River State (ARMTI, 1993).

In order to encourage farmers in agricultural production (in livestock and arable crops), Green River Project (GRP) and Sustainable Community Development Programme (Seed Multiplication Centre) have through their extension services introduced rabbit farming to their contact farmers with the intension that the new enterprise will in the process of time trickle down to the non-contact farmers in the area. But the challenging questions following the introduction of rabbit farming in the area are these: Are farmers (both contact and non-contact) in ONELGA really aware of rabbit enterprise? If they are aware, are they adopting the enterprise (in either rearing or marketing)? And if they are adopting it, why are there scanty of rabbit (white meat) in ONELGA markets up till the time of this study? This study is therefore designed to investigate the challenges of rabbit farming in Ogba/Egbema/Ndoni Local Government Area of Rivers State.

On the basis of research questions raised, one null hypothesis was formulated to guide the study.

H₀: The view of contact farmers and non-contact farmers on the challenges of rabbit enterprises in ONELGA do not vary significantly.

Methodology

A total sample size of forty (40) respondents made up of twenty (20) contact farmers and twenty (20) non-contact farmers were used for this study. Purposive random sampling was used to gather data from contact farmers. While snowball sampling was used to gather information from the non-contact farmers. Five out of the six political blocks in ONELGA were covered in this study, based on the fact that extension programmes of the two oil companies have been extended to these areas. Therefore, the selection of the contact and non-contact farmers for this study was based purely on their ability to supply the needed information which enabled the researchers to draw a logical conclusion at the end of the study.

Primary data used in this study were obtained from personal interview and direct discussions with the rabbit farmers and marketers of rabbit products within the area. The instrument used for data collection was a Structured Questionnaire designed in a Likert rating scale with five options such as: Strongly Agree (SA – 5), Agree (A - 4), Undecided (U - 3), Disagree (D - 2) and Strongly Disagree (SD - 1). The questionnaires were distributed and timely retrieved personally by the researchers.

The major analytical tool that was employed in the study was the mean scores derived from the Likert rating scale $(5+4+3+2+1)/5$, which gave the critical mean/point of 3.0. Decisions were taken from any item with mean score greater than the critical mean (> 3.0) as accepted, while any mean score less than the critical mean (< 3.0) as rejected and any mean score equal to ($=3.0$) as undecided. Students' t-test was the inferential statistical tool employed for test of significance. Hypotheses (H_0) ascertained if the view of contact farmers and non-contact farmers on the challenges of rabbit enterprises in ONELGA do not vary significantly. All the tests were carried out at 0.05 significant level. Where t-calculated was greater than t-critical), the null hypotheses was accepted, meaning there was no significant difference and vice versa.

Result and Discussion

The result in Table 1 showed that rabbit farming has been introduced to the farmers by Green River Project (GRP) or Seed Multiplication Center (SMC) in ONELGA as a farm activity (Grand Mean = 2.78) . It showed that rabbit farming was not introduced as farm animals to earn a living (M = 1.49). It also revealed that both the contact and the non contact farmers have not meaningfully engaged in rabbit farming (M = 1.53). However, the analysis showed that though majority of the farmers are aware that rabbit can be domesticated as farm/pet animal, but many of them did not see it as an enterprise to make money (M = 2.32).

Table 1: Awareness of rabbit farming among Contact and Non-contact farmers in ONELGA.

Statement of Facts	Contact Farmers N=20 Mean	Non-contact Farmers N=20 Mean	Grand Mean
Rabbit farming has been introduced to	4.12	1.43	2.78

the farmers by Green River Project (GRP) or Seed Multiplication Center (SMC) in ONELGA as a farm activity.			
Rabbit farming was introduced as farm animals to earn a living.	1.98	1.00	1.49
You have once engaged in Rabbit farming as a means of livelihood.	1.56	1.50	1.53
Only contact-farmers in ONELGA are aware that rabbits can be domesticated.	2.03	2.57	2.30
Majority of farmers in ONELGA are aware of rabbit enterprises.	2.58	2.06	2.32

Source: Field Survey, 2015

From the findings, rabbit farming has been introduced in the study area through Green River Project (GRP) and Seed Multiplication Centre (SMC) to contact farmers only. Maybe it was introduced as a pet animal to the contact farmers and not as a business animal to make profit and earn a living like poultry and piggery. The necessary awareness on its economic and medical advantages as well as the ways of handling it commercially may not have extensively been unfolded to the farmers. Or may be, because of the cost and techniques involved in handling of rabbit including the feed formulation and its routine management as observed by Anyanwu et al, (2001) have not been made popular in West Africa since its potentialities as a rich source of protein have not been recognized by many. It was in this premise that Oyenike, (2004) and Omole, et al (2007) noted that there would be a trend towards more consumption of rabbit meat as more people become aware of the medical importance of rabbit meat in the treatment of high blood pressure, anaemia and several other ailments as well as the low fat and cholesterol levels.

Though, the views of the two groups of farmers were divergent in some of the issues raised on the awareness of the enterprise, but the t-test result in Table (2) showed no difference in the views of both farmers, t-cal (1.52) is less than t-tab (1.86), which led to the acceptance of the null hypothesis, meaning that there is no significant difference between the mean scores of the two groups of farmers (contact and non-contact). This adduced to the fact that the farmers in the area are not yet aware of rabbit farming as a means of livelihood or a supporting income.

Table 2: Summary of t-test result on the awareness of rabbit farming among contact and non-contact farmers in ONELGA.

Source	N	Mean	df	Variance/SD	t-cal	t-tab	Remark
Contact	5	2.94	8	1.62/0.57			NS
Non-contact	5	2.00		0.67/0.23	1.53	1.86	
Total	10						

Source: Field Data, 2015

NS – Not significant at $P \geq 0.05$

From Table 3, the result showed that adoption of rabbit farming both in terms of production and marketing were very low (with maximum production – breeding of 10 rabbits and below { $M=1.34$ } and maximum marketing of rabbits– from 10 rabbits and below { $M=2.09$ }). It also revealed that Production of rabbit feeds and drugs ($M = 1.00$) has not been adopted at all, while selling of rabbit feeds and drugs ($M=1.14$) has observed a very low adoption.

Table 3: Rate of adoption of rabbit farming among Contact and Non-contact Farmers in ONELGA.

Adoption	Contact Farmers N=20 Mean	Non-contact Farmers N=20 Mean	Grand Mean
51 breeding rabbits and above	1.26	1.20	1.23
31 – 50 breeding rabbit.	1.40	1.10	1.25
11 -30 breeding rabbits	1.52	1.12	1.32
10 breeding rabbits and below	1.45	1.23	1.34
Marketing 51 rabbits and above at a time	1.82	1.34	1.58
Marketing between 31 – 50 rabbits at a time	1.83	1.62	1.73
Marketing between 11 – 30 rabbits at a time	2.00	1.64	1.82
Marketing 10 rabbits and below at a time	2.66	1.52	2.09
Production of rabbit feeds and drugs	1.00	1.00	1.00
Sales of rabbit feeds and drugs	1.27	1.00	1.14

Source: Field Survey, 2015

From the findings, it showed that rabbit rearing and its marketing have not been adopted significantly by the two groups of farmers, even though it has been introduced in the area. An indication that rabbit production is not yet regarded as a business in the area. This finding agreed with Onifade et al (1999) who stated that in spite of the exceptional attributes and advantages of keeping rabbits, its production in Nigeria is still comparatively rudimental.

Result in Table 4 identified the following as factors contributing to none or low adoption of rabbit farming in the study area. These include in their order of degrees: lack of proper awareness with grand mean of (M=4.86), Lack of interest in rabbit farming (M=4.71) lack of capital (M=4.57), poor marketing channels (M=4.47), techniques involved in the business (M=4.42), Attitude of farmers (M=4.42), classification of rabbit farming as business for special (skillful) people (M=4.19) and lack of incentives with grand mean of (4.06).

However, the analysis showed that unfavourable environmental conditions with the grand mean (M=1.50) was not considered by the respondents as a factor affecting rabbit production in the area. This means that environmental condition of ONELGA may be favourable but the farmers have no interest in the business.

Table 4: Factors Affecting Rabbit farming among Contact and Non-Contact Farmers in the study area.

S/NO	Statement of Facts	Contact Farmers N=20 Mean	Non-contact Farmers N=20 Mean	Grand Mean
1	Lack of proper awareness of Rabbit farming as an enterprise.	4.82	4.90	4.86
2	Techniques involved in its production.	4.40	4.43	4.42
3	Lack of interest in rabbit farming	4.61	4.80	4.71
4	Lack of incentives for rabbit farmers	4.00	4.12	4.06

5	Lack of capital.	4.33	4.81	4.57
6	Poor marketing channels for rabbits.	4.42	4.52	4.47
7	Unfavourable environmental conditions	1.66	1.34	1.50
8	Attitude of farmers towards rabbit	4.40	4.43	4.42
9	Classification of rabbit farming as business for special (skillful) people.	4.02	4.35	4.19

Source: Field Survey, 2015

The findings indicate that: Lack of proper awareness, techniques involved in the business, lack of incentive, lack of capital, poor marketing channels and attitudes of farmers towards rabbit farming constitute the major problems in the enterprise. This finding is in line with Nworgu, (2006) who stated that non-readily available market when the farmers are ready to sell their stock and inadequate knowledge and information about the advantages of eating rabbit meat are problems of rabbit production. Also in line with this finding is Sogunle, et al, (2009) who emphasized that the knowledge of rabbit genetics and production techniques still lag behind when compared with other livestock.

Also, the t-test result in Table (5) showed no difference in the view of both farmers; t-cal (0.29) is less than t-tab (1.75), which led to the acceptance of the null hypothesis, meaning that their views concerning the problems of rabbit farming in the area are the same.

Table 5: Summary of t-test result on the factors affecting rabbit farming among contact and non-contact farmers in the study area.

Source	N	Mean	df	Variance/SD	t-cal	t-tab	Remark
Contact	9	4.07	16	0.88/0.94			NS
Non-contact	9	4.20		1.21/1.10	0.29	1.75	
Total	18						

Source: Field Data, 2015 **NS – Not significant at $P \geq 0.05$**

Conclusion

From the findings, rabbit farming has been introduced in the study area through Green River Project (GRP) and Seed Multiplication Centre (SMC) to contact farmers as a pet animal. The proper awareness of the potentialities (economic, nutritional and medical advantages) of rabbit farming as well as its handling has not been exposed to the farmers in the study area; hence, there is little or no adoption of the enterprise. Lack of proper awareness, lack of interest in the enterprise, lack of capital, and poor marketing channels were identified as major problems confronting rabbit farming in the area.

Recommendation

Based on the findings, the study, recommended the following:

1. Extension agencies in the study area should create proper awareness (wide publicity of rabbit enterprise including its economic potentials, nutritional values, rearing and marketing as well as value-chain additions) as a viable business to generate income in the area.
2. Government and non-governmental organizations should encourage farmers who are willing to go into rabbit farming through grants and feasible credit facilities.

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