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Economics of Rabbit Production in Gokana Local Government Area of Rivers State, Nigeria

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Abstract

This research was carried out to determine the profitability of rabbit production in Gokana Local Government Area (LGA) of Rivers State, Nigeria. A sample of 30 rabbit farmers (owning at least 2—15 rabbits) from five communities were randomly selected and interviewed using structured questionnaires and oral interview. The data collected were analyzed using frequency counts, percentages and gross margin analysis. The result indicated that 53.3% of the respondents were males while 46.7% were females; 40% of the respondents fell within the age group of 41—50 years. More than half of the respondents (53.3%) had family size of 4—8 persons. The result showed that a higher percentage (56.7%) of the rabbit farmers had tertiary education and that 33.3% of the respondents had 2—15 rabbits compared with 16.7% of them that had more than 35 rabbits. More of the respondents (40%) had 1 to 3 years of experience while only 10% had less than 1 year experience. Three major constraints capable of limiting rabbit production in the LGA were unavailability of concentrate feed, lack of capital for investment and high cost of medication. The study revealed that rabbit farmers in the LGA made a profit of N530 to N650 per rabbit sold. Thus, despite the relatively small size of the rabbit farms in the LGA, an investment into rabbit production could be quite profitable, such that not less than half of the total cost of production is realized as profit in addition to increased family protein intake.
Key words : Rabbit, Profitability, Constraints, Farm size.

Livestock production is a socio-economic activity that could lead to improved income and raise the quality of living. Rabbit had since been identified as an economic livestock for small-scale rural farmers/ dwellers, capable of producing about 47 kg of meat, enough to solely meet the animal protein requirement of a medium-sized family (1, 2). Casady (3) reported that rabbit meat has high biological value with high protein (21%), low fat (10%), low cholesterol and sodium while Damron (4) showed that a cooked piece of rabbit meat is high in protein (56%), low in fat (9%), low in cholesterol, sodium and calories (8%) and contain 28% phosphorus, 13% iron, 16% zinc, 14% ribiflavin, 6% thiamin, 35% B_{12} and 48% niacin. The prolific nature of rabbits coupled with its short gestation period and generation interval, makes the animal of choice for multiplication and serve as a short way of increasing animal protein intake (5, 6). Rabbit production, thus have enormous potential in alleviating the problem of animal protein supply in developing countries, (7). In Nigeria, low animal protein intake has remained a major nutritional problem, especially for the low income and non-wage earners (8). There is therefore an urgent need to develop rabbit production as a cheap source of animal protein to bridge the wide gap existing between animal protein supply and consumption. Although Taiwo et al. (9) reported that to meet the effect of world food shortage in developing countries, rabbit production was gaining ground as an alternative source of protein. The finding of Akinota and Onunkwo (10) showed that almost half of the respondents in a survey conducted in Ogoni, Rivers State, Nigeria, agreed that there was still poor awareness and availability of rabbit meat, thus, ranked third in preference for meat after goat and sheep. The authors stated that most rabbit farmers in the study area had 1—20 rabbits with a higher percentage (77.5%) of the respondents indicating their readiness to start or increase production and consumption of rabbit. The motivation was based on the awareness created by the survey, the rich vegetation of the area, the ability of rabbits to thrive on roughages with or

Table 1. Economics characteristics of the rabbit farmers. Source : Computed from survey data.

Variables	Frequency	Percentages (%)
Gender		
Males	16	53.3
Females	14	46.7
Total	30	100
Age (Years)		
21—30	3	10.0
31—40	7	23.3
41—50	12	40.0
>50	8	26.7
Family Size		
1—4	8	26.7
4—8	16	53.3
9—15	6	20.0
Level of Education		
Tertiary	17	56.7
Secondary	8	26.7
Primary	5	16.7
Farm Size (No. of Rabbits)		
2—15	10	33.3
16—25	8	26.7
26—35	7	23.3
>35	5	16.7
Purpose		
Consumption	10	33.3
Income	2	6.7
Both	18	60.0
Years of Experience (Years)		
>1	3	10.0
1—3	8	26.7
3—5	12	40.0
>5	7	23.3

without concentrate feed, the prolific nature of the animal, low cost of production and its relatively small size and docile nature which make them amenable to handling by all categories of people, especially women and children. This study was therefore targeted at ascertaining the profitability of rabbit production in Gokana Local Government Area of Rivers State, with the aim of using such information to encourage more farmers, especially livestock farmers to venture into rabbit production and create more awareness of the usefulness of rabbit.

Table 2. Problems encountered by the respondents. Source : Computed from survey data.

Sources	Frequency	Percentages (%)
Capital	10	33.3
Feed (concentrate)	12	40.0
Drugs	6	20.0
Labor	2	6.7

Methods

The study was conducted in five autonomous communities in Gokana LGA, Rivers State, Nigeria. The communities were : Biara, Nweol, Bormu, Lewe and Bodo. A total of 30 rabbit farmers (six from each community), owning at least 2—15 rabbits were randomly selected and interviewed using structured questionnaires and oral interviews. The study lasted from February to May 2008. Some socio-economic changes such as age differences and sex of the farmers, farm size, purpose of production, level of education and experience in the business were collected. Data were also collected on production and marketing variables. Completed questionnaires were retrieved and analyzed using descriptive statistics. Profitability was determined from the data obtained.

Results and Discussion

The study revealed that 53.3% of the respondents were males while 46.7% were females (Table 1). This could be attributed to the fact that more of the respondents had tertiary education, and it is a known reason that more men in the study area were usually sent to acquire tertiary education than women; 40% of the respondents (12 rabbit farmers) were within the age group of 41—50 years. This may be due to the increasing number of undergraduates who leave home for school and graduates who seek for paid (white-collar) jobs in urban areas coupled with the normal rural-urban drift of young able bodied men in search of better jobs, amenities and good environment to the detriment of agricultutal production, especially, livestock production. Yakubu and Yakubu (11) stated the same age group for majority of the poultry farmers they surveyed and attributed it to the unavailability of young ones who may be in school or to the

Table 3. Cost and returns per rabbit in the study area (N). Source : Computed from survey data.

Items	Biara	Nweol	Bormu	Lewe	Bodo
Expenditure					
Cost of weaned rabbit	600	550	550	550	550
Transportation cost	50	40	50	30	50
Cost of medication	70	80	70	50	100
Feed (Concentrate)	150	100	100	80	150
Repairs	50	40	70	60	50
Miscellaneous	100	100	100	100	100
Total cost (TC)	1020	910	940	870	1100
Revenue					
Sales of mature rabbit	1500	1450	1450	1450	1700
Sales of manure	50	50	50	50	50
Total revenue (TR)	1550	1500	1500	1500	1750
Profit (TR—TC)	530	590	560	630	650

elderly ones who may not be able to cope with the rigors of the business. Majority (53.3%) of the respondents had family size of 4—8 persons, 26.7% had 1—4 persons and 20% had a family size of 9—15 persons. The large family sizes recorded could probably suggest why the availability of labour was not a limiting factor to rabbit producion in the area. More than half (56.7%) of the respondents had tertiary education, 26.7% had secondary education while 16.7% had primary education. This implied that with little enlightenment and demonstration, all the respondents can adopt new innovations and skills. It could also be stated that educated people are more interested in setting up rabbit farms in the area; 33.3% of the farmers had 2—15 rabbits in their farms, 26.7% of them had 16—25 rabbits, 23.3% had 26—35 rabbits while 16.7% had more than 35 rabbits in their farms. This could be due to the poor awareness and poor availability of rabbit for sales in the study area (10), or may be due to the lack of commercial rabbit production (only 6.7% for income) as indicated by this study. More than half of the respondents (60%) kept rabbit for both income generation and consumption purposes, 33.3% kept the animal for consumption alone while only 6.7% kept it for only income generation. It was noticed that 12 respondents (40%) had 3—5 years of experience, 26.7% had 1—3 years of experience, 23.3% had more than 5 years of experience and 10% had less than 1 year experience. The more year of experience acquired by most of the farmers could be the reason why most of them were willing to expand their business, because it had been a steady source of additional income and protein supply for their families.

Table 2 shows that there were some problems encountered by the respondents such as capital, feed, drugs and labor; 33.3% of them mostly had financial problems, thus could not easily expand their business, 40% had feed (concentrate) as their problem because concentrate feed was not sold in the LGA and could only be purchased from the state capital, making it too expensive and inconveniencing to transport. But the rich vegetation (grasses and legumes) in the area coupled with the ability of rabbits to thrive on roughages with or without concentrate feed had kept the business progressing; 20% of the respondents indicated lack of drugs and medical experts to administer treatment when the rabbits are diseased. Only 6.7% (2 respondents) had labor problem. This small percentage could be attributable to the relatively large family sizes of most of the respondents, which eliminate the hiring of labor.

The cost and returns per rabbit produced in the study area (Table 3) showed that the profit obtained per rabbit in the five communities were as follows : Biara, N530; Nweol, N590; Bormu, N560; Lewe, N630 and Bodo, N650.

Conclusion

The study revealed that despite the constraints of capital, concentrate feed, drugs and the relatively small sizes of the available rabbit farms in Gokana LGA, rabbit farmers in the LGA realize not less than half of the capital invested as profit in addition to increased family protein intake. Thus, there is the need to encourage more farmers to start or increase rabbit production based on the availability of rich vegetation, low cost of production, the high prolific nature of rabbit and the high profit recorded.

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