

# Social-Economic Status of Cane Rat (*Thryonomys Swinderianus* Temminck) Farmers in Awka South Local Government Area, Anambra State, Nigeria

<sup>1</sup>Adeyemi Muhammed Adewole, <sup>\*2</sup>Apalowo, Oluropo Ayotunde, and <sup>1</sup>Nwaogu Chidubem Precious

<sup>1</sup>Department of Forestry and Wildlife, Nnamdi Azikiwe University, Awka, Nigeria

<sup>2</sup>Department of Crop Science and Horticulture, Nnamdi Azikiwe University, Awka, Nigeria

**\*Corresponding Author**

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## ABSTRACT

Meat production serve as one of the major source of income to farmers. This study was carried out to access the socio-economic features of cane Rat (*Thryonomys Swinderianus Temminck*) production in Awka South (LGA) Anambra State, Nigeria. Ten respondents were randomly selected from each of the nine communities in the study area, making a total of ninety cane rat farmers. The communities were: Ezinato, Isiagu, Umuawulu, Nibo, Nise, Okpuno, Mbaukwu, Amawbia, Awka. A structured questionnaires was administered to each respondent while data collected include sex, age, marital status, education level, household size, religion, purpose of production, level of production and methods of marketing. Data was analyzed using Statistical package for social sciences (SPSS) version 21, while descriptive statistics such as frequencies and percentages were used to analyze the socio-economic characteristics of the respondents. From the findings, it was observed that 58.1% were males, while 41.9% are females. In the research, 93.5% of the respondents are married, 3.2% are widows, while 3.2% are widowers, 38.7% lack formal education, 32.3% has just primary education while 19.4% has secondary education. Result also showed that majority of the farmers are old and between 41 to 60 ages which represent about 64.5% of the farming population. The study revealed that cane rat is a good source of revenue that can help reduce economic challenges among farmers. The age of the farmers could also affect the rate they accept new farming techniques.

**Keywords:** Awka South, animal, cane rat, socio-economic

## INTRODUCTION

Cane rats (grass cutters) belong to the family Thryonomyidae. They serve as a source of food in many parts of Africa where they are consumed as meat (Fayenuwo and Akande, 2002). It contain high quality protein and low cholesterol which has the potential to reduce the gap in the supply of animal protein from livestock. It also contain good amount of minerals and low fat (Caldwell et al., 2018; Olatidoye et al., 2019). Cane rats are phytophage animals (grass eaters) that lives in the wild and can also be domesticated (Babarinde et al., 2019). When in the wild, It is regarded as an endangered species as a result of bush burning and poaching. The demand for cane rats is has increased over the years because of their tasty taste, especially among food vendors (Akinola et al., 2015). Hence, the production of cane rats serve as a source of income to farmers (Agboola et al., 2021). Earlier study by indicate that cane rats are one of the most expensive bushmeat in the market (Falade and Idahor, 2012). They also have high fecundity, which helps the farmers to maximize their profit with minimal investment. The two most common species popularly produce in Africa are *Thryonomys swinderianus* (greater cane rat) and *Thryonomys gregorianus* (lesser cane rat).

Although previous reports revealed the economic importance as well as the domestication systems used by farmers in Nigeria (Falade and Idahor, 2012; Henry, 2014; Olatidoye). However, there is paucity of information on the socioeconomic contributions of cane rat to farmers in the South East Nigeria. Therefore, this experiment was carried out to investigate their socioeconomic status in other to get a baseline information

that would enhance profitability. Anambra State was used as a case study because it is a cosmopolitan state with residents from different states of the southeast Nigeria.

## MATERIALS AND METHODS

This study was undertaken in Awka South local government area in Anambra state, South-eastern part of Nigeria. Awka South is located within longitude and latitude is about 7.00°E-7.10°E of the equator. The land area covers about 180km<sup>2</sup> and it comprises deciduous tall trees with thick undergrowth and numerous climbers. The relative humidity is 80%, while the average temperature is 27° c with daily minimum and maximum temperature ranges are 22°c and 34°c respectively. The area is part rainforest vegetation with two seasonal climatic conditions. They are the rainy season and dry season which is characterized with harmattan. The communities that make up Awka South local government are: Amawbia, Awka, Ezinato, Isiagu, Mbaukwu, Nibo, Nise, Okpuno and Umuawulu. Awka-south is majorly dominated by Igbos ethnic group

Data was collected majorly with the aid of questionnaire. The data was collected from grasscutter farmers in the study area using multistage purpose random sampling procedure. Ten respondents were selected from each of the nine towns in Awka South, making a total of ninety questionnaires distributed to the cane rat farmers. The data analysis was carried out using Statistical package for social sciences (SPSS) version 21.

## RESULTS AND DISCUSSION

The study reveals that the most of the cane rat farmers are male, making up 58.1% of the respondents, while females make up 41.9%. This gender distribution suggests that farming roles are predominantly held by men in the region, which may influence agricultural practices, decision-making, and access to resources, as men often have more control over agricultural assets like land and credit. This is similar to the observation of Falade et al. (2012), that reported more male participation in the rearing of cane rat, attributing the tedious management operation to be the reason many female farmers may be discouraged to go into cane rat production

The age distribution indicates a significant proportion of farmers in the 41 to 60 age bracket (64.5%), with younger farmers (21-40 years) comprising only 35.5%. Notably, there are no farmers aged 60 and above. This suggests that the farming population is relatively older, which is contrary to the observation of Weidinger (2006), that believed the involvement of older people in cane rat production was because they see it as a hobby. This could also affect their adaptability to new farming techniques and technologies because younger farmers that are usually more dynamic and open to adopting new technologies and practices (Ullah et al., 2020), are underrepresented, which could hinder the advancement of farming practices in the region .

Majority (93.5%) of the respondents are married, indicating a strong family structure among cane rat farmers. Marriage can provide stability and support in farming operations, as spouses often contribute to agricultural activities and household management. This stability may enhance communal ties and resource sharing. However, the presence of only a small percentage of single, widowed, or divorced individuals highlights a community largely founded on traditional family values

The educational profile of the respondents shows a significant level of non-formal education (38.7%), followed by primary education (32.3%). Secondary education accounts for 19.4%, while only 9.7% have tertiary education. With nearly 71% of respondents having only primary or non-formal education, there is a critical need for educational programs that can enhance farmers' understanding of modern agricultural techniques, business management, and financial literacy. Adebayo and Adeola (2017) emphasized that education levels significantly predict successful credit utilization in agricultural settings. This suggests a potential need for educational programs that could improve their understanding of farming techniques and financial management.

The household sizes vary, with the largest proportion (41.9%) of farmers living in households with 7 or more members, followed by 38.7% in households of 4-6 members, and 19.4% in smaller households (1-3). Larger household sizes can provide more labor for farming activities, but they may also increase competition for resources and limit economic stability. Larger families can be beneficial for agricultural production, but they might also strain financial resources if not managed effectively.

The majority of respondents (90.3%) identify with a religion, with Christianity being the prominent faith among the population (9.7% adhere to traditional beliefs). Religion can influence social norms, community support systems, and even agricultural practices among farmers.

Table 4.1: Socio-economic characteristics of respondents

Variables	Frequency	Percent (%)
Sex		
Male	52	58.1
Female	38	41.9
Age (Years)		
21-40	32	35.5
41-60	58	64.5
60 and above	0	0
Marital Status		
Married	84	93.5
Widow	3	3.2
Widower	3	3.2
Educational level		
Non-formal	35	38.7%
Primary	29	32.3%
Secondary	18	19.4%
Tertiary	8	9.7%
Household Size		
1-3	17	19.4
4-6	35	38.7
7 and above	38	41.9
Religion		
Christianity	81	90.3
Traditionality	9	9.7

Figure 1 showed the purpose of producing cane rats. The majority of the farmers (83.9%) engage in cane rat farming for commercial purposes, indicating a strong market orientation in their production activities. This suggests that cane rats are viewed as a viable income-generating activity, contributing significantly to the livelihoods of farmers. Cane rats has previously been identified as a good revenue source which help to ameliorate economic problem especially in the agrarian communities (Falade et al., 2012). The smaller percentage (16.1%) involved in ceremonial purposes highlights a cultural aspect of cane rat farming, which may be tied to traditional practices or community events. This dual-purpose approach—commercial and ceremonial—demonstrates the multifaceted role of cane rats in local economies and cultures.

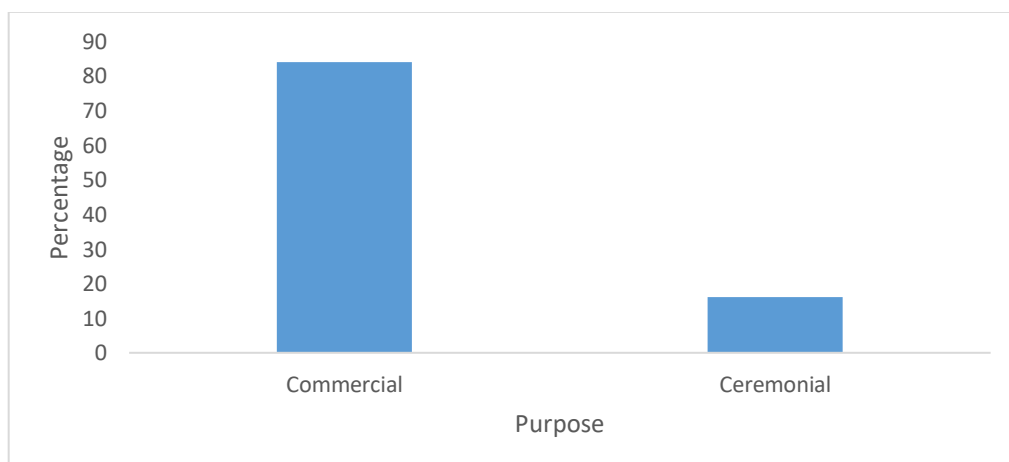


Figure 1: Purpose of producing cane rat in Awka South

The level of cane rat production is shown in Figure 2. Majority of farmers (96.9%) engage in daily production which indicates an active farming environment. This also showed that cane rat farming is not just a side activity for these farmers but is integral to their daily lives and economic sustainability.

Daily production is likely driven by regular demand for cane rats, both in local markets and possibly for personal consumption. This revealed the socio-cultural value of cane rats as a food source, resulting in continuous harvesting and sales. Regular daily production allows farmers to maintain a consistent cash flow, which is crucial for household sustainability. The ability to sell fresh cane rats daily can enhance farmers' liquidity and support their immediate financial needs

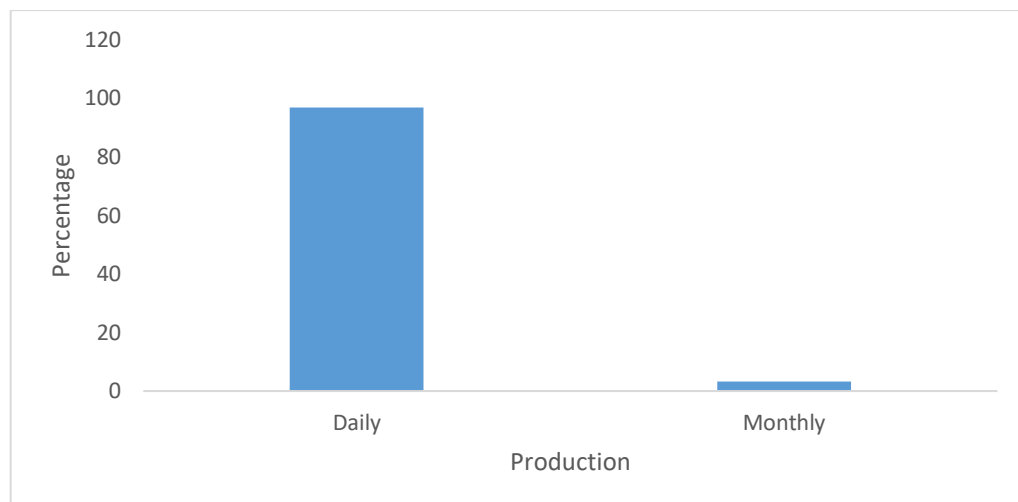


Figure 2: Level of cane rat production in Awka South

Figure 3 reveals the species of cane rat commonly produced in Awka South. A significant majority of the farmers (87.1%) are involved in the production of *Thryonomys swinderianus*, while only 12.9% sell *Thryonomys gregorianus*. The predominance of the Greater cane rat indicates its preference among farmers, possibly due to its higher market demand, better adaptability to local farming conditions, or superior taste qualities. Understanding species selection can inform future breeding and management practices to enhance productivity.

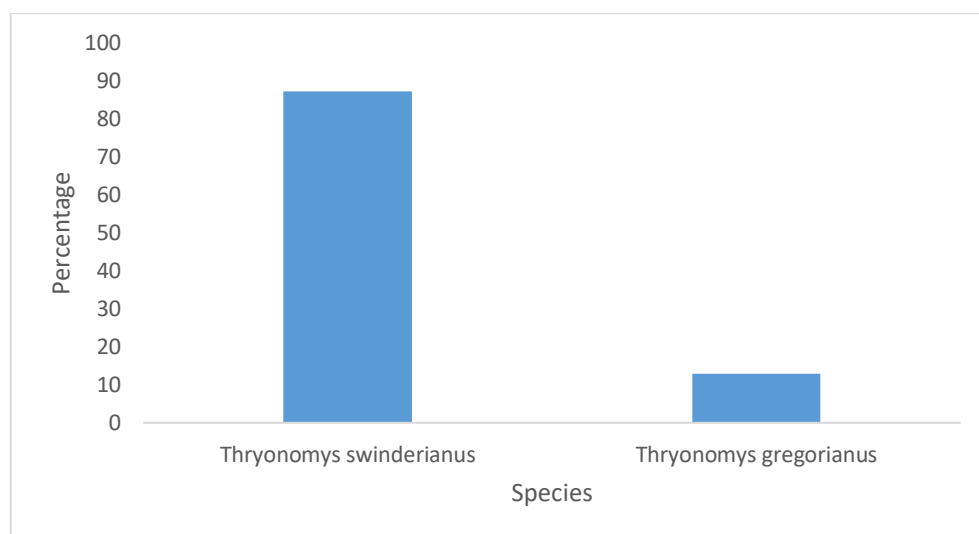


Figure 3: Species of cane rat produced in Awka South

Figure 4 shows different methods of marketing cane rat in Awka South. The methods employed for marketing cane rats reveal diverse strategies adopted by farmers. Nearly half (48.4%) of the farmers utilize open markets to sell their products, showing a preference for traditional marketing channels that allow direct interaction with buyers. The use of home service (32.3%) indicates a growing trend of personal sales, where farmers may

deliver cane rats directly to consumers, possibly enhancing customer relationships and ensuring fresher products. The adoption of social media (19.4%) as a marketing tool suggests an openness to modern technology among some farmers, which can expand their reach and connect them to broader markets.

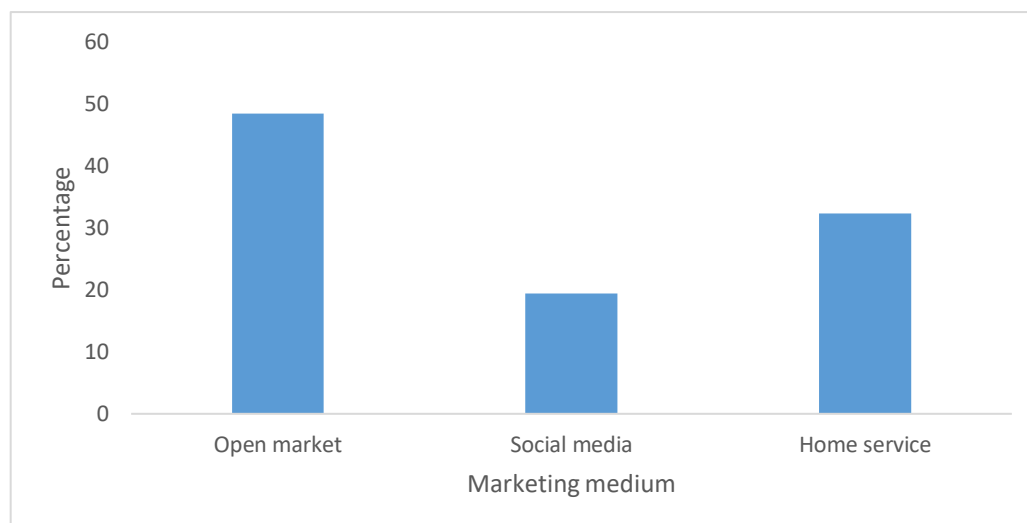


Figure 4: Methods of marketing cane rat in Awka South

## CONCLUSION

The lived experiences of cane rat farmers in Anambra reveal a sector with significant potential. Addressing gaps in education, gender inequality, veterinary care, access to credit, and policy implementation is crucial for unlocking the full socioeconomic benefits of cane rat farming. Integrating farmers' voices and lived realities into policy and program design will be essential for sustainable development in this promising livestock sector.

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