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Educational Requirements of Farmers for Entry into Grass Cutter Farming in Cross River State, Nigeria

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Abstract

The focus of the study was to identify the educational requirements of farmers for entry into grass cutter farming in Cross River State, Nigeria. Four research questions and four hypotheses guided the study. Survey research design was adopted for the study. The population for the study was 179, comprising 86 University agricultural lecturers from UNICAL and CRUTECH and 93 graduate extension personnel from CRADP. The entire population was involved in the study. A 39-item questionnaire tagged Educational Requirements for Grass cutter Farming Questionnaire (ERGFQ) was used for data collection. Three experts validated the instrument. Cronbach alpha was used to determine the internal consistency of the instrument and a coefficient of 0.81 was obtained. Weighted mean scores were used to answer the research questions while Independent t-test statistic was used to test the null hypotheses at .05 level of significance. It was found out that farmers required education/training on planning, stocking, management, processing and marketing to be effective in grass cutter farming. It was recommended that the training skill areas be used to guide the training of youths and adults on grass cutter farming as well as integrating the skill areas into the skill training programme for youths and adults in the state.

Key Words: Educational Requirements, Grass cutter, Grass cutter farming.

Introduction

Grass cutter otherwise called cane rat *(Thryonomys spp)* is a wild hystricomorphic rodent that is widely distributed and valued in West Africa for its high protein and low fat meat. They occupy the grassland savanna throughout the humid and sub humid areas of Africa. Onadeko (1996) stated that the distribution of grass cutter is determined by the availability of adequate or preferred grass species for food. The meat of grass cutter is tender and very tasty and it is widely acceptable within the African continent. The wide acceptability and high nutritional qualities of grass cutter necessitate its farming as a venture.

Farming is the business of cultivating the soil and raising livestock for man's benefit. Farming as used in this study is the business of raising grass cutter for the benefit of mankind. Grass cutter farming involves several activities, such as, stocking, husbandry/management, processing and marketing. All these activities require several skills which could be handed down to farmers through educational procedures.

Education according to Alawa and Osinem (2009) involves the interaction between teachers and students with curricular content in an environment that ensures a change in behaviour gained through activity, training or observation. Education is used in this study to mean the training and interaction between grass cutter farmers and extension personnel that leads to the acquisition of knowledge, skill and attitudinal change in grass cutter farming. The activities in grass cutter farming which could be in skills could be acquired by farmers through training.

Skill, according to Osinem (2008) is the expertness, practiced ability or proficiency displayed in the performance of a task. The author explained that it is the ability to perform a task acquired through repetition of the operation. In the opinion of Okorie (2000), to possess a skill is the demonstration of acting, thinking or behaving in a specific activity in such a way that the process becomes natural to the individual through repetition or practice. In the context of this study, skill is the ability of farmers to perform the various tasks in grass cutter farming with maximum

proficiency to ensure the steady production of its protein rich meat and increase in farm profitability. These tasks which could be in the area of selection, stocking, management, processing and marketing of grass cutter are to be possessed by farmers if the benefits of grass cutter to humans are to be realized.

A farmer in the view of Olaitan (2005) is a person who grows crops and rears animals for the benefit of mankind. A farmer in this study is a youth or adult member of a community in Cross River State who should be involved in grass cutter farming for its benefits to mankind.

In Cross River State, the researcher has observed that grass cutter farming is not widely practiced in spite of the general acceptability and benefits accruing from the animal. Households in the state rely on plant protein and animal protein from beef, mutton and pork which are less in protein content as compared to grass cutter meat. The consumption of animal protein is stressed by medical experts and farmers can take advantage of the production of this all important wild animal that is friendly to the environment. Besides, grass cutter farming requires little area of land, capital with a high prolific rate to guaranteed quick returns to investment. It could also offer an employment option to youths and adults thereby reducing the rate of social vices and chase for white collar jobs that are farfetched. Interactions with some households revealed serious interest in grass cutter farming like other wild animals such as rabbits and monkeys but decried lack of knowledge and skills in raising this animal. Ntiamoa-Baidu (1997) stated that grass cutter remains the most important bush meat throughout West African and explained that the over dependence on the animal has led to its over exploitation hence, the need to evolve ways of taming this animal to meet the needs of Africans in general and Cross River State in particular.

The purpose of this study was to identify the educational requirements of farmers for entry into grass cutter farming in Cross Rivers State.

Specifically, the study seeks to:

1. identify the educational requirements of farmers in planning for grass cutter farming;
2. find out the educational requirements of farmers for effective stocking of grass cutter;
3. identify the educational requirements of farmers in management practices for effective of grass cutter farming;
4. determine the educational requirements of farmers for effective processing and marketing of grass cutter.

Methodology

Four research questions were developed and answered while four hypotheses were formulated and tested by the study. Survey research design was adopted for the study. The design was appropriate for the study as it intends to use structured questionnaire to collect data and generalize of findings thereof. The study was carried out in Cross River State. The population for the study was 179, comprising 86 lecturers of agricultural education and training programmes in the State from University of Calabar (UNICAL) and Cross River State University of Technology (CRUTECH) and 93 graduate extension personnel from the Cross River State ADP. The entire population was involved in the study.

A 39-item questionnaire tagged Educational Requirements for Entry into Grass cutter Farming Questionnaire (EREGFQ) was developed by the researcher and used for data collection. The instrument had two sections: A and B. Section A solicited demographic data of the respondents while section B dealt with research variables in the study with the following scale: Very Highly Required – VHR; Highly Required-HR; Moderately Required-MR and Not Required-NR. The highest level in the scale had 4 points and the least received 1point. The instrument was face validated by three experts in the Department of Vocational Teacher Education (Agricultural Education Unit) of the University of Nigeria, Nsukka.

Cronbach alpha was used to determine the internal consistence of the instrument and a coefficient of 0.81 was obtained. One hundred and seventy nine (179) copies of the questionnaire were administered on the respondents with the help of six research assistants. The 179 copies were retrieved and analyzed.

Weighted mean scores were used to answer the research questions while independent t-test statistic was used to test the null hypotheses at .05 level of significance. The following decisions guided the interpretation of the results of analysis made:

a) A cut off point of 2.50 on a four point scale was used for answering the research questions.
b) For the hypotheses, the null hypotheses was upheld if the calculated t-value was less than critical table value of 1.960 otherwise; the alternate hypotheses was upheld at .05 level of significance.

Results

The results of the study were obtained from the research questions answered and hypotheses tested.

Research Question 1

What are the educational requirements of farmers in planning for grass cutter farming?

The data for answering research question one is presented in Table 1

Table 1: Mean ratings of respondents on the Educational Requirements of Farmers in Planning for Grass cutter farming

S/N	Item Statement	$\overline{X}$	Remarks
1.	Formulation of objectives	3.36	Required
2.	Review the objectives periodically to meet economic situations	3.03	Required
3.	Draw up programme plan to cover different stages of the farming project	3.22	Required
4.	Prepare a budget for the grass cutter Farm	3.40	Required
5.	Identify sources of funds	3.22	Required
6.	Select site for grass cutter farming	2.98	Required
7.	Construct cages and hutches	2.68	Required
8.	Adopt appropriate farming system	2.72	Required
9.	Procure inputs for the farm	2.80	Required
10.	Recruit personnel to work in the farm	3.01	Required
11.	Identify relevant farm record to use in the grass cutter farm	3.21	Required

$\overline{X}$ = Mean.

Data on Table 1 shows the mean ratings of agricultural lecturers and extension personnel on the educational requirements of farmers in planning for grass cutter farming. The data indicated that all the items recorded mean scores ranging from 2.86 to 3.40 which were above the cutoff point of 2.50. The implication of this result was that respondents were in agreement that the eleven skill items are required by farmers to adequately plan for grass cutter farming.

Hypothesis 1

There is no significant difference in the mean ratings of lecturers of agriculture and extension personnel on the educational requirements of farmers in planning for grass cutter farming.

Independent t-test statistic was utilized to test the hypothesis and the result is presented in Table 2

Table 2: Independent t-test analysis to compare the opinions of lecturers of agriculture and extension personnel on educational requirements in planning for grass cutter farming

Groups/Variables	N	$\overline{X}$	SD	t-cal	Remark
Lecturers of Agriculture	86	3.21	0.56	0.35	NS
Extension Personnel	93	3.18	0.61		

Significant at .05; df=177; critical t=1.960; NS= Not Significant

Data on Table 2 revealed a calculated t-value of 0.35 which is less than table value of 1.960 at .05 level of significance and 177 degrees of freedom. Since the calculated t-value is less than table value, the null hypothesis was not rejected. The implication of this result was that the two groups of respondents did not differ significantly in their opinions on the educational requirements of farmers in planning for grass cutter farming.

Research Question 2

What are the educational requirements of farmers for effective stocking of grass cutter?

The data for answering research question two is presented in Table 3

Table 3: Mean ratings of respondents on the educational requirements of farmers for effective stocking of grass cutter.

S/N	Item Statement	$\bar{X}$	Remarks
1	Source for stock from an already established farm	2.96	Required
2	Purchase stock from a nearby breeding and multiplication centre	3.00	Required
3	Pre-select stock through a series of tests or checks for agility and aggressiveness	2.60	Required
4	Select stock at the proper age	3.21	Required
5	Carry out sexing of the animal	2.76	Required
6	Transport foundation stock from place of purchase to the established farm	3.01	Required
7	Isolate purchased stock for proper medical examination and disinfection	2.96	Required
8	Provide therapy to reduce stress	2.83	Required

Table 3 presents the mean ratings of agricultural lecturers and extension personnel on the educational requirements of farmers for effective stocking of grass cutter. The data indicated that all the items recorded mean scores that ranged from 2.60 to 3.21 and were above the cutoff point of 2.50. The implication of this result is that respondents were in agreement that the eight isolated educational skill items are required by farmers for effective stocking of grass cutter.

Hypothesis 2

There is no significant difference in the mean ratings of lecturers of agriculture and extension personnel on the educational requirements of farmers for effective stocking of grass cutter.

Independent t-test statistic was used to test the hypothesis and the result is presented in Table 4.

Table 4: Independent t-test analysis to compare the opinions of lecturers of agriculture and extension personnel on educational requirements of farmers for effective stocking of grass cutter

Groups/Variables	N	$\bar{X}$	SD	t-cal	Remark
Lecturers of Agriculture	86	3.41	0.71	0.24	NS
Extension Personnel	93	3.29	0.58		

Significant at .05; df=177; critical t=1.960; NS= Not Significant

Data on Table 4 revealed a calculated t-value of 0.24 which is less than table value of 1.960 at .05 level of significance and 177 degree of freedom. With this result, the null hypothesis was accepted. The implication of this result is that the two groups of respondents did not differ

significantly in their opinions on the educational/training requirements of farmers for effective stocking of grass cutter.

Research Question 3

What are educational requirements of farmers in management practices for effective grass cutter farming?

The data for answering research question three is presented in Table 5.

Table 5: Mean ratings of respondents on the educational requirements of farmers in Management practices for effective grass cutter farming

S/N	Item Statement	$\bar{X}$	Remarks
1	Source for adequate and quality grasses and forages	3.02	Required
2	Source for materials with least cost for compounding of local feeds	2.80	Required
3	Purchase pelleted concentrates for supplementary feeding	2.66	Required
4	Supply feeds according to the age of the animal	3.06	Required
5	Identify sexual maturity characteristics of the animals	3.00	Required
6	Mate the mature animals	2.62	Required
7	Carry out routine management activities like daily inspection of the cages and hutches	3.21	Required
8	Carry out occasional management activities in the farm like castration and vaccination	3.08	Required
9	Keep accurate records of activities in the farm	3.32	Required

Table 5 presents the mean ratings of agricultural lecturers and extension personnel on the educational requirements of farmers in management for effective grass cutter farming. The data indicated that all the items recorded mean scores ranging from 2.62 to 3.32 which were above the cutoff point of 2.50. The implication of this result was that respondents were in agreement that the nine skill items are required by farmers as management practices for effective grass cutter farming their differences in background and work roles notwithstanding.

Hypothesis 3

There is no significant difference in the mean ratings of lecturers of agriculture and extension personnel on the educational requirements of farmers in management practices for effective grass cutter farming.

Independent t-test statistic was employed to test the hypothesis and the result is presented in Table 6

Table 6: Independent t-test analysis to compare the opinions of lecturers of Agriculture and extension personnel on educational requirements of farmers in management practices for effective grass cutter farming

Groups/Variables	N	$\overline{X}$	SD	t-cal	Remark
Lecturers of Agriculture	86	3.16	0.72	0.52	NS
Extension Personnel	93	2.92	0.52		

Significant at .05; df=177; critical t=1.960; NS= Not Significant

Data on Table 6 revealed a calculated t-value of 0.52 which is less than table value of 1.960 at .05 level of significance and 177 degree of freedom. Since the calculated t-value is less than table value, the null hypothesis was not rejected. This implies that the two groups of respondents did not differ significantly in their opinions on the educational requirements of farmers in management practices for effective grass cutter farming.

Research Question 4

What are the educational requirements of farmers for effective processing and marketing of grass cutter?

The data for answering research question four is presented in Table 7

Table 7: Mean ratings of respondents on the educational requirements of Farmers for Effective processing and marketing of grass cutter

S/N	Item statements	$\overline{X}$	Remarks
	a) Processing		
1	Render the animal unconscious before slaughtering	2.80	Required
2	Slaughter the animal with minimum amount of damage to the tissue	3.22	Required
3	Remove the internal organs of animal	3.06	Required
4	Grade grass cutter and its products	3.04	Required
5	Determine prices of product based on body weight	3.22	Required
6	Store and preserve grass cutter products	3.20	Required
	b) Marketing		
7	Identification of the ideal customers	2.86	Required
8	Package meat to meet the consumers' taste	2.72	Required
9	Determine appropriate market for the product	2.68	Required
10	Keep appropriate sales records for the enterprise	2.77	Required
11	Determine farm profit and losses	2.92	Required

Table 7 presents the mean ratings of agricultural lecturers and extension personnel on the educational requirements of farmers for effective processing and marketing of grass cutter. The data indicated that all the items recorded mean scores ranging from 2.68 to 3.22 which were above the cutoff point of 2.50. The implication of this result is that respondents were in agreement that the eleven isolated skill items are required by farmers for effective processing and marketing of grass cutter.

Hypothesis 4

There is no significant difference in the mean ratings of lecturers of agriculture and extension personnel on the educational requirements of farmers for effective processing and marketing of grass cutter.

Independent t-test statistic was employed to test the hypothesis and the result is presented on Table 8

Table 8: Independent t-test analysis to compare the opinions of lecturers of agriculture and extension personnel on educational requirements of farmers for effective processing and marketing of grass cutter

Groups/Variables	N	$\overline{X}$	SD	t-cal	Remark
Lecturers of Agriculture	86	3.36	0.63	0.98	NS
Extension Personnel	93	3.27	0.54		

Significant at .05; df=177; critical t=1.960; NS= Not Significant

Data on table 8 revealed a calculated t-value of 0.98 which is less than table value of 1.960 at .05 level of significance and 177 degree of freedom. Since the calculated t-value is less than table value, the null hypothesis was therefore retained. The implication of this result was that the two groups of respondents did not differ significantly in their opinions on the educational requirements of farmers for effective processing and marketing of grass cutter.

Discussion of Results

The data generated and analyzed from the research questions and hypotheses from the lecturers of agriculture and extension personnel confirmed that all the items are required in the four areas of grass cutter farming. The findings on educational requirements in planning for grass cutter farming indicated that farmers should be trained on how to formulate objectives; review the objectives periodically; draw up programme plan; make a budget; identify sources of finance and selection of site. The findings further showed that they should be trained on construction of cages and hutches to specification; adoption of appropriate farming systems; procurement of inputs; recruitment of personnel to work in the farm and identification and keeping of relevant farm records. The above findings are in line with the submission of Olaitan and Mama (2001) that planning for any enterprise in agriculture is the process of arranging and documenting farm activities before implementation. The authors identified planning activities such as formulation of objectives, revision of the objectives periodically, budgeting, identification of sources of funds and labour among others to be essential to any agricultural enterprise.

The findings on educational requirements in the stocking of grass cutter indicated that farmers should be trained to be able to source for an already established grass cutter farm, purchase stock from nearby breeding and multiplication centre, select of stock at proper age, sex of the animal, and transport of foundation stock from place of purchase to the established farm. Other educational skill areas identified are isolation of purchased stock for proper medication and provision of a therapy to reduce stress on the animals. The findings are in line with Ayodele and Meduna (2007) who stated that grass cutter to be used for breeding should be preselected through a series of tests or checks like size, docility and virility, age at first mating and parentage. The findings further agree with Ngo-Samnick (2012) who stressed the need for grass cutter farmers to be equipped with the knowledge of obtaining the best animal for breeding from the nearest breeding centre.

The findings on educational requirements of farmers in management practices for effective grass cutter farming indicated that farmer should be trained to be skilled on how to source for adequate and quality grasses and forages, source for materials with least cost for compounding of feeds, purchase pelleted concentrates for supplementary feeding, provide feeds according to age of animal and identify sexual maturity traits in the animals. The findings also show that farmers should be educated to be able to mate the animals, perform routine checks and other occasional management activities including record keeping. The findings are in agreement with Onadeko and Amubode (2002) and Ayodele and Meduna (2007) who stated that provision of quality and

adequate nutrition is essential to grass cutter rearing in addition to occasional management operations like castration of males not selected for breeding.

The findings on educational requirements of farmers for effective processing and marketing of grass cutter indicated that farmers required training to be able to render the animal unconscious before slaughtering, remove internal organs, grade grass cutter and its products and determine prices of products based on body weight. The findings also showed that farmers should identify ideal buyers, package meat to meet consumers' taste, determine appropriate market for the products, keep appropriate records and determine farm profitability. These findings agree with Ebong (2000) who summarized marketing activities into market survey, grading, advertising, recording of financial transaction and determination of profits or losses.

Conclusion and Recommendations

The issue of combining animal protein of high quality with plant protein has been of primary concern to Nigerians and Cross Riverians in particular. This has necessitated studies to determine educational requirements in the areas of knowledge and skill training that could lead to attitudinal change on wild animals that could be domesticated, marketed by youth and adult members of the society. Grass cutter farming could help youths and adults to supply the needed high quality animal protein, secure employment and generate income that could better their standard of living.

The study therefore identified four areas in grass cutter farming which could constitute education/training requirements of youths and adults for effective rearing of grass cutter.

It was therefore recommended that:

1. The agricultural extension officers in the Ministry of Agriculture should use the identified educational/training skill areas by the study to guide the farmers and members of young farmers club on effective grass cutter farming.
2. The Government of Cross River State through the assistance of curriculum planners should integrate the skills identified by this study into the State skill acquisition training programme for youths and adults in grass cutter farming.

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