

Assessment of Resources Required for Establishment of Mushroom Farms in Secondary Schools in Akwa Ibom State

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Abstract

The study assessed the resources required for the establishment of mushroom farms in secondary schools in Akwa Ibom State. The study adopted a descriptive survey design. The population for the study was 791 Agricultural teachers drawn from public and private secondary schools in Akwa Ibom State, Nigeria. Purposive sampling technique was used to derive a sample size of 300 Agricultural teachers used for the study. A structured questionnaire titled “Assessment of Resources for Establishment of Mushroom Farms Questionnaire” was used as instrument for data collection. Three experts validated the instrument while test-retest method was used to obtain the reliability coefficient of 0.82. Two research questions and two null hypotheses tested at 0.05 level of significant guided the study. The items were rated on four (4) point rating scale; mean was used to analyze the research questions while t-test was used in testing the formulated hypotheses. The findings revealed that the establishment of mushroom farms depends so much on availability of resources such as funds, equipment's and basic infrastructures but these resources are not adequately available for establishment of mushroom farms in secondary schools in Akwa Ibom state. The researcher recommended that government and other stakeholders should ensure adequate funding and provision of other facilities for establishment of mushroom farms in secondary schools in Akwa Ibom state.

Keywords: Resources, Establishment of Mushroom Farm, Vocational Agricultural Education

I. INTRODUCTION

Mushrooms are stationary organisms, with many species that are either edible or poisonous. Onwubuya, Ajani, Dike and Uzokwe (2015) asserted that in the earlier years, mushrooms were collected from the wild, either from the forest floor or grassland seasonally especially in Nigeria until recently, the commercial production of mushroom became popular due to its huge benefits. Accordingly, Adebayo, Banjo and Abikoye (2009)

opined that Mushrooms have many uses which includes; medicinal, ceremonial, nutritional and biotechnological based functions. The value for mushrooms amongst the various tribes in Nigeria has made it an economic product for citizens. It is a major source of earning for young entrepreneurs who choose to establish mushroom farms. There are different kinds of mushroom; the most popular edible mushroom in Nigeria, according to Okhuoya, Akpaja, Osemwegie, Oghenekaro and Ihayere (2010), is the sclerotium-forming *Pleurotostuberregium*; others include, *Agaricus spp.*, *Auricularia auricular*, *Psathrellaatroumbonata* Pegler, *Lentinussquarrosulus*, *Chlorophyllummolybditis*, *Schizophyllum commune*, *Termitomyces globules* *Volvariellaesculenta* (Mass) Singer etc. Elaine and Nair (2009) maintained that; mushrooms have now become popular all over the world and that there are over 200 genera of macro-fungi which contain species that are of use to man. Twelve species are commonly grown for food and/or medicinal purposes, across tropical and temperate zones, these include the Common mushroom (*Agaricus*), Shiitake (*Lentinus*), Oyster (*Pleurotus*), Straw (*Volvariella*), Lion's Head or PomPom (*Heridium*), Ear (*Auricularis*), Ganoderma (*Reishi*), Maitake (*Grifolafrondosa*), Winter (*Flammulina*), White jelly (*Tremella*), Nameko (*Pholiota*), and Shaggy Mane mushrooms (*Coprinus*). Commercial markets are dominated by *Agaricusbisporus*, *Lentinulaedodes* and *Pleurotus*spp, which represent three quarters of mushrooms cultivated globally. Mushroom is a high value niche product with great potential, contributing to enterprise diversification and poverty alleviation (Kimole, 2012). Shirur and Chandegowda (2017) observed that mushroom farming is confronted with the lack of institutional support, high price of spawn, high cost of land acquisition, time lag to obtain a return on investment, lack of funds and insufficient production. Accordingly, Gebrelibanos (2015) asserted that low investment of capital on mushroom cultivation negatively affects the amount, quality of production and the market level. While Joseph and Oku (2016) moaned the complex process of obtaining loan. Thus, it is required that all necessary resources

needed to establish a viable mushroom venture are made readily available.

Resources are very important because of its role in the achievement of organizational/educational objectives and goals. The extent to which an organization achieves her objectives is directly proportional to the resources available. According to Oghuvby (2009), the quality of education and learning achievements of students depends on the resources available in schools. Thus, effective teaching and learning cannot take place within the classroom if the basic resources are not present. Mmou and Olutila (2000) observed that the success of a project is a function of the available resources to carry out the project, whether in schools or any other institutions.

Secondary school is the post primary stage of education. It is generally the final stage of compulsory education. Collins in Eze (2010) refers to secondary school as a school for young people, usually between the ages of eleven and eighteen. The National policy on Education (FRN, 2013) refers to secondary school as the form of education children receive after primary education and before the tertiary stage. Secondary schools in Nigeria and in Akwa Ibom specifically are managed by government and private individuals. The objectives of secondary education are to prepare individuals for useful living within the society and higher education (FRN, 2013).

II. STATEMENT OF THE PROBLEM

In Nigeria, secondary education plays a crucial role in contributing to economic and human development. The nation's professional and highly skilled personnel such as engineers, managers, technicians and teachers among others determine their career choice from the foundational stage of secondary education.

The introduction of entrepreneurship at the secondary level of education and beyond is to inculcate in learners the required skills to be self-reliant. Thus, it is required that adequate resources be put in place for effective practical delivery. Agricultural programmes such as mushroom farming, fisheries, animal husbandry etc. are programmes put in place to drive the entrepreneurial spirit amongst secondary school students.

Mushroom has been discovered to be a high value niche product with great potential, contributing to enterprise diversification and poverty alleviation which could create employment opportunities for our teaming unemployed youths and could go a long way in saving man from protein deficiency diseases (Isikhuemhenet *al.*, in Kimole, 2012). However, observations show that secondary schools in Akwa Ibom state are yet to practically deliver the

agricultural teachings in reflection to mushroom production, prompting the study which is aimed at ascertaining whether or not the resources required for the establishment are available

III. PURPOSE OF THE STUDY

The objective of this study was to assess resources required for the establishment of mushroom farms in secondary schools in Akwa-Ibom State.

Specifically the study sought to;

1. Ascertain the adequacy of facilities required for establishment of mushroom farms in secondary schools in Akwa Ibom State.
2. Ascertain the adequacy of funds required for establishment of mushroom farms in secondary schools in Akwa Ibom State.

IV. RESEARCH QUESTIONS

The following research questions guided the study;

1. How adequate are facilities required for establishment of mushroom farms in secondary schools in Akwa Ibom State?
2. How adequate are funds required for establishment of mushroom farms in secondary schools in Akwa Ibom State?

V. HYPOTHESES

The following hypotheses were tested;

1. There is no significant difference in the mean ratings of Agricultural teachers on adequacy of facilities required for establishment of mushroom farms between public and private secondary schools in Akwa Ibom State.
2. There is no significant difference in the mean ratings of Agricultural teachers on adequacy of funds required for establishment of mushroom farms between public and private secondary schools in Akwa Ibom State.

VI. METHODOLOGY

The research design used in conducting the study was descriptive survey. The population for the study was 791 Agricultural teachers drawn from public and private secondary schools in Akwa Ibom State, Nigeria as reflected in the table below;

Table 1: Population Distribution

S/N	GROUPS	TOTAL NO. OF AGRICULTURE TEACHERS
1.	Public	466
2.	Private	325
GRAND TOTAL		791

Source: Source: State Secondary Education Board, Uyo (2018)

Purposive random sampling technique was used to derive a sample size of 300 Agricultural teachers used for the study. The instrument used for data collection was a structured questionnaire titled “Assessment of Resources for Establishment of Mushroom Farms Questionnaire” (AREMFQ). The instrument provided response to the two research questions with 10 items on a 4-point rating scale weighted as “Very Adequate” (VA) – 4 points, “Adequate” (A) – 3 points, “Fairly Adequate” (FA) – 2 points and “Not Adequate” (NA) – 1 point. To establish the validity of the instrument, the questionnaire was subjected to face and content validity by two experts. To ensure the consistency of the instrument, test-retest method of reliability testing was adopted, giving a reliability Co-efficient of 0.82. The data analysis was done using the mean to answer the research questions with established criterion means 2.50 while t-test was used to test the hypotheses at 0.05% significance level.

VII. RESULTS

A. Research Question 1

How adequate are facilities required for establishment of mushroom farms in secondary schools in Akwa Ibom State?

Table 2: Mean rating of respondents on adequacy of facilities required for establishment of mushroom farms in secondary schools in Akwa Ibom State

Statements	Public (N=150)		Private (N=150)		Mean of Means	Remarks
	\bar{X}	STD	\bar{X}	STD		
My school has large area of land	2.37	1.01	2.06	0.80	2.2	NA
There are quality spawns	1.68	0.53	2.00		1.84	NA
There is adequate power supply	1.62	0.52	1.56	0.51	1.59	NA
There are research materials	1.52	0.59	1.83	0.62	1.68	NA
There are storage facilities	3.08	0.90	2.61	1.04	2.09	NA
Grand Mean/SD	2.1	0.71	2.0	0.59	2.03	NA

Source: Field work, 2018.

The data in Table 2 indicated that respondents were of the opinions that land ($\bar{X} = 2.22$), quality spawns ($\bar{X} = 1.84$), power supply ($\bar{X} = 1.59$), research materials (1.68), storage facilities ($\bar{X} = 2.09$) are not adequately available. It was generally accepted that facilities are not adequate for establishment of mushroom farms in both public and private secondary schools in Akwa Ibom State with an average mean score of ($\bar{X} = 2.03$).

$\bar{X} = 1.84$), power supply ($\bar{X} = 1.59$), research materials (1.68), storage facilities ($\bar{X} = 2.09$) are not adequately available. It was generally accepted that facilities are not adequate for establishment of mushroom farms in both public and private secondary schools in Akwa Ibom State with an average mean score of ($\bar{X} = 2.03$).

B. Research Question 2

How adequate are funds required for establishment of mushroom farms in secondary schools in Akwa Ibom State?

Table 3: Mean rating of respondents on adequacy of funds required for establishment of mushroom farms in secondary schools in Akwa Ibom State

Statements	Public (N=150)		Private (N=150)		Mean of Means	Remarks
	\bar{X}	STD	\bar{X}	STD		
There is adequate access to funds for training	1.98	0.28	1.78	0.43	1.88	NA
There are adequate funds for organizing practical	2.02	0.49	1.83	0.38	1.93	NA
My school is fully funded	2.08	0.66	2.00	0.34	2.04	NA
There are funds from stakeholders to run demonstration farms	2.25	2.46	2.06	0.64	2.16	NA
There are enough funds to channel into agricultural teachers welfare to boost performance	1.46	0.53	1.83	0.79	1.64	NA
Grand Mean/SD	1.96	0.88	1.90	0.51	1.93	NA

Source: Field work, 2018.

The Data in Table 3 above indicated no adequate access to funds for training ($\bar{X} = 1.88$); no adequate funds for organizing practicals. ($\bar{X} = 1.93$); schools

are not fully funded ($\bar{X} = 2.04$), funds from stakeholders are enough to run demonstration farms ($\bar{X} = 2.16$) and no sufficient funds to channel into agricultural teachers welfare to boost performance ($\bar{X} = 1.64$). It was generally accepted by the respondents that funds required for establishment of mushroom farms in secondary schools in Akwa Ibom State was not adequate ($\bar{X} = 1.93$).

C. Hypothesis 1

There is no significant difference in the mean ratings of Agricultural teachers on adequacy of facilities required for establishment of mushroom farms in public and private secondary schools in Akwa Ibom State.

Table 4: t-test result on adequacy of facilities required for establishment of mushroom farms

Respondents	N	\bar{X}	Std	Df	t-cal	t-crit	L/Sig	Decision
Public Agricultural Teachers	150	2.1	0.71	298	0.90	1.96	0.05	Accepted
Private Agricultural Teachers	150	2.0	0.59					

Source: Field work, 2018.

The result in table 4 indicated that the t-calculated (0.90) was less than the t-critical (1.96) at the degree of freedom (298) and 0.05 significant levels. Hence, the null hypothesis that there is no significant difference in the mean ratings of agricultural science teachers on adequacy of facilities required for establishment of mushroom farms in public and private secondary schools in Akwa Ibom State was accepted.

D. Hypothesis 2

There is no significant difference in the mean ratings of Agricultural teachers on adequacy of funds required for establishment of mushroom farms in public and private secondary schools in Akwa Ibom State.

Table 5: t-test result on adequacy of funds required for establishment of mushroom farms

Respondents	N	\bar{X}	Std	Df	t-cal	t-crit	L/Sig	Decision
Public Agricultural Teachers	150	2.1	0.71	298	0.90	1.96	0.05	Accepted
Private Agricultural Teachers	150	2.0	0.59					

Source: Field work, 2018.

The data in table 5 indicated that the t-calculated (0.68) was less than the t-critical (1.96) at the degree of freedom (298) and 0.05 significant levels. Hence, the null that there is no significant difference in the mean ratings of Agricultural teachers on adequacy of funds required for establishment of mushroom farms in public and private secondary schools in Akwa Ibom State was accepted.

VIII. DISCUSSION OF FINDINGS

One of the findings of this study was that facilities are not adequate for establishment of mushroom farms in both public and private secondary schools in Akwa Ibom. Facilities such as land, quality spawns, power supply, research materials and storage facilities are not adequately available as shown in Table 2. This finding agrees with that of Shirur and Chandegowda (2017) who found that mushroom farming is confronted with the lack of institutional support, high price of spawn, high cost of land acquisition. All these factors make the acquisition of necessary facilities difficult by the schools hence the establishment of mushroom farms in public and private secondary schools in Akwa Ibom state becomes a mirage.

The study also showed that there are no adequate funds for establishment of mushroom farms in both public and private secondary schools in Akwa Ibom. This result corroborated that of Gebrelibanos (2015) who asserted that low investment of capital on mushroom cultivation negatively affects the production and marketing of mushroom. The finding also agrees with that of Joseph and Oku (2016) who blamed the complex process of obtaining loan as one of the factors promoting poor funding of mushroom farms. Lack or poor funding is capable of causing a setback in the establishment of mushroom farms in public and private secondary schools in Akwa Ibom State.

IX. CONCLUSION

Based on the findings, it was deduced that public and private secondary schools in Akwa Ibom State do not have mushroom farms as a result of lack or inadequate resources to establish and manage mushroom farms; which is a minus from the educational objectives of making agriculture a vocational subject in secondary schools.

RECOMMENDATIONS

Based on the findings, the following recommendations were made:

1. Government and other stakeholders should increase their funding of secondary education and especially agricultural education for improved and practical

- learning and skill acquisition in vocational agriculture.
2. Equipment's should be adequately provided by government and other stakeholders to ensure effective delivery of agricultural education and establishment of demonstration farms to improve learning.

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