

## **ENHANCING ENTREPRENEURIAL SKILLS OF FARM FAMILIES THROUGH EXTENSION EDUCATION IN ABIA STATE, NIGERIA**

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### **ABSTRACT**

The study investigated how extension education can empower rural farm families to acquire relevant entrepreneurial skills for their farm business. Multistage stage sampling procedure was used in selecting 180 respondents. Data were collected through the use of structured questionnaires and Focus Group Discussion and later analyzed with the use of simple descriptive and inferential statistics like Z-test. Findings show that the mean age of respondents was 40.2 years, majority of the respondents were female (54.0%) with about 40.0% with no formal education. Annual average farm income was (N120) per annum with 38.0% belonging to social organization and 43.0% having 15-20 years of farming experience. Results on managerial skills before and after training on capacity building using z-test show a significant difference at 1% level of probability. From the findings of the study, it is concluded that the rural farm families can strengthen their capabilities through extension education. The paper therefore recommends regular extension training for the farm families on their enterprise needs.

**Keywords:** Rural Farm Families, Extension Education and Enterprise needs.

### **INTRODUCTION**

Entrepreneurship is the act of being an entrepreneur or one who undertakes innovations, finance and business acumen in an effort to transform innovations into economic goods. In spite of the fact that rural farmers possess a lot of energy and other inestimable assets for high productivity, little can they achieve without the required skills.

Mindtools.com (2016), noted that what makes someone a successful entrepreneur are some skills that are needed to build a great business.

Based on the above definitions and researchers' observations that our rural farmers do not in this 21<sup>st</sup> country participate actively again in agriculture while those who participate complained that they could not achieve much, it becomes necessary to find out what skills do farm entrepreneurs need to build and run a successful agri business.

The development of the entrepreneurial capacity of farmers will enable them to make significant contributions to agricultural development by identifying and exploiting investment opportunities in mainstream agricultural production, providing investment capital for the establishment and promotion of agro and allied enterprises, stimulating the development of the allied downstream sub-sector (input supply) through backward integration and upstream sub-sector (product processing) through forward integration, inducing the development of ancillary services for agriculture such as insurance through risk bearing and transforming the state of agricultural technology through innovation and innovation adoption. Without entrepreneurship, Nigerian agriculture will remain largely, a subsistence low external input activity with the consequent low output and low income for farmers (Onyebinama, 2004). The country's quest for self-sufficiency in food production will remain elusive, while the dream of achieving the sustainable development goal of zero hunger and poverty reduction among others will remain a mirage .

In Abia State, access to land is limited and so most farmers are tenants and are also more likely to engage in diversification activities to get extra income. Agricultural efficiency and productivity depend largely upon the input and investment in agriculture and the methods of production. There is no doubt that these inputs play an important role, but the farmers who are the major decision makers, has to decide on what to produce, how much to produce?, when to produce? and how to produce?

These decisions are not that easy. Therefore, farmers need technical and managerial competencies to make wise decisions. Therefore, the managerial decisions to be taken by the farmers are very important in the farming business.

The traditional function of the extension service is education. Unfortunately the provision of education by the extension service in Nigeria most of the time is limited to introduction of new technologies and feedback to research institutes (Anyanwu, 1998). While the extension service has made tremendous progress in the area of information dissemination and introduction of new technologies to farmers, this progress has not translated into agricultural output and productivity. Many governments, non government organizations as well as private sectors stress the need to strengthen education and training among the poorer sections of the population through extension systems, training programme and educational opportunities (Khal *et al*, 2013).

## **PROBLEM STATEMENT**

Entrepreneurial activities within the agricultural sector are done mainly for survival as opposed to return on investment at community level and thus contribute minimally to the national economy. The challenge for the national agriculture sector is to identify key factors for building a climate in which entrepreneurial initiative and business activities can thrive with the rural sectors.

The significance of entrepreneurial activities with the rural areas requires entrepreneurial conditions to be enhanced. The study therefore investigates the entrepreneurial levels of farmers in Abia state rural communities and identify factors that would improve and foster entrepreneurship to increase economic dynamism through the creation of a favourable environment for stimulating entrepreneurship activities.

Given the role of technical knowledge in increasing agricultural output and productivity, the extension service provides the physical framework for disseminating information and introducing new technologies to farmers and to teach them how to adopt and adapt improved production practices in order to increase their production and income. The extension services also ensures that the agro-economic and social environment of farmers and the day to day production problems they face are appreciated by research, thereby facilitating the continuous reorientation of research towards the priority needs of farmers and the early resolution of important technological constraints (Benor 1984).

But the ratio of extension personnel to farm families is 1:2000, so in order to bridge the gap the outreach of Michael Okpara University of Agriculture in conjunction with Bern University of International Agriculture, Switzerland replicated the training ( Capacity building on Agricultural Education) in selected communities in Abia state, Nigeria.

The broad objective of the study was to enhance the entrepreneurial skills of rural farm families with the following specific objectives;

1. ascertain the socio-economic characteristics of the respondents in the study area.
2. examine the business enterprises engaged by the respondents in the study area
3. identify the managerial competencies of the respondents before and after the training

## **METHODOLOGY**

The study was conducted in Abia State. The state is located within the Southeastern Nigeria and lies between longitude  $04^{\circ} 45^1$  and  $06^{\circ} 07^1$  North and latitude  $07^{\circ} 00^1$  and  $08^{\circ} 10^1$  East. Abia State is bounded by Imo at the Western border; Ebonyi and Enugu at the North; Cross River and

Akwa-Ibom States at the East and Rivers at the South. Its population stood at about 2,833,999 persons with a relatively high density at 580 persons per square kilometer (NPC, 2007).

The study employed two sources of data collection via primary and structured questionnaire. Primary data collection was between 2013/2014, secondary data were collected from literature, local government areas and agricultural institutions. The study applied multi-stage sampling technique in the selection of farm families from the agricultural zones of Abia (Ohafia, Umuahia and Aba). In stratum one, 1 Local Government Area was randomly selected from the zones (i.e. 3 LGAs). The second stratum involved random selection of 2 communities from the 3 LGAs, set aside for the research (6 communities). The last stratum entailed selection of 10 farm families from the communities giving a sample size of 180 respondents (selection was based only on those farm families that were engaged in food production, processing and other agri business).

The training programme consists of managerial skills short sessions. It was practical and application oriented and included opportunities for the participants to work on real problem areas of their farm enterprises. The sessions were designed in such a way as to be fitted exactly to the needs of the participants as they arise in practice. Identified Managerial Skills include; Networking, organizing, innovation, marketing opportunities, proper record keeping, risk assessment management and decision making.

After the training, the researchers went back to the various communities in 2015/2016 farming season to ascertain how the farm business and other livelihood activities has improved as a result of the training on managerial skills received.

For each community, the farmers were asked how the training they received on managerial competencies (skills) has improved their farm business and other livelihood activities. Their responses were recorded and analyzed using both descriptive statistics. Objective 1 – 2 were analyzed with frequency distribution while objective 3 was realized using 4-point Likert type scale were assigned scores of very high = (4), high = (3), low = (2), very low (1).

### **Hypothesis Testing**

The hypothesis which stated that:

There is no significant difference between the knowledge of the respondents before and after the training programme on managerial competencies was tested using z-test. The z-test model is stated below;

$$z_{cal} = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s^2_{x_1}}{n_1} + \frac{s^2_{x_2}}{n_2}}}$$

Where

$\bar{x}_1$  = Mean of level of knowledge before training

$\bar{x}_2$  = Mean of level of knowledge after training

$s^2_{\bar{x}_1}$  = Squared standard deviation of the level of knowledge before training

$s^2_{\bar{x}_2}$  = Squared standard deviation of the level of knowledge after training

$n_1$  = Number of sampled respondents before training

$n_2$  = Number of sampled respondents after training

## **RESULTS AND DISCUSSION**

### **Socio-Economic Characteristics of Respondents**

Table 1 shows distribution of the respondents based on their socio-economic characteristics. The results shows that a fair proportion 24% of the respondents were between the age of 35 – 40 years of age, 22% were between 60 and above, while 20% were between 25 – 30 years of age.

This result is in consonance with the findings of Nwobiala (2014) that community development associations were mostly within the productive ages. These therefore, suggest that given adequate training or skill acquisition, the respondents have the potentials to diversify their agricultural activities to become entrepreneurs. Age is a difficult element in relation to entrepreneurial qualities; some respondents think younger farmers are better entrepreneurs, because they are ambitious, more flexible and more open to change. Others think older farmers are able to act in a more entrepreneurial manner because of the life cycle in their farm organization and their experience in business.

The Table further shows that 46% of the respondents were male, while 54% were female. Women comprise more than 50% of the rural population involved in agricultural activities. Empowering this disempowered section of the society will have a major impact in addressing development. Rural women play crucial roles in agricultural activities and in increasing food and mutation security, as farmers/producers, workers and entrepreneurs (international year of

cooperation, 2012). Table 1, also reveals the educational level of the respondents, ab 40.0%) of the respondents had no formal education, 36% had primary education, 18% had secondary education, while 7% had either diploma or B.Sc certificates. Nwachukwu (2014) cited that educated individuals and households are better positioned to take advantage of new skills and technologies that could enhance the entrepreneurial competencies of the individuals. He further stated that educated farmers are known to make greater use of information, advice and training, to participate more in government scheme and be more proactive in adjusting to change and planning for the future of their business.

Table 1 further indicates that 34% of the respondents earned between N100 – 120,000 per annum, while 24% of the respondents earned between N40 – 80,000 while 22% and 20% earned between N140 – 160,000 and 180 – 200,000 respectively. The implication of the result is that the training had a positive impact on the respondents.

**Table 1: Socio-economic characteristics of the respondents**

<b>Variables</b>	<b>Frequency</b>	<b>%</b>
<b>Age</b>		
25 – 30	28	15.6
35 – 40	36	20.0
45 – 50	44	24.4
55 – 60	32	18.0
60+	40	22.0
<b>Total</b>	<b>180</b>	<b>100</b>
<b>Sex</b>		
Male	82	45.6
Female	98	54.4
<b>Total</b>	<b>180</b>	<b>100</b>
<b>Marital Status</b>		
Married	152	84.4
Not married	28	15.6
<b>Total</b>	<b>180</b>	<b>100</b>
<b>Level of Education</b>		
Non-formal	72	40.0
Primary	65	36.1
Secondary	33	18.3
Others	10	5.6
<b>Total</b>	<b>180</b>	<b>100</b>

<b>Level of Income ‘000’</b>		
40 – 80	45	23.9
100 – 120	62	34.4
140 – 160	39	21.7
180 – 200	36	20.0
<b>Total</b>	<b>180</b>	<b>100</b>

*Source: Field survey, 2016*

### **Farm enterprise engaged by the respondents in the study area**

Table 2 shows the various activities engaged by the farm families in the study area. From the result 93.3% of the respondents were engaged in crop production, 32% livestock rearing, 37% were engaged in vegetable/fruits production, 56% food processing 16% were engaged in mushroom growing/beekeeping while 83% were engaged in oil processing.

Also 40% were involved in marketing of their products while 26% were involved in sales of agro-inputs. Robinson-Dart(2016), in his findings stated that enhancing knowledge and skills has never been so vital for the creation of inclusive and sustainable societies as in today’s globalized, knowledge oriented world and so it has becomes necessary for the farm families to acquire the essential skills to meet up with the challenges.

As diversification becomes almost an agricultural practice, farmers are increasingly recognized as entrepreneurs, needing to develop new skills and capabilities to remain competitive (McElwee, 2006). Smith (2004) also argues that entrepreneurship is increasingly becoming the most important aspect of modern farming.

**Table 2: Distribution of respondents based on their business enterprises**

<b>Variables</b>	<b>Frequency</b>	<b>%</b>
Crop production	168	93.3
Livestock rearing	58	32.2
Vegetable/fruits production	67	37.2
Oil processing	151	83.9
Mushroom crowing/bee-keeping	28	15.6
Food processing	101	56.1
Marketing	72	40.0
Sales of Agro-inputs	47	26.0

*Multiple Response Source: Field survey, 2016*

### **Level of knowledge on managerial skill before and after the training**

Results on table 3 show respondents level of knowledge before and after the training. From the result, networking ability had a mean score of (M =2.31) and a standard deviation of 0.60 before intervention and (M =4.39) with standard deviation of 0.81 after intervention. Ability to cooperate with others, networking and utilizing contacts will help their business growth.

Having such networking abilities, including more experienced mentors, is a key characteristics of successful entrepreneurs.

Planning had a ranking mean of (M = 2.15) with standard deviation of 0.74 before training and (M= 4.31) with standard deviation of 0.89 after the training.

The implication of the results is that their knowledge skill increased on how to build their farm business from scratch while managing limited resources (including time, money and personal relationship).

Innovation had a mean score of (M = 2.14) standard deviation (0.64) before intervention and (M= 3.91) with standard deviation (1.09) after intervention. The training on being innovative helped the farm families to know how to make arrangements for introducing new things in their farming business which will helped them to increase their production and reduce cost at the same time.

Risk assessment and management had a mean score of (M = 2.13) with standard deviation of 0.66 before training and (M = 3.76) with standard deviation of 0.78 after the training. The training enabled them to initiate long term plans and policies and undertake innovative efforts.

Marketing opportunities had a mean score of (M = 1.14) with standard deviation of 0.78 before training and (M = 2.64) with standard deviation of 1.14 after training. The respondents were able to identify market segments. They were now producing goods in accordance with consumers taste which can be known from market trend. Proper record-keeping had a mean score of (M =2.02) with standard deviation of 0.75 before training and (M = 3.76) with standard deviation of 1.17 after the training. It is proper for successful entrepreneur to keep records. He has to supervise every little detail so as to ensure maximum production and economies.

Decision making had a mean score of (M =1.94) with standard deviation of 0.78 before training and (M= 3.64) and standard deviation of 1.14 after the training. The implication of the result is that the respondents can now take appropriate decision about procurement of machineries and supplies, quality of products, diversification of products, pricing of products. According to Rae (2007) and Man *et al.*( 2002) both entrepreneurial and management skill set are necessary to run

a successful venture. Enhancing knowledge and skills has never been so vital for the creation of inclusive and sustainable societies as today’s globalized knowledge orientation world (Robinson-Dart, 2016).

**Table 3: Mean Distribution of Respondents on managerial competencies before (1) and after (2) the training**

Variables	Before training		After training	
	M	SD	M	SD
Networking	2.31	0.60	4.39	0.81
Innovation	2.19	0.74	4.31	0.89
Risk assessment and management	2.14	0.67	3.91	1.09
Marketing Opportunities	2.13	0.66	3.82	1.15
Proper Record Keeping	2.02	0.75	3.76	1.17
Team working	1.94	0.78	3.64	1.14

*Source: Field survey, 2016*

**Table 4: Difference between the level of knowledge managerial skills before and after the training in the study**

	Mean	Std Deviation	Std Error M	Z-cal
Before	1.5543	0.27349	0.07309	16.35*
After	2.8464	0.30124	0.08051	
Before-After	-1.29214	0.29569	0.07903	

- $P \leq 0.05$ . *Source: Field survey, 2014*

Results on Table 4 shows the significant difference between the level of knowledge (skills) managerial skills of the respondents before and after the training. The result revealed the mean level of knowledge before the training as (1.5543) and after training as (2.8464). The difference in mean was (1.2921) and with standard deviation of 0.2775.

The result also revealed that z-calculated was (16.35) and is greater than z-tabulated (-3.989) indicating that there is a significant difference between the level of knowledge (skills) before the training and level of knowledge acquired after the training.

With this result the researchers fail to accept the null hypothesis which stated that there is no significant difference between the level of knowledge before and after the training in the study area.

## **CONCLUSION AND RECOMMENDATIONS**

Based on the findings of the study the researchers concluded that the training was effective in enhancing the entrepreneurial competencies of the respondents and therefore recommends that;

Agricultural Development Program (ADP), National Research Institute and Non-governmental organizations should from time to time organise seminar and workshop that focuses on entrepreneurial activities and development.

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