

ENTREPRENEURIAL COMPETENCY NEEDS OF SECONDARY SCHOOL GRADUATES IN COMMERCIAL PLANTAIN PLANTATION MANAGEMENT PRODUCTION IN ABIA AND IMO STATES, NIGERIA.

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Abstract

The study focused on identification and packaging of entrepreneurial competencies in commercial plantain plantation production for training secondary school graduates for employment in Abia and Imo States. The study had three (3) specific purposes while one (1) null hypothesis was formulated and tested at 0.05 level of significance. The population of the study was 1434 made up of 644 agricultural science teachers, 766 extension agents and 34 registered plantain plantation management farmers. The sample for the study was 316 made up of 129 agricultural science teachers, 153 extension agents and 34 registered plantain plantation management farmers. Structured questionnaire was used to obtain data from the respondents. The questionnaire was face validated by five (5) experts. Cronbach Alpha Method was used to determine the internal consistency of the structured questionnaire; a reliability coefficient of 0.88 was obtained. The data collected was analyzed using Weighted Mean and Analysis of Variance (ANOVA) to test the hypothesis of no significant difference at probability of less than or equal to 0.05. The study found out that: secondary school graduates needed 59 entrepreneurial competencies for employment in plantain nursery. The study also found out that there was no significant difference in the mean ratings of the responses of Agricultural Science teachers, Extension agents and plantain plantation management farmers on 57 out of 59 competencies in commercial plantain nursery needed by secondary school graduates for employment in commercial plantain nursery production. Based on the findings, the study recommended that Abia and Imo State governments should direct the administrators of skill acquisition centres in the two states to integrate the identified competencies in commercial plantain plantation production and packaged plantain management programme into programmes of skill acquisition centres for training secondary school graduates for employment.

Keywords: Entrepreneurship, Competency, Secondary school graduates, commercial plantain production.

Background

Plantain is a crop plant with green leaves and herbaceous stem. Its fruits are cherished by many people in Abia and Imo states. Agbakoba (2001) highlighted that plantain species are classified either by bunch type, floral size or size of the pseudostem (false stem). The specie of plantain grown in the area of study is false horn plantain. It usually produces heavier bunches and greater number of fruits than others. This variety has similar methods of production, like other species.

It was reported by Opeke (2006) that plantain is useful in the cure of different diseases such

as cardio vascular and kidney problems, dehydration in infants and diabetic patients or people with arthritis and gastro-intestinal ulcers. In agriculture, plantain products such as the fruits or peels are used as feed for animals; the peels are used as organic manure by farmers. The dead leaves and pseudostems of plantain are used for mulching or allowed to decay to form organic manure. Based on the value of plantain as stated above, secondary school graduates involved in plantain production enterprises cannot be out of business easily especially when they are trained to be entrepreneurial proficient.

Entrepreneurship in the view of Tasbulatova (2000) involves new ways of looking at opportunities and identifying new approaches towards solving problems through application of strategic planning. The author stressed that strategic planning is an essential part to the concept of entrepreneurial development of an individual which implies dexterity of competencies in an occupation to achieve a goal.

Competency as explained by Alawa, Abanyam and Okeme (2010) is the successful performance of a task through the use of knowledge, skill, attitude and judgement. To be competent means that individual has acquired knowledge, skills and attitude which are required for performing successfully at a specified proficiency level in any given work. Entrepreneurial competency in the context of this study refers to identified knowledge and skills in plantain production that are organized sequentially in the way that a learner could master them and in addition with business knowledge and skill that would be used to pilot these competencies into economic success in commercial plantain production. Commercial plantain production according to the report of international institute of tropical agriculture (IITA) (2008) is the cultivation of large expanse of land with plantain plants of different species growing in it for market purposes. Commercial plantain production could be in form of an enterprise.

The production of plantain in Abia and Imo States have been regarded by the people as a viable enterprise hence they are eager to become involved in it profitably. In the context of this study, enterprise refers to business operations undertaken by secondary school graduates in the cultivation of plantain for generating income for their livelihood. In the study area, plantain production enterprises include plantain nursery, plantain plantation management, plantain processing and marketing. The enterprise that is of concern to this study is plantain plantation management. This enterprise could provide jobs for

secondary school graduates. Secondary school graduates in the view of Onuka (2003) are school leavers who have completed six years of secondary school but could not secure admission into any higher institution or secure employment in any farm related occupation due to lack of interest and skills in farming.

Governments of both states make efforts to boast plantain production and mandated secondary schools to teach plantain production as a major crop in order to empower the youths to take to plantain crop production on graduation. However, secondary school students graduate without the needed entrepreneurial competencies in plantain production. This also make the governments of Abia and Imo states to direct the skill acquisition centres in their respective states to embark on the training of unemployed secondary school graduates in competencies in plantain production. It was observed that the skill acquisition centres lacked training programmes in plantain production required to equip unemployed secondary school graduates with plantain production competencies. For improvement in plantain production through training in skill acquisition centres to be achieved, there is need to identify the competencies needed by unemployed secondary school graduates in commercial plantain plantation management

The major purpose of the study was to identify and package entrepreneurial competencies in plantain production enterprise for training secondary school graduates for employment in commercial plantain plantation management enterprise in Abia and Imo States. Specifically, the study sought to identify and package:

1. Entrepreneurial competencies needed by secondary school graduates for employment in planning and pre-planting operations of commercial plantain plantation management,
2. Entrepreneurial competencies needed by secondary school graduates for employment in planting and post-planting

operations of commercial plantain plantation management.

3. Entrepreneurial competencies needed by secondary school graduated for employment in harvesting and marketing operations of plantain fruits.

Hypothesis

H₀₁: There is no significant difference in the mean ratings of the responses of agricultural science teachers, extension agents and farmers on the entrepreneurial competencies needed by secondary school graduates for employment in:

- i. Planning and pre-planting operations of commercial plantain plantation management.
- ii. Planting and post-planting operations of commercial plantain plantation management.
- iii. Harvesting and marketing operations of commercial plantain plantation management.

Methodology

The study made use of descriptive survey design. A descriptive survey design in the opinion of Ali (2006) is a study which uses a sample of a definite population of an investigation to document, describe and explain what is in existent or the present status of phenomena investigated. The study was carried out in Abia and Imo states. The population of the study was 1,434 comprising 644 agricultural science teachers, 766 extension agents and 34 registered plantain plantation management farmers. The total sample for the study was 302, made up of 129 agricultural science teachers, 153 extension agents selected through 20% proportionate random sampling technique while the entire 34 registered plantain farmers was used because it was small. A set of structured competency questionnaire covering plantain nursery and marketing was developed for data collection. The instrument was face validated by five experts. These include one expert from Agricultural education unit of the Department

of Vocational Teacher Education, University of Nigeria, Nsukka, one from crop science department, Federal university of technology Owerri, one from crop production department of Imo state polytechnic Owerri, one from National Institute of Horticultural Research and training (NIHORT) Okigwe and one from Agricultural Development Programme (ADP) Owerri. Cronbach Alpha reliability method was used to determine the internal consistency of the questionnaire. The reliability coefficient of 0.88 was obtained. Three hundred and sixteen (316) copies of the questionnaire was administered with the help of six assistants, all the copies of the questionnaire were collected after four weeks at an agreed place by the researcher from the assistants. This shows a 100% return rate. In deciding on the competency items needed, the real limit of numbers was utilized for decision making as follows:

Very Highly Needed (VHN) 4.50 – 5.00

Highly Needed (HN) 3.50 – 4.49

Averagely Needed (AN) 2.50 – 3.49

Slightly Needed (SN) 1.50 – 2.49

Not Needed (NN) 1.00 – 1.49

The standard deviation was used to decide on the closeness or otherwise of the respondents to the mean in their responses. Any item with standard deviation of less than 1.96 indicated that the respondents were not too far from the mean or from one another in their responses.

Any competency item with a mean value of 1.50 or above was regarded as needed. Any item with a mean value less than 1.50 was regarded as not needed.

The hypothesis formulated was tested at 0.05 level of probability using Analysis of Variance (ANOVA). A hypothesis of no significant difference was accepted where P-value is greater than 0.05; the hypothesis of no significant difference was rejected where p-value is less than 0.05. Where there is difference, Post hoc analysis was carried out to decide on the direction of the difference.

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Results:

Table I: Mean and Analysis of Variance (ANOVA) of responses of the agricultural science teachers, Extension Agents and plantain Plantation management farmers on Entrepreneurial competencies needed by secondary school graduates for employment in planning and pre-planting operations of commercial plantain plantation management. **N = 316**

S/N	Item Statement	X	SD	P-value	Remark
1	Formulation of specific objectives for plantain plantation management	4.56	0.75	0.61	VHN/NS
2	Review the objectives of the plantain plantation enterprise periodically based on changes in market demand and supply	4.78	0.71	0.71	VHN/NS
3	Draw up programme plan for the plantain plantation enterprise	4.65	0.76	0.67	VHN/NS
4	Decide on the type (small, medium or large) of plantain plantation management enterprise	4.35	0.64	0.96	VHN/NS
5	Identify sources of credit for plantain plantation enterprise	4.63	0.74	0.81	VHN/NS
6	Budget for plantain plantation management	4.50	0.72	0.58	VHN/NS
7	Identify relevant material inputs and their location (seedling, fertilizers, herbicides) for plantain plantation enterprise	4.51	0.76	0.67	VHN/NS
8	Provide relevant tools and equipment (vehicles, cutlass, hoe, etc.) for use in plantain plantation enterprise	4.38	0.71	0.87	VHN/NS
9	Identify different levels of man power needed for plantain plantation management	4.64	0.78	0.72	VHN/NS
10	Plan farm operations to make most efficient use of the available money	4.31	0.70	0.91	VHN/NS
11	Make rules and regulations for successful plantain operations	4.73	0.75	0.64	VHN/NS
12	Identify market outlet for the plantain products	4.29	0.71	0.78	VHN/NS
13	Identify relevant records to keep for plantain plantation enterprise	4.36	0.57	0.99	VHN/NS
14	Identify a site for plantain plantation enterprise	4.71	0.73	0.51	VHN/NS
15	Select well drained soil, rich in organic matter	4.56	0.70	0.47	VHN/NS
16	Clear the undergrowth of the selected land with appropriate technologies	4.76	0.75	0.57	VHN/NS
17	Cut down the trees with appropriate technologies	4.44	0.57	0.26	VHN/NS
18	Pack residues and burn	4.59	0.72	0.80	VHN/NS
19	Stump the stems, pack off, level and fill depressions with appropriate technologies	4.67	0.74	0.74	VHN/NS
20	Lay out the blocks to specification	4.23	0.70	0.82	VHN/NS
21	Lay the plots in planting spacing of 3m by 2m along and within the rows for digging	4.67	0.65	0.04	VHN/NS
22	Dig holes of 30cm by 30cm for each plantain sucker	4.28	0.66	0.02	VHN/NS
23	Keep the top soil separated from bottom soil of du holes				<i>Okafor, O. E., Orusha, J. O. & Nwoye, E.O</i>

Key: X = Mean, SD = Standard Deviation, NS = Not Significant, S = Significant P-Value = 0.005, N = Number of Respondence, VHN = Very Highly Needed HN = Highly Needed

The data in table 1 revealed that the 23 competency items and their mean values ranged from 4.23 – 4.78, which were above the real limit of 1.50. This indicated that all the competency items were needed by secondary school graduated for employment in planning and pre-planting operations of commercial plantain plantation management. The 23 competency items had their standard deviation ranged from 0.57 – 0.78 and are positive, these were less than 1.96 indicating that the respondents were not too far from the mean and were close to one another in their opinions. These helped to add value to the mean. The data also revealed that the 21 competency items had their P-value ranged from 0.26 – 0.99 which were greater than 0.05 indicating that there was no significant difference in the mean ratings of the responses of Agricultural Science teachers, Extension agents and plantain plantation farmers on 21 out of 23 entrepreneurial competencies needed by secondary school graduates for employment in planning and pre-planting operations. Therefore, the hypothesis of no significant difference was upheld for 21 entrepreneurial competency items. Competency items 21 and 22 had p-values of 0, 04 and 0.02 respectively less than 0.05, indicating that there was a significant difference in the mean ratings of the respondents. Therefore, the hypothesis of no significant difference was rejected for the 2 competency items.

Post hoc analysis with Sheffe test of multiple comparison was used to show the direction of the significant difference in the mean ratings of the responses of the three groups of respondents on items 21 and 22. It was revealed that the significant difference was between agricultural science teachers and plantain plantation farmers.

Table 2: Mean and Analysis of Variance (ANOVA) of responses of the agricultural science teachers, extension agents and plantain plantation management farmers on Entrepreneurial competencies needed by secondary school graduates for employment in planting and post planting operations of commercial plantain plantation management **N = 316**

S/N	Item Statement	X	SD	P-value	Remark
1	Select well differential seedlings after 7 – 8 weeks in the nursery	4.66	0.72	0.83	VHN/NS
2	Remove bottom portion of the polythene bag with seedlings to 2cm from the base	4.59	0.65	0.96	VHN/NS
3	Place seedlings centrally into the hole with two hands and remove the poly bag	4.64	0.74	0.64	VHN/NS
4	Fill back the hole first with top soil and then with bottom soil	4.54	0.88	0.99	VHN/NS
5	Press the soil firmly around the seedling	4.63	0.85	0.68	VHN/NS
6	Place mulch materials around each planted seedlings	4.38	0.90	0.54	VHN/NS
7	Water the seedlings daily	4.59	0.76	0.79	VHN/NS
8	Weed as weeds appear with cutlass or machet or spray weeds with appropriate herbicides	4.58	0.76	0.79	VHN/NS
9	Apply 300kg/ha of Nitrogen in form of urea to seedlings one month after planting at the rate of milk tin per plantain plant	4.66	0.88	0.55	VHN/NS
10	Apply 500kg/ha of muriate of potash 30 days after the first application of urea at the rate of small tomato tin per plantain plant0.	4.51	0.67	0.99	VHN/NS
11	Apply mixed fertilizer of 250gm (N), 100gm (P2O5) and 200gm (k) at the rate of 50gm/plant when it stars to maiden	4.63	0.71	0.83	VHN/NS

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12	Hand pick pests or insects on green leaves of plantain plant	4.55	0.78	0.63	VHN/NS
13	Plant resistant variety to guide against diseases	4.37	0.81	0.53	VHN/NS
14	Spray appropriate insecticides to destroy insects or pests	4.64	0.74	0.44	VHN/NS
15	Cut the male bud after the fruit has been set when the fingers are not coming out	4.68	0.77	0.00	VHN/NS
16	Get a stick that has Y shape and blog the Y stick shape on fruit stalk	4.58	0.72	0.66	VHN/NS
17	Dig the stick firmly into the soil to provide support of trunk or fruit until harvesting	4.71	0.63	0.99	VHN/NS

The data in table 2 revealed that the entire competency items had their means ranged from 4.37 – 4.71. Each mean was above the real limit of 1.50, this implied that all the competency items were needed by secondary school graduates for employment in planting and post planting operations of commercial plantain plantation management. All the competency items had their standard deviation ranged from 0.63 – 0.92 and are positive, these were less than 1.96 indicating that the respondents were not too far from the mean and were close to one another in their opinions. This makes the mean more dependable.

The data also revealed that the 16 competency items had their p-value ranged from 0.44 – 0.99 which were greater than 0.5 indicating that there was no significant difference in the mean rating of the responses of Agricultural science teachers, extension agents and plantain plantation farmers on 16 out of 17 entrepreneurial competencies needed by secondary school graduates for employment in planting and post-planting operations. Therefore, the hypothesis of no significant difference was upheld for 16 entrepreneurial competency items. Competency item 15 had p-value of 0.00 less than 0.05, indicating that there was a significant difference in the mean ratings of the respondents on competency item 15. Therefore, the hypothesis of no significant difference was rejected for the competency item 15. Post hoc analysis with Sheffe test of multiple comparisons was used to show the direction of the significant difference in the mean ratings of the responses of the three groups of respondents was revealed that on item 15, the significant difference in mean ratings of the responses of the respondents was between Agricultural Science teachers and Extension agents.

Table 3: Mean and Analysis of Variance (ANOVA) of responses of the agricultural science teachers, extension agents and plantain plantation management farmers on entrepreneurial competencies needed by secondary school graduates for employment in harvesting and marketing operations of plantain fruits. N = 316

S/N	Item Statement	X	SD	P-value	Remarks
1	Identify mature plantain fruits for harvesting	4.63	0.64	0.81	VHN/NS
2	Harvest with sharp machet by bending down to cut the pseudostem	4.69	0.75	0.98	VHN/NS
3	Place with forked stick or a helper to receive the bunch	4.73	0.70	0.98	VHN/NS
4	Cut the pseudostem half way, then cut the bunch	4.57	0.71	0.61	VHN/NS
5	Cut the entire pseudostem and chop together with the foliage of the main plant	4.32	0.98	0.91	VHN/NS

6	Spread chopped psudostem and foliage over the soil as mulch for ratoon crop	4.60	0.85	0.58	VHN/NS
7	Collect the harvested bunches together for airing	4.55	0.65	0.70	VHN/NS
8	Cover the bunch with leaves half way to allow air inside the heap	4.54	0.72	0.71	VHN/NS
9	Carry out market survey for sale of plantain bunches	4.56	0.69	0.64	VHN/NS
10	Advertise the sales of plantain fruits	4.62	0.85	0.69	VHN/NS
11	Identify customers and invite them for supply and search for market	4.33	0.79	0.68	VHN/NS
12	Inform customers on the arrival of plantain products	4.61	0.78	0.69	VHN/NS
13	Identify suitable whole sellers and retail agents	4.58	0.87	0.81	VHN/NS
14	Sort the bunches to sizes in the weigh house	4.58	0.76	0.90	VHN/NS
15	Fix their prices based on the weight or size of the bunches	4.62	0.79	0.78	VHN/NS
16	Sell the plantain bunches to the buyers	4.63	0.87	0.73	VHN/NS
17	Transport the purchased bunches to the buyers if necessary	4.67	0.87	0.88	VHN/NS
18	Keep records of purchase and sales made	4.65	0.80	0.56	VHN/NS
19	Reconcile sales with cost of resource input to determine profit or loss.	4.64	0.68	0.90	VHN/NS

The data in table 3 revealed that the 19 competency items had their mean values ranged from 4.32 – 4.73 which were above the real limit of 1.50. This indicated that all the competency items were needed by secondary school graduates for employment in harvesting and marketing operations of plantain fruits in Abia and Imo states. The 19 competency items had their standard deviations ranged from 0.65 – 0.98, these were less than 1.96 indicating that the respondents were not too far from the mean and were close to one another in their responses. This adds value to the mean. The data also revealed that all the 19 competency items had their P-value range from 0.56 – 0.98 which were greater than 0.05 indicating that there was no significant difference in the mean ratings of the responses of agricultural science teachers, extension agents and plantain farmers on the 19 entrepreneurial competencies needed by secondary school graduates for employment in harvesting and marketing operations of plantain fruits. Therefore, the hypothesis of no significant difference was upheld for the 19 entrepreneurial competency items.

Discussion of Findings

The study found out that the competency items in plantain plantation management were needed by secondary school graduates for employment in plantain plantation management enterprise. From Table 1 above, it was revealed that the findings on planning for plantain plantation management enterprise were in agreement with the views of Anyanwu, et al (2004) who outlined competencies in farm planning to include: reviewing of the farm objectives, establishing rules and regulation for workers, identifying manpower and market outlet among others. The findings on competencies in pre-planting operations of commercial plantain plantation management were in line with the views of Chadha (2007) who listed competencies as select suitable well drained loamy soil, under brushing of the undergrowth, stumping of all trees among others. The findings were also in line with the views of Faturoti, Tenkouano, Lemchi and Nnaji (2006) who outlined competencies in pre-planting as: lay out the blocks of 4 hectares, dig holes of 30 cm by 30cm by 30cm for each of the plantain sucker among others. From table 2, the findings on planting plantain in the field were in line with report of FAO

(2003) on Banana/Plantain multiplication which stated that the competencies on planting plantain in the field as: Selecting a well developed seedling when the seedling is about 7-8 weeks old, Remove bottom portion of the polyethene bag by 2cm among others. The findings were also in conformity with the opinions of Rasheed (2003) that the following competencies on planting plantain in the field were: removing the poly bag away from the seedlings, place mulch materials around each planted seedlings among others.

Findings on post-planting operations were in agreement with the views of Ekunwe and Ajayi (2010) who listed the competencies as weeds appear with cutlass or machet, apply 300kg/ha of Nitrogen in form of urea to seedlings one month after planting at the rate of milk tin per plantain plant, apply 500kg/ha of muriate of potash 30 days after the first application of urea at the rate of small tomato tin per plantain plant among others.

The findings were also in line with the report of IITA (2008) on plantain cultivation that stated competencies on post planting as follows: hand pick pests or insects on green leaves of plantain plants, plant resistant variety to guard against diseases, spray appropriate insecticides to destroy insects and pests among others. From table 3, the findings on harvesting of plantain fruits were in conformity with the view of Imo ADP (2007) that the following competencies were needed in harvesting as: Identify mature plantain fruits, harvest with machet by bending down to cut the pseudostem among others. The findings were also in line with the NIHORT (2006) report that outlined competencies in harvest of plantain as: Cut down the entire pseudostem and chop together with foliage of the main plant among other findings on marketing of plantain fruits were in line with the views of Stanton (1996) who stated that marketing competencies include: Carry out market survey for sale of plantain bunches, identify customers and invite them for supply. The findings on marketing were also in

consonance with the opinions of Danielles, Enyiberger and Lovens (2010) who outlines marketing competencies as: Sort the goods to sizes in the weigh house, fix their prices based on the weight or sizes of the bunches.

Conclusion and Recommendation

The government of Abia and Imo States made efforts to boost plantain plantation management production through schools but the results were not very favourable hence, the government established skill acquisition centres for training secondary school graduates for occupation but these skill centers were devoid of competency training programme for training secondary school graduates for employment in the plantain plantation management production enterprise.

This study focused on identification and packaging of entrepreneurial competencies in commercial plantain plantation production for training secondary school graduates for employment. The study therefore found out that the entrepreneurial competency items in plantain plantation management were needed by secondary school graduates for employment on plantain plantation management enterprise. The study also packaged the identified plantain plantation management competencies into programme for training secondary school graduates for employment. The study therefore recommended that Abia and Imo States government should direct the acquisition centers to integrate the identified and packaged programme in plantain plantation production enterprise into skill acquisition centers for training secondary school graduates for employment in commercial plantain plantation production.

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