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ABSTRACT

This study focused on determination of technical skill capacity building needs of lecturers of Agricultural Education in organic farming for effective delivery to students in Universities in Southeastern Nigeria. Four research questions guided the study. The population of the study was 63 respondents. The entire population was involved in the study. A 52-skill item questionnaire was used for data collection. The questionnaire skill items were validated by three experts. Split-half technique and Cronbach Alpha reliability method were used to determine the internal consistency of the instrument. A reliability coefficient of 0.86 was obtained. Sixty-three copies of the instrument were administered to the respondents by the researchers on one to one basis. All the copies of the questionnaire were retrieved and analyzed using mean and Improvement Need Index (INI) to answer the research Questions. It was found out that the lecturers of Agricultural Education in Universities in Southeastern Nigeria needed capacity building in technical skills in crop rotation, green manuring, composting and biological pest and disease control. It was recommended that the identified technical skills by this study be packaged and utilized to retrain lecturers of Agricultural Education through workshops, seminars in organic farming for effective delivery to students in Universities in Southeastern Nigeria.

Key Words: Technical Skill, Innovation, Sustainable, Teacher, Pedagogy, Capacity Building.

1. INTRODUCTION

Organic farming has been practiced for centuries in different parts of the country. According to United State Development of Agriculture Report (1980), organic farming is the production system which avoids or largely excludes the use of synthetic fertilizers, pesticides, growth regulator and livestock feed additives. The report noted that to a maximum extent, organic farming systems rely upon crop rotation, crop residue, animal manure, legumes, green manure, off-farm organic wastes, mechanical cultivation, mineral bearing rocks and aspects of biological pest control to maintain soil productivity and tilt to supply plant nutrients and control insects, weeds and other aspects. Oluwatomi (2011) recorded that organic farming is a form of agriculture that relies on techniques such as crop rotation, green manure, compost and biological pest control to maintain soil productivity on a farm. It excludes or strictly limits the use of manufactured fertilizer, pesticides (which includes herbicides, insecticides and fungicides), plant growth regulators such as hormones, livestock antibiotics, food additive and genetically modified organisms. In the context of this study, organic farming is a form of agriculture that adopts techniques such as crop rotation, green manuring, compost and biological pest control to maintain soil productivity on a crop farm. International Federation of Organic Agriculture Movement (IFOAM, 2011) stated that organic farming is a production system that sustains the health of soils, ecosystems and people. It combines traditional innovation and science to benefit the natural environment, promote fair relationship and good quality of life for all involved. The United Nations Environment Programme (UNEP, 2008) recorded that organic farming can be more conductive to food security in Africa than most conventional production system (inorganic farming) which uses synthetic chemicals in production. The body argued that even though inorganic farming seems to be more time and energy saving, yield and income generating; it has heavy adverse effects on human beings and natural environment. It is not self sustaining for most of inorganic materials are imported into developing countries like ours. The body pointed out that organic farming is sustainable and environmental friendly. It withstands severe weather condition better than conventional farming during drought. It

mitigates and reverses the effects of climate change, reduces nitrate leaching, cost of production and provides rural jobs than conventional farming. The body further stated that products of organic farming last longer in storage, taste better than the products of conventional farming and contain less or no contaminants. These assertions are confirmed by the submission of Oni (2011) that several research studies conducted in many European countries certified that organically produced foods contain less contaminant, provide better environment, higher nutritive value and has higher market demand than inorganically produced foods.

The government of Nigeria appreciates these health, economic and environmental importance of organic farming and included it in the curriculum of secondary schools. In the recent curriculum of senior secondary schools (2009), organic farming was specified to ensure that the objectives are focused and achieved. One of the objective, according to Nigerian Educational Research Development Council (NERDC, 2009) is to equip students in senior secondary schools with skills in areas of organic farming such as crop rotation, green manure, composting and biological pest control by teachers of agriculture to enable students practice organic farming in schools and at home.

A teacher, in the view of Obenewa (1994) is someone who has undergone the necessary and recommended training in a teacher preparatory programme and is charged with the full responsibility of managing the classroom in such a way as to enhance the learning behavior of the students. A teacher of agriculture in senior secondary school is a graduate of a university who has undergone the necessary and recommended training in pedagogy and technical areas of agriculture and has the responsibility of teaching the content of Agriculture science curriculum to students in senior secondary schools. It is the onus of a teacher of agriculture to expose the students to knowledge, principles and technical skills in the content areas of agriculture such as organic farming to enable them practice it both in the schools and at homes. Technical skills, according to Osinem (2008) are those skills that require a good understanding and proficiency in a specific activity, particularly one involving methods, procedures or techniques and process. Such skills as stated by the author are acquired through training. Technical skills, in this context, refer to proficient capacities required of teachers of Agriculture in demonstrating organic farming practices to students which involve methods, procedures, techniques and processes. The teachers acquire technical skills in agriculture from their lecturers while training in the university as students. This enables them to teach and evaluate secondary school students for performance before they are allowed to graduate.

In the area of the study, the researchers observed that senior secondary school students could not engage in organic farming practices either in the school farms or at home to help their parents. Ellah (2007) reported that parents of students in secondary schools expressed the inability of their children to assist them effectively in farm work arising from lack of interest and skills Olaitain, Alaribe and Nwobu (2009) found out that students in secondary schools were not able to practice rudimentary skills in Agriculture. In a focused discussion with some parents of the secondary school students by the researchers, the parents attributed their children's lack of interest and skills in organic farming to low competence of the teachers of Agriculture in schools. Besides, a visit to 17 secondary schools in the area of the study by the researchers revealed that there were no pits or locations for composting. There was also no plan for crop rotation and green manuring on school farms for all the schools visited. Most of the teachers of Agriculture in the schools practice inorganic farming without any plan to control pest and diseases organically or inorganically.

In a focused interaction with some of the teachers of agriculture in twenty seven (27) centres where co-ordinating and marking of external Examinations (WAEC and NECO) take place, it was revealed that the teachers of agriculture posses low technical competencies in organic farming which they associated with their low exposure and experiences in technical areas of agriculture while they were training in schools. The teachers admitted that they were taught organic farming theoretically but never had any practical activity in organic farming during their training in schools. This implies that the lecturers of Agricultural Education in the universities in southeastern Nigeria may not be technically competent in organic farming for effectively delivery to their students. To associate the low competence of the teachers of agriculture in senior secondary schools with their lecturers, the lecturers need assessment to determine what they possess technically in organic farming and what they need to possess for capacity building and effective delivery.

Assessment, in the explanation of Barde and Denton (2001), is the process of gathering and discussing information from multiple and diverse sources in order to develop deep understanding of what students know,

understand and can do with their knowledge as a result of their educational experience. Olaitan, Nwachukwu, Igbo, Onyemachi and Ekong (1999) defined assessment as a form of evaluation that uses collected data for estimating the worth, quality or effectiveness of a programme or project. With reference to this study, assessment involve collection of data from the lecturers of Agricultural Education in universities and officials in agricultural research institutes to estimate the level at which the lecturers perform and the level they need to perform technically in organic farming for effective delivery to their students. The assessment will establish the level of their capacity building needs if a gap exists.

Capacity building, in the submission of Nwobu, Amusa and Olaitan (2009), is an effort geared towards improving the level of knowledge, skills, and attitude possessed by an individual for proficiency in a given task or job. Asogwa, Dumbiri and Omeje (2010) said that capacity building is the act of developing the level of knowledge, skills, and attitude possessed by an individual in a given job to maximize profit and enhance income. In this study, capacity building is the act of improving the level of technical skills possessed by lecturers of agricultural education in organic farming for effective delivery to students in universities.If the capacity of the lecturers in organic farming is improved, it could result in production of competent teachers of Agriculture who will re-introduce organic farming into secondary school farms for demonstration and practice by students.

Therefore, the purpose of this study was to identify technical skill capacity building needs of lecturers of Agricultural Education in organic farming for effective delivery to students in universities in Southeastern Nigeria. Specifically the study sought to identify technical skills in:

a. Crop rotation

b. Green manuring

c. Composting and

d. Biological pest and disease control where lecturers of Agricultural Education needed capacity building.

2. MATERIAL & METHODS.

Four research questions guided the study. The study adopted survey research design. Survey research design, in the opinion of Owens (2002) is that in which the same information is gathered from an unbiased representative group of interest. It is very valuable tool for assessing opinion and trends from representative group of population being investigated. The study was carried out in Southeast, Nigeria. The population for the study was 63 made up of 46 lecturers of agricultural education in universities and 17 officials in research institutes in Southeastern Nigeria. The entire population was involved in the study due to its manageable size, hence there was no sampling. The instrument used for data collection was 52-skill structured questionnaire developed from literature reviewed and used for data collection. The instrument was divided into two categories of technical skills needed and technical skills performed. The needed category has a four-point response options of highly needed (4), averagely needed (3), slightly needed (2) and not needed (1) while the performance category had a four-point response options of high performance average performance, low performance and no performance with a corresponding value of 4.3.2 and 1 respectively.

Three experts face validated the instrument; two of the validates were from the Department of Soil Science, University of Nigeria, Nsukka while one was from National Institute of Horticultural Research and Training, Ibadan. Their corrections and suggestions were used to develop the final questionnaire. Split-half technique and Cronbach alpha reliability method were adopted to determine the internal consistency of the instrument. A reliability coefficient of 0.86 was obtained. Five research assistants that were familiar with the area of the study were hired and trained to help administer copies of the questionnaire. The needed category of the questionnaire was administered to the officials in research institutes while the performance category was administered to the lectures.

All the copies of the questionnaire were retrieved after two weeks of administration and analyzed using weighted mean and Improvement Need-Performance Index (INPI) to answer the research questions. To determine the need-performance gap of lecturers of agricultural education, the following were adopted.

(1) The weighted mean of each item under the needed category $\left(\bar{x}_n \right)$ was calculated.

(2) The weighted mean of each item under the performance category $\left(\bar{x}_p\right)$ was calculated

(3) The difference between the two weighted mean i.e $\bar{X}_n - \bar{X}_p$ = NPG (Need-Performance Gap) was calculated.

The value of NPG of each item indicated the capacity level of the lecturers on that item.

Where NPG is zero (O), it means that capacity building is not needed for the item because the level at which the lecturers performed that technical skill is equal to the level at which the skill is needed. Where NPG is negative (-), it means capacity building is not needed for that item because the level at which the lecturers performed the technical skill item is higher than the level at which the skill is needed. Where the NPG is positive (+), it means capacity building is needed because the level at which the lecturers performed the technical skill is lower than the level at which it is needed (modification of Olaitan and Ndomi in Ella, 2007).

3. RESULTS & DISCUSSION.

The results of the study were obtained from the research questions answered through the data collected and analyzed as presented below:

3.1 Research Question 1

What are the technical skills in crop rotation where lecturers of Agricultural Education need capacity building for effective delivery to students?

The data for answering research question 1 were presented in table 1.

Table 1: Need-Performance Gap Analysis of Mean Ratings of the Reponses of Lecturers of Agricultural Education and Officials in Research Institutes on Crop rotation where lecturers needed capacity building for effective delivery.(N=63:46 lecturers and 17 officials)

S/n	Item statement	$\bar{X}_n$	$\bar{X}_p$	$\bar{X}_n - \bar{X}_p$ (NPG)	Remarks
1	Determine the goal of the crop rotation to establish a range.	3.22	2.91	0.300	CBN
2	Make a list of crops to grow.	2.59	3.10	-0.21	CBNN
3	Group the crops into families using principles such as shallow/deep rooted crops, heavy feeders, disease and pest attack resistance etc.	3.09	2.10	0.97	CBN
4	Sketch a map on graph papers indicating positions of each group of crops.	2.83	2.01	0.80	CBN
5	Translate the map into the field/farm maintaining the correct position for each crop.	2.99	2.98	0.01	CBN
6	Label each crop with the year	2.85	3.87	-1.02	CBNN
7	Plant specific crop in the mapped spaces according to the translation	2.88	2.07	0.81	CBN

8	Introduce fallow system into the rotation schedule in order of sequence.	3.18	2.60	0.58	CBN
9	Identify the benefit or problems encountered using the plan.	2.83	2.02	0.81	CBN
10	Modify the rotation schedule if need be to minimize the loss	3.09	1.83	1.29	CBN
11	Consider the crops pattern of neigbhouring farmers to maximize the benefit on the rotation.	2.76	2.05	0.71	CBN
12	Maintain consistency of the rotation schedule for consistent result.	3.33	2.04	0.73	CBN
13	Keep records of crop type, yield, weather, soil amendments, chemicals and cost of production for calculation and observation of gain or loss	3.07	2.11	0.04	CBN

N = number of respondents; $\bar{X}_n$ = mean of needed by officials; $\bar{X}_p$ = mean of performance by lecturers, NPG= Need-Performance Gap, CBN= Capacity building needed, CBNN= Capacity Building Not Needed.

Data in table 1 showed that Need-Performance gap values of eleven (11) out of thirteen (13) skill items ranged from 0.01 to 1.29 and were positive. This indicated that the lecturers needed capacity building in the 11 skill items. Two (2) out of the 13 skill items had a performance gap value of -0.21 and -1.02 and were negative, indicating that the lecturers do not need capacity building on the two skill items. Generally, the lecturers needed capacity building on crop rotation for effective delivery to students in universities in Southeastern Nigeria.

3.2 Research Questions 2

What are the technical skills in green manuring where lecturers of Agricultural education needed capacity building for effective delivery?

The data for answering research questions 2 were presented in table 2.

Table 2: Need-Performance Gap Analysis of Mean Ratings of the Reponses of Lecturers of Agricultural Education and Officials in Research Institutes on green manuring where lecturers needed capacity building for effective delivery.(N=63:46 lecturers and 17 officials)

S/n	Item statement	$\bar{X}_n$	$\bar{X}_p$	$\bar{X}_n - \bar{X}_p$ (NPG)	Remarks
1	Source the seeds/ cuttings of green manure crops.	3.61	3.53	0.08	CBN
2	Inoculate the legume seeds/cuttings if necessary.	3.56	3.53	0.03	CBN
3	Prepare the seed beds.	3.58	3.50	0.08	CBN
4	Broadcast the seeds on the beds or plant the cuttings on the beds spacing them appropriately.	3.59	3.63	-0.06	CBNN
5	Water the seed beds after planting if necessary.	3.89	3.87	0.02	CBN
6	Weed the farm regularly to reduce weed competition and insect attack	3.71	3.45	0.34	CBN

7	Cut/slash the crop before flowering sets in, i.e before the ground period of growth is completed	3.42	3.41	0.01	CBN
8	Allow the crops to regrow to flowering	3.92	3.91	-0.01	CBNN
9	Plough in the crop distributing evenly over the farm just after it had flowered	3.32	3.21	0.11	CBN
10	Leave the ploughed farm for about 7 days before planting the targeted/next crops	3.81	3.68	0.13	CBN

N = number of respondents; $\bar{X}_n$ **=** mean of needed by officials; $\bar{X}_p$ = mean of performance by lecturers, NPG= Need-Performance Gap, CBN= Capacity building needed, CBNN= Capacity Building Not Needed.

Data in table 2 showed that the need-performance gap values of eight (8) out of ten (10) skill items ranged from 0.01 to 0.34 and were positive. This indicated that the lecturers needed capacity building in the 8 skill items. Two (2) out of the 10 skill items had need-performance gap values of -0.01 and -0.06 and were negative, indicating that the lecturers do not need capacity building on the two skill items. Generally, the lecturers needed capacity building on green manuring for effective delivery to students in universities in Southeastern Nigeria.

3.3 Research Question 3

What are the technical skills in composting where lecturers of agricultural education need capacity building for effective delivery?

The data for answering research question 3 were presented in table 3.

Table 3: Need-Performance Gap Analysis of Mean Ratings of the Reponses of Lecturers of Agricultural Education and Officials in Research Institutes on composting where lecturers needed capacity building for effective delivery.(N=63:46 lecturers and 17 officials).

S/n	Item statement	$\bar{X}_n$	$\bar{X}_p$	$\bar{X}_n - \bar{X}_p$ (NPG)	Remarks
1	Select appropriate site that is not water logging but close to the farm.	2.94	2.08	0.86	CBN
2	Map out seven square plots spaces between 1m X 1m X 3m	3.42	1.28	2.14	CBN
3	Label the plots/spaces as A,B,C, 1, 2, 3 and 4.	2.87	1.73	1.14	CBN
4	Excavate a pit/trench of about 1m deep in each plot mapped.	3.48	1.83	1.65	CBN
5	Provide wall or fence round the corners.	3.23	1.66	1.57	CBN
6	Source compost materials such as plants and animal residues.	3.62	1.46	2.16	CBN
7	Cut the compost materials with implements such as cutlass.	3.65	2.28	1.37	CBN
8	Build up heaps in plot 1, 2 ,3 and 4 with the compost materials in alternate layers of plant and animal origin if possible.	3.58	2.33	1.25	CBN
9	Spray old compost humus or animal dung on the heap to attract	2.84	1.19	1.69	CBN

	decomposing bacteria.				
10	Sprinkle water on each of the heaps.	2.96	2.34	0.62	CBN
11	Repeat the process of applying water after each layer until the required level of the compost is attained.	3.44	21.8	1.26	CBN
12	Drive a strong long stick (testing stick) through the top into the centre of the heap.	3.76	1.83	1.93	CBN
13	Cover the pit with layers of plant refuse of 15-20cm to drive away flies.	3.76	1.83	1.93	CBN
14	Remove the testing stick after 2 months of establishment.	3.76	1.83	1.93	CBN
15	Feel the testing stick to know if it were hot, cold, damp or moist.				CBN
16	Turn the materials through removing layer by layer from heap 1 and 2 into space A, heap 3 and 4 into space B after two months.	3.64	2.67	0.97	CBN
17	Stack materials in the spaces from where the materials were removed i,e 1,2,3 and 4 to continue another process of composting.	2.79	1.23	1.59	CBN
18	Turn the materials in heap A and B into C after three weeks.	2.84	1.73	1.11	CBN
19	Provide a shade over C to prevent escape of certain nutrients.	2.88	1.16	1.72	CBN
20	Cover the prepared compost to prevent the effect of sub or rain	3.60	2.12	1.48	CBN
21	Apply compost to farms using appropriate methods	3.24	1.51	1.73	CBN

N = number of respondents; $\bar{X}_n$ = mean of needed by officials; $\bar{X}_p$ = mean of performance by lecturers, NPG= Need-Performance Gap, CBN= Capacity building needed, CBNN= Capacity Building Not Needed.

Data in table 3 showed that the need-performance gap values of all the twenty-one (21) skill items ranged from 0.62 to 2.16 and were positive. This indicted that the lecturers needed capacity building in all the 21 skill items in composting for effective delivery to students in universities in Southeastern Nigeria.

3.4 Research Question 4

What are the technical skills in biological pest and weed control where lecturers of agricultural education need capacity building for effective delivery?

The data for answering research question 4 are presented in table 4

Table 4: Need-Performance Gap Analysis of Mean Ratings of the Reponses of Lecturers of Agricultural Education and Officials in Research Institutes on biological pest and weed control where lecturers needed capacity building for effective delivery.(N=63:46 lecturers and 17 officials).

S/n	Item statement	$\bar{X}_n$	$\bar{X}_p$	$\bar{X}_n - \bar{X}_p$ (NPG)	Remarks
1	Source 0.5kg of Neem or Eucalyptus leaves.	3.55	2.45	1.10	CBN

2	Fetch 10 litters of water into a cooking pot.	3.45	2.15	0.24	CBN
3	Put the Neem/Eucalyptus leaves into the pot containing water.	3.45	2.15	1.30	CBN
4	Set the pot with its content on fire.	3.92	2.60	0.92	CBN
5	Heat/boil for about 20 minutes.	3.47	3.12	0.34	CBN
6	Keep the pot with the solution safe for about 24 hours.	3.63	2.21	1.42	CBN
7	Filter the solution into a Knapsack sprayer.	3.42	1.43	1.99	CBN
8	Spray the solution on crop plants appropriately.	3.64	1.67	1.97	CBN

N = number of respondents; $\bar{X}_n$ = mean of needed by officials; $\bar{X}_p$ = mean of performance by lecturers, NPG= Need-Performance Gap, CBN= Capacity building needed, CBNN= Capacity Building Not Needed.

Data in table 4 showed that need-performance gap values of all the eight skill items ranged from 0.24 to 1.99 and were positive. This indicated that the lecturers needed capacity building in the 8 skill items on biological pests and disease control for effective delivery to students in Universities in Southeastern Nigeria.

4. FINDINGS

The findings of this study revealed that lecturers of agricultural education in universities in Southeastern Nigeria were deficient in 48 technical skills items (11 in crop rotation, 8 in green manuring, 21 in composting and 8 in biological pests and disease control). This therefore, indicates that the lecturers needed capacity building in 48 technical skill items identified by this study for effective delivery of organic farming to students in Universities in Southeastern Nigeria. The findings of this study were in agreement with the findings of Ifeanyieze and Olaitan (2007) who carried out a study on the requisite skills required for capacity building of teachers of agriculture for effective teaching of yam production in Colleges of Education in Southeastern Nigeria. The authors found out that teachers of agriculture required 18 requisite skills in planning, implementing and evaluating instruction while 9 skills were required in preplating operation, 9 in planting operation, 16 in post-planting operation, 13 in processing and storage of yam to enable them teach yam production effectively in College of Education in South-eastern Nigeria.

The findings of the study were in consonance with the finding of Olaitan, Alaribe and Nwobu (2009) in a study on capacity building needs of teachers of Agriculture for effective teaching in basic schools in Abia State, Nigeria where it was found out that teachers of Agriculture obtained low performance generally in curriculum content in Agriculture Programme of Colleges of Education and needed capacity building to be more effective in teaching agriculture in basic schools.

The finding of this study were also in line with the findings of Asogwa and Ohagwu (2010) in a study on professional skills capacity building needs of Teachers of Agriculture for effective teaching of vegetable production to students in Colleges of Education in Southeasten Nigeria, where it was found out that teachers of Agriculture needed capacity building in 19 skill items in planning, implementing and evaluating instruction, and 20 skill items in nursery, pre-planting, planting, post-planting and post harvest operations to enable them teach these operations to students effectively.

The findings of the authors in their various research activities helped to justify the findings of this study.

5. CONCLUSION

Inorganic farming has long over taken organic farming in our agricultural system today. Many governmental and non-governmental agencies have discovered that inorganic farming has adverse effects on human beings and natural ecosystem. It is not sustainable in many developing countries like Nigeria as most inorganic materials are imported. The advantage of organic farming in a country like ours necessitated its integration into the curriculum of agriculture in senior secondary schools. It was observed that teachers of agriculture in senior secondary schools teach organic farming theoretically to students indicating that their technical skills in the area is in doubt. This situation suggested to the researchers that the trainers of these teachers, that is the lecturers of agricultural education in universities may

not have imparted technical skills in organic farming to the teachers while they were in training in the schools. This study found out that lecturers of agricultural education in universities in Southeastern Nigeria needed capacity building in 48 technical skills in organic farming for effective delivery to their students. It was therefore recommended that the identified skills in organic farming where lecturers of agricultural education in universities needed capacity building be utilized by lecturers to improve their competence through workshops and short duration courses that may be organized by research institutes.

REFERENCES.

Asogwa, V.C. and Ohagwu, O. (2010) Professional Skill Capacity Building Needs of Teachers of Agriculture for Effective Teaching of Vegetable Production to Students in Colleges of Education in South East, Nigeria, *Nigerian Vocational Association Journal*. VOl 15. No. 1 July, 2010.

Asogwa, V.C; Dumbiri, D, N. and Omeje, M.N (2010) Competency Capacity Building Needs of Okra farmers for Commercial Production to Enhance Income in Enugu State. *Ebonyi Technology and Vocational Educational Journal* Vol 1. No 1 May 2010.

Barde, B and Denton. J. (2001). Using the Process for Development and Programme Assessment. *A Paper Presented at the American Association for Higher Education Conference, Denver Co.*

Brandt K.M and Igaard J.P. (2011). Organic Agriculture; does it enhance or reduce the nutritional value of plant foods? – *J.Sc: Food Agric*. 2011; 81:924-31.

Castellini C; Mugnai C and Bosco A (2002) Effect of Organic Production System on Broiler Carcass and Meat Quality. *Journal of Meat Science* 60:PP219-225.

Ellah, B. I (2007) Effectiveness of Quality Assurance of Curriculum Frame Factors on Implementation of Programme of Colleges of Education in Eastern Nigeria*. An Unpublished Thesis, Department of Vocational Teacher Education, University of Nigeria, Nsukka*.

Gold M.V (2007). *Alternative Farming Systems Information Center. US. Department of Agriculture SRB* 99-02. Retrieved from http://en.wikipedia.org/wiki/agrarianism

International Federation of Organic Agriculture Movements (IFOAM, 2011) *Definitions of Organic Agriculture Movements (IFOAM, 2011) Definitions of Organic Agriculture*. Retrieved from:///www.ifoam-orgorganicon23/03/06.

Nigeria Educational Research of Development Council (NERDC, 2009). *National Agriculture Curriculum*: Ibadan: University Press Plc.

Nwobu, V.I. Amusa, T.A and Olaitan S.O. (2009). Quality Assurance of Instructors in Teaching Cocoyam Production to Students in Schools of Agriculture in South-West, Nigeria. Nigeria *Vocational Association (NVA)* 14 (1): 79-89.

Obanewa, O. (1994). *An Introduction to the Teaching Profession in Nigeria. Nigeria*. Institute of Education: Edo State University.

Olabiyi, T. I (2001). *Organic Agriculture.* Retrieved from www.lantech.edy.ngon24/03/12.

Olaitain, S.O., Alaribe, M.O and Nwobu, V.U (2009) Capacity Building Needs of Teachers of Agriculture for effective Teaching in Basic Schools in Abia State. *Nigerian Vocational Journal*. Vol 13. No 1. July (2009).

Olaitan, S.O. Nwachukwu, C.E; Onyemachi, G.A; Igbo C.A. and Ekong, E.O. (1999) *Curriculum Development and Management in Vocational Technical Education.* Onitsha: Cape Publishers International Limited.

Oluwatomi (2001). Organic Farming. *African Newspapers of Nigeria Plc.vol.3, pp22-25.*

Oni, A. O (2011). *The Impact of Organic Agriculture on Food Quality*. Retrieve from www.http:/organicagric/org/on24/03/12.

Osinem, E.C. (2008). *Managing Agricultural Education and Training.* Enugu, Nigeria: Belony International Publishers.

Owens, L.K (2002). *Introduction to Survey Research Design. Survey Research Laboratory (SRL) fall 2002 seminars Series*. Retrieved from http://www.Srl.uic.edu on 09/06/09.

The United Nations Environmental Programme (UNEP, 2008) *Organic Agriculture*. Retrieved from http://www.nal.unep/org/organicagric on 23/03/06.

United States Development of Agriculture (USDA, 1980) *Report and Recommendations on Organic Farming.* Retrieved from http://wwwinal.Usda.gov.afric/pubson 23/03/12