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IN THIS ISSUE

Promoting Lifelong Learning Opportunities for Sustainable Development <i>Professor B.G. Nwargu</i> - - - - -	1
Promoting Lifelong Learning Opportunities for Sustainable Development in Nigeria <i>Professor Chuks E. Ezedum, Ph.D</i> - - - - -	31
Lifelong Learning Requirements for Sustainable Development: Perception of Difficult Chemistry Concepts by Agricultural Education Students <i>Yusuf, N. B., garba, I. A. And Ayodele, M. O.</i> - - - - -	37
Parent-Child Sexual Health Communication and Promotion of Lifelong Learning Opportunities for Sustainable Development in Kaduna State, Nigeria <i>Adamu Abdulkareem Biu Ph.D</i> - - - - -	47
Awareness of Nutritional Values and Feeding Practices Among Secondary School Teachers for Sustainable Development in Nsukka Education Zone: Implications for Productivity Boosting of Teachers <i>Ozor, Johnson Chikaadinaka, Dr. Kimisuoteli Sintel & Eneh Anastasia Uchenna</i> - - - - -	60
Achieving Sustainable Development through Lifelong Learning Programmes In Enugu State <i>Michael O. Ugwueze, Matthias U. Agboeze, Ph.D & Maryrose Ndidi Agboeze</i> - - - - -	77
Strategies for Enhancing Community Participation in the Implementation of the Ube Programme for Sustainable Development in Ekiti State <i>Ikueloghon Olamire J., Ikuelogbon, Esther.O.</i> - - - - -	90
Assessment of Economics Curriculum Implementation in Secondary Schools in Nsukka Education Zone <i>Nji, Ifeyinwa Awele</i> - - - - -	108
School Readiness for Integrating ICTS in Teaching of Primary Pupils For Promoting Lifelong Learning Opportunities and Sustainable Development in the North <i>J. A. Ermenike</i> - - - - -	122

Boosting Senior Secondary Students' Achievement in Economics for Sustainable Development: Computer Concept Mapping Approach <i>Chinyelugo, Tochukwu Celestina & Prof. Nwoji, Queen Jay</i>	135
Management Challenges and Strategies for Achieving Sustainable Development with E-Learning at the National Open University of Nigeria <i>Okeke, Francisco Chinwendu Ph.D, Agu, Patricia Uzoamaka Ph.D & Ezeh, Eucharía Ngozi</i>	150
Counselling Strategies for Managing Gender-Based Violence among In-School Adolescents in Anambra State <i>Ngozi H. Chinweuba Ph.D, Ruphina U. Nwachukwu Ph.D & Chinasa M. Ugwunnadi</i>	175
* Correlational Study of Pre-Service Science Teachers Technology Preparedness, Beliefs, Attitude, and Intention towards Use of Information Technology for Teaching: A Case Study <i>Shittu, Ahmed Tajudeen, PhD, Gambari, Amosa Isiaka, Ph.D & Omiola Matthew Adetayo, PhD</i>	188
Nutritional Practices for Health Promotion and Sustainable Development Among Pregnant Women Attending Antenatal Clinic in Nsukka Health District, Enugu State <i>Stella U. Ugwu, Oliver I. Abbah & Lawretta I. Abugu</i>	199
Perception of Senior Secondary School Students' Enrolment in Physical Education in Nsukka Education Zone <i>Ofili, Perpetua Chinyere (Ph.D)</i>	214
Professional Development Strategies for Improving the Work Performance of Academic Staff of Universities in South East Nigeria for Sustainable Development <i>Dr. Eke N. Ukpai & Dr Chukwuemeka J. Chukwu</i>	231
Awareness and Usage of E-Learning Materials among Students of National Open University of Nigeria (Noun) <i>Dr. S.E. Nwana, Dr. S.O Ugwuda & Dr. C.I. Egbe</i>	246
* Effects of E-Interactive and Video -Based Reflective Teaching Strategies on Chemistry Pre-Service Teachers' Classroom Practices In North Central, Nigeria: Implication For Capacity Building <i>Chada, Amina Mohammed PhD; Gimba Ramatu Wodu PhD; Mohammad Umar Sanda Koroko PhD & Umar Idris Sarkin Bauchi</i>	256

Innovative Pedagogies: A Strategy for Promoting Science, Technology, Engineering and Mathematics (Stem) Education for Lifelong Learning And Sustainable Development. <i>Anioku, O. L. & Emejil, E. I.</i>	265
The Role of Education in Sustainable Solid Waste Management in Enugu Urban, Nigeria <i>Dr. Regina I. Enebechi & Ikeche, Nnonyelugo Crescent</i>	278
The Role of Agricultural Education in Achieving Sustainable Development Goals through Productive Employment in Agronomy and Forestry <i>Adesanya, Emmanuel Olorunleke; Prof. Osinem, Emmanuel C. & Afolabi, Kayode O.</i>	299
Christian Religious Education for Capacity Building and Sustainable Development: Current Issues and Trends in the Curriculum <i>Rev. Dr. Reuben Goje Maiture</i>	317
Promoting Guidance and Counselling In Schools for Sustainable National Development in Nigeria. <i>Chinwe Ihuoma Ph.D</i>	332
Service Learning As an Educational Approach for Sustainable Development <i>Emelogu, Ngozi Ugonma & Ejeh, Paulache</i>	346
Strategies for Promoting Civic Education Curriculum Implementation in Secondary Schools in Nsukka Local Government Area <i>Eze Afannamuefuna A & Rev. Sis C.N. Nwokafor</i>	358
Education for Gender Equality and Sustainable Development <i>Oruonyelije Appolonia Ahunna</i>	367
Women Education and Sustainable Development <i>Dr. Okon Etim Okon</i>	382
Climate Change Education for Sustainable Development in Nigeria <i>Benjamin Anabaraonye</i>	403
Age of Parents as Demographic Predictor of Child Abuse and Neglect in Bauchi State, Nigeria <i>James Iliya Kyamru, Ph.D., George Simon Gemson Ph.D. Emmanuel H. Da'am, Ph.D. & Hadiza Mudil</i>	415

THE ROLE OF AGRICULTURAL EDUCATION IN ACHIEVING SUSTAINABLE DEVELOPMENT GOALS THROUGH PRODUCTIVE EMPLOYMENT IN AGRONOMY AND FORESTRY

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Abstract

Agricultural education is the way of improving productivity in the agricultural sector. It could also be a strong tool in achieving the aims and objectives of the Sustainable Development Goals (SDGs). Agricultural education is a strong tool in addressing the menace of hunger and poverty. Several attempts have been made by scholars to proffer ways through which the SDG objectives of eradicating hunger and poverty can be realized. Most of these have dwelt on the aspect of increasing animal production, efficient marketing channel and intensive use of modern technology in agriculture. Thus, this paper sought to shed light on how agricultural education could be used to achieved the SDG objectives of eradicating hunger and poverty as well as creating decent jobs through training in agronomy and forestry. This paper dealt with factors that generated the problem as well as explanations of major concepts relating to the topic, the relevance of agricultural education to the actualization of SDGs ; the process through which productive employment could be achieved in the area of agronomy and forestry, ways by which productive employment could be achieved through agricultural education in the aspects awareness creation, as well as vocational guidance and counseling. It is recommended that agricultural education should be made compulsory in primary and secondary schools, it should be well funded by government and teachers should be well motivated to improve the study of agriculture in schools. It is believed that if these are done, the desired goal of reducing hunger and creating employment could be achieved.

Keywords: *Agricultural Education, Sustainable Development, Agronomy and forestry*

Introduction

The world is faced with many problems in the areas of food, education, health, energy, security, technology, and human relations. These catalogues of problems are not limited to a section of the globe, but threaten human existence everywhere. Prominent among these is the problem of food which forms the foundation for the rest of the problems. The enormity of these problems prompted the United Nations Organization to launch the Millennium Development Goals (MDGs). In September 2000, leaders from 147 countries around the world gathered in New York to issue the millennium declaration which outlined their collective commitment to sustainable development and poverty reduction (Canadian International Development Agency (CIDA), 2003). Since then, every effort has been geared towards the realization of the Millennium Development Goals. CIDA (2003), notes that a powerful momentum has been building behind these goals. This implies that every sector of the economy must contribute to the realization of the MDGs.

Behrman (2008), notes that lack of satisfactory progress is most severe in sub-Saharan Africa, where several countries are not on track to achieve a single Goal. This, according to the author was connected with

the low financial status of such countries because it is believed that achieving the MDGs will require, in most cases, substantial additional fiscal resources. Apart from these, Thompson (2017), observes that though the MDGs were concrete, specific and measurable, and helped to establish some priority areas of focus in international development but by being so targeted, some equally important areas were unattended to. Although, some significant progress was made over the past 15 years, especially with regards to the goals that border on eradicating poverty and improving access to education. However, the pace of progress has been uneven. Coupled with the unevenness, is the fact that the improvements had concentrated in specific regions and among certain social groups. Assessment of the MDGs by the United Nations showed that the goals were unrealized for many people: "The assessment of progress towards the MDGs showed that the poorest and those disadvantaged because of gender, age, disability or ethnicity are often bypassed."

This led the United Nations to develop a new set of goals called the Sustainable Development Goals (SDGs) to address the lapses of the MDG. The Sustainable Development Goals, otherwise known as the Global Goals, are a universal call to

action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. The SDG consisted of 17 Goals that were built on the successes and weaknesses of the MDGs, while new areas such as climate change, economic inequality, innovation, sustainable consumption, peace and justice, among other priorities were also included. The goals are interconnected and the key to success on one will involve tackling issues more commonly associated with another (United Nations Development Programme (UNDP), 2017).

Financial situations of the developing countries have contributed to the inability of such countries to meet up with the achievement of the MDGs (Behrman, 2008). Therefore, for developing and underdeveloped countries to meet the SDG, it is necessary for the poor countries to seek alternative ways of meeting the SDGs with the available resources at their disposal, especially from their natural environments. This could only be obtained through agriculture. However, the success of the agricultural sector in this technological age also hinges on agricultural education. In view of this, agriculture and agricultural education are challenged to seek for ways of achieving the Sustainable

Development Goals in the poor countries.

Agricultural education as an aspect of vocational and technical education has an important role to play in the achievement of the SDGs if the goals and objectives of the SDGs are to be achieved. Agriculture is defined by *Wikipedia Free Encyclopedia* (2009) as the production of food and goods through farming and forestry. Agriculture is the production, preservation, storage, processing and distribution of crops and animals (Osinem, 2001). However, agricultural education is defined by Okorie (2001), as a pre-vocational and vocational programme taken in schools. Agricultural education seeks to develop vocational skills in crop and animal production, marketing, and other saleable skills in agriculture. Agricultural education deals with the impartation of knowledge and skills for actual production of crops and animals; it emphasizes that knowledge, skill, and attitudes in areas of agriculture are imparted into the learner. Osinem (2008), explains that agricultural education is the education that provides learners with sound academic knowledge and skills as well as ample opportunity to apply this knowledge through classroom activities, laboratory experiments, project participation

and supervised agricultural experiences. The author states further that agricultural education programmes are designed to prepare students for employment in various agricultural occupations such as horticulture, agricultural mechanization, agribusinesses, natural resources management, animal husbandry crop production and other emerging occupations in the agricultural sector.

Therefore, to solve the foundational problem facing the world population and achieve food sufficiency, agricultural education must first play its role in training those that will make food available to the populace before other human needs can be achieved. Swanson (2008), affirmed that agricultural education plays an important role in preparing farmers, researchers, educators, extension staff and members of agric business and others to make productive contributions in the society. In the course of making these productive contributions, these people are also engaged in productive employment.

Hornby (2006), defines employment as a work that is done by someone especially to earn money. It is the state of being engaged in a work; to be in paid employment, full time or part-time, self employment etc. To be productive according to the same

author, involves doing or achieving a lot that is being fruitful; to make goods or grow crops, especially in large quantity (Hornby, 2006). It involves doing a job that has a good or product as its output. The product can also be a service package. Thus, we can deduce that productive employment is engaging in a type of work in which the outcome is a good, product or service package to be sold to the larger society to earn money. Okorie (2000), explained productive work (employment) is the work or services which satisfy some aspects of the human needs. This implies that for any employment or work to be productive, it must be geared towards meeting the needs of human being in product form or in form of a service. However, the first of the basic needs of human being or any nation is of the principles guiding crop production and husbandry as well as the actual practice. That is, applying the skills involved in tendering crops and management of the production environment. Someone that specializes in the area of agronomy is called an agronomist. An Agronomist is trained in the management of crops on the farm, from land preparation to storage of the farm produce (Osinem, 2001). Among the job areas under agronomy, as outlined by the author, are field crop production, tree crop growing,

horticultural crop production and pasture management.

Forestry on the other hand is defined by Zulberti (1987), as the art of planting, tending and managing forests and the utilization of the forest products. Forestry here encompasses forest management. Forest management, according to Olaitan and Omomia (2006), is the practice aimed at conserving the soil and maximizing the utilization of the soil towards maximizing the resources on the land. These land resources include trees, wild animals and all physical resources such as streams and rocks on the forest land. While forest management may be seen as the act of taking care of already established forest, forestry include initiating forest, managing it and utilizing output from the forest. This was confirmed by Hornby is (2006) definition of forestry as the science or practice of planting and taking care of trees and forests. Also, some areas of forestry as outlined by Osinem (2001), which can generate productive employment are forest guard, forester or forest manager, wildlife conservationist, agro-forester, and lumber.

Therefore, going by the meaning and the job areas of agronomy and forestry it can be said that providing training in agronomy and forestry through agricultural education will not only help to make

food available to the populace but also provide productive employment for the youths. It has been noted that the forest provides millions of people with fuel, building materials, food, fodder, medicine and employment (Osinem, 2005). It means that agronomy and forestry would not only provide food alone, they will also help to generate gainful employment through the provision of productive employment for income generation and for the general benefit of the individuals and the nation at large.

Productive employment is a necessary tool for national development and one of the ways of meeting the national need. It is in recognition of this need that the Nigerian government established the National Manpower Board and gave as one of its mandates, "To formulate employment policies and the designing of programmes for employment generation, productivity enhancement and skill development (Okorie, 2000). With this statement the Federal Government observed that it is not sufficient to get people employed in just any unproductive sector, but the employment must be geared towards "productivity enhancement," that is, generating a product or service to meet human needs. It is only through productive employment that people can be fed,

clothed, sheltered and goals of living can be fully realized. The recognition of this fact led the initiators of the SDG to include as one of its goals, "Decent Work and Economic Growth," which seeks to promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

Therefore, the thrust of this paper is to see how this can be achieved through agricultural education. That is, to end poverty in all its forms everywhere, end hunger and achieve food security and improved nutrition as well as promoting sustainable agriculture thus achieving the first and second goals of the SDG using the eight goals of full and productive employment and decent work for all through training in agronomy and forestry via agricultural education.

The Place of Agricultural Education in the Actualization of the SDGs

The Sustainable Development Goals (SDGs) are the seventeen goals of development that are to be achieved by countries of the world, especially, less developed and developing countries by the year 2030. The seventeen SDGs are lofty goals, which if properly implemented, will foster development for the third world countries.

To achieve each of the goals, some objectives are set to serve as indicators. To achieve the first, second and the eight goals which this topic is trying to address, the outline of the objectives are to end poverty in all its forms everywhere, end hunger, achieve food security and improved nutrition and promote sustainable agriculture as well as engender decent work and economic growth through promotion of sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. It is the challenges posed by the above objectives that inform our topic: "Achieving Productive Employment in Agronomy and Forestry for the Nation through Agricultural Education". This research paper is based on the premise that poverty and hunger can be eradicated and that full productive employment and decent work can be provided for all if people are provided with productive employment using the natural resources that abound in the area of agriculture through which they can earn a better living. It is also believed that the rest of the SDGs can only be realized when the three selected goals are fully achieved. For instance, good health and well-being and responsible consumption and production can be expected if people

are well fed. Also, gender equality, reduced inequalities, industry, innovation and infrastructure, sustainable cities and communities could also be realized when people have money in their pockets through productive employment; while climate action, and peace, justice and strong institutions can only be obtained when the citizens are actively busy in their decent job.

Owing to the poor nature of developing countries, full productive employment and work for all could only be achieved in such countries if the citizens are engaged in such work that does not require huge capital outlay and which they can easily do in their environment using their natural resources such as land and water as it is obtained in agronomy and forestry. The United States Department of Agriculture (2003), expresses this view by saying that USDA programmes should target the poor directly in the field to create the greatest benefit to the poor. Therefore, any work for the poor should not require huge capital and expensive resources to initiate. As a result, agronomy and forestry form the major branches of agriculture through which food sufficiency and employment generation could be attained with training from agricultural education and readily available resources at the farmers' environment for them to be

productively engaged. It is based on this fact that this paper believes that the foundation for the realization of the SDGs is agricultural education. This will in turn translate to food sufficiency.

It is agricultural education that can impart and develop those knowledge, skills, competencies and attitudes needed by an individual in the area of production, distribution, processing, distribution and services in order for such persons to be gainfully employed in these areas. Thus, agricultural education is highly relevant in making both youths and adults to be gainfully employed by equipping them with skills that are needed in the area of actual production of crops and animals; agro-processing, and many other areas of agriculture. Also, agricultural education creates awareness through extension services to achieve its objectives for those that are out of the school system. It also provides vocational guidance and counseling to anyone seeking profitable employment and satisfactory placement in any areas of agriculture. Then the assertion by Okorie (2001), that agricultural education prepares one for productive employment in recognized occupation proved to be true.

CIDA (2003), notes that agriculture can make significant

contributions to attaining the MDGs. It shows that failure in the agricultural sector means failure in the SDGs. The realization of the rest of the SDGs hinges on the achievement of the first goal. The achievement of the first objective will be the bedrock on which the remaining goals will be achieved. That is, other goals would only be realized if people are well fed, have money to spend and have stable employment to give them income. Therefore, to allow failure in the agricultural sector which will automatically spell doom for the SDGs, and to avert this, agricultural education is the answer.

Anna and Helgadothr (2001), noted that agricultural education is a crucial aspect of development of the knowledge society in rural areas. The development of practical and theoretical knowledge in agriculture is an important commodity and valuable product in the world market of information. It follows that, a comprehensive agricultural education system will go a long way to achieve the SDGs by providing adequate training in agriculture. Therefore, training on the appropriate skills in area of agronomy and forestry is a fundamental step on which the success of the SDGs is based.

How Productive Employment Can Be Provided in Areas of Agronomy through Agricultural Education

The various aspects or job areas where training will be provided in agronomy to enhance productive employment for the nation are:

Providing training in food crop production

This will involve imparting comprehensive theoretical knowledge and practical skills in the youths who will like to engage in staple food production like yam, rice, cassava, maize millet, cowpea, soybean, groundnut etc. These foods have constant demand on daily basis and as such, provide a lucrative job areas for anybody engaged therein. The training module in these agronomic job areas will include:

- Principles and skills in identifying good soil for a particular crop.
- Training in pre-planting operations like clearing, stumping, ploughing, harrowing and ridging. This will involve training using tractor mounted equipments and manual methods.
- Training in good seed selection, where to obtain good seed and the actual planting method and practices for each crop.
- Teaching and training on the principles and skills needed in post-planting operations such as

weeding, thinning for some crops, choice of appropriate fertilizer and their application method, irrigation method where necessary, and techniques for control of pests and diseases.

- Training in harvesting techniques and post-harvesting handling for each crop.
- Skills necessary in storage practices for each crop will also be imparted.

Providing training in tree or cash crop production

Since cash crops form the major sources of raw materials for our industries, productive employment can be generated through adequate training in such jobs. Due to the fact that most of such cash crops are in tree crops form, training to be given will be tailored towards plantation crop production. Also, training in food crop production has covered up for those arable crops in cash crop group. Those skills to be imparted will include:

- Training in principles and practices in identifying and selecting land for tree crops.
- Imparting land preparation principles and skills that is required in tree cropping. This will include stumping and ploughing alone for some tree

crops while some may need harrowing and ridging.

- Training in nursery practices required for each crop. This will include acquisition of skills in nursery site selection, preparation, planting, weeding, shading, irrigation, hardening and transplanting to the field.
- Training in planting and transplanting methods for tree crops. This includes skills in ball of earth and open transplanting method, planting distance, holing and back filling techniques.
- Trainees will also be trained in skills required for irrigation and shading of trees.
- Post-planting skills such as weeding, pruning, fertilizer application, diseases and pest control techniques in plantation crops will also be given.
- Harvesting skills for each of the tree crops will be included.
- Storage and post harvesting techniques for each of the tree crops will be imparted.

Providing training in fruit and orchard management

The training in this job area of agronomy is closely linked with that of tree cash crop production, only that their post harvesting handling will be different. Those in fruit and orchard production will be exposed

to refrigeration practices that will be needed to preserve the freshness.

Providing training in market gardening

Knowledge and skills will be provided through training in various aspects of vegetable production. This will include choice of land for vegetable growing, land preparation and cultivation practices; nursery practices for those that require nursery; fertilizer application principles and practices; irrigation techniques for vegetables; weeding and pest control. Post harvest practices will include refrigeration and sales.

Providing training in horticulture

This would involve training in the area of landscaping and raising flowers in nursery. The skills to be acquired in this job area will include: identification of nursery sites, collection of flower species, clearing of nursery sites and soil preparation, planting of the flowers, irrigation methods and practices, fertilizer application principles and techniques, sale, transportation and handling practices during supply.

Landscaping practices which trainees would be exposed to will include: site planning, landscaping design and plan drawing, land leveling where necessary, site preparation, planting according to

design and putting up irrigation facilities.

Provision of training in pest control

This is another job of agronomy in which some people specialize, and without actually growing any crop. These people are usually hired by crop growers to control pests in their farms, houses, animal pens and environmental fumigation. This job deals mainly on chemical control of various pests and weeds using motorized or manual sprayers. It is a lucrative area of agronomy that is gaining wider popularity. Due to the risky nature of the job, specialized training is required by anyone who wishes to engage in the job. Okorie (2000), identifies the skills in which training can be given in pest control as follows: identify pests, read and interpret a pesticide labels, calibrate sprayer, apply pesticides using sprayer, select sprayer nozzles, use personal safety equipments, while spraying, determine economic threshold for treatment, scout crops for pest infestations and identify the life cycle of some insect pest.

Providing training in soil management and conservation

All agronomic jobs depend on the quality of the soil. It is then important that soil management knowledge and skills be included in

the training need of all agronomic area of specialization. In recognition of this fact, United Canadian Sustainable Agriculture and Education Programme (1997), observes that a common philosophy among sustainable agriculture practitioners is that a healthy soil will produce healthy crop plants that have optimum vigor and are less susceptible to pests. They therefore, suggested methods to protect and enhance soil productivity, which are also areas which soil management training, could be given as: cover cropping, composting and manuring, tillage reduction practices, avoidance of traffic on wet soils and maintenance of soil cover or mulching techniques

Providing training in crop processing, storage and marketing.

Due to the impossibility on the part of farmers to process their crops to export tastes, most farmers sell their produce in the harvested form while some are sold with minimum processing. This, therefore, creates job opportunities for those that engage in crop processing to market taste.

For example, crops like rice, rubber, wheat; oil palm etc. require serious processing with machines which may not be affordable to ordinary farmers. Some processing skills that may be required to be

productively engaged in this job include:

- Soaking, boiling, drying, de-husking, polishing and packaging for rice and wheat.
- Peeling, washing, grinding, jacking or pressing, frying or drying as may be necessary for cassava.
- Boiling, pressing, floating, separation and concentration for oil palm.

Also for those crops that involve specialized storage, training could also be given to would be investor who want to be gainfully engaged in crop storage.

Marketing: Training in marketing strategies will also be needed for anyone that is employed in agronomic job areas. This is needed because farmers would want to sell their products to obtain money for their daily needs. In view of this training in such skills as packaging, sourcing for buyers, pricing techniques and delivery strategies would be required.

It is believed that any recipient of the training given in all the above sections of agronomy will be gainfully and productively employed or engaged to take care of himself or herself, thus reducing hunger and poverty.

How Agricultural Education Can Provide Productive Employment in Forestry

Forestry, as earlier noted, is the planting, tendering and management of trees and wildlife animals and utilization of its resources for the advantage of human beings. Engaging in any area of forestry is a lucrative employment which can improve income and reduce hunger. Therefore, for effective performance in any aspect of forestry, adequate training is needed for a lifelong productive employment in such area. Forestry jobs require training in both knowledge and skills for effectiveness in their performance. The training to be acquired in each of the job areas of forestry are explained as follows:

Training in forest resources management

The training to be provided under this job area will include:

- Afforestation principles and skills: These are methods or practices involved in planting new trees. It will entail selection of fast growing trees and how they could be planted and nurtured.
- Regeneration practices: this involves training on how to re-grow felled trees. This could be natural or artificial (Olaitan

and Omomia, 2006). The skills to be acquired will be how trees can be regenerated artificially.

- Selective exploitation: The skills here will involve identification of mature trees for exploitation, determining when there is a need for selective exploitation and planning how selective exploitation will be done without affecting other trees.
- Forest regulation principles: These are laws guiding the use and management of forests and its resources. The forest managers should be thoroughly grounded in these laws as it will be the major guidelines governing his operations.

Anyone trained in forest management can secure employment with government, private companies or large paper mills that has forests.

Provision of training in forest guard

The major duty of forest guards is to protect the forest against intrusion by unauthorized persons. The forest guards protect the forest against indiscriminate lumbering, forest fires, hunting and illegal harvesting of forest resources. The major training or skill which will

be required for forest guards are forest regulation or laws and other skills needed in detecting and catching up with intruders. Skills in stamping and putting seals on approved timber will also be given. Employment in forest guards could also be obtained with governments or private companies.

Provision of training in agro-forestry

This involves growing forest trees with food crops production. Osinem (2005), defines agro-forestry as the land use system in which trees and shrubs are grown in association with crops (agricultural crops and pastures) in a spatial arrangements or a rotation, and in which there are both ecological and economic interactions between the trees and other components of the system. In view of this, someone engaging in this job areas would need training in afforestation skills; skill in *taungya* system and courses in forest regulations. Thus, someone engaging in agro-forestry may be given land by government on which to grow trees for the government and crops for his personal needs; while some may engage in it as a personal venture owing both the trees and the crops. Anybody seeking to be productively employed in agro-forestry must possess all skills in arable crop production as well as skills in forest tree production.

Providing training in wild life conservation and tourism

This job involves taking care of wild animals in a forest reserved areas to ensure that they do not go into extinction and at the same time available for tourism purposes. The people engaged in this job would require training in forest conservation laws, zoological practices, animal health practices, tourism management etc. Some of the skills they will be equipped would include identification of wildlife species, feeding skills, health management skills and skills required in guiding tourists round the reserve. People that engage in this area are usually employed by the government into forest reserve areas.

Providing training in lumbering

Lumbering involves the felling of matured trees and processing them into planks for furniture, plywood or paper products. The major work of the lumber is to fell the trees and ensure that it gets to the processing factory. Therefore the skills that lumbers would require include:

- Skills in operating a power saw: It will include technique of handling power saw, sharpening the saw chain and tree cutting techniques.

- Skills on minor servicing of power saw like oiling, plug replacement and so on.
- Skills in jacking and lifting timber: It will include training on how to handle the power jack or lift.
- Transportation skills: This would involve ensuring that timber are transported to the factory or sawmill.
- Training in forest regulation and identification of matured trees is also required for this job.

Adequate training programme that is provided in the area of forestry will not only provides productive employment and reduce hunger ; it will also sustain the provision of shelter, fuel, medicine and building materials (CIDA,2003) which forests are noted for.

Creating Productive Employment through Awareness Creation

Agricultural education plays an important role in the area of awareness creation and information dissemination in the field of agriculture and rural living. This is in fulfillment of the objective of agricultural education which is aimed at developing an understanding and appreciation of career opportunities in agriculture and of the preparation needed to progress in production

agriculture, agribusiness occupation or other careers in agriculture; and another objective which is set to develop those abilities in human relation which are essential in agricultural occupations (Osuala, 1993). To achieve these two objectives, agricultural education is engaged in equipping the would-be and practicing farmers with needed information and latest development in the field of agriculture. This is usually done through the classroom teachers and the extension agents. In the course of disseminating this information, people are made aware of the employment opportunities that abound in the area of forestry and agronomy or agriculture in general and they take steps to exploit those opportunities. Osinem (2005), supports this view by saying that agricultural education, in recent times, has taken on a stronger informal roles whereby professional staff act in a developmental capacity, assisting land user in achieving their own objectives. The author notes further that the role of agricultural educator would evolve that of being facilitators and partners with students and farmers.

Jonesboro (2008), also notes that agricultural education improve the quality of life for all people by helping farmers increase production, conserve resources and provide nutritious food. Thus, agricultural

education creates awareness and orientation among the rural populace on the need to conserve the natural environment to prevent degradation. This awareness created also help to open new employment opportunities in the area of natural conservation and food preservation. The awareness created in the area of natural conservation could motivate some individuals to take up forestry as an occupation thereby creating a productive employment for such person. Also, the individuals used to create this awareness which are mostly extension agents derive some sort of employment in their activity.

Providing Productive Employment through Guidance and Counseling

Agricultural education being a vocational field also creates productive employment through its guidance and counseling role. This it does by helping to motivate youth who are undecided about what to do to take up agriculture either in forestry, agronomy or any other areas of agricultural production.

Through the use of various guidance services like analysis of individuals, occupational information, community occupational surveys and follow-up, group activities, counseling and placement services (Okorie, 2001). Agricultural education makes use of these activities by first carrying out

an appraisal of the individual taking cognizance of his personality, aptitude, attitudes, age, sex, home background, health, interest e.t.c. Based on the information obtained from such appraisal, occupational information is provided to such a person. This would help him to be aware of occupations available, entry requirements, training and opportunities for growth in such field.

Then the guidance counselor would make a survey of the local community of the counselee to find a suitable employment in line with his characteristics. Then based on the collective effort of the counselor and the counselee, the client is given the opportunity to explore various options available to him in forestry and agronomy. He is then counseled where he needs help and finally placed on suitable job areas in forestry or agronomy. Thus the person become employed and a better and responsible citizen that could contribute to the growth of the society.

Summary and Conclusion

The need to alleriate hunger and unemployment problems has brought about the inclusion of eradication of poverty and hunger as the foremost goal of the SDGs. As a result, agriculture is most challenged to perform a basic role in the SDG.

However, success in the agricultural sector depends on the agricultural education to supply the needed knowledge, skills, and attitudes required to produce the needed manpower in the agricultural sector. In view of this, agricultural education has to train people in the area of agronomy and forestry which are the basic source of staple foods for daily living. In the course of producing this food items, the farmers also engage in productive employment which provide them with income and reduce their poverty level. Thus, to provide the productive employment in agronomy and forestry, required knowledge and skill training would be provided in various aspects of agronomy like arable crop production, cash crop and tree crop production, horticulture and market gardening, pasture management, fruit and orchard management, pest control, soil management and conservation, crop processing, storage and marketing. Also, the required training should also be provided in all areas of forestry like forest management, agro-forestry, lumbering, forest guards and wildlife conservation and tourism.

Agricultural education also provides this productive employment through awareness creation and extension. Motivation into the job areas is achieved through guidance and counseling

services; all of which are components of agricultural education.

However, the provision of this training, awareness and guidance services requires the use of funds, personnel, equipments, facilities and other needed resources for effective delivery. It requires teaching aids and materials, scientific and technical equipments as well as adequately equipped laboratories, training and experimental farms. The outcome of the lack of the needed financial, human and material resources is that agricultural education institutions face great difficulties in meeting their obligation. The effect of which is the collapse of the agricultural sector. There is the need then for government to take up the challenge and revive the field of agricultural education. An improvement in the delivery of agricultural education through provision of needed facilities and resources will help to increase food production to reduce hunger and create employment.

Recommendation

In spite of the cogent role which agricultural education plays in the actualization of the SDGs, it is faced by many teething problems. However, for agricultural education to perform maximally, the following recommendations were made.

- The study of agriculture should be made compulsory at the junior and senior secondary levels to acquaint students with opportunities that exist therein.
- Facilities, equipment and tools that are needed for effective practice of agricultural skills should be provided in schools.
- Appropriate vocational guidance and counseling services should be made available to youths, to direct and stimulate their interest in agriculture.
- Agricultural education should be made a compulsory course at the adult literacy center and at the basic schools to educate them on modern ways of farming.
- The extension agents should be well equipped and strengthened to create awareness and educate youths and farmers about the potential benefit of engaging in forestry and agronomy.
- Teachers of agricultural education should be well trained and motivated to impart the appropriate forestry and agronomic skills in youths at all levels of education.

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