

AGRICULTURAL EDUCATION FOR SUSTAINABLE FUTURE DEVELOPMENT

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Abstract

Agricultural Education prepares individuals to be effective in the society. It is the type of education that is involved in training learners in improved agricultural production processes as well as in the techniques for the teaching of agriculture. Through the salable skills acquired in different areas such as crop production, animal production, piggery, goat, cattle, sheep, snail, fishery, horticulture etc. individuals will be self reliant; hence, employment will be created. This paper examined the relevance of agricultural education for sustainable future development in Nigeria against, the background of increasing unemployment rate among school leavers and the resultant negative effects on the national economy. Consequently the authors examined the basic concepts of agricultural education, and sustainable future development. Importance of agricultural education, issues affecting agricultural education and agricultural education for sustainable future development were highlighted. Appropriate recommendations aimed at improving agricultural education for sustainable future development were made.

One of the national goals of education at all levels, which is linked to the philosophy of Nigerian education is the acquisition of appropriate skills and the development of mental physical and social abilities and competencies as equipment for

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the individual to live in and contribute to the development of the society (Federal Republic of Nigeria (2004). It may not also be wrong, therefore, to assume that every level of education in the country should be geared towards self reliance, employment and sustainable future.

The rate and level of development of any nation is dependent on her level of agricultural development, no nation can survive let alone developed without the ability to feed her people. Food security is paramount to any nation in need of development. This is because nations that cannot meet the basic food need both in quality and quantity of her populace is politically and economically unstable. This brings to bear the application of knowledge, skills and attitude acquired in agricultural education, which will enhance food production. The greatest challenge facing developing countries today is how to eliminate hunger and to overcome poverty. Food production is important and agriculture provides the means by which food, fiber, animal production, raw materials for industries can be produced. Through agriculture, a country can harness natural resources on land, forest, rivers, stream, lakes, and seas to provide all the people need and to promote national development.

The Basic Concept of Agricultural Education

The federal government of Nigeria, in recognition of the importance of agriculture in the national economy, introduced pre-vocational agriculture in the junior secondary curriculum in other to equip the young students with the necessary pre-vocational or entry skills into agricultural occupations.

The broad objectives of the curriculum include:

- i. To stimulate students interest in agriculture.
- ii. To assist students acquire and integrate basic knowledge and skills in agriculture.
- iii. To expose students to the various occupational opportunities available in the field of agriculture.
- iv. To prepare students for occupation and for the studies in agriculture. Egbule (2004) defined agricultural education as the type of education that is employed in training learners in the process of agricultural productivity, as well as in the techniques for the teaching of agriculture. Presently agricultural education in Nigeria takes place at the informal and formal levels. At the informal levels learners are trained to modern agricultural production processes outside the formal school system. At the formal level, agriculture is studied at various levels in the Nigerian educational system.

Agricultural education is concerned with that aspect of learning that prepares people and personnel to become teachers of agricultural extension and other professionals in areas that require a broad knowledge or agriculture. It, among other things focuses on the development of leadership skills needed in planning and achieving long range goals and objectives, including improved agricultural production,

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conserving of natural and human resources and provision of education of education programmes for personal family and community development.

In Nigeria, it is not surprising to find that most of our universities offer agriculture as a field of study. This trend is however not complemented by a commensurate number of students. For instance, of the over 60% of the agricultural labour force that are women, only 25% of these women studied agriculture. A survey among the students found the most cited reasons to be personal. The view of their teachers however contrasted sharply with the position of the students. The teachers opined that students studied agriculture simply to have a degree and rarely practiced farming (Afonja and Omolara 1995).

To meet the challenges of agricultural production and food security facing Africa today and in the 21st century, countries must be willing to invest in their human capital for development. Improving human capital in agriculture is especially important in the low income food deficit countries of Africa where the shortage of trained human resources is a major limiting factor to development.

Concept of Sustainable Development

Sustainable development on the other land means continuous development using the earth's resources without destroying the life sustainable properties of the environment (Ojiako, 2008). The Oxford Dictionary of New words (1993) on its own part, defined sustainable development as being able to sustain (an activity, use of resources etc) over an indefinite period without damage to the environment, permanent depletion of resources etc. so meeting human needs at all times forms the bedrock of sustainable development. Meeting the goals of sustainable development means satisfying:

- a. Economic needs
- b. Social, cultural and health needs
- c. Political needs
- d. It also means: Minimizing use of waste of non-renewable resources
- e. Sustainable use of renewable resources e.g. fresh water, soils, forests etc
- f. Keeping within the absorptive capacity of local and global sinks of waste.

There is a growing consensus that sustainable development means achieving quality of life that can be maintained for many generations because it is

- a. Socially desirable
- b. Economically variable
- c. Ecologically sustainable

There is need for our agricultural activities to be sustainable because the population of the country is growing astronomically (presently put at 140 million people) and there is fear that the country will not be able to meet the food need of the nation. This is against the backdrop of most farmlands in Nigeria being degraded by severe soil erosion and desertification, leaving a trail of poverty, hunger, mass

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migration and internally displaced people. New approaches in agriculture are needed if rural communities are to overcome growing food insecurity and poverty.

The new approaches known as agro-ecological agriculture or conservation agriculture can be achieved by mass agricultural education of the rural inhabitants, majority of whom are farmers (about 75 percent of Nigerians are farmers).

Importance of Agricultural Education

In general terms, agricultural education has an essential role to play in reversing the ugly trend of growing food insecurity and environmental degradation. According to Olaitan (1984) agricultural education performs the following functions:

1. Agricultural education provides young people with sound knowledge of the basic principles and techniques of agriculture and the motivation with which they can translate this knowledge into real improvement in agricultural productivity.
2. It preserves the tradition and customs/culture of the people which are in keeping with modern farming methods, and changes which are obsolete.
3. Provide the farmers with the knowledge upon which to base is production decision e.g how to react to fluctuation in product prices and select the enterprise best suited to his land. It also teach the farmers the principles of harmonious property relations in the use of agricultural resources so that farmers can then pool the ownership and operation of adjoining land for the greater production.
4. Helps rural farmers to develop an understanding of the interrelationship of urban and rural life and provide counseling about agriculture occupation and the means of preparing for them.
5. Provides training for specialist agriculture occupation such as livestock and plants breeding, food storage And processing and also agriculture finance and insurance to help reduce uncertainties for those producing food in the future.
6. Produces more trained personnel involved in extension service for farmers, translating research findings into field trial prior to commercial application.
7. Produces graduates who will wish to remain in an academic environment either in research, or in teaching from elementary through the college level. (Olaitan, (1984: 7-8).

Agricultural education programmes give the added advantage of the opportunity to see or know how it is done, that is, the practical aspect of soil analysis, maintenance and improvement of its fertility, the production, preservation and processing aspects of animal and crop sciences, the efficient management of rural area (Odukwe, 1990). This broad outline of agricultural education programmes indicates the agriculture is now very diverse and its no more the tilling of the soil and cultivating without having knowledge of other aspects of agriculture. The modern farmer is a businessman and should therefore be trained in all aspects of agriculture.

Issues Affecting Agricultural Education

Agricultural Education can be used to achieve national development, because the need to be self-reliant stands as one of the urgent needs of the government. Agriculture is therefore aimed at playing a significant role in the country. The interest of the government is to increase food supply at a relatively low price. In the school system, Agricultural Education is confronted with the following:

Inadequacy of teachers, both in quantity and quality. The strength of any educational system depends on the worth of the teachers because it is the teacher who implements the curriculum; there are not enough competent teachers in the field of agriculture. The worth of the in terms of knowledge of subject matter and skills is paramount to skills acquisition of the learners. Agwubuike (1982) in Okoli and Ofodile (2006) noted that there are not enough competent teachers of agricultural science in our schools and graduate teachers in specialized areas of agriculture offered teaching position in schools accepted the offer as stepping stone to better job offers in the industries.

Inadequate Facilities for the Teaching and Learning of Agricultural Education

Agricultural Education requires a lot of equipment and resource materials such as machineries, land and laboratories etc but some of these facilities are lacking. Agricultural Education is one of the vocational courses which cannot be adequately imparted without proper and adequate facilities and equipment for a well balanced programme. Inadequacy of these materials hampers the student's exposure to practical skills. Teaching of agricultural education must be accompanied with specialized laboratory, machines, tools and equipment but all these facilities are lacking hence the poor teaching of the course.

Lack of Interest on the Part of Students: Most students see agriculture as punishment and a career for people that could not do well in other areas such as medicine, pharmacy and engineering. According to Okoli and Ofodile (2006), students see farming as dirty and unprofitable and as such should be left on the hands of illiterates. Also student's lack of interest in agricultural education is the reason for the low prestige value of farming because farming was regarded as a dirty job undertaken by poor people also most students will not want to soil their hands.

Lack of Motivation and Incentives to Agriculture Educators: motivation according to Unyanga (1995), is that inner force that initiates a person's behavior or actions, such a force would be wishes, desires, expectation and drive. A motivated employee could be described as being hard working and goal oriented. The aspiration and commitment level of teachers are greatly determined by the nature of motivation and incentive given to them. Teachers that are not motivated have low morale; the teacher will not be discouraged to put in their best in the job and also impart the required knowledge, skills, attitude, and ideas in their studies because there is no job satisfaction.

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Agricultural Education and Sustainable Future Development

Agricultural Education is the type of education that leads to acquisition of practical skills; it assists individuals in acquiring and developing skills which would be eventually transferred to job opportunity in the society. At least 75% of the total labour force is engaged in agriculture. Agriculture can be regarded as the business of production, storage, distribution and marketing of crops, animals and their products. Agricultural Education is one course that prepares individuals to earn a living, either on a regular paid job or through self-employment. One can earn a living by engaging in crop production i.e. tree crops, arable, animal production i.e. snailry, fishery, horticulture, rabbitary etc. Agriculture Education is an area an individual can venture into for self-employment and employment creation. In recent times, self-employment is becoming more popular among agriculturalist through the acquisition of sate able skills, the basic skills acquired enable the individuals to be able to support a developing modern economy and contribute to the well-being of the society. Osuala (2004) observed that graduates could not access productive employment because they are bereft of the required competencies and skills. They are without employment because they are not employable. Skills acquired in different areas of agriculture like poultry, piggery, bee keeping or apiculture, snailry or vegetable gardening.

Arable crop production enables an individual to secure jobs that will benefit both the society and the individual. Iweh (2008), noted, that for the nations of the world to achieve civilization and technological advancement, the development of the people through acquisition of relevant skills and competency must be emphasized and carried out, as development is the sustained positive improvement of a place or community through man's potential of creativity. This he noted constitutes the requisite generic skills, which are required for sustainable national development and this is the essence of agricultural education programme. Agricultural Education creates jobs and skills acquired in the different areas make an individual employable. Also an individual can make a decent living from agriculture. The importance of Agricultural education emanates from its unique position as a multi-disciplinary field which provides people with different vocational training for different careers and vocations in agriculture. Agricultural Education being a skill acquisition oriented programme alleviates poverty which leads to wealth creation because agricultural products and produces such as food crops, vegetable milk, animal skin, meat eggs generate money. According to Aniodoh (2002), science and technology have been used in agriculture health, and medicine, transportation, communication, comfort entertainment, welfare and building construction. He reported that in the area of agriculture, modern science and technology have lead to revolutionization of agriculture, modern science and technology have lead to revolutionization of agriculture resulting in increased food production for our teeming population.

One of the objects of vocational and technical education to which Agricultural Education belongs is to equip school leavers to earn a living. Saraki (2007) asserted that agriculture is a potent weapon capable of wiping out poverty and hunger in Africa

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and that if modern technology is employed in agricultural production, unemployment would be reduced drastically because many will be interested in agriculture. Agricultural Education can make a person to be self-reliant and productive thereby, contributing to national growth and development. Agricultural Education can be used to achieve national development for wealth creation and food security. National food security will no doubt, imply the production of verities of food in quality and quantity, which will ensure healthy and happy citizens. The Nigerian economy has for long been dependent on oil as a major source of revenue, there is no doubt that the oil reserve may not last for ever but when people trained in different aspects of agriculture venture into using the skills acquired into the different areas of agriculture for productive purpose, more revenue will be acquire from the export of the agricultural produce and this will boost the nation's economy just like the recent cassava initiative by the President of Nigeria – Dr. Goodluck Ebele Jonathan.

Agricultural Education is geared towards the acquisition of saleable skills to enhance employability, increased food production which will lead to food security, wealth creation, security in the nation and supply of raw materials required for the development of industries so as to create employment opportunities for the general populace. Agricultural Education is an essential tool necessary for the development of human capital and resources of any nation. Individuals in the field of agriculture are the future farmers and nation builders. According to Egbule (2002) “the interest and zeal manifested by the youth towards Agricultural Education are significantly related to the achievement of self sufficiency in food production which is the aspiration of the nation now and in the future”. He also added that the involvement of the head (thinking) heart (feeling) and hands (skills) in agriculture if properly channels, can promote a new era in Agricultural Education to develop requisite skills and abilities in the individual so that they can immediately be employable.

Conclusion

The fastest instrument to facilitate and foster the achievement of national development and growth is the educational system. Nigeria is naturally an agrarian economy blessed with vast areas of rich agricultural land, human and material resources needed for agricultural development. By virtue of the skills acquired through agricultural education, an individual becomes employable and will be able to create jobs thereby reducing unemployment, hence increased food production which implies food security for the nation.

Recommendation

A nation that cannot feed itself is insecure and dependent. The best yardstick to measure a successful government is its ability to provide food security for the people. The present administration should pull its weight by ensuring food security through massive agricultural production. For this to happen, it is important to ensure that:

1. Farmers are motivated by giving them incentives in both cash and kind.

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2. Gradual move subsistence farmers to mechanized farming, train them and give them subsidy to make them maintain such large scale agricultural production.
3. Our agriculture must move away from rain-fed agriculture. We must build dams as an alternative to water provision for agriculture. Rain-fed agriculture cannot sustain massive production.
4. Mass agricultural education of our farmers on the techniques of conservation or agroecological agriculture which is both sustainable and friendly to the environment is now imperative.
5. Bridging the huge extension personal to farmer ratio presently put to 1: 2500.
6. Review our Land Use Act/Decree.
7. There should be consistency in policy in the subsidies on farm inputs and machines such as fertilizers, improved seeds and seedling etc.
8. Training and re-training of the extension farmers on the techniques of conservation agriculture.
9. Mass re-education of our farmers towards agricultural industrial technology e.g. use of computers in agriculture.
10. Rural infrastructural and information communication technology development so as to convey properly the pros and cons of certain development to the farmers in an acceptable conditional environment.
11. The benefit of university and other institutions research result/information should be brought to bear directly on food production.
12. Speedy return of the nation's economic base to agriculture, as a panacea to employment and poverty in the country.
13. Government and other stakeholders in the agriculture sector should embark on serious utilization of research findings for improved food production.
14. The Nigerian Agricultural Insurance Company (NAIC) must be re-organized to serve as risk bearer and facilitate credit accessibility to farmers.
15. Rural programme such as FADAMA II project, IFAD-CBROP and all State River Basins Development Authorities must be given all necessary assistance to sustain agricultural and food production, thereby ensuring food security.
16. Special incentive and assistance to women in Agriculture.
17. To produce the type of farmers required to meet our national food needs relevant government agencies and agricultural institutions should organize refresher courses, and workshops on farm demonstration programmes, short-term courses etc to give farmers the required knowledge and skills. These courses should be organized at both formal and informal levels to suit the greater percentage of farmers that are literate.

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