



## Implication of Agricultural Science Education on the Development of the Nigerian Economy

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### Abstract

*The introduction of agricultural education in Nigeria educational system is necessary as it helps learners acquire knowledge and skills in agriculture which will improve the quantity and quality of agricultural production with a view to better the living standard of the people. Agricultural education has been progressing overtime due to the benefits derived from agriculture. The agricultural sector is a major source of livelihood for most citizens, but the paper noted that production hurdles have significantly stifled the performance of the sector. The paper argued that if the problems bedeviling agricultural sector as well as agricultural education such as inadequate funding, low societal acceptance, lack of qualified manpower, lack of good roads and infrastructures among others can be addressed, the Nigerian economy will be in a better shape as it relates to food security, employment of the youth and provision of raw materials. The paper finally concluded that agricultural education is an innovative programme aimed at self-reliant and employment creation in the country. Apart from the income generation and economic empowerment it can give to the youths, it preoccupies them and keep their minds out of mischief and violence, thereby, enhancing peace and national security which are of utmost importance to the Nigerian economy, and recommends adequate funding to acquire necessary tools and equipment, qualified teaching personnel and in-service training for the teachers as well as incentives for learners of agricultural science.*

**Keywords:** Agricultural Education, Development, Nigerian Economy

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### Introduction

Agriculture remains the foundation and base of the Nigerian economy in spite of the discovery of petroleum. This is because though crude petroleum oil has become the major source of foreign exchange for the country, agricultural sector still employs majority of the citizens as there is basically no household that is not involved in one form of agriculture or the other. The sector is a major source of livelihood for most citizens especially in the rural areas, but production hurdles have significantly stifled the performance of the sector. The sector has however not kept pace with trends in technology development possibly because of some challenges such as; poor technologies, limited adoption of research findings, land tenure system, inadequate storage facilities, poor irrigation systems, bad roads to market, over reliance on rain-fed agriculture, low

productivity due to poor planting materials, low fertilizer application, societal attitudes towards agriculture and weak agricultural extension system. Food and Agriculture Organization (2019) noted that Nigeria has lost estimated USD 10billion from annual export opportunities of palm oil, cocoa, cotton, and groundnut due to continuous decline in the production of these commodities. Nigeria, according to FAO (2019) is the continent's leading consumers of rice and one of Africa's leading producers of rice. Also, it is the highest producer of cassava in the world with about 50 metric tons annually from a cultivated area of about 3.7 million hectares.

Okeke (2007) observed that in the past, various governments have attempted to restructure the agricultural sector with the primary aim of making Nigeria self-reliant in food production. In order to develop the sector,



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government over the years has executed different agricultural policies like the Operation Feed the Nation, Green Revolution, Agricultural Development Projects etc. The then General Ibrahim Babangida's administration introduced Structural Adjustment Programme (SAP) to encourage youths and the general Nigerian populace to embrace the spirit of self-reliance. Yet, Nigeria has not attained that level of food sufficiency and reliance. This has resulted in the continuous failure of the sector to play its role in national development (Onwualu, 2012). There is need to utilize the great opportunities in food production to create employment, end food importation and provide raw materials for the agro-allied industries. For effective results therefore, all aspects must be looked into to bring about the needed change. Adeniyi (2012) opined that a commensurate number of self-reliant and independent graduates surely will be one of the major solutions to the teething unemployment ravaging the country, hence, agricultural education is essential in the development of the Nigerian economy. The introduction of agricultural science in Nigeria educational system is welcomed as it helps learners acquire knowledge and skills in agriculture which will improve the quality and quantity of agricultural production with a view to better the living standard of the Nigerian citizens. Also, agricultural education is expected to harmonize the various policies and equip the learner with useful skills to enable him/her make a living out of agriculture.

### **and the Nigerian Economy**

In Nigeria, agriculture is the bedrock of economic development, especially in the provision of food vital for human development and raw materials for industry. It is a readily available source of employment and income to the people. Agriculture contributed immensely to the Gross Domestic Product of the country, and remains an important means of alleviating poverty. Central Bank of Nigeria (2011) highlighted that the agricultural sector in the 1960's contributed 85% of the Nigeria foreign exchange earning, 90% employment generation and 80% GDP. These benefits prompted the government to initiate several

policies and projects to enhance agricultural productivity.

Cash crops such as: oil palm, groundnut, cocoa, generated revenue for national development. Gamble, Blumberg, Vernos, and Raun (1988) observed that funds contributed by the regionally important marketing boards launched all the three premier universities in the different geopolitical regions of Nigeria. They explained that, oil palm proceeds were used to build University of Nigeria, Nsukka, roads, hospitals and other social amenities in the eastern part of the country. In the Western region, Cocoa House, Ibadan, O'dua Investment Group, University of Ife now Obafemi Awolowo University, Ile Ife were built from the revenue from cocoa. While, groundnut pyramids and cotton were used to build institutions like Ahmadu Bello University, Zaria. Nigeria led in the export of these major commodities (Alkali, 1997). Uдах, Mbanasor and Nwosu (2015) noted that despite these enormous contributions of agriculture, the sector has slipped into a systemic decline, particularly in the past four decades. They explained that contribution of agriculture to overall GDP went from 64 percent in 1960 to 46 percent in 2010. According to National Bureau of Statistics (2020) as at 2019, contribution of agriculture to Nigeria GDP stands at about 26.09%. This is as a result of its subsectors' performing decimally.

Nigerian agriculture is characterized with different agricultural resources; this makes agriculture more important to most Nigerians than any other sector. Agricultural resources are classified as; crop and animal. Under crop section are;

Fibre e.g. cotton

Fruits and vegetables e.g. ginger, tomatoes, pepper, mango

Grains e.g. maize, rice, sorghum

Legumes e.g. soya-beans, groundnuts

Tubers e.g. yam, cassava

Energy crops e.g. jatropha, typha grass

Tree crops e.g. orange, cashew etc

Oil seed e.g. oil palm, melon, castor

Forestry and plantation e.g. timber, bamboo

Ornamental e.g. flower

Under the animal sector, resources are divided into fishery, cattle, sheep, pigs and poultry. If



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well developed and utilized, these resources from both animal and crop sectors can generate income for the country more than the petroleum sector. Since the potentials of agriculture are still intact, necessary measures should be put in place to bring agriculture back to its pride of place. Having highlighted these importance of agriculture to the economy, it becomes expedient to improve on the quality of agricultural education offered to bring about productivity.

### **The concept of Agricultural Education**

Agricultural education has been progressing overtime due to the benefits derived from agriculture. Egbule (2004) in Modebelu and Nwakpadolu (2013) defined agricultural education as a process of training learners in the process of agricultural productivity as well as the techniques for teaching agriculture. Also, Federal Republic of Nigeria (2004) in Makusidi (2016) defined agricultural education as an aspect of education that leads to practical skill acquisition, applied skills as well as basic scientific knowledge. It is further described as education that leads the learners directly to a particular vocation in the society. It helps prepare and equip the learners in various agricultural occupations e.g. crop production, animal husbandry, horticulture and guarantees national growth and development. Agricultural education helps the learners to be exposed to real life experience through demonstrations, field trips, excursions, and classroom lectures. According to Amadi and Blessing (2016) it is a core vocational subject taught in all levels of education starting from the primary to the tertiary level of education.

### **Role of Agricultural Education in National Development**

Dipcharima (2004) in Makusidi (2016) explained that agricultural education assists and provides the individuals or the society with basic or essential agricultural knowledge and skills to innovate and explore the environment for the betterment of the whole society or nation. These skills are necessary and important for national growth and development because they guarantee high level production of farm products and produce. It exposes the learner to

the use of modern techniques, agricultural mechanization, fertilizer application and management. Agbulu and Ekele, (2004) explained that these skills must be encapsulated within the curriculum of secondary and tertiary institutions so as to enable the students develop interest and acquire vocational skills. The Nigerian economy cannot afford to lose the agricultural sector knowing fully the importance of the sector. Agricultural education among all other factors is the way out to salvage the sector from its dwindling performance thereby improving the economy. Adequate agricultural education will address the challenges of food insecurity, poverty and unemployment. But for a functional agricultural education that would enhance effective training and development of the learners, there need to be qualified manpower, financial resources, enabling environment, and infrastructural development.

National development is a conscious and holistic effort towards economic, political and social development of country. It entails growth of the nation in all its sectors and in human and material resources. According to Peters (2006), national development is the growth in income per capita of a country, it is the provision and creation of conditions by which the citizens of a nation attain the fulfillment of their basic human need. On the other hand, Makusidi (2016) viewed national development as a progress towards reducing the incident of poverty, unemployment and income inequality in the society. One major tool of employment and poverty reduction is agriculture; Eneji, Tsuvyaki and Afu (2021) explained that Nigeria per capita GDP and various components of the agricultural sector provides a half and engages two-third of the labour force. The basic idea of national development is growth in human and materials resources of a nation. Qualitative education is required for a strong nation building and because there is need to balance the human and material resources of a nation in other to come out with a strong structure, agricultural education becomes imperative. According to Ifeanyi (2012) most nations collapse because of poor or weak human resources which invariably means poor quality education. Therefore, he suggested that



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education that can equip the individual with the right knowledge and skills are the types of education needed for economic and national development. Agricultural education happens to fail within that type of education that can expose the learner to the acquisition of skills for economic and national education. In another development, Agricultural education is concerned with the provision of necessary expertise needed for a strong independent and food sufficiency nation. On the other hand, agricultural education is designed to equip students with the skills and knowledge needed to practice agriculture for efficient food production. Agricultural education becomes necessary to help in:

- Farm mechanization and use of modern equipment;
- Providing technical knowledge and vocational skill for agricultural, industrial, commercial and economic development;
- Producing people who can apply scientific knowledge to the improvement and solution of the environment and agriculture;
- Training and imparting necessary skills for the production of crafts men, technicians and other skilled personnel for self-reliance and enterprise;
- Creation of future entrepreneurs;
- Prepares individuals to become teachers of agriculture, extension officers and other professions related to agriculture;
- Helping the youths to develop an intellectual understanding of the increasing complexity of problem limiting farm production.

However, attainment of the above roles become functional when some of the problems bedeviling agricultural education are addressed like; low funding, nonchalant attitudes of students towards farming occasioned by the use of crude implements, inadequate equipment, tools and teaching aids, unqualified personnel, and societal attitudes towards agricultural education. Also, well-articulated programmes and pedagogical approach to agricultural education is important for a vibrant and functional agricultural education. There is great

apathy by both citizens and government towards investing in the agricultural sector of the economy; they prefer trade to agricultural sector. When these problems are addressed, agricultural education would become more functional to make learners self-reliant and independent as opined by Adeniyi (2012) that a commensurate number of self-reliant and independent graduates surely is a solution to the teething unemployment situation ravaging the Nigerian economy presently. Implying that agricultural education is an essential tool in national development. It is believed that proper and adequate agricultural education would address the challenges of food insecurity and poverty as well.

### Conclusion

Nigeria has enormous agricultural resources that when fully harnessed and developed can generate more revenue for the citizens, foreign exchange for the country, create employment and improve the overall standard of living of the citizenry. A viable agricultural sector can solve most of the socio-economic challenges facing the country today including insecurity, unemployment and corruption. Agricultural education is an innovative programme aimed at self-reliant and employment creation in the country. Apart from the income generation and economic empowerment it can give to the youths, it preoccupies them and keep their minds out of mischief and violence, thereby, enhancing peace and national security which are of utmost importance to the Nigerian economy. A food secured nation leads to improved standard of living; one indices for national development. Having seen the various agricultural resources that can generate money and employment, beyond crude oil, agricultural sector seems to be the most important sector of the Nigerian economy, hence, the importance of agricultural education in producing people who can apply scientific knowledge to the improvement of agriculture and help youths understand the use of modern equipment among other roles. For a functional agricultural education, there is need for qualified teachers/manpower, financial resources, structural and material resources, enabling environments and infrastructures. These would



enhance effective training and development of the learners.

### Recommendations

1. Adequate funding of agriculture and agricultural education is needed to provide tools and equipment as well as infrastructures for agriculture to thrive. The success of agriculture is a sure bet for the development of the Nigerian economy.
2. Funding of agricultural departments and institutions to enable them organize conferences and workshops. The outcome of these conferences and workshops would be useful to policy makers on the type of policies to enact in order to move the nation forward.
3. Students of agricultural education should be given adequate orientation on the need to take to farming, and the usefulness of agriculture to the Nigerian economy.
4. There should be incentives and motivation for students offering agriculture at the tertiary levels to encourage them and motivate others thereby changing societal attitudes towards agricultural education.
5. For effective agricultural education, qualitative and innovative teachers are important, hence; in-service training should be made available for teachers to upgrade on their knowledge of the subject matter.
6. Loans and other forms of credit should be ear-marked for graduates of agricultural education and any other agricultural related course to set up farms to put into practice what they have learnt over the years in school. This would bring about more employment opportunities as well as more food for the citizens.
7. Societal attitude and bias towards agricultural education has to be addressed by government. This can be done by making agriculture more attractive than what it is now. Agricultural education should be given higher priority especially, because of its importance in a depressed economy such as ours.

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