

VOCATIONAL AGRICULTURAL EDUCATION: AN INSTRUMENT FOR ACHIEVING FOOD SECURITY IN NIGERIA

BY

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Abstract

This paper discussed vocational agricultural education as an instrument for achieving food security in Nigeria. The paper focused on the use of skills and technical knowledge in Vocational agricultural education in crop and animal production, processing of agricultural product, marketing and distribution of farm products. The problems militating against the achievement of food security through vocational agricultural education were also discussed. A number of suggestions and recommendations on how to solve the problems were made.

Introduction

Vocational agricultural education is that aspect of education process that prepares individuals for practical skills and basic scientific knowledge required for agricultural production. The practical skills and technical knowledge of agricultural production include; skills in tractor operation, use of farm tools and equipment and their maintenance, skills in land preparation for planting of crops, fertilizer application and agro-chemicals, weed control, rearing of livestock, harvesting of crops, processing, preservation and storage of farm products, marketing and distribution of agricultural products profitably. Olaiton, (1985). Usman and Sulaiman (2000) reported that vocational agricultural education also involves the inculcation of the right attitudes, values, habits, abilities, understanding, competencies, scholarship, leadership, co-operation and citizenship needed for entry into agricultural occupation.

The overall objectives of vocational agricultural education, according to FRN (2004:29) include;

1. To develop skills and basic scientific knowledge and competencies required in agricultural production.
2. To develop an understanding and appreciation of career opportunities in agricultural occupation and the preparations required to progress in production agriculture, agricultural business, and other careers in agriculture.
3. To develop the ability to secure satisfaction in placement and advancement in agricultural occupation through programmes on continuing education.
4. To develop leadership qualities, attitudes, thrifts, scholarships, co-operations, citizenship and patriotism by participating in experiences and activities of agricultural programmes.
5. To develop competencies required by individuals engaged in agriculture.
6. To develop practical skills and competencies in agricultural research.

An individual with relevant skills and technical knowledge as well as the right attitudes and values can enter into agricultural occupation and produce enough food and fiber to feed the teeming population as well as ensuring the achievement of food security in Nigeria.

Food security may be defined as when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food

preferences for an active and healthy life. Clay (2002) defined food security as a condition of assuring the availability of food, price stability of basic food stuffs at the local, national and international levels. This implies that the basic food requirements should be available at all the times to sustain a steady expansion of food consumption and prices.

Furthermore, Food and Agricultural Organization (FAO) (1983) explained food security as a situation when all people at all times have both physical and economic access to the basic food that they needed. In it's broader context, food security could be explained as a situation whereby every individual at all times have physical and economic access to the right type, sufficient and nutritious food that meets their dietary needs for a healthy life.

According to FAO (1992), the idea of food security globally was conceived in a joint Food and Agricultural Organization (FAO) and World Health Organization (WHO) International Conference on Nutrition held in Rome in December, 1992, which aimed at encouraging action to promote and protect the nutritional well-being of vulnerable population and to improve in human welfare, including nutritional and economic access to food. The basic need of a human being is food; this is supported by the Maslow's hierarchy of needs in Hersey and Blanchard (1989). Similarly, the book of Genesis (1:29) reveals:

"God said, I give you every seed-bearing plant on the face of the whole earth and every tree that has fruit with seed in it. They will be yours for food. And to all the beasts of the earth and all the birds of the air and all the creatures that move on the ground, everything that has the breath of life in it. I give every green plant for food. And it was so".

This implies that man has fundamental right to have access to sufficient and safe food for a healthy life; but the question is, "Is man having the physical and economic access to right type, sufficient, safe and nutritious food that meets his dietary needs for healthy life? The answer to the question above is "No". Further, Pingali, Alinovi and Sutton (2005) stated that about 850 million people in the world are undernourished. There is widespread persistence and prevalence of food insecurity, food crisis, hunger and abject poverty all over the world, especially in African continent. This paper discussed the benefits of food security, factors affecting food security, achieving food security through functional vocational agricultural education and factors militating against agricultural education to achieve food security in Nigeria.

Benefits of Food Security

The benefits of food security according to Pingali, Alinovi and Sutton (2005) are as follows:

1. **Quantitative food supply:** Adequate food security ensures adequate food supply for every individual. This implies that every individual will have access to enough food that meets his dietary needs.
2. **Qualitative food supply:** Food security ensures qualitative food supply. This means that the quality of the food in terms of caloric quality, texture, structure and palatability should be supplied.
3. **Steady supply of food:** The steady supply of food prevents seasonal supply and scarcity of food in circulation. This implies that food will be available all the year round.
4. **Stability in price:** When there is food stability, the prices of food in the market remains stable without fluctuations and inflection.
5. **Economic accessibility:** When there is food security, every individual will have economic access to food at affordable prices.
6. **Nutritional balance:** This implies that individuals will have the food that contains all the nutrient requirements of the body. This prevents nutritional deficiencies such as

kwashiorkor, anemia, scurvy, poor eyesight, osteoporosis, berry-berry and oestomalasia.

7. **Safe food:** Food security makes it possible for foods for man's consumption to be safe from contamination, parasitic infection, toxic substances that could be injurious to life.
8. **Consumer's satisfaction:** When there is food security, the food consumers are satisfied in terms of choice, interest, likeness, habit and food taste.
9. **Culturally acceptability:** When there is food security, every culture meets its food choice, habit, preparation and food utilization.
10. **Varieties:** According to an adage, varieties are the spices of life. Food security ensures supply of various food stuffs for human consumption in terms of taste, colour, structure, texture, nutrient content, preparation methods and utilization.
11. **Food functions:** When there is food security, there will be food that performs various functions in the body such as energy food, portentous food for repairs of worn out tissues, for growth, development and other body metabolisms.
12. **Healthy living:** The health of any living organism is the function of the quantity, quality and safety of the food consumed. Food security ensures healthy life.

The implication of the above factors is that food security has tremendous benefits, which could be achieved through functional Vocational Agricultural Education.

Factors Affecting Food Security

Many factors have been identified as barriers for the achievement of food security and prominent among them are;

1. **Environmental degradation:** Environmental degradation include; gully erosion, which devastate productive lands, desert encroachment, deforestation and decline in soil fertility leading to low crop yield. FAO (1996c) has estimated that half of African farmers live on environments with a highly vulnerable natural resource base such as slopping lands, dry lands areas with limited rainfall. Also deforestation and increase demand of firewood for cooking, has led to high denudation of soil cover resulting to reduced food supplies.
2. **Rapid population growth and urbanization:** The rapid increase in populations of people and urbanization have great influence on food security. FAO (1996a) reported that food production and dietary energy supply in sub-Saharan African as a whole has continued to decline.
3. **Biotic factors:** The incidence of diseases and pests of crops and animals have contributed enormously to decline in food production, which has directly affected food security.
4. **Wars and civil unrest:** Period of wars always witnessed mass refugees' movement and abandonment of farming activities. FAO (1996b) reported that five worst situation in 1995 were those of refugees and displaced persons from within Rwandan, Burundi, Liberia, Sierra Loeone, Mozambique, Somalia and Sudan who fled from their homes and abandoned food production.
5. **HIV/ AIDS impacts:** FAO (1996b) reported that Human Immune Virus / Acquired Immune Deficiency Syndrome infected persons lack the ability for farm work, food processing and food marketing which has led to loss of trained workforce in agricultural occupation. This implies that if these factors are not addressed urgently in Nigeria, food security may not be achieved.

Achieving Food Security through Functional Vocational Agricultural Education

Vocational Agricultural Education can be used to achieve food security in Nigeria through;

Crop Farming: The application of practical skills and knowledge and right attitudes in the production of banana cassava, beans, vegetables, rice, maize, millet, potato and many other plantation crop will ensure food security.

Animal Husbandry: knowledge in the skills and vocational agricultural education can be utilized in cattle, goat, sheep, rabbit, pig, poultry, fish, snail and bee production for adequate supply of animal protein requirements of the people.

Processing of Agricultural Products: The skills and knowledge in vocational agricultural Education can be effectively utilized in the processing of agricultural products such as processing of cassava to garri, soya bean to soya milk, palm fruits to palm oil, groundnut seeds to groundnut oil and cake, which are of high nutritive value in achieving food security.

Marketing of Agricultural Foods: The skills and knowledge in vocational agricultural education can be utilized in marketing and distribution of the agricultural foods which helps in the creation of both time, place of the agricultural production in achieving food security.

Factors Militating Against Vocational Agricultural Education to Achieve Food Security

The application of vocational agricultural education to achieve food security has tremendous constraints: prominent among the problems according to Pingali Alinovi and Sutton (2005), Usman and Sulaman (2007) are;

1. ***Land tenure system:*** Land tenure system is the method by which land is fragmented and owned by individuals in the communities. The system has negative impact on food security. For instance, in many areas, graduates who are interested in farming find it difficult to obtain productive land for use. It is necessary that the land act decree 1978 should be reformed so that individuals can have access to land for farming.
2. ***Poor Relationship Between Training Institutions and Agro-Firms:*** The relationship between institutions training agricultural educationists and agro-firms such as modern commercial farmers where the students could gain practical experience in production agriculture is lacking. They should be cordial relationship between the institution and students for practical experience.
3. ***Paucity of Farm Tools and Equipment:*** Insufficient farm tools, machines and equipment for practical activities have great influence in the application of vocational agricultural education in achieving food security. There is shortage of modern farming tools and equipment such as tractor and tractor coupled equipment, sprayers, seed drillers and many others in the institutions that offer vocational agricultural education and on the job farmers. Government should try to reduce the tariff for agricultural tools and equipment so that their prices could be available by an average farmer.
4. ***Public Perception of Vocational Agricultural Education and Farming:*** For years, the public perceive vocational agricultural education and farming as a profession for those who cannot make it academically or those who are failures in their lives Based on this, nobody wants to be associated with a failure or somebody who cannot make it; worst is

that, the youths feel that farming is a dirty profession rather they prefer white collar jobs. Effort should be made by the government to enlighten the public in the importance of vocational agricultural education.

5. **Lack of Funds:** Farmers and agricultural education institutions lack funds for the procurement of farm tools and equipment, inputs such as seeds, agro-chemicals and many others needed. Farmers should be encouraged to form cooperative societies in order to raise funds.
6. **Government Policies:** The agricultural policy of the federal government of Nigeria have not actually metamorphosed into successful achievement of food security in Nigeria due to Lack of proper implementation. Good agricultural polices should be well implementation
7. **Lack of Rural Infrastructure and Social Amenities:** In the rural areas where farming activities take place lack infrastructures and essential amenities such as motorable roads, electricity, pipe borne water, residential accommodations, health centres, agro-service centres, schools, post office, markets and banks. The absences of these amenities make life difficult for the rural dwellers who are engaged in farming. Effort should be made by the government to provide infrastructures in the rural areas.
8. **Lack of efficient marketing system:** Nigerian markets are characterized with frequent price fluctuations, lack of uniform measures, lack of market survey and information. The market system in Nigeria should be made more effective.

Conclusion

The basic need of any living organisms is food for survival. Fundamentally, man is supposed to have physical and economic access to sufficient, safe and nutritious food that meets his needs for an active and healthy life. The reverse appear to be the case. In Nigeria today, millions of the people are undernourished and cannot have access to nutritive and adequate food as a result of environmental degradation, rapid population growth and urbanization, diseases of crops and animal, wars and civil conflicts, the impact of the acquired immune deficiency Syndrome (AID) as well as lack of processing of food and storage facilities. An effort directed towards addressing these factors and application of knowledge and skills of the vocational agricultural education in animal and crop production, processing and distribution of the farm product will ensure food security in Nigeria.

Recommendations

The following recommendations were made:

1. The right and access to productive land should be made available for the vocational agricultural graduates who are engaged in farm occupation and others interested in farming business.
2. Effort should be made by the government and non-governmental organizations to grant credit facilities to graduate farmers to enhance food production.
3. Efforts should be made by the governments, non-governmental organizations and well to do individuals in the society to provide infrastructures and essential amenities in the rural areas such as good road network, electricity, pipe borne water to make life comfortable in the rural areas.
4. The government should ensure that there is efficient marketing system where the prices of food items will be controlled, standard measurement maintained as well as efficient delivery system.

5. Efforts should be made by the governments to ensure that good agricultural policies are implemented appropriately.

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