

## ACHIEVING FOOD SECURITY THROUGH EFFECTIVE SKILL TRAINING IN AGRICULTURE AT THE SECONDARY SCHOOL LEVEL

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### **Abstract**

This paper focused on achieving food security through effective skill training in agriculture at the secondary school level. Food security is the availability of the right, quality and quantity of food at all times to sustain a steady consumption by human beings. It also involves supply of basic food at stable and affordable prices. The paper is focused on the importance of food security, consequences of food insecurity, factors affecting food security, skill training in agriculture, constraints of effective skill training in agriculture, and ways of achieving effective skill training in agriculture and conclusion is made.

Food is one of the basic needs of man and is rated as the first need of man which has to be achieved before every other needs in the hierarchy of human needs. (Maslow 1954).

The concept of food security have evolved in the last thirty years to reflect changes in official policy thinking (clay 2002).

FAO (2006) stated that the right to food is not a new concept and was first recognized in the united Nation (UN) Declaration of Human Rights in 1948. In 1996, the formal adoption of the right to adequate food for man marked the milestone achieved by the World Bank food summit. It pointed the way towards the possibility of a right based approach to food security.

World Food Summit (1996) defined food security in terms of food supply assuring the availability and price stability of basic food stuffs at the national and international levels. FAO (1983) expanded the definition of food

security to be the availability at all times of adequate world food supplies of basic food stuffs to sustain a steady expansion of food for consumption and to offset fluctuations in production and prices. Consequently, the widely accepted World Food Summit (1996) defined food security as an access, availability and stability of food for human consumption.

Therefore, food security exists 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 (World Bank, 1996).

One of the concerns of successive governments in Nigeria has been to reduce the level of hunger among the populace and achieve food security in the country. In the past, the efforts of the government to achieve the above centered on the establishment of a number of programmes such as the Directorate of food, road and Rural infrastructure (DHRRI), Better life for rural women programme, operation feed the nation, Green revolution, school to land programme, River Basin authority and Agricultural Development project (ADP). All these programmes and projects were aimed at achieving food security in Nigeria but, unfortunately some of these programmes could not achieve their basic objectives which might be attributed to poor implementation and corruption.

Furthermore, in order to ensure food security, agricultural education was introduced into the 6-3-3-4 system of education.

Agricultural education is studied at the senior secondary schools level (SSS) as agricultural science and at the Junior secondary school (JSS) as practical agriculture. One of the objectives of the agricultural education at the secondary school level is to develop practical skills in agricultural production in the students which will enable the recipients enter into agricultural occupation. (FRN, 2004).

This paper, therefore maintained that food security could be achieved through effective skill training in agriculture at the secondary schools. The paper is focused on importance of food security, consequences of food Insecurity, factors affecting food security, skill training in agriculture, constraints of effective skill training in agriculture and ways of achieving effective skill training in agriculture.

#### **Importance of Food Security**

The importance of food security according to Pingali, Alinovi and Sutton (2005) include;

1. **Quantitative food supply:** Food security ensures adequate supply of food to every individual: This means that every individual suppose to have access to enough food that meets his dietary needs.
2. **Qualitative food supply:** Food security ensures qualitative food supply. This implies that the quality of food in terms of calorie, texture, structure and palatability as well as nutritive qualities will be supplied.
3. **Steady food supply:** Food security ensures steady food supply. This implies that food will be available all the year round.
4. **Stability in food price:** When there is food security in the nation, there is every tendency that the prices of food will be stable without inflation.
5. **Economic accessibility:** When there is food security in a nation, every individual will have economic access to food at affordable prices.
6. **Nutritional balance:** Food security ensures balanced diet for people. This implies that every individual will have access to foods that are nutritious. This will help to prevent nutritional diseases such as kwashioko, anemia, scurvy, poor sight, osteoporosis and osteomalasia.
7. **Safe food:** Food security makes it possible for foods to be free from contamination, parasitic infections, toxic substances that would be injurious to human life.
8. **Consumers satisfaction:** When there is food security, there is every tendency that consumers will be satisfied in terms of choice, interest, likeness, habit and food taste.
9. **Varieties:** Food security in the society makes it possible for the supply of varieties of food for human consumption.
9. **Food functions:** When there is food security, there will be abundant food that performs various functions in the human body such as energy food, protein containing food which supplies the body with proteins, repair of worn out tissues, growth, and other metabolic functions in the body.

11. **Healthy living:** The health condition of an individual is the function of the quality and quantity of food taken.

#### **Consequences of Food Insecurity**

The consequences of food insecurity are enormous. A situation, where an individual cannot afford the basic three square meals a day can be traumatic and devastating.

The following are the common probable consequences of food insecurity among the people:

1. **Stealing:** An individual who cannot have access to food may resort to take up arms and go about stealing in order to get money or beg for food. Such individuals become problems to the society.

2. **Prostitution:** Many young ladies go into prostitution not because they enjoy it, but simply because they are looking for food for survival. Such ladies resort to indiscriminate sexual intercourse for money and food. This consequently increases the spread of sexually transmitted diseases as well as HIV and Aids in the society.

1. **Malnutrition:** Lack of adequate and right food with the complete nutrients leads to malnutrition and other diseases related to malnutrition. Such as Kwasioko, Anemia, osteoporosis, oestomalacia, scuring and many others. Malnutrition when acute can lead to high rate of mortality in the society and as well as low life- expectancy.

4. **Corruption in the public and private places**

Lack of adequate and right type of food may lead to corruption in the public and private places.

5. **Conflicts and aggressiveness**

A hungry man is an angry man. Lack of sufficient food makes a man to be angry and aggressive. In a situation where many people are angry, it may lead to conflicts in the society.

6. **Rural- urban migration**

Rural urban migration is the mass movement of people, especially the youths to the cities for greener future. This is caused by hunger and lack of adequate and right type of food.

#### **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:** Environment degradation include; gully erosion, which devastates 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 increased 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 Africa as a whole has continued to decline.

3. **Biotic factors:** The incidence of diseases and pests of crops and animals have contributed enormously to the decline in

food production, which has directly affected food security.

4. **Wars and civil unrest:** period of wars are witnessed with mass refugees' movement and abandonment of farming activities. FAO (1996b) reported that five worst situations in 1995 were those of refugees and displaced persons from within Rwandan, Burundi, Liberia, Sierra Leone, Mozambique, Somalia and Sudan who fled from their homes and abandoned food production.
5. **HIV/AIDS impacts:** FAO (1996b) reported that Human Immune Virus Deficiency Syndrome infected persons lack the ability to farm work, food processing and food marketing which has led to loss of trained workforce in agricultural occupation.

#### **Enterprises in Agriculture**

Agriculture is an industry whose aim is farming. Farming concerns itself with the growing of crops and rearing of farm animals for the utilization of man (Oliatan, 1996). (Olaitan and Sowande 2000). Stated that there are numerous farming business, enterprises. These include;

1. **Crop Production:** Crop production involves growing of crops, which could be arable crops such as maize, yam, cocoyam, millet, cowpea, cassava, pepper, beans and soya bean. Crop production could also involve the growing of plantation crops such as rubber, cashew, citrus, kola, cocoa, oil palm and skill for their production.
2. **Animal Production:** Animal production is the rearing and management of farm animals for man's utilization such as rabbit, goat, cow, sheep and poultry.
3. **Apiculture:** Apiculture is the commercial keeping of bees for honey production. This

particular enterprise can be practiced to enhance food security.

4. **Fishery:** Fish is one of the vital foodstuff that is enjoyed in most homes both in the rural and urban cities. Fish provides rich protein in human diet (Olaitan and Sowande 2000).

#### **Skill Training and Agriculture**

Skill is the ability to carry out any activity expertly with little or no error. It is also referred to as expertise, practiced ability, dexterity and tact. It is an organized sequence of actions, proficiency, and involves the acquisition of performance capability. (Hull in Okorie 2000).

Okorie (2000) explained that skill training in agriculture is the ability to do or perform an activity that is related to agricultural practices. This includes; skills in livestock production, skills in crop production, skills in processing, preservation, storage and marketing of agricultural products.

Okorie (2000) enumerated the following trainings in poultry; ability to identify poultry breeds, select layers or broilers, determine floor space needed, determine feeder and water space needed, select bedding materials, formulate balance ration, disinfect poultry house, control diseases and pests and keep accurate records. Furthermore, he listed the following skill trainings in crop production; ability to prepare land suitable for planting of crops, carry out seed test and selection, dress seeds with the right chemicals, raise seedlings in nursery, transport seedlings, identify weeds and control weeds with the right chemicals, harvest crops, process harvested crops, preserve and store products as well as carry out marketing of the farm products profitably.

Ndem (2010) explained that skill training in agriculture include; skills in the use of farm tools to till the soil, manipulate farm machines and equipment to carry out different

operations on the farm as well as skills in conservation and maintenance of the soil for crop production.

### **Constraints of Effective Skill Training in Agriculture**

(FRN, 2004) prescribed the offering of practical agriculture at the junior secondary schools (JSS) as pre-vocational subject, and at senior secondary school (SSS) level as vocational subject.

The major aim of offering this subject is to develop pre-vocational occupation and vocational skills in agriculture in the recipients. Olaitan and Sowande (2000) reported that there exist inherent problems in the implementation of the agricultural education curriculum at the secondary schools which has resulted to poor quality of the secondary school graduates. These graduates lack the basic practical skills in agricultural production.

The problems include; the quality of teachers, textbooks and reference materials, farm tools and equipment, laboratory equipment and school time-table.

Ndem (1996) reported that poor attitudes towards agricultural production by the students is one of the constraints of effective implementation of the curriculum of agriculture at the secondary school level.

#### **1. Inadequate Qualified Agricultural Science Teachers**

In many secondary schools, there are shortage of qualified agricultural science teachers to implement the curriculum. (Olaintan, 2000).

#### **2. Lack of Incentives for the Teachers**

The school system in Nigeria has not been able to motivate teachers appropriately. Teachers go home with poor pay without any motivation in the job. This has

contributed to the poor implementation of the curriculum of agricultural science curriculum (Olaitan, 2000).

#### **3. Inadequate Agricultural Textbooks and Reference Materials**

Current text books and reference materials are in short supply at the secondary schools. The teachers find it difficult to make references and carry out effective research due to shortage of appropriate texts.

#### **4. Shortage of Farm Tools and Equipment**

Agricultural science is a vocational subject, which is practical-oriented. The teacher needs tools and equipment to teach the subject. Eni (2006) Reported that many schools do not have tractors and other farm tools.

#### **5. Inadequate Time Allocation for Practical Agriculture at the Secondary Schools**

(FRN, 2004) recommended 40 minutes duration for each period at the secondary schools for each subject. This 40 minutes duration is not adequate for the teaching of agricultural science at the secondary school especially practical work on the school farm.

#### **6. Poor Attitudes of Students towards Agricultural Practices**

Students show insufficient interest in agricultural practices at the schools. Many students feel that agricultural production is for those who are academically poor. They also feel that agricultural production is a dirty profession and meant for the rural aged people (Ndem, 2006).

### **Ways of Achieving Effective Skill Training in Agriculture**

For effective skill training in agriculture at the secondary schools, the following actions should be taken:

1. The national commission for colleges of education (NCE) the National board for technical education (NBTE) and the National University Commission (NUC) should ensure that the training of the teachers are properly carried out in order to turn out qualified agricultural science teacher graduates.
2. The trained teachers should be employed in the schools and placed on the appropriate grades. Teachers should be provided with adequate incentives such as housing accommodation; medical care for them and their families, office accommodation, transport allowances, regular payment of salary, regular promotions, in-service training opportunities and job security.
3. Efforts should be made by the school authorities and well to do individuals in the society to provide current textbooks and reference materials in agriculture as well as farm tools and equipment like tractor, hoes, cutlasses, and other hand tools. Also other teaching aids like charts, video, tape recorders, slides and inculcator machines.
4. Agricultural science at the secondary schools should be allocated double periods for theory and double periods for practical, that is a maximum of 2 hours 40 minutes a week. This will give sufficient time for the teaching of the subject.
5. To increase student's attitude towards agricultural practices, the agricultural science teacher should explain to the students the benefit they will derive from the practical agriculture. Students should be informed about the type of operation to be carried out on the school farm. Students should be engaged in the school farm work when the weather is conducive. Students

should be given part of the products of the school farm. Outstanding students in practical agriculture should be recognized and possibly given award.

### **Conclusion**

The basic need for man for survival is food. Achievement of food security in any nation is one of the surest ways of reducing corruption, prostitution, arm robbery, rural urban migration and other anti-social vices: The youths at the secondary schools naturally possess good health, strength, and vigor which they could exploit to their advantage to contribute in achieving food security in the society. This can be realized in Nigeria by providing effective skill training in agriculture at the secondary school level.

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