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CHAPTER 12

OPTIMIZING THE POTENTIALS OF SACK FARMING IN SOLVING THE PROBLEMS OF LAND ACCESSIBILITY AND HOUSEHOLD FOOD INSECURITY IN NIGERIA

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INTRODUCTION

Agriculture played significant roles in the economic development of Nigeria to the extent that it accounted for more than 50% of the annual GDP and for more than three-quarters of export earnings before the discovery of crude oil. The percentage contribution of agriculture however has continued to decline at the discovery of crude oil and the country's major foreign exchange earner became grossly neglected (Oni, 2008). Agriculture suffered a serious decline at the advent of crude oil in the early 1970s because attention was shifted from the sector to petroleum. There was total dependence on petroleum as a result of the oil boom. This brought about a distortion of the labour market which led to adverse effects on the production levels of agriculture in the areas of food and cash crops.

The abandonment of agriculture as a result of oil boom created setback in agricultural activities as there was massive rural-urban migration and reduced food per capital output (Towobla et al. 2014). Massive movement to urban areas led to hunger and poverty, larger proportion of the urban population lives on less than one dollar per day. Agriculture has been discovered to be a very crucial sector for hunger and poverty alleviation (Nwafor et al., 2011; Salami et al. 2011; Tunde, 2012) since over 40% of the GDP comes from the sector and it employs about 60% of the working population. Mozumdar (2012) pointed out that the livelihood of a major proportion of population in the developing countries including Nigeria is directly or indirectly connected to agriculture. Corroborating this, EEG, (2011) observed that worldwide, about three quarter of the poor live in rural areas and 86% of them work in agricultural sector for their livelihoods. Furthermore, agriculture remains the economic mainstay of most households (Udoh, 2000) and one of the crucial sectors of the economy of Nigeria as it provides staple food for the large population.

The population of Nigeria is growing at an alarming rate, meeting the food supply requirement of the nation is a serious problem that needs immediate attention. Food production cannot match with the population growth hence, the need to depend on imported staple foods with the attendant effect of rising import bill. Osagie (2013) estimated that more than 65 per cent of the Nigerian population is food insecure. Apart from natural increase in population, lack of employment and climate change, insecurity over the past years has also contributed to food insecurity.

Nowadays, soaring food prices in major cities across the Nigerian states are being reported with adverse impact on household budgets. The Boko Haram insurgency in the North-east and pockets of conflicts in some states where basic food items for the nation come from are making food commodity prices to rise. According to Food and Agricultural Organisation of the United Nations (2013), Sahel States in Northern Nigeria were faced with severe food

facing high food prices awaiting the next harvest." Alarminglly, it points out that over 1.4 million children in the region were at risk of severe malnutrition in 2013. There are so many challenges affecting agricultural production in Nigeria, and these include inadequate or erratic rainfall, cattle disturbances, theft, bad road, inadequate capital, inadequate farm input, lack of extension services, land tenure system, high cost of hired labour, political tensions, frequent changes in government policies which results in starting another programme without completing the first one, rural-urban drift, hijacking of farm inputs by the elites and insecurity among others. This paper therefore focuses on how sack farming can assist in solving the problem of national insecurity and lack of accessibility to land at household level for sustainable food security.

Objectives include:

- * Review the concepts of food production and food security;
- * Examine the process of sack farming assess the role of sack farming in solving land accessibility and national security problems;
- * Identify the challenges of sack farming in ensuring food security

Food Production and Food Security

Food production is a method of farming that involves cultivation of land and rearing of animals for man's use. It also includes processing, preservation and marketing of farm products. This method of farming can be carried out both in the rural and urban areas of the country. For this study, food production is referred to as the production of food grains, fruits, vegetables, fish raising, herb gardening, flower and shrub growing in sacks for home consumption and or for the market and related small-scale processing and marketing activities. The essence of growing food in sacks is to ensure food security.

United States Agency for International Development(USAID) Bureau for Africa, (1995:12) defined food security as a situation *"When all people at all times have physical, social and economic access to sufficient food to meet their dietary needs for a productive and healthy life"*. Food security is therefore dependent on agricultural production, food imports and donations, employment opportunities and income earnings, health care utilization and caring practices, intra-household decision-making and resource allocation (Maxwell and Franken Berger, 1992).

Nugent and Egal (2000) say food security is not just about making food available but rather must be accessible. The World Food Summit (1996) and World Health Organization defines food security as the implication that all people at all times have both physical and economic access to enough safe nutritious food to meet their dietary needs and food preferences for an active healthy lifestyle. Therefore, every household at all levels i.e global, national and local must have both physical and economic access to a sufficient quantity, quality and variety of food year round. "The ability to meet aggregate food needs in a consistent way is known as food security" (Anderson and Cook, 1999:142). It was further emphasized that one can only be food secure when food is available, affordable and utilized.

Chung, Haddad, Ramakrishma, and Riely, (1997) employed a triad of concepts in the definition of food security: Food availability, food accessibility and food utilization. Food availability is about food production and supply while food access means food affordability

and food utilization is linked with the nutritional aspects of food intakes like calories, fat, protein and vitamin intakes. "A household is food secure when it has access to the food needed for a healthy life for all its members and when it is not at undue risk of losing such access" (UN, AC/SCN, 1991, para 30).

Hamm and Bellows (2003:37) asserts that "a situation in which all community residents obtain a safe, culturally acceptable, nutritionally adequate diet through sustainable food systems that maximizes community self-reliance and social justice is known as community food security". Meaning the amount of food available in the country must be enough to meet people's food needs and must be evenly distributed. This is referred to as National food Security.

Therefore, for people to be food secure there must be availability in terms of production, accessibility in terms of supply, affordability in terms of purchase and utilization in terms of nutrients derived from food consumption (Tunde, 2012). Also, for Nigeria to be food secure, there must be food year-round and in every part of the country for every resident. On the other hand, food insecurity is when people do not have access to basic food to supply them with enough nutrients.

Process of Sack Farming

The process of sack farming involves filling sacks or polythene bags (Plate 1), containers or plastics with soil, manure and pebbles for drainage, and growing plants on the top and in holes in the sides. These sacks can be placed comfortably at the backyard within individual's compound and wet regularly. This method allows people to grow food in places especially where there exists limited access to arable land, water and national insecurity issues. The sack farming method allows a freer flow of water to the roots and retains moisture more efficiently than traditional methods, meaning sack farmers can keep their plants hydrated with less water.



Plate 1: Backyard Sack Farming in Ilorin Town

The vertical sack gardening technology is emerging as a way to grow a large supply of vegetables and crops despite the constraints.

Role of sack farming in solving land accessibility, national and food insecurity issues

Land as a factor of production is available everywhere but not accessible to everyone. This can be linked to the kind of land tenure system obtainable in each society. Land tenure system implies a system according to which land is held by an individual or the actual tiller of the land. Land rights can be regarded as the right to access, hold, use, control or transfer land that reflect specific socio-cultural and geographic contexts based on the community's social structure (Alston and Mueller, 2015). Johnson (2007) pointed out that the rights to land vary depending on people's status or type of group. In Nigeria, land tenure systems vary from **Communal Ownership, Inheritance Tenure System, Leasehold Tenure System, Rent Tenure System, Gift Tenure System, Freehold Tenure System and Tenant at Government will, Gift tenure system, Rent tenure system and Freehold tenure system.**

Sack farming however plays crucial role in solving land accessibility problems in developing countries particularly Nigeria because male landowners possess the strongest land rights and highest tenure security. According to some scholars (Duncan and Brants, 2004; Nara et al., 2020), the weaker land rights holders are mostly women who suffer certain implications such as food insecurity and therefore need protection through regulation. These women can therefore embark on sack method of farming to resolve the issue of weaker land rights. Similarly, men who are smallholder farmers do not have the rights to own land can equally embrace the sack method of farming. Sack farming is a small scale method of farming that can thrive very well in any area where there is scarcity of land especially in the urban areas.

A lot of people are embracing sack method of farming even in the rural areas nowadays as a result of increase in national security problems within the country. Nigeria was repeatedly ranked low by The Global Peace Index (2012) indicating a worsened state of insecurity. The unusual security challenges such as kidnapping, terrorism, violent armed robbery, political assassinations, ritual killings and more recently activities of Boko Haram in the north eastern region of Nigeria impinge on the security of lives and property of both Nigerian citizens and foreigners living or even trying to invest in the country. Sack farming can therefore replace the need to travel a distance to farm on the field but rather farming can be done at home without the fear of being kidnapped or attacked by hoodlums or any miscreants. Furthermore, there won't be any farmer/herdsmen crisis. National insecurity issues are impacting seriously on availability, accessibility, stability and utilization of food within the country. Hence, if sack farming is adequately and sustainably practiced, it will promote sustainable food security within the country.

Sack farming allows access to leafy greens that otherwise would have to be purchased thereby ensuring food security. Food insecurity is a situation whereby people lack basic food intake to provide them with adequate energy and nutrient for good and fully productive lives. Food insecurity can be grouped as either chronic or transiting. Chronic food insecurity can be seen as a situation whereby there is a constant inadequate diet. This is as a result of unavailability of resources to produce or acquire food especially by households that persistently lack the ability either to purchase enough food or to produce their own. Chronic food insecurity results into a high degree of vulnerability to famine and hunger, elimination of this vulnerability means food security must be ensured. Involvement in sack method of farming at household level will automatically ensure food security.

Benefits of Sack Farming

1. Sack farming is good for many urban and slums dwellers, since space is always limited and for those living in areas with insufficient rains.
2. It can be used during the challenges of unfertile or saline soil, flooding, waterlogging, and land and water constraints are regularly encountered.
3. Another benefit of this method has to do with high productivity at low cost and portability.
4. It involves very low maintenance and reduces the time spent on weeding because there is no need for weeding.
5. Easy to water and watering can even be automated
6. The proximity of this method of farming is important because they are done within individual compound thereby reducing travel times that can lead to insecurity.
7. It can be used to convert wasted space to productive ones.
8. It assist in ensuring food security at household level through accessibility, stability and utilization
9. It assists in generating additional income through sales from excess home produce harvested.
10. It also discourages theft of crops since it will be looked after and monitored within the compound
11. This type of farming helps to decorate the home.
12. Sack farming assists in solving the problem of insecurity in the country since it can be practiced within individual's compound and so there will be no need to go to the field where farmers can be kidnapped or attacked by herdsmen.
13. It encourages cooperation among farmers by strengthening their relationships
14. It encourages people particularly youths to engage in farming
15. It encourages stronger social capital
16. It is a social activity for some people

Challenges of Sack Farming in Nigeria

Sack method of farming has many advantages and should be encouraged by the government of Nigeria, however, in spite of these advantages, there are still some challenges associated with it.

Some of these include:

1. Watering of the sack farm is the most significant challenge facing sack method of farming. The sack garden requires adequate water, on the average, two liters of water per day in the dry season.
2. Sack farming can be destroyed by children and animals.
3. Lack of adequate space to practice the method of farming. This can be linked to insecure land tenure.
4. Pests and disease is another problem affecting sack farming because plants can be infected by pests as well as by diseases.
5. Lack of knowledge of sack farming is another challenge as several farmers faced many challenges as relate to sack gardening because they lack knowledge about it.
6. Lack of pesticides. A lot of farmers do not have money to purchase pesticides while some do not know how to make the traditional pesticides using hot peppers, garlic and soap.

7. Low yield is another problem facing sack farming. If not done properly, there is the possibility of experiencing low yield. Also, since it is usually done within the compound and not on a large expanse of field there is the likelihood of low yield.
8. It can lead to conflict with neighbours if it is a rented house
9. There is problem of theft especially if practiced in a rented house
10. Lack of adequate seeds/seedlings. Many sack farmers experience problems with obtaining seeds or seedlings.
11. Obtaining adequate and fertile soil or stones can also be a problem.

CONCLUSION

Agricultural food production is an important part of ensuring sustainability of the environment. Despite the enormous availability of land in space and continuous improvement in the agricultural inputs, access to farm land is characterized with lots of challenges ranging from land rights to tenure security which hinders the quantity and quality of production. The sack method of farming is a budding and burgeoning innovation which allows for interested farmer to partake in food production by eliminating the challenges of land system through growing of choice crops within the home compound. Sack farming helps in the mitigation against the chronic food insecurity as well as national insecurity. It can therefore be concluded that sack food farming should be encouraged as it will assist in solving the problems of national security, land tenure and meeting the tripartite function of food security at household level viz availability accessibility and utilization.

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