



**FEDERAL UNIVERSITY OF TECHNOLOGY
MINNA**

**NIGERIAN SOIL RESOURCES:
THE NEGLECTED BASE OF OUR
NATIONAL DEVELOPMENT**

By

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B.Agric. (Ife), MSc (Ibadan), PhD (Minna)

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INAUGURAL LECTURE SERIES 56

19TH OCTOBER, 2017



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1.0 INTRODUCTION

With immeasurable gratitude to Almighty God, I stand before this distinguished audience this 19th day of October, 2017 to deliver the 56th Inaugural Lecture of Federal University of Technology, Minna. This is the third Inaugural Lecture to be delivered by Professors from the Department of Soil Science and Land Management; the first and second were delivered by Prof. A. Bala and Prof. A. O. Osunde, respectively. This lecture is intended as a birthday gift to myself to mark my 65 years of existence on planet earth.

Soil is a national development resource like petroleum and solid minerals. It is our nation's primary asset for agriculture and food production. As a Soil Scientist, the big question I have sought to find an answer to is how best to manage our soil resources to supply enough food for the present generation and still pass on the same soil resources to the next generation without loss of productivity. My concern is based on the scientific fact that soil is not only a finite natural resource; it is also non-renewable on human timescale. For instance, if improper methods are used for farming and a single inch or 2.5 cm of soil is lost, it will take 300-1000 years for nature to replace it through soil formation! (Huypers *et al.*, 1994).

Quite often, the emphasis in soil management is on mineral fertilizers and this is erroneous to a large extent. Not only policy makers are guilty of this error but even some Agronomists. Mineral fertilizers might sustain soil productivity in the short term but certainly not in the long term, as research and practical field experience in the tropics have shown. In this lecture, I will expound on two soil management practices which, in my professional opinion, are more fundamental to long-term tropical soil productivity than mineral fertilizers, and which majority of Nigerian farmers must embrace, if the nation's soil

resources are to be exploited in a sustainable manner to supply enough food for our burgeoning population and reposition the agricultural sector as a base for our national development.

2.0 BACKGROUND TO THE INAUGURAL LECTURE TOPIC

Vice Chancellor Sir, my distinguished audience, the choice of the topic for this inaugural lecture was informed by the following analysis and findings:

2.1 Food Insecurity in Nigeria

Two common definitions of food security come from the UN's Food and Agriculture Organization (FAO) and the United States Department of Agriculture (USDA).

- (i) Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (FAO, 2006).
- (ii) Food security for a household means access by all members at all times to enough food for an active, healthy life. Food security includes at a minimum:
 - a) the ready availability of nutritionally adequate and safe foods,
 - b) an assured ability to acquire acceptable foods in socially acceptable ways (that is, without resorting to emergency food supplies, scavenging, stealing, or other coping strategies (Originally from USDA and reported in Mark *et al.*, 2008).

A household is considered food secure when its occupants do not live in hunger or fear of starvation (FAO, 2001). Food security involves not only food availability but also food access through domestic production. It is also the contention of the FAO (2010) that for a country to have sustainable food security, food supplies must keep pace with increase in population and urbanization. As

such, matching food production growth rate with population growth rate is vital to achieving food security.

Nigeria is a country with a huge food deficit and a colossal food import bill. According to a 2006 report quoted by Ojo and Adebayo (2012), 65% of the Nigerian population was suffering from lack of food security. The food insecurity situation of the country was more recently highlighted by the 2015 Global Hunger Index which ranked Nigeria 91st out of a total of 104 countries (14th most hunger-stricken nation) (Metu *et al.*, 2016). Nigeria posts a dismal stunted children rate of 31.5%, the highest in sub-Saharan Africa, with more than 50% of this figure from North East and North West States (Sun, August 1, 2017).

Nigeria's population currently stands at 182 million, including 14 million malnourished children; and food accounts for the highest share of consumer price index, with an average Nigerian spending 73% of his/her income on food and beverages (Sunday Punch, May 28, 2017). With inflation rate as high as 16.5%, food prices have hit the roof top and crime rate has expectedly increased exponentially (Punch, August 3, 2016). As if the food insecurity situation is not bad enough, forecasts suggest that the country's population would be about 203.13 million by the year 2020. In fact, a United Nation's report stated that by the year 2050, Nigeria would be the world's third most populous country behind China and India (Saturday Punch, February 4, 2017). While the growth in the population of Nigeria is at the rate of 3.2%, the growth in food production has been less than one (Metu *et al.*, 2016). Further escalation of food deficits and food insecurity problems is hence imminent.

2.2 Nigeria's soil resources and agricultural sector: decades of neglect and attendant consequences

Among the most damaging impacts of the discovery of oil in

Nigeria and the easy money from the sector are: (i) the long, steady decline of the country's agricultural sector due to inadequate funding, and (ii) the attendant massive importation of food items (Ojo and Adebayo, 2012). Thus, the state of hunger in the country is largely due to the neglect of the agricultural sector. Before Nigeria attained independence, agriculture was the most important sector of the economy, and accounted for more than 50% of GDP and more than 75% of export earnings. Nigeria was able to feed her citizens and there were surplus food items to export. Subsequently however, with the rapid expansion of the petroleum industry, agricultural development was neglected, and the sector started declining. Thus, between mid-1960s and mid-1980s, Nigeria moved from a position of self-sufficiency in basic foodstuffs to one of heavy dependence on food imports (Aregheore, 2009).

To amplify the neglect of the nation's agricultural sector in quantitative terms, analysis of federal budget shows that, over the years, the sector has not received up to 10% allocation which is the minimum requirement according to Maputo Declaration of sufficient food production. The highest the sector has received was about 7% in 2008 budget. Up to 2007, budgetary provision to agriculture was at times as low as 3% (Ojo and Adebayo, 2012; Adeniyi and Adeyemo, 2014). Vaughan *et al.* (2014) revealed that Nigeria imported about N1.0 billion worth of food per day in the period 1990-2011. Food import bill was in multiples of five times (516.65%) of food export and 18.81% of aggregate import. Mean annual food import for the period was 243.33% of 2010 Federal Government agriculture budget and 332.03% of the actual allocation (Tables 1 & 2). Table 3 is list of the top ten food commodities with highest import bills in the period 2006-2010. The first five commodities accounted for over 84% of the total import bills of those ten commodities. Among the ten commodities, the only one that Nigeria lacks comparative

advantage to produce is wheat. Since 2011, food import bill has risen further such that food import now rivals the country's annual budget. For instance, by 2016, Nigeria's annual spending on food import stood at \$22 billion (about N6.9 trillion). In comparison, the country's 2017 budget stands at N7.298 trillion (Saturday Punch, February 4, 2017).

Table 1: Twenty-two year statistics of import and export from 1990 to 2011 (N million)

Variable	Total	Mean
Aggregate import	42,315,824.86	1,923,446.58
Food import	7,961,170.90	361,871.40
Aggregate export	90,226,890.83	4,101,222.31
Food export	1,540,930.74	70,042.31

Source: Vaughan *et al.* (2014)

Table 2: Analysis of twenty-two year statistics of import and export from 1990 to 2011

Description	Value
Food import as a percentage of aggregate import	18.81
Food import as a percentage of food export	516.65
Mean food import as a percentage of 2010 Federal Govt Agric. Budget*	243.33
Mean food import as a percentage of 2010 Federal Govt Agric. Allocation*	332.03
Mean daily food import	About ₦1.0 billion

*2010 Agriculture budget was N148,716 million while allocation was N108,986 million.

Source: Vaughan *et al.* (2014)

