



**FEDERAL UNIVERSITY OF TECHNOLOGY
MINNA**

**STRIVING FOR FOOD SECURITY IN NIGERIA:
THE ROLE OF A VIABLE AND VIBRANT
SEED INDUSTRY.**

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INAUGURAL LECTURE SERIES 16

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1.0 INTRODUCTION

In a keynote address presented at the 44th meeting of the Association of Deans of Agriculture in Nigerian Universities (ADANS) at Minna in 2002, Professor Ango Abdullahi, the then Special Adviser to Chief Olusegun Obasanjo, the former President of the Federal Republic of Nigeria, reminded participants of the role that agriculture plays at all times. He referred to agriculture as “the main anchor of the Nigerian economy, not withstanding the acknowledged role of the petroleum sector”.

NO FARMER, NO FOOD, NO FUTURE!

1.1 What is food security?

One World Guides (2009a) defined food security simply as “access to sufficient and affordable food”. They stated further that food security has become the most intractable challenge for development agencies and that almost one billion people experience the hardship that hunger imposes, a figure which continues to rise even amidst the riches of the 21st century; incidence of hunger exceeds 35% of the population in 15 countries of Africa. Net cereal imports of developing countries are expected to increase from 90 million tons in 1990 to 190 million by 2020 (Pinstrup-Anderson, 1996).

1.2 Are we food secure?

Amaza *et al.* (2008) did a study of food security in some rural households in Borno State and reported that over 58% of the sampled households were food insecure. They further reported that larger households were more food-insecure than smaller ones; they recommended provision of better family planning programme to stem the tide of food-insecurity among large-size households. Recently One World Guides (2009b) reported that Nigeria is substantially dependent on imported staples of rice and wheat and that in 2006 it was the largest customer in the world for US wheat exports. They further reported that the Ministry of Agriculture

estimated that 65% of the population is food insecure and that the real test would come whenever inadequate rainfall or flood impacts the harvest. In the food security update reported for Nigeria by FEWS NET (2009) Katsina, Jigawa, Borno and parts of Yobe States as well as Delta region States such as Delta, Bayelsa and Rivers were indicated to be moderately food-insecure as at November 2008. By February 2010 however, all the states named above in addition to Sokoto, Zamfara, Bauchi and Cross-River States were all classified as being moderately food-insecure (FEWS NET, 2010). FEWS NET (2010) quoted Dutch Agriculture Development and Trading Company, which estimated that Nigeria will import about 2.2 billion kg of rice this year to meet local requirements.

In a special report by FAO (2008), it was indicated that a 20% decline in sorghum production was recorded in 2007 and that predicted losses of maize, rice and groundnut would stand at about 20, 10 and 10% respectively. As a result of poor production, commodity prices were on the increase pushing the item out of the reach of the poor. For maize, price increases in 2008 compared to 2007 was put at about 165%. The report further pointed out that the complication in price hike was brought about by the demands for the popular grains by the poultry, food processing industries in breweries. Production of cereals is said to be on a decline because of inadequate supply of fertilizers and improved seeds as well as the poor timeliness of supply and distribution of agricultural inputs. Definitely, we are not food secure. It is however note worthy that the Chief Servant and Executive Governor of Niger State, Dr Muazu Babangida Aliyu, flagged off the distribution of 30,000 MT of fertilizer in the State, as early as April this year! We should be able to do for seed what we do for fertilizer.

2.0 SEED SECURITY

2.1 What is Seed?

God Almighty in Genesis 1:11 said "Let the earth bring forth grass, the

herb yielding seed, and the fruit tree yielding fruit after it's kind, whose seed is in itself, upon the earth and it was so". This verse, quoted from the Holy Bible, reminds us that God, from the beginning programmed the ability to produce seeds in plants and that a plant would always produce seeds of its kind. Generally speaking, seed could mean any part of a plant that is used in producing the next generation so that food may be available always. This would include both vegetative (stem, root, bulb, tuber, etc) and generative (true seed arising from pollination and fertilization) parts. However, even the generative seed that does not meet required quality standards is only a grain. Grains are produced to be eaten by man, fed to livestock or as raw materials in industries, whereas seeds are carefully produced, handled and stored in ways that would ensure high quality genetically, analytically and physiologically (in terms of germination, high seedling/plant vigour and optimum yield) for high crop productivity. Therefore, following careful production and harvest, seeds must be processed and stored in such a way that the embryo would remain viable and vigorous for a long time. Macleod (2007) pointed out that seeds are a means of transformation/evolution from generation to generation, in addition to the essential nutrition and energy for germination, emergence and plant development. Fatula (1985) stressed that availability of good seeds and other propagating materials represents a serious constraint in crop production in Nigeria and that seed sets a limit of realizable yield. Reasoning along this same line Maredia *et al.* (1999) see seed together with environment as a determining factor of the upper limit of crop yields and the productivity of all other agricultural inputs to the farming system. Seed is the starting point for all crop cultivation and if poor quality seed is used crop productivity is reduced; spread of diseases is also encouraged (CTA, 2010).

2.2 What is Seed Security?

Many definitions of the term "seed security" abound, with one expanding on the other. Karling (1999) defined seed security as "a series of activities developed to ensure access by farming household to adequate quantities

of good quality seeds and plant materials of adapted crop variety at all time-good or bad". He stressed that access implies that the source of these seeds should be within an acceptable distance and at an affordable prices, while at all times refers to the availability of appropriate seed stocked for each and every growing season regardless of good or bad growing condition and/or natural or man-made calamities. FAO (2010) also defined seed security as "ready access by rural, household, particularly farmers and farming communities, to adequate quantities of quality seed and planting materials of crop varieties, adapted to their agro-ecological conditions and socioeconomic needs, at planting time, under normal and abnormal weather conditions". Karling (1999) stated further that seed security for food security can only be achieved in the developing countries if strategies and mechanism are designed to protect the local crop diversity and improve or strengthen the seed supply sector. He concluded that if seed security is achieved, it would be a considerable asset in the fight against food insecurity and hunger throughout the developing world. Joost van der Burg (1998) defined seed security thus: the state in which all farmers in a region or farming system have ready access to sufficient quantities of seed on adequate genetic and physical quality, at the right moment, year after year. He then went ahead to describe the relationship between the three main classes of agriculture and three seed security levels. In low (external)-input agriculture, a farmer is seed secured when he is capable of producing enough crops so he can reserve some seed for next planting season. However, this group hardly produces enough to feed the family and so does not save seed and may depend of seed gift. Farmers in this group are not seed secured. In medium-input agriculture, a farmer has some money to buy some farming inputs including seed, more or less frequently. The farmer is able to produce enough seed for himself, exchange with neighbours and buys seed of local and or improved varieties. In the high external input agricultural system, farmers usually sell all their produce and buy new seed every year or every second or third year. This group of farmers only uses its farm-produced resources if there is seed supply crisis.

organizations and institutions involved in specialized tasks related to producing and marketing seed for sale to seed users.

Farmers in Nigeria source seeds from both the informal and formal sectors. Operations in the informal seed sector are usually unregulated. In this sector, farmers usually source seeds from their own savings, from other farmers, relative /friends and from local markets. About 80% of the seed by farmers in this country are obtained through this system. Furthermore, most of the farmers' varieties are of untraceable origin and are not certified. In the report of a study visit to Zimbabwe published by (CTA 2000), it was stated that the informal sector is normally made up of unregulated and uncontrolled seed operations, that it depends mainly on indigenous cultivars and that it lacks any sophisticated infrastructure. Seed quality may therefore be questionable.

The formal seed system on the other hand, is well organized and produces improved seed. It is composed of both the public and private sectors. In Nigeria, researches in respect of the development and maintenances of cereal and grain legume, crop varieties are conducted by Universities (government and private), National Agricultural Research Institutes, the International Institute of Tropical Agriculture (IITA), the International Crop Research Institute for Semi-Arid Tropics (ICRISAT). The State Agricultural Development Projects (ADPs) procure Foundation Seed from the NASC from which they produce Certified Seed through either direct production or the engagement of contract growers to boost seed production. The National Agricultural Extension Research and Liaison Services (NAERLS), is involved in seed extension technology and information dissemination. Private companies and other establishments are also a very important integral part of the seed industry in Nigeria. They produce and market Certified Seeds of various crops.

According to Olonilua (2009), the first seed law was enacted in Switzerland in 1819, in North America (Connecticut) in 1821 and in Britain in 1870. George (2009) reported that a wide range of schemes providing

verification of sowing and planting materials of vegetables had been operating in some countries since the 1920s and that it was not until 1950s that there were steps towards coordinated efforts between countries. The establishment of an organized seed industry is relatively new in Nigeria. Shobowale (2009) gave an account of the development of seed industry in Nigeria. Organized seed programme did not commence until 1975 when the National Seed Service (NSS) was established to oversee the development of the emerging national seed programme in a bid to ensure that quality seeds are made available to farmers. A national seed policy was formulated in 1992 aimed at strengthening the institutional support to achieve the objective of the Nigerian seed industry. The National Agricultural Seed Act 72 was put in place in 1992 to give legal backing to the policy earlier formulated. The act paved way for the establishment of the National Agricultural Seed Council (NASC) in December, 2007. The NASC is statutorily responsible for the following:

- (i) the development, certification and control of quality;
- (ii) seed technology development, technical support services, seed industry development, coordination of Breeder and Foundation Seeds;
- (iii) Foundation Seed production, distribution and monitoring of Certified Seed;
- (iv) planning and monitoring of the national seed programme;
- (v) the publication of the list of registered, released or notified seed varieties approved for commercialization in Nigeria;
- (vi) assisting the development of private seed industry and
- (vii) receiving and processing of applications for seed import and export.

Considerable improvement has been recorded in the involvement of private companies in seed production activities in this country. Whereas FAO (1999) listed only four private sector seed companies (Premier Seed Nig. Limited, UAC Seed, UT Seed and Tenti Seed) in 1999, the 2008 Annual Report of NASC (NASC, 2008) showed that 12 companies were

