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1.

Nigeria is very blessed with agricultural resources, a large expanse of land estimated at 91 million hectares (1990) of which 81 million hectares are arable. Most parts of the country experience rich soil, well distributed rainfall, not to mention the warm year-round temperatures. And 18 million hectares of land classified as permanent pasture, for livestock production. Agriculture has its place in the history of the nation, this is the reason for the 'green' in the flag, and the progressive roles it has played; serving as the major source of livelihood to over 75% of the population.

PRE-COLONIAL

Long before the dawn of Nigeria's colonization, our ancestors were sustained primarily on farming as the major occupation with the use of crude implements compared to what is obtained today. Yet, they produced enough food crops to feed themselves like most other Africans and also produced cash crops which used for trade by barter system, across the Trans Saharan trade to the end of the Atlantic trade.

COLONIAL

The period of the colonial administration in Nigeria, 1861-1960, was interrupted by impromptu attention to agricultural development. During the era, considerable emphasis was placed on research and extension services. The first notable activity of the era was the establishment of the Department of Botanical Research in 1893 in the former Western Nigeria; saddled with the responsibility of conducting research in Agriculture. In 1905, the British Cotton Growers Association acquired 10.35 square kilometers of land at the site now called Moor Plantation, Ibadan for growing cotton to feed the British Textile Mills. In 1910, Moor Plantation, Ibadan became the headquarters of the Department of Agriculture in Southern Nigeria, and a Department of Agriculture was established in the

North in 1912. In 1921, a unified Department of Agriculture was formed in Nigeria, after the amalgamation of the North and the South. The major policy of the Central Department of Agriculture was to increase production of export crops for the British market which was ready to absorb it for its industrial growth. Extension activities were therefore directed towards increasing efficiency in crop production and marketing. Regulations were made to set and enforce standards in export crop production.

Under the colonial government, livestock which were predominantly nomadic got a fair share of development with interest directed at the health and hygiene of the domesticated cattle. Thus, the Nigerian Veterinary Department was established in 1914 with its headquarters at Zaria. In 1924, a small veterinary laboratory was established for the production of rinderpest serum.

Deliberate efforts at developing the country's fisheries can be said to date back to the Second World War when, because of the naval blockade of the high seas, the then Colonial Administration decided to develop the country's local resources, including fisheries. A fisheries organization was established in 1941 as a Fisheries Development Branch of the Agricultural Department of the Colonial Office and a Senior Agricultural Officer was appointed to conduct a survey of the industry and its possibilities. The headquarters was sited at Apese village and later at Onikan in Lagos, from where, assisted by a part-time voluntary officer, preliminary experiments in fish culture in brackish water ponds at Onikan were carried out and surveys were conducted on the canoe fisheries of Apese village and Kuramo waters around Victoria Island, Lagos.

The colonial period also witnessed the establishment of the Niger Agricultural Project in 1949 with the aims of producing groundnut for export and guinea-corn for local consumption. It was also meant to relieve world food shortage, demonstrate better farming techniques and increase productivity of Nigeria's agriculture. The project was sited near Mokwa (Niger state) at an area which was suitable for mechanized food crop production.

POST-COLONIAL

New policies were formulated in the postindependence era to actualize more equitable growth in agriculture. The earlier surplus extraction policies were quickly translated into the pursuit of an export-led growth. This led to the demarcation of the country into the Western Region (cocoa), Northern Region (groundnut) and Eastern Region (oil palm).

The 1962-1968 development plans was Nigeria's first national plan. Among several objectives, it emphasized the introduction of more modern agricultural methods through farm settlements, co-operative (nucleus) plantations, supply of improved farm implements (e.g. hydraulic hand presses for oil palm processing) and a greatly expanded agricultural extension service.

Some of the specialized development schemes initiated or implemented during this period included:

- Farm Settlement Schemes
- National Accelerated Food Production Programme (NAFPP), launched in 1972.

There were also a number of agricultural development intervention experiments, notably

- Operation Feed the Nation, launched in 1976;
- River Basin and Rural Development Authorities,

established in 1976;

- Green Revolution Programme, inaugurated in 1980
- The World Bank-funded Agricultural Development Projects (ADP).

While each of the above programmes sought to improve food production, the ADPs represented the major practical demonstration of the integrated approach to agricultural development in Nigeria. Owing to the oil boom in the 1970s, Agriculture assumed a downward trend. Available data show that at independence in 1960 the contribution of agriculture to the GDP was about 60%, which is typical for developing agrarian nations. However, this share declined over time to only about 25% between 1975 and 1979. Between 1970 and 1982, agricultural production stagnated at less than one percent annual growth rate, at a time when the population growth was between 2.5 to 3.0 per cent per annum. There was a sharp decline in export crop production, while food production increased only marginally. Thus, domestic food supply had to be augmented through large imports. The food import bill rose from a mere N112.88m annually during 1970 - 1974 to N1, 964.8m in 1991.

The years since the early 1960s have also witnessed the establishment of several agricultural research institutes and their extension research liaison services. Some of the major institutions are:

1. Agricultural Extension and Research Liaison Service (AERLS) at the Ahmadu Bello University, Zaria established in 1963
2. The International Institute of Tropical Agriculture (IITA) established in 1967
3. International Livestock Centre for Africa (ILCA).

In an attempt to address the dwindling resources accrued from Agriculture, successive government implemented programs aimed at increasing food production and reviving Agriculture. These are:

National Accelerated Food Production Programme (NAFPP): was an agricultural extension programme initiated in 1972 by the Federal Department of Agriculture during General Yakubu Gowon's regime. The programme focused on bringing about a significant increase in the production of maize, cassava, rice and wheat in the Northern states through subsistent production within a short period of time. The programme was designed to spread to other states in the country after the pilot stage that was established in Anambra, Imo, Ondo, Oyo, Ogun, Benue, Plateau and Kano states.

Operation Feed the Nation (OFN): This programme evolved on 21st May 1976 under the military regime of General Olusegun Obasanjo. The programme was launched in order to bring about increased food production in the entire nation through the active involvement and participation of everybody in every discipline thereby making every person capable of partly or wholly feeding him or herself. Under this programme every available piece of land in urban, sub-urban and rural areas was meant to be planted while government provided inputs and subsidies (like agrochemicals, fertilizers, improved variety of seed/seedlings, day old chicks, machetes, sickles, hoes etc.) freely to government establishments. Individuals received these inputs at a subsidized rate.

The River Basin Development Authority (RBDA): River Basin Development Decree was promulgated in 1976 to establish eleven River Basin Development Authorities (RBDAs) (Decree

25 of 1976) [8]. The initial aim of the authorities was to boost economic potentials of the existing water bodies particularly irrigation and fishery with hydroelectric power generation and domestic water supply as secondary objectives. The objective of the programme was later extended to other areas most importantly to production and rural infrastructural development.

The Green Revolution: Green Revolution was a programme inaugurated by Shehu Shagari in April 1980. The programme was aimed at increasing production of food and raw materials in order to ensure food security and self-sufficiency in basic staples. Secondly, it aspired to boost production of livestock and fish in order to meet home and export needs and to expand and diversify the nation's foreign exchange earnings through production and processing of export crops. The federal government provided agrochemicals, improved seeds/seedlings, irrigation system, machine (mechanization), credit facilities, improved marketing and favorable pricing policy for the agricultural products.

The Nigerian Agricultural Land Development Authority (NALDA): This was established in

1992. The authority aims at giving strategic public support for land development, assisting and promoting better uses of Nigeria's rural land and their resources, boosting profitable employment opportunities for rural dwellers, raising the level/ standard of living of rural people, targeting and assisting in achieving food security through self-reliance and sufficiency.

National Fadama Development Project (NFDP): The first National Fadama Development Project (NFDP-1) was designed in the early 1990s to promote simple low-cost improved irrigation technology under World Bank financing. The main objective was to sustainably increase the incomes of the Fadama users through expansion of farm and non-farm activities with high value-added output[9].The programme covered twelve states of Adamawa, Bauchi, Gombe, Imo, Kaduna, Kebbi, Lagos, Niger, Ogun Oyo, Taraba including the Federal Capital Territory (FCT). The program adopted community driven development approach with extensive participation of the stakeholders at early stage of the project. This approach is in line with the policies and development strategies for Nigeria which emphasize poverty reduction, private sector leadership and beneficiary participation. Overall appraisal of the first and second phases of the project; show remarkable success, hence the invention of the current third phase.

National, Special Programme on Food Security (NSPFS): This Programme was launched in January 2002 in all the thirty six states of the federation during the Olusegun Obasanjo's regime. The broad objective of the programme was to increase food production and eliminate rural poverty. Other specific objectives of the programme were: assisting farmers in increasing their output, productivity and income; strengthening the effectiveness of research and extension service training and educating farmers on farm management for effective utilization of resources; supporting governments efforts in the promotion of simple technologies for self-sufficiency; consolidating initial efforts of the programme on pilot areas for maximum output and ease of replication; consolidating gain from on-going for continuity of the programme and consequent termination of external assisted programmes and projects.

In the present day, a lot has happened as well. In 2011, the government of Nigeria, launched the Agricultural Transformation Agenda, with the aim of changing the perception about agriculture as a development issue instead of pure business. The vision in the transformation strategy is to achieve a hunger-free Nigeria through an agricultural sector that drives income growth, accelerates achievement of food and nutritional security, generates employment and transforms Nigeria into a leading player in global food markets to grow wealth for millions of farmers. In order to achieve this vision, the value chain approach has been in use. Fertilizer procurement and distribution, marketing institutions, financial value chains and agricultural investment framework are poised for a change using this approach.

Unluckily, the issues and challenges have not changed much since the dawn of agriculture in Nigeria. Majority of farmers (more than 65%) still use the crude method of farming; Storage ideas and facilities have not improved much and thus losses incurred from postharvest handling are still very high; Infrastructure development has not progressed to meet the current challenges, resulting in stagnation of processes and logistical nightmare; Access to markets has remained a recurring headache making the idea of Farming very unattractive to most people.

Beyond all of this the fact remains that, Nigeria’s Agriculture Sector has enormous potential, with an opportunity to grow output by 160% from USD 99 billion at present to USD 256 billion by 2030[10] (depending on who you ask).

Opportunities highlighted at SENCE Agric’s Agriculture Fair of March 2012 showed that Nigeria faces a large and growing global agricultural market. The rising commodity prices, growing demand for food and opportunities in biofuel as safe sources of alternative fuel all present significant opportunities for Nigeria. In summary Agriculture has had a long history in Nigeria albeit a not so successful one but the future is great, and the right people need to be involved to move it away from rhetoric to a life giving, money making venture for the good of man and country.

2.

Agriculture apart from its contribution to employment creation, poverty and hunger reduction as well as reduction in rural-urban drift was also a source of major foreign exchange earnings of Nigeria and a major contributor to economic development in the early colonial days up to the time it achieved political independence through to 1970. It was as a result of enormous contribution of agriculture to the economy according to Olufolabi (2009) that by the 70s and 80s, different research institutes and departments of agriculture had emerged. Presently Nigeria has the largest and most elaborate National Agricultural research systems in sub-Saharan Africa.

CHALLENGES AND PROSPECTS OF NIGERIAN AGRICULTURE IN THE EMERGING ECONOMY

There is **low public spending on "agricultural research** as a proportion of agricultural Gross Domestic Product (GDP) in Africa declined over the years (ECA-OECD Review 2005). Take for instance, "Nigeria invest 2% of her national budget into agriculture annually…" this is comparable to small country like Burkina Faso which invest 10 % and most Asian nations invest 16% of their national budget into agricultural sector, we shall discover that Nigeria Government is doing little or nothing to make Nigeria a potential agricultural nation. **Mismanagement** is also a major challenge of agriculture in Nigeria. All aspect of the Nigerian economy is faced with mismanagement of resources by those who allocate resources. This challenge extends to the agricultural sub-sector of the economy. It is as a result that all the numerous research institutes across the country are yet come out with a viable formula for agricultural improvement as expected. Another close link factor to that of mismanagement is **corruption.** This singular factor is gulping almost all money allocated to the agricultural sector and that is why our agriculture is suffering the setback we are currently facing. According to Olufolabi (2009).

Biotechnology has provided unparallel prospects for improving the quality and productivity of crops, livestock, fisheries and forestry. Genetic Modification (GM) technologies have emerged more recently" the challenge that African countries including Nigeria is facing with using the biotechnology to improve agriculture through this method is that bio-safety is a highly technical field requiring high initial investment for building the necessary human resource capacity and institutional infrastructure such as laboratories and green houses for risk assessment or testing and identification of genetically modified organism" bio-safety issues according to PAPA(2008) transcend national boundaries thereby cripples transboundary movement of Genetic Modification Organism (GMOs) across borders is "going to be formidable challenge which may require policy interventions and coordination". In a related development, it has been argued that "there is a general consensus that both transgenic and conventional breeding will be needed to boast crop and livestock productivity during the next 50 years (Science, March 2008). The problem with this is that there is low public investment in biotechnology and slow progress in regulating possible environment and food safety risks in restraining the development of GMO that could help the poor. The new Partnership for African

Development (NEPAD) 2001 in its agenda is “driven by the Comprehensive Africa Agricultural Development Program (CAADP) which expected annual grow trade is target at 6.5%. Also, at least 10% of the national budget of countries based on the Maputo Declaration of February 2003 should be allocated to agriculture. Nigeria is yet to attain this criterion in this agricultural target.

There is also low **agricultural mechanization** in Nigeria. Agriculture in Nigeria is still left in the hands of farmers who employ crude method of farm implements such as the use of hoes, cutlasses etc. for cultivation, tilling and general farming. This development to some extent assist to encourage food insecurity in Nigeria. In a related development, there is no **improved seeds and seedlings** available to farmer. Even when the improved seedlings are made available to farmers, majority of the farmers because of ignorance reject the use of such improved seedling sometimes on flimsy excuses. **High level of illiteracy** of Nigerian farmers is also causing food insecurity in Nigeria. Majority of Nigeria farmers are illiterate or barely literate because the literate and highly literate elites consider being a farmer as a dirty job. Therefore, it is the illiterate farmers that are responsible for accepting most of the new techniques and improved new seedlings etc. **The discovery of crude oil** across states of the Niger Delta Region in the late 1950s made the government at all levels to abandon the agricultural sub-sector of the economy. This neglect as the result of the oil discovery is contributing immensely to the low attitude towards agriculture thereby pointing to the impending food insecurity in Nigeria. Initially, the government was **subsidizing organic Fertilizer** to help boost agriculture in Nigeria. During this period, most farmers get access to fertilizers at affordable prices. Today, most government at various levels placed low premium to subsidizing of organic fertilizer thereby making the commodity to be too expensive for the poor farmers to afford. Also, government had separated herself from distributing fertilizers to farmers as it used to be in the past instead the procurement is left in the hands of fake or relatives of those in power who are tagged as contractors of the government. These people divert the products to unknown destinations while the chief executives will be in the government house organizing press conference to tell the world the number of millions of metric tonnes of fertilizer distributed to farmers for that farming season. Though, in 1978, the then Head of State and Commander-in-Chief of the Armed Forces of the Federal Republic of Nigeria, General Olusegun Aremu Obasanjo promulgated the Land Use Decree which transferred all Nigeria land to the Government, **Land tenure system** is still the major challenge of agricultural revolution in Nigeria. In case of large-scale agriculture, people vehemently oppose releasing their inheritance (land) for such purposes.

Lack of credit facilities from either the government or financial institutions. The agriculturalists are faced with severe challenges in securing better loan for their agricultural production. Most of the credit facilities available are mostly from the Federal Government through the agricultural banks which subject farmers to rigorous conditionalities and the farmers who are majorly illiterate could not afford to undergo the rigour in the name of collecting loans. Also, the agricultural banks are not helping matters as they give agricultural loans to civil and public servants who are not farmers thereby making the essence of granting the loan useless. **The use of obsolete and archaic** harvesting instruments is also a source of set-back to farmers in Nigeria. Because of the neglect of agriculture by the government coupled with poor credit facilities available to the farmers in Nigeria farmers still depends on the old and crude method of using manual harvesting implements through the employment of manpower. These crude implements not only frustrate farmers but create unnecessary expenses and slow down the harvesting processes due to manual application. **Pest and rodents' activities** against crop production constitute another challenge to viability of the agriculture in Nigeria. Nigeria farmers are undertaking agricultural profession under the mercy of the pests and rodents that eats up and consume as much crops as they desire.

Vagaries of weather condition determine to a large extent the yielding of agricultural crops in Nigeria. Farmers in Nigeria depends majorly on the natural God-given weather conditions. The consequent of this is that farmers not only wait until rainy season before planting crops but also completely depends on the sufficiency of the rain to take the crops to yielding stage. Sometimes the farmers may experience low yields possibly because the rain is too much or because it is too small depending on the type of crop that a particular farmer may plant. Closely linked to the above factor with respect to challenges of agriculture in Nigeria is the inability of the government to **build facilities for irrigation farming** across the country for both dry season farming particularly. The end product of this neglect is that in Nigeria immediately dry season sets in, new crops seizes in the market or become scarce and costly. This situation is indeed a great and challenge to food sufficiency in Nigeria. Private partnership in agriculture is not a common practice in Nigeria because private capitalists have not made agriculture as a priority area yet coupled with the fact that agriculture doesn't bring quick return on investment and more also that when you invest on agriculture the payback period is highly unpredictable due to many of the factors enumerated above.

Weeds and weeds control is one of the threats to farmers in Nigeria. The farmers spend substantial part of their insufficient income on controlling of weeds in their farm through the hiring of manual labourers. The farmers do not have access to chemicals like herbicides which would have been less expensive in controlling weeds. Even when the chemicals are introduced for them, they reject it on the ground that it could as well kill their crops alongside with the weeds. The resistance attitude towards the use of chemical may not be unconnected to illiteracy and lack of proper education on the usage of the chemical accordingly.

However, in 2019, the Federal Government continued with its renewed focus on the agricultural sector in an attempt to diversify the economy away from oil. The sector which was neglected since 2016 became an option for diversification owing to its vast potentials to drive a more sustainable economic growth in Africa's most populous nation in terms of job creation and revenue diversification. To accelerate this growth, the government in the last five years had devoted a lot of energy at deepening agriculture with initiative like the Anchor Borrowers Programme

(ABP), ban on the importation of some agro commodities and the shutting down of its land borders without addressing fundamental issues of mechanisation, irrigation, seeds, extension service, insurance, research and development, among others. As a result, yields have continued to remain low and progress made initially is now on a downward trajectory as the sector's growth rate has been slowed.

Data from NBS (National bureau of statistics) shows that the sector grew by 3.17 percent, in the first quarter of the year, it also grew at a slower rate of 1.79 percent in second quarter and picked up marginally to 2.28 percent in the third quarter of 2019. Similarly, during the year, agricultural export for the period experienced strong growth from January to September 2019. They noted that the country can only drive growth in the sector when agricultural products become highly competitive. Experts noted that the country must increase its mechanisation scale to meet the ever-increasing demand for food before the country can talk about earning foreign exchange through the sector. Also, they added that the government must provide the needed infrastructures such as power and motorable roads to drive down production cost, effective and efficient rail transportation linking where the food is produced in the north and markets in the south as well as irrigation facilities to aid all-year farming. With all this in place, they stated that the country's agricultural products will be competitive as a result, importation will be discouraged. Border closure: In an attempt to tackle issues of smuggling that has deterred growth in some subsectors under the agricultural sector, the Federal Government had since August 2019 shutdown the Nigerian borders. The policy has spur demand in crop and livestock products across the country and created investment opportunities for potential investors across the various value chains in the agricultural sector. Also, it made farmers and millers ramp up production especially for rice and poultry production to meet the ever-growing demand for food in the country. The Poultry Association of Nigeria (PAN) estimated local poultry production to have increased to 7,000metric tons since the policy took off. This shows that there is a vast potential in the sector which the government must harness with sustainable policies. The budgetary allocation for the agriculture sector over the last few years shows that the allocation to agriculture, as a percentage of the overall annual budget to all sectors increased from 1.25 percent in 2016 to 1.82 percent in 2017 and 2.23 percent in 2018.

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