Agricultural Policy and Budget Analysis in Nigeria (1999-2007): Perspectives and Implications for SLISSFAN Project States[1]

Report Submitted to

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Abbreviations and Acronyms

ACGS	Agricultural Credit Guarantee Scheme
ACP	African-Caribbean Pacific Group of States
ADP	Agricultural Development Programme
ADS	Agricultural Development Strategy
AfDB	African Development Bank
AGOA	Africa Growth Opportunity Act
AIAE	African Institute for Applied Economics
APMEU	Agricultural Project Monitoring and Evaluation Unit
ARD	Associates in Rural Development
ARMTI	Agriculture and Rural Management Training Institute
BENSEEDS	Benue State Economic Empowerment and Development Strategy
BLP	Better Life Programme
CBN	Central Bank of Nigeria
CPPs	Crop Protection Chemicals
CRF	Consolidated Revenue Fund
CSOs	Civil Society Organizations
DFID	British Department for International Development
DFRRI	Directorate for Foods, Roads and Rural Infrastructure
EEG	Export Expansion Grant
EU	European Union
FACU	Federal Agricultural Coordinating Unit
FAO	Food and Agriculture Organization of the United Nations
FAOSTAT	FAO Statistics
FCT	Federal Capital Territory
FDA	Federal Department of Agriculture
FGN	Federal Government of Nigeria
FMARD	Federal Ministry of Agriculture and Rural Development
FMSP	Fertilizer Market Stabilization Programme
FPDD	Fertilizer Procurement and Distribution Department
FRA	Forest Resources Assessment
FSP	Family Support Programme
GDP	Gross Domestic Product
GHI	Global Hunger Index
GIS	Geographic Information Systems
Ha	Hectare
IAR	Institute of Agricultural Research
IARCs	International Agricultural Research Centres
IART	Institute of Agricultural Research and Training
ICRISAT	International Crops Research Institute for Semi-Arid Tropics
IFPRI	International Food Policy Research Institute
IITA	International Institute for Tropical Agriculture

INEC	Independent National Electoral Commission
LGAs	Local Government Areas
MDAs	Ministries, Departments and Agencies
MDGs	Millennium Development Goal
MFO	Major Final Outputs
Mt	Metric Tons
NACRDB	Nigerian Agricultural, Cooperative and Rural Development Bank
NADF	National Agricultural Development Fund
NAPEP	National Poverty Eradication Programme
NARIs	National Agricultural Research Institutes
NASD	National Agricultural Seed Decree
NASEEDS	Nasarawa State Economic Empowerment and Development Strategy
NBS	National Bureau of Statistics
NDPs	National Development Plans
NEEDS	National Economic Empowerment and Development Strategy
NEI	Nucleus Estate Initiative
NFDC	National Fertilizer Development Centre
NGOs	Non Governmental Organizations
NEPAD	New Partnership for African Development
NFRA	National Food Reserve Agency
NFTC	National Fertilizer Technical Committee
NPC	National Planning Commission
NPIRD	National Policy on Integrated Rural Development
NRDSS	Nigeria's Rural Development Sector Strategy
NSPFS	National Special Food Security Programme
NSS	National Seed Service
PCU	Project Coordinating Unit
PEFA	Public Expenditure and Financial Accountability
PLASEEDS	Plateau State Economic Empowerment and Development Strategy
PRSP	Poverty Reduction Strategy Paper
SAP	Structural Adjustment Programme
SERI	Socio-Economic Rights Initiative
SG 2000	Sasakawa Global 2000
SGR	Strategic Grain Reserve
SLISSFAN	Strengthening Livelihoods of Small Scale Farmers in Nigeria
SMEs	Small and Medium Enterprises
SPFS	Special Programme on Food Security
USAID	United States Agency for International Development
WARDA	West Africa Rice Development Authority
WTO	World Trade Organization

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Executive Summary

Despite Nigeria's potential competitive advantage – favourable agro-ecological and natural conditions – in several agricultural commodities (including roots and tubers, cereals and legumes, tree crops and livestock), past and present agricultural policies and programmes have not been able to adequately and significantly address the constraints faced by small-scale farmers. Small-scale farmers in Nigeria and SLISSFAN Project States are still confronted with, among other problems, poor access to modern inputs and credits, poor agricultural infrastructure, inadequate access to markets, and land and environmental degradation.

Therefore, improved pro-poor agricultural governance in Nigeria (and in SLISSFAN Project States in particular) is pertinent for sustaining economic growth and development in these areas. This is especially true given the contribution to the economy by the agricultural sector, and the role and significance of small scale, poor and illiterate farmers in Nigeria and SLISSFAN Project States. It is expected that improved pro-poor agricultural governance in Nigeria and SLISSFAN Project States will translate into reduction of rural poverty and improved livelihoods for small-scale farmers. In order to achieve these goals, this study recommends the following:

- The design of a new comprehensive win-win and sustainable agricultural policy at both national and sub-national levels.
- The need for an effective agricultural development strategy (ADS) for identifying the key issues and opportunities facing the agriculture sector and for developing operationally sound programmes to promote pro-poor growth.
- Nigeria and SLISSFAN Project States need a framework for financing agriculture.
- It is desirable to institute an annual or biannual incentive-loaded competition aimed at identifying indigenous technological solutions to the numerous challenges facing the nation's agriculture.
- All levels of governance in Nigeria and SLISSFAN Project States should increase the fiscal space for agriculture by allocating at least 30% of aggregate capital expenditure to agriculture capital expenditure.
- Nigeria and the SLISSFAN Project States should immediately engage the private sector and other stakeholders to brainstorm and negotiate on concrete ways of igniting and energizing the agricultural sector.
- Agricultural efforts by Nigeria and SLISSFAN Project States should be geared towards strengthening capacity for formulating and costing policy, using results-oriented budgeting, managing how budgets are implemented, monitoring and reporting, and developing mechanisms for stakeholder participation.
- At every level of government in Nigeria and SLISSFAN Project States, there is a need to commit more effort to organizing, recording, and reporting public spending information in a way that makes transparent the functional allocation of public resources.
- There is the need, moreover, to improve internal systems for tracking, recording, and disseminating information about public spending in agriculture and other sectors in Nigeria and SLISSFAN Project States.
- With its federal system of governance, there is need for the clarification of the roles of the three tiers of government in public agricultural services and investments in Nigeria and SLISSFAN Project States.

- In Nigeria and SLISSFAN Project States, we need to shift expenditures to market-related major final outputs (MFO).
- Lastly, but not the least, the civil society organizations (CSOs) at both national and sub-national levels have a great role to play in pushing for smallholder-friendly agricultural reform.

1.0 INTRODUCTION

1.1 Nigeria's geographical location, characteristics and climate

Nigeria, with a total geographical area of 923,768 square kilometers, is located between latitudes 4°N and 14°N and longitudes 2°2' and 14°30' East. The nation is bordered in the north by the Republics of Niger and Chad, in the south by Atlantic Ocean, in the east and west by Republics of Cameroon and Benin respectively.

The spatial extent of the country bestows on her various climatic regimes and physiographical units representing a wide variety of ecological zones. Nigeria is divided into seven agro-ecological zones. These are semi-arid, found only in the northern region; the savannah, found in the northern and middle region; a small highland area found in the middle and southern region; a larger transition environment of savannah derived from the forest overlapping the southern and middle regions; mangroves in the Niger Delta; freshwater swamps in the Niger Delta and Lowland rain forest in the south. These agro-ecological zones manifest correspondingly varied environmental characteristics such as length of growing period, which for instance is 151-180 days for the northern Guinea Savanna, 181-210 days for the southern Guinea savanna and 211-270 days for the derived Savanna/coastal Savanna (Jagtap, 1995).

The agro-ecological setting and technology base, in principle, determine the production systems. Two major production systems dominate these zones: (a) the traditional production system, which is found in all parts of the country and consists of land holdings of less than 2 hectare with a variety of food crops intended mainly for consumption purposes; and (b) the improved irrigation production system which comprises the improved small scale irrigation using low-lying or water logged areas for crop and livestock production as well as large-scale mechanized and/or commercial irrigation farming systems (AfDB, 2005).

The annual rainfall in these zones varies from as low as 250 mm in the extreme northeastern part to 750 mm in the southern part (FGN, 1999); in years of good and copious rainfall, average rainfall ranges between 500-1800 mm. Rainfall is largely erratic in the northern region, while the humid areas with torrential rainfalls are found in the southern part. Annual rainfall decreases northwards; 2,000 mm in the coastal zones of the Niger Delta to 500-700 mm in the North (Library of Congress, 2006). The sub-humid areas with moderate rainfalls and derived vegetation are found in the middle-belt.

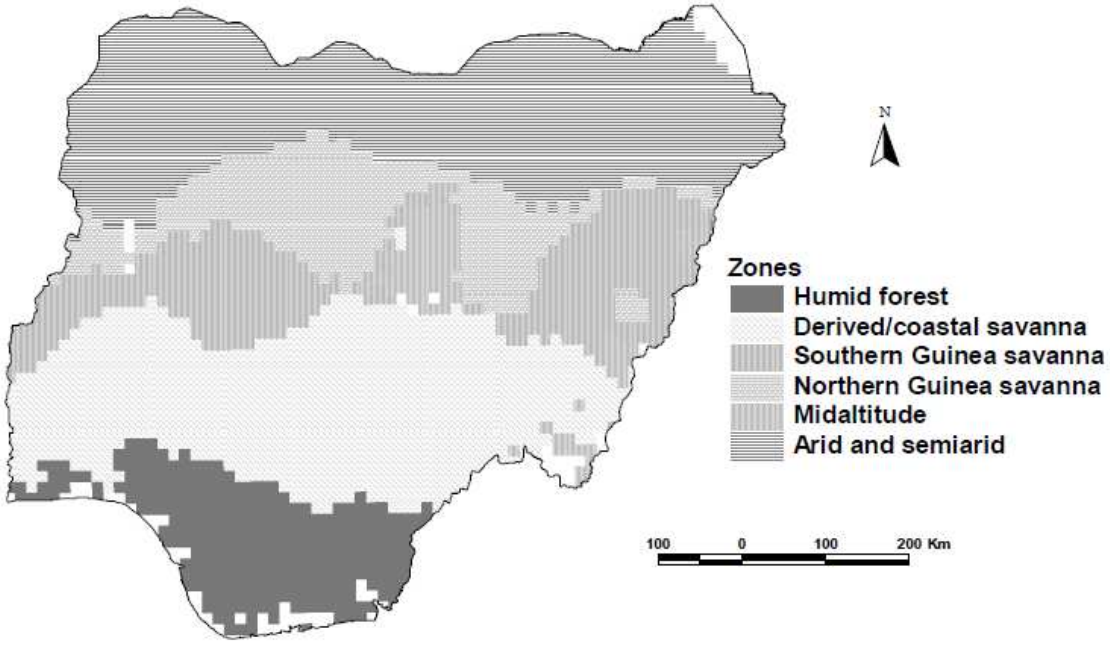
Moreover, geology as well the soil type also varies markedly across these zones (FGN, 1999). As seen in Table 1 and Fig. 1 below, the major soils found in the various agro-ecological zones are coarse-textured, and low in organic matter content and chemical fertility (Salako, 2003). Although, yields can be improved by addition of inorganic and organic fertilizer, this can only be sustained and assured with high soil physical qualities, which can be at a high level with conservation tillage and soil conservation measures.

Table 1: some characteristics of agro-ecological zones in Nigeria

Agro-ecological Zone	*Major Soils (FAO Classification)*
Humid forest	Ferralsols, Nitosols and Gleysols
Derived/Coastal Savanna (Moist Savanna)	Ferrasols, Luvisols, Nitosols, Arenosols, Acrisols, Lithosols
Southern Guinea Savanna (Moist Savanna)	Luvisols, Acrisols, Ferralsols and Lithosols
Northern Guinea Savanna (Moist Savanna)	Luvisols
Mild-altitude Savanna	Ferralsols, Nitosols

Source: Crop Modeling Unit, IITA, Ibadan, Nigeria.

Figure 1: Agro-ecological Zones of Nigeria



Source: IITA GIS Unit, Ibadan, Nigeria

Climatically, Nigeria is equatorial in the south, tropical in the centre and arid in the north. Mean maximum temperature ranges from 30-32^{o}C in the South and 33-35^{o}C in the North (Library of Congress, 2006). Nigeria's terrain is varied with rugged hills, undulating slopes, gullies, water-logged areas, and flat and undulating land surfaces. Specifically, it is characterized by southern lowlands merging into central hills and plateaus; mountains in the Southeast, and plains in the North.

1.2 Nigeria's agricultural resources and potentials

Nigeria has a highly diversified agro-ecological condition which makes it possible for the production of a wide range of agricultural products. Nigeria has a total land area of about 91.07 million hectares, 77% of which is cultivable (agricultural) area and 13% under forests and woodland (Eboh et al., 2004). Of Nigeria's estimated 74 million (FAOSTAT, 2009) hectares of agricultural land as at 2005, about 39.2 million are under permanent pasture with another 3 million under permanent crops, with about 32 million hectares for arable crops. Cropping intensity is high with respect to arable land. Forestry constitutes about 11 million hectares as at 2005 according the global tables of the Forest Resources Assessment (FRA 2005).

In terms of employment, at least 60% of Nigeria's population of 140 million (as at 2006) is estimated to be engaged or employed in agriculture (mainly smallholders). Women make up to 60-80 percent of agricultural workforce or labour and produce about two-thirds of food crops.

Crop production, livestock (animal husbandry), fisheries and forestry (agro-forestry) are the four broad systems of land use. Crop production can be broadly classified into three types of farming – rotational fallow, semi-permanent or permanent cultivation (rain-fed and irrigated systems) and mixed farming. Livestock production is predominantly the pastoral type with estimated 16 million cattle, 13.5 million

sheep, 26 million goats, 2.2 million pigs and 150 million poultry (ARD, 2002). Fisheries resources include a variety of fin and shell species distributed in 11.6 million hectares of inland fresh water and the brackish water of creeks and lagoons.

Variations in agricultural land use, production potentials and farming systems can occur not just in different broad ecological zones, but within same ecological environment as well. The agricultural production potentials of Nigeria can be categorized as follows (Table 2 below).

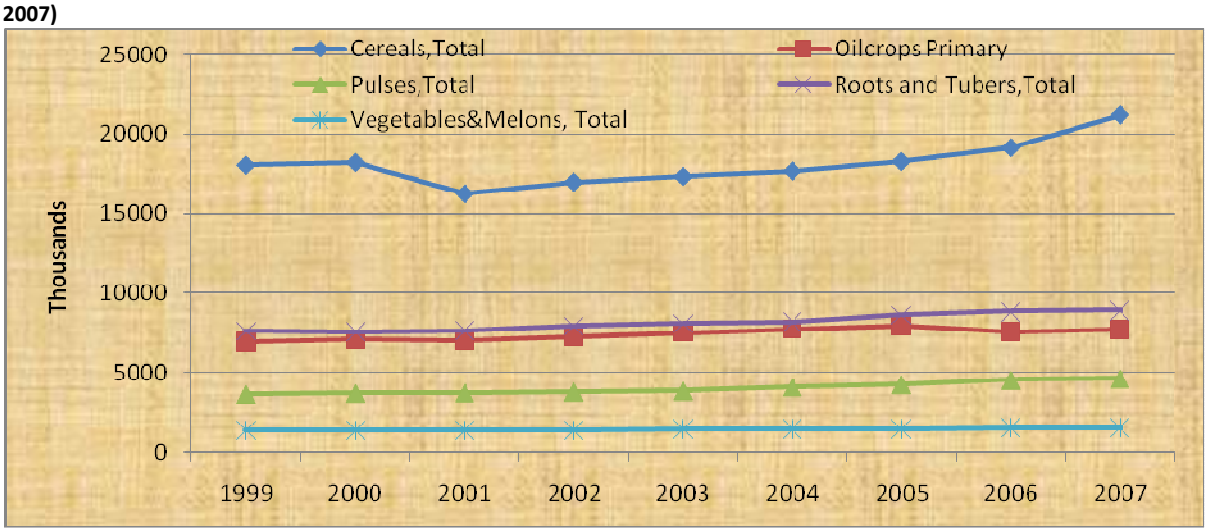
Table 2: Some dominant crops and livestock in Nigeria

Agricultural category	***Dominant crops/commodities***
Root and tuber crops	Yam, cassava, cocoyam, potatoes
Cereals and pulses	Guinea corn (sorghum), millet, maize, rice, cowpea
Tree crops	Cocoa, kolanut, rubber, oil palm
Oil seeds	Groundnut, beniseed, soyabeans
Industrial crops	Cotton, tobacco, sugarcane, kenaf
Livestock	Poultry, sheep, goats, cattle pigs

Source: Eboh *et al.* 2004.

The relative importance, in terms of area under cultivation, of these crop categories can be seen in Fig. 2 below. The land area under cereals has constantly remained well above other crop categories and has been increasing steadily since 2001. Following the cereal group, in terms of crop area significance, are roots and tubers, oilcrops, pulses, and vegetables.

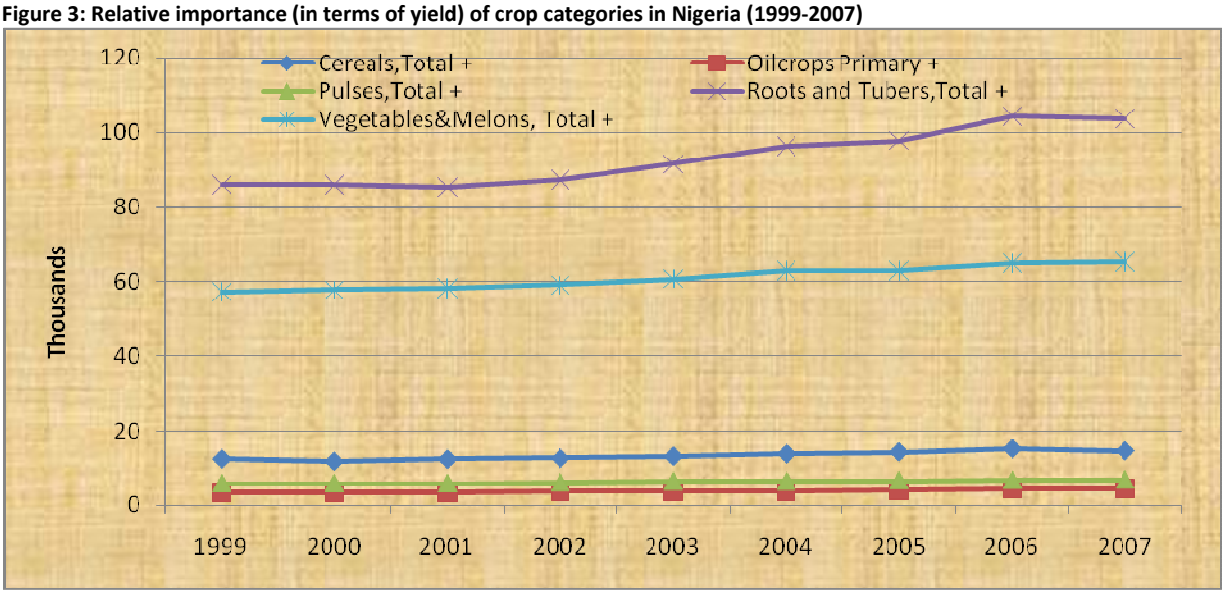
Figure 2: Relative importance (in terms of area under cultivation) of crop categories in Nigeria (1999-2007)



Source: authors with data from FAOSTAT (2009)

It is, however, instructive to see that while cereal area has increased steadily since 2001, cereal yield has remained largely stagnant between 1999-2007 (see Fig. 3 below). On the other hand, although land area under roots and tubers has increased moderately, yield increases of roots and tubers have been steadily fair. Vegetable yield has also increased fairly despite stagnation in land area under cultivation.

Figure 3: Relative importance (in terms of yield) of crop categories in Nigeria (1999-2007)



Source: authors with data from FAOSTAT (2009)

In 1987, the Federal Government of Nigeria divided the country into five farming systems research and extension zones – North, West, Northeast, Central, Southwest and Southeast (Shaib et al., 1997), each with designated agricultural research institutes for the coordination of research and extension linkages. The peculiar features of these zones are given in table 3 below.

Table 3: Regional distribution (according to farming systems research and extension zones) of agricultural resources and potentials

Zone	***Key features of agricultural resource base and production***
Northwest (comprising 6 states)	500-1200 mm of rainfall; largest potential for irrigation; important crops include sorghum, maize, rice, groundnut, cotton, vegetables, onions, tomatoes; major supplier of maize, tomato, onion and groundnut to other parts of the country; leading in cattle, sheep, and goats production; high potential for artisanal fish production and fadama agriculture; and high risks of desert encroachment.
Northeast (comprising 6 states)	250-1200 mm of rainfall; main food crops are sorghum, millet, cowpea and groundnut; animal traction more prevalent; nomadic pastoralists (cattle, sheep and goats) and fresh water fishing are important economic activities.
Central (comprising 7 states and FCT)	Cultivated share of arable land is mere 25%; produces 34% of the yam and 98% of the Irish potatoes in the country; produces sorghum, maize, rice, grain legumes, oil seeds, cashew nuts, mangoes, citrus, sugar cane and fibre; livestock resources include cattle, goats, sheep, pigs and poultry; high potential for wildlife, forestry and fisheries development.
Southwest (comprising 8 states)	Yam and cassava based arable systems; other crops include maize, rice, legumes and vegetables; produces the bulk of cocoa, rubber and kolanut; largest producer of timber; livestock resources include goats, sheep, poultry and pigs, artisanal fish production; fast expanding integrated commercial poultry and fish production.
Southeast (comprising 9 states)	Highest population density and highest incidence of small farm holdings; severity of erosion problems; yam and cassava are dominant crops; livestock is mainly small ruminant; pollution from petroleum exploration and production.

Source: Eboh et al., 2004.

More specifically, the regional distribution of crops in Nigeria is shown in Table 4 below. The North Central geopolitical zone leads other zones in terms of area of land under cultivation vis-à-vis national crop area for rice (37%), yam (33%) and cassava (24%). However, the North East zone has the highest percentage of land area under maize production (25%) and sorghum production (35%).

Table 4: Regional distribution of some selected crops in Nigeria (percent of total crop area in 2007)

Zone	*States*	*Rice Area*	*Maize Area*	*Sorghum Area*	*Yam Area*	*Cassava Area*
North Central	Benue, Kogi, Kwara, Nassarawa, Niger, Plateau, FCT	37	22	20	33	24
North East	Adamawa, Bauchi, Borno, Gombe, Taraba, Yobe	25	25	35	7	8
North West	Jigawa, Kaduna, Kano, Katsina, Kebbi, Sokoto, Zamfara)	20	20	44	4	8
South East	(Abia, Anambra, Enugu, Imo, Ebonyi	8	6	0	20	20
South South	Akwa-Ibom, Bayelsa, Cross-River, Delta, Edo, Rivers	4	8	0	21	23
South West	Ekiti, Lagos, Ondo, Osun, Oyo, Ogun	6	19	2	15	16
National	-	100	100	100	100	100

Source: authors with data from National Food Reserve Agency (NFRA)

1.3 Trends in agricultural production, area and yield

This section reviews crop production and productivity performance across the states of Nigeria using data from the National Food Reserve Agency (NFRA). The following crops – Cassava, Maize, Sorghum, Rice, and yam – were chosen for review given their food security value.

1.3.1 Cassava

In the last nine years (1999-2007), Benue State is the only state in Nigeria has reached, in terms of cassava production, more than 3 million metric tons (see Fig. 4 below). Benue state (the "green" state in this case) produced on the average (1999-2007) 3.57 million metric tons of cassava. The "blue" states including Kogi, Enugu, Imo and Cross River produced, on the average, from 1999-2007, 2.1-3.0 metric tons of cassava, while 1-2 million metric tons of cassava was produced by "yellow" states including Kaduna, Oyo, Ogun, Ondo, Delta, Rivers, Akwa-Ibom and Taraba. The "white" states, on the other hand, represent areas where cassava production is below 1 million metric tons, on the average, in the last nine years.

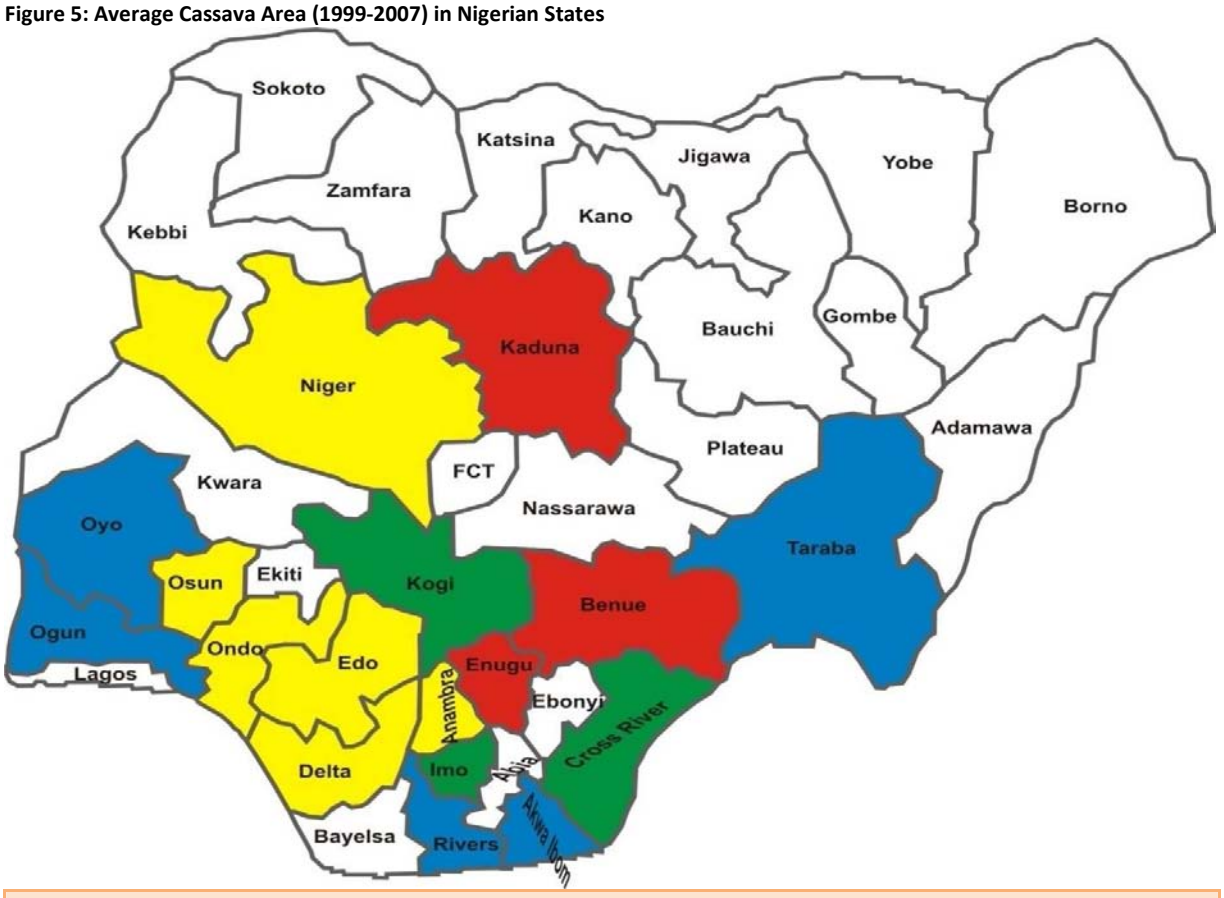
Figure 4: Average Cassava Production (1999-2007) in Nigerian States[2]

Key	
white	< 1 million metric tons
yellow	1-2 million metric tons
Blue	>2 million-3 million metric tons
Green	>3 million metric tons

[2] Data for these maps were obtained from the National Food Reserve Agency (NFRA), formerly Projects Coordinating Unit, Federal Ministry of Agriculture and Water Resources.

In terms of area under cassava cultivation, the "red" states including Benue, Kaduna and Enugu have put over 200 thousand hectares of land, on the average, to cassava cultivation (see Fig. 5 below). Benue State leads others with 268 thousand hectares on the average from 1999-2007. The "green" states including Kogi and Cross River States have between 151-200 thousand hectares of land under cassava cultivation, while Oyo, Ogun, Rivers, Akwa-Ibom and Taraba ("blue" states) have between 101-150 thousand hectares of land under cassava cultivation. With between 50-100 thousand hectares of land under cassava cultivation are Niger, Osun, Ondo, Edo, Delta, and Anambra States (the "yellow" states). The white States depict areas with less than 50 thousand hectares of land, on the average, under cassava cultivation in the last nine years.

Figure 5: Average Cassava Area (1999-2007) in Nigerian States

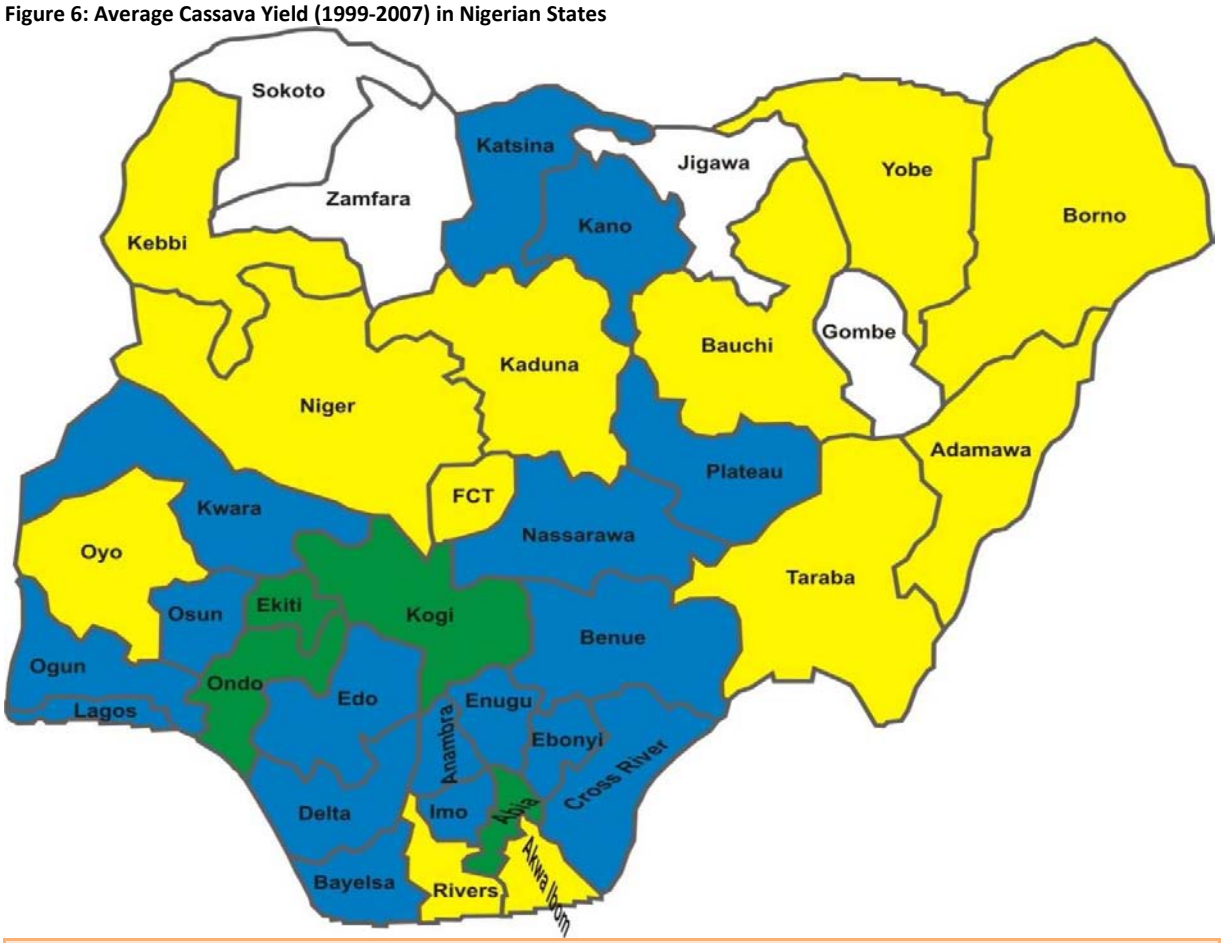


Key	
white	< 50 thousand hectares
yellow	50-100 thousand hectares
Blue	101-150 thousand hectares
Green	151-200 thousand hectares
Red	>200 thousand hectares

Furthermore, the average cassava yields from 1999-2007 shows that only Kogi, Ekiti, Ondo and Abia States (the "green" states) have exceeded 15 tons per hectare (see Fig. 6 below). Ondo State had the highest average yield of 18.5 metric tons per hectare is this is better than the averages (1999-2007) of the World (11.1 metric tons/ha), Africa (9.3 metric tons/ha), Americas (12.6 metric tons/ha), Asia (16.1 metric tons/ha), and Oceania (11.2 metric tons/ha).

The "blue" states including Kaduna, Kano, Plateau, Nassarawa, Benue, Enugu, Ebonyi, Cross River, Anambra, Imo, Bayelsa, Delta, Edo, Lagos, Ogun, Osun and Kwara achieved cassava yields between 11-15 tons per hectare in the last nine years. Other states, i.e. the "yellow" states (excluding the "white" states – Sokoto, Zamfara, Jigawa and Gombe which produced less than 5 tons per hectare) achieved between 5-10 tons per hectare in the last nine years.

Figure 6: Average Cassava Yield (1999-2007) in Nigerian States

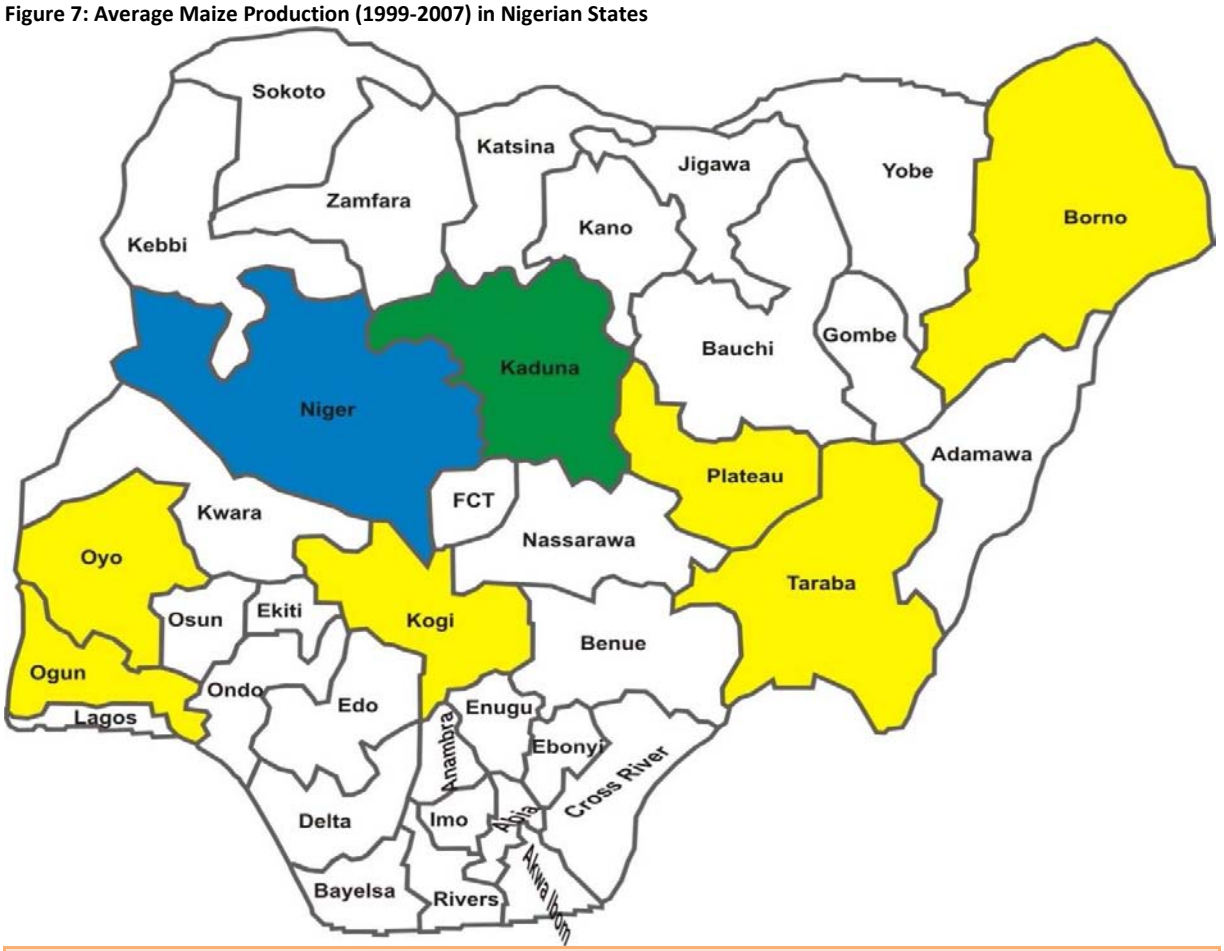


Key	
white	< 5 tons/ha
yellow	5-10 tons/ha
Blue	11-15 tons/ha
Green	>15 tons/ha

1.3.2 Maize

Maize, an important cereal in Nigeria, is produced in all the states of the Federation. Though an all-ecology crop in Nigeria, most states (the "white" states in this case) each produced less than 200 thousand metric tons on the average from 1999-2007 (see Fig. 7 below). The six "yellow" states including Borno, Plateau, Taraba, Kogi, Oyo and Ogun produced between 200-400 thousand metric tons each, while Niger State (the "blue" state) produced between 401-600 thousand metric tons in the same period. Kaduna State is the only "green" state in this case producing more than 600 thousand metric tons, on the average, in the last nine years.

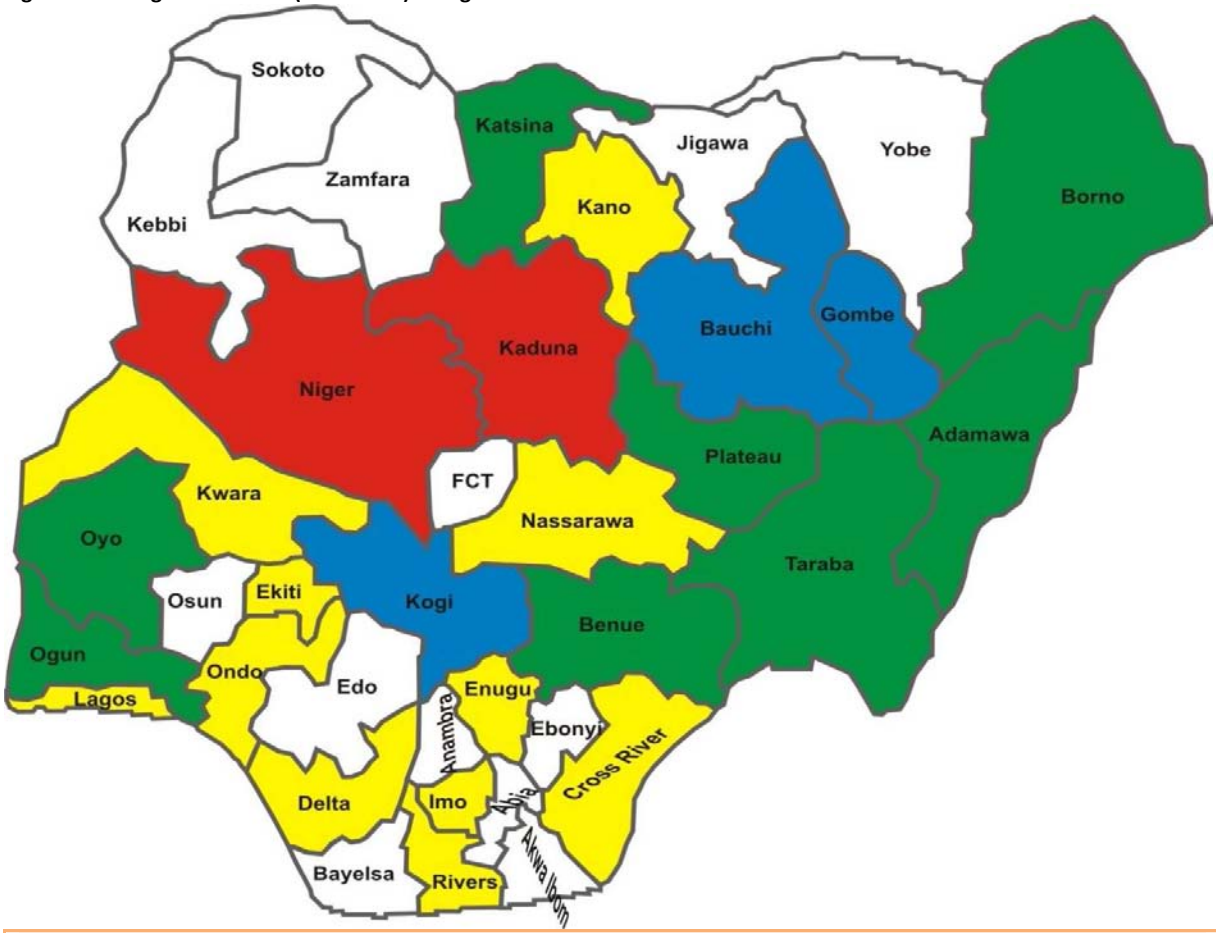
Figure 7: Average Maize Production (1999-2007) in Nigerian States



Key	
white	< 200 thousand metric tons
yellow	200-400 thousand metric tons
Blue	>400-600 thousand metric tons
Green	>600 thousand metric tons

Also, data on the average maize area (1999-2007) in the country shows that Niger and Kaduna (the "red" states in this case) each has put more than 200 thousand hectares of land under maize cultivation (see Fig. 8 below). The "green" states including Katsina, Borno, Adamawa, Plateau, Taraba, Benue, Oyo and Ogun States cultivated between 151-200 thousand hectares of maize land, while between 101-150 thousand hectare of maize land was cultivated each by the "blue" states including Bauchi, Gombe and Kogi States. Kano, Nassarawa, Kwara, Ekiti, Ondo, Lagos, Delta, Enugu, Imo, Rivers and Cross-River (the "yellow" states) each cultivated between 50-100 thousand hectares of maize land. On the other hand, less than 50 thousand hectares of maize land was cultivated by the "white" states including Sokoto, Kebbi, Zamfara, Jigawa, Yobe, Osun, Edo, Bayelsa, Akwa-Ibom, Abia, Ebonyi, Anambra, and FCT.

Figure 8: Average Maize Area (1999-2007) in Nigerian States

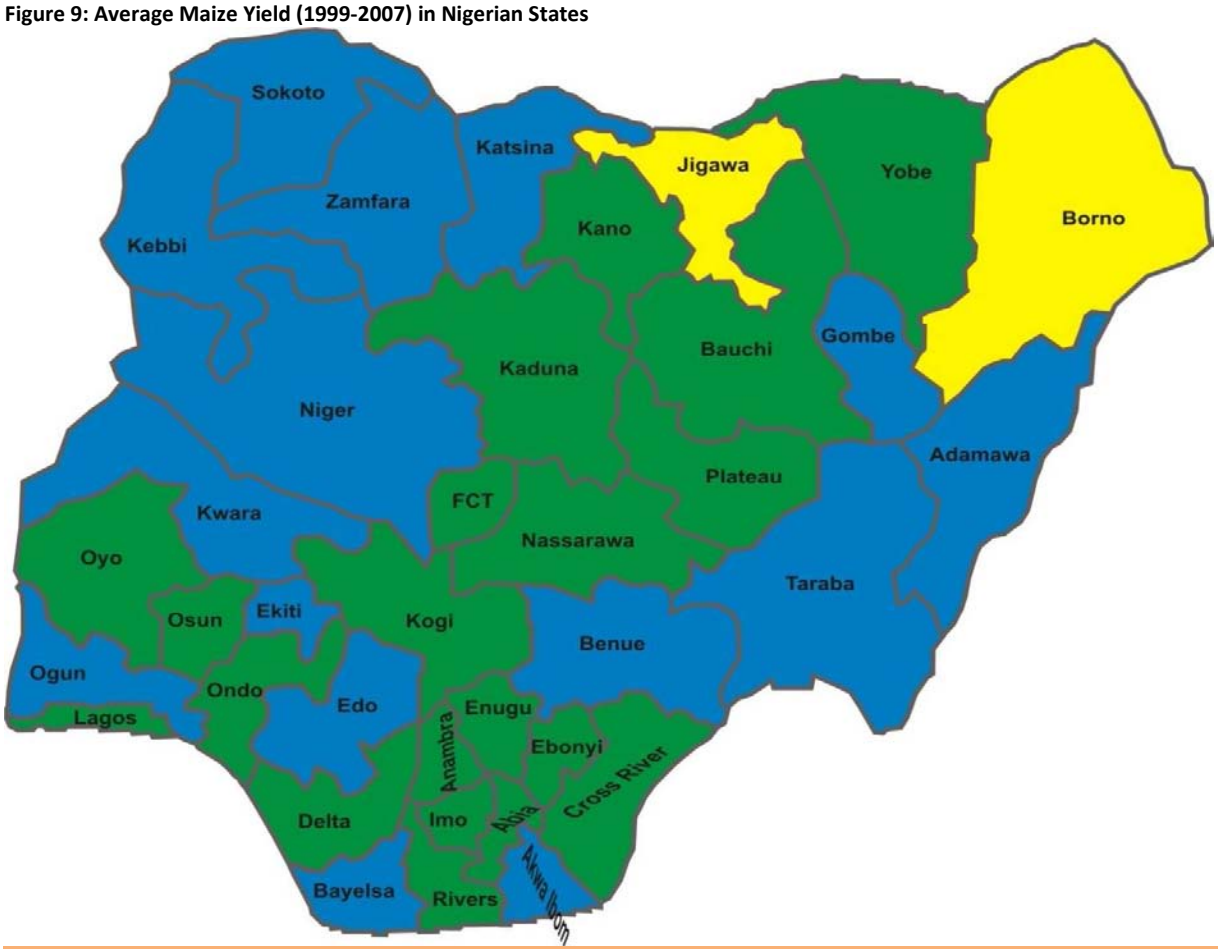


Key	
white	< 50 thousand hectares
yellow	50-100 thousand hectares
Blue	101-150 thousand hectares
Green	151-200 thousand hectares
Red	>200 thousand hectares

In terms of maize yields, only Jigawa and Borno states ("yellow" states in this case) each averaged between 0.5-1.0 metric tons per hectare, while an average of between 1.1-1.5 metric tons per hectare was achieved each by 15 "blue" states including Katsina, Zamfara, Sokoto, Kebbi, Niger, Kwara, Ekiti, Ogun, Edo, Bayelsa, Akwa-Ibom, Benue, Taraba, Adamawa, and Gombe (see Fig. 9 below). Several other states, the "green" states including Yobe, Kano, Bauchi, Kaduna, Plateau, Nassarawa, Kogi, Oyo, Osun, Ondo, Lagos, Delta, Rivers, Imo, Abia, Cross-River, Ebonyi, Anambra, Enugu, and FCT obtained an average yield of more than 1.5 tons per hectare.

Imo State recorded the highest average yield of 2.2 metric tons/ha and this is better than the Africa average of 1.7 metric tons/ha. However, it is less than the averages (1999-2007) of the World (4.6 metric tons/ha), Americas (6.2 metric tons/ha), Asia (4.0 metric tons/ha), Europe (5.5 metric tons/ha) and Oceania (6.3 metric tons/ha).

Figure 9: Average Maize Yield (1999-2007) in Nigerian States

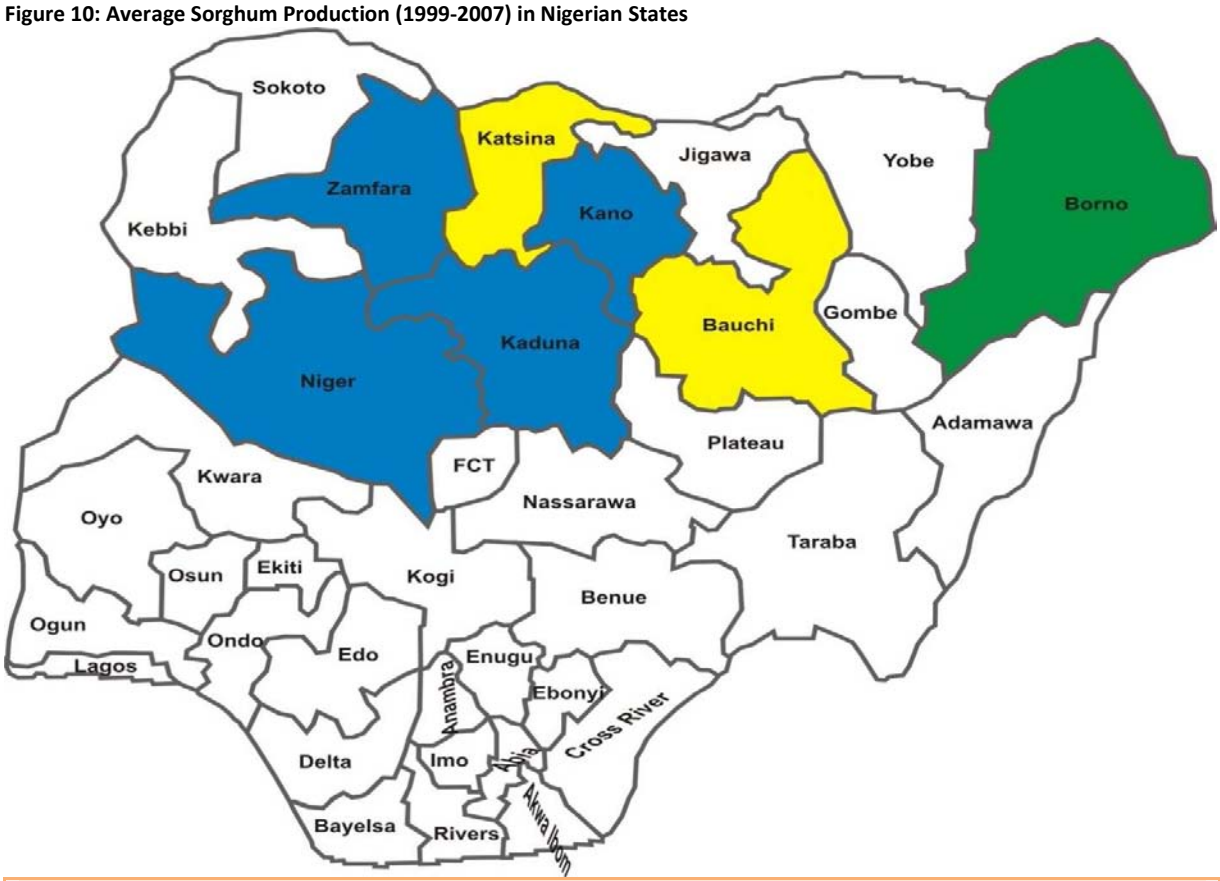


Key	
white	< 0.5 tons/ha
yellow	0.5-1.0 tons/ha
Blue	1.1-1.5 tons/ha
Green	>1.5 tons/ha

1.3.3 Sorghum

Sorghum is mostly produced in the Northeast, Northwest and North central regions of Nigeria. Only Borno State (the "green" state in this case) produced greater than 600 thousand metric tons of sorghum on the average in the last nine years (see Fig. 10 below). Kano, Kaduna, Niger and Zamfara States (the "blue" states) each produced on the average between 401-600 thousand metric tons, while the average sorghum production in each of the "yellow" states (including Katsina and Bauchi) is between 200-400 metric tons. As can also be seen in Fig. 10, several other "white" states each produced less than 200 metric tons of sorghum from 1999-2007.

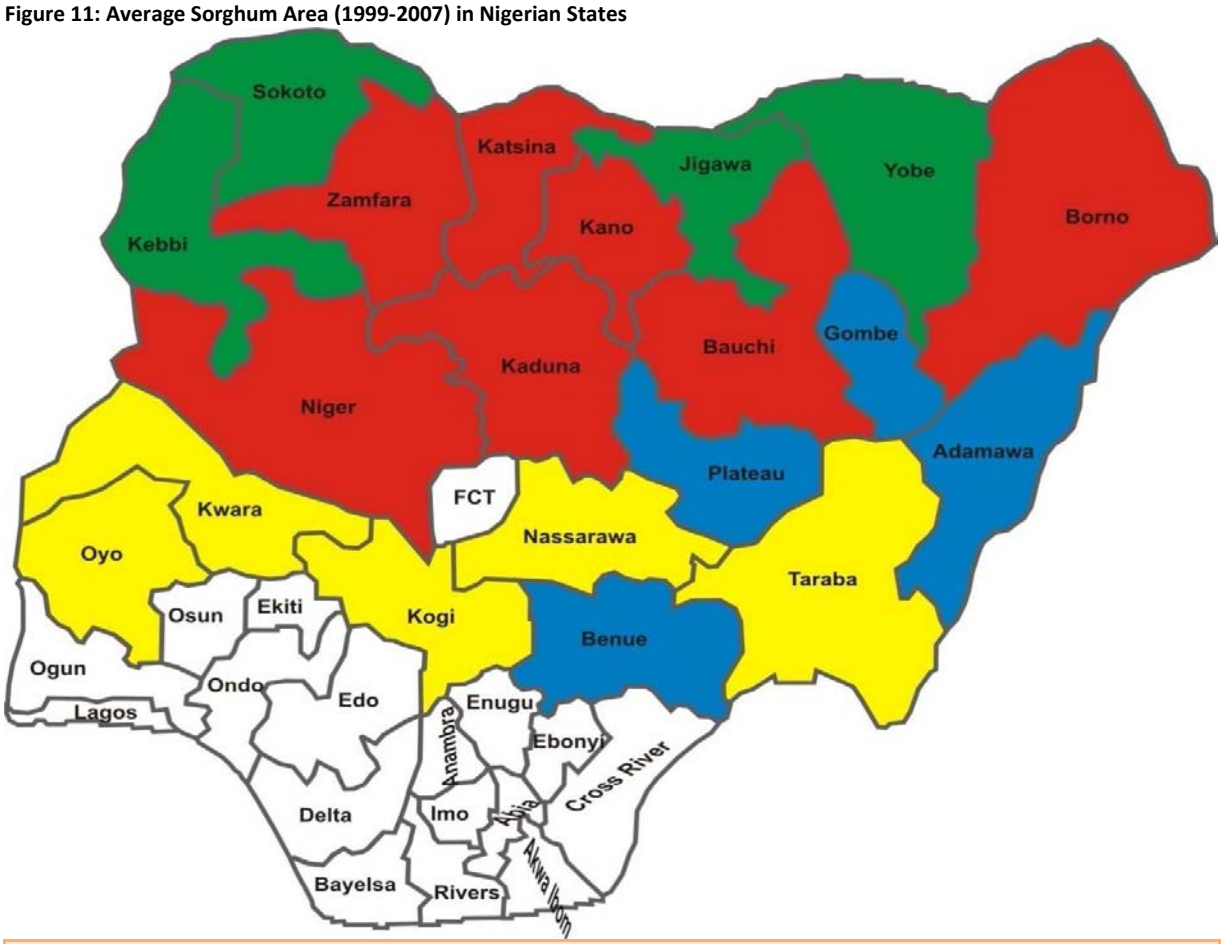
Figure 10: Average Sorghum Production (1999-2007) in Nigerian States



Key	
white	< 200 thousand metric tons
yellow	200-400 thousand metric tons
Blue	>400-600 thousand metric tons
Green	>600 thousand metric tons

Analysis of land area under sorghum cultivation shows that Borno, Bauchi, Kano, Katsina, Zamfara, Kaduna and Niger States (the "red" states in this case) have each cultivated more than 200 hectares of land in the last nine years (see Fig. 11 below). With between 151-200 thousand hectares of land each under sorghum cultivation are four "green" states including Kebbi, Sokoto, Jigawa and Yobe, while Oyo, Kwara, Kogi, Nassarawa and Taraba (the "yellow" states) each cultivated between 50-100 thousand hectares of land of the average within the same period. The remaining "white" states including Ogun, Lagos, Osun, Ekiti, Ondo, Edo, Delta, Bayelsa, Rivers, Akwa-Ibom, Cross-River, Ebonyi, Abia, Imo, Anambra, Enugu, and FCT either cultivated, on the average, less than 50 thousand hectares of land or are traditionally non-sorghum producing areas of the country.

Figure 11: Average Sorghum Area (1999-2007) in Nigerian States

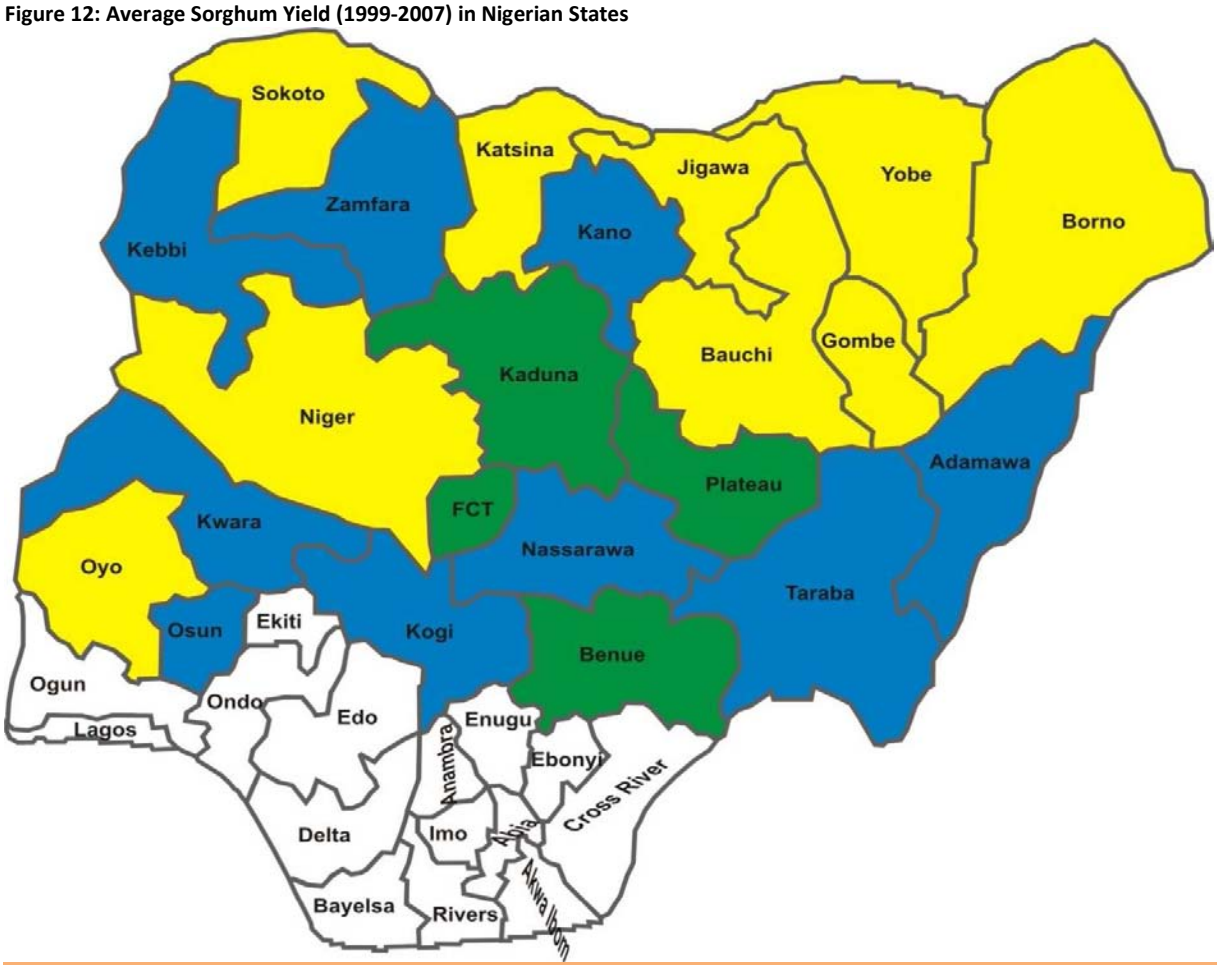


Key	
white	< 50 thousand hectares
yellow	50-100 thousand hectares
Blue	101-150 thousand hectares
Green	151-200 thousand hectares
Red	>200 thousand hectares

Moreover, in terms of average yields of sorghum in the last nine years, FCT, Kaduna, Plateau and Benue States (the "green" states) each achieved more than 1.5 tons per hectare, while between 1.1-1.5 tons per hectare was achieved by Kebbi, Zamfara, Kano, Kwara, Osun, Kogi, Nassarawa, Taraba, and Adamawa States (the "blue" states) (see Fig. 12 below). The "yellow" states including Oyo, Niger, Sokoto, Katsina, Jigawa, Bauchi, Gombe, Yobe and Borno achieved an average yield each of between 0.5-1.0 tons per hectare, while the "white" states experienced an average sorghum productivity of less than 0.5 tons per hectare.

Kaduna State recorded the highest average yield of 1.9 metric tons/ha. This is certainly better than the averages (1999-2007) of the World (1.4 metric tons/ha), Africa (0.9 metric tons/ha), and Asia (1.0 metric tons/ha). However, it is less than the averages of Americas (3.4 metric tons/ha), Europe (3.9 metric tons/ha) and Oceania (2.6 metric tons/ha).

Figure 12: Average Sorghum Yield (1999-2007) in Nigerian States

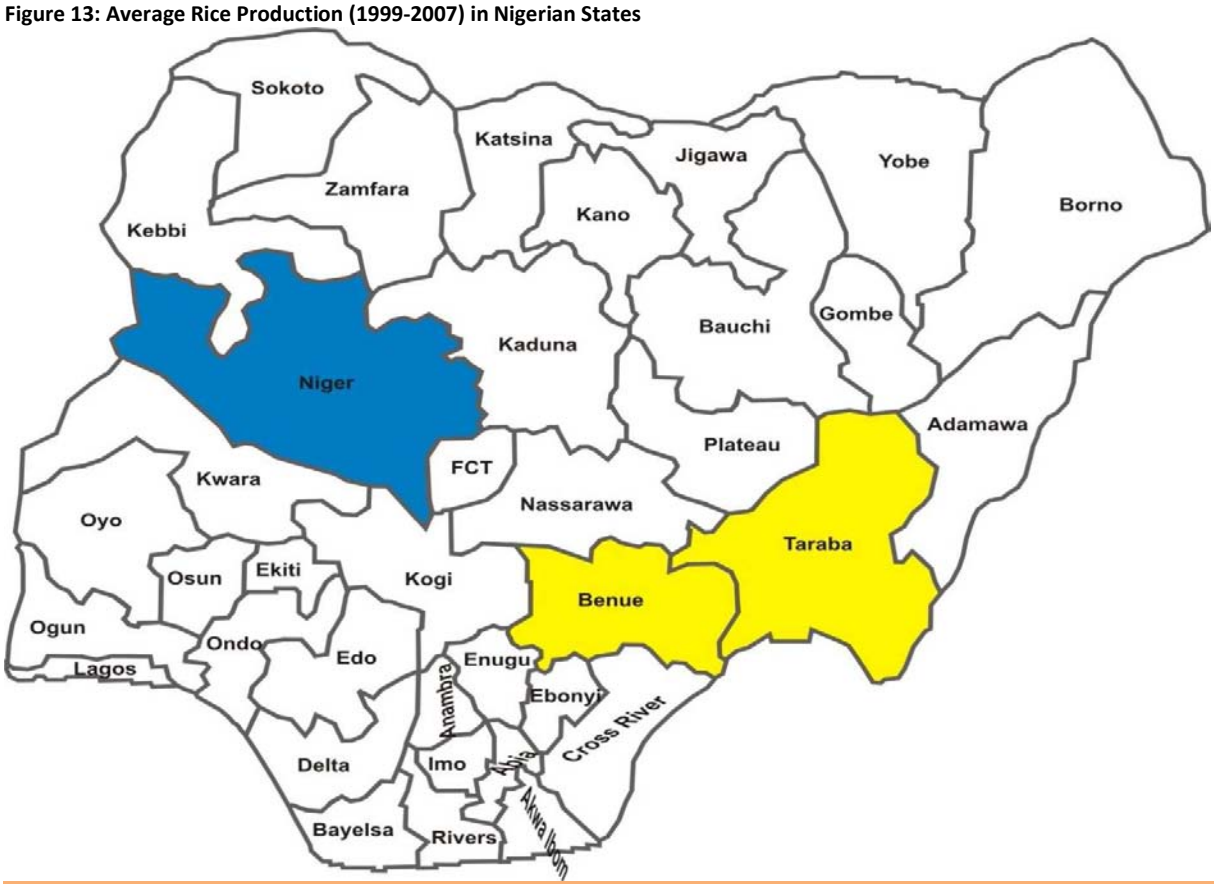


Key	
white	< 0.5 tons/ha
yellow	0.5-1.0 tons/ha
Blue	1.1-1.5 tons/ha
Green	>1.5 tons/ha

1.3.4 Rice

Data show that rice is produced in almost every state of Nigeria, but most of these states (the "white" states in this case) in the last nine years (1999-2007) each produced below 200 thousand metric tons on the average (see Fig. 13 below). The "yellow" states including Taraba and Benue produced between 200-400 thousand metric tons each, while the only "blue" state, Niger State, produced between 401-600 thousand metric tons of rice, on the average, in the last nine years. No state produced more than 600 thousand metric tons within the same period.

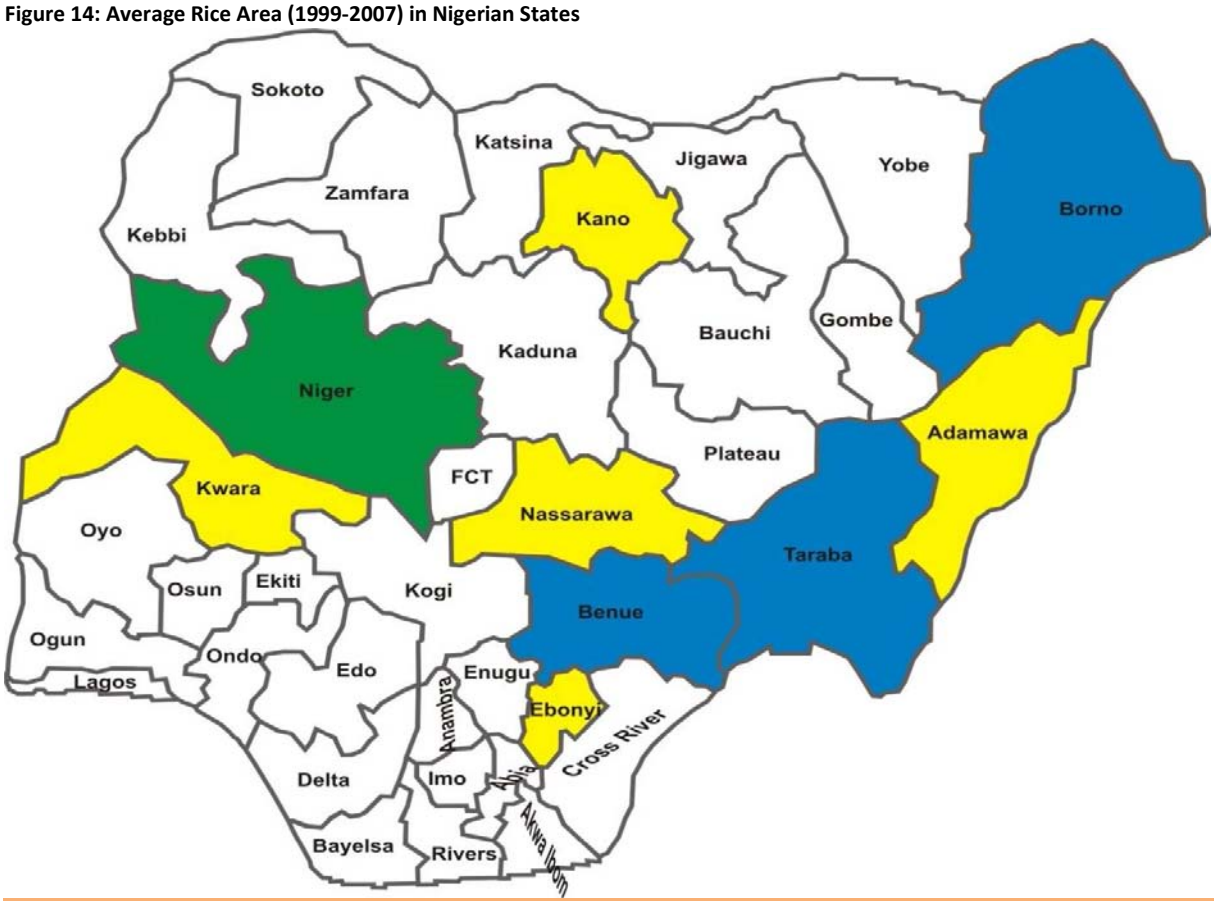
Figure 13: Average Rice Production (1999-2007) in Nigerian States



Key	
white	< 200 thousand metric tons
yellow	200-400 thousand metric tons
Blue	>400-600 thousand metric tons
Green	>600 thousand metric tons

On the average, in the last nine years, Niger state has the highest rice area under cultivation with between 151-200 thousand hectares of land (Fig. 14). The state is followed by three other "blue" states including Benue, Taraba and Borno with between 101-150 thousand hectares of land under rice cultivation. The "yellow" states of Ebonyi, Kwara, Nassarawa, Adamawa and Kano have put between 50-100 thousand hectares of land under cultivation, while the "white" states indicate areas with less than 50 thousand hectares under cultivation in the last nine years.

Figure 14: Average Rice Area (1999-2007) in Nigerian States

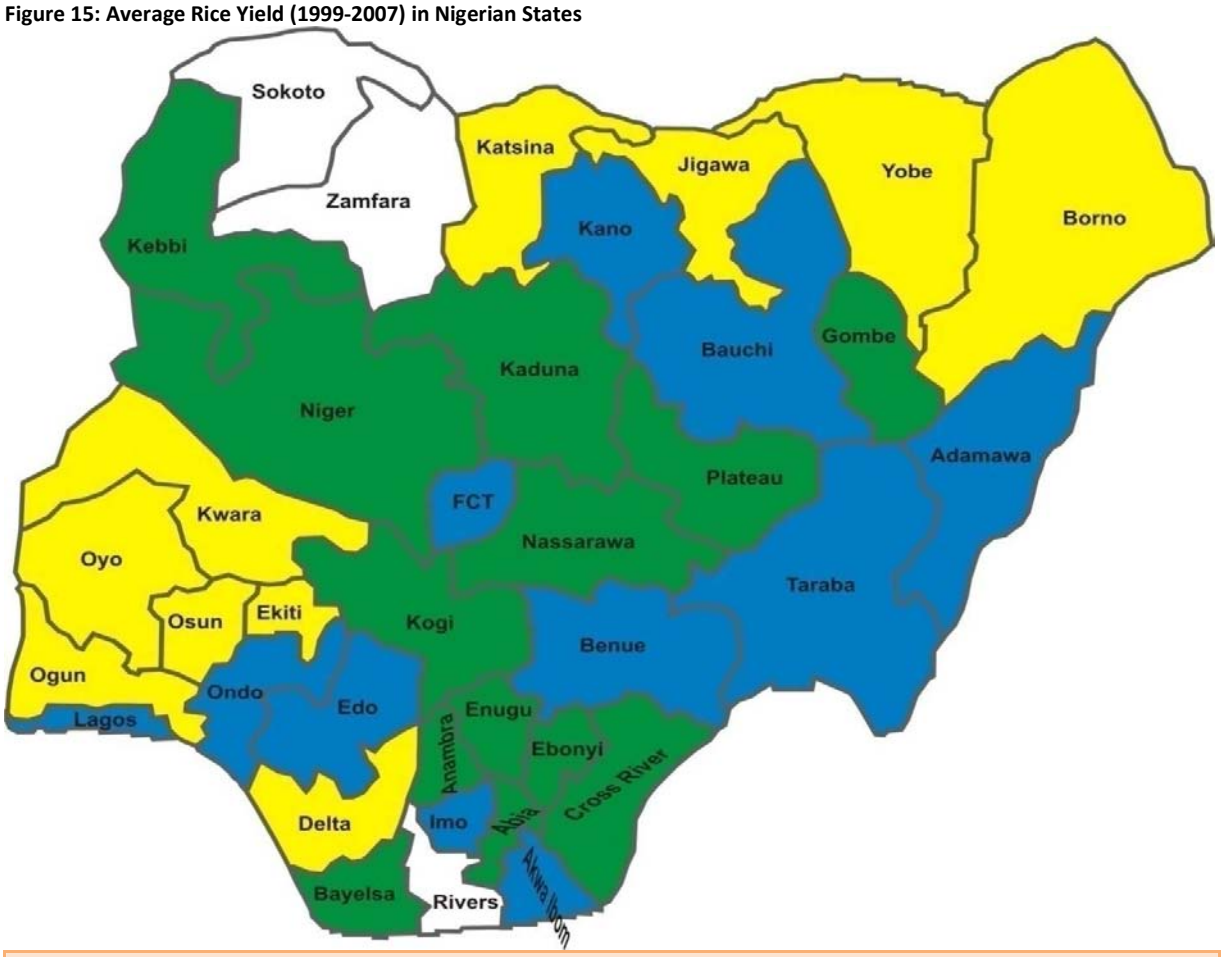


Key	
white	< 50 thousand hectares
yellow	50-100 thousand hectares
Blue	101-150 thousand hectares
Green	151-200 thousand hectares
Red	>200 thousand hectares

Furthermore, in terms of average productivity from 1999-2007, Kebbi, Niger, Kaduna, Gombe, Plateau, Nassarawa, Kogi, Enugu, Anambra, Ebonyi, Abia, Cross-River, and Bayelsa States (the "green" states) each achieved greater than 2.0 tons per hectare, while the "blue" states including Kano, Bauchi, Adamawa, Taraba, Benue, Akwa-Ibom, Imo, Edo, Ondo, Lagos and FCT achieved between 1.6-2.0 tons per hectare (see Fig. 15 below). Between 1.0-1.5 tons per hectare of rice yield was achieved by the "yellow" states comprising Katsina, Jigawa, Yobe, Borno, Kwara, Oyo, Ogun, Osun, Ekiti and Delta, while Sokoto, Zamfara and Rivers (the "white" states in this case) recorded below 1.0 ton per hectare on the average in the last nine years.

Ebonyi State recorded the highest average yield of 2.9 metric tons/ha and this is better than the Africa average of 2.3 metric tons/ha. However, it is less impressive of the averages (1999-2007) of the World (4.0 metric tons/ha), Americas (4.5 metric tons/ha), Asia (4.1 metric tons/ha), Europe (5.7 metric tons/ha), and Oceania (8.0 metric tons/ha).

Figure 15: Average Rice Yield (1999-2007) in Nigerian States

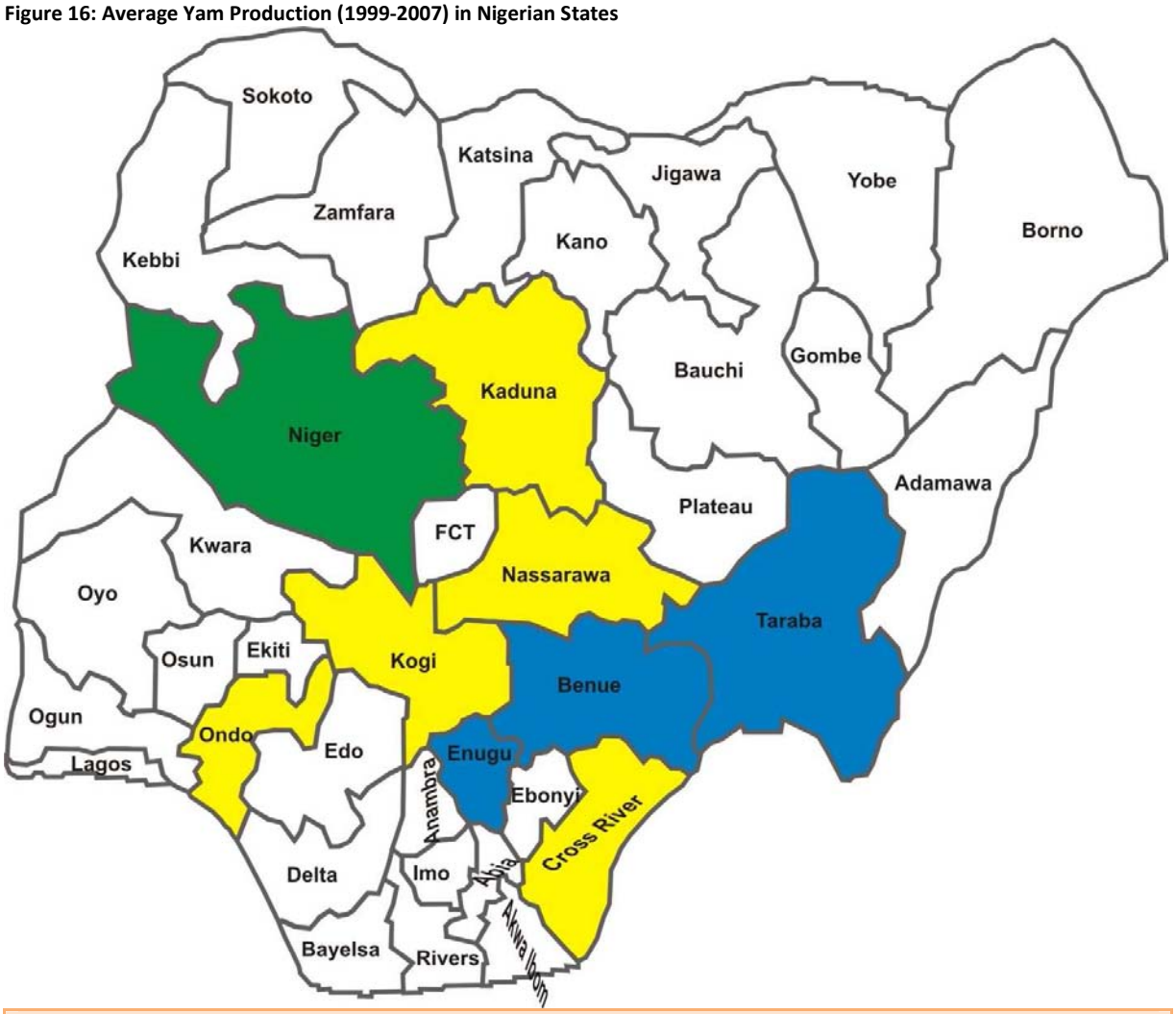


Key	
white	< 1 tons/ha
yellow	1.0-1.5 tons/ha
Blue	1.6-2.0 tons/ha
Green	>2.0 tons/ha

1.3.5 Yam

Yam is grown in many states of the Federation. In the past nine year, however, only Niger State (the 'green' state) has produced on the average above 3,000 metric tons of Yam. The 'blue' states including Benue, Enugu and Taraba have each produced on the average between 2001-3000 metric tons of yam (see Fig. 16 below). The 'yellow' states including Kaduna, Nassarawa, Kogi, Ondo, and Cross River produced on the average between 1000-2000 metric tons respectively, while the remaining 'white' states each produced less than 1000 metric tons in the last nine years.

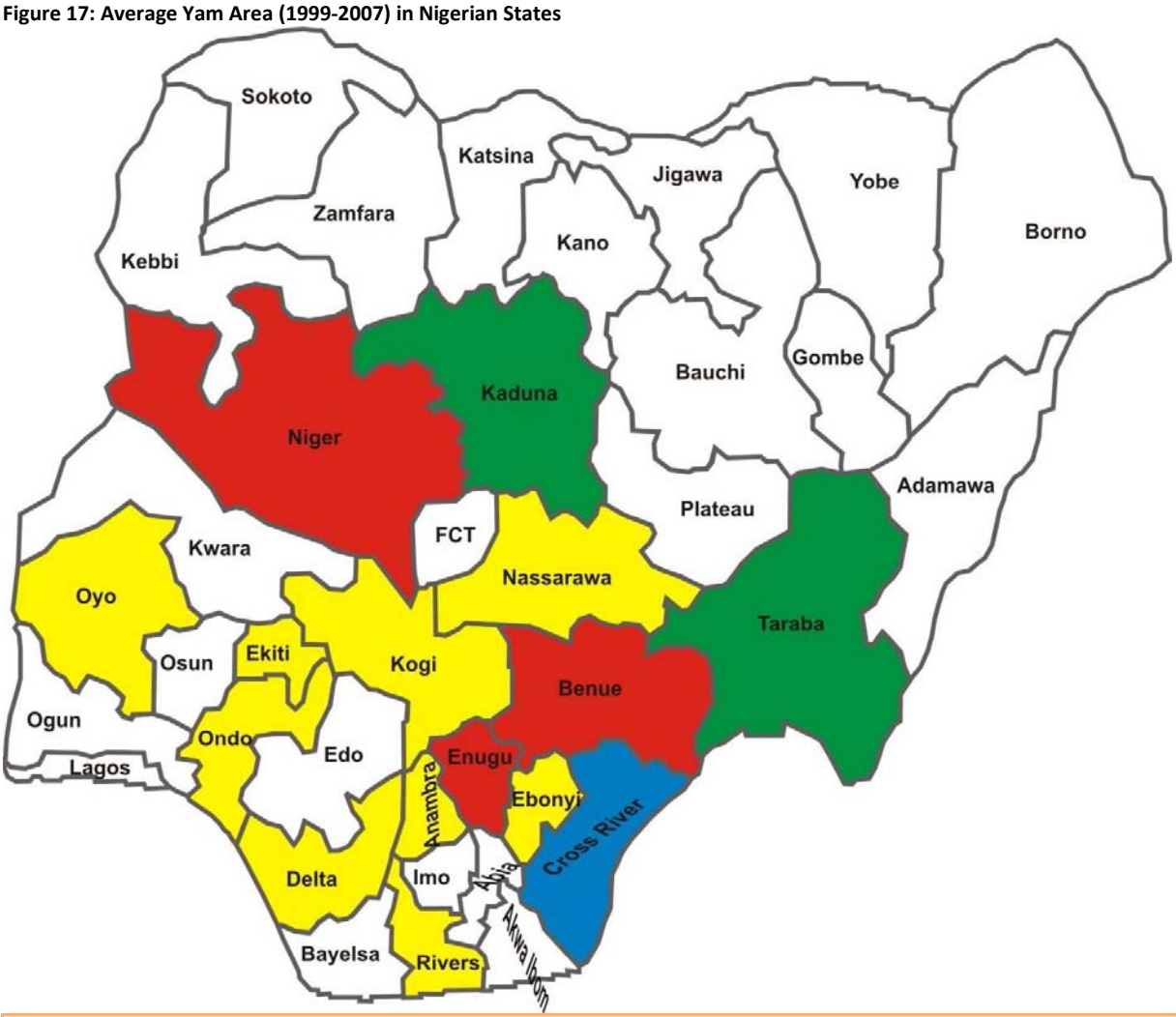
Figure 16: Average Yam Production (1999-2007) in Nigerian States



Key	
white	< 1000 thousand metric tons
yellow	1000-2000 thousand metric tons
Blue	2001-3000 thousand metric tons
Green	>3000 thousand metric tons

In terms of area under yam cultivation (Fig. 17 below), Niger, Benue and Enugu States ('red' states) have each committed over 200 thousand hectares of land, on the average, to yam production in the last nine years. The 'green' states including Kaduna and Taraba have each put between 151-200 thousand hectares of land, on the average to yam cultivation, while Nassarawa, Kogi, Ekiti, Oyo, Ondo, Delta, Anambra, Rivers and Ebonyi States (the 'yellow' states) have respectively brought between 50-100 thousand hectares of land under yam cultivation. The only 'blue' state here, Cross River, cultivated on the average between 101-150 thousand hectares of yam land in the last nine years. The remaining 'white' states each cultivated less than 50 thousand hectares of yam land, on the average, between 1999-2007.

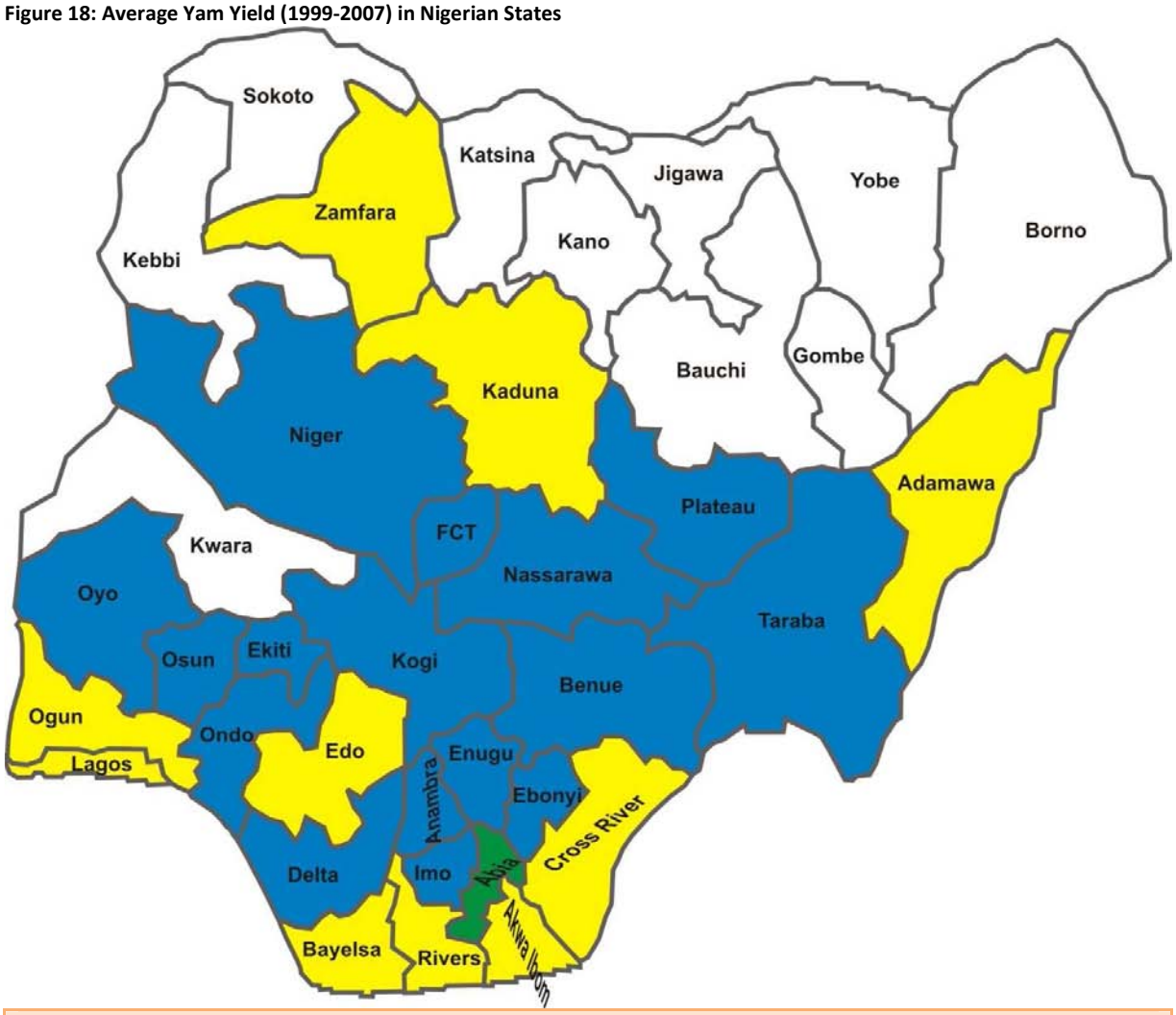
Figure 17: Average Yam Area (1999-2007) in Nigerian States



Key	
white	< 50 thousand hectares
yellow	50-100 thousand hectares
Blue	101-150 thousand hectares
Green	151-200 thousand hectares
Red	>200 thousand hectares

Moresore, in terms of yield, Abia State ('green' state) is the only state in the country that has recorded, on the average, more than 15 metric tons/ha of yam yield in the country (see Fig. 18 below). The 'blue' states with 11-15 metric tons/ha each on the average include Niger, FCT, Nassarawa, Plateau, Oyo, Osun, Ekiti, Ondo, Kogi, Delta, Anambra, Imo, Enugu, Ebonyi, Benue and Taraba. The 'yellow' states including Zamfara, Kaduna, Adamawa, Ogun, Lagos, Edo, Bayelsa, Rivers, Akwa-Ibom and Cross River each recorded on the average yam yields between 5-10 metric tons/ha in the last nine years, while the remaining 'white' states each recorded less than 5 metric tons/ha of yam yield within the same time period.

Figure 18: Average Yam Yield (1999-2007) in Nigerian States



Key	
white	< 5 tons/ha
yellow	5-10 tons/ha
Blue	11-15 tons/ha
Green	>15 tons/ha

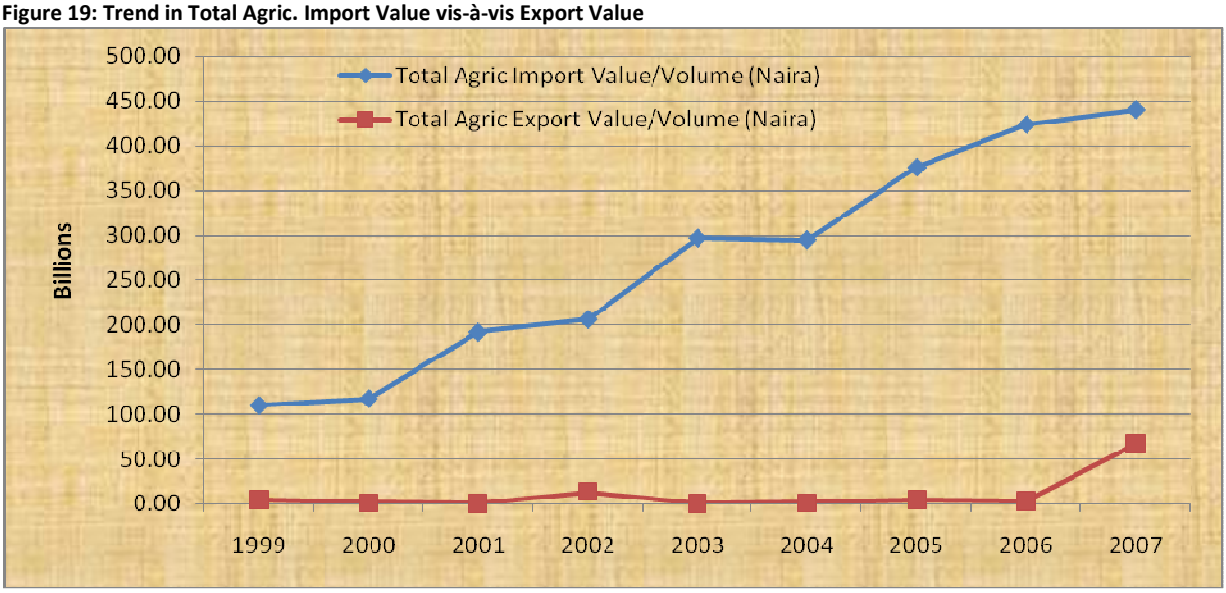
When compared with other world regional yield averages (1999-2007), Abia State's yam average yield (15.7 mt/ha) is better than those of the world (10.4 mt/ha), Africa (10.4 mt/ha), Asia (15.2 mt/ha) and the Americas (8.8 mt/ha), but equal to that of Oceania (15.7 mt/ha) and worse than Europe (16.3 mt/ha).

1.4 Trend in agricultural exports and imports

Using a broad classification, the Central Bank of Nigeria (CBN) and National Bureau of Statistics (NBS) documents the import and export agricultural products in the following categories – live animals and animal products; vegetable products; animal and vegetable fats and oil; foodstuff, beverages, spirit and vinegar, tobacco; and raw hides and skins leather, furskins, and saddler. The agricultural exports of significance include cocoa beans and products, rubber, fish/shrimp, cotton, processed skin, etc. these agricultural products account for about 39.7% of the total non-oil exports in 2007 (CBN, 2007).

In terms of value of import vis-à-vis export, Nigeria is a huge net importer of agricultural products (see Fig. 19 below). The import-export gap has been widening since 1999 and this puts the agricultural policy of the nation to question. This situation, however, provides a unique opportunity for closing up or eliminating this 'agricultural deficit' through functional policies and budgets.

Figure 19: Trend in Total Agric. Import Value vis-à-vis Export Value



Source: authors with data from (NBS 2006) and CBN (2007)

1.5 Role and significance of smallholder producers

Although data from FAO show that just about 43.2% of the country's cultivable agricultural land area is under cultivation as at 2005, most of the land is cultivated by smallholder and traditional farmers who use rudimentary production techniques, with resultant low yields. Within the arable crops subsector, it is estimated that some 25 million hectares are cultivated each year by smallholders for whom farmer support in terms of delivery of services (e.g. agric extension/education, provision of financial and technological inputs, market development, etc) is crucial.

Small-scale (0.1-5.9 ha), medium scale (6.0-9.9 ha) and large scale (>10 ha) are the three broad categories of farm holdings in Nigeria, with the small-scale farm holdings predominating the country's

agriculture and accounting for about 81% of the total farm area and 95% agricultural output (Shaib *et al.*, 1997). The estimated average operational holding is 2 ha per farm family.

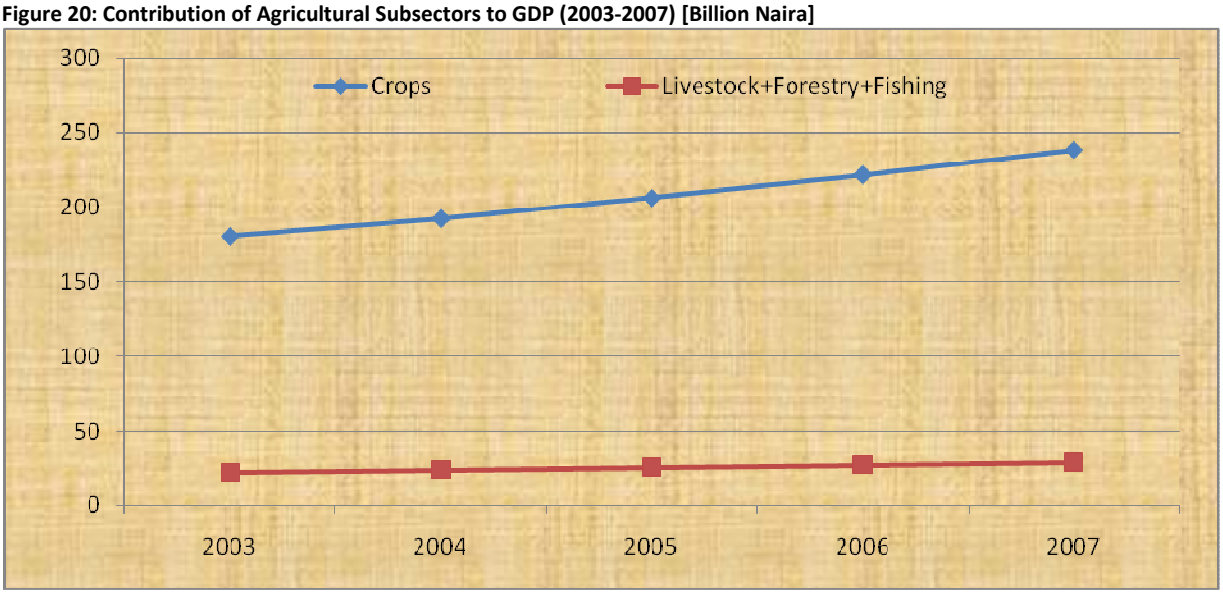
According to Idachaba (2000), the small-scale farmer will continue to be the backbone of Nigerian agriculture for the next 25 years. This implies that Nigeria's agricultural policy thrust in the next decade and beyond should have the small-scale farmer as its center piece. The average age of farmers in the country is high and increasing, thus reflecting low inflow of younger entrepreneurial labour force into agriculture (Eboh et al. 2004) and signifying the urgent need for the renewal of the farming population by making agriculture very attractive and qualitative.

1.6 Significance of agriculture in the Nigerian economy

Agriculture constitutes one of the most important sectors of Nigeria's economy. Nigeria's agricultural potentials are large and its development is one of the central tenets of the poverty reduction strategy of all levels of government.

Nigeria's agricultural economy is divided into four sub-sectors. These are crops, livestock, forestry and fisheries. The crop subsector has been and remains the dominant component of the nation's agriculture as shown in Fig. 20 below. In 2007, crops contributed some 37.65% of GDP, livestock another 2.65%, forestry accounted for 0.53% and fishing 1.37%.

Figure 20: Contribution of Agricultural Subsectors to GDP (2003-2007) [Billion Naira]



Source: authors with data from CBN Annual Report and Statements of Accounts (2007)

Furthermore, agriculture is clearly the dominant sector the nation's economy by virtue of accounting for the largest single share of GDP, with a growth rate of 7.43% in 2007 (CBN, 2007) (see also Fig. 21 below). Agriculture contributed 42.2% of the nation's GDP in 2007, while industry (including crude petroleum, mining and quarrying, and manufacturing contributed 23.66%. Wholesale/retail and the services sectors contributed 16% each, and building and construction sector contributed only 1.72% to the 2007 GDP of Nigeria. Moreover, it is important to emphasize that agriculture is the main driver of the growth in the nation's non-oil sector.

Figure 21: Share of Economic Sectors in Total GDP 2007 (1990 Constant Basic Prices)

Source: authors with data from CBN (2007)

In terms of food security, the agricultural sector has always been providing the main source of food and nutrition to the nation even in the face supply gaps. According to data from CBN (2007), the value of imports of food and live animals in Nigeria increased from about ₦160.2 billion in 2001 to about ₦290.7 billion in 2007. The sector also supplies essential raw materials to industries as shown in the increase in production of industrial crops (including cocoa, groundnut, benniseed, coconuts, sheanuts, soybean, cotton, palm kernel and oil, coffee, rubber, sugar cane, and tobacco, etc.) from about 15.4 million metric tons in 2001 to about 17.7 million metric tons in 2006 (CBN, 2006). Furthermore, agricultural exports significantly added to non-oil foreign exchange earnings with a revenue increase from about ₦37.5 billion in 2004 to about ₦67.4 billion in 2007 (CBN, 2007). Moreover, agriculture contributes to labour force (employment). A recent estimate shows that agriculture provides employment especially for about 70% of Nigerian who resides in the rural communities and predominantly engages in agricultural production (Okolo, 2004).

1.7 Challenges of the Nigerian Agriculture

Nigeria, no doubt, has potential competitive advantage in several agricultural commodities including roots and tuber crops, cereals and legumes, tree crops and livestock products. The sources of potential competitive advantage include the favourable agro-ecological and natural conditions for a wide variety of crops, large domestic and regional markets, relatively low labour costs and the unique opportunity to massively invest oil revenue for rapid agricultural growth and transformation.

Unfortunately, according to Eboh et al. (2004) and Azih (2008), these economic and market potentials have been undermined by inappropriate and unstable macroeconomic and structural policies, inconsistent and poorly implemented sector strategies and programmes, grossly inefficient and disoriented public sector, weak private sector involvement in agriculture, non-competitive input-end subsidy administration system, poor technology and service delivery environment, absence of long-term finance window for agriculture, weak market base, and distorting incentive systems linked to the rent/patronage-dominated enclave oil sector. The dominance of the oil sector has over the years crowded out agriculture and other sectors, leaving a skewed non-diversified economic structure unable

to generate incomes, jobs and attract non-oil private sector investments. Some of these government programmes and policies encouraged practices that are inconsistent with sustainable agriculture.

Specifically, smallholder farmers are constrained by many problems (Manyong et al., 2003), including those of poor access to modern inputs and credits, poor infrastructure, inadequate access to markets, land and environmental degradation including climate change, inadequate and unused research and extension services and so on. These challenges, on the other hand, are exacerbated by rural poverty which is found to be the bane confronting smallholder farmers.

Although Nigeria's Global Hunger Index (GHI) decreased by 5.3 from her GHI of 23.7 (1990) to 18.4 (2008), she has remained in the category of countries with serious hunger problems. The GHI ranks countries on a 100-point scale, with 0 being the best score (no hunger) and 100 being the worst, though neither of these extremes is achieved in practice (Grebmer *et al*., 2008). Values less than 4.9 reflect low hunger, values between 5 and 9.9 reflect moderate hunger, values between 10 and 19.9 indicate a serious problem, values 20 and 29.9 are alarming, and values exceeding 30 are extremely alarming.

As an indicator, GHI gives signals about food security and nutrition status thereby triggering actions to address emergency food needs as well as steps to improve long-term agricultural productivity. It is also useful in highlighting key trends and the geographic areas of greatest vulnerability.

2.0 NIGERIA'S AGRICULTURAL POLICY AND INSTITUTIONAL LANDSCAPE

In this section, we review a host of agricultural policies that were or being implemented by the Federal Government of Nigeria. It is worthy to note, however, that three broad policy and economic instruments currently bear on the agricultural sector. These include the National Policy on Agriculture (2001), National Economic Empowerment and Development Strategy (NEEDS I & II), and the 7-Point Agenda. Within the three broad framework are sub-policies (including Agricultural Trade Policy, National Fertilizer Policy, Agricultural Subsidy Policy, and Food Security Policy) and programmes (including the Presidential Initiatives on Commodities, National Special Food Security Programme (NSPFS), Commerce 44, Export Expansion Grant (EEG), Agricultural Credit Guarantee Scheme (ACGS), National Fadama Development Programme, National Cocoa Development Programme, and Commodity Development and Marketing Companies).

2.1 Agriculture in the national development plans

Accelerating the growth of agricultural productivity and incomes has been a key component of Nigeria's development and poverty reduction strategies, since independence in 1960. At independence in 1960, Nigeria adopted five-year National Development Plans (NDPs), based on import-substitution industrialization and agricultural development strategies, to promote social and economic development. From 1962-1985, the country executed four NDPs. The objectives of Nigeria's agricultural policy, as contained in the 4 National Development Plans (1962-1968; 1970-1974; 1975-1980 and 1981-1985) include: promotion of self-sufficiency in food and raw materials for industries; improvement of the socio-economic welfare of rural people engaged in agriculture; and diversification of the sources of foreign exchange earnings through increased agricultural exports arising from the adoption of appropriate technologies in food production and distribution. The first two National Development Plans (1962-68, 1970-74) conceived agriculture as a source of surplus through Marketing Boards' taxation to finance development of the national economy. In 1990, Nigeria adopted the Rolling Plan in order to

ameliorate the shortcomings of post-independence Fixed Five-Year Plans, make planning more flexible and linked to policy and budgeting. It was also hoped that the Rolling Plans would consolidate the achievements of the economic reform programme embedded in the SAP framework. Between 1990 and 2001, the authorities put in place successive 3-year Rolling Plans, with agriculture as one of the priority sectors.

2.2 Agriculture under SAP

The Structural Adjustment Program (SAP) was introduced in Nigeria in 1986. It was aimed at restructuring the economy's productive base, and reduce her dependence on petroleum exports; eliminate distortions and rationalize consumption and expenditure patterns. In addition, SAP was targeted at expanding non-oil exports, reducing government controls and generally rolling back the hand of the state from direct intervention in the market and the economy. SAP envisaged a larger role for the private sector in the domestic economy and directed towards encouraging market-led competition, rational resource allocation and use.

The Nigerian expectation under SAP is that the agricultural economy should serve as an avenue for the diversification of exports. The assessments of the impact of SAP on the agriculture sector are mixed. Some argue that SAP triggered significant supply responses from the rural economy in terms of a substantial increase in food and export crop production – the early years of SAP gave rise to significant improvements in non-oil exports led by cocoa. Similar views are that it led to an expansion of rural incomes and a dramatic reduction in rural poverty with the incidence decreasing from 51 percent in 1985 to 46 percent in 1992 (World Bank, 2002). Others however observe that the intended objective of diversifying the productive base of the economy has not been achieved through structural adjustment (Shaib *et al*, 1997).

2.3 Agriculture in poverty reduction strategies

Recognizing the close interface between agriculture, rural development and poverty alleviation, several targeted poverty alleviation programmes in Nigeria bear strong agricultural-rural sector bias. The Directorate for Foods, Roads and Rural Infrastructure (DFRRI) established in 1986 aimed at developing rural and agricultural infrastructures including roads, agro-facilities, electricity to improve rural productivity, employment and incomes. The National Directorate for Employment has since 1987 been implementing schemes to promote skills acquisition, job creation and enterprise development in agricultural and non-agricultural sectors. While the Peoples' Bank (established in 1989) aimed at easing access to low-cost credit in the informal sector including farmer groups and producer's associations, the Community Banking Programme established in 1991 was designed to promote community-owned banking (savings and credit) among the grassroots including farmers and rural people. Also, women-targeted poverty alleviation programmes emphasized agriculture and rural sector. The Better Life Programme (BLP) for Rural Women was established in 1987 to improve rural and agricultural women's incomes and welfare through productivity enhancing measures, enterprise development, skills and capacity development. The Family Support Programme (FSP) was established in 1994 to promote women's productivity and incomes through easier access to micro-credit. Nigeria's Draft Interim Poverty Reduction Strategy Paper (PRSP) (August 2003) incorporates agricultural and rural development as a main agenda of poverty reduction strategy. Currently, the National Poverty Eradication Programme (NAPEP) established in 2000 is implementing nation-wide employment creation and enterprise development schemes in agricultural production, processing, marketing and agro-based activities. However, agricultural components of the poverty alleviation programmes have had little impact due to poor linkages and lack of coordination with sector strategies and policy discontinuity.

While incorporating agricultural and rural development as a key element of poverty reduction strategy, the Draft Interim Poverty Reduction Strategy Paper) I-PRSP anchors on the Nigerian Rural Development Sector Strategy developed in 2001, with an overarching goal of bringing about poverty reduction and enhanced food security through sustainable agriculture and rural development. The strategies defined in the IPRSP point to the following priorities and options: a) promotion of rural productive farm and off-farm activities; b) human resource development; c) enhancement of rural infrastructure – physical, economic and social infrastructure and their maintenance by communities; d) special programmes for target groups and/or development challenges, such as women, youth, children and people living with HIV/AIDS; and e) organization and mobilization of rural communities. In this context, an important future challenge is to clarify mechanisms for achieving pro-poor growth in the agricultural and rural sector.

2.4 Agriculture in NEEDS

The NEEDS targets: minimum annual growth rate of 6% per annum in agriculture; $3 billion in agricultural exports, a major component of which will be cassava by 2007; drastic reduction in food imports from 14.5% of total imports to 5% by 2007; development and implementation of a scheme of land preparation services to increase cultivable arable land by 10% annually and foster private sector participation through incentive schemes (NPC, 2004)

The policy framework embodies: providing the right policy environment and vigorously targeted incentives for private sector investment in the sector: Government will implement agricultural and rural development policy aimed at addressing the foregoing constraints; fostering effective linkage with industry to achieve maximum value addition/processing for export; creation of more agricultural and rural employment opportunities to increase the income of farmers and rural dwellers through the modernization of production and creation of an agricultural sector that is responsive to the demands and realities of the Nigerian economy; reversing the trend in import of food, (which stood at 14.5% of total imports at end 2001), through a progressive programme for agricultural expansion; reduction of the food import bill to stem the rising trade imbalance as well as diversify the foreign exchange earning base of the economy and striving towards food security and generate surplus for the export market.

To achieve these targets, the strategies will include: vigorous implementation of the Presidential Initiatives on Cassava, Rice, Vegetable oil, sugar, livestock, tree crops and cereals. Under this initiative, Nigeria hopes to generate as much as ₦3 billion annually from the export of agricultural products; taking advantage of the various concessionary arrangements within the WTO, EU-ACP, and the AGOA, NEPAD and the huge market in the West African sub region; strengthening of agricultural research and revitalization of the agricultural training and streamlining the extension delivery system including the involvement of non-governmental organizations (NGOs) in extension delivery; developing effective and sustainable private sector-led input supply and distribution system. Others include: adequate capitalization of the Nigerian Agricultural, Cooperative and Rural Development Bank (NACRDB) to provide soft agricultural credit and rural finance; the NACRDB has been restructured and its mandate expanded to include full financial intermediation; refurbishment of the eight functional silo complexes and phased completion of the remaining ones to improve and increase the capacity of the food reserve programme as a step to food security. These would be leased out to farmers either on individual or group basis; promotion of joint-venture private sector managed multi-commodity development and marketing companies to guarantee remunerative prices for farmers, stabilize consumer prices and provide alternative market for farm produce through buyer-of-last-resort mechanism; promotion of all season farming through rain-fed and irrigated farming with emphasis on fadama agriculture as well as implementation of the programme for the massive production of tree crop seedlings (NPC, 2004).

2.5 Agriculture in the 7-point agenda/NEEDS II

On assumption of power in May 2007, the present federal administration of President Yar' Adua adopted the 7-point Agenda as the broad policy priorities for implementing economic reforms and development programmes in Nigeria. The 7-point Agenda describes the key policy imperatives, directive principles and instruments in promoting sustainable economic growth for the achievement of the MDGs by 2015 and Vision 20:2020. The 7-point Agenda is being implemented within the enabling platform of the successes and lessons of precursor programmes - NEEDS-I and the experiences in the design of the NEEDS-II.

The main agricultural goals enunciated under the 7-point agenda are diversified economy, food security, employment generation, economic linkages, exports and poverty reduction. The 7-point Agenda acknowledges the oft-mentioned challenges in Nigeria's agricultural development as follows: low productivity, low quality of private sector investment, lack of domestic and international competitiveness, weak domestic policies and institutions, inadequate funding and lack of organized land titling and tenure. The issues are analogous to those identified under NEEDS-II, as constituting critical gaps in the agricultural development process. Specifically, NEEDS-II identifies the key challenges as follows: finance and access to credit, land reform, agricultural extension, commercialization of agricultural production and post-harvest management, agricultural-industry linkage, research and training, market-oriented subsidies, appropriate technologies and entrepreneurship and agribusiness development. In addition, the NEEDS-II stipulates the targets of agricultural progress as follows: 10% annual increase in crop production, 2.5% annual increase in livestock production, 8.0% annual increase in forestry and 9.0% annual increase in fishery production. Other targets include: reduce agricultural population in poverty by half each year; achieve 5% employment generation in the agricultural sector, generate up to $3 billion in agricultural exports by 2011; reduce food import from 5% of total imports to zero by 2011, increase cultivable arable land by 10% annually.

The key elements of the 7-point Agenda strategy are land reform, commercial agriculture, irrigation development, institutional support and market stabilization. Land reform would bring about legislative and administrative review of the Land Use Act 1978, to make land more accessible, secure and easily titled. The land reform will also promote land use planning, productivity-enhancing public interventions and systematic land development. Commercial agriculture will accelerate resource flow from private investors, good quality human capital and technology-driven production systems. It is intended to promote market-based production systems that are driven by efficient and sustainable technologies. Under the commercial agriculture programme, arable land will be developed in the states for use by well-trained motivated commercial farmers, who will cultivate carefully selected ecologically suitable, commercial market-responsive crops. It will involve the federal, state and local government, each playing complementary and reinforcing roles. Market stabilization is aimed at reducing price instability and market fluctuations through the application of price floors and guaranteed price regimes. It has the effect of discouraging capital flight from agriculture and giving market incentives to agricultural producers and economic agents in agricultural value chains.

Within the framework of the 7-point Agenda, the National Food Security Programme whose current base document was published in August 2008 specifies the food security crops as follows: cassava, rice, millet, wheat, maize, sugar, cowpeas, soybeans, tomato, cotton, cocoa, oil palm and rubber. Other agricultural commodities mentioned include: livestock – poultry, goat, sheep, cattle and pig; fishery – fish and fish products. The programme targets a total of 454,021 ha of irrigated land in addition to the

existing 220,000 ha currently under irrigation. Examples of the targeted irrigation coverage include: rice – 60,000 ha, sugar – 60,000 ha, wheat – 50,000 ha and cotton – 40,000 ha.

2.6 Agriculture in the rural development strategy

Agricultural sector occupies a central position in the Nigeria's Rural Development Sector Strategy (NRDSS). The strategy encapsulates key elements with potentially significant implications for agricultural development. Such elements include enabling incentive framework for rural economy, institutions role re-definition, efficient public sector delivery (subsidies, credit, extension, public spending), technology generation and dissemination, sustainable management of natural resources, adequate and efficient rural infrastructure (physical and social) and development of human capital (FMARD, 2001). Similarly, agriculture is one of the priority policy areas for integrated rural development under the National Policy on Integrated Rural Development. Cross cutting integrated rural development strategies with potentials to positively impact on agriculture are human resources development and utilization, enabling rural infrastructure, appropriate institutional framework, sustainable funding and effective coordination and monitoring (FMARD, 2001).

2.7 National Policy on Integrated Rural Development (NPIRD)

The National Policy on Integrated Rural Development was adopted in 2001 following a National Rural Development Sector Study. The objectives of the NPIRD include: reducing poverty, increasing productivity, reducing unemployment, improving rural and urban food security and promoting competitiveness. The National Policy on Integrated Rural Development (NPIRD) envisions the rural economy as a mainstream component of national agricultural and rural development. The agricultural policy area of NIPDR centres on the provision of increased investment in agricultural research and extension services in support of the smallholder farmer.

The strategies enunciated in the Policy include: promotion of rural productive activities, supportive human resources development and utilization (health and population; culture and social development; education, technology and skills development; research and extension services). Also included is the creation of enabling rural infrastructure; special programmes for target groups. Also provided for are rural community organization and mobilization and participation of rural people in the policy process.

The current Nigeria Rural Sector Strategy is based on the five principles: a) non-intervention; b) enabling Nigerian agriculture to transit from being low-cost, low-price supplier to supplier of high quality, value-added commodities and animal products, obtaining premium prices and capable of sustaining growth in the sector and raising the incomes of farm families; c) participation; d) sustainability; and e) greater equity.

2.8 The new national policy thrust on Agriculture

The New National Policy Thrust on Agriculture was adopted in March 2002. The main features of that policy include the evolution of strategies that will ensure sufficiency and improvement of the level of technical and economic efficiency in food production; reduction in risks and uncertainties; unified and all-inclusive extension delivery system; promotion of agro-allied industries; provision of rural infrastructure, rural banking, primary healthcare, cottage industries, etc. The broad objectives include:

- attainment of self-sufficiency in basic food commodities with particular reference to those which consume considerable shares of Nigeria's foreign exchange and for which the country has comparative advantage in local production;
- increase in production and processing of agricultural raw-materials to meet the growth of an expanding industrial sector;

- increase in production and processing of exportable commodities with a view of increasing their foreign exchange earning capacity and further diversifying the country's export base and sources of foreign exchange earnings;
- modernization of agricultural production, processing, storage and distribution through the infusion of improved technologies and management so that agriculture can be more responsive to the demands of other sectors of the Nigerian economy;
- creation of more agricultural and rural employment opportunities to increase the income of farmers and rural dwellers and to productively absorb an increasing labour force in the nation; protection and improvement of agricultural land resources and preservation of the environment for sustainable agricultural production; and
- establishment of appropriate institutions and creation of administrative organs to facilitate the integrated development and realization of the country's agricultural potentials.

The strategies contained in the Policy include:

- creating the conducive macro-environment to stimulate greater private sector investment in agriculture so that the private sector can assume its appropriate role as the leader and main actor in agriculture;
- rationalizing the roles of the tiers of government in their promotional and supportive activities to stimulate growth;
- reorganizing the institutional framework for government intervention in the sector to facilitate smooth and integrated development of agricultural potentials; and articulating and implementing integrated rural development as a priority national programme to raise the quality of life of the rural people;
- increasing agricultural production through increased budgetary allocation and promotion of the necessary developmental, supportive and service-oriented activities (unified extension system, i.e. ADPs) to enhance production and productivity and marketing opportunities;
- increasing fiscal incentives to agriculture, among other sectors, and reviewing import waiver anomalies on agricultural imports; and
- promotion of increased use of agricultural machinery and inputs through favourable tariff policy.

The new policy highlights the following aspects of agricultural improvement programmes: research and development including biotechnology; animal vaccine production; veterinary drug manufacture; agro-chemicals manufacture; water management; adaptive technology; agricultural development fund; supportive activities (input support, and commodity marketing and export) and service delivery activities (input supply and distribution, agricultural extension, credit and micro-credit delivery, and cooperative and farmer/community associations).

2.9 Agricultural Trade Policy

Nigeria's Agricultural Trade Policy seeks to exploit all the trade potentials of agricultural products both within the domestic and external market opportunities. This it hopes to achieve by encouraging sector specialization in terms of commodity-based comparative advantage in production and ecological endowment for cheap and adequate supply of agricultural raw materials necessary for inter-sectoral trade. It equally seeks the achievement of competitive quality and standard certified products to satisfy local demands and attain export competitiveness. To this end, it makes demands on export value and linkage with industrial sector to enhance export promotion and technology application objectives of the policy. Basically, the policy seeks the platform of Nigeria's bilateral, regional and multi-lateral trade

agreements to explore market for her agricultural products. This policy is not yet attained because the key fundamentals are still absent (Azih, 2008).

2.10 Other sub-sectoral policies and initiatives

2.10.1 Land Use Act and Tenure System

The Land Use Act of 1978 is aimed at facilitating an effective utilization and exploitation of the land resources for agricultural purposes. The law seeks to bring existing land tenure systems under one common law. This law, however, has been largely abused as public officials with authority for land use approval have expropriated large portions for selfish purposes. Besides, the law has become a key bottleneck to land access and alienation for investment uses, necessitating the call for its amendment. Currently, the present administration of President Yar' Adua is already in the process of implementing a land reform in line with his 7-point agenda.

2.10.2 Input policies

Nigerian agricultural input policy has over the years centred on government subsidy as a strategy to facilitate farmers' access to inputs, particularly fertilizer and improved seeds/seedlings. According to Olayemi (1995), since the early 1970s government policy on input supply and distribution focused on instruments for ensuring adequate and orderly supply of modern inputs. The generic agricultural inputs on which attention is usually focused include fertilizers, crop protection chemicals (CPPs, including pesticides, herbicides, nematicides), seed and seedlings, land and water resources, and mechanization services. However, chemical fertilizer remains the most strategic of all the inputs. There is marked disparity in the extent of use of agricultural inputs between Northern and Southern states. The 19 Northern states and Abuja account for about 70% of total annual consumption of subsidized fertilizer allocated by the federal government.

Fertiliser: Fertilizer procurement and distribution over the years has reflected inconsistencies and instabilities associated with government policy in Nigeria. Before 1976, when the centralized Fertilizer Procurement and Distribution Unit was established in the Federal Ministry of Agriculture and Water Resources, fertilizer matters were highly decentralized and loosely coordinated. Individual state governments placed orders for fertilizer in bulk and this was distributed through the extension services and approved sales agents working for the state ministries of agriculture. The Fertilizer Procurement and Distribution Department (FPDD) was envisaged to solve the problems of untimely delivery, inaccessibility of fertilizer to farmers, poor economies of scale, non-synchronization of import arrival schedules at the ports, which had characterized fertilizer supply, and which earlier experience indicated but failed to do so.

Today, there is considerable decentralization in the system. Many state governments and private sector operators now have their own fertilizer plants and have assumed greater responsibilities for fertilizer production, procurement and distribution, but there is great doubt about the functionality of these fertilizer plants today. They also procure product from the main private sector importers and producers and distribute at subsidized prices to farmers (FGN/SG2000/USAID, 2000). Key aspects of the current policy on fertilizer that are now being implemented by the Federal Fertilizer Department (FFD) of the Federal Ministry of Agriculture and Rural Development (FMARD) include:

- fertilizer quality control and monitoring by the National Fertilizer Technical Committee (NFTC) of the FMARD;
- promotion and development of organic fertilizer technologies and systems that will be attractive to the private sector for investment;

- commissioning studies on fertilizer usage and impact assessment particularly on the environment; implementation of the Fertilizer Market Stabilization Programme (FMSP), funded from a revolving account, and involving the procurement and equitable distribution of fertilizer to all states in Nigeria in order to stabilize the fertilizer market; and
- testing of new fertilizer formulations and samples from fertilizer companies and importers by the National Fertilizer Development Centre (NFDC) with the collaboration of the Institute of Agricultural Research (IAR), Zaria, and the institute of Agricultural Research and Training (IART), Ibadan to ensure quality and genuineness of claims.

Factors that have constrained the development of the Nigerian fertilizer market include:

- weak legal and regulatory framework that have supported liberalization, resulting in the flooding of the market with dubious middlemen and quality products;
- instability of macroeconomic variables (interest rates, foreign exchange, tariffs, subsidy and farmer protection regimes, etc);
- inadequate financial services and high cost of credit;
- lack of market information (on prices, availability, supply sources, etc);
- poorly developed rural infrastructure leading to high transportation costs;
- inadequate and obsolete port facilities;
- inefficiencies in the custom clearing bureaucracy;
- low demand arising from weak purchasing power of farmers; and
- poor technical knowledge of inputs, particularly fertilizers and CPPs.

Seed: The National Seed Policy of Nigeria was formulated in 1992 and was backed by the National Agricultural Seed Decree (NASD) No. 72 of 1992. It provided guidelines for regulating the various aspects of seed production, marketing and quality control activities (FG/SG2000/USAID, 2000). The decree established the National Seed service (NSS), Crop Variety Registration and Release Committee, the Seed Standards Committee, and the Department of Training, Information and Seed Extension. The decree is in line with regional and international standards, and makes provision for the withdrawal of public sector agencies in favour of the private sector in key areas of the seed industry. The FMARD regulates the seed sector. The production of breeder seeds is contracted to the National Agricultural Research Institutes (NARIs) working on specific crops. The production of foundation seeds is handled by both the NSS and the private sector, while the private sector produces certified seeds with the aid of contract farmers. The International Agricultural Research Centres (IARCs, mainly IITA, WARDA, and ICRISAT) complement the production, in cooperation with NARIs, and supply of breeder seeds to the NSS and the private sector for foundation seed production. Certified seeds are sold to farmers through the farm service centres (of the FMARD), various state agricultural marketing companies, the Agricultural Development Projects (ADPs) and cooperative societies. The reach of the NSS-controlled formal seed sector is limited. In the informal seed sector seed multiplication and distribution happens at the community level where farmer-to-farmer seed diffusion of both certified and uncertified seeds also prevails.

But, the NSS is hampered by the high cost of production and distribution of seeds, low levels of effective demand for seeds, the relatively narrow range of crops/varieties that do not meet small farmers' needs, inconsistencies and delays in the release of budgeted funds to compensate the NSS for subsidies. Other problems that have been noted in the seed sector (and the NSS in particular) include conflicting goals of agricultural development policy, poor and delayed funding of public institutions to perform their functions (producing and distributing quality seeds by the ADPs, quality control and research support activities), conflicting roles for public and private sector participants, lack of clarity on intellectual

property rights for developing breeder seeds in the private sector, insufficient resources for training and technical assistance to contract growers, and slow release of new varieties due to irregular meetings of the variety release committee and the seed council, lack of credit to farmers and dealers to develop outlets in rural areas, inadequate extension services, and poor rural infrastructures, among others (FGN/SG2000/USAID, 2000).

Crop Protection Chemicals (CPPs): The CPPs component of Nigerian agricultural input sub-sector includes herbicides (30%), insecticides (40%), fungicides (15%), growth regulators and seed treatment chemicals (8%), rodenticides, nematicides and others (7%). There are no public sector agencies involved in the manufacture or importation of CPPs in Nigeria but government will support the establishment of such factories. It encourages the timely supply of adequate quantities of CPPs through speedy formalities in foreign exchange procurement, port clearing etc. The Agricultural Development Projects (ADPs) are the only public agencies that are directly involved in the pricing and marketing of CPPs.

The key operators in the CPP market include the ADPs, private companies and the Japanese Aid-in-Kind, KR2. The unorganized nature of the CPP market makes it difficult to determine market shares and sizes (FGN/SG2000/USAID, 2000). Private sector companies some of which have formulation and packaging plants (mainly multinationals) supply 70% of the estimated total CPP demand of approximately ₦500 million per annum. These include Chemical and Allied Products, Swiss Nigeria Chemical Company – Ciba Geigy, National Oil and Chemical marketing Company –Shell, BASF, Unichem – Bayer, Ibachem - Dow Elanco, Nigeria Hoechst and Rhone, and Total. The CPP companies supply the Federal government, which in turn supplies the small scale farmers through its field offices and the farm service centres. State governments buy from the CPP companies and channel it through their ministries of agriculture, the ADPs and established CPP distributors.

Since the deregulation of the agricultural sector in 1986, the marketing of CPPs have become unorganized, without proper legislative control thereby allowing unprofessional and unscrupulous dealers whose activities promote adulteration and poor quality products to operate in the market. The relative fewness of the number of suppliers of CPPs limits the variety of available CPPs in the market and constrains product choice among farmers. There is inadequate information on the CPP needs of farmers, which makes it difficult for dealers to forecast demand and plan supplies. The level of demand remains low as a result of the weak purchasing power of farmers. Recent evidence on use of herbicides in Kebbi, Sokoto, Cross River, Kwara, and Adamawa states indicate that it is restricted because of non-availability, high cost and lack of skill of application (Jibrin, 2003).

2.10.2.1 The Subsidy Component of National Agricultural Input Policies

Subsidy policies aim to reduce the costs of an activity relative to what they would have been in the absence of the policies. Subsidies can be direct or indirect, explicit or implicit. Analysis reflecting explicit subsidies only underestimates subsidy regimes and their potential incentive effects. In Nigeria, indirect subsidies also reach the agricultural input sub-sector through government spending on agricultural research/extension, land use, mechanization, irrigation, agricultural credit and fiscal measures. Structurally, these subsidies are found in three key activities, namely, the importation processes, the distribution processes, and the production processes. Input subsidies date as far back as 1950s when the regional (colonial) governments in Nigeria subsidized the prices of key agro-inputs, especially agrochemicals used in the production of export crops. In the early 1970s, the Federal government centralized the application of subsidies and extended it to food crops (Olayemi, 1995), in addition to policy instruments given as follows: fertilizer subsidy was wholly borne by the FGN and hovered around 75%; shared between the states and the FG at 25% and 50% respectively in 1980; rose rapidly after 1986

as a result of currency devaluation under SAP; subsidy on seed was 50% or more; agro-chemicals were subsidized up to 50%; and tractor hire services were rendered at between 25% and 50% subsidy (Okoye, 2003).

Nigeria's agricultural subsidy policies have evolved over the years, in response to changing political and economic climate as well as responses to the dominant global trends in economic restructuring, trade liberalization. In the early 1980s the receipt of a World Bank loan of $250 million had a precondition for the Nigerian government to reduce subsidy to no more than 50% by 1985 and 25% by 1988. Such conditionalities, which are encountered from time to time, are automatically built into the nation's input subsidy policy regime at the material time they are imposed. In a general sense, the history of agricultural input subsidy policies in Nigeria seems to fall broadly into seven periods (see table 5 below), ranging from the pre-1970, marked by minimal government intervention in agriculture through the present regime of 25% subsidy by the federal government. The National Agricultural Policy in 1988 provided for selective application of subsidies on farm inputs, farm equipment and facilities, and farm services to reduce cost of agricultural production. Such subsidies were to be granted on a declining scale with eventual phasing out. But experience over the years, shows that the federal government have not complied with this principle for perhaps political reasons, except when compelled by several forces including budgetary pressures, misadministration of subsidies, private sector lobby or pressures from multilateral institutions.

Table 5: Past and Present Input (Fertilizer) Subsidy Regimes in Nigeria

Policy period	*Key policy provisions*	*Level of subsidy*	*Remarks*
Before 1976	Procurement, distribution. Subsidy levels left to states.	25- 50% of landed cost of fertilizer.	State governments could not recover much of the transportation costs.
1976-1979	Centralized procurement and distribution, subsidy determination by FGN.	Nominal level in state capitals: 75%; Real level, about 85%.	Same problem of transport cost recovery as above.
1980-1983	Decentralized arrangement	Federal and State Governments took equal share of the 75% subsidy at 37.5% each. Actual subsidy close to 85%.	
1984-1985	Centralized Procurement Again. FGN took a World Bank loan of $250 million with a precondition to reduce subsidy to more than 50% by 1985 and 25% by 1988.	1985: 38%; 1986: 28%	SAP and Post-SAP periods.
1986-1998	Decentralized Procurement. Deregulated and privatized marketing by 1997.	Between 70% and 80% and complete withdrawal of FGN from subsidy scheme.	
1999-2000	25% subsidy abolished in 2000	1999, 25% subsidy ; 2000, zero subsidy	
2000-2003	Reduction of tariff on fertilizer imports (5%); implementation of the fertilizer Market stabilization Programme (FMSP) under FMARD	25% subsidy under the FMSP: 50% subsidy planned?	Devaluation of Naira results in up to 6-fold increase in landed cost of fertilizer.

Source: Okoye, 2003.

Agricultural input subsidy administration particularly concerning fertilizer is amply discussed in the literature. Highlights of the discussion include the movement of the subsidy experience from state administered subsidy to Federal Government administered subsidy, and then to sharing of subsidy between the FGN and the states. Also notable is the problem of non-recovery of intra-state transportation costs from farmers, which points to poor administration, leading to avoidable leakages. As a result of this, actual subsidy was always much higher than officially stated. Another important point is that between 1986 and 1997, the local currency suffered rapid devaluation against the major international currencies as a result of the economic liberalization of the time. The FGN used this as a reason to provide fertilizer subsidies of between 70% and 80% on agricultural inputs. According to Falusi

(2001), limited effectiveness of the scheme and the need to encourage private sector participation forced the FGN to deregulate and privatize the fertilizer market in 1997.

Availability of agrochemicals is about 40% of its requirements, much better than those of seeds and fertilizer. But the quality of available agrochemicals is low, with instances of banned products sold in the market. Fertilizer subsidy ought to benefit poor farmers, but the elites and large commercial farmers largely control it. Much of the fertilizer is diverted away from state supply channels and sold at considerable profits at the government's expense. At present, government subsidy covers only a third of the available fertilizer. Current fertilizer availability is only 4% of estimated optimal fertilizer use of 7million tones; fertilizer use has declined from over 1.5million tones in the early 90s to about 330,000 tonnes today (DFID, 2003).

In comparison with fertilizer, the market for seeds is quite liberalized, but only 12% of total requirement is currently met. The number of seed companies has fallen from 5 to 2 reducing competition in the market. This is due to inconsistent agricultural input policies and the fact that government's direct intervention implicitly undermines private sector participation in the seed production and markets. The National Seed Service (NSS) is the main channel through which subsidy on seed is provided in Nigeria. Its services are government-subsidized and the subsidy element on improved seed was estimated to be 50% by 1995 (Olayemi, 1995). There exists a large subsidy component in the operations of the IARs and the NARIs in Nigeria, which deal with the production of breeder seeds, but it has not been estimated. At state levels, the ministries of agriculture make bulk purchases of seeds from the NSS and private seed companies and sell at subsidized prices to their farmers through the farmer service centres. Again no statistics have been located concerning the levels of this subsidy. In the 1980s the Federal Government subsidized agricultural machinery/equipment by 50% through the machinery ownership scheme and tractors hire services, which continue till date. Since the 1970s, machinery/equipment for agricultural production has been exempted from import duty.

A study on input subsidy policies in Nigeria (Okoye, 2003) concluded that: the granting of direct agricultural input subsidy has been an important element of government agricultural incentive structure since the 1950's; unknown levels of indirect subsidies exist in all sectors of agricultural production in Nigeria as empirical studies to analyze them is lacking; the annual fertilizer subsidy costs in Nigeria are on the average very high and have sometimes been higher than the entire capital expenditure on agriculture itself; despite the huge amounts of money being spent to improve access of farmers to agro-inputs, they are reportedly still not only having difficulty obtaining the necessary inputs on time and of good quality, but are also paying very high prices; regulatory mechanisms, monitoring and enforcement by the government has not been able to adequately address the key problems of poor quality inputs in the market and cross-border leakages of subsidized inputs. It was also observed that the private sector, although most often left disorganized and discouraged by lack of clarity about government intensions in input policy has considerably expanded its involvement in the supply, particularly of fertilizer under the control and management of the local governments.

2.10.3 Agricultural extension

Agricultural extension in Nigeria is the primary function of Agricultural Development Programmes in the 36 states of the country, plus the Federal Capital Territory, Abuja. The ADP system in Nigeria is complemented by a number of supporting institutions, most of which are Federal. These agencies and institutions comprise the Agriculture and Rural Management Training Institute (ARMTI) and the Project Coordinating Unit (PCU), which resulted from a recent merger of Agricultural Project Monitoring and

Evaluation Unit (APMEU) and Federal Agricultural Coordinating Unit (FACU) (FMARD, 2001). Others are the Federal Department of Agriculture (FDA) and State Ministries of Agriculture and Natural Resources.

Since the initiation of ADPs in the 1970s (FMARD, 2001), ADPs have been the primary focus of public extension efforts in Nigeria. These were created out of enclave production projects with support from the World Bank and rapidly scaled up to cover all states. In all, 37 ADPs exist to coordinate the delivery of technology, inputs and infrastructure.

Although many ADPs have been able to assure a minimum of extension services to farmers, unstable funding has been a major constraint. Low level of use of new information technologies, poor communication and low staff morale are major problems. Staff skills are not dynamic to respond adequately to new challenges in the areas of social organization, post-harvest, natural resources management, and marketing. Although the T&V system employed by the ADPs has successfully addressed many of the weaknesses of the national extension system, it was costly to operate and unsustainable in the face of continuing budget constraints. The Government's current strategy (articulated in the Rural Development Strategy Paper, which was adopted as official policy in October 2001) is to give a new orientation to the process of technology generation and transfer, whereby the institutional framework would be transformed in order to make agricultural research and extension agenda and activities more *demand-driven and client-responsive.* The proposed project would support this shift in paradigm by adopting an innovative approach to research/extension advisory services which would be based on three core principles: a) decentralization – to achieve responsiveness of farmers; b) contracting out – to achieve efficiency and flexibility; and c) cost-sharing – to achieve sustainability and "buy-in" by beneficiaries.

The reality is that the old system is gradually changing. The environment for rural advisory services, in general, is increasingly being shaped by policies and influences. The ADPs are expected to evolve from front line extension to a role of facilitator, catalyst, and coordinator. Adapting public extension services to the changing needs and opportunities for the kind of innovation and agricultural diversification activities being promoted under the proposed project will represent a significant change in Nigeria's rural advisory system. Under this scenario, the main activities of the ADPs would be to: help farmers organize, facilitating their access to other governmental, NGO and private programs and generally assisting them in properly formulating their demands for services and innovations/technical assistance; coordinate extension activities at the state level to maximize complementarity among providers, and facilitate, where possible, partnerships; provide technical back-stopping to front line extension workers in LGAs, producer and community organizations and NGOs; monitor performance of extension providers, especially LGAs; and ensure proper coordination and monitoring of implementation of agriculture and rural sector projects, on behalf of FMARD. ADPs would be expected to realize substantial efficiency gains by streamlining management and size through: i) reviewing governance and autonomy to provide for greater representation of farmers and the private sector on governing boards, and flexible management systems; ii) downsizing of staff to the level needed for the above coordination and facilitation roles; and iii) up-grading staff education levels, and technical training in non-crop areas for ADP staff, including HIV/AIDS prevention and awareness.

Under the New Policy Thrust on Agriculture, extension service delivery will be streamlined through the integration of the ADP and state extension services for greater services, in view of the observed dichotomy in extension services in some states between the ADP and the States' Ministries of Agriculture. Consequently, agricultural extension service is being strengthened including the use of demonstration or model farms and adoption of integrated production and pest management system.

2.10.4 The presidential initiatives and Value Addition

The Nigerian Federal Government has established several special Presidential Committees for the promotion and development of strategic agricultural commodities. The committees are charged with producing blueprints for the promotion of respective commodities for export, employment creation and agro-processing investments. The commodities include rice, vegetable oil, sugar, cassava, livestock, tree crops and fisheries. These committees are developing measures in the areas of productivity-enhancement, identification and development of domestic and export markets, development of agricultural processing and value adding technologies and enterprises and the promotion of linkages between commodities and other sectors.

2.10.5 National agricultural development fund (NADF) and Agricultural Credit Guarantee Scheme

NADF addresses the problem of inadequate funding of agriculture on a sustainable basis. Agricultural Development Fund (ADF) have additional sources of funding as follows: 25% appropriation from the sugar development levy; and 1% appropriation tax accruing to the federal government from petroleum products pump price.

The Agricultural Credit Guarantee Scheme (ACGS) was set up by the Central Bank of Nigeria to mobilize funds from the banking sector for rural development and to guarantee loans by the commercial banks for investment in agriculture in order to minimize the risks involved in financing the sector. The implementation of this policy has been too slow to reach all applying farmers and poses some problems for Nigeria's poverty-stricken small-scale farmers who appear to have more difficulty now securing production assistance.

2.10.6 The Fadama Project

Fadama I, financed by the World Bank at the cost of about $45 million, was launched in 1988 and implemented in the northern states of country providing support for dry season farming through the supply of small scale irrigation implements and construction of dams for crops and livestock farming. The Fadama Development Project (Fadama II), launched in 2004 and covering 12 states, seeks to raise the incomes and improve the well-being of about 2 million rural families involved in fadama production and related off-farm activities as well as enhance food security and reduce poverty, through environmentally sustainable increases in agro-pastoral and food chain supply productivity and competitiveness and better access to inputs and product markets and associated services. Pursuant to these development objectives, the proposed project would finance the following: a) an infrastructure component designed to increase access of the rural poor to essential social services and markets; b) a science and technology component to ensure that the rural poor have access to appropriate technologies to diversify their income from their on-farm and off-farm activities; c) an institutional component to enhance the institutional capacity of the private sector, state government, local administrations, communities and organized private economic interest groups to deliver key social and physical infrastructure and environmental services efficiently and cost-effectively, and to make participating government agencies more responsive to local demands; d) a financial services component to support increased access to financial services from the private sector; and e) an environmental and social safeguards and conservation component to support the monitoring and mitigation of the negative environmental and social impacts of the project and to promote sound conservation and integrated ecosystem management. According to an IFPRI team, Fadama II was very successful increasing direct beneficiaries' real income by 58.8% and this is far beyond the anticipated target of 20% (Nkoya *et al.*, 2008).

Fadama III is expected to expand across states that have not benefitted, especially the southern parts of Nigeria. The loan package is about $450 million, with the World Bank providing about $250 million (Azih, 2008). The development objective of Fadama III project is to sustainably increase the incomes of fadama resource users by directly delivering resources to the beneficiary rural communities, efficiently and effectively, and empowering them to collectively decide on how resources are allocated and managed for their livelihood activities and to participate in the design and execution of their sub-projects (reduce rural poverty, increase food security and hence contribute to the achievement of a key MDG.

2.10.7 The special programme on food security (SPFS)

The National Special Programme for Food Security aims to achieve sustainable food security and alleviate rural poverty. It is based on participatory, simple and innovative low-cost approaches (technical and institutional) to improve the productivity and sustainability of agricultural systems in order to guarantee better livelihoods for poor farmers and rural populations. The objectives include among others: assisting farmers to achieve their production and income-earning potentials on a sustainable basis and strengthen the relevance and effectiveness of research and extension. Its components include food security project, aquaculture and inland fisheries project, animal diseases and trans-boundary pest control project, marketing of agricultural commodities and food stock management project and soil fertility initiative. It is being implemented in 109 project sites on the whole. In each of the 36 states, there are 3 sites and one site is located in the Abuja Federal Capital Territory. One of the 3 sites in each state is devoted to the development of urban/peri-urban agriculture). Each site targets 250-300 farm families and 500-600 ha (FMARD, 2001).

2.10.8 Commerce 44 Instrument

This initiative seeks to develop the export of eleven agricultural commodities, eleven manufactured products and eleven solid minerals, with high export potentials. The idea aims to focus on eleven countries or regions of the world taking advantage of the concessions offered by the subsisting bilateral and multilateral agreements as well as memoranda of understanding (MoUs) that will facilitate the smooth export of Nigerian products into their markets. The agricultural commodities include cocoa, cotton, cassava, ginger, shea nut, gum Arabic, sesame seed, poultry, cashew nuts, fruits and vegetables, and floriculture. The capacity to exploit these opportunities is in the attainment of best practices to enhance their competitiveness.

2.10.9 The nucleus estate initiative (NEI)

This is a private sector-driven agricultural scheme, which demonstrates potentials for private sector contributions to linking production with markets. It is designed to increase agricultural production, increase farmers' productivity, guarantee timely provision of necessary inputs to farmers, ensure ready market for farmers produce, guarantee free flow of raw materials to end user firms and address to a great extent their poverty. The strategy is to link the network of rural-based low-income farmers and farming groups to major producers/processors.

2.10.10 The strategic grain reserve scheme

Systems for assuring food security and responding to famine conditions include a Strategic Grain Reserve (SGR) Scheme implemented since 1976, current afforestation programmes in Sokoto, Kebbi, Katsina, Kano, Jigawa, Borno and Yobe states and erosion control-and-prevention projects such as those in Enugu, Anambra, Imo and Ondo states. The SGR scheme aims at maintaining the national food security stock required in times of emergency to stabilize prices, safeguard agricultural incomes and continuity of farm production. The scheme operates through purchase and release of commodities and acts as the buyer of last resort. It is reported that only 8 out of 33 silo complexes have been completed

and are operational with capacity of 186,000 tonnes (Idachaba, 2003); only 3% of installed silo capacity was utilized pre-1999. The National SGR scheme has recently been expanded to cover additional food crops such as gari, yams, etc. In 2002, the surge of agricultural produce in the wake of the agricultural sector growth rate of 5.1% led the Federal Government to provide a special grant of ₦1.8 billion to mop up the excess grains and gari and stabilize prices (Bello, 2003). Also, the Federal Government allocated additional ₦1.0 billion to mop up more excess grains. Also, ₦100m has also been approved to mop up surplus yams.

2.10.11 Criticisms of Past and Present Agricultural Policies

Though Nigeria's agricultural sector has witnessed considerable competitive restructuring in the last two decades, the new competitive environment while constituting considerable incentive to farmers, has failed to stabilize prices, and therefore, farm incomes (Olomola 2006). The 2006 Global Hunger Index (GHI) rates Nigeria as a country with serious hunger problem using three dimensions of hunger, namely, insufficient availability of food, shortfalls in the nutritional status of children, and child mortality, which to a large extent is attributable to under-nutrition (Wiesmann 2006).

Although the proportion of under-nourished people in Nigeria decreased from 13.3% (19990-92) to 9.2% (2004) according to FAO in 2006, this reduction may be attributable to increasing trend of food importation (Ujah, 2007). The Fig. 22 below shows that the value of food importation into Nigeria in recent years is greatly surpassing the value of food export. Note also the volatile trend in the value of the country's agricultural export in recent years, indicating its volatile contribution to foreign exchange earnings.

Figure 22: Value of Nigeria's Total Agricultural Imports and Exports (2000-2005)

Source: authors with data from FAO (2009)

According to Eboh *et al.* (2004), Nigerian agricultural policies have been shallow, poorly articulated, too casual and simplistic. They tend to be largely narrative, not sufficiently analytical and reflective of the hard issues of strategy and policy accountability. They lack adequate translation of strategies into sector programmes and projects. Often, they contain no indicators, benchmarks and targets, thereby making measurement, tracking and monitoring extremely difficult. There are no explicit linkages to existing policies and frameworks that impact on agric sector, e.g. rural development, SMEs, environment, water resources. The policy elements are not elaborately contextualized as they lack visible linkages to past agric policies. It is not clear what value has been added by successive policies and there are no clear inputs and insights from sound policy analysis.

The agricultural policy landscape is also characterized by poor implementation and narrow base of policy formulation. According to Manyong *et al.* (2003), there has been a tendency to regard formulation of policies as ends in themselves, rather than being means to a desired end. For this reason, little attention is being paid to efficient implementation of policies. Bureaucrats and policy implementers often loose sight of the fundamental objectives of policies coupled with poor managerial capacity, bureaucratic bottleneck, corruption and high rate of policy turnover which tend to complicate the problem of policy implementation. On the other hand, the base of agricultural policy formulation process in Nigeria is still narrow as the level of involvement of the people in the formulation of policies that affect their lives is minimal with the consequences of lack of grassroots support and lack of popular mobilization necessary for success.

2.10.12 Sub-national Agricultural Resources and policies: Benue, Nassarawa and Plateau States

2.10.12.1 Benue State

Agricultural Resources: Although the fertile top soils of the plains are not so deep, their vast spatial coverage provides the basis for extensive form of peasant agriculture. The numerous rivers and streams in the state provide a great potential for irrigated agriculture, source of freshwater fish, hydroelectric power and transport. Most of the state lies in the southern guinea savannah zone. The natural vegetation, comprising grasses, trees and shrubs, is currently being used for grazing, firewood, timber, wood carving, palm products, fruit gathering and various construction purposes including building.

The succulent grasses can be easily harvested, dried and preserved for dry season livestock feeding. Some of the economic trees commonly found here include the locust bean, shea-butter, mahogany, silk cotton, cashew, mango, orange, and guava.

Agriculture forms the backbone of the state economy, engaging up to 70% of working population. Bush fallow using simple tools is the dominant system though mechanization and plantation agriculture/agro-forestry are gradually creeping in. Use of farm inputs such as fertilizers, improved seeds, insecticides and herbicides is on the increase through the activities of the State Ministry of Agriculture.

Farms are generally small and fragmented, ranging from less than one hectare to six hectares. Important cash crops include soyabeans, rice, groundnut, citrus, oil palm, melon, African pear, hot pepper, and rain-fed tomatoes. Food crops include yam, cassava, sweet potatoes, beans, maize, millet, guinea corn and vegetables. There has been a gradual shift from a grain and root crop economy to a tree economy in much of the state; and there seems to be little irrigated agriculture despite the abundance of fadama and surface water. In rural areas, peasant agriculture is the dominant occupation, although trading, hunting, fishing, carving, and weaving also engage a good percentage of people.

Agricultural Policy: The Benue State Economic Empowerment and Development Strategy (BENSEEDS) has identified some major issues and challenges facing the state's agriculture. These challenges to food insecurity include inadequate processing and storage facilities, reliance on rain-fed agriculture, menace of weeds and pests, and soil degradation.

The goals of agriculture in BENSEEDS include i) to sustain food security, employment opportunities, income generation, and remain the food basket of Nigeria; ii) conserve and manage sustainability the State's fishery resources, and protect areas of resource, increase fish production, preservation,

processing, marketing and distribution in partnership with neighbouring communities and stakeholders for the benefit of the people and government; iii) attainment of self-sufficiency in forestry and wildlife products for the realization of poverty reduction, wealth creation, and employment opportunities; and iv) attainment of self-sufficiency in livestock for the realization of poverty reduction, wealth creation, employment opportunities and health for all. These various goals are backed up by numerous targets and strategies.

2.10.12.2 Nassarawa State

Agricultural Resources: The vegetation of Nassarawa State can be divided into two zones made up of i) the flood plain complexes of savannah which is a mixture of several vegetation types, found on river flood plains; and ii) mixed leguminous wooded savannah characterized by mixed formation of trees, shrubs and grasses, and wooded with *Daniella oliveri* and oil palms. The economy of the state is monoculture with over 80% of the people engaged in subsistence farming and living in rural neighbourhoods. Since agriculture is the mainstay of the state's economy, it is strategic to stimulating the growth and development of the state.

The availability of abundant arable farmland (2.7 million hectares) in the state offers a great agricultural potentials and opportunities for commercial farming, fishery development, and wildlife and forest conservation. Blessed with tropical climate and fertile soil, the state produces many cash and variety of food crops including soya beans, sesame seeds, groundnuts, rice, cassava, yams, maize, cashew, sorghum, melon, mangoes and vegetables. The state also has great potentials for animal husbandry and feeds production given her large herds of cattle, goat and sheep, chickens and animal wastes.

Agricultural Policy: The state is faced with daunting agricultural/environmental challenges such as soil erosion, land degradation through mining and bush burning, deforestation, flood, waste management problems, and pollution. However, in view of the dominant role that agriculture plays in the state's economy and the desire to sustain food security and the supply of industrial raw materials, the Nasarawa State Economic and Empowerment Development Strategy (NASEEDS) policy thrust on agriculture is committed to increasing investment in food and agricultural production.

Backed up with many targets and strategies, the main policy thrusts under agriculture include:

1. Provision of right policy environment and target incentive for private investment and an enabling environment for those employed in agriculture;
2. Reducing growing food insecurity in the state through specific programmes and projects aimed at increasing labour supply presently being depleted by rural-urban migration and HIV/AIDS pandemic;
3. Fostering effective linkages with SMEs and industry to achieve maximum value-added and processing for export. Food surplus shall be exported or channeled for industrial processing and other uses, and efforts made to reduce waste of agricultural products;
4. Modification of agricultural extension schemes to reduce the impact of HIV/AIDS and ensure sustainable environmental management; and
5. Concrete encouragement of the private sector to invest in the agricultural sector.

2.10.12.3 Plateau State

Agricultural Resource: The state is hydrologically advantaged in that it is a major watershed to many rivers, with high water table in many areas of the state. The availability of water has made it possible for the state to be ranked number one in vegetable production. Also, 95% of Irish potatoes consumed in the country are grown in the state. About 70% of the population of the state lives in the rural areas and 80%

of these are engaged in agriculture. Farming, therefore, constitute the largest sector of the rural economy. Huge potentials exist in the state for cereals, oil seeds, root crops subsector, and livestock production. The state has at least a total of 227,189 farm families with an average of 6 persons and 2.5 hectares of land under cultivation.

The abundant agricultural and mineral resources of the state can provide a solid base for rapid industrialization. Industries which can be profitably established using local raw materials are food processing, beer and beverage industries utilizing wheat, barley, maize, Irish potatoes, yams, fruits and vegetables produced in the state; and milk and milk-based product industries.

Agricultural Policy: It is estimated that about 60% or more of all vegetables and Irish potatoes produced in the state perish due to the absence of food preservation and processing technologies. However, in recognition of the potentials of the agricultural sector in repositioning the economy of the state, Plateau State Economic Empowerment and Development Strategy (PLASEEDS) is committed to making deliberate polices to make agriculture attractive to farmers, youths, women, and the organized private sector. Other agricultural policy focus of the PLASEEDS includes the following (backed up by many targets and strategies):

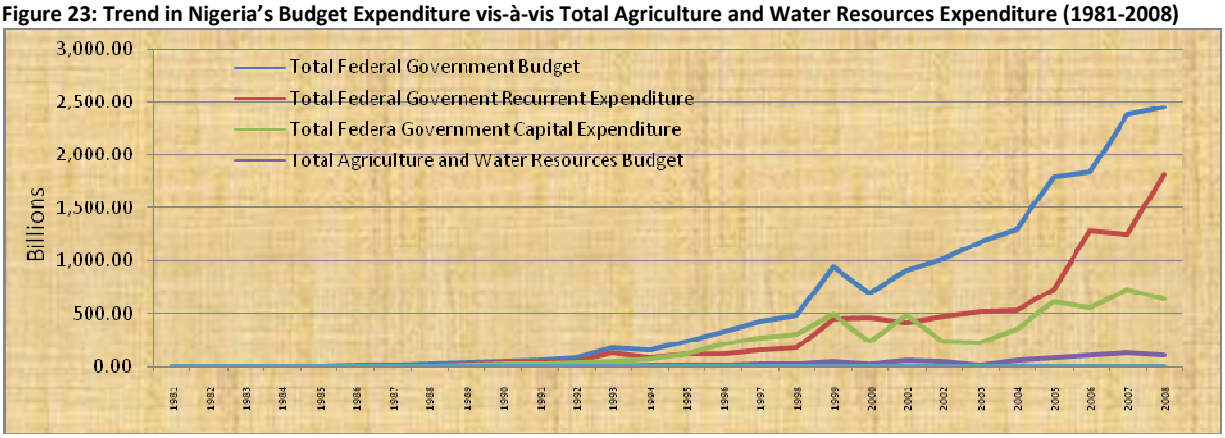
- Encourage the formation of cooperatives for cassava and coffee production as well as for livestock and poultry;
- Support and encourage advocacy to relevant institutions set up by Federal Government to enhance agricultural production; and
- Reform the entire machinery of the agricultural sector to give prompt and effective services to stakeholders.

3.0 AGRICULTURAL BUDGET TREND AND ISSUES

3.1 National agricultural budget trend and issues

Since 1991, Federal Government's total budget has been increasing astronomically, while her recurrent expenditure has also been rising greatly from 2001 (Fig. 23). The figure 23 also shows that total Federal Government Capital Expenditure has been volatile over the years and actually declined in the 2008 proposed budget. Total Agriculture and Water Resources budget seems to be stable but very far below the Federal Government's total, recurrent and capital expenditures over the years.

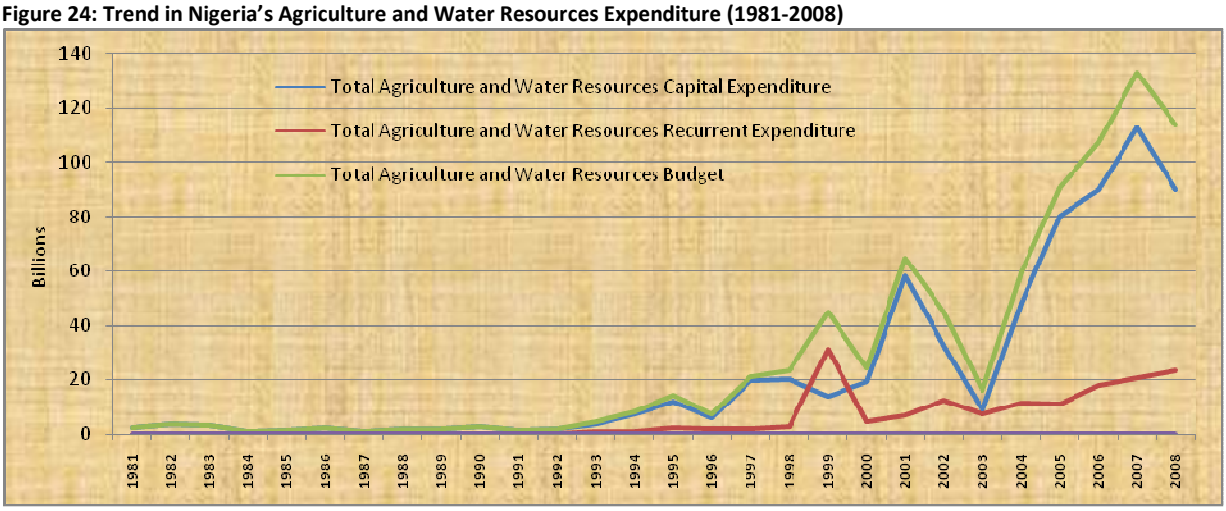
Figure 23: Trend in Nigeria's Budget Expenditure vis-à-vis Total Agriculture and Water Resources Expenditure (1981-2008)



Source: Ujah (2007)

Analysis of the trend in the budget of Agriculture and Water Resources reveals that total capital expenditure and total budget for the ministry has always been very closely associated (Fig. 24). Of particular interest is the fact that total capital expenditure allocation has always been higher than the recurrent expenditure since year 2000 except in 2003 when both allocations were almost equal. But in the 2008 budget, allocation for capital expenditure witnessed a decline from the 2007 allocation and the allocation for recurrent expenditure has been increasing since 2005. However emphasis should be laid on the implementation of the budget for the sector as recent monitoring and evaluation reports indicate that the implementation of the 2007 and 2008 agricultural budget was below 25%.

Figure 24: Trend in Nigeria's Agriculture and Water Resources Expenditure (1981-2008)

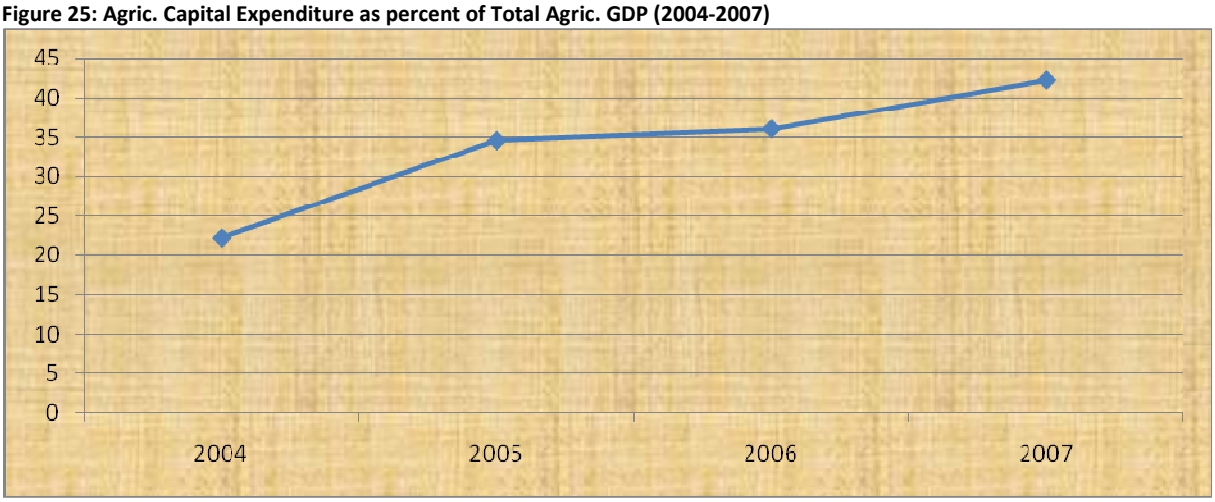


Source: Ujah (2007)

However, the impact of these increases in capital expenditure in the ministry is not very clear given the myriad of problems facing the agricultural and water resources sector in the country. Indicators need to be developed for monitoring and assessing budgetary impacts in the sector in relation to policy priorities and objectives of the sector. A look into the budget details of 2008 for the sector does not show any capital expenditure commitment for improving the production, storage, processing and marketing activities of the small-scale farmers who constitute food security engine of this country. Government budget should be an important instrument for making the Nigeria small-scale farmer competitive not just regionally but also globally. Lack of or inadequate funding of the agricultural sector can never put the sector on sustainable grounds.

It is commendable to note that the total capital expenditure to agriculture as a percentage of total agriculture GDP has been increasing since 2004 (see Fig. 25 below). It increased from 22% in 2004 to 42% in 2007. While deliberate effort to increase this to at least 80% is advocated, greater efforts should put into ensuring that such capital expenditures are pro-poor and addressing the myriad of problems facing the illiterate and resource-constrained small-scale farmer.

Figure 25: Agric. Capital Expenditure as percent of Total Agric. GDP (2004-2007)

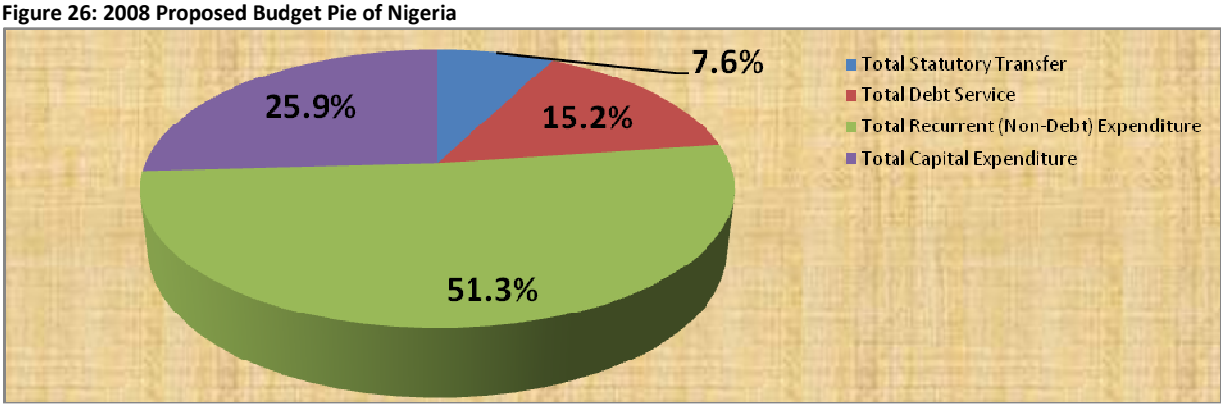


Source: authors with data from CBN Statistical Bulletin (2006) and FGN Budgets

3.2 Nigeria's 2008 Agricultural Budget Highlights and Ratios

Nigeria's 2008 proposed budget is significant from the point of view of total recurrent (non-debt) expenditure with about 51.3% of all expenditure (Fig. 26). About 15.2% and 7.6% of the entire budget was dedicated to debt service and statutory transfers respectively within the fiscal year. 25.9% was dedicated to capital expenditure, while a total sum representing 74.1% of the entire budget was expected to be spent on non-capital items. Given the magnitude of infrastructural decay and poverty in Nigeria, the 2008 proposed budget seemed to be a contradiction of its supposed focus – the ordinary Nigerian. The life and welfare of the ordinary Nigerian can only be affected when there is a massive investment on capital items by the government. To drive home the point, the total capital expenditure per capita of the 2008 proposed budget was approximately ₦4, 386[3], and ₦365 per capita per month. The big question here is can this amount improve the welfare and poverty of an individual given the prevailing economic circumstances?

Figure 26: 2008 Proposed Budget Pie of Nigeria

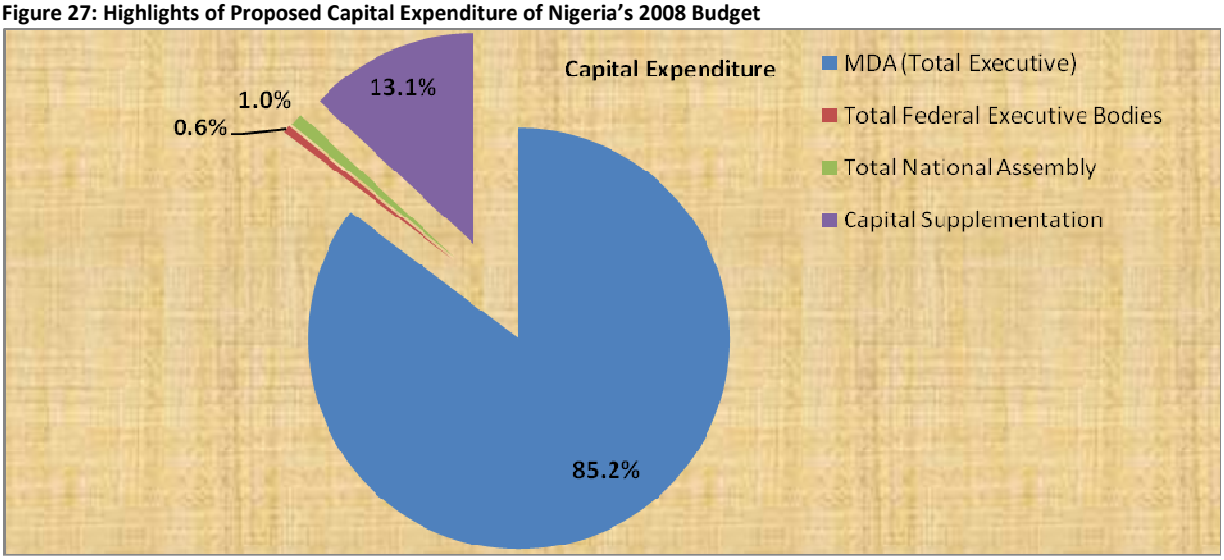


Source: Ujah (2007)

[3] This figure was arrived at using the 2006 population figures. This figure will certainly be less when calculated with the 2008 projected population figure for Nigeria.

Further scrutiny of the 2008 budget revealed that capital expenditure by MDAs (total executive) constituted the largest chunk (85.2%) of the budget (Fig. 27). Capital supplementation (e.g. counterpart funding, MDGs social safety nets, conditional grants, etc) got 13.1%, National Assembly got 1.0% and Federal Executive bodies including National Population Commission, Code of Conduct Bureau, Public Complaints Commission, INEC, etc got 0.6% of total capital expenditure.

Figure 27: Highlights of Proposed Capital Expenditure of Nigeria's 2008 Budget

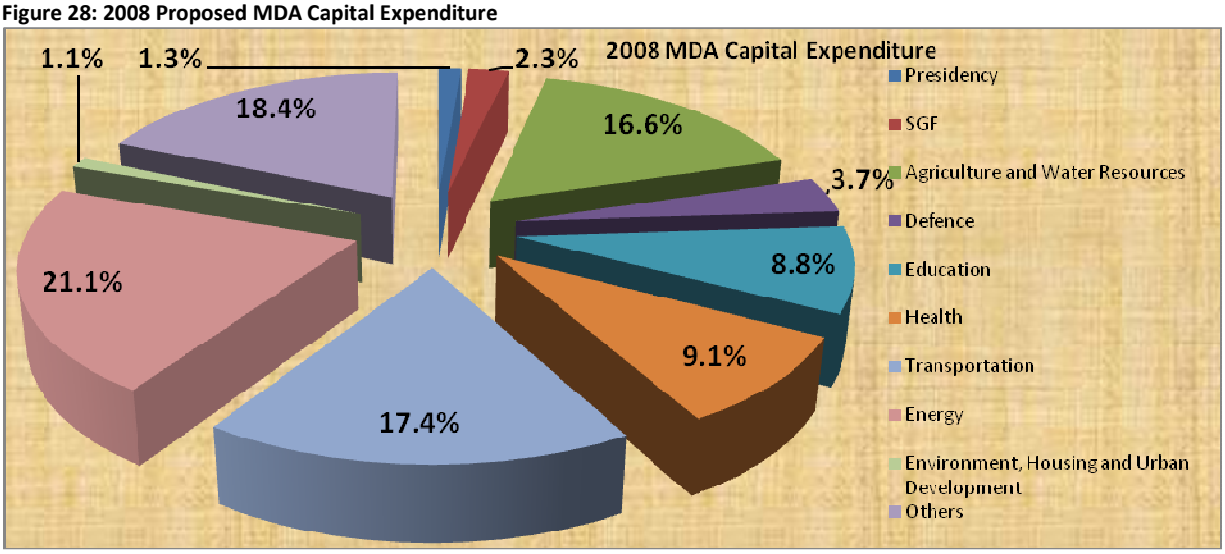


Source: Ujah (2007)

Of particular interest here is the capital expenditure proposed for the National Assembly, not because it is a significant share of the total capital expenditure proposed but because there is no allocation for capital items in the detailed budget for the National Assembly. In fact, capital expenditure got a zero allocation for the National Assembly. This confusion needs to be clarified.

Fig. 28 below highlights the details of the total capital expenditure by some selected Ministries, Departments and Agencies (MDAs) of the Federal Government. It reveals that the Energy ministry got a lion share of 21.1% of the total MDA capital expenditure. This reflects the importance and priority which the government attaches to one of its seven point agenda. Secretary to Government of the Federation (SGF) got 2.3%, while Defense, Education and Health got 3.7%, 8.8% and 9.1% of the total MDA capital expenditure respectively. Transport got 17.4%, Environment, Housing and Urban Development got 1.1% and a combination of other MDAs got 18.4% altogether.

Figure 28: 2008 Proposed MDA Capital Expenditure

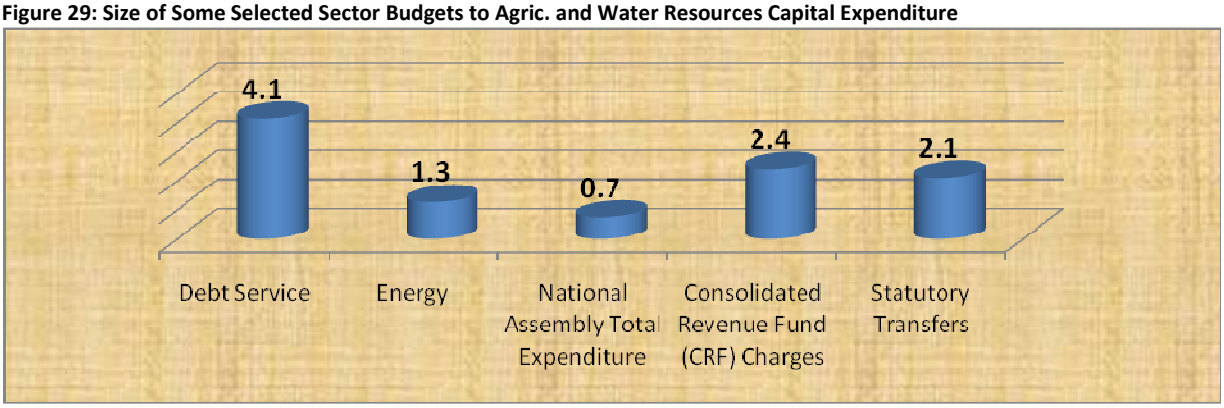


Source: Ujah (2007)

Agriculture and Water resources got 16.6% of the total MDA capital expenditure and 14.2% of the aggregate capital expenditure of the 2008 budget. 14.2% is a huge improvement on the 2006 allocation which was 2.81%. But the 2008 proposed total Agriculture and Water Resources capital expenditure per capita (using the 2006 population figure) is approximately ₦622 per annum and approximately ₦52 per month. Using agricultural population (2005), this amounts to approximately ₦1, 880 per annum and approximately ₦157 per month. The situation could be worse given the fact the total population and total agricultural population figures would have increased in 2008. As allocations to agriculture and water resources did not do badly in the 2008 budget, especially when compared with historical trends, emphasis should be laid on how much of the allocation is actually disbursed and applied in programme and project implementation.

In terms of ratios (Fig. 29), analysis indicates that appropriation for debt service in the 2008 budget is about 4.1 times the size of the total Agriculture and Water Resources capital expenditure. The budget for Energy is 1.3 times larger than Agriculture and Water Resources capital expenditure, while that of the National Assembly is approximately 0.7 times the size of Agriculture and Water Resources capital expenditure. Also, the Consolidated Revenue Fund (CRF) Charges are approximately 2.4 times larger than the total Agriculture and Water Resources capital expenditure.

Figure 29: Size of Some Selected Sector Budgets to Agric. and Water Resources Capital Expenditure



Source: Ujah (2007)

3.3 Agricultural budget trends in some SLISSFAN Project States – Benue, Plateau and Nasarawa

In the last four years, agriculturel capital budget in Benue State declined steadily from ₦2.69 billion in 2005 to ₦1.84 billion in 2008 (Table 6 below). But for Nasarawa and Plateau States, agriculture capital budget increased reasonably. In Nasarawa State, it increased from ₦0.84 billion in 2005 to ₦2.03 billion in 2008; while in Plateau State, it increased from ₦0.95 billion (2005) to ₦3.23 billion (2008).

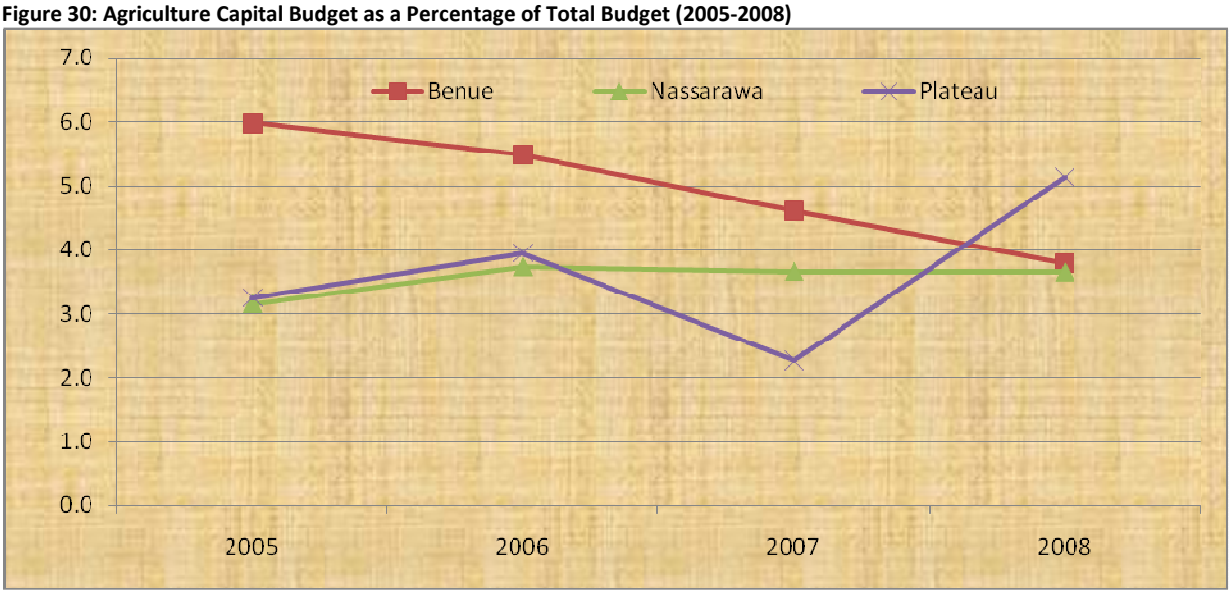
Table 6: Agriculture Capital Budget in selected SLISSFAN Project States

State	*2005*	*2006*	*2007*	*2008*
Benue	2.69	2.60	2.07	1.84
Nassarawa	0.84	1.18	1.30	2.03
Plateau	0.95	1.26	0.80	3.23

Source: authors with data from States' Budgets

Also, the agriculture capital budget share of total budget in Benue State has declined steadily from 6% (2005) to 3.8% (2008) (Fig. 30 below). In the same period (2005-2008), agriculture capital budget share of total budget increased relatively from 3.2% to 3.6% in Nasarawa State, and from 3.2% to 5.1% in Plateau State.

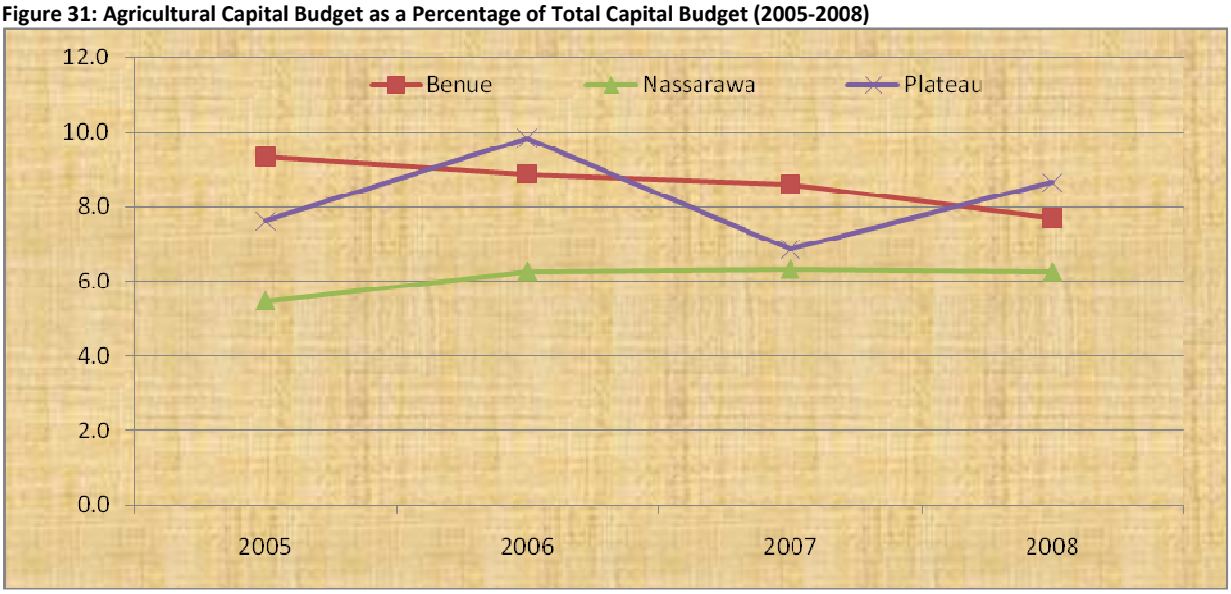
Figure 30: Agriculture Capital Budget as a Percentage of Total Budget (2005-2008)



Source: authors with data from States' Budgets

Further analysis of agriculture budget share of total capital budget indicate a steady decline from 9.3% (2005) to 7.7% (2008) in Benue State, and another decline from 9.8% (2006) to 8.7% (2008) in Plateau State (Fig. 31 below). But in Nasarawa State, it increased marginally from 5.5% in 2005 to 6.3% in 2008.

Figure 31: Agricultural Capital Budget as a Percentage of Total Capital Budget (2005-2008)



Source: authors with data from States' Budgets

The poor budget allocations vis-à-vis the contributions of the agricultural sector the economies of these states could be attributed to lack of capacity in the relevant ministries of agriculture to absorb increased budgetary allocation. This is evident in the quality of budget items as can be seen in the budgets of most states in Nigeria. The agriculture ministries in these states are unable to articulate programmes and projects that can concretely address the problems and challenges of small-scale farming, especially those of poor and illiterate farmers.

3.4 Criticisms of Past and Recent Budgets in Nigeria

A recent assessment/analysis of the quantity and quality of public spending in agriculture by IFPRI and World Bank teams, in terms of its degree of alignment with government policy goals, reveals a lot of disparity. Mogues *et al*. (2008) indicate that public spending on agriculture is very low – less than 2% of total federal expenditure was allotted to agriculture during 2001-2005, actually far lower than spending in other key sectors such as education, health and water. This spending contrasts dramatically with the sector's performance in the nation's economy, which stood at above 40% as at 2007; and falls well below the 10% goal set by African Leaders in the 2003 Maputo agreement. Nigeria is also shown to fall far behind in agricultural expenditure by international standards, even when accounting for its level of income.

Broadly speaking, agricultural spending has followed government agricultural polices but there are important discrepancies. Spending is highly concentrated in free areas with three programmes accounting for more than 81% of total spending – procurement and distribution of fertilizer, the National Special Program for Food Security (NSPFS), and buyer-of-last-resort grain purchase. Nearly 60% of total capital spending goes to government purchase of agricultural inputs and outputs alone. In several instances, public funds and implementing approaches differ significantly from those described in policy documents. Also, funding is very low for a number of activities considered vital for promoting

agricultural productivity gains for pro-poor growth – basic and applied agricultural research, agricultural extension and capacity building, agricultural finance, irrigation development, and agribusiness development.

Also important is the pattern of public spending in agriculture which raises doubts about the quality of spending. It has been shown that many of the Presidential Initiatives, which differ greatly in target crops, technologies, research, seed multiplication, and distribution, have identical budgetary provisions. This pattern suggests that the needs assessment and costing for these initiatives have been inadequate, and that decision may have been based on political considerations rather than economic assessment.

Moreover, the analysis of public spending is complicated by the preponderance of off-budget funds. Public spending on agriculture is not fully captured in official budget records. The so-called "off-budget" expenditures overlap extensively with donor funds since a substantial amount of external aid is typically not captured in government accounts. Reliable data on these two categories of funding has always proven very difficult to obtain from MDAs and even from donor agencies.

The extent or degree of budget execution in Nigeria has been found to be poor. The Public Expenditure and Financial Accountability (PEFA) best practice standard for budget execution is no more than 3% discrepancy between budgeted and actual expenditures. In contrast, the analysis by the IFPRI and World Bank teams, led by Mogues *et al*., shows that Nigeria's federal budget execution averaged only 79% between 2001 and 2005, meaning 21% of approved budget was never spent. Budget execution at the state and local government levels was even less impressive, ranging from 71-44%. Government MDAs are only able to plan and carryout effective agricultural programs and activities if approved budgets provide a good indication of actual resources. This problem affects not only agriculture but most sectors of the economy.

Furthermore, information about the functional areas of public spending in agriculture is lacking. At all the three levels of government, the budget classification system is not structured along functional lines, such as agricultural extension, agricultural research, input subsidies, and others. Capital spending is reported by sub-sector such as crops and livestock and/or by department and program. Recurrent expenditures are classified into salaries, benefits and operating costs.

Finally, poor public expenditure quality and availability hinder policy analysis, program planning and impact assessment. The IFPRI and World Bank team showed that there exists poor state of the systems for recording, verifying, and reporting data on public expenditure in agriculture. For instance, at the federal level, data on public spending in agriculture were not available even in the Ministry of Agriculture's Department of Finance and Accounts. Two core technical departments (Agriculture Research and Cooperatives) were unable to provide any expenditure data reflecting the incompleteness of federal spending. In cases where expenditure data were available, the quality was often questionable. The discrepancies between the data obtained from the individual line departments in the agriculture ministry and from the central ministry of budgets were often significant; in some instances, figures doubled from one source to another.

4.0 CONCLUSIONS

There exists strong evidence that, in Nigeria, the pressure is on agriculture to deliver growth and economic prosperity (Eboh et al. 2005). The ability of agriculture to deliver on growth targets and on a sustainable basis, however, is inextricably tied to better management of agricultural resources. This is only achievable through adequate and clearly articulated policies, programmes, projects, and budgets.

Nigeria's agriculture and food security is bedeviled with major economic, institutional, structural, and environmental constraints or challenges. These challenges or constraints threaten the nation's quest for self food sufficiency and poverty alleviation. Some of these constraints include degraded soil which keeps on reducing agricultural yield, lack of funds, inadequate processing, storage and marketing facilities, continued dependence on rain-fed agriculture, inability to match political commitments with adequate budgetary allocations, land tenure system that inhibits the acquisition of land for mechanized farming, lack of political will to improve local farming technologies, inefficiencies in input supply and distribution, etc. It is expected that government's agricultural policies and budgets should be geared towards addressing these fundamental constraints and challenges in a holistic manner through a systemic approach. Moreover, agricultural policy or vision should be premised on the realities facing the sector.

Unfortunately, while the nation basks in euphoria of beautiful agricultural policies and programmes/projects, it is difficult to categorically assert that they have successfully addressed the myriad of constraints and challenges facing agricultural production, storage, processing and marketing or distribution. The current global economic meltdown and recession might be a challenge for the sector, but surely it provides an opportunity for moving Nigeria's agriculture to the next level of being a major and net food exporter. We need to seize the moment as it is one of those rare opportunities for a fundamental shift or change. Nigeria should not miss the opportunity of contributing to the reduction of global food crisis.

5.0 RECOMMENDATIONS AND ADVOCACY ISSUES

1. In view of the present global economic realities, there is need for a new comprehensive win-win and sustainable agricultural policy at both national and sub-national levels. We need to create a fresh, bold policy vision that catches people's imagination, pro-poor and farmer-centred. This new policy should be preceded by a thorough analysis of Nigeria's and SLISSFAN Project States' food equation including the internal and external components.
2. Nigeria and its constituent sub-national governments (especially SLISSFAN Project States) have continued, over the years, to invest in agricultural development without a clear overall strategy. An effective agricultural development strategy (ADS) is critical for identifying the key issues and opportunities facing the agriculture sector and for developing operationally sound programmes to promote pro-poor growth. ADS must provide a vision for the future role of the sector and set forth the policy framework and investment priorities needed to achieve the vision. Key areas include building the human and institutional capacity for strategic analysis and planning; and establishing a participatory, consultative process to articulate an ADS that can result in real progress for the sector.
3. Nigeria and SLISSFAN Project States need a framework for financing agriculture. Such a framework should be able to compel local financial institutions to allocate a particular

percentage of their investible funds to well-articulated and farmer-centred agricultural programmes/projects. The desirable financing framework in this case should cover all the different aspects of the food value chain of the agricultural programme/project and poor farmer-friendly to ensure that only value-added agricultural products and services enter the competitive local and international market.

4. Currently, there seem to be lack of deliberate national or sub-national effort and incentives mechanism to tap the pro-poor indigenous technological ingenuity for improving Nigeria's and SLISSFAN Project States' agriculture. It is desirable to institute an annual or biannual incentive-loaded competition aimed at identifying indigenous technological solutions to the numerous challenges facing the nation's agriculture. The competition should aim at addressing a particular problem at a time, and solutions or innovations identified should be commercialized and disseminated.
5. In Nigeria and SLISSFAN Project States, sustainable agricultural development is imperative in the quest for development given its share in GDP and employment. Therefore, agricultural expenditure is one of the most important government instruments for promoting economic growth and alleviating poverty. The budget is the most formidable tool for solving the identified agricultural constraints or challenges if the country must be food secure. The fourth NGO/CSO Regional Consultation for Africa which took place from 27 to 29 February in 2004 in Johannesburg urged national governments to increase public funding to agriculture/rural sector to 30% of their budgets (FAO 2004). Therefore, all levels of governance in Nigeria and SLISSFAN Project States should increase the fiscal space for agriculture by allocating at least 30% of aggregate capital expenditure to agriculture capital expenditure. However, the quality of such expenditure should be monitored and evaluated to ensure efficiency and effectiveness. The quality of spending to agriculture is more important than the overall level of spending. However, when quality spending is combined with high quantity of spending then agriculture is bound to achieve a maximum impact. Allocations to agriculture, especially capital allocation, should be able to guarantee right (in terms of accessibility, acceptability, adequacy, etc) to food by the ordinary Nigerian.
6. It is now very clear that more efficient outcomes can generally be achieved if private sector is involved in the provision of public services – public-private partnerships. Although government can give general direction to agricultural programmes and projects, it can take advantage of private sector resources by contracting out to specialized private sector firms and NGOs under competitive bidding. Both parties (government and private sector) will need to develop performance indicators for regular benchmarking of progress and evaluation of programmes and projects. Nigeria and the SLISSFAN Project States should immediately engage the private sector and other stakeholders to brainstorm and negotiate on concrete ways of igniting and energizing the agricultural sector.
7. There is the need for capacity building in public expenditure management. The capacity to manage public expenditure (budget formulation and execution, monitoring and evaluation, etc) seems to be weak, especially in Ministries of Agriculture. Efforts by Nigeria and SLISSFAN Project States should be geared towards strengthening capacity for formulating and costing policy, using results-oriented budgeting, managing how budgets are implemented, monitoring and reporting, and developing mechanisms for stakeholder participation. Building capacity for the development of MTEF is critical for translating the 7-point Agenda, Vision 20: 2020, NEEDS and SEEDS into public expenditure programmes and ensuring that agricultural sector priorities are reflected in the implementation of these policies.
8. There exists the urgency for modification and strengthening of the classification system determining the level of resource allocation to agriculture's core functions. This would be useful

for analysis as well as for policy planning – determining, for example, the reason for adoption of improved technology. At every level of government in Nigeria and SLISSFAN Project States, there is a need to commit more effort to organizing, recording, and reporting public spending information in a way that makes transparent the functional allocation of public resources.

9. There is the need, moreover, to improve internal systems for tracking, recording, and disseminating information about public spending in agriculture and other sectors in Nigeria and SLISSFAN Project States. Consolidated and up-to-date expenditure data are unavailable within the Ministry of Agriculture at both national and sub-national levels, not even for its own use. Without this information, it is difficult for authorities to undertake empirically-based policy analysis, program planning, and impact assessment. The lack of reliable data and information prevents monitoring and tracking of spending, thereby increasing the risk of corruption. We need to design and implement appropriate monitoring and evaluation of public expenditures and programmes.
10. With its federal system of governance, there is need for the clarification of the roles of the three tiers of government in public agricultural services and investments in Nigeria and SLISSFAN Project States. This is necessary to reduce overlaps and gaps in agricultural interventions and improve the efficiency and effectiveness of public investments and service delivery in the sector. There is, therefore, the need for a comprehensive decentralization strategy even at the level of SLISSFAN Project States.
11. In Nigeria and SLISSFAN Project States, we need to shift expenditures to market-related major final outputs (MFO). A critical role for the government is to invest in essential public goods, in particular infrastructure (rural roads and wholesale markets), market information, research and development, and food safety and quality. Applied research is urgently needed to address critical knowledge gaps in several areas including fertilizer subsidies, food security, strategic grain reserves, etc. spending on agricultural research and development is a critical area for growth in agriculture.
12. Lastly, but not the least, there is the need for the involvement of civil society organizations (CSOs) at both national and sub-national levels. The civil societies in SLISSFAN Project States (particularly Benue, Plateau and Nasarawa) should deploy their lobbying, advocacy and campaign skills to facilitate state-level establishment of micro credit scheme aimed at investing about ₦250-300 million every year for four years in farmer support. This should be channeled mainly to the army of subsistence farmers who are the actual producers of the nation's food crops. The action is in view of the fact that all credit instruments (both formal and informal, and whether provided by the private or public sector) have failed to reach these poor farmers. They are without formal education, rural-based and lacking in assets that could be presented as collaterals for formal credit facilities. On the basis of the activities of these farmers, the states in the North Central region have come to be regarded as the food basket of Nigeria. But if the livelihoods of these farmers cannot be sustained for lack of effective input support, the comparative advantage in basic food production enjoyed by these states may be lost soon.

    The subsidy claimed to be provided by these states in respect of fertilizer and other inputs is not reaching the poor and the marginalized. Diversion of fertilizer by middlemen working in collusion with corrupt public officials has ensured that the poor who need the subsidy most are the least likely to benefit from it. We need evolve ingenious ways of delivering micro-credits to poor and illiterate farmers and equally design mechanisms to enable them payback such credits. There is the need to vigorously pursue the development of non-institutionalized credit sources devoid of problems (heavy bureaucracy and guarantees) inherent in agricultural and institutionalized credit markets.

Furthermore, the use accounting in agriculture is low in Nigeria and SLISSFAN Project States. Consequently, farmers, banks, public administration bodies, policymakers and other agents usually use non-accounting-based information as the basis for decision-making. This is actually the case when predicting farm viability or otherwise. Farm size, experience and personal characteristics of the farmer, farm location, type of farming involved, approaches to farm productivity and market strategies, etc., all constitute relevant that is available to agents for evaluation of farm (non-)viability, reflecting structural and fixed characteristics of each particular farm and can easily be observed. CSOs, SLISSFAN Project States and the nation should, therefore, map out strategies (through their extension services) for training poor and illiterate farmers on simple ways of keeping farm records.

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