

AGRICULTURAL PERFORMANCE SURVEY OF 2012 WET SEASON IN NIGERIA



NATIONAL REPORT



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**National Agricultural Extension and Research Liaison Services (NAERLS)
Federal Ministry of Agriculture and Rural Development
Ahmadu Bello University, Zaria**

And

**Planning Research and Statistics Department (PRSD), Federal Ministry of
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Agricultural Performance Survey of 2012 Wet Season in Nigeria

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**The National Technical Committee on Agricultural
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**Collaborators: PRSD, NBS, FDAE, FDA, FDF, FDL, IAR, IAR&T, NCRI, NRCRI,
NPC and ADPs**

December 2012

PREFACE

The assessment of wet season agricultural production in Nigeria is an annual activity of NAERLS. As usual, the exercise was conducted in August/September 2012 in conjunction with the Planning, Policy, Analysis and Statistics Department (PPASD), the National Programme on Food Security (NPFS), the National Bureau of Statistics (NBS), Federal Department of Fisheries (FDF), the Nigerian Meteorological Agency (NIMET), Federal Department of Agriculture (FDA), the Federal Livestock Department (FLD), National Productivity Centre (NPC) and the five Zonal Coordinating Research Institutes. Nineteen teams of three specialists each covered all the 36 states of Nigeria and the Federal Capital Territory (FCT) involving 148 LGAs. The headquarters of the Federal Ministry of Agriculture and Rural Development (FMARD) was also covered.

We wish to express our sincere appreciation to officials of State Ministries of Agriculture, State Agricultural Development Projects (ADPs), other State parastatals and LGAs across the country that made all the necessary arrangements to facilitate the smooth conduct of the field work and also provided the required data for this report. With recent progress made to create the South-South Agro-ecological zone, some aspects of the report reflect all six zones while others maintained the former 5 zones. The outputs of the evaluation exercise have been put together into executive summary, national and state reports, which are being circulated to all states and relevant Federal agencies and other stakeholders. The executive summary is the first in the series of reports of the assessment of the 2012 wet season which provides principal trends and findings to guide decision-makers, researchers in their activities in this sector. The continued involvement of such agencies as NBS, NPC, FDF and NIMET has raised the scope and enriched the content of the reports. Concerted efforts are on to improve the capacity of all participating agencies in data collection and management in future engagements. Comments, observations on this report are welcomed from interested persons, agencies or corporate bodies.

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ABBREVIATIONS AND ACRONYMS

ADP	-	Agricultural Development Programmes
AfDB	-	Africa Development Bank
APS	-	Agricultural Performance Survey
APSR	-	Agricultural Performance Survey Report
ASC	-	Agro Service Centers
ATA	-	Agricultural Transformation Agenda
AETA	-	Agricultural Extension Transformation Agenda
BEA	-	Block Extension Agent
CAYS	-	Crop Area and Yield Survey
CBARD	-	Community Based Agricultural and Rural Development
EA	-	Extension Agent
FAO	-	Food and Agriculture Organization
FDA	-	Federal Department of Agriculture
FDF	-	Federal Department of Fisheries
FDL	-	Federal Department of Livestock
FNT	-	Forthnightly Training
IAR	-	Institute of Agricultural Research
IAR&T	-	Institute for Agricultural Research and Training
LCRI	-	Lake Chad Research Institute
LGA	-	Local Government Area
MOP	-	Muriate of Potash
MTP	-	Management Training Plot
MTRMs	-	Monthly Technology Review Meetings

NA	-	Not Available
NAERLS	-	National Agricultural Extension and Research Liaison Services
NASC	-	National Agricultural Seeds Council
NEZ	-	North East Zone
NBS	-	National Bureau of Statistics
NCRI	-	National Cereals Research Institute
NFRA	-	National Food Reserve Agency
NIFOR	-	National Institute for Oil Palm Research
NIMET	-	Nigerian Meteorological Agency
NRCRI	-	National Root Crops Research Institute
NPFS	-	National Programme on Food Security
NWZ	-	North West Zone
OFAR	-	On Farm Adaptive Research
PM	-	Programme Manager
PPASD	-	Planning Policy Analysis and Statistics Department
PRSD	-	Planning Research and Statistics Department
RID	-	Rural Infrastructure Department
RTEP	-	Root and Tuber Expansion Programme
SEZ	-	South East Zone
SSZ	-	South South Zone
SWZ	-	South West Zone
SPAT	-	Small Plot Adaptation Technique
SSP	-	Single Super Phosphate
T & V	-	Training and Visits
ZEO	-	Zonal Extension Officer

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EXECUTIVE SUMMARY

The Wet Season Agricultural Performance Survey (APS) for the year was conducted between 26th August and 3rd September, 2012. The survey was carried out by the National Agricultural Extension and Research Liaison Services (NAERLS) in collaboration with several other stakeholders in agricultural data generation and use. The agencies that participated include the Planning Research and Statistics Department (PRSD), the National Bureau of Statistics (NBS), the Federal Department of Agricultural Extension (FDAE), the Nigerian Meteorological Agency (NIMET), the Federal Department of Fisheries (FDF), the Federal Livestock Department (FLD), the National Productivity Centre (NPC) and the five Zonal Coordinating Research Institutes, Institute for Agricultural Research (IAR), the Lake Chad Research Institute (LCRI), the National Cereals Research institute (NCRI), the Institute of Agricultural Research and the Training (IAR & T) and National Root Crops Research Institute (NRCRI). A broad scope of participation by relevant bodies is maintained to sustain improvement in the quality, utility and depth of data generated from the survey. The objectives of the survey were to: assess the agricultural performance during the wet season; make production forecasts; identify constraints to increase agricultural productivity and effective extension delivery service; and provide feedbacks for improved research and policy performance.

The objectives of the survey were to: assess the agricultural performance during the wet season; make production forecasts; identify constraints to increased agricultural productivity and effective extension delivery service; and provide feedbacks for improved research and policy performance.

Nineteen multi-disciplinary teams of three scientists each were constituted, making a total of 57 scientists who carried out the exercise across the 36 states of the federation and FCT using Participatory Rural Appraisal (PRA) techniques. This involved the use of structured questionnaire/ checklists, farm visits, interviews with farmers, agricultural ministries and ADP officials. In every state, two communities each were selected from two LGAs in each of the two selected agricultural zones for evaluation. From each community, five farmers were interviewed in addition to focused group discussions held at every site. Final wrap-up sessions to validate data generated were held at the end of each state visited with officials of the state ADPs and Ministries of Agriculture. The summary of the findings of the survey are presented as follows.

Rainfall Situation

The rainfall situation in 2012 was substantially higher than 2011. In the South-South Zone rainfall was overwhelmingly high in 2012. The rains started in April in the North-East and North-West Zones. Most of the states in the South-West and South-South Zones recorded first rains in January as against February in 2011. There were variations in commencement of rain in the North Central Zone. Benue State recorded first rains in January, FCT in February while the rains commenced in Kwara, and Plateau in April. In Taraba State, the rains started in May.

In terms of volume of rainfall, the South-South Zone had more rainfall amount in excess of 2000 mm followed by the South-West (>1500 mm) while the North-East recorded less than 500 mm for both 2011 and 2012. North-Central recorded an increase of 37% in the volume of rainfall in 2012 over that of 2011.

Heavy rains which resulted in floods occurred across the country causing severe crop damages, some casualties and displacement of several farming communities. The South-West Zone recorded a higher number of rainy days than the Northern zones, while the South-East recorded slightly higher rainy days than the South-West. Despite the heavy rains, dry spells were reported in Kwara state, although these were only for a few days.

The rainy season extended beyond long-term established duration in most parts of the country. This induced a longer period of cloud overcasts that impeded optimum solar reception by crop. The early onset of rains enabled earlier planting of crops but the extended rainy season raised fear of damage to early planted crops that matured during the rains because sun drying option was not feasible. The cloudy nature of the season also engendered the problem of mycotoxin especially aflatoxin which farmers and consumers have to contend with.

The rainfall amounts received especially in August and September 2012 across the country caused serious economic damage for cultivated crops and habitats. Although all crops were affected, more phenomenal damages were recorded for maize, rice, cocoyam, cassava, fish and soybean. The release of water into Nigeria from a dam in Cameroon in early September compounded the situation leading to colossal loss of agricultural products especially along the shores of River Niger and River Benue, the confluence town of Lokoja and all the states in the Niger Delta. The flood and overflow of the banks of River Niger in Lokoja, Anambra, Delta, Bayelsa and Rivers states impeded movement of commuters and vehicles to the extent that millions of perishable agricultural commodities were lost in transit.

Agricultural Mechanization

Availability and accessibility of tractors for farm operations are major indicators to assess the level of agricultural mechanization. The result from the survey showed that farming operations in the country still relied mostly on manual labour. The data from 28

states and the FCT showed that the number of functional tractors for farm operations decreased from 1,983 in 2011 to 1,662 in 2012. Similarly, the number of non-functional tractors increased from 832 to 1,203 within the same period. The number of privately owned functional tractors however increased from 868 in 2011 to 1,096 in 2012. Privately owned non-functional tractors were 61 in 2011 and 196 in 2012, indicating an increasing lack of capacity for private tractor operators to maintain their tractors. Related to this is the gradual disappearance of tractor hiring units in many states.

North-West had more tractors than each of the other zones. Its number of tractors increased slightly from 812 in 2011 to 879 in 2012. In the North-East, the number of tractors decreased from 735 in 2011 to 527 in 2012, while in the North-Central an addition of 3 tractors was reported. Borno State reported 669 tractors, the highest among the states in terms of the number of Government-owned tractors. This is followed by Katsina State which has about 538 tractors.

In many states, private individuals and organizations were providing tractor hiring services. Meanwhile, the prospects of more involvement of private participation in such service received a boost under the Agricultural Transformation Agenda of the Federal Government. Many private tractor service providers were able to access credits under the Growth Enhancement Support Scheme of ATA. However, a class of private tractor service providers is emerging across the country. In Sokoto State where the highest figure was posted, 300 functional tractors owned by private organizations were reported, followed by Borno state, which reported 148.

Available records showed the total number of functional tractors of 2,530 owned by Government and private organizations in the country in 2012. This value is a reflection of the level of the challenges confronting farmers during the 2012 season in their quest to mechanize agriculture in the country. The fact that the number of functional tractors continue to decrease annually is an issue of concern for national planning. It is becoming obvious that incentives may be required to stimulate sustainable private sector engagement to improve tractor availability at fair prices. Also, proper record-keeping of farm machinery and equipment for efficient scheduling of farm operations to achieve timeliness in agricultural production activities should be encouraged.

As in previous years, the use of work bulls increased this year especially in Katsina, Borno, and Kano. However, the use of work bulls was limited to secondary tillage practice due to the absence of appropriate labour-saving devices.

Use of Improved Farm Inputs

A few states made efforts to procure and distribute seeds, seedlings and cuttings of various crops and tree crops in 2012. The quantities made available of these planting materials varied from one agro-ecological zone to the other. Farmers in North-East Zone especially in Borno, Bauchi, Gombe and Adamawa states were of the opinion that the prices of these commodities were fair. Many farmers in these states however could not

access the inputs provided by government sources. In Gombe, Adamawa and Bauchi states, farmers applauded the early supply of drought-tolerant maize seeds by the AfDB-Community Based Agriculture and Rural Development (AfDB-CBARD) which is driving the adoption of improved seeds in these states.

Farmers reported that seeds of sorghum, soybeans, rice and maize were supplied by ATA at no cost to only registered farmers. Owing to the supply of inputs, many farmers became interested in the ATA programme but could not access the seeds because of the closure of registration of farmers. It is reported that less than 10% of the farmers' population was able to register before the closure of registration due to scarcity of registration forms. Recipients of the seeds supplied by ATA reported that the seeds were supplied very late in August after most of them had planted. Hence they kept the seeds for future use. The situation was similar in many other zones. In addition to the cereal crops made available, some states in the North-West Zone procured and distributed various vegetable seeds (such as carrot, onion, cabbage, water melon) and moringa to farmers. In the North-Central Zone, planting materials procured or provided through ATA were also not adequate in Kogi, Niger and Benue states and in most states of the South-West Zone. Across the country, private sector seed dealers and the informal and community-based seed trade remained the primary sources of seeds to farmers. Incidences of adulteration of seeds were reported— this and the need for timely supply of seeds remained a challenge for the National Agricultural Seeds Council. Many farmers requested for seed varieties which were not available owing to shortage of breeder and/or foundation seeds. Up-scaling the capacity of research institutes to technically backstop promotion of improved high-yield varieties by timely providing necessary basic seeds/ germplasm management which has great multiplier effects of raising technology adoption and income of farmers should be considered by the ATA team.

Owing to the inputs supplied, many farmers became interested in the ATA programme but could not access seeds because of the closure of farmers registration and delay in deliveries.

Very few state governments procured and distributed agro-chemicals such as crystallizer and agrolizer, insecticides, herbicides, fungicides and lime. Various agro-processing machines, work bulls, tractors, storage bins, sprayers, dryers, threshers, water pumps and motorized fish feeders were also made available by a few state governments, especially of Kaduna, Zamfara and Niger states. Kwara, FCT and Kogi states in the North-Central Zone up-scaled their efforts to supply agro-chemical and farm equipment to farmers in 2012. Also, Kwara State procured tractors in addition to agro-processing equipment while the FCT, Niger and Kogi states provided mostly agro-chemicals to farmers. Agro-chemicals and sprayers procured by Enugu, Akwa-Ibom and Imo states were reported to be inadequate and expensive. Many farmers expressed concerns over the poor quality and quantity of some of the inputs they received from government sources. As in previous years, poor access to modern inputs compromised expansion of production and the prospects of increasing youths' participation in agriculture.

Fertilizer Procurement and Distribution

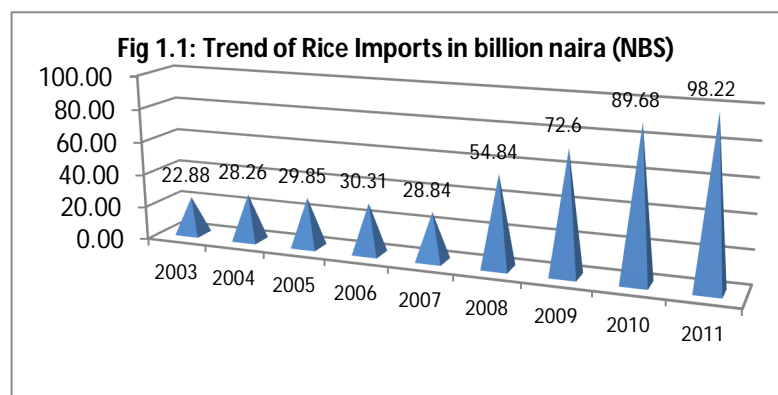
Farmers applauded the initiative of the Federal Government to promote private sector dominance in the supply of agricultural inputs to enhance the success of the Growth Enhancement Support (GES) Scheme. Implementation and compliance with the initiative varied across the country, especially as it related to the use of e-wallet scheme of fertilizer supply to farmers. About 50% of the states that provided data on GES showed very encouraging progress in the implementation of the initiative. One key achievement of the scheme was that it has the potentials to eliminate the role of middlemen and government officials in the fertilizer procurement by farmers. It has also made the product relatively affordable. Under GES a bag of fertilizer was sold between ₦3,000 and ₦3,500, depending on the fertilizer composition. The open market prices for the same fertilizer bag was from ₦4,500 to ₦6,000. Farmers however complained that the two bags each farmer was allowed to buy under the scheme were insufficient. They therefore appealed for upward review of the allotted numbers of bags as well as the extension of registration time and the expansion of coverage areas by the scheme in order to capture more farmers. Many farmers were ignorant of the scheme; hence, they called for more and elaborate publicity at the community level.

Labour Cost of Farm Operations

Labour cost of all farm operations increased during the 2012 season when compared to 2011. The cost of land clearing recorded the highest price of ₦14,000/ha in Ondo and Akwa-Ibom states and FCT. The cost of ploughing was high in Nasarawa state (₦20,000/Ha) while the cost of ridging, planting and harvesting were high in Akwa-Ibom, Lagos and Kaduna states respectively.

Food Commodity Prices

Market prices of major food commodities across the country as at July 2012 were compared with those of July 2011. The price of millet increased by 100% in Gombe, 39% in Lagos, 33% in Bauchi and 30% in Zamfara. The price of maize increased from 13 to 38% in most of the states with the highest level of increase (38%) occurring in Lagos State, followed by Akwa-Ibom State with (30%), while Kaduna state recorded the least (13%). During the period under review, the price of rice decreased from 6% and 45%. The highest price decrease (45%) occurred in Benue followed by Adamawa and Ebonyi



states. The reduction in the market price of rice implied that the increased domestic production under ATA is impacting positively on local prices of rice across the country. This likely may reduce rice imports in the shortest time (Figure 1).

The prices of Sorghum and Cowpea increased in all the zones of the country. Yobe state reported more than 100% increase in the price of sorghum. In Taraba State, sorghum price increase was 33% while Kaduna, Akwa-Ibom, Bauchi and Gombe each reported about 20%, increases in sorghum price. The price of cowpea skyrocketed this year to unprecedented levels across the country. Zamfara reported about 100% increase in the price of cowpea over the period under review, while Benue and Adamawa states reported between 16% and 39% increases. In September 2012, the price of cowpea was at N350,000 per ton. Also, the prices of cassava products increased in all the zones with Oyo and Osun states reporting increases of more than 100% for cassava tuber. There was 75% increase in Edo State and 38% in Nassarawa State. The price of gari increased by 20% in Enugu State in 2012 compared with 2011. However, a significant reduction in the price of gari was reported in Zamfara, Nassarawa and Oyo states. Ondo state reported 22% reduction in the price of cassava flours, while Kaduna and FCT reported a 17% decrease. Nassarawa, Gombe, Imo and Ebonyi states reported 1% increase in the price of cassava flour. In many states, the marketing of cassava remained a challenge, also as substantial amount of cassava tubers were not harvested because the labour cost of harvesting (in Benue states in particular) out-weighed the market value of harvested tubers during the year under review.

Yam tubers, flour and sweet potato price also increased across the country. Adamawa reported about 167% increase in sweet potato price while Niger, Cross River, Nassarawa, Ondo, Akwa-Ibom and Kebbi reported an increase in the price of yam tubers between 17% and 56%. A significant decrease in the price of sweet potato in Osun (47%), Ondo (33%), Rivers (20%), Kwara (15%) and Plateau (11%) states were also reported. The price of melon was reported to have increased sharply in the NEZ, SWZ, SEZ and SSZ. Bauchi State recorded an increase of 130%, Ogun State and 65% Cross River State 50% increase in melon price. Price of melon however decreased in Ondo State by 44% and by about 42% in Enugu Benue and Akwa-Ibom states respectively. As much as 69% increase in soybean price was recorded in Kaduna State, 44 to 45% in Bauchi and Benue states and 31% in Oyo State. Irish potato prices increased in Akwa-Ibom State by 41%; 25% in Oyo State and about 11% in both Nassarawa and Abia states.

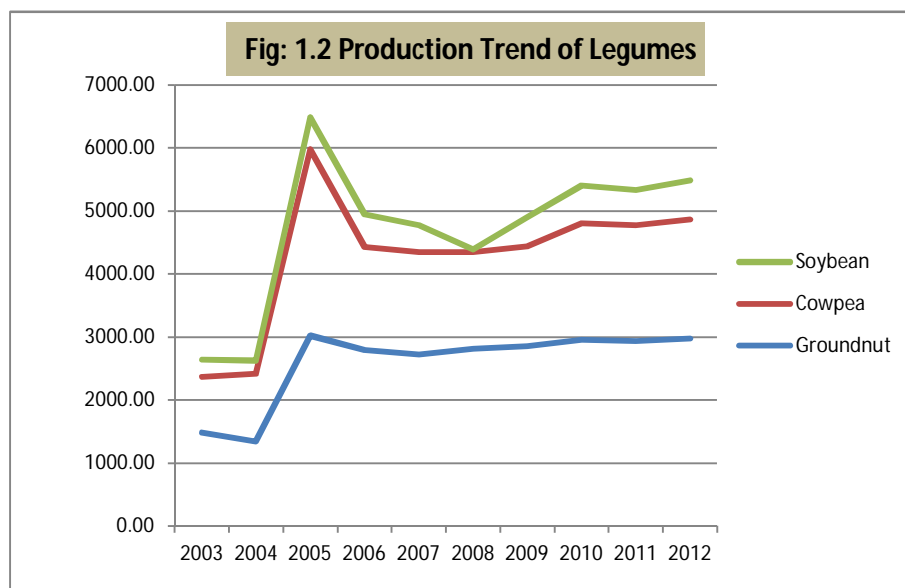
Beef and goat meat prices experienced sharp increase across the nation. A rise of 100% in the price of beef and goat meat was reported in Adamawa State while the increase ranged from 33- 79% in most of the southern states.

The price of mutton which increased across the country was more than 100% in Adamawa State, 127% in Nassarawa State and about 82% in Taraba and Kebbi states. In Ebonyi State, 40% increase in the price of chicken was reported. The price of fresh fish

increased by 79% in Kaduna State, 59% in Kwara State and 29% in Ogun State. In Cross River and Plateau states, the price of fresh fish recorded a decrease of 28% and 14% respectively.

Price of dry fish decreased by 15% and 23% in Cross River and Rivers states respectively. Unlike in Kwara, Nassarawa and Lagos states where increase of 57%, 49% and 36% were respectively

posted, Imo State reported more than 115% increase in dry fish price. The price of eggs decreased marginally in SWZ and in a few other states of the federation. For example, egg price decreased by 28% in Oyo State and by 4 to 7% in Ekiti, Plateau and Bauchi states.



Crop Area Estimates

The estimated area devoted to crop production increased for most crops with the exception of cocoyam which decreased by 5.39% in 2012. This could be in response to government drive to increase agricultural contribution to national economy growth under ATA. The increase was more pronounced with the process of rice, soybean and maize. Maize land area of production increased from 5.1 million hectares in 2011 to 5.3 million hectares in 2012 which represent about 4% increase (Fig 2). Soybean area increased from 602,580 hectares in 2011 to 627,224 in 2012 reflecting about 6% level of increase. That of sorghum increased from 4.842 million to 4.891 million hectares which is about 1.0%. Rice area increased from 2.55 million hectares in 2011 to 2.7 million hectares in 2012.

Production area of cotton showed signs of growth for the first time in seven years. A slight increase in cotton area from 256,967 hectares in 2011 to 260,960 hectares in 2012 was recorded. Cassava area also increased slightly from 3.878 million hectares in 2011 to 3.922 million hectares in 2012. Cowpea area increased marginally from 3.157 million hectares to 3.2 million hectares which is a 1.39% level of increase. The area devoted to ginger production this year also increased by 7.3%; from 48,910 hectares to 51,954 hectares.

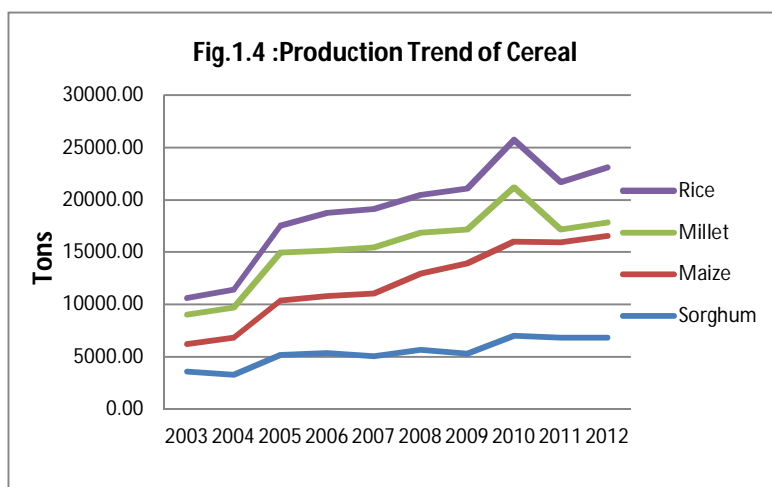
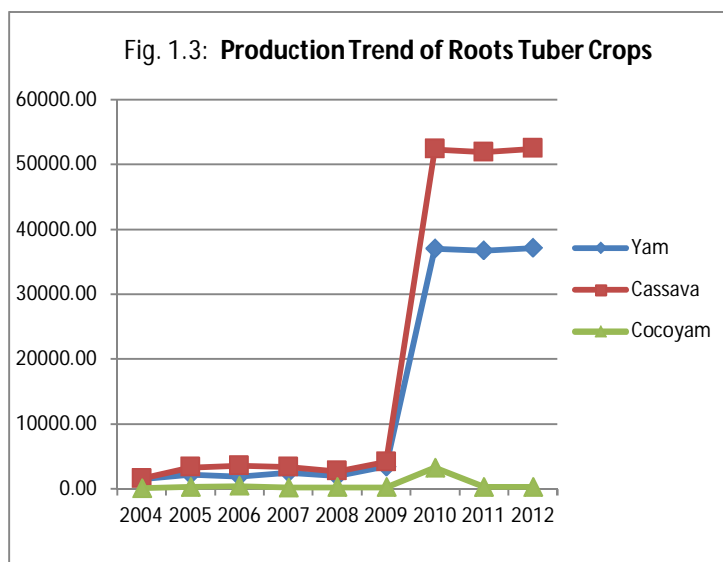
Production Estimates

Figures 3 and 4 show the output trend of major crops in Nigeria from 2002 to 2012. The forecast for maize production is 9.7 million tons, compared with 9.088 million tons produced in 2011, which represent a 6.74% increase. Sorghum production is expected to increase slightly by 0.34%, from 6.829 million tons produced in 2011 to 6.851 million tons in 2012. Rice forecast for this year reflects an increase of 16.35% from 4.521 million tons to 5.261 million tons.

The estimated output for yam is 37.123 million tons, against the 36.744 million tons produced in 2011. Millet output forecast is 1.28 million tons this year, compared with the 1.258 million tons produced last year, which is an increase of 1.72%. Soybean is expected to post a remarkable increase and the forecast is 10.82% increase, from 559,112 tons in 2011 to 619,608 tons in 2012. Cotton production is estimated to increase by 1.3% this year over the figures for 2011. On overall, the food and agricultural raw material prospects for 2012 looked good until the damaging impacts of heavy downpours and floods across the country.

Impact of Flooding on the output forecasts

Massive flooding was experienced in more than 20 states during the last week of August and in September. This had damaging effects on output captured in the forecasts made at the beginning of September 2012. Crops planted in the plains along River Benue, its tributaries, part of River Niger and its tributaries as well as the Niger – Delta



region were mostly destroyed from more than 3 weeks of submerge. Crops in Adamawa, Nasarawa, Benue, Niger, Kogi, Ebonyi, Anambra, Delta and Byelsa were lost to flood. The crops mostly affected were rice, maize, yam, soybean, cocoyam and cassava. The effect of the heavy downpours on cowpea increased pests and disease pressures on the crop with the likelihood of reducing farm yield this year.

Following the heavy downpours and flooding that occurred in September of 2012, it has become expedient to quantify the impact of the flood on the anticipated outputs in order to enable pragmatic plans to manage potential negative fallouts of the event. The projected output reduction anticipated to emanate from the flood based on the exposure to the risk of damage because of the ecologies in which the crops are produced and the areas so far affected are as follows:-

The flood has already on a national scale, induced about 16.4 % depression on rice output, 11.4% depression on maize output; 9.5 % decrease in soybean output; 9.3% reduction in cassava output and about 6.3% reduction in cowpea output. These represent losses of about 862,800 tons of rice, 1,105,900 million tons of maize, 58,860 tons of soybean, 4.874 million and 118,944 tons of cassava and cowpea outputs respectively. The estimated value of damage caused by the flood in 2012 is 394,266 billion naira.

Strategic Grain Reserve

The purpose of national strategic grain reserves is to ensure year round availability of food and food commodity price control in order to meet the challenges of natural and civil disasters. However, private sector involvement in the provision of strategic grain reserve is negligible and the process is laden with high level inefficiency. Meanwhile, with good policy and public private partnership plans, the observed situation can be corrected for national food security objectives.

LIVESTOCK AND FISHERIES

Livestock

The most widely reported constraints to livestock production were inadequate animal health care and poor disease control measures; limited capacity of extension services; conflict between pastoralists and crop farmers; prevalence of theft of animals and feed scarcity. These factors deter investment in livestock production. Reports from previous APS in Nigeria had indicated the near absence of livestock data. This year's report from some of the states in terms livestock data is not in any form different. Several recommendations made by various stakeholders especially in previous APS Reports have included the establishment of Livestock Census Unit in the Federal Department of Livestock, Federal Ministry of Agriculture and Rural Development. The paucity of livestock data observed during the 2012 survey has reaffirmed the need for such a unit.

Livestock population

There were large numbers of cattle, sheep and goats in Borno, Bauchi, Ekiti, Enugu and Kano states and FCT, but no reliable data was available to make economic projections. Large populations of poultry were also reported in Bauchi, Ekiti, Ondo, Kano and Rivers states. Also, a large population of rabbits was reported in Bauchi and Ondo states. In Bayelsa State, the promotion of grass-cutter rearing was remarkable.

LIVESTOCK DISEASES AND PESTS

Cattle

The occurrence of CBPP was reported in Bauchi, Gombe, Jigawa, Katsina and Kano states. Foot and mouth disease was reported in Bauchi, Bayelsa, Benue, Gombe, Jigawa, Kano and Plateau states. Feed poisoning was only reported in Bayelsa state. Other disease conditions that affected cattle were streptotricosis, LSD and *trypanosomiasis*. Gombe, Katsina, Jigawa, Kano, Lagos and Bayelsa states vaccinated their stocks against some of the prevalent diseases.

Sheep and goats

PPR, worm infestation, pneumonia, foot rot and mange were the most common diseases that affected sheep and goats in 2012. States such as Bayelsa, Gombe, Jigawa, Katsina, Kano, Lagos and Rivers treated and vaccinated a large population of their sheep and goats.

Poultry

There was intensified poultry production in many states. The practice of intensive, semi-intensive and free range systems of rearing of chicken and other poultry species existed side by side. However, a clear shift of farmers to intensive system of production was reported across the country. In a few large scale commercial farms, exotic birds were introduced. High costs of feed and inadequate veterinary services were among the challenges confronting farmers in most of the states. Disease conditions that were encountered by farmers across the country included Newcastle disease, Gumboro, fowl typhoid and cholera. Many poultry farms complained of scarcity of locally made vaccines from NVRI in Vom, Plateau State (which previously enjoyed wide patronage from farmers owing to their efficacy). Expanding as well as decentralizing the local production capacities of vaccines of NVRI without compromising quality are viable interventions.

AQUACULTURE AND FISHERIES

As in previous years, data for aquaculture and fisheries were largely not available in many states. Where they were found, the quantities were not impressive.

Fisheries Diseases and Parasites

Aquaculture productions were affected by bacterial, fungal and viral diseases. Most states reported broken skull disease in clarias. Fish parasites such as Hirudinea, leeches, lice and helminthes, skin infections, ulcerative caudal fin, white patches on the heads and attacks from Predators, such as dragon flies, monitor lizards, snakes and frogs were reported in Ekiti, Taraba, Ondo, Rivers, Bauchi, Jigawa, Kaduna, Bayelsa, Kano and Edo states. Infestation severity was either from light or heavy. Pest attacks and diseases persisted in most states: this is a major challenge to fish farmers because of the lack of knowledge and manpower for disease diagnosis and treatment. Many fish farmers were using common salt application in fish pond to treat most of the diseases. The effectiveness and quantification of such local treatments and health implication of such practices need to be well situated and communicated to the farmers to forestall future problems. Poor feeding, insufficient water supply and poor management of fish stocks were other challenges faced by the fish farmers.

There is the urgent need to develop a crop of efficient fisheries technicians (staff) to provide advisory services on fish disease prevention, diagnosis and treatment to forestall losses in this regard. Also, a growing number of fish farmers expressed the desire for improved production and handling skills as well as local feed formulation skills in order to optimize the use of local feed production resources.

Fisheries Production Estimates

Data were available on artisanal fisheries output (inland and coastal) in 7 states in 2012, as against 12 states in 2011. On aquaculture output, 9 states provided production estimates in 2012, unlike in 2011 when 18 states provided such data. From available records, leading aquaculture production states in 2012 were FCT (27,811MT), Oyo (27,000MT), Kano (15,000MT) and Ogun (8,374MT). Catfishes (clarias) and Heterobranchus dominated farmed species across the country. Artisanal fisheries production indicated certain levels of increase in 3 states: Bauchi (0.73%), Sokoto (21.01%), and Kano (100.22%). Some states however recorded a reduction in aquaculture outputs in 2012. The trend in aquaculture output showed reduction of 3.64% in Niger, 19.51% in Gombe and 10.1% in Jigawa states. The aquaculture production in some states showed appreciable increase in production output. Abia, Bauchi, Ekiti and Ondo states showed production increase of 5.10%, 6.38%, 12.50% and 7.10%, respectively.

In Kano, Benue and the FCT, percentage decreases were recorded (48.00%, 63.71% and 52.72% respectively). This means that there was a reduction in aquaculture output in the two states and the FCT in 2012, compared with the 2011 figures. The reduction may be attributed to lack of proper support from government, insufficient technical skills, diseases, high cost of feed and fingerlings and market uncertainties in the wake of civil crises that occurred in some of the states.

Fisheries Inputs

The fisheries input procurement and distribution situation across the country was dismal in 2012. Only Edo State procured and distributed fishing nets in 2012. No other states procured and distributed any fisheries input in 2012. In 2011, Bauchi, Yobe, Kaduna, Bayelsa, Edo, Lagos, Osun and Kebbi states were able to procure and distribute fisheries inputs.

EXTENSION ACTIVITIES OF AGRICULTURAL DEVELOPMENT PROGRAMMES

ADP Funding and Staffing Adequacy

This year was a very discouraging one regarding the funding of agricultural extension in many states. Many state governments appeared to have abandoned the funding of extension services. In majority of the states where some special projects, such as FADAMA III were being implemented, commitment to agricultural extension was essentially limited to the payment of counterpart funds. Hence, implementation activity was very low in many instances. Poor funding was visible in Kano, Edo, Delta, Enugu, Benue, Zamfara and Bauchi states. ***The poor level of funding discouraged the recruitment of young extension staff in most of the ADPs. Currently, the average age of extension agents in most of the ADPs was 50 years. In many states, up to 35% of the existing staff would retire in the next 4 years and more than 74% would retire in the next 10 years.*** Unless the challenges of poor funding and ageing staff are urgently addressed, short to medium-term sustainability of agricultural growth, anchored on effective and energetic extension staff, will be compromised in these states. To save these agencies from total collapse, urgent and innovative intervention at the federal level is imperative. The poor funding situation also led to poor EA: Farm family ratio across the states.

Farm families

Kano State recorded the highest number of farm families of 994,656. This is followed by Akwa-Ibom State, with 685,095 and Kaduna State with 606,007. However, for each of the states, there was decrease in the number of farm families as against the 2011 figures. This may not be unconnected with the low number of VEAs available in the country.

Village Extension Agents (VEAs)

In 2012, the number of Extension Agents reduced in many states due to retirements, mortality and movement of staff to other jobs. Kano State, with 705 VEAs has the largest number of VEAs in the country, followed by Bauchi and Ebonyi states with 600 and 553 VEAs respectively. However, when compared to 2011, only Enugu and Kwara states increased the VEA numbers from 22 to 80 and 120 to 137 respectively. It is reported

that poor funding of ADPs across the country constrained the employment of additional VEAs.

Extension Agent

Farm family ratios in Bayelsa, Anambra, Cross River and Benue states were the highest, with 1:10,568, 1:9409, 1:4721 and 1:4000 respectively. Adamawa State has the least EA:farm family ratio of 1:1212. This trend of dwindling numbers of VEAs has persisted over the years and without any significant remedy in sight.

Most ADPs, especially in Sokoto, Kano, Taraba, Osun, Lagos, Ondo, Enugu, and Cross Rivers states did not conduct any farm visit. But among those which conducted, Zamfara and Bayelsa states had the lowest record of farm visits of 4 and 10 respectively. In contrast, Kaduna, Gombe, Bauchi and Plateau states conducted several on-farm visits related to special projects, such as AfDB-CBARD, Fadama III and TL2 being implemented in these states.

SPATs, MTPs and OFAR

The success in technology dissemination and adoption by farmers depends on the number and effectiveness of Small Plot Adoption Techniques (SPATs), Management Training Plots (MTPs) and On-farm Adaptive Research (OFAR) that are conducted by ADPs. The conduct of these activities was drastically reduced in 2012. Most states did not establish SPATs, MTPs and OFARs. Plateau and Yobe recorded the highest OFARs of 77 and 75 respectively. The reports from Taraba and Abia states showed they conducted the highest number of SPATs of 4,106, and 3,375 respectively.

FNTs/MTs and MTRMs/QTRMs

Forth Nightly Training (FNT) of farmers was not conducted by 41% of the ADPs due to financial and other logistics problems. However, Anambra, Ekiti, Benue, Kogi and Benue states conducted a few FNTs in 2012. Also, 65% of the ADPs conducted MTRM. But only Nasarawa State and FCT met their MTRM targets.

Training of Farmers

The highest number of farmers trained in 2012 was recorded by Katsina, Oyo, Adamawa, Bauchi, Anambra states and FCT, which aggregated to less than 30,000 farmers. About 60% of the ADPs did not conduct any direct training for farmers. These included states that had well trained master trainers for farmers field school. However, technical messages to farmers were sustained via radio and television programmes on national networks and states media stations.

Number of Farmer Field Schools (FFS) Established

Borno, Adamawa, Katsina, Kebbi, Kano, Kaduna, Taraba, Plateau, FCT, Niger, Kogi, Benue, Osun, Lagos, Ondo, Enugu, Edo, Delta and Akwa-Ibom did not establish FFS. Gombe, Ekiti, Bauchi, Imo, Cross River and Ogun states had the highest number of FFS

recording 81, 81, 76, 72, 63 and 40, respectively, while Oyo, Nasarawa, Abia and Rivers states had the lowest number of 1, 2, 6 and 14, respectively.

TECHNOLOGIES EVALUATED UNDER OFAR, SPAT AND MTP

Generally, most of the technologies under OFAR are crop-based. In Kwara, Nasarawa, Imo, Abia, Anambra Ekiti, Lagos, Osun, Bayelsa and Cross River states, efforts were made to include OFAR packages for livestock.

About 65% of the state ADPs did not conduct SPAT. Also, about 54% of them did not establish MTPs due to inadequate and untimely release of fund by government.

On a general note, there was low performance in the activities of ADPs across the country in 2012 as compared with 2011. Considerable improvement in the level of funding and commitment to support agriculture and extension services occurred in Borno State in 2012, unlike in the last 10 years when agriculture was completely neglected in the state. However the recent shift of interest to agriculture by the Borno state government is encouraging.

AGRICULTURAL TRANSFORMATION AGENDA (ATA)

The National Economic Management Team unveiled an Agricultural Transformation Agenda (ATA) to revitalize the agricultural sector. The Federal Government during the year rolled out broad-based programme intended to induce investment-driven strategic partnerships with the private sector and provide a range of incentives to unlock the potentials of agriculture to increase the sector contribution to economic growth. Under ATA, the country took giant strides to improve market connections and enhance commodity value chain performance by promoting innovative incentive schemes. In this way, agricultural subsidies will get to the intended beneficiaries. The anomalous scheme in which subsidies on production inputs such as fertilizer and improved seeds are creamed off before they get to the farmers will be eliminated. The quality of the inputs deployed to farmers under the scheme improved remarkably and the confidence shown by farmers in the use of novel technologies were being reinstated by the participating private input suppliers who have expectedly up-scaled stewardship in support of their products. Areas devoted to production and the expected outputs of most of the commodities of target under ATA increased in 2012 over figures of 2011 by a range of 11- 19%. The commodities and components being promoted under the ATA programme are cocoa, soybean, rice, sorghum, maize, oil palm, cotton, cassava, livestock, fisheries and horticulture. The commodity value chain approach has been adopted to promote these 11 key items with market-sensitive action plans to achieve huge increase in production and ensure food security and to create at least 3 million jobs for Nigerians. Under ATA, improved seeds and fertilizer were distributed to farmers in 26 states of the federation and the FCT through the Growth Enhancement Support Scheme and e-wallet (an ICT application concept).

The objectives of the Agricultural Transformation Agenda are to:

- ✓ Increase food and nutritional security;
- ✓ Enhance income of rural populace;
- ✓ Increase export earnings;
- ✓ Reduce import dependency;
- ✓ Create employment and jobs and;
- ✓ Provide correct policy, regulation and administrative framework.

Most states have commenced implementation of activities on rice, cassava and maize/soybean value chains. So far, the Agricultural Transformation Agenda intervention created jobs in a few states like Gombe, Jigawa, Kebbi, Benue, Ekiti, Osun, Ebonyi, Anambra, and Imo. Records from the South-South Zone were not available as at the time of reporting. The use of vouchers and electronic-wallets (mobile phones) to distribute subsidies on inputs to farmers, with the target of 20 million farmer in 2015 was commended by most of the farmers, especially in Kaduna State and by several development workers interviewed, though with suggested areas for improvement.

RECOMMENDATIONS

The following recommendations are made based on data collected, interactions with stakeholders in agriculture, observations during the survey and regular field feedback from the six NAERLS zonal offices:

1. The heavy downpours in September, which forced the release of water from the Dadin-Kowa Dam in Gombe state and another Dam in Cameroon, caused massive flooding in more than 20 states of the country. Many farmlands were submerged and crops worth several millions of naira destroyed. The forecasts of improved production due to field observations conducted late in August and early September have been negated.
There is an urgent need to emphasize dry season farming in order to ameliorate shortfalls from wet season production and ensure stable food supply and fair market prices. Nonetheless, residual moisture from the floods should increase the production potential of significant areas to be used for dry-season farming in 2012/2013 dry season. Serious investments in irrigation infrastructure and broad-based skill improvement to optimize the use of existing and yet to be developed irrigation facilities are compelling due to the huge downpour of 2012.
2. Traditional farm tools still dominate agricultural production in Nigeria. This limits productivity and is a disincentive for engagement of youths in agriculture. In spite of government efforts to acquire tractors, the number of tractors available for field work is reducing annually. Many tractors are down because of minor problems. Concerted efforts should be made to ensure effective after sales services for tractors. A more comprehensive inventory of tractors and other farm

machines and skill development for tractor repairs to keep existing tractors functional while acquiring new ones are viable plans to check this menace.

3. The effects of climate change are becoming more apparent and are complicating the pressure on national research systems to provide novel technologies for transformation of the nation's agriculture.
Funding should be increased for research activities to develop appropriate technologies/maintain germplasm of biological resources for mitigating the effects of climate change, including multi-purpose tree species for checking soil erosion, desertification, nutrient-efficient crops, control of crop pests and diseases, livestock and fisheries and low cost feeds and feeding techniques for fisheries and livestock.
4. Sustainable agricultural transformation requires active engagement of skilled extension personnel. Presently, the number of such personnel available is not stable. Moreover, the poor funding of ADPs is negating efforts of the Federal Government to revitalize agriculture. An innovative federal intervention on the issue of sustainable funding and personnel development at the ADPs would be a strategic development initiative to quickly avert total collapse of agricultural extension service provision in the country.
A complement to such intervention is a clear perspective support for the conduct of a national census of extension personnel and unemployed graduates with a view to integrate them into agricultural value chain incubation schemes as leverage for the transformation agenda.
5. The strategic grain reserves of the Federal Government are currently not being complemented at the state level. To enhance effectiveness of the programme, state governments and the private sector need to be more active and responsible in the ownership, stocking and distribution, linking commodities to market evolution. A situation in which the operation of the strategic grain reserve scheme is almost under the exclusive control of the Federal Government is not sustainable.
6. There is paucity of data on livestock and fisheries production across the states. Therefore, it is important to initiate the conduct of livestock population census and nationwide fisheries production survey in order to entrench reliable livestock and fisheries data for development planning.
7. There is the urgent need to train livestock and fisheries technical staff on disease prevention, diagnosis and treatment to forestall production loss usually experienced by farmers. Fish farmers should be trained on how to produce own feeds using local feed resources, because over 70% of production cost is expended on feed purchase.

8. Cassava glut was reported in many states, especially in Oyo, Kwara and Kogi with an estimated production loss of 100% by most farmers. The current policy of cassava inclusion in bread and the establishment of Cassava Bread Development Fund are steps in the right direction. Meanwhile some clarity on the mode and structure for the enforcement of the policy is necessary.
9. Inputs received by farmers through e-wallet under the Growth Enhancement Scheme, GES of ATA, for the wet season was late and inadequate. The process of fine-tuning the scheme should be continued without off season holidays in order to address the anomalies detected in the 2012 survey.
10. The progress made in the establishment of the Department of Extension at the Federal Ministry of Agriculture and Rural Development is highly commendable. The Department should be supported and strengthened with skilled staff for effective take-off in order to quickly deal with the issue of lack of extension policy in Nigeria.



1.0 INTRODUCTION

The annual Agricultural Performance Survey (APS) for the year was conducted between 26th August and 3rd September, 2012. The survey was carried out by the National Agricultural Extension and Research Liaison Services (NAERLS) in collaboration with Planning Research and Statistics Department of the the Federal Ministry of Agriculture and Rural Development (FMARD) along with several other stakeholders in agricultural data generation and use. The other agencies that participated include the National Bureau of Statistics (NBS), the Federal Department of Agricultural Extension (FDAE), the Nigerian Meteorological Agency (NIMET), the Federal Department of Fisheries (FDF), the Federal Livestock Department (FLD), the National Productivity Centre (NPC) and the five Zonal Coordinating Research Institutes, Institute for Agricultural Research (IAR), the Lake Chad Research Institute (LCRI), the National Cereals Research institute (NCRI), the Institute of Agricultural Research and the Training (IAR & T) and National Root Crops Research Institute (NRCRI).

The annual survey has four strategic objectives which are:

- i. Assess the performance of agriculture/programmes during the year especially the wet season;
- ii. Make production forecasts available;
- iii. Identify constraints to increase agricultural productivity and effective extension delivery service and
- iv. Provide feedbacks for improved research and policy performance.

2.0 Methodology

Nineteen multi-disciplinary teams of three scientists each, making a total of 57 scientists carried out the survey exercise across the 36 states of the federation and FCT using Participatory Rural Appraisal (PRA) techniques. The teams used structured questionnaires/ checklists, farm visits, other relevant reports, interviews of farmers, agricultural ministries and ADP officials in the survey. In every state, two communities each were selected from two LGAs in each of the two selected agricultural zones for evaluation. From each community, five farmers were interviewed in addition to focused group discussions held at every site. Final wrap-up sessions to validate data generated were held at the end of each state visited with officials of the state ADPs and Ministries of Agriculture and farmer's organizations were possible. The summary of the findings of the survey are presented as follows.

3.0 FINDINGS/OBSERVATIONS

3.1 WEATHER SITUATION

Rainfall Situation

The rainfall amount in 2012 was substantially higher than of 2011 (Fig 3.1.1-3.1.12). In the South-South Zone rainfall was overwhelmingly high in 2012. The rains started in April in the North-East and North-West Zones. Most of the states in the South-West, South-East and South-South Zones recorded their first rains in January as against February in 2011. There were variations in the commencement of rain in the North-Central Zone. Benue, Kogi, Kwara states and FCT recorded their first rain in February, while the rains commenced in Nassarawa, Niger, Taraba and Plateau in April.

The total rainfall amount received from January to December 2012 in the South-South Zone was in excess of 2500 mm, followed by the South-East (>1500 mm) and South-West (>1100 mm). The North-Central received rainfall amount slightly above 900 mm while North-East and North-West recorded increases of 29% and 18% respectively in 2012 (above those of 2011).

Heavy rains that resulted in flooding occurred this year in Kogi, Kwara, Lagos, Taraba and Adamawa states, with attendant severe crop damage, some casualties and displacement of several farming communities. The South-West Zone recorded higher number of rainy days than the Northern Zones, while the South-East recorded slightly a higher rainy days than the South-West. Despite the heavy rains, dry spells were reported in Kwara State (although only for a few days). The rainy season extended beyond long-term established duration in most parts of the country. This invariably induced a longer period of cloud overcasts that impeded optimum solar reception on crop surfaces. The early on-set of the rains enabled earlier planting of crops but the extended rainy period raised the fear of damage on early planted crops that matured during the rains, because sun-drying option was constrained. The cloudy nature of the season induced concern for mycotoxin, especially aflatoxin, which the farmers and consumers had to contend with.

As earlier stated, the rainfall amounts received especially in August and September across the country were unprecedented. This resulted in flooding, with serious economic implications. Although all crops were affected, phenomenal damage was recorded in maize, rice, cocoyam, cassava, fish and soybean. The release of water into Nigeria from a dam in Cameroon in early September compounded the situation and resulted in a colossal loss of agricultural products especially along the shores of River Niger and River Benue. The flood overflowed the banks of River Niger in Lokoja and Anambra, Delta, Bayelsa and Rivers states impeding the movement of commuters and vehicles to the extent that millions of tons of perishable agricultural commodities were lost in

transit. The Federal government reported that in 27 states, over two million people were displaced by the flooding.

Figure 3.1: Rainfall Distribution in Nigeria

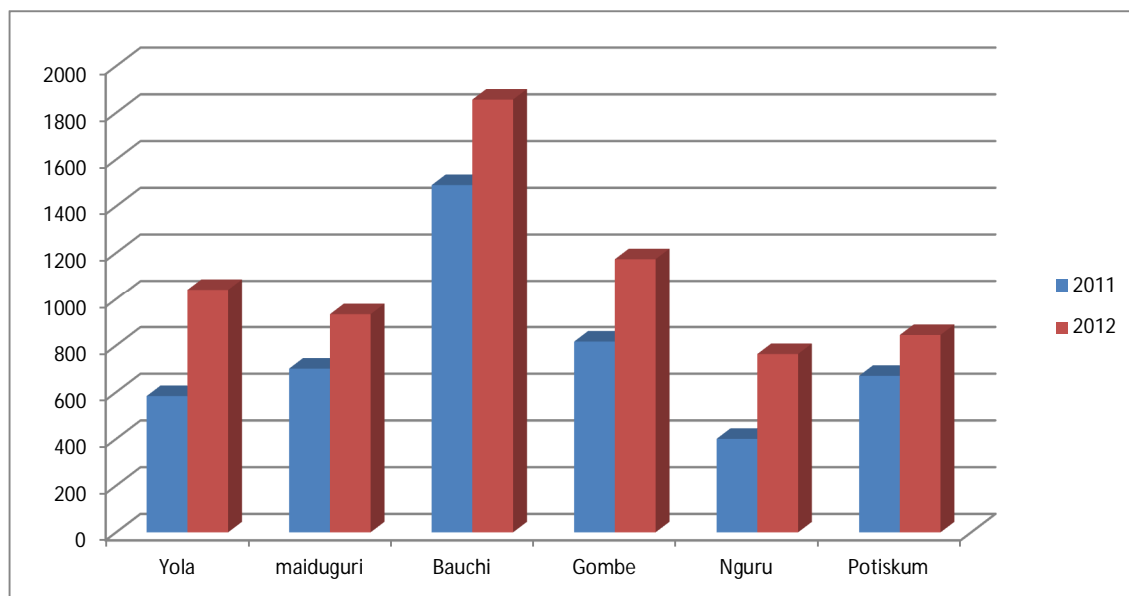


Figure 3.1.1: Annual Rainfall (mm) of selected stations in NE for 2011 and 2012

The comparative rainfall data for 2012 and 2011 in the six agro-ecological zones of Nigeria are presented in this section. The rainfall amounts and rainy days increase from the NE down to the SW and SS. Generally, rainfall started between the month of January and February in the South, while most states in the North received their first rainfall in the months of March and April in 2011 and 2012.

NORTH EAST ZONE

In 2012, the rains started in April in all states of the zone, except with the exception of Yobe State. It became fully established in late April across the zone. A total amount of 2682 mm was received in the month of April, compared to 62.9 mm received in 2011. More rainfall occurred in July, August and September in 2012 than those of the corresponding months in 2011 across the zone.

Comparative data between 2011 and 2012 revealed that all the states within the zone received more rainfall from January to December 2012 than in 2011 as shown in Figure 5 with Bauchi State receiving the higher rainfall. Cases of serious flooding were reported in some parts of Yobe and Adamawa states. The rainfall distribution and quantity across the zone were considered adequate for crop production, except for the serious flood that resulted in the destruction of crops in Adamawa and Yobe states.

NORTH WEST ZONE

The rain started in the month of April 2012 in two states (Kebbi and Zamfara) while Kaduna State recorded its first rain of the year in the month of February. However, the rain became fully established in early May across all the State in the zone. In general, the amount of rainfall received in the zone in 2012 exceeded that of 2011 by 22%. Surprisingly, one of the stations, Yelwa in Kebbi State, recorded less rainfall in 2012 compared to the record of 2011 as shown in Figure 3.1.2. Minor floods occurred in most of the states, while heavy floods were recorded in Zamfara, Katsina and Kano states.

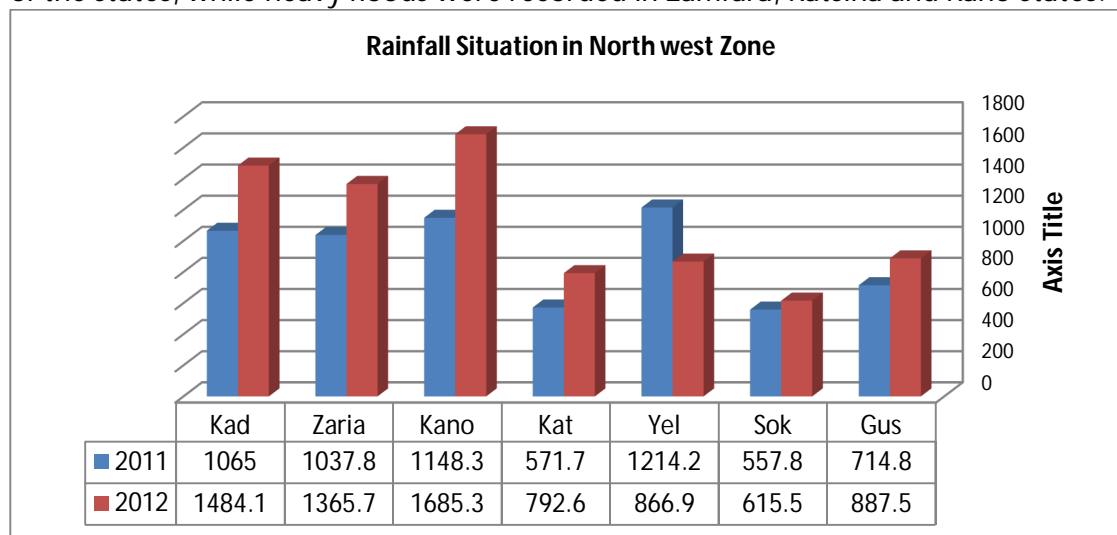


Figure 3.1.2 : Annual Rainfall (mm) of selected stations in North West for 2011 and 2012

NORTH CENTRAL ZONE

The rain commenced in February in Benue, Kogi, Kwara and FCT, but no rain was received in the month of March in the zone except in Kwara State. Rainfall was fully established in April in all the states of the zone. Generally, the quantity of rain received



Plate 1: One of the several communities submerged by flood in Nassarawa State in 2012

in 2012 exceeded that of 2011 by 26%. Also, rainfall terminated earlier in the zone in 2011 as compared to that of 2012, which was in November. Heavy floods occurred in all the states in the zone. The floods were reported to have destroyed houses, farmlands and animals amounting to billions of naira in Kogi, Plateau and Benue states. Critical infrastructure was also damaged and activities in several sectors of the economy were disrupted. It disrupted movement of commuters and vehicles to the extent that millions of tons of perishable agricultural commodities were lost in transit. Millions of people were displaced by the floods. However, Ilorin town in Kwara State recorded less rainfall in 2012 compared to the records of 2011 as shown in Figure 3.1.3.

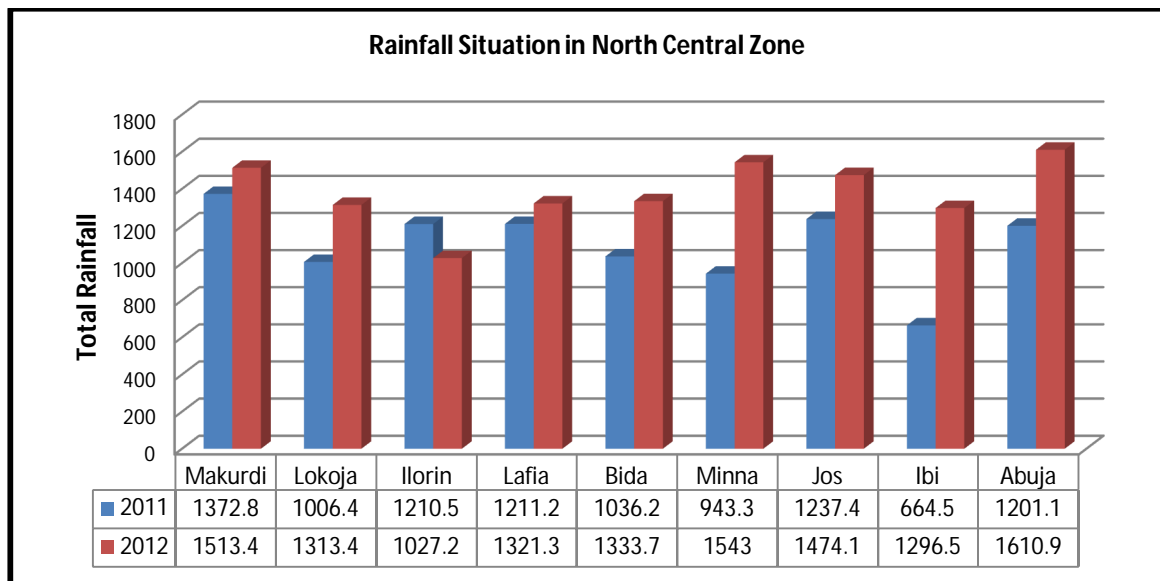


Figure 3.1.3: Annual rainfall (mm) of selected stations in North Central for 2011 and 2012

SOUTH WEST ZONE

The rainfall commenced as early as January, 2012 in most of the states in the zone as compared to 2011 when the rain commenced in February. Generally, the quantity of rain received in the South West zone in 2012 is less than that of 2011 by 9%. However, the quantity and distribution of rainfall in 2012 is considered favourable for good crop production.

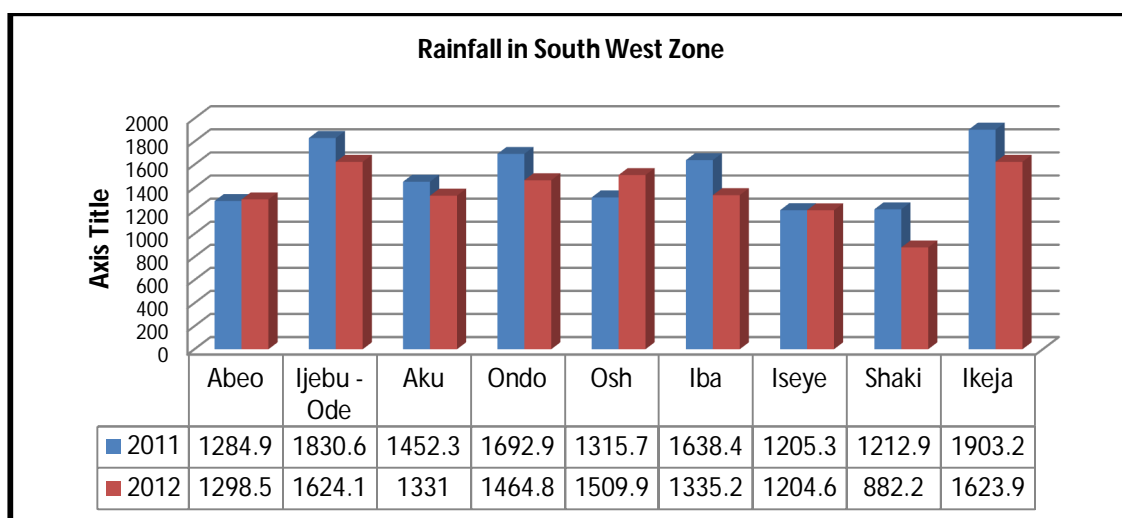


Figure 3.1.4: Annual rainfall (mm) of selected stations in SW for 2011 and 2012

SOUTH EAST ZONE

The rainfall started as early as January, in all the states in the zone and became fully established in the month of February. Rainfall data for Ebonyi State for 2012 was not available. As at the end of December 2012 the total rainfall in most of the states within the zone was generally higher than that of last year. Also, the rains were so heavy in the zone that incidences of flood were reported in Anambra, Akwa-Ibom and Imo states. Despite the flood, however, the rainfall amount and distribution in 2012 were considered adequate and favourable for good crop production.

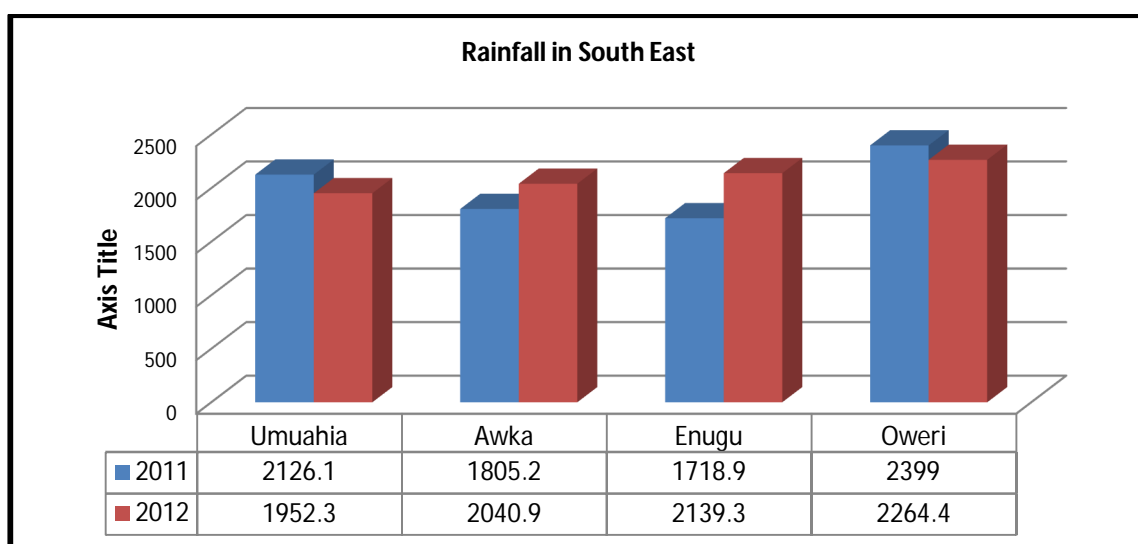


Figure 3.1.5: Annual rainfall (mm) of selected stations in South East for 2011 and 2012

SOUTH-SOUTH ZONE

Rainfall started in January in all the states in the zone as against 2011 when it started in February. The trend of the rainfall in the zone was similar to that of the South East Zone with their peak in June and July. Comparative the data showed that rainfall amount received in 2012 was higher than that of 2011 by 14%. Several flood incidences were reported in all the states in the zone.



Plate 2: Flood destroyed sorghum, maize and rice fields at Adamawa State

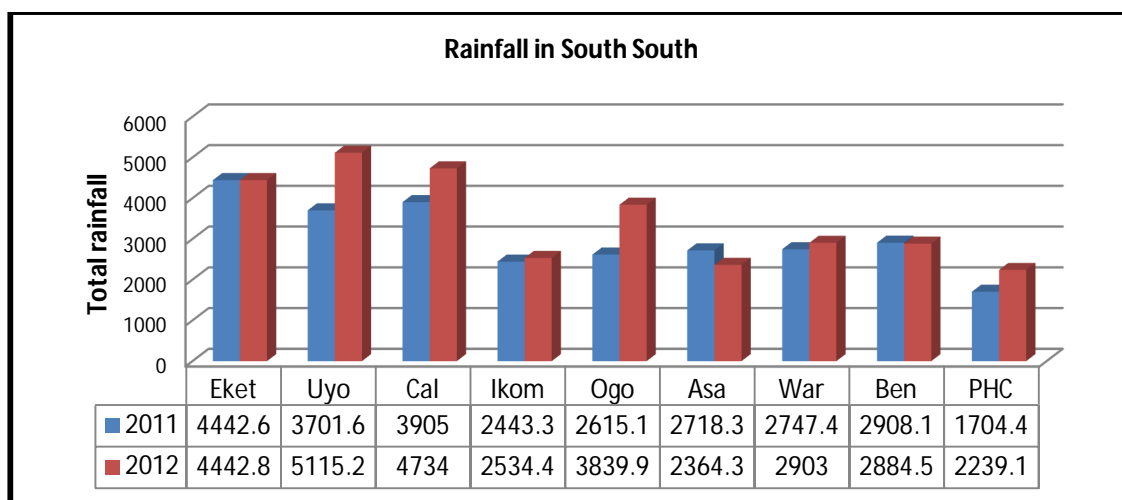


Figure 3.1.6: Annual Rainfall (mm) of selected stations in the South-south for 2011 and 2012

RAINY DAYS

NORTH EAST ZONE

In the North East Zone, the total rainy days in 2012 in each state of the zone were generally low, compared to those of other zones. Bauchi recorded 108 rainy days, followed by Yola with 101 days. However, rainy days in Adamawa, Borno, Gombe, Yobe and Bauchi states were higher in 2012 as against those of 2011 as shown in Figure 3.1.7. Adamawa and Bauchi recorded 7 rainy days in November Borno recorded 3 days in the same month while Gombe and Yobe did not record any rainfall in the month of October. In all the states there were more rainy days in 2012 compared with 2011.

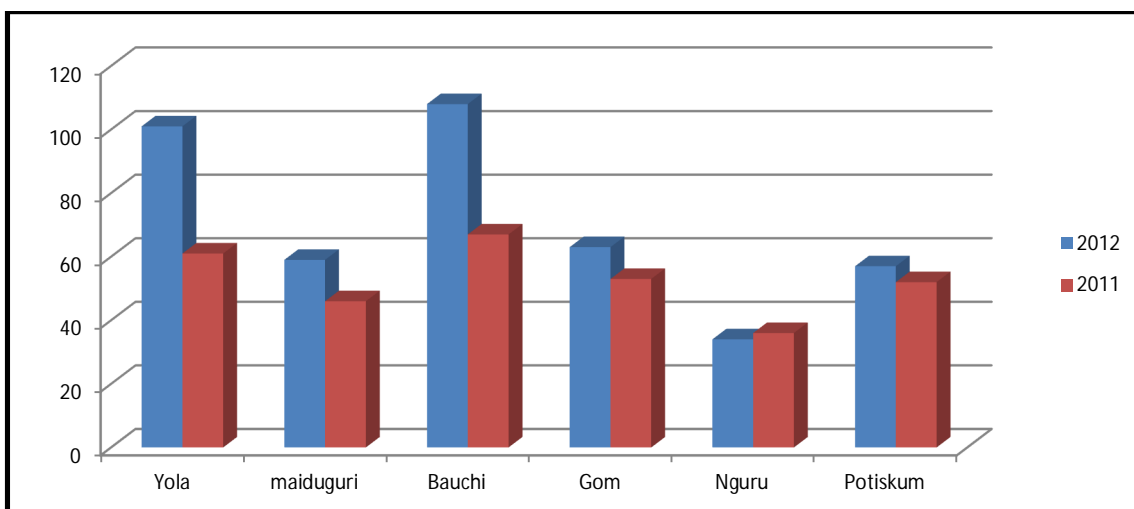


Figure 3.1.7: Rainy days of the selected stations in NE for 2012 compared to 2011

NORTH WEST ZONE

The monthly rainy days in each station in the North West Zone showed general increase across the states compared to 2011 with 21 rainy days being the highest. This occurred in Kaduna State during the month of August. The number of rainy days during the months of July and August 2012 in all the states in the zone was between 11 and 21 days, while it ranges from 6 to 18 days in the month of September. The highest number of rainy days of 93 was recorded in Kaduna town, followed by Zaria with 82 days, while the lowest was Katsina, with 50 days. However, rainfall records showed that Gusau recorded 58 rainy days in 2012 compared to 60 days in 2011. Figure 3.1.8 presents a chart of total rainy days of seven selected stations representing six states, as there was no record obtained for Jigawa state.

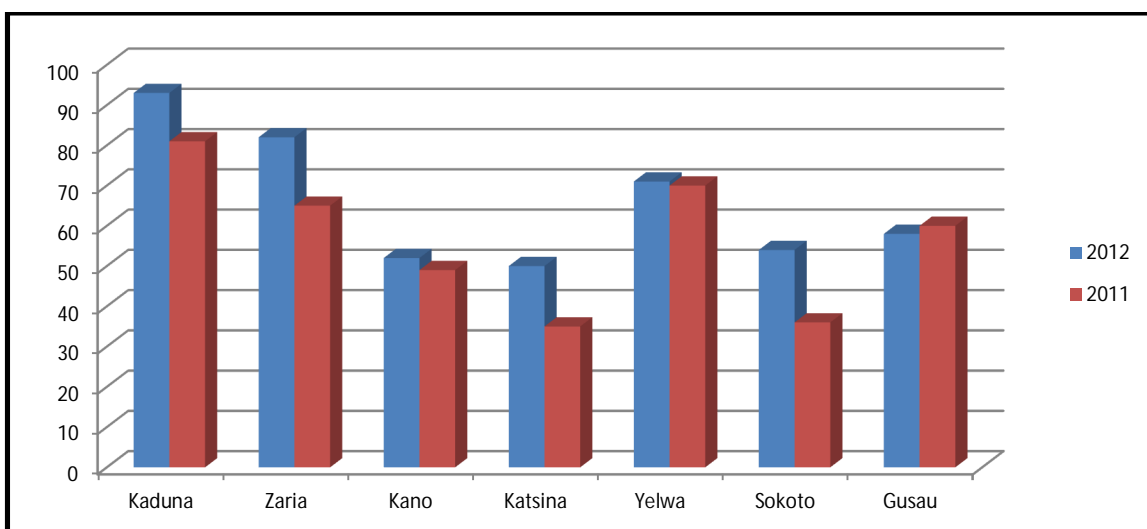


Figure 3.1.8: Rainy days of the selected stations in NW for 2012, compared to 2011

NORTH CENTRAL ZONE

The number of rainy days in each station across the zone was more in 2012, compared to 2011. Abuja and Jos recorded 117 days and 106 days in 2012, compared to 94 days and 98 days respectively for 2011. Rainy days were recorded in the month of November in some of the states in the zone, as against 2011 when no rainy day was recorded (Fig 3.1.9).

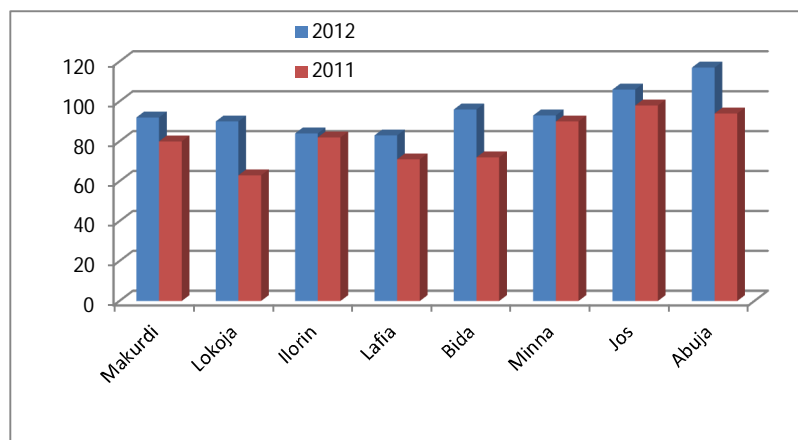


Figure 3.1.9: Rainy days of the selected stations in NC for 2012, compared to 2011

SOUTH WEST ZONE

The total number of rainy days in each station was higher in 2012 than in 2011 with the exception of Oshogbo. The highest rainy days were 125, recorded in Ondo while the lowest number of days was 79, recorded for Shaki town. The highest number of rainy days of 20 was recorded in the month of September in Akure while the highest number of 21 days was recorded in Iseyintown in September and Oshogbo in October as shown in Figure 3.1.10

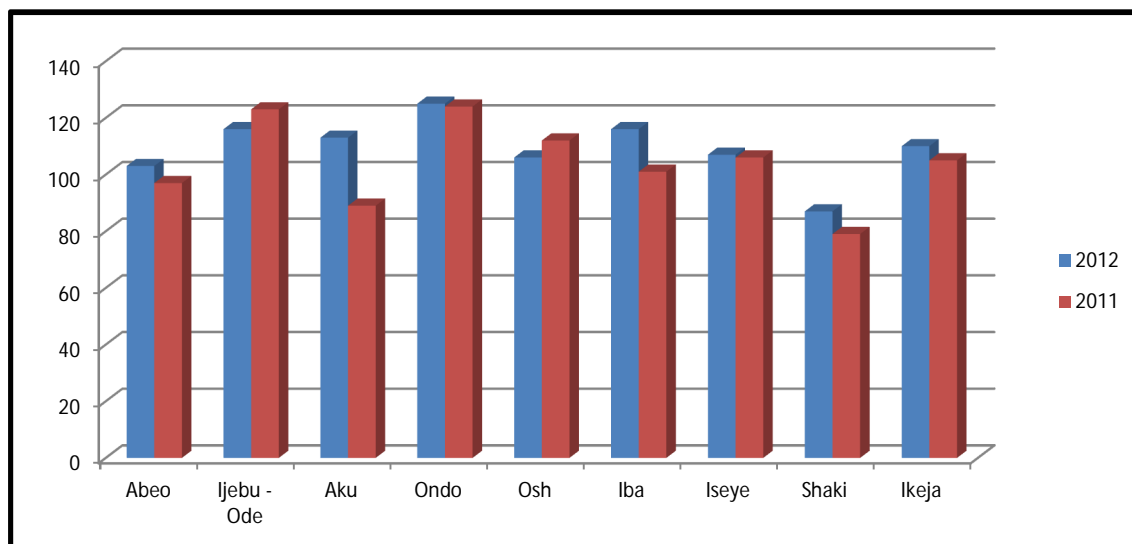
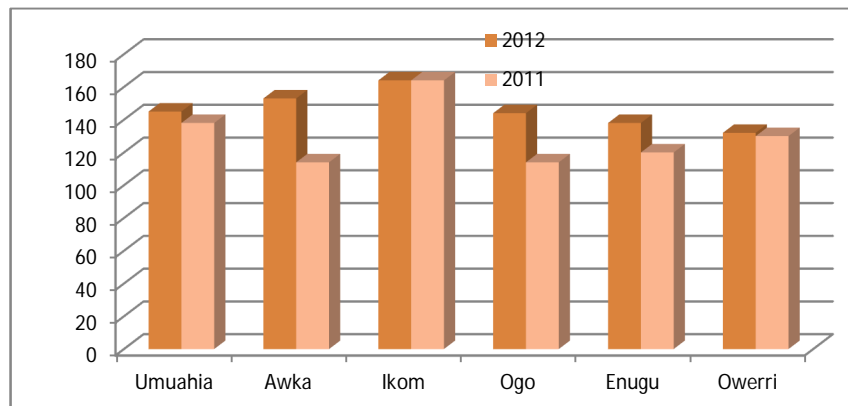


Figure 3.1.10: Rainy days of the selected stations in SW for 2012 compared to 2011

SOUTH EAST

The rainy days of 2012 in the South East Zone showed a general increase across the



zone over those of 2011. During the peak period, rainy days were as high as 26 in Abia State and ranged from 17 to 25 days in other locations

Figure 3.1.11: Rainy days of the selected stations in SE for 2012, compared to 2011

SOUTH-SOUTH ZONE

The trend of the rainy days in the zone was similar to that of the South East zone, although there were more rainy days in the South-South Zone than in the South East Zone. Most of the locations in the South-South Zone had more than 14 days of rain during the main rainy months. Rainy-days as high as 30 days were recorded in Akwa-Ibom in the month of July.

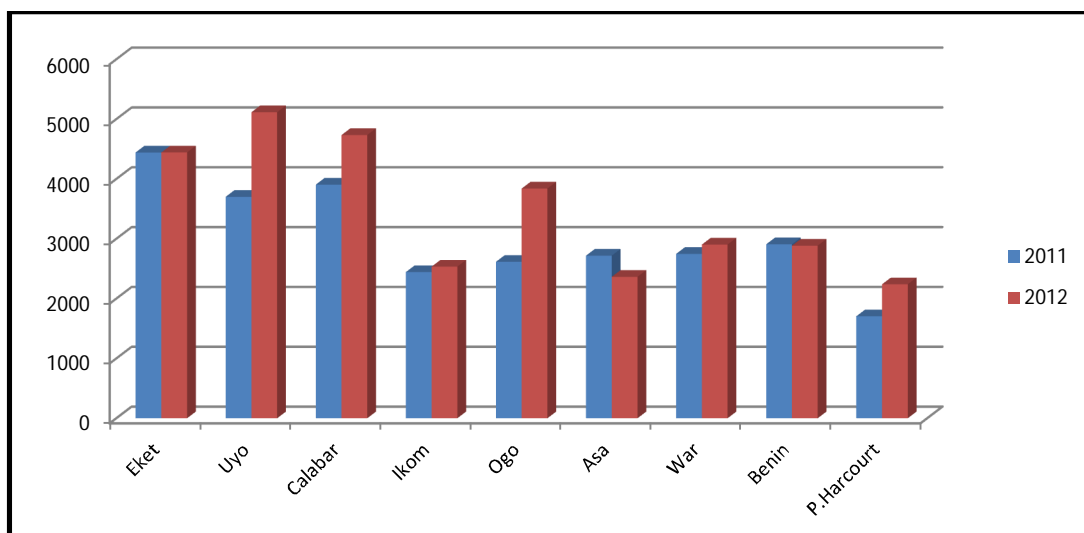


Figure 3..1.12: Rainy days of the selected stations in SS for 2012 compared to 2011

MAXIMUM TEMPERATURE (°C)

Maximum temperatures across the country were documented. The Zonal mean temperature did not differ significantly between 2011 and 2012 for every months in each zone. North West and North East Zones recorded the highest temperature, followed by the North Central Zone. While the Highest Zonal Mean temperature of 40.8 °C was recorded in Nguru, Yobe State in the North East Zone, the least Zonal Mean temperature of 26.4 °C was recorded in the South West Zone in August at Shaki, Oyo State.

Table 3.1.1: Rainfall data (mm) in North East Zone for 2011 and 2012

State	Station	April		May		June		July		August		September		October	
		2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
Adamawa	Yola	2.5	154.8	58.8	108	29.9	198.9	92.2	157.4	134.1	154.8	210.1	239.5	55.9	27.6
Borno	Maiduguri	7.6	202.2	57.8	72.9	143	68	165.2	270	218.1	202.2	89.7	115.2	20	3.4
Bauchi	Bauchi	4.5	300	76.8	167.9	151	163.8	189.8	535.3	624.7	300	332.8	375.3	110.8	14.6
Gombe	Gombe	47.5	13.3	33.8	63.3	78.9	223.3	220.6	334.8	278.2	343.5	100.9	166.8	56.8	28.1
Yobe	Ngu	0.8	0	36	60.8	59.2	121.2	89.9	134.9	162.4	321.3	37.1	125.2	15	0
Yobe	Potiskum	0	0	27	78.6	152	107.9	145.4	206.6	220.1	316.9	98.8	125.1	27.2	10

Table 3.1.2: Rainfall data (mm) in North West Zone for 2011 and 2012

State	Station	April		May		June		July		August		September		October	
		2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
Kaduna	Kad	57.1	60.8	142.9	212.8	80.9	100.3	193.4	225.6	208	346.2	298.7	403.3	82.7	135.1
Kaduna	Zaria	21	16.7	136.2	232.8	93.3	134.6	317.4	274.5	261.6	432.9	183.5	189	24.8	85.2
Kano	Kano	12.5	0	114.3	71.9	148.6	432.6	235.4	412.4	378.9	626.3	226.4	123.5	32.2	18.6
Katsina	Kat	0	0	38	120.3	161.2	135.2	116.6	224	180.6	227.5	67.3	83.6	8	2
Kebbi	Yel	11.2	56.8	61.2	120.3	334.2	50.3	194.7	254.3	312.2	152.8	217.2	191.2	83.5	41.2
Sokoto	Sok	0	0	92.9	56.6	161.2	83.2	29.3	178.2	174.2	140.7	93.2	92.4	7	64.4
Zamfara	Gus	1	5.2	62.5	158	83.6	63.4	106.1	272.2	301.4	173.1	140.7	118.5	19.5	97.1

Table3.1.3a: Rainfall data (mm) in North Central Zone for 2011 and 2012(February –June)

State	Station	February		March		April		May		June	
		2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
Benue	Makurdi	68.8	0.5	0	0	78	174.3	141.6	139.5	181.6	160.6
Kogi	Lokoja	0	11.8	0	0	65.7	86.5	159.9	233.9	163.2	156.9
Kwara	Ilorin	23.6	22.1	0	4	20.4	134.6	122.8	138.2	253	152.8
Nasarawa	Lafia	9.3	0	0	0	28.1	93.5	196.8	142.2	222	200.8
Niger	Bida	5.6	0	0	0	31.9	64.5	96.9	308.6	210.3	210
Niger	Minna	1.5	0	0	0	25.8	34.2	140.3	204.3	39.7	99.4
Plateau	Jos	7.4	0	0	0	45.9	65.7	186.6	311.9	170.5	253.8
Taraba	Ibi	NA	0	NA	0	NA	99.1	NA	202.7	NA	203.6
FCT	Abuja	43.5	20.6	0	19	52.2	52	105.2	162.8	127.5	222.8

Table 3.1.3b: Rainfall data (mm) in North Central Zone for 2011 and 2012(July to November)

State	Station	July		August		September		October		November	
		2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
Benue	Makurdi	90	346.5	217.4	174.3	272	290.7	323.4	199.7	0	27.3
Kogi	Lokoja	128.1	283.3	150.9	180.5	191.1	148.4	147.5	209.9	0	2.2
Kwara	Ilorin	93.1	120.7	201.8	108.7	247.5	230	248.3	107.4	0	8.7
Nasarawa	Lafia	74.4	231	279.1	230.3	230.2	215.4	171.3	173.2	0	34.9
Niger	Bida	120.9	256.3	157.4	140.9	286.7	224.2	126.5	129.2	0	0
Niger	Minna	195.4	333	158	376.9	301.8	337.2	80.8	158	0	0
Plateau	Jos	236.9	429	281.8	153.9	111.7	201.2	196.6	58.6	0	0
Taraba	Ibi	124.6	327.7	103.4	127.3	243.6	166.8	192.9	169.3	0	0
FCT	Abuja	306.3	376.1	163.5	243.3	272.6	274.4	130.3	228.9	0	11

Table 3.1.4a: Rainfall data (mm) in South West Zone for 2011 and 2012 (January – June)

State	Station	January		February		March		April		May		June	
		2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
Ogun	Abeokuta	0	0	68.2	13.1	19.6	11.6	56.5	76.5	148	183.8	102.9	350.3
Ogun	I jebu- Ode	0	0	61.6	101.9	8.9	16.8	66.1	91.6	217.6	136.6	232.9	301.3
Ondo	Akure	0	35.6	88.1	8.1	96.1	74.1	113.9	152.1	143.5	96.8	219.1	250.5
Ondo	Ondo	0	54.2	88.4	93.2	68	34.5	73.6	92.8	189.9	158	223.8	183.5
Osun	Oshogbo	0	3.7	90.5	61.5	28.8	25.8	89.2	134.3	105.3	178.2	160.6	189.7
Oyo	Ibadan	0	0	60.8	19.8	66.6	29.3	94.1	117.1	151.1	215.6	285.4	215
Oyo	Iseyin	0	26.7	62.1	44.9	38.6	13	36.2	215.2	65.7	221.1	145.3	145.5
Oyo	Shaki	0	22.9	53.6	28.6	40	23.9	93.4	93.3	98.4	139.9	210	153
Lagos	Ikeja	0	10.5	86.6	122.2	21.6	78.1	74.7	115.9	169.4	144.9	340.6	477.6
Lagos	Oshodi	0	6.6	202	141.2	5.1	52	64.5	80.8	226.8	136.9	326.5	517.2

Table 3.1.4b: Rainfall data (mm) in South West Zone for 2011 and 2012 (July – December)

State	Station	July		August		September		October		November		December	
		2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
Ogun	Abeokuta	284.7	147.8	41.8	34.2	294.3	189.6	255.3	283.2	13.6	8.4	NA	0
Ogun	I jebu– Ode	435.9	317.2	109.4	59.6	306.5	254.1	319.2	166.6	32.5	133	NA	45
Ondo	Akure	181.4	242.3	92.4	117.9	324.9	204.1	167.1	143.1	25.8	42	0	0
Ondo	Ondo	363.8	249.3	180.5	123.4	270.4	187.1	229.6	247.4	4.9	95.6	0	0
Osun	Oshogbo	121.6	171	113.6	98.8	145.9	290.8	305.4	219.6	64.8	124	NA	15.8
Oyo	Ibadan	298.4	218.2	211.1	92.5	238.2	226.8	213.3	146	19.4	54.9	NA	0
Oyo	Iseyin	140.5	87.7	308.1	106.6	244.6	172.4	163.6	182.5	0.6	15.7	NA	0
Oyo	Shaki	136.4	82.4	181.5	77.1	159.2	157.4	240.4	126.6	0	0	NA	0
Lagos	Ikeja	476.5	147.5	43.7	34	195.3	214.1	209.3	138.9	240.5	123	NA	27.6
Lagos	Oshodi	412.7	208.9	57.8	6.9	216.7	164.6	256.9	220.5	135.2	121	NA	11.6

Table 3.1.5a: Rainfall data (mm) in South East and Some states in South South Zone for 2011 and 2012 (January – June)

State	Station	January		February		March		April		May		June	
		2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
Abia	Umuahia	0	0	60.8	23.8	111.4	47.3	103.9	195	342.1	247.3	220.1	225
Anambra	Awka	0	28.3	18.5	66.5	59.9	16.5	109.7	373.5	281.4	167.4	190.5	327.6
Enugu	Enugu	0	39	44.6	21.2	118.4	0	118.1	140	220.2	288.7	190	282.5
Imo	Owerri	0	24.8	99.4	74.1	84.2	22.1	114.8	130.2	451.2	251.7	181.3	284.9

Table 3.1.5b: Rainfall data (mm) in South East and Some states in South South Zone for 2011 and 2012 (July - December)

State	Station	July		August		September		October		November		December	
		2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
Abia	Umuahia	245.7	355.7	391.8	195	385.4	321.9	252.2	259.7	12.7	81.6	NA	0
Anambra	Awka	221.2	232	186.9	373.5	511.7	167.4	211.7	266.7	13.7	49.8	NA	0
Enugu	Enugu	195.4	388	237	309.1	439.4	393.2	153.8	228.1	2	88.5	NA	0
Imo	Owerri	305.2	415	500.4	306.9	377.1	477	245.1	192.3	40.3	110.2	NA	0

Table 3.1.6a: Rainfall data (mm) in South-South Zone for 2011 and 2012 (January – June)

State	Station	January		February		March		April		May		June	
		2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
A – Ibom	Eket	0.2	63.2	141	291.8	263.8	74.6	173.9	418.6	484.2	470.3	875.7	856.3
A – Ibom	Uyo	0	163.3	53.8	290.7	197.3	0	91.8	660.5	553.3	336	383.8	698
C/River	Calabar	0	28	153.4	376.4	123.1	36	208.9	861.3	340.6	401.5	694.8	398.8
C/River	Ikom	0	16.4	121.8	73.6	40.2	4	259.8	313.7	306	343.6	252.5	482.6
C/River	Ogoja	0	25.4	51.1	4.1	21.7	0	154.6	607.5	436.5	571.1	328.1	535.6
Delta	Asaba	0	0	54.5	15.8	97.8	20.6	169.3	328.5	465.2	80	268.8	263.3
Delta	Warri	0	18.8	136.4	168	67.7	47.1	142.8	137.6	367.5	333.4	334.2	469.8
Edo	Benni	0	48.5	77.8	53.2	81.4	74.8	321.4	157.1	296.5	383.6	421.3	549.8
Rivers	PHC	0	5.7	111.1	104	0.2	92.7	113.6	247.2	322.8	208	149.1	311.8

Table 3.1.6b: Rainfall data (mm) in South-South Zone for 2011 and 2012 (July – December)

State	Station	July		August		September		October		November		December	
		2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
A – Ibom	Eket	754.7	834	572.5	418.6	562	374.1	494	281.9	120.6	182.8	NA	176.6
A – Ibom	Uyo	779.7	911.9	383.6	660.5	501.4	526.7	561.9	497.7	195	270.5	NA	99.4
C/River	Calabar	806.5	630.1	550.7	861.3	183.9	572.9	518.9	410.4	324.2	126.7	NA	30.6
C/River	Ikom	239	309.5	360.9	313.7	384.9	295.8	415	288.4	63.2	93.1	NA	0
C/River	Ogoja	116.9	314	476.5	607.5	626.1	579.1	401.9	476.7	1.7	118.9	NA	0
Delta	Asaba	506.7	331.1	483.9	328.5	458.7	511.6	213.4	294.7	0	190.2	NA	0
Delta	Warri	672.6	678.1	458.2	133.4	254.8	333	199.1	330	114.1	184.4	NA	69.4
Edo	Benni	535	408	424.4	171.3	408.6	525.5	278.1	285.2	63.6	189.7	NA	37.8
Rivers	PHC	298.8	359	213	217.8	250.6	409.4	191.7	204.5	53.5	79	NA	0

Table 3.1.2a: Monthly Max Temperature of North East Zone for 2011 and 2012 (January – June)

State	Station	January		February		March		April		May		June	
		2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011
Adamawa	Yola	34.2	33.4	38.2	38.7	39.8	41.2	30.5	40.3	35.8	36.9	32.9	34.7
Borno	Maiduguri	32.1	31	37.1	37.6	37.6	39.8	31.2	41	39.7	40.3	35.5	38.1
Bauchi	Bauchi	31.3	30.2	35.7	35.8	36.7	38.1	28.9	38	36.2	36.2	31.8	33.6
Gombe	Gombe	31.5	30.1	35.2	36.3	35.9	38.3	38.1	37.6	34.7	35.6	31.3	33.5
Yobe	Nguru	31.6	29.6	35.7	36.2	36.1	39	41.8	40.2	40.8	41.1	35.5	37.7
Yobe	Potiskum	31.1	30.3	36.2	36.9	36.8	38.9	41.1	37.8	38.8	39.6	34.3	36.5
Monthly mean		32	30.77	36.35	36.92	37.15	39.22	35.27	39.15	37.67	38.28	33.6	35.68

Table 3.1.2b: Monthly Max Temperature of North East Zone for 2011 and 2012 (July – December)

State	Station	July		August		September		October		November		December		Annual Mean
		2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	
Adamawa	Yola	30.8	33.1	30.5	31.1	31.3	30.6	34.7	33.4	37	36.4	35.8	NA	34.84061
Borno	Maiduguri	32.9	34.4	31.2	31.2	33.9	33.6	36.3	36.8	35.2	35.7	37.1	NA	35.62183
Bauchi	Bauchi	29.5	30.9	28.9	29.2	29.5	30.6	32.8	323	34.4	33.9	32.7	NA	46.12273
Gombe	Gombe	28.6	30.2	28.3	28.1	29.8	29.7	32.4	32	33.9	33.3	32.3	NA	32.9
Yobe	Nguru	32.9	38.8	30.9	31.7	33.9	34.4	37.4	36.8	35.2	35.5	30.1	NA	35.77826
Yobe	Potiskum	30.8	33.2	30.1	30.7	33	32.4	34.4	34.7	37.5	34.7	30.6	NA	34.8
Monthly mean		30.92	33.43	29.98	30.34	31.9	31.88	35.04	82.72	35.53	34.92	33.1	NA	36.67724

Table 3.1.3a: Monthly Max Temperature of North West Zone for 2011 and 2012 (January – June)

State	Station	January		February		March		April		May		June	
		2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011
Kaduna	Kaduna	31.7	30.6	35.5	35.1	35.5	36.6	35.3	35.1	32.3	32.9	30.2	30.7
Kaduna	Zaria	30.1	29	34.6	35.4	34.8	37.3	37.1	36.8	32.7	34.5	30.3	31.2
Kano	Kano	29.5	27.7	34.6	35.4	35.5	38.2	40.4	39.2	38.3	39.2	33.5	34.9
Katsina	Katsina	29.7	28.6	35.2	35.1	35.1	37.8	40.2	38.9	37.6	38.9	33.7	36.4
Kebbi	Yelwa	35.5	35.1	38.4	37.2	40.2	41	38.1	39.3	34.8	36.9	33.1	33.5
Sokoto	Sokoto	32.7	31.8	37.4	37.2	38.1	40.7	41.4	39.9	38.6	39.7	34.3	35.6
Zamfara	Gusau	33	30.5	37.1	36.5	37.1	38.3	39.8	38.3	37.3	38.3	32.6	34
Monthly mean		31.74	30.47	36.1	36	36.6	38.6	38.9	38.2	35.94	37.2	32.53	33.76

Table3.1.3b: Monthly Max Temperature North West Zone for 2011 and 2012 (July to December)

State	Station	July		August		September		October		November		December		Annual Mean
		2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	
Kaduna	Kaduna	28.5	29.5	27.6	28.6	29.3	30.3	31.8	31.5	33.7	32.9	33	NA	32.09565
Kaduna	Zaria	28.9	29.5	28	29	29.6	30.6	32.2	31.8	32.9	32.4	29.2	NA	32.08261
Kano	Kano	30.8	32.2	29.7	30.3	32.2	32.2	36.1	34.2	34.8	33.3	32	NA	34.09565
Katsina	Katsina	30.8	32.2	29.7	30.3	32.2	32.2	36.1	34.2	34.8	33.3	32	NA	34.13043
Kebbi	Yelwa	30.8	32	30.1	30.6	31.1	30.9	33.7	33.1	37.1	37.1	36.8	NA	35.06087
Sokoto	Sokoto	31	34	30.5	31.8	33	33.9	35.9	37.1	38.4	36.8	34.8	NA	35.85217
Zamfara	Gusua	29.8	32.3	29.1	30	31.5	31.6	34	33.7	34.4	35.3	32.4	NA	34.21304
Monthly mean		30.09	31.67	29.24	30.09	31.27	31.67	34.3	33.66	35.2	34.4	32.9	NA	33.93292

Table 3.1.4a: Monthly Max Temperature of North Central Zone for 2011 and 2012 (January – June)

State	Station	January		February		March		April		May		June	
		2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011
Benue	Makuri	34.5	34.5	35.9	35.4	38.2	37.1	29.4	35.4	31.9	33.1	30.6	31.1
Kogi	Lokoja	34.8	24.4	36.9	37.5	38.2	38.4	35.5	36.1	33.2	34.3	31.5	32.4
Kwara	Ilorin	33.8	33.8	35.5	35.6	36.5	35.9	33.7	34.9	31.5	33.9	30.6	31
Nasarawa	Lafia	34.8	35.4	38	37.3	39.3	39.1	36	37.4	33.1	34.3	31.9	31.4
Niger	Bida	34.7	34.6	37.1	37.5	38.8	38.5	36	37.3	31.9	34	31.4	32
Niger	Minna	35	34.6	37.4	37.3	39.3	39.2	36.4	37.2	32.7	33.4	31	31.4
Plateau	Jos	28.3	27.5	31.3	31.1	31.7	32.5	29.9	32	27.7	28.7	26.2	26.6
Taraba	Ibi	32.5		37.3		39.1		35.9		32.9		31	
FCT	Abuja	34.8	34.6	35.9	35.9	37.7	37.7	34.6	35.4	31.6	33.3	32.2	30.8
Monthly mean		33.7	32.4	36.1	36	37.6	37.3	34.16	35.713	31.83	33.13	30.71	30.84

Table 3.1.4b: Monthly Max Temperature of North Central Zone for 2011 and 2012 (July – December)

State	Station	July		August		September		October		November		December		Annual Mean
		2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	
Benue	Makurdi	29.8	30.7	29.4	29.5	30.3	30.2	31.1	30.8	33.4	34	34.5	NA	32.64348
Kogi	Lokoja	30.3	31.4	29.5	30.5	30.6	31.2	31.2	31.6	34.3	34.7	34.9	NA	33.1913
Kwara	Ilorin	28.9	29.2	27.8	28.5	29.4	29.9	30.9	30.6	33.9	34.1	34.2	NA	32.35217
Nasarawa	Lafia	30.2	31.6	29.9	29.8	30.2	30.9	32.3	31.3	35	33.2	36.4	NA	33.86087
Niger	Bida	29.7	31.2	29.5	30.3	31	31.1	32.2	32.1	35.5	35.6	35.1	NA	33.78696
Niger	Minna	29.1	30.7	28.2	29.4	29.9	30.3	31.6	31.2	35.5	35.4	36.4	NA	33.5913
Plateau	Jos	24	25.5	23.8	24	24.9	25.2	27.8	27.7	28.6	28.1	28.5	NA	27.89565
Taraba	Ibi	29.9	31.2	29.8	30.2	30	30.2	31.5	22.4	38.4	32.3	35	NA	32.32941
FCT	Abuja	28.4	30	27.9	28.4	28.9	29.8	30.8	31.2	33.6	34.3	34.8	NA	32.72174
Monthly mean		28.92	30.17	28.42	28.96	29.47	29.87	31.04	29.88	34.2	33.5	34.4	NA	32.54082

Table 3.1.5a: Monthly Max Temperature of South West Zone for 2011 and 2012 (January to June)

State	Station	January		February		March		April		May		June	
		2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011
Ogun	Abeokuta	35.4	34.7	35.2	35.3	36	35.6	34.4	35.2	32.8	33.9	31.1	31.5
Ogun	Ijebu - Ode	33.8	33.6	33.6	34.1	34.8	34.8	32.8	33.7	31.7	32.2	29.9	29.8
Ondo	Akure	33.5	34.1	33.5	34.2	34.4	34.1	32.6	31.9	31.5	32	29.6	30.6
Ondo	Ondo	33.2	32.7	33.2	34	33.9	34	33.1	32.3	31.4	32	30.3	30.6
Osun	Oshogbo	33.8	33.7	33.9	33.7	35	33.8	33	33.3	31.2	32	29.9	30.3
Oyo	Ibadan	33.7	33.6	33.9	34.5	35.3	34.8	33.4	33.3	31.4	32.8	29.9	30.7
Oyo	Iseyin	33.8	33.9	34	34.2	35	33.7	32.1	33.2	30.7	32.5	29.5	30.4
Oyo	Shaki	33.1	33.5	33.9	34.2	34.5	34.7	32.8	33.1	30.5	32.4	28.3	29.8
Lagos	Ikeka	33.6	33.4	32.5	33.8	33.5	34	32.9	33.7	31.4	32.5	29.6	29.8
Lagos	Oshodi	33.8	33.1	32.9	33.3	34	33.8	33.5	33	31.9	32.5	30.4	30.3
Monthly mean		33.8	33.6	33.7	34.13	34.64	34.33	33.06	33.27	31.45	32.48	29.85	30.38

Table 3.1.5b: Monthly Max Temperature of South West Zone for 2011 and 2012 (July to December)

State	Station	July		August		September		October		November		December		Annual Mean
		2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	
Ogun	Abeokuta	29.6	29.3	29	30	31	30.8	32	31.6	34	34.2	35.2	NA	32.94783
Ogun	Ijebu - Ode	28.4	28.4	28	28.4	29.4	29.9	30.4	30.6	32.1	32.9	33.1	NA	31.58261
Ondo	Akure	27.9	29.2	27.3	28.1	28.9	29.9	30.5	30.5	32.7	33.6	33.7	NA	31.4913
Ondo	Ondo	28.9	28.5	27.5	28.5	29	29.7	30.7	30.3	32.3	33.5	33.5	NA	31.43913
Osun	Oshogbo	28	28.3	27	27.7	28.6	29.1	30.6	30.3	32.4	32.6	32.8	NA	31.34783
Oyo	Ibadan	28.3	28.4	27.4	28.1	29	29.9	30.8	30.6	32.6	33.1	34.3	NA	31.73043
Oyo	Iseyin	27.6	27.9	26.7	27.1	28.6	29	29.9	30.1	32	32.7	34	NA	31.24348
Oyo	Shaki	27.5	27.9	26.4	26.7	28	28.4	28.9	29.5	31.8	32.3	33.4	NA	30.93913
Lagos	Ikeka	28.9	28.9	28.3	29.4	29.7	30.3	30.7	30.8	32.4	32.3	33.6	NA	31.56522
Lagos	Oshodi	29.5	28.8	29	29.1	30.4	29.9	31.1	31.2	32.4	32.6	33.9	NA	31.75652
Monthly mean		28.46	28.56	27.66	28.31	29.26	29.69	30.56	30.55	32.47	33	33.8	NA	31.60435

Table 3.1.6a: Monthly Max Temperature South East Zone for 2011 and 2012 (January – July)

State	Station	January		February		March		April		May		June		July	
		2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011
Abia	Umu	33	32.9	32.6	33.1	34.4	33.5	28.7	32.4	31.5	31.5	30	30.3	28.5	29.2
Anambra	Awka	34.1	34.3	33.7	35.3	36.4	36	28.5	33.9	30.1	32.5	31	31.1	29.6	29.7
Enugu	Enu	33.7	33.8	34	34.3	36.7	35	34	33	32	32.2	30.6	30.6	29.6	29.9
Imo	Owr	32.9	33.4	32.6	32.7	34.6	33.3	32	32.9	31.7	31.8	30.1	30.1	28.7	29.3
Ebonyi	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monthly mean		32.69	33.09	32.67	33.23	35.03	33.94	29.389	32.667	31.467	31.86	30.18	30.32	28.68	28.98

Table 3.1.6b: Monthly Max Temperature of South East Zone for 2011 and 2012 (August – December)

State	Station	August		September		October		November		December		AnnualMean
		2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	
Abia	Umu	28.7	28.8	29.4	29.5	30.5	30.1	31.4	32.3	32.5	NA	31.07826
Anambra	Awka	28.9	28.8	30.1	30.3	31.6	31.5	33.5	34	34.7	NA	32.15652
Enugu	Enu	29	29.1	29.9	30	30.8	31	32.7	33.6	33.3	NA	32.12174
Imo	Owr	28.6	28.6	29.4	29.7	30.6	30.5	31.9	32.5	33.5	NA	31.36522
Ebonyi	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Monthly mean		28.5	28.33	29.411	29.44	30.656	30.42	31.733	32.5	32.9	NA	31.22174

Table 3.1.7a: Monthly Max Temperature of South-South Zone for 2011 and 2012 (January – July)

State	Station	January		February		March		April		May		June		July	
		2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011
A – Ibom	Eket	29.3	29.9	29.4	29.6	30.5	30.6	27	30.3	30.5	29.9	28.4	28.5	26.8	26.7
A – Ibom	Uyo	31.9	33.3	31.1	32.2	34.3	32	27.9	31.6	31.3	31.7	29.2	30.2	27.6	28.3
C/Rivers	Cal	32	32.1	31.5	32	33.5	33	28.3	31.8	31.6	31.5	30.4	29	28	27.4
C/Rivers	Ikom	32.5	32.6	33.5	34	36.5	34.8	28.5	32.8	31.9	32.4	30.6	30.4	28.9	29.5
C/Rivers	Ogo	34.8	35.5	35.6	35.9	38.4	37.3	29.6	35.3	32.6	33.2	31.3	31.7	30.4	30.8
Delta	Asa	34.8	34.9	34.8	36.1	36.9	36.8	29.9	34.7	33.1	33.9	31.1	32	30.4	30.8
Delta	War	33.9	33.8	33	33.9	34.3	34.3	33.5	33.8	32.7	32.8	30.8	31.1	29.3	29.2
Edo	Ben	33.5	33.6	32.4	34	34.1	34.4	32.6	32.8	31.7	32.7	30.1	30.7	28.6	28.8
Rivers	PHC	33.1	33.8	32.6	32.8	34.5	33.2	32.8	33.5	32.4	31.8	30.2	30	29.3	28.7
Monthly mean		32.87	33.28	32.66	33.39	34.78	34.04	30.011	32.96	31.978	32.21	30.23	30.4	28.81	28.91

Table 3.1.7b: Monthly Max Temperature of South-South Zone for 2011 and 2012 (August - December)

State	Station	August		September		October		November		December		Annual mean
		2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	
A – Ibom	Eket	27	26.6	27.7	27.1	28.4	28.1	28.8	29.4	30.9	NA	28.75652
A – Ibom	Uyo	27.9	27.4	28.8	28.5	30.2	28.9	30.8	31.6	31	NA	30.33478
C/Rivers	Cal	28.3	27.7	29	28.7	30.3	29.8	31	31.6	32	NA	30.45652
C/Rivers	Ikom	28.5	28.5	29.8	30	31.7	30.7	32.2	32.6	33.3	NA	31.57391
C/Rivers	Ogo	29.6	29.5	30.6	31.2	31.8	32.3	33.3	34.9	35	NA	33.06957
Delta	Asa	29.9	29.7	28.4	31	32.5	32.4	32.1	35	35.4	NA	32.89565
Delta	War	29.4	29.4	30.4	30.7	31.2	31.4	33.7	34	33.6	NA	32.18261
Edo	Ben	28	28.5	29.3	29.8	30.5	31.3	32.1	33.5	33.3	NA	31.57826
Rivers	PHC	29.9	28.9	29.7	30.4	30.5	30.8	31.7	32.4	32.7	NA	31.55217
Monthly mean		28.722	28.47	29.3	29.71	30.79	30.63	31.744	32.78	33	NA	31.37778

3.2 USE OF IMPROVED FARM INPUTS:

3.2.1 PLANTING MATERIALS

Increased access to farm inputs is one of the key pillars of the Agricultural Transformation Agenda (ATA) with the improvement of the performance of selected value chain crops as one of the drivers. Under ATA, input deployment strategies prudently attempted to eliminate leakages associated with previous approaches to input distribution in which subsidy awards are creamed off before they get to target beneficiaries. Two principal inputs (seeds and fertilizers) were targeted by the Federal Government. Most state governments across the country maintained their traditional approach to input delivery in 2012. In many states, incentives to agriculture by FGN were the main intervention during the year under reference. It is worth noting that for the first time in more than ten years, Borno State government actively promoted the use of improved seeds and invested substantially in the distribution of seeds and fertilizers. The provision of seeds this year was widely commended by farmers across the country although most of them reported that the inputs arrived late after they had planted. A handful of the farmers that collected the seeds from ATA were however keeping the seeds for use in subsequent (2013) season. It may therefore be expedient to validate the viability of such seeds prior to the next planting season to ensure that farmers' effort and trust in the programme are sustained.

North East Zone

In this zone, seeds, seedlings/ cuttings of various crops and trees of economic importance were made available by state ADPs. The suppliers of the seeds included Madalla, Savannah Seeds and Livestock Limited, Premier Seed Nigeria Limited, Masalaha Seeds Nigeria Limited, and Research Institutes operating within Borno, Bauchi, Gombe and Adamawa states. It was reported that the planting materials were generally inadequate and in many instances, arrived late. Improved seeds of rice, maize, sorghum and soybeans were provided by ATA. Apart from Gombe, Borno and Adamawa that procured fairly large quantities of maize (450MT) and rice (210MT), other states provided insignificant quantities of seeds. The AfDB-CBARD Project procured and distributed over 40 tons of seeds of drought-tolerant maize in Adamawa, Bauchi, and Gombe states. This has increased maize production and the prospect of food security in the zone. Similarly, NPFS, with the support of Islamic Development Bank had procured and made available late in 2011 seeds of assorted vegetables to farmers in Gombe and Yobe states. These were later used in the 2012 season.

North West Zone

In this zone, seeds of cereals (rice, maize, millet, and sorghum), legumes (cowpea, soybean, and groundnuts), vegetables (carrots, onions, cabbage, water melon, okra, pepper) and trees (mangoes, moringa) were procured and distributed. In some cases across the states in this zone, planting materials were inadequate. Also, the quantities procured by some states were high, especially in Kaduna, Zamfara and Sokoto. For Kano and Katsina states, no information on the procurement of planting materials was provided.

North Central Zone

Kogi State procured and distributed some quantities of seeds of three crops (maize, rice and cocoa) but these also were inadequate. Other states in the zone also provided seeds of maize and rice, which were also inadequate. In Nassarawa State, improved cassava cuttings were distributed to farmers with the support of IITA. Private companies under the rice Alliance Scheme supported by OLAM and USAID provided substantial quantities of rice seeds to farmers in Benue, Nassarawa and Niger states.

South West Zone

Ekiti, Oyo and Delta did not provide information on the supply of planting materials. Osun and Lagos provided data only on maize while.

South East Zone

In this zone, planting materials provided included those of rice, maize, cassava, yam, okra and telfaria, some of which are ATA value chain crops. Various quantities of these planting materials were procured and distributed. Farmers in Imo and Enugu states reported slight improvement in the availability of seeds and cassava cuttings in 2012 as against 2011, although they complained of high cost and scarcity, especially during the early part of the planting season. The problem of scarcity of inputs was more serious in the other states in the zone. Many farmers and extension agents complained that the improved cassava cuttings (especially the new high Vitamin A rich cassava) received in the zone were not properly labeled, and this complicated adoption and promotion processes.

South-South Zone

In South-south only Edo had provided data on maize and rice, and even there most of the farmers in the State, reported for inadequate and high cost of planting materials during the season.

3.2.2 USE OF AGRO-CHEMICALS AND FARM EQUIPMENT

Agro-chemicals and farm equipment are also very critical in agricultural production. Their use reduces the drudgery usually associated with farming in rural areas. Data collected across the country show that some state governments procured and distributed agro-chemicals like crystallizer, pesticides, insecticides, herbicides, fungicides and lime; while equipment procured included various agro-processing machines, work bulls, tractors, storage bins, sprayers, dryers, shellers, water pumps and motorized fish feeders.

North East Agro-Ecological Zone

In this zone, only Borno and Gombe states procured agro-chemicals and farm equipment. In Gombe state, they were procured and distributed but in most cases, they were inadequate. In Borno State, the agro-chemicals procured were yet to be distributed as at the time of visit. Other states in the zone did not provide data on provision of agro-chemicals to farmers.

North West Zone

Kaduna, Katsina, Zamfara and Kebbi states made efforts to procure and make available to farmers through their ADPs a few quantities of agro-chemicals and farm equipment. Sokoto state did not provide data on the provision of agrochemicals and farmers reported that this trend had persisted for more than five years. ADP officials reported that crystallizers and organic fertilizers were supplied in Jigawa and Kano states, but were not patronized by farmers in the states. Similarly, lime fertilizers procured in Kaduna State were not taken by farmers. It is important that this rejection is considered a threat to government development effort. And as such prompt remedial action should be taken by appropriate authority.

North Central Zone

Some states made efforts to provide chemicals and farm equipment for farmers. Kwara, FCT and Kogi provided agro-processing equipment, while the FCT, Niger and Kogi states provided agro-chemicals. Benue, Taraba, Plateau and Nasarawa provided no data.

South West Zone

Agro-chemicals were procured and distributed to farmers in Osun, Ondo, Ogun and Lagos states, while and Oyo states had no data.

South East Agro-Ecological Zone

In the South East Zone, little quantity of agro-chemicals and sprayers were procured in Enugu, and Imo states. High price of agro-chemicals remained a critical problem for farmers in the zone. The heavy rains experienced during the year increased the pressure of weeds menace and pest attacks in the zone.

South-South Zone

In South-south, in Edo state, rice and cassava processing mills were provided while Delta had not supply any data on inputs procurement but Akwa-Ibom had provided little quantity of inputs to farmers.

3.2.3 Fertilizer procurement and distribution

Fertilizer is a critical component for agricultural production in Nigeria. Under the current Agricultural Transformation Agenda (ATA), the e-wallet scheme was initiated in 2012. The scheme showed considerable promise in addressing the issues of middlemen in the distribution of this input, as major marketers took leading roles in the provision of fertilizers using the GES. Although many state governments also procured and distributed fertilizers to farmers in 2012, the fertilizer supplied through the Growth Enhancement Support (GES) was the most significant endeavour under ATA because farmers showed enormous interest in it. Reports from across the country indicated that various states recorded different levels of implementation of the scheme. Under GES, a bag of fertilizer cost between ₦3000 and ₦3500 depending on the composition. The market price for the same fertilizer bag during the year (2012) was between ₦4500 and ₦6000. The market price of fertilizer was much higher in 2012 than in 2011. The anomalous scheme in which fertilizers supplied to farmers find way to the open market was

almost completely eliminated in 2012. Farmer however complained that the fertilizers arrived late and that the two bags (1 bag of NPK and 1 bag Urea) per farmers under the GES scheme were inadequate because they often have more than one farm and/or cultivate several crops. Many farmers also complained that they do not own mobile telephone and that the few that could afford mobile phones were confronted with poor network connectivity which usually frustrates their desire to place their fertilizer requisition through the e-wallet platform.

3.3 Crop Pests, Diseases and Natural Hazards

Incidences of pests, diseases and natural hazards on crops production in 2012 cropping season across the country are presented in Table 3.3.1-3.3.4. Although incidences of pests and disease attacks were moderate, they were heavier in 2012 than in 2011. The floods experienced in most states affected several crops in 20 states, especially in Adamawa, Anambra, Kogi, Benue, Edo, Kebbi, Kaduna, Nassarawa, Delta, Bayelsa, Rivers and Cross River. Up to 95% yield loss were reported in several locations.

Cocoyam rot/leaf rot diseases reported in 2011 still persisted in 2012 in Imo, Kaduna, Enugu, Niger and Ebonyi states. No control measure for cocoyam rot has been proffered. The problem has been reported to NRCRI for further research. The incidence of cocoyam rot was heavy, with an estimated yield loss of 45%. There were moderate cases of stem borers, downy mildew, streak and rodent attacks on maize in most states. The heavy rains also raised the fear of aflatoxin infection on maize, groundnut and other crops. The estimated loss in yield due to attack by monkeys on maize was 17% in Enugu State and a little less than that in Kwara State. The data obtained also indicated that pest and disease incidence on cowpea were light and generally moderate for soybean and groundnut across the agro-ecological zones.

Cassava glut was reported in Oyo State. Timely action is needed to address this, especially when the Federal Government is promoting cassava bread so that farmers would not be discouraged from cassava production. The prevalence of pests and diseases constituted heavy loss (above 90%) in the yield of most crops in Cross River State.



Plate 3: Power tillers being introduced in rice

Table3.3.1: Summary of incidences, severities and management options for mitigating the menace of pests, diseases and natural disasters on Nigerian crop.

Crops Infested/ Infected	Pests/ Diseases/Hazard	Affected states	Severity	Estimated yield loss (%)	Control measure(s)
Maize	Quelea birds	Ekiti, Gombe	Light- Moderate	10-20	Scaring, cultural practices
Maize	Stem borer	Ekiti, Kwara, Ondo, Oyo, Anambra, Kogi, Lagos, Adamawa, Enugu, Imo, Abia, Bauchi, FCT	Moderate-Heavy	15-20	Chemical, integrated pest management (IPM), use of improved varieties
Maize	Downy mildew	Benue, Abia	Light- Moderate	10 – 20	Chemical
Maize	Damping off	Bauchi	Moderate	20	Seed dressing
Maize	Termite	Katsina	Moderate	14	Application of Worm-force (Cabofuran 3G)
Maize	Leaf blight	Ebonyi, Adamawa	Moderate	10	Chemical insecticides
Maize	Grasshoppers	Abia	Moderate	12	Fumigation
Maize	Dry spell	Kebbi,	Light	10	Use of drought tolerant variety, replanting
Maize	Streak	Ondo, Abia,	Light- Moderate	10	Chemical, use of improved variety
Maize	Striga	Kwara, FCT	Moderate,-Heavy	15 - 30	cultural practice, crop rotation,
Maize	Hail storm and strong winds	Plateau	Light	10	Nil
Maize	Spittle bugs	Bauchi	Moderate	20	Chemical
Maize	Flood	Lagos, Adamawa, Yobe, Cross river	Moderate-Heavy	25-35	Drainage
Maize	Grass cutter	Ekiti	Light	10	Setting of traps
Maize	Monkeys	Kwara, Enugu	Moderate, Heavy	10-15	Scaring
Maize	Rodents	Imo	Light	8	Early planting
Millet	Flood	Yobe, Adamawa, Jigawa	Moderate- Heavy	20 - 25	Relocation and nothing
Millet	Stem borer	Bauchi, Adamawa	Light-Moderate	10-30	Chemical
Millet	Shoot fly	Bauchi	Moderate	30	Chemical
Millet	Quelea birds	Katsina, Gombe, Kebbi, Jigawa	Light	5-10	Chemical, scaring, cultural practices
Millet	Dry spell	Kebbi	Light	7	

Table 3.3.2: Summary of incidences, severities and management options for mitigating the menace of pests, diseases and natural disasters on Nigerian crop.

Crops Infested/ Infected	Pests/ Diseases/Hazard	Affected states	Severity	Estimated yield loss (%)	Control measure(s)
Rice	Blast	Benue, Zamfara, Adamawa, Lagos, Kogi, Bauchi	Moderate- Heavy	15-20	Chemical, use of resistant variety, crop rotation
Rice	Rodents	Ebonyi	Light	6	Trap
Rice	Quelea Birds	Gombe, Ondo, Ekiti	Moderate	8	Scaring, cultural practices
Rice	Stem borer	Ekiti, Abia, Bauchi	Light- Moderate	15	Chemical
Rice	Bird invasion	FCT, Ogun	Moderate	20-30	
Rice	Weevils	Abia	Moderate	15	
Rice	Grass cutters	Ebonyi, Ondo, Ekiti	Light, Moderate	9	Trapping
Rice	Flood	Kebbi, Adamawa, Nassarawa, Kwara, Plateau, Yobe, Cross River, Jigawa	Light - Heavy	10-35	No remedy
Rice	Death heart	Kogi	Light	10	
Rice	Gulmage	Anambra, Imo	Light	10	
Sorghum	Striga	FCT, Kwara, Gombe, Zamfara, Sokoto, Niger	Moderate	25-35	
Sorghum	Spittle bugs	Bauchi	Heavy	8	Insecticides
Sorghum	Stem borer	Kwara	Light	5-10	IPM,
Sorghum	Millipedes	Gombe	Moderate	5	Cultural practices
Sorghum	Flood	Yobe, Bauchi , Adamawa , Kebbi, Jigawa	Moderate- Heavy	15 - 20	Nil
Sorghum	Dry spell	Kebbi			
Sorghum	Smut	Bauchi	Moderate		
Cowpea	Aphids	Gombe, Niger, Adamawa, Katsina, Bauchi, Kaduna	Moderate	10-20	Cultural practices, use of insecticides, pesticides
Cowpea	Weevils	Kwara, FCT	Moderate	10-20	Chemical, by tripple bagging
Cowpea	Flood	Kebbi, Yobe	Moderate		
Cowpea	Not yet identified	Niger	Heavy	25	Fungicides, cultural practices
Cowpea	Pod borer	Kogi, Kano, Zamfara, kaduna, Niger, Gombe, Taraba, and Plateau	Moderate	15	Chemical insecticides

Table 3.3.4: Summary of incidences, severities and management options for mitigating the menace of pests, diseases and natural disasters on Nigerian crop.

Crops Infested/ Infected	Pests/ Diseases/Hazard	Affected states	Severity	Estimated yield loss (%)	Control measure(s)
Cowpea	Bugs	Bauchi	Moderate	20	Insecticides
Cowpea	Flea Beetle	Ekiti	Light	10	Chemical
Cowpea	Thrips	Ekiti	Light	10	Chemical
Cowpea	Root knot	Ekiti	Light	5	Uproot attacked
Cowpea	Cricket bird	Imo	Light	2	Trap
cowpea	Rodents orphid	Imo, Kwara	Light	2	Trap, IPM
Soybean	Grass cutter	Ondo , Ekiti	Moderate	20	Weeding
Soybean	Rodents	Kwara	Light	15	IPM
Soybean	Beetles	Bauchi	Moderate	12	Herbicides
Soybean	Birds	Kwara , Benue, Kaduna	Light	15	IPM
Groundnut	Bacterial wilt	Anambra	Moderate	14	
Groundnut	Rosette	Adamawa, Kwara	Light	5-10	Crop rotation, IPM
Groundnut	Leaf spot	Anambra	Moderate	13	
Groundnut	Flood	Kebbi , Adamawa	Heavy	10-25	Nil, Crop rotation
Groundnut	Aphids	Zamfara, Katsina	Moderate	35-40	Insecticides
Cassava	Mosaic	Bayelsa, Lagos, Ebonyi, FCT, Bauchi, Adamawa, Imo	Moderate	10-20	IPM, harvest matured crop, through varietals sorting, crop rotation, planting improved varieties
Cassava	Leaf blight	Anambra	Heavy		
Cassava	Millipedes	Rivers	Moderate	10 - 16	Chemical
Cassava	Rodent	Bayelsa, Kwara, Imo, Cross river	Light, Moderate	3- 20	Trapping, IPM
Cassava	Glut	Oyo	Heavy	statewide	Value addition
Cassava	Bush fire	Oyo	Moderate	14	Fire tracing
Cassava	Leaf curl	Ondo	Light	10	Nil
Cassava	Root nut	Abia	Heavy	18	
Cassava	Spider mite	Abia			No rating

Table 3.3.6: Summary of incidences, severities and management options for mitigating the menace of pests, diseases and natural disasters on Nigerian crop.

Crops Infested/ infected	Pests/ Diseases/Hazard	Affected states	Severity	Estimated yield loss (%)	Control measure(s)
Cassava	Rot	Benue	Heavy	35	Processed
Cassava	Grass cutter	Imo, Edo, Delta and Nasasarawa	Light	3	
Cassava	Grasshopper	Ekiti	Light	3	Hand picking, Spraying with insecticides
Cassava	Mealy bug	Ekiti	Light	4	Treat before planting, use of resistant variety
Yam	Beetle	Anambra, Bayelsa, Lagos, Enugu, Plateau, Ekiti, Imo, Ondo	Light	3	Insecticides, Weeding
Yam	Mealy bug	Anambra, Edo, Delta, Nassarawa	Heavy	20	
Yam	Cricket	Kwara	Light	10	IPM
Yam	Nematode	Ebonyi, FCT	Moderate	18	Chemical, Varietals sorting and crop rotation
Yam	Weevils	Bayelsa, Adamawa	Light	9	
Yam	Flood	Cross river	Heavy	23	No remedy
Cocoyam	Leaf blight	Anambra, River, Plateau, Cross river,	Moderate	15-20	Nil, Spraying
Cocoyam	Die back	Bayelsa	Heavy	35	
Cocoyam	Rot	Imo, Ebonyi	Moderate,	15-20	Nil
Cocoyam	Leaf rot	Imo, Enugu	Heavy	27	Nil
Cocoyam	Flood	Cross River	Heavy	35	Roughing, reported to NRCRI
Cocoyam	Fungal	Kaduna, Delta	Heavy	25	
Sweet potato	Scab	Bauchi	Moderate	15	Fungicide

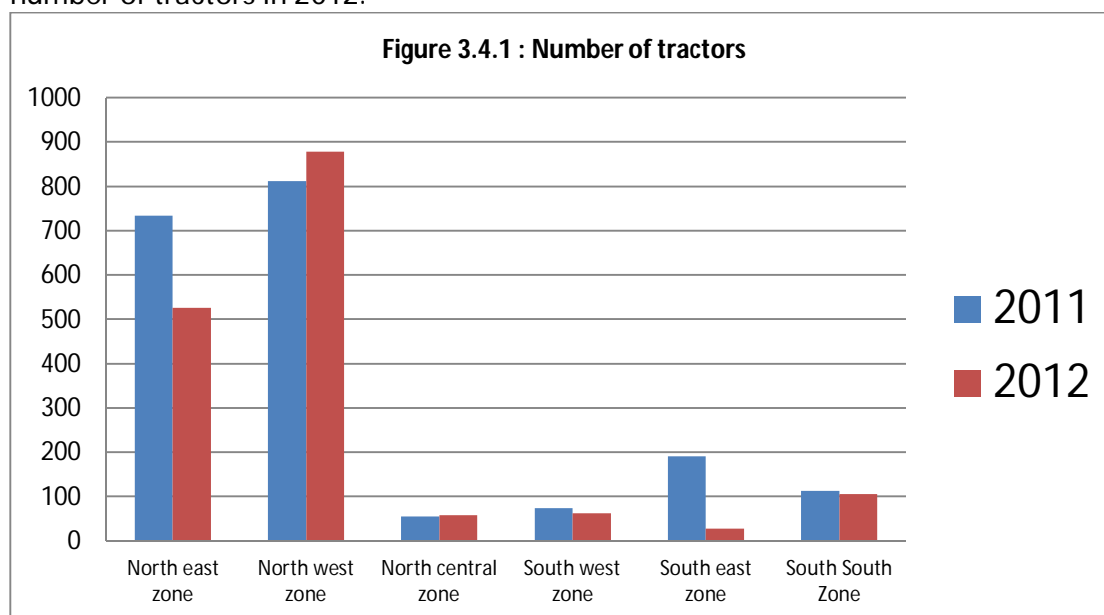
Table 3.3.7: Summary of incidences, severities and management options for mitigating the menace of pests, diseases and natural disasters on Nigerian crop.

Crops Infested/ infected	Pests/ Diseases/Hazard	Affected states	Severity	Estimated yield loss (%)	Control measure(s)
Sweet potato	Blotch	Bauchi	Light	6	Fungicide
Sweet potato	Flood	Kebbi, Adamawa	Moderate	10	Nil
Sweet potato	Tuber borer	Kwara, Bauchi, Zamfara	Light	2	
Sweet potato	Fungal	Oyo	Heavy	18	
Citrus	Brown spot	Niger , Kaduna, Osun, Benue, Delta	Heavy	15	Nil
Tomato	Wilt	Anambra, Oyo, Osun, Ekiti, Delta	Heavy	30	Nil
Pepper	Wilt	Oyo	Heavy	20	Nil, NIHORT informed
Pepper	Beetle	Bayelsa	Heavy	20	Nil
Plantain	Sigatoka	Lagos, Delta	Moderate, Heavy	15-20	Nil, destruction of affected stem
Plantain	Worm infestation	Bayelsa	Moderate	9	Nil
Coconut	Die-back	River	Heavy	15	No solution yet
Benni seed	Flushy beetles	Bauchi, Jigawa, Nassarawa	Moderate	15	Insecticides
Pawpaw	Fungal attack	Oyo , Edo, Ebonyi	Heavy	10	NIHORT informed
Kola nut	Kola nut fruit abortion	Rivers, Edo and Osun	Heavy	20-30	No solution yet
Okro	Larva /leaf eater	Bayelsa , Niger	Heavy	30	Nil

3.4 AGRICULTURAL MECHANIZATION

3.4.1 Tractor availability

Agricultural mechanization improves productivity, reduces arduousness and improves attractiveness to farming. Tractors are used with various farm implements and equipment for several farm tasks, from land preparation through planting to harvesting, processing and storage. With this fact, the need for tractor operations is indispensable; as tractor is the power house of farmers, it provides the power they need for mechanized farm operations. All agricultural enterprises, like crop, livestock, fisheries, forestry, agro-processing, etc are covered in this regard. It is therefore, important to know the status of tractor availability and functionality in Nigeria, including the operations it performs. Out of 36 states and FCT, 6 states did not have information on tractor availability in 2011 and 2012. The total numbers of functional tractors were 1,983 and 1,662 in 2011 and 2012 respectively, representing a decrease of 19.3%. The non-functional tractors across the states were 832 and 1,178 in 2011 and 2012, respectively which shows rapid increase in the number of non-functional tractors comparing 2011 and 2012 records. Record for the privately owned functional tractors showed 1,096 and 868 for 2011 and 2012 respectively, while non-functional tractors were 61 in 2011 and 196 in 2012. North West had the largest number of tractors in all the zones with 812 and 879 in 2011 and 2012 respectively. This is followed by the North East with 735 and 527 in 2011 and 2012 respectively. North Central had the least number of 56 and 59 for 2011 and 2012 respectively while the South East had the least number of tractors in 2012.



Borno State had the highest number of government owned tractors (669); followed by Katsina state (538) while FCT, Kwara, Lagos and Oyo all had the same least number of tractors in 2011 and 2012. Only eight states provided information on tractor availability and functionality for private owned tractors in 2011 and 2012. The percentage of states without records on privately owned functional tractors was 78.38. Sokoto led the states

with 300 functional tractors owned by private individuals/organizations in both 2011 and 2012. This is followed by Borno State with 225 and 148 in 2011 and 2012 respectively. Kwara State had the least number of tractors in 2012. The total number of functional tractors owned by both Government and private organizations, as obtained from the state ministries of agriculture in the country was 2,530 in 2012. The figure was grossly insufficient compared to the area of land that this number of tractors can cultivate and this is an indication that Nigeria is under-tractorized. Consequently, in order to increase the total areas of land for cultivation, necessary actions should be taken to sustain the available functional tractors and put the non-functional ones in good condition. If this is properly done and complemented with other farm inputs, the attainment of food sufficiency and subsequent export, as the goal of the present Agricultural Transformation Agenda would be achieved.

3.2 Prices of some Tractor Operations

Tractor operations considered for 2011 and 2012 were ploughing, harrowing and ridging. The costs of tractor operations for 2012 were not significantly different from those of 2011 except in Benue State where there were 72%, 90% and 120% increases in prices of ploughing, harrowing and ridging respectively. North Central agro-ecological zone had the highest price operation with an average mean of ₦12,530 per ha. Kaduna State recorded the highest operation price for ploughing at ₦26,250/ha. The least average prices were recorded for ploughing and harrowing operations at ₦4,300/ha and ₦3,900/ha respectively in the South-West. There was no much difference between 2011 and 2012 prices of harrowing operation. The North East had the highest operation price for harrowing at an average price of ₦10,000/ha in 2012. For ridging operation, the highest price was recorded for the South-South at ₦9,000 while North-West had the least price at ₦3,000/ha. Among all the states across the federation, Cross River had the highest harrowing operation price at ₦18,000/ha.

3.3 Problems on Tractorization

Some of the identified problems affecting tractor availability and functionality in 2011 persisted in 2012. These were high cost of purchasing new tractors, scarcity of spare parts, fuel adulteration, frequent breakdown of tractors and lack of skill tractor operators and mechanics. The report on animal traction for the year 2012 was almost the same with that of 2011. Most states 92% did not have report on animal traction. Only three states and the FCT had records; the states are Borno, Adamawa and Zamfara. Work bulls remained the preferred animal power used in 2012. The number of animals used in Borno in 2011 and 2012 was 12,500 and 10,750 respectively, representing a decrease of 16%. Zamfara State had a 3.6% increase in the number of animals used for traction, that is, 140,000 in 2011 and 145,000 in 2012. Adamawa reported 400,000 number of animals used in 2011 and 400,500 in 2012, representing an increase of 0.13%. In Adamawa State this number of work bulls for animal traction was attributed to inadequate of Tractor Hiring Service (THS) and the increase in arable farm land.

Some of the problems identified on agricultural mechanization in Nigeria during 2012 were:

- a. No standard workshops for tractor repairs
- b. Non-availability of tractors at the peak of demand
- c. High cost of tractor hiring
- d. Non-availability of simple modern irrigation technology
- e. High cost of tractor maintenance
- f. Lack of training for tractor operators
- g. High cost of work bulls for animal traction
- h. Lack of training centre on animal traction
- i. Inadequate animal health care for animal traction

With these itemized problems and continuous decrease in the number of functional tractors and the consequent increase in non-functional ones across the country, it is imperative to arrange for after-sales services. The services to be rendered by tractor distributors and marketers should include training, spare parts availability and establishment of repair shops in strategic locations across the country.

Table 3.4.1.: Number of Tractors Owned by Government and Private Organizations

North East Zone

State	Government Tractors						Private Tractors					
	Functional			Non-Functional			Functional			Non-Functional		
	2011	2012	% change	2011	2012	%change	2011	2012	%change	2011	2012	%change
Borno	669	433	-35.27	128	314	145.31	225	148	-34.22	61	138	126.2295
Yobe	15	7	-53.33	54	62	14.81	NA	NA	NA	NA	NA	NA
Bauchi	16	27	68.75	20	20	0	NA	NA	NA	NA	NA	NA
Gombe	35	60	71.42	25	13	-48	NA	NA	NA	NA	NA	NA
Total	735	527	51.56	227	409	112.12	225	148	-34.22	61	138	126.2295

Table 3.4.2.: Number of Tractors Owned by Government and Private Organizations
North West Zone

State	Government Tractors						Private Tractors					
	Functional			Non-Functional			Functional			Non-Functional		
	2011	2012	% change	2011	2012	%change	2011	2012	%change	2011	2012	%change
Jigawa	36	36	0	28	0	-100	174	174	0	NA	NA	NA
Katsina	538	574	6.7	28	28	0	NA	NA	NA	NA	NA	NA
Sokoto	28	28	0	62	62	NA	300	300	0	NA	NA	NA
Kebbi	5	3	-40	40	NA	NA	43	43	0	NA	NA	NA
Zamfara	19	38	100	50	56	12	NA	NA	NA	NA	NA	NA
Kano	NA	14	NA	NA	38	NA	NA	NA	NA	NA	NA	NA
Kaduna	186	186	0	0	57	0	187	187	0	0	57	0
Total	812	879	66.7	208	241	-88	704	704	0	0	57	0

**Table 3.4.3.: Number of Tractors Owned by Government and Private Organizations
North Central Zone**

State	Government Tractors						Private Tractors					
	Functional			Non-Functional			Functional			Non-Functional		
	2011	2012	% change	2011	2012	%change	2011	2012	%change	2011	2012	%change
Taraba	48	34	-29.17	152	158	3.95	NA	NA	NA	NA	NA	NA
Plateau	NA	11	NA	NA	23	NA	150	0	-100	NA	NA	NA
FCT	1	1	0	NA	NA	NA	15	15	0	NA	NA	NA
Kwara	1	NA	NA	35	36	2.9	2	1	-50	0	1	0
Niger	6	13	116.7	3	3	0	NA	NA	NA	NA	NA	NA
Total	56	59	87.5	222	252	6.8	167	16	-150	0	1	0

**Table 3.4.4: Number of Tractors Owned by Government and Private Organizations
South West Zone**

State	Government Tractors					
	Functional			Non-Functional		
	2011	2012	% change	2011	2012	%change
Osun	19	15	-21.1	15	19	26.7
Oyo	1	1	0	6	6	0
Ogun	10	5	-50	8	3	-62.5
Ekiti	21	24	14.3	51	64	25.5
Ondo	23	17	-26.1	0	23	NA
Lagos	1	1	0	NA	NA	NA
Total	75	63	-82.9	80	115	-10.3

**Table 3.4.5: Number of Tractors Owned by Government
South East Zone**

State	Government Tractors					
	Functional			Non-Functional		
	2011	2012	% change	2011	2012	%change
Anambra	12	17	41.7	NA	2	NA
Enugu	70	7	-90	6	78	1200
Ebonyi	106	NA	NA	5	0	-100
Abia	2	2	0	NA	NA	NA
Imo	2	2	0	3	3	0
Total	192	28	-48.3333	14	83	1100

**Table 3.4.6: Number of Tractors Owned by Government and Private Organizations
South- South Zone**

State	Government Tractors					
	Functional			Non-Functional		
	2011	2012	% change	2011	2012	%change
Cross River	87	82	-5.7	20	15	-25
Bayelsa	13	12	-7.7	14	14	0
Delta	5	5	0	41	42	2.4
Rivers	8	7	-12.5	6	7	16.7
Total	113	106	-25.9	81	78	-5.9



Table 3.4.7: Cost of tractors services in the North East Zone

State	Ploughing (N/Ha)			Harrowing (N/Ha)			Ridging (N/Ha)		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
Borno	11,500	11,000	-4.35	11,000	11,000	0	11,000	11,000	0
Yobe	NA	NA	NA	4,500	4,500	0	NA	NA	NA
Bauchi	2,000	2,000	0	2,000	2,000	0	2,000	2,000	0
Z. Mean	6,750	6,500	-3.70	5,833.3	5,833.3	0	6,500	6,500	0

Table 3.4.8: Cost of tractors services in the North West Zone

State	Ploughing (N/Ha)			Harrowing (N/Ha)			Ridging (N/Ha)		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
Sokoto	2,000	2,000	0	2,000	2,000	0	2,000	2,000	0
Kebbi	4,250	4,250	0	2,500	2,500	0	2,000	2,000	0
Jigawa	6,000	6,000	0	5,250	5,250	0	4,250	4,250	0
Kano	7,250	5,375	-25.86	3,375	3,750	11.11	3,375	3,750	11.11
Kaduna	21,000	26,250	25	12,500	17,500	40	NA	NA	NA
Z. Mean	8,100	8,775	8.33	5,125	6,200	20.98	2,906.25	3,000	3.23

Table 3.4.9: Cost of tractors services in North Central Zone

State	Ploughing (N/Ha)			Harrowing (N/Ha)			Ridging (N/Ha)		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
Taraba	8,000	8,000	0	7,000	NA	NA	7,000	NA	NA
Plateau	5,000	3,000	-40	5,000	3,000	-40	5,000	3,000	-40
Nasarawa	NA	20,000	NA	NA	7,500	NA	NA	7500	NA
Niger	12,250	15,250	24.49	12,250	12,250	0	14,000	14,000	0
Kwara	7,800	7,800	0	4,450	4,450	0	5,200	5,200	0
Benue	5,000	8,600	72	4,000	7,600	90	3,000	6,600	120
Z. Mean	7,610	12,530	64.66	6,540	6,960	6.43	6,840	7,260	6.15

Table 3.4.10: Cost of tractors services in the South West Zone

State	Ploughing (N/Ha)			Harrowing (N/Ha)			Ridging (N/Ha)		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
Oyo	7,750	3,500	-54.84	NA	3,500	NA	NA	3,500	NA
Osun	5,375	5,375	0	5,375	5,375	0	5,375	5,375	0
Ekiti	4,500	4,500	0	3,000	3,000	0	3,000	3,000	0
Ondo	4,000	4,000	0	4,000	4,000	0	4,000	4,000	0
Z. Mean	5,406.25	4,343.75	-19.66	4,125	3,968.75	-3.79	4,125	3,968.75	-3.79

Table 3.4.11: Cost of tractors services in the South East Zone

State	Ploughing (N/Ha)			Harrowing (N/Ha)			Ridging (N/Ha)		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
Ebonyi	12,000	NA	NA	12,000	NA	NA	13,000	NA	NA
Anambra	6,000	6,000	0	NA	NA	NA	4,000	4,000	0
Abia	NA	11,200	NA	NA	10,000	NA	7,000	NA	NA
Z. Mean	9,000	8,400	-6.67	12,000	10,000	-16.67	8,000	4,000	-50

Table 3.4.12: Cost of tractors services in the South-South Zone

State	Ploughing (N/Ha)			Harrowing (N/Ha)			Ridging (N/Ha)		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
Bayelsa	5,000	5,000	0	5,000	5,000	0	5,000	5,000	0
Rivers	12,500	12,500	0	5,000	5,000	0	5,000	5,000	0
C/Rivers	19,000	20,250	6.58	17,500	17,500	0	18,000	18,000	0
Z. Mean	12,166.67	9,737.50	-19.97	9,166.67	7,175	-21.73	9,333.33	9,333.33	0
Nat. Mean	8172.15	8381.04	3.83	7131.67	6689.51	-2.46	6284.10	5677.01	-7.40

3.5 COST OF PRODUCTION OF MAJOR CROPS

The production costs of major crops are shown in Tables 4.1 to 4.10, as indicated on the tables, the costs of production of most crops increased significantly. The cost of production of a hectare of maize crop was higher in 2012 than 2011 by about 21% in several southern states and over 15% in Katsina and Borno states, but lower in Sokoto state by 22%. The observed reduction in the production cost of maize in some states may be connected to improved access to highly subsidized production inputs such as seeds and agrochemicals (fertilizers).

The production cost of sorghum decreased by over 22% in Sokoto State but increased by 15% in Borno State. Increasing domestic rice demand induced an increase in the production cost of rice especially in Jigawa (16.6%), Nasarawa (22%) and Borno (12.5%). However, in Anambra and Bayelsa states, the production of rice did not change remarkably in 2012, compared with 2011. An increase of about 34% in the cost of production of cassava was observed in Ogun State, compared with the decrease of as high as 37% recorded in Imo State. Increases in the costs of production of several other crops were recorded in 2012. These included plantain, oil palm and sweet potato that had overall national mean increases of 11.8%, 16.7% and 10% respectively.

There were remarkable changes in the production costs of major crops among states and within each zone as well as between the two years under review. These disparities might be attributed to relative scarcity and differences of input prices across the six agro-ecological zones.

Among the factors responsible for the increasing cost of production was the dependence on manual labour which has increasingly become scarce and costly. Labour cost alone accounted for about 50 to 70% of production costs for



Simple threshing machines such as this attract the youths to agriculture. Government should help make them available

low input farmers, while fertilizer accounted for about 30-43% of total variable cost of production for farmers at medium to high input scales. Access to affordable labour saving devices and cheaper fertilizers and seeds therefore has a great potential to reduce production cost and enhance farmers' incomes. Adulteration, high prices and scarcity of inputs, such as fertilizers, improved seeds and agrochemicals for the control of diseases and pests and mechanized farm implements were other factors that contributed to high cost of production across the states.

Table 3.5.1: Cost of Production of Major Crops in Nigeria (N/ha) in 2011 and 2012(North East Zone)

State	Sorghum			Maize			Rice			Millet			Cowpea			Groundnut		
	2011	2012	% Change ¹	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
Borno	55000	65000	15.4	NA	NA	NA	70000	80000	12.5	55000	65000	15.4	90000	100000	10.0	NA	NA	NA
Yobe	60000	70000	14.3	55000	65000	15.4	78000	85000	8.2	50000	55000	9.1	50000	60000	16.7	60000	70000	14.3
Bauchi	40398	43200	6.5	60812	63500	4.2	83431	85000	1.8	32802	35700	8.1	55449	50000	-10.9	40601	45000	9.8
Gombe	23000	25000	8.0	30000	35000	14.3	26000	28000	7.1	25000	25000	0.0	27000	30000	10.0	NA	NA	NA
Adamawa	32000	35000	8.6	50000	55000	9.1	52000	57000	8.8	17000	21000	19.0	33000	35000	5.7	30000	32000	6.3
Z. Mean	42079	47640	10.5	48953	54625	10.7	61886	67000	7.7	35960	40340	51.6	51090	55000	6.3	32650	36750	7.6

Table 3.5.2: Cost of Production of Major Crops in Nigeria (N/ha) in 2011 and 2012 (North West Zone)

State	Sorghum			Maize			Rice			Millet			Cowpea			Groundnut		
	2011	2012	% Change ¹	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
Jigawa	62000	65000	4.6	63920	67420	5.2	47800	57300	16.6	62000	65500	5.3	NA	NA	NA	28000	31500	11.1
Katsina	47650	60000	20.6	75250	85000	11.5	NA	NA	NA	117650	55000	-113.9	46000	50000	8.0	NA	NA	NA
Sokoto	55000	45000	-22.2	60000	50000	-20.0	70000	65000	-7.7	55000	45000	-22.2	40000	35000	-14.3	45000	40000	-12.5
Kebbi	90000	NA	NA	105000	NA	NA	110000	NA	NA	70000	NA	NA	47000	NA	NA	NA	NA	NA
Zamfara	60000	65000	7.7	120000	130000	7.7	NA	NA	NA	60000	65000	7.7	50000	55000	9.1	50000	55000	9.1
Kaduna	110000	120000	8.3	145000	155000	6.5	135000	150000	10.0	NA	NA	NA	105000	110000	4.5	85000	90000	5.6
Z. Mean	70775	591667	3.2	94862	97484	2.2	90700	90767	6.3	72930.0	57625	-30.8	57600.0	62500	1.8	52000.0	54125	3.3

Table 3.5.3: Cost of Production of Major Crops in Nigeria (N/ha) in 2011 and 2012 (North Central Zone)

State	Sorghum			Maize			Rice			Millet			Cowpea			Groundnut		
	2011	2012	% Change ¹	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
Taraba	NA	NA	NA	85000	105000	19.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Plateau	79,000	76,000	-3.9	129500	126000	-2.8	118,000	129,000	8.5	62000	55000	-12.7	NA	NA	NA	NA	NA	NA
Nasarwa	48,200	55,500	13.2	56900	94000	39.5	119,000	152,500	22.0	41700	57850	27.9	55700	75250	26.0	58,700	80,670	27.2
FCT	70,000	75,000	6.7	78000	78900	1.1	98,000	100,200	2.2	67400	70000	3.7	83100	89600	7.3	79,000	86,000	8.1
Niger	70,530	76,430	7.7	78190	72,200	-8.3	101,420	96,101	-5.5	NA	NA	NA	80760	70760	-14.1	74,060	72111	-2.7
Kwara	50,000	50,000	0.0	50000	52000	3.8	65,000	70,000	7.1	NA	NA	NA	50000	54000	7.4	55,000	55,000	0.0
Kogi	128.7	NA	NA	128700	NA	NA	144,500	NA	NA	NA	NA	NA	112600	NA	NA	NA	NA	NA
Zonal Mean	52976	66586	4.72	86612	88017	8.7	107653	109560	6.9	57033	60950	6.3	76432	72402	6.6	66690	73445	8.2

Table 3.5.4: Cost of Production of Major Crops in Nigeria (N/ha) in 2011 and 2012(South West Zone)

State	Maize			Rice			Cowpea			Groundnut		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
Osun	75,000	80,000	6.3	103,000	105,000	1.9	58,000	60,000	3.3	NA	NA	NA
Oyo	96,000	105,000	8.6	NA	NA	NA	NA	NA	NA	78,500	79,000	0.6
Ekiti	100,000	96,000	-4.2	220,000	224,000	1.8	100,000	96,000	-4.2	NA	NA	NA
Ondo	69000	69000	0.0	NA	NA	NA	85000	85000	0.0	NA	NA	NA
Lagos	10000	65000	84.6	150000	155000	NA	NA	NA	NA	NA	NA	NA
Edo	NA	NA	NA	NA	NA	NA	NA	NA	NA	350,000	370,000	5.4
Delta	95,000	95,800	0.8	98,500	99,400	NA	NA	NA	NA	65,000	66,200	1.8
Z.Mean	74166.7	85133.	16.0	142875	145850	1.85	81000	80333	-0.28	164500	171733	2.6

Table 3.5.5: Cost of Production of Major Crops in Nigeria (N/ha) in 2011 and 2012 (South East and South-South Zone)

State	Sorghum			Maize			Rice			Millet			Cowpea			Groundnut		
	2011	2012	% Change ¹	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
Anambra	NA	NA	NA	100,000	118,000	15.3	46,000	46,000	0.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
Enugu	NA	NA	NA	100,000	110,000	9.1	140,000	145,000	3.4	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ebonyi	NA	NA	NA	110,000	112,000	1.8	200,100	200,000	-0.1	NA	NA	NA	NA	NA	NA	55,000	80,000	31.3
C/River	NA	NA	NA	75,600	78,300	3.4	84,000	87,000	3.4	NA	NA	NA	NA	NA	NA	54,100	56,200	3.7
Abia	NA	NA	NA	88,000	90,000	2.2	120,000	125,000	4.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ak/Ibom	NA	NA	NA	119,000	119,000	0.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Imo	NA	NA	NA	155,000	155,000	0.0	170,000	180,000	5.6	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bayelsa	NA	NA	NA	100,000	100,000	0.0	180,000	180,000	0.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rivers	NA	NA	NA	139,000	145,000	4.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Z.Mean	0	0	0	109622	114144.4	3.99	134300	137571	2.34316	0	0	0	0	0	0	54550	68100	17.493
Nat. Mean	55277	57797	6.14	82843.3	87881	8.33	107482	110149	5.01	55307.9	52971	9.1	66530	67558	3.62	74078	80830	7.8

Table 3.5.6: Cost of Production of Major Crops in Nigeria (N/ha) in 2011 and 2012 – cassava, cocoyam, soybean and cotton (North East Zone)

State	Cassava			Soybean			Cotton		
	2011	2012	% Change ¹	2011	2012	% Change	2011	2012	% Change
Borno	NA	NA	NA	NA	NA	NA	NA	NA	NA
Yobe	60000	65000	7.7	NA	NA	NA	NA	NA	NA
Bauchi	NA	NA	NA	39,070.00	56,000	30.2	NA	65000	NA
Gombe	NA	NA	NA	20,000	20,000	0.0	35,000	35,000	0.0
Adamawa	NA	NA	NA	25000	30000	16.7	NA	NA	NA
Z. Mean	60000	65000	7.692308	28023.33	35333.33	15.6329	35000	50000	0

Table 3.5.7: Cost of Production of Major Crops in Nigeria (N/ha) in 2011 and 2012 – cassava, cocoyam, soybean and cotton (North West Zone)

State	Cassava			Soybean			Cotton		
	2011	2012	% Change ¹	2011	2012	% Change	2011	2012	% Change
Jigawa	NA	NA	NA	NA	NA	NA	NA	NA	NA
Katsina	NA	NA	NA	NA	NA	NA	76,700	82,500	7.0
Sokoto	45,000	40,000	-12.5	45,000	45,000	0.0	NA	NA	NA
Kebbi	60,000	NA	NA	NA	NA	NA	100,000	NA	NA
Zamfara	NA	NA	NA	60,000	65,000	7.7	50,000	60,000	16.7
Kano	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kaduna	NA	NA	NA	106,000	112,000	5.4	NA	NA	NA
Z. Mean	52500	40000	-2.5	70333	74000	4.32	75566	71250	11.8

Table 3.5.8: Cost of Production of Major Crops in Nigeria (N/ha) in 2011 and 2012 – cassava, cocoyam, soybean and cotton (North Central Zone)

State	Cassava			Yam			Melon			Soybean		
	2011	2012	% Change ¹	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
Taraba	120,000.0	150,000.0	20.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
Plateau	74,000.0	78,000.0	5.1	405,800.0	463,000.0	12.4	NA	NA	NA	NA	NA	NA
Nasarwa	67,700.0	90,150.0	24.9	564,700.0	596,700.0	5.4	NA	NA	NA	58,700.0	67,400.0	12.9
FCT	135,000.0	137,000.0	1.5	331,300.0	340,250.0	2.6	NA	NA	NA	NA	NA	NA
Niger	NA	NA	NA	98,190.0	99,000.0	0.8	38,544.0	32,010.0	-20.4	NA	NA	NA
Kwara	65,000.0	70,000.0	7.1	70,000.0	75,000.0	6.7	50,000.0	52,000.0	3.8	48,600.0	50,000.0	2.8
Kogi	149,600.0	NA	NA	432,600.0	NA	NA	112,500.0	NA	NA	NA	NA	NA
Z. Mean	101,883.3	105,030.0	11.7	317,098.3	314,790.0	5.6	67,014.7	42,005.0	-8.3	53,650.0	58,700.0	7.9

Table 3.5.9: Cost of Production of Major Crops in Nigeria (N/ha) in 2011 and 2012 – cassava, cocoyam, soybean and cotton(South West Zone)

State	Cassava			Cocoyam			Yam			Melon			Soybean		
	2011	2012	% Change ¹	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
Osun	94,600	101,000	6.3	85,000	80,000	-6.3	215,000	220,000	2.3	NA	NA	NA	NA	NA	NA
Oyo	82,000	92,845	11.7	NA	NA	NA	115,000	132,500	13.2	68,000	69,000	1.4	NA	NA	NA
Ekiti	150,000	152,000	1.3	100,000	98,000	-2.0	550,000	560,000	1.8	65,000	68,000	4.4	120,000	120,000	0.0
Ondo	150000	150000	0.0	129000	129000	0.0	180000	185000	2.7	NA	NA	NA	NA	NA	NA
Ogun	89040	134460	33.8	144105	200000	27.9	442240	663360	33.3	NA	NA	NA	NA	NA	NA
Lagos	120000	122000	1.6	120000	122000	1.6	450000	455000	1.1	35000	36000	2.8	NA	NA	NA
Edo	150,000	165,000	9.1	NA	NA	NA	160,000	180,000	11.1	NA	NA	NA	NA	NA	NA
Delta	78,000	80,000	2.5	70,000	72,100	2.9	105,000	106,700	1.6	63,000	64,250	1.9	NA	NA	NA
	114205	124663.1	8.292875	108018	116850	4.0348	277155	312820	8.38816	57750	59312.5	2.64609	120000	120000	0

Table 3.5.10: Cost of Production of Major Crops in Nigeria (N/ha) in 2011 and 2012 – cassava, cocoyam, soybean and cotton(South East and South-South Zone)

State	Cassava			Cocoyam			Yam			Melon			Soybean			Cotton		
	2011	2012	% Change ¹	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
Anambra	132,000	150,000	12.0	425,000	650,000	34.6	650,000	750,000	13.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
Enugu	168,000	180,000	6.7	156,000	165,000	5.5	126,200	136,000	7.2	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ebonyi	95,000	120,000	20.8	31,000	90,000	65.6	320,000	325,000	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA
C/River	98,000	99,500	1.5	37,000	42,000	11.9	190,000	221,000	14.0	29,400	33,400	12.0	NA	NA	NA	NA	NA	NA
Abia	145,000	140,000	-3.6	94,000	95,000	1.1	240,000	300,000	20.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ak/Ibom	46,000	115,000	60.0	NA	NA	NA	340,000	340,000	0.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
Imo	410,000	300,000	-36	40,000	40,000	0.0	460,000	500,000	8.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bayelsa	150,000	150,000	0.0	130,000	135,000	3.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rivers	155,000	182,000	14.8	154,000	220,000	30.0	769,000	854,000	10.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
Z.Mean	155444	159611	8.4	133375	179625	19.0	386900	428250	9.2	29400	33400	11.9	0	0	0	0	0	0
Nat. Mean	96806	98860	6.72	120696	148237	11.5	327051	351953	7.73	51388.2	44905	2.11	68001	72008	6.9	55283	60625	5.92

Table 3.5.11: Cost of production of major crops in Nigeria (N/h) vegetable, onion, beniseed, egusi & tomato (North East Zone)

State	Onion			Beni Seed			Tomato		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
Bauchi	166,732	75,000	-122.3	47,144	55,000	14.3	NA	NA	NA
Gombe	35,000	35,000	0.0	20,000	20,000	0.0	30,000	30,000	0.0
Z. Mean	100866	55000	-61.	33572	37500	7.14	30000	30000	0

Table 3.5.12: Cost of production of major crops in Nigeria (N/h) vegetable, onion, beniseed, egusi & tomato (North West Zone)

State	Onion			Beniseed			Tomato		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
Jigawa	49500	5300	-834.0	29500	33000	10.6	61000	64500	5.4
Katsina	NA	NA	NA	36,000	40,000	10.0	NA	NA	NA
Z. Mean	49500	5300	-833.96	32750	36500	10.303	61000	64500	5.4264

Table 3.5.13: Cost of production of major crops in Nigeria (N/h) vegetable, onion, beniseed, egusi & tomato (North Central Zone)

State	Tomato		
	2011	2012	% Change
Plateau	135,000	140,000	3.6
Niger	63347	60332	-5.0
	99173.5	100166	-0.713

Table 3.5.14: Cost of production of major crops in Nigeria (N/h) vegetable, onion, beniseed, egusi & tomato (South West Zone)

State	Tomato		
	2011	2012	% Change
Osun	12,400	25,000	50.4
Oyo	66,500	67,000	0.7
Ekiti	60,000	62,000	3.2
Lagos	86000	87000	1.1
	56225	60250	13.88

Table 3.5.15: Cost of production of major crops in Nigeria (N/h) vegetable, onion, beniseed, egusi & tomato (South East Zone)

State	Vegetables			Beniseed			Tomato		
	2011	2012	% Change ¹	2011	2012	% Change	2011	2012	% Change
Ebonyi	NA	NA	NA	74,000	35,000	-111.4	NA	NA	NA
Abia	86,000	89,000	3.4	NA	NA	NA	NA	NA	NA
Imo	NA	NA	NA	NA	NA	NA	25,000	25,000	0.0
Z. Mean	86000	89000	3.37	74000	35000	-111.43	25000	25,000	0.0
Nat. Mean	86000	89000	3.37	46774	36333	-31.32	54274	55983	3.72

Table:3.5.16 Production cost in North West Zone

State	Pepper		
	2011	2012	% Change ¹
Jigawa	61000	64500	5.4
Z. Mean	61000	64500	5.426357

Table:3.5.17 Production cost in North Central Zone

State	Pigeon peas		
	2011	2012	% Change
Kogi	113,310	NA	NA
Z.mean	113310	0	0

Table:3.5.18 Production cost in South West Zone

State	Pepper			Okro			Plantain		
	2011	2012	% Change ¹	2011	2012	% Change	2011	2012	% Change
Osun	133,500	135,000	1.1	78,000	80,000	2.5	NA	NA	NA
Oyo	72,500	75,000	3.3	NA	NA	NA	NA	NA	NA
Ondo	100000	100000	0.0	NA	NA	NA	NA	NA	NA
Delta	NA	NA	NA	NA	NA	NA	65,000	67,000	3.0
Z.Mean	102000	103333.3	1.481481	78000	80000	2.5	65000	67000	2.9851

Table:3.5.19 South East Zone and South-South Zone

State	Pepper			Okro			Pigeon peas			Plantain		
	2011	2012	% Change ¹	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
Ebonyi	70,000	58,000	-20.7	NA	NA	NA	NA	NA	NA	NA	NA	NA
C/River	21,000	24,700	15.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
Abia	37,000	40,000	7.5	52,000	55,000	5.5	NA	NA	NA	NA	NA	NA
Imo	25,000	25,000	0.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bayelsa	NA	NA	NA	NA	NA	NA	NA	NA	NA	250,000	300,000	16.7
Rivers	115,000	140,000	17.9	NA	NA	NA	NA	NA	NA	914,200	1,210,000	24.4
Z.Mean	53600	57540	3.929449	52000	55000	5.45455	0	0	0	582100	755000	20.556
Nat. Mean	72200	75124.44	3.612429	65000	67500	3.97727	113310	0	0	323550	411000	11.771

Table 3.5.20 Cost of production of Major Crop (N/h): telferia, banana, garden egg, bambara nut, oil palm and Irish potatoes in Nigeria (North East Zone)

State	Bambara nut		
	2011	2012	% Change
Gombe	22,000	25,000	12.0
Adamawa	22000	25000	12.0
Z. Mean	22000	25000	12

Table 3.5.21 Cost of production of Major Crop (N/h): telferia, banana, garden egg, bambara nut, oil palm and Irish potatoes in Nigeria (North West Zone)

State	Bambara nut		
	2011	2012	% Change
Sokoto	43,000	35,000	-22.9
Kebbi	65,000	NA	NA
Z. Mean	54000	35000	-22.857

Table 3.5.22 Cost of production of Major Crop (N/h): telferia, banana, garden egg, bambara nut, oil palm and Irish potatoes in Nigeria (North Central Zone)

State	Irish Potatoes		
	2011	2012	% Change
Plateau	286,000	300,000	4.7
Z.mean	286000	300000	4.6667

Table 3.5.23 Cost of production of Major Crop (N/h): telferia, banana, garden egg, bambara nut, oil palm and Irish potatoes in Nigeria (South West Zone)

State	Telferia		
	2011	2012	% Change ¹
Lagos	120000	122000	1.6
Z.mean	120000	122000	1.639344

Table 3.5.24 Cost of production of Major Crop (N/h): telferia, banana, garden egg, bambara nut, oil palm and Irish potatoes in Nigeria (South East Zone)

State	Telferia			Garden Egg			Bambara nut			Oil Palm			Irish Potatoes		
	2011	2012	% Change ¹	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
Abia	NA	NA	NA	82,500	85,000	2.9	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ak/Ibom	140,000	140,000	0.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Imo	NA	NA	NA	30,000	30,000	0.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bayelsa	100,000	100,000	0.0	NA	NA	NA	NA	NA	NA	250,000	300,000	16.7	NA	NA	NA
Rivers	250,240	200,000	-25.1	148,250	154,210	3.9	NA	NA	NA	NA	NA	NA	NA	NA	NA
Z. Mean	163413	146666	-8.37	86916	89736	2.26	0	0	0	250000	300000	16.6	0	0	0
Nat. Mean	141706	134333	-3.36	86916	89736	2.27	38000	30000	-5.42	250000	300000	16.6	286000	300000	4.6



Animal traction is still in vogue in many northern states.

Table 3.5.25: Cost of production of major crops (₦/h): water melon, acha, wheat, sugarcane, sweet potato, carrot and pineapple in Nigeria (North East Zone)

State	Water Melon			Acha			Wheat		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
Yobe	60000	65000	7.7	NA	NA	NA	90000	100000	10.0
Bauchi	NA	NA	NA	54628	55000	0.7	NA	NA	NA
Z. Mean	60000	65000	7.7	54628	55000	0.67	90000	100000	10

Data on Celosia, water melon, acha, wheat, sugar cane and cotton not available in the North West and North Central Zones.

Table 3.5.26: Cost of production of major crops (₦/h): water melon, acha, wheat, sugarcane, sweet potato, carrot and pineapple in Nigeria (North Central Zone)

State	Water Melon			Acha			Wheat			Sugar Cane		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
FCT	NA	NA	NA	NA	NA	NA	NA	NA	NA	220,000	226,000	2.7
Niger	NA	NA	NA	NA	NA	NA	NA	NA	NA	86491	81410	-6.2
	0	0	0	0	0	0	0	0	0	153245	153705	-1.79
Nat. Mean	67500	32500	3.84	54628	55000	0.67	90000	100000	10	153245	153705	-1.79

Data not available on sweet potato, acha, carrot and pineapple in North East, North West, North Central and South West zones.

Table 3.5.27: Cost of production of major crops (₦/h): water melon, acha, wheat, sugarcane, sweet potato, carrot and pineapple in Nigeria (South West Zone)

State	Sweet potato		
	2011	2012	% Change
Ekiti	80,500	81,000	0.6
Ogun	84640	100000	15.4
Delta	98,000	99,800	1.8
	87713	93600	5.92

Table 3.5.28: Cost of production of major crops (N/h): water melon, acha, wheat, sugarcane, sweet potato, carrot and pineapple in Nigeria (South East Zone)

State	Sweet potato			Carrot			Pineapple		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
Enugu	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ebonyi	85,000	121,000	29.8	NA	NA	NA	NA	NA	NA
C/River	59,200	61,000	3.0	NA	NA	NA	NA	NA	NA
Imo	30,000	30,000	0.0	NA	NA	NA	NA	NA	NA
Bayelsa	100,000	100,000	0.0	NA	NA	NA	130,000	150,000	13.3
Rivers	145,200	234,000	37.9	NA	NA	NA	NA	NA	NA
Z.Mean	83880	109200	14.13032	0	0	0	130000	150000	13.333
Nat. Mean	85796.67	101400	10.02864	110000	115000	4.34783	130000	150000	13.333

Table 3.5.29: Cost of Production of pawpaw in South West Zone

State	Paw-paw		
	2011	2012	% Change
Edo	200,000	250,000	20.0
Zonal Mean	200000	250000	20
Nat. Mean	200000	250000	20

3.6 GRAIN RESERVES

The aim of grain reserve is to ensure all-year round availability of food and price control. Most of the states did not have records on grains stored and distributed both in 2011 and 2012. In 2011, millet (with a national mean of 149.5MT) was the most stored grain in the country; while for 2012, it was maize (with a national mean of 102.4MT). Other stored grains include millet, cowpea and sorghum. There was scanty data on strategic grain reserve activities in the states. The discussion on strategic grain reserves of each is presented below according to agro-ecological zones.

North East Zone

Tables 6.1a and 6.1.b present data for the NE Zone. None of the states in the zone supplied data on grain storage for the period under study. Borno State indicated that it has grain reserve stations in farm centres and that these were state government-owned. But no quantifiable data were provided to validate this assertion. Bauchi State indicated that it has grain reserves in Azare, Bauchi and Boto (each reserve having an installed capacity of 4000MT) and they all belonged to the state. But there was no information on how much of grains was reserved in them. Field observation from Kebbi State Ministry of Agriculture suggested that the state has been battling with the problems of timely purchase of excess produce from farmers and the need to improve its storage facilities' capacity.

Table 3.6.1.: Grain Storage and Distribution (North East Zone)

State	Grain Type	Quantity Stored(mt)			Quantity Distributed(Mt)			Selling Price N/Mt		
		2011	2012	% Change	2011	2012	% Change	2011	2012	%Change
BORNO	Millet	847	NA	-	847	NA	-	Free	NA	-
	Sorghum	300	NA	-	300	NA	-	Free	NA	-
Yobe	Millet, Sorghum, Maize	NA	NA	-	NA	NA	-	NA	NA	-
	Cowpea	NA	NA	-	NA	NA	-	NA	NA	-
Bauchi	Sorghum	NA	NA	-	NA	NA	-	NA	NA	-
	Maize	NA	NA	-	NA	NA	-	NA	NA	-
Gombe	Millet, Sorghum, Maize	NA	NA	-	NA	NA	-	NA	NA	-
Adamawa	Millet, Sorghum, Maize	NA	NA	-	NA	NA	-	NA	NA	-
Z. Mean	Millet	169.4	NA	-	847	NA	-	NA	NA	-
	Sorghum	60	NA	-	300	NA	-	NA	NA	-

Table 3.6.2: Installed Capacity of Reserves (North East Zone)

State	Location	Installed capacity (MT)	Ownership	Quantity of grain stored	
				2011	2012
BORNO	Farm centre	1147	State	NA	NA
Yobe	NA	NA	NA	NA	NA
Bauchi	Azare	4000	State	17	NA
	Bauchi	4000	State	NA	NA
	Boto	4000	State	NA	NA
Gombe	NA	NA	NA	NA	NA
Adamawa	NA	NA	NA	NA	NA

Table3.6.3: Key Grain Silo complexes in Nigeria

S/N	Name of Silo	Location/State	Capacity in Metric tons	Types of grains/foods
1	Minna	Niger State	25,000	Maize, Sorghum & Garri
2	Akure	Ondo state	25,000	Maize, Sorghum & Garri
3	Eruwa	Edo State	25,000	Garri
4	Makurdi	Benue State	25,000	Sorghum
5	Ogoja	Cross River	25,000	Maize, Sorghum & Rice
6	Gombe	Gombe State	25,000	Maize, Sorghum & Millet
7	Jahun	Jigawa State	25,000	Maize, Sorghum & Millet
8	Ilorin	Kwara State	25,000	Maize & Sorghum
9	Ibadan	Oyo State	25,000	Maize & Sorghum
10	Jos	Plateau State	25,000	Maize, Sorghum & Millet
11	Lafiagi	Kwara State	11,000	No stock ,poor access road
12	Kaduna	Kaduna State	25,000	No stock, just completed

North West Zone

For the North West, only Kebbi and Sokoto states provided data for grain reserves. Grain storage for millet in Kebbi remained the same for 2011 and 2012; but there was much reduction for sorghum and maize, as both crops recorded 1,000MT for 2012 as against 1500MT and 1800MT respectively for 2011. For the year under study, Kebbi State reported 7,000MT storage of paddy rice. For Sokoto State, there was much decrease in the quantity of grains stored in 2012 compared to those for 2011. One other striking feature of Sokoto figures is the fact that all grains stored were said to have been distributed for the year under study. Jigawa State Ministry of Agriculture stated that the policy of the State allows grain distribution to all local government areas during offseason. But there was no data to substantiate this submission.

Kano State had grain reserves in various locations in the state. These include Maganda, with a warehouse capacity of 6,000 metric tons, and Gezawa, Lamire, Tulin, Balame, Tofa and Kwarkya (all with a warehouse capacity of 2,500 each). However, there was no information on the quantities of grains stored in these warehouses. Jigawa State had grain reserve silos located at Talaku, Aujara and Gumel with installed capacities of 380MT each. On installed grain storage capacity in all the states in the zone (with the exception of Zamfara) there were existence storage sites. Jigawa recorded three, each with 380MT capacity; Kaduna reported five, each having 5000MT capacity, while Kano indicated six, with capacities ranging from 2000MT to 6000MT. Furthermore, Katsina had three with the capacity of 25,000MT while Kebbi had six, ranging from 500MT to 5000MT. Sokoto had a silos complex at Nassarawa with over 10,000MT combined capacity. There was no data on the existence and installed capacity for grain reserves in Zamfara State.

Table 3.6.4: Grain Storage and Distribution (North West Zone)

State	Grain Type	Quantity Stored(mt)			Quantity Distributed(Mt)			Selling Price (N/Mt)		
		2011	2012	% Change	2011	2012	% Change	2011	2012	%Change
Kebbi	Millet	2,100	2100	0	NA	2,500	-	2,100	NA	NA
	Sorghum	1,500	1000	33.3	NA	1,000	-	1,500	NA	NA
	Maize	1,800	1000	44.4	NA	900	-	1,800	NA	NA
	Paddy Rice	-	7,000	100	-	400	-	-	-	-
Zamfara	Millet, Sorghum, Maize, Cowpea	NA	NA	-	NA	NA	-	NA	NA	-
Katsina	Maize	108.74	NA	-	108.74	NA	-	25,000	NA	-
	Millet	132.39	NA	-	132.3.9	NA	-	3,000	NA	-
	Sorghum	600	NA	-	600	NA	-	24,000	NA	-
Jigawa	Millet	300	NA	-	NA	NA	-	1134	NA	-
	Sorghum	60	NA	-	NA	NA	-	1108	NA	-
Kano	Millet	116	NA	-	1.16	NA	-	20,000	NA	-
	Sorghum	560	NA	-	560	NA	-	17,000	NA	-
	Maize	113	NA	-	1.13	NA	-	20,000	NA	-
Kaduna	Millet, Sorghum, Maize	NA	NA	-	NA	NA	NA	NA	NA	-
Sokoto	Millet	1797.2	900	-49.9	1793.4	900	-49.8	3250	-	-100
	Maize	1115.7	300	-73.1	1115.7	300	-73.1	3250	-	-100
	Sorghum	660	3000	35.4	660	3000	35.4	-	-	-
	Beans	228.7	-	-	228.7	-	-100	-	-	-
Z. Mean	Millet	616.2	428.6	-49.9	175.08	485.7	21.45	4212	-	-71.4
	Maize	448.2	571.4	-18.4	275.1	171.4	-24.7	7150	-	-57.1
	Sorghum	482.9	185.7	-33	260	571.4	-9.2	6229.7	-	-57.1
	Beans	32.8	-	-	32.7	-	-	-	-	-
	Paddy rice	-	1000	14.3	-	57.1	14.3	-	-	-

Table 3.6.5: Installed Capacity of Reserves(North West Zone)

State	Location	Installed capacity	Ownership	Quantity of grain stored	
				2011	2012
Jigawa	Talaku	380	State	330	Nil
	Aujara	380	State	316	Nil
	Gumel	380	State	319.05	Nil
Kaduna	B/Gwari	5,000	State	Nil	NA
	Zaria	5,000	State	Nil	NA
	Saminaka	5,000	State	Nil	NA
	Kafanchan	5,000	State	Nil	NA
	Kaduna	5,000	State	Nil	NA
Kano	Maganda	6,000	State	Nil	Nil
	Gezawa	2,500	State	Nil	Nil
	Tukin	2,500	State	Nil	Nil
	Balame	2,500	State	Nil	Nil
	Tofa	2,500	State	Nil	Nil
	Kwarkya	2,500	State	Nil	Nil
Katsina	Katsina	5000	State	2611.3	2611.3
	Funtuwa	2000	State	500	400
	Dutsanma	25,000	FG	Nil	Nil
Kebbi	BirniKebbi	5000	State	2500	2500
	Argungu	1000	State	1000	100
	Bunza	500	State	300	300
	Yauri	1000	State	400	400
	Zuru	2000	State	400	300
	Jega	500	State	-	-
Sokoto	Kasarawa Silo complex	10,000+	Federal	Nil	Nil
Zamfara	NA	NA	NA	NA	NA

North Central Zone

The six states in the zone (Taraba, Plateau, Nasarawa, Kogi, Kwara and Benue) did not supply data on grain storage for the year under study. However, Niger and FCT gave data. Niger had 25% and 11% increase of millet and maize stored respectively compared to the 2011 figures. But the state also recorded a 50% and 33% decrease for rice and sorghum storage, respectively, for 2012 when compared to the 2011 figures. In like manner the FCT recorded a tremendous increase of 83% for both millet and sorghum grain stored for the period compared to the figures of the previous year (2011).

Nassarawa State Ministry of Agriculture observed that neither the federal nor the state government was playing any significant role in the sustenance of the strategic food programme. Kogi State Ministry of Agriculture indicated that both federal and state governments were not investing enough in silo construction for the state. On installed capacity of grain reserves the FCT indicated that there were two separate 250MT-capacity reserves at Ribochi and Kwali, and 300MT reserves in three other different locations: Abaji, Gwagwalada and Bwari. These five reserves, are the property of the FCT authority. Kwara State reported four 2,500MT state-owned reserves sited at four different locations across the state—at Patigi, Lafiagi, Erin-Ile and Kaima. There was also a 5,000MT state-owned reserve in Ilorin. Niger had a state-owned 100MT-capacity reserve at Minna. However, the other five states of Benue, Niger, Taraba, Nasarawa and Plateau did not provide data on available grain reserves in their respective states.

Table 3.6.6: Grain Storage and Distribution (North Central Zone)

State	Grain Type	Quantity Stored(mt)			Quantity Distributed(Mt)			Selling Price N/Mt)		
		2011	2012	% Change	2011	2012	%Change	2011	2012	%Change
FCT	Maize	547	577.5	5.6	30,000	577.5	-98.1	30,000	36,000	20
	Millet	293	253.5	-13.5	30,000	253.5	-13.5		36,000	-
	Sorghum	60	109.8	83	60	109.8	83		36,000	-
	Beans	-	59.3	-	-	59.3	-	-	68,000	-
Niger	Millet	120	150	25	120	150	25	30,000	35,000	16.7
	Sorghum	150	100	-33.3	150	100	-33.3	30,000	35,000	16.7
	Maize	180	200	11.1	180	200	11.1	35,000	35,000	0
	Rice	300	150	-50	300	150	-50	41,500	47,500	14.5
Kwara	Millet,	480	NA	-100	480	NA	-	2000	NA	-
	Sorghum,	180	-	-100	180	-	-	1800		-
	Rice	480	-	-100	480	-	-	1200		-
Z. Mean	Millet	111.6	50.4	-11.1	3825	50.4	-123.5	4000	8875	2.1
	Maize	90.9	97.2	2.1	3772.5	97.2	-10.9	8125	8875	2.5
	Sorghum	48.8	26.2	-6.3	48.8	26.2	-6.3	3975	8875	2.5
	Beans	-	7.4	-	-	7.4	-	85000	8500	12.5
	Paddy rice	37.5	18.8	-6.3	60	-	-18.5	5237.5	5957.5	-10.7

Table 3.6.7: Installed Capacity of Reserves(North Central Zone)

State	Location	Installed capacity (MT)	Ownership	Quantity of grain stored (MT)	
				2011	2012
FCT	Ribochi	250	FCT	120	Nil
	Abaji	300	FCT	292.2	219.7
	Kwali	250	FCT	210	230.4
	Gwagwalada	300	FCT	174	250
	Bwari	300	FCT	103	299
Kwara	Ilorin	5,000	State	480	-
	Patigi	2,500	State	250	-
	Lafiagi	2,500	State	230	-
	Erin-Ile	2,500	State	-	-
	Kaima	2,500	State	-	-
Niger	Minna	1000	State	213	8012

South West Zone

None of the states in the South-West had data on grain storage for the period under study. With regard to installed reserve capacity, only Ekiti State indicated that it has three Federal Government-owned silos in Ikale (380MT), Erifun (350MT) and Aiyedun (50MT) all were not utilized since construction. Lagos, Ogun, Oyo, Osun and Ondo states supplied no data on installed capacity.

Table 3.6.8: Installed Capacity of Reserves(South West Zone)

State	Location	Installed capacity (MT)	Ownership	Quantity of grain stored	
				2011	2012
Ekiti	Ikale	380	FG	NA	NA
	Erifun	350	FG	NA	NA
	Aiyedun	50	FG	NA	NA

South East Zone

For the Southeast Zone, no data was supplied for grain reserves for 2011 and 2012. However, there were few observations about the situation of grain reserves from relevant State Ministry of Agriculture. In Anambra State it was observed that a silo was under construction in Igbariam, in Anambra East LGA with the capacity of 25MT. Ebonyi State had a link with the National Strategic Grain Reserves on its grain reserve plans. In Enugu state-owned grain reserve has been now been handed over to the State Ministry of Commerce and Industry for management.

Table 3.6.9: Installed Capacity of Reserves (South East Zone)

State	Location	Installed capacity(MT)	Ownership	Quantity of grain stored	
				2011	2012
Anambra	Igbariam	25	State	NA	NA

South-South Zone

None of the states in the zone supplied data on grain storage for the period under study. For installed capacity only Cross River had a 2,500MT capacity grain reserve in Okoku-Ogoja. But there was no record of grain storage in the state. The Ministry of Agriculture in Bayelsa state reported that construction of a 1,000 capacity silos is ongoing in Ogbogene as part of the Federal Strategic Grain Reserve Policy implementation in the state.

Table 3.6.10: Installed Capacity of Reserves (South-South Zone)

State	Location	Installed capacity	Ownership	Quantity of grain stored	
				2011	2012
Cross-Rivers	Okoku-Ogoja	25000	FG	Nil	Nil

Table 3.6.11: Grain Storage and Distribution (National averages)

State	Grain Type	Quantity Stored (mt)			Quantity Distributed (Mt)			Selling Price N/Mt		
		2011	2012	% Change	2011	2012	% Change	2011	2012	%Change
Nat. Mean	Millet	149.5	79.8	-26.8	737.8	89.4	7.5	1369	1479.1	-9.2
	Maize	89.9	102.4	0.4	691.3	44.8	-5.9	2545.83	1479.1	-9.1
	Sorghum	128.1	35.3	-6.5	101.5	99.6	-19.3	1200.8	1479.1	-9.1
	Beans	5.5	1.2	2.1	5.5	1.2	-2.4	1416.7	1416.7	2.1
	Paddy rice	6.3	169.8	1.3	10	9.5	-0.7	872.9	992.8	-1.8

3.7 Food Commodity Prices

Comparison of market prices of major food commodities were made for the period of January to July 2011 and January to July 2012. They are presented in Tables 3.7.1a – 3.7.1h

The prices of maize and millet in the NWZ and SWZ increased but that of rice decreased. The NCZ recorded decreases in prices for millet and rice and a slight increase in the price of maize. Gombe, Lagos, Bauchi and Zamfara states reported 100%, 39%, 33%, and 30% increases in the price of millet respectively. Also, Lagos, Bauchi, Enugu and Benue recorded price increases of 38%, 18%, 16% and 13% for maize respectively. Akwa-Ibom, Ondo, Cross River, Osun, Oyo, Kwara, Kaduna, and Edo reported decreases in the price of maize, with variation between 30% and less than 1%. Yobe, Benue, Adamawa, Ebonyi and Lagos states had once decreases of rice that ranged between 6% and 45%. In Kwara and Kaduna states, 23% and 10% reductions in the price of millet (respectively) were recorded. The reduction in the price of rice implied that increasing domestic production is impacting positively on local market prices across the country.

Sorghum and Cowpea prices increased by more than 100% in the NWZ, NEZ, NCZ, SWZ, and SSZ and by 335% in Taraba, 20 to 24% in Kebbi, Kaduna, Akwa-Ibom, Bauchi and Gombe states. Cowpea price generally recorded over 300% increase during the year. Bennis seed price dropped in Benue and Adamawa states by about 39% and 16% in 2012 respectively.

The price of cassava products significantly increased in all the zones of the country. Oyo and Osun states reported over 100% increase in the price of cassava tuber in 2012. This is probably due to farmers' response to increase demand stimulated by the cassava bread policy as well as export drive of this commodity. Kaduna, Edo, Nassarawa, Kwara, and Enugu states also recorded 83%, 75%, 38%, and 30% increases in the price of

cassava tuber respectively. Gari price increased by 20% in Enugu State during this period unlike in Zamfara, Nassarawa, Ondo and Oyo states where 22% reduction in gari price recorded and in Kaduna State and the FCT that had 17% decrease in the price of cassava flour. Nassarawa, Gombe, Imo and Ebonyi states recorded 100%, 40% 20% and 1% increase in the price of cassava flour respectively.

The prices of yam tubers, flour and sweet potato generally increased across the country in 2012, except in the SWZ. Adamawa State reported about 167% increase in the price of sweet potato, while Niger, Cross River, Nassarawa, Ondo, Akwa-Ibom and Kebbi states reported increases in the price of yam tubers at 56%, 48%, 34%, 32%, 30% and 17% respectively. Significant decreases in the price of sweet potato in Osun, Ondo, Rivers, Kwara and Plateau states at 47%, 33%, 20%, 15% and 11% were also recorded in that order.

A sharp increase in the price of melon was reported in the NEZ, SWZ, SEZ and SSZ. Bauchi State reported an increase of 130% in the price of melon while Ogun and Imo states recorded about 65% increase. Cross River State posted a 50% increase in melon prices as against Ondo, Enugu, Benue and Akwa-Ibom states that experienced about 44%, 42%, 37% and 18% decrease in melon prices. Also, Kaduna, Bauchi, Benue and Oyo states reported increases in the price of soybeans of more than 69%, 45%, 44% and 31%. Akwa-Ibom State recorded a 41% increase in the price of Irish potato; while Oyo state reported a 25% increase for the same product. Irish potato price was also higher by 11% in Nassarawa and Abia states in 2012, compared with 2011 records.

The price of beef and goat meat increased significantly across the nation in 2012. In Adamawa State, a 100% rise in beef and goat meat price was recorded. Kaduna, Kogi and Ebonyi states had 43%, 42% and 33% increases in beef price, while Abia, Ebonyi and Oyo states reported price increase of 58%, 28% and 15% respectively for goat meat. Price data for Pork meat was not available from all the zones. Mutton price significantly increased across the country. Adamawa State recorded more than 100% increase in the price of mutton in 2012 over that of 2011. The increase in the price of mutton was fair in Akwa-Ibom, Ebonyi, Nassarawa, and Kaduna states but strayed from 15% to 37% in 2012. The level of price increase of 14% for was recorded in Bauchi and Gombe states.

The price of chicken increased by 127%, 82%, 53% and 40% in Nassarawa, Taraba, Kebbi and Ebonyi states respectively. In fact, it is important to note that there were no records of price reduction from all the zones for chicken throughout the year under review.

The price of fresh fish increased in most states. Kaduna State recorded about 79% increase while Kwara, Bauchi, Enugu, Kebbi and Ogun states reported increases in the range of 29 to 59%. A few states however posted reductions in the price of fresh fish, especially Cross River and Plateau State which recorded 28% and 14% reductions in respectively.

Marginal decreases in the price of eggs were reported in the SWZ and other parts of the country, while same increases were recorded in NWZ, NEZ, NCZ, SEZ and SSZ states. For instance Oyo, Ekiti, Plateau and Bauchi states reported egg price decrease of 28%, 7%, 5%, and 4% respectively, while Ebonyi, Benue, Kebbi, Kogi and Adamawa recorded increases of 60%, 15%, 14%, 13% and 7% respectively during the same period.

Price of dry fish decreased in most states of the SSZ. In Cross River and Rivers states, dry fish price decreased with as much as 15% and 23% respectively. However, in NWZ, NEZ, NCZ, SEZ and SWZ, increases were recorded for dry fish price for the same period. Kwara, Nassarawa, Kogi, Kebbi, Lagos and Enugu states recorded price increases of 57%, 49%, 45%, 33%, 36%, and 26% for dry fish prices in 2012 respectively. In Bauchi and Ogun states, the increase in the price of dry fish was 29%. The price of dry fish in Imo State was more than 115% in 2012 compared with 2011. In Osun and Kogi states, fresh fish price increased by 28% and 45% respectively. However, prices of fresh fish decreased in Niger and Plateau states by 46% and 16% respectively.

Table 3.7.1: Commodity Prices in Nigeria (N/kg) (Maize, Millet and Rice) 2011 and 2012

North East Zone

State	Maize			Millet			Rice		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
Borno	NA	NA	NA	NA	NA	NA	NA	NA	NA
Yobe	65	72	10.77	60	75	25	146	80	-45.20
Bauchi	58.03	68.25	17.61	57.93	77.33	33.49	146.21	159.21	8.89
Gombe	60	60	NA	50	100	100	110	150	36.36
Adamawa	67.08	70.65	5.32	68	79	16.18	125.88	83.67	-33.53
Zonal means	50.02	54.18	6.74	47.19	66.27	34.93	105.62	94.58	-6.69

Price in North West Zone

State	Maize			Millet			Rice		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
Jigawa	NA	60.25	NA	NA	59.59	NA	NA	103.7	NA
Katsina	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sokoto	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kebbi	120	100	20	130	105	23.81	NA	NA	NA
Zamfara	68	66	3.03	80	61.5	30.08	187.07	173.44	7.86
Kano	NA	50.1	NA	NA	50.99	NA	NA	200.48	NA
Kaduna	64	64.64	-0.99	90	100	-10	170	157.72	7.79
Zonal means	36	48.71	3.15	42.86	53.87	6.27	51.01	90.76	2.23

Price in North Central Zone

State	Maize			Millet			Rice		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
Taraba	130.26	140.2	7.63	70	75	7.14	120	130	8.33
Plateau	54.66	60.42	10.54	72.81	87.15	19.69	130.47	163.45	25.28
Nasarawa	59.12	66.1	11.81	62.61	74.82	19.5	113.82	137.41	20.73
Niger	57.72	NA	NA	65.07	NA	NA	112.92	NA	NA
Kwara	75.71	73.33	-3.14	109.09	84.5	-22.54	140.75	179.13	27.27
Kogi	66.5	66.67	0.26	78	87.5	12.18	200	220	10
Benue	75.53	85.63	13.37	88.94	86.25	-3.02	184.61	103.84	-43.75
FCT	75	75	0	100	100	0	180	200	11.11
Zonal means	74.31	70.92	5.06	80.81	74.40	-8.38	147.82	141.73	-5.13

Price in South West Zone

State	Maize			Millet			Rice		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
Osun	81.01	75.93	-6.27	NA	NA	NA	136.02	153.69	12.99
Oyo	92.65	87.98	-5.04	99.38	115	15.72	129.55	143.77	10.98
Ekiti	100	100	0	NA	NA	NA	200	200	0
Ondo	112.62	91	-19.19	139.92	140	0.06	201.93	200	-0.96
Ogun	75	79	5.33	NA	NA	NA	275	290	5.45
Lagos	80.05	110.25	37.73	115.45	160	38.59	180.65	169.22	-6.33
Zonal means	90.22	90.69	2.09	59.12	69.17	9.06	187.19	192.78	3.69

Price in South East Zone

State	Maize			Millet			Rice		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
Anambra	6971	6985	0.20	NA	NA	NA	1335	1336	0.075
Enugu	86.4	100	15.74	NA	NA	NA	143.05	158.97	11.13
Ebonyi	150	150	0	NA	NA	NA	160	140	-12.5
Imo	125	135	8	NA	NA	NA	155	160	3.23
Abia	112.45	120	6.71	NA	NA	NA	159	160	0.63
Zonal means	1488.97	1498	6.13	NA	NA	NA	390.41	390.99	0.512

Price in South-South Zone

State	Maize			Millet			Rice		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
A/Ibom	217.91	152.41	-30.06	200	NA	NA	173.15	251.24	45.09
Cross River	148.84	126.11	-15.27	NA	NA	NA	209.31	209.1	-0.10
Bayelsa	230	250	8.69	NA	NA	NA	350	450	28.57
Rivers	100	120	20	NA	NA	NA	167	179	7.19
Edo	143.2	142	-0.84	NA	NA	NA	NA	NA	NA
Zonal means	139.99	131.75	-2.91	33.33	NA	NA	149.91	181.56	13.46

Table 3.7.2: Commodity Prices in Nigeria (N/kg) (Sorghum, Cowpea and Beniseed)

Price in North East Zone

State	Sorghum			Cowpea			Benni seed		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
Borno	NA	NA	NA	NA	NA	NA	NA	NA	NA
Yobe	30	85	183.33	130	150	15.38	NA	NA	NA
Bauchi	54.92	65.89	19.97	105.63	187.87	77.86	NA	NA	NA
Gombe	50	60	20	100	300	200	110	120	9.09
Adamawa	65	68	4.62	120	240	100	190	160	-15.79
Zonal means	39.98	55.77	45.58	91.12	175.57	78.65	60	56	-1.34

Price in North West Zone

State	Sorghum			Cowpea			Benniseed		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
Jigawa	57.16	NA	NA	95.83	NA	NA	204.54	NA	NA
kebbi	105	130	23.81	300	350	16.67	120.05	140	16.62
Zamfara	66	68	3.03	87	186	113.79	NA	NA	NA
Kano	49.53	NA	NA	101.33	NA	NA	NA	NA	NA
Kaduna	79.51	64	-19.51	123.25	184	49.291	186.58	215	15.23
Zonal means	51.03	37.43	1.048	101.06	102.86	25.68	73.02	50.71	4.55

Price in North Central Zone

State	Sorghum			Cowpea			Benni Seed		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
Taraba	75.23	100	32.93	90	150	66.67	NA	NA	NA
Plateau	67.36	65.83	-2.27	134.53	165.21	22.81	231.69	247.68	6.90
Nasarawa	56.33	62.66	11.24	125.54	187.55	49.39	187.72	193.43	3.04
Niger	56.99	NA	NA	93.36	NA	NA	172.47	157.12	-8.90
Kwara	87.5	93.72	7.11	141.59	229.4	62.02	NA	NA	NA
Kogi	92	105	14.13	200	350	75	100	152	52
Benue	82.2	86.92	5.74	154.61	235	51.99	378.75	232.24	-38.68
FCT	112	114	1.79	196	340	73.47	157	160	1.91
Zonal means	78.70	78.52	8.83	141.95	207.15	50.17	153.45	142.81	2.03

Price in South West Zone

State	Sorghum			Cowpea		
	2011	2012	%Change	2011	2012	%Change
Osun	76.9	78.61	2.22	145.1	192.67	32.78
Oyo	81.87	87.85	7.30	144.84	227.17	56.84
Ekiti	NA	NA	NA	200	210.5	5.25
Ondo	NA	NA	NA	157.34	225	43.00
Ogun	NA	NA	NA	300	340	13.33
Lagos	NA	NA	NA	178.83	195.2	9.15
Zonal means	26.46	27.74	1.59	187.69	231.76	26.73

Price South East Zone

State	Cowpea		
	2011	2012	%Change
Abia	174	175	0.575
Imo	NA	NA	NA
Anambra	127.73	127.86	0.10
Enugu	110.03	139.4	26.69
Ebonyi	166.6	160	-3.96
Zonal means	115.67	350.45	4.68

Price South-South Zone

State	Sorghum			Cowpea		
	2011	2012	%Change	2011	2012	%Change
A/Ibom	50	60	20	150	150	0
Cross River	NA	NA	NA	171.15	241	40.81
Bayelsa	NA	NA	NA	300	350	16.67
Rivers	NA	NA	NA	171	192	12.28
Edo	NA	NA	NA	240	240	0
Zonal means	50	60	20	172.03	195.5	11.63

Table 3.7.3: Commodity Prices in Nigeria (₦/kg) (Cassava Tuber, Gari and Flour)

Price in North East Zone

State	Cassava Tuber			Gari			Cassava Flour		
	2011	2012	%Change	2011	2012	%change	2011	2012	%Change
Yobe	100	NA	NA	132	NA	NA	NA	NA	NA
Bauchi	44.08	58.75	33.28	109.74	118.62	8.09	107.9	115.53	7.07
Gombe	NA	NA	NA	110	140	27.27	100	140	40
Adamawa	60	105	75	90	90	0	65	75	15.38
Zonal means	40.82	32.75	21.66	88.35	69.72	7.07	54.58	66.11	12.49

Price in North West Zone

State	Cassava Tuber			Gari			Cassava Flour		
	2011	2012	%change	2011	2012	%change	2011	2012	%Change
Jigawa	NA	NA	NA	94.87	NA	NA	NA	NA	NA
Kebbi	NA	NA	NA	130.6	125.5	-3.91	NA	NA	NA
Zamfara	72.5	NA	NA	136	120.5	-11.4	NA	NA	NA
Kano	50.8	NA	NA	134.7	NA	NA	35	NA	NA
Kaduna	39.4	72	82.8	107.5	117.5	9.3	101.9	85	-16.67
Zonal means	32.5	14.4	16.6	127.2	72.7	-1.21	27.4	17	-3.33

Price in North Central Zone

State	Cassava Tuber			Gari			Cassava Flour		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
Taraba	NA	NA	NA	80	80	0	85.73	100	16.65
Plateau	65.48	51.38	-21.53	104.76	110	5	71.25	70.23	-1.43
Nasarawa	20.6	28.49	38.30	83.95	72.1	-14.12	59.24	58.79	-0.76
Niger	60.92	NA	NA	93.88	NA	NA	51.82	NA	NA
Kwara	9	12.42	38	73.68	69.5	-5.67	52.3	104.38	99.58
Kogi	9.5	10	5.26	70	85	21.43	65	71.43	9.89
Benue	30.25	40	32.23	100	100.77	0.77	87	97	11.49
FCT	15	16	6.67	130	135	3.85	72	60	-16.67
Zonal means	26.34	19.79	12.37	92.03	81.55	-11.09	68.04	70.23	2.34

Price in South West Zone

State	Cassava Tuber			Gari			Cassava Flour		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
Osun	9.53	21.63	126.97	64.49	89.68	39.06	87.38	105.23	20.43
Oyo	11.39	30.07	164.00	91.35	40.58	-55.58	96.67	119.58	23.69
Ekiti	9.55	10.5	9.95	100	100	0	160	162.5	1.56
Ondo	70.56	25	-64.57	108.76	96.1	-11.64	167.5	130	-22.39
Ogun	6.6	10.9	65.15	135.25	160.25	18.48	120.45	132.45	9.96
Lagos	13.09	NA	NA	112.23	122.25	8.928	138.05	133.33	-3.42
Zonal means	20.12	16.35	50.25	102.01	101.48	-0.12	128.34	130.51	4.97

Price in South East Zone

State	Cassava Tuber			Gari			Cassava Flour		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
Abia	10.12	10.2	0.79	126.96	140	10.27	175	175	0
Imo	115	150	30.43	95	100	5.26	100	120	20
Anambra	3725	3749	0.64	9549	9565	0.17	7254	7268	0.19
Enugu	39	50.87	30.44	64	76.9	20.16	NA	NA	NA
Ebonyi	40.41	50.5	24.97	79.66	81	1.68	65	70	7.69
Zonal means	785.91	802.11	17.45	1982.92	1992.58	7.51	1518.8	1526.6	5.58

Price in South-South Zone

State	Cassava Tuber			Gari			Cassava Flour		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
A/Ibom	25.46	33.67	32.25	97.47	112.81	15.74	NA	NA	NA
Cross River	23.93	21.57	-9.86	110.3	129.32	17.24	NA	NA	NA
Bayelsa	460	500	8.69	267	300	12.36	NA	NA	NA
Rivers	166.64	100	-39.99	85	100	17.65	NA	NA	NA
Edo	51.5	90	74.76	110	120	9.09	61.28	62	1.17
Zonal means	121.26	124.21	10.97	111.63	127.02	12.01	10.21	10.33	0.19

Table 3.7.4: Commodity Prices (₦)/kg in Nigeria (Yam tuber and flour and Sweet potato)

Price in North East Zone

State	Yam (tuber)			Sweet potato		
	2011	2012	%Change	2011	2012	%Change
Borno	300	300	0	NA	NA	NA
Bauchi	NA	NA	NA	70.68	79.04	11.83
Gombe	720	750	4.17	NA	NA	NA
Zonal means	204	210	1.04	42.14	39.81	35.69

Price in North West Zone

State	Yam (tuber)			Sweet potato		
	2011	2012	%Change	2011	2012	%Change
Jigawa	104.45	NA	NA	NA	NA	NA
Kebbi	300	350	16.67	140	170	21.43
Zamfara	155	160	3.23	92	NA	NA
Kano	200.48	NA	NA	67.71	NA	NA
Kaduna	168.32	144.75	-14.00	93.62	104.17	11.27
Zonal means	164.76	130.95	1.18	78.67	54.83	6.54

Price in North Central Zone

State	Yam (tuber)			Yam (flour)			Sweet potato		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
Taraba	420	500	19.05	75.32	NA	NA	NA	80	NA
Plateau	144.78	149.8	3.47	135.79	147.22	8.42	72.24	63.81	-11.67
Nasarawa	70.17	93.91	33.83	72.53	84.01	15.83	49.71	55.05	10.74
Niger	53.94	84.31	56.30	NA	NA	NA	68.86	85.25	23.80
Kwara	90.22	81.5	-9.67	80.64	104.38	29.44	60.18	51.43	-14.54
Kogi	66.5	85.71	28.89	55	76	38.18	50.56	60	18.67
Benue	87.87	87.87	0	100	100	0	NA	NA	NA
FCT	60	75	25	130	135	3.85	57	52	-8.77
Zonal means	140.94	165.87	21.98	69.88	68.60	15.31	50.26	65.92	4.50

Price in South West Zone

State	Yam (tuber)			Yam (flour)			Sweet potato		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
Osun	77.86	69.5	-10.74	132.12	236.42	78.94	83.32	44.32	-46.81
Oyo	73.44	74.93	2.03	276.93	232.95	-15.88	65	76.25	17.31
Ekiti	120	130	8.33	160	162.5	5625	55	55	0
Ondo	119.2	81.5	-31.63	169.38	158	-6.72	60	40	-33.33
Ogun	210.5	230	9.26	220	245	11.36	140	155	10.71
Lagos	170	190.75	12.21	170	190.65	12.15	130	139.98	7.68
Zonal means	128.5	129.45	-1.76	188.07	204.25	13.57	88.89	85.09	-7.41

Price in South East Zone

State	Yam (tuber)			Sweet potato		
	2011	2012	%Change	2011	2012	%Change
Abia	129.7	130	0.23	91.72	100	9.02
Imo	140	120	-14.28	170	180	5.88
Anambra	8298	8315	0.20	6880	6894	0.20
Enugu	119.13	138.76	16.48	70.54	80.74	14.46
Ebonyi	143.83	160	11.24	122.5	110	-10.20
Zonal means	1766.13	1772.75	2.77	1466.95	1472.95	3.87

Price in South-South Zone

State	Yam (tuber)			Yam (flour)			Sweet potato		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
Cross River	117.43	162.62	38.48	NA	NA	NA	64.08	66.12	3.18
A/Ibom	141.2	184.49	30.66	NA	NA	NA	104.4	130.27	24.78
Bayelsa	500	500	0	200	250	25	85	90	5.88
Rivers	93.7	120	28.07	NA	NA	NA	250	200	-20
Edo	115.63	121.51	5.09	157.5	181.1	5.09	102.81	100	-2.73
Zonal Mean	161.33	181.44	17.05	59.58	71.85	5.02	101.04	97.73	1.85

Table 3.7.5: Commodity Prices in Nigeria (₦/kg) (Melon, Soybean and Irish potato)**Price in North East Zone**

State	Melon			Soybean			Irish potato		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
Bauchi	393	906.7	130.71	98.65	142.75	44.70	116.5	121.98	4.70
Gombe	70	60	-14.29	80	100	25	90	100	11.11
Adamawa	115	140	21.74	160	160	0	106	60	-43.39
Zonal means	115.6	221.34	27.63	67.73	80.55	13.94	62.5	56.39	-5.52

Price in North West Zone

State	Soybean			Irish potato		
	2011	2012	%Change	2011	2012	%Change
Kebbi	140	170	21.43	250	300	20
Kano	97.66	NA	NA	82.33	NA	NA
Kaduna	80.23	136	69.5127	142.86	112.18	-21.48
Zonal means	63.58	61.2	18.19	95.04	82.44	-0.29

Price in North Central Zone

State	Melon			Soybean			Irish potato		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
Taraba	165	160	-3.03	90.31	100	10.73	160	170	6.25
Plateau	543.61	600	10.37	103.5	130.27	25.86	94.4	94.09	-0.33
Nasarawa	354.02	363.23	2.60	84.33	113.44	34.52	68.29	76.01	11.30
Niger	NA	NA	NA	105.88	NA	NA	181.25	NA	NA
Kwara	300	339.2	13.07	125	127.5	2	NA	NA	NA
Kogi	200	269.23	34.62	100	135	35	NA	NA	NA
Benue	866.67	550	-36.54	154.29	222.89	44.47	NA	NA	NA
FCT	178	180	1.12	60	78	30	125	131	4.8
Zonal means	325.91	307.71	2.78	102.91	113.39	10.32	78.62	58.89	2.75

Price in South West Zone

State	Melon			Soybean			Irish potato		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
Osun	635.01	476.47	-24.97	102.15	119.67	17.15	NA	NA	NA
Oyo	893.75	900	0.69	99.15	130.38	31.49	120	150	25
Ekiti	870	800	-8.05	140	140	0	NA	NA	NA
Ondo	669.12	378	-43.51	168.85	156	-7.61	NA	NA	NA
Ogun	200	330	65	NA	NA	NA	NA	NA	NA
Lagos	480	605	26.04	125.55	145.55	15.93	172.55	185.55	7.53
Zonal means	624.65	581.58	2.54	105.95	115.27	9.49	48.76	55.93	5.42

Price in South East Zone

State	Melon			Soybean			Irish potato		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
Anambra	NA	NA	NA	8875	8885	0.11	7455	7471	0.21
Imo	605	1000	65.29	NA	NA	NA	175	180	2.86
Enugu	239.11	139.4	-41.70	125.37	150.05	19.68	NA	NA	NA
Ebonyi	817.5	800	-2.14	175	170	-2.86	NA	NA	NA
Abia	316.6	320.8	1.33	316.6	320.8	1.32	100	110.5	10.5
Zonal means	395.64	452.04	4.55	1898.39	1905.17	3.65	1546	1552.3	2.71

Price in South-South Zone

State	Melon			Soybean			Irish potato		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
Cross River	412	617.18	49.80	148.69	152.02	2.24	73.92	76.18	3.06
A/Ibom	815.33	667.3	-18.16	213.89	219.1	2.44	133.6	189	41.47
Bayelsa	500	600	20	NA	NA	NA	NA	NA	NA
Rivers	1000	1000	0	NA	NA	NA	139	150	7.91
Edo	425	500	17.65	NA	NA	NA	NA	NA	NA
Zonal means	525.39	564.08	11.55	60.43	61.85	0.78	57.75	69.19	8.74

Table 3.7.6: Commodity Prices in Nigeria (₦/kg) (Beef and Goat meat)

Price in North East Zone

State	Beef			Goat meat		
	2011	2012	%Change	2011	2012	%Change
Yobe	NA	450	NA	450	450	0
Bauchi	666.33	833.19	25.04	571.99	698.63	22.14
Gombe	700	700	0	700	700	0
Adamawa	500	1000	100	470	1000	112.77
Zonal means	373.27	596.64	25.01	438.39	569.73	26.98

Price in North West Zone

State	Beef			Goat meat		
	2011	2012	%Change	2011	2012	%Change
Jigawa	NA	NA	NA	622.21	NA	NA
Kebbi	1000	1050	5	850	870	2.35
Zamfara	800	900	12.5	850	950	11.76
Kaduna	506.67	725	43.09	675	675	0
Zonal means	461.33	535	12.12	650	499	2.82

Price in North Central Zone

State	Beef			Goat meat		
	2011	2012	%Change	2011	2012	%Change
Taraba	800	900	12.5	550	600	9.09
Plateau	765.13	750	-1.98	730.18	762.5	4.43
Nasarawa	677.39	805.19	18.87	742.92	789.35	6.245
Niger	764.42	NA	NA	316.08	NA	NA
Kwara	740.74	600	-18.99	480	550	14.58
Kogi	706	1000	41.64	1400	1600	14.29
Benue	900	900	0	838.57	966.67	15.28
FCT	900	1000	11.11	900	1000	11.11
Zonal means	781.71	744.39	7.89	744.72	783.57	9.38

Price in South West Zone

State	Beef			Goat meat		
	2011	2012	%Change	2011	2012	%Change
Osun	729.26	830.08	13.82	NA	NA	NA
Oyo	1042.12	1096.11	5.18	769.55	655.42	-14.83
Ekiti	1000	1000	0	420	450	7.14
Ondo	793.75	980	23.46	312.6	NA	NA
Ogun	600	675	12.5	650	720	10.77
Lagos	750	820	9.33	750	800	6.67
Zonal means	819.19	900.19	10.72	483.69	437.57	1.62

Price in South East Zone

State	Beef			Goat meat		
	2011	2012	%Change	2011	2012	%Change
Imo	950	950	0	850	850	0
Anambra	39446	39460	0.04	32840	36202	10.24
Enugu	795.63	929.15	16.78	530	552.68	4.28
Ebonyi	600	800	33.33	783.3	1000	27.67
Abia	550	600	9.09	412.5	650	57.58
Zonal means	8468.33	8547.83	11.85	7083.16	7850.94	19.95

Price in South-South Zone

State	Beef			Goat meat		
	2011	2012	%Change	2011	2012	%Change
A/Ibom	840.19	705.12	-16.08	901.82	802.2	-11.05
Bayelsa	NA	NA	NA	1250	1400	12
Cross River	1142.82	932.64	-18.39	973.23	1034.25	6.27
Rivers	770	850	10.39	1300	1500	15.38
Edo	650	650	0	650	650	0
Zonal means	567.17	522.96	-4.01	845.84	897.74	3.77

Table 3.7.7: Commodity Prices in Nigeria (N/kg)(Mutton, Chicken and Fresh Fish)

Price in North East Zone

State	Mutton			Chicken			Fresh Fish		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
Yobe	450	NA	NA	NA	NA	NA	NA	400	NA
Bauchi	628.83	718.93	14.33	1000	582.7	-41.73	450	695.69	54.59
Gombe	700	800	14.29	750	800	6.67	500	500	0
Adamawa	470	1000	112.766	750	800	6.67	480	500	4.17
Zonal means	449.77	503.79	28.28	500	436.54	-5.68	286	419.14	11.75

Price in North West Zone

State	Mutton			Chicken			Fresh Fish		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
Kebbi	1000	1050	5	1700	800	-52.94	600	800	33.33
Zamfara	850	950	11.76	800	1100	37.5	NA	NA	NA
Kano	857.15	NA	NA	588.72	NA	NA	NA	NA	NA
Kaduna	675	775	14.81	825	975	18.18	447.92	800	78.60
Zonal means	676.43	555	6.32	782.74	575	0.55	209.58	320	22.39

Price in North Central Zone

State	Mutton			Chicken			Fresh Fish		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
Taraba	550	600	9.09	550	1000	81.82	750	800	6.67
Plateau	736.31	750	1.86	697.65	630.66	-9.60	677.62	580.26	-14.37
Nasarawa	618.33	735.11	18.89	470.59	1066.67	126.67	497.81	532.17	6.90
Niger	348.78	NA	NA	564.11	NA	NA	431.01	NA	NA
Kwara	NA	NA	NA	559.38	700	25.14	270	430	59.26
Kogi	NA	NA	NA	900	1200	33.33	500	600	20
Benue	NA	NA	NA	1333	1500	12.53	1137.5	1421.6	24.98
FCT	NA	NA	NA	800	900	12.5	700	750	7.1457
Zonal means	281.67	260.64	3.73	734.34	874.67	35.29	620.49	639.25	13.82

Price in South West Zone

State	Chicken			Fresh Fish		
	2011	2012	%Change	2011	2012	%Change
Oyo	432.43	540.94	25.09	523.23	536.28	2.49
Ekiti	750	750	0	350	360	2.86
Ondo	721.13	1110	53.93	400	400	0
Ogun	650	1600	146.15	600	775	29.17
Lagos	1500	1650	10	560	600	7.14
Zonal means	675.59	941.82	39.19	405.54	445.21	6.94

Price in South East Zone

State	Mutton			Chicken			Fresh fish.		
	2011	201 2	%Change	2011	2012	%Change	2011	2012	%Change
Abia	340	400	17.65	600	640	6.67	505.1	515.2	1.99
Anambra	28415	32602	14.74	49654	49666	0.02	20878	20888	0.05
Imo	NA	NA	NA	900	950	5.56	630	600	-4.76
Enugu	NA	NA	NA	570.11	868.34	52.31	265	393.97	48.67
Ebonyi	600	800	33.33	500	700	40	400	420	5
Zonal means	5871	6760.4	13.14	10444.82	10564.87	20.91	4535.62	4563.43	10.19

South-South Zone

State	Mutton			Chicken			Fresh fish.		
	2011	201 2	%Change	2011	2012	%Change	2011	2012	%Change
A/Ibom	840.19	531.15	-36.78	815.33	667.3	-18.16	756.51	818.53	8.19
Bayelsa	NA	NA	NA	2200	2500	13.64	600	700	16.67
Rivers	NA	NA	NA	1500	1800	20	1200	1260	5
Cross River	NA	NA	NA	1340.56	895.46	-33.20	1158.74	829.18	-28.44
Edo	NA	NA	NA	575	800	39.13	727.5	790	8.59
Zonal means	3144.77	3699.41	2.22	5875.90	5951.99	12.75	2763.53	2772.93	6.29

Table 3.7.8: Commodity Prices in Nigeria (₦/kg) (Eggs, Frozen Fish and Dry Fish)

Price in North East Zone

State	Eggs			Frozen Fish			Dry Fish		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
Bauchi	900	864	-4	NA	NA	NA	792.15	1022.79	29.12
Gombe	700	700	0	NA	NA	NA	500	500	0
Adamawa	750	800	6.67	600	700	16.67	NA	NA	NA
Zonal means	470	472.8	0.53	120	140	3.33	258.43	304.56	5.82

Price in West Zone

State	Eggs			Dry Fish		
	2011	2012	%Change	2011	2012	%Change
Kebbi	700	800	14.29	600	800	33.33
Zamfara	825	850	3.03	0	0	0
Kano	NA	NA	NA	777.78	0	0
Kaduna	900	NA	NA	435.99	500	14.68
Zonal means	485	330	3.46	362.75	260	9.60

Price in North Central Zone

State	Eggs			Frozen Fish			Dry Fish		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
Plateau	650	620	-4.62	628.34	533.33	-15.12	862.67	718.75	-16.68
Nasarawa	364.39	415.71	14.08	565.14	474.2	-16.09	1198	1519.01	26.79
Niger	NA	NA	NA	NA	NA	NA	999.33	512.31	-48.73
Kwara	680	700	2.94	300	380	26.67	350	550	57.14
Kogi	750	850	13.33	170	230	35.29	1,100	1,600	45.45
Benue	650	750	15.38	NA	NA	NA	985.71	1170	18.69
FCT	750	800	6.67	700	750	7.14	1,300	1,500	15.4
Zonal means	480.55	516.96	5.97	295.435	295.94	4.74	849.46	1058.759	12.26

Price in South West Zone

State	Eggs			Frozen Fish			Dry Fish		
	2011	2012	%Change	2011	2012	%Change	2011	2012	%Change
Osun	608.33	700	15.07	385.24	494.35	28.32	NA	NA	NA
Oyo	433.29	310.3	-28.39	349.15	376.77	7.91	643.05	617.44	-3.98
Ekiti	750	700	-6.67	500	550	10	900	900	0
Ondo	720	750	4.17	263.54	300	13.83	535	535	0
Ogun	NA	700	NA	600	700	16.67	1300	1680	29.23
Lagos	680	750	10.29	600	680	13.33	1120	1520	35.71
Zonal means	531.94	651.72	-0.92	449.66	516.85	15.01	749.66	875.41	10.16

Price in South East Zone

State	Eggs			Dry Fish		
	2011	2012	%Change	2011	2012	%Change
Abia	750	750	0	580	591.8	2.03
Anambra	NA	NA	NA	NA	NA	NA
Enugu	NA	NA	NA	361.23	456.95	26.49
Ebonyi	500	800	60	675	650	-3.70
Imo	700	700	0	556	1200	115.83
Zonal means	390	450	12	434.45	579.75	28.13

Price in South-South Zone

State	Eggs			Dry Fish		
	2011	2012	%Change	2011	2012	%Change
A/Ibom	700	700	0	1384	1362.65	-1.54
Cross River	920	900	-2.17	1129.23	955.71	-15.37
Bayelsa	850	900	5.88	900	1000	11.11
Rivers	0	650	NA	2400	1850	-22.92
Edo	550	550	0	600	600	0
Zonal means	503.33	616.67	0.62	1068.87	961.39	-4.79

3.8 FARMERS ASSESSMENT OF CROPPING PERFORMANCE

Farmers' assessment of cropping performance for the year 2012 was carried out in 35 states of the Federation (Delta State excluded) and the Federal Capital Territory, Abuja with a total number of 752 farmers who were individually interviewed. The farmers were engaged in group discussions.

Production patterns practiced by the farmers were both sole and mixed cropping. According to 83.5% of the farmers interviewed, majority operated similar production pattern (where all crops were planted as sole mixture). This was not applicable to rice, which was only planted as sole crop. Mixed cropping was generally practiced by 87.5% of the farmers interviewed, while 9.5% were engaged in mixed farming. Seventy-seven percent of farmers interviewed kept livestock, such as sheep and goats, poultry, swine and cattle while 3% engaged in fish farming and fishing.

Maize, sorghum and rice cultivation were popular in the drier zones of North East, especially in Adamawa, Borno, Bauchi and Gombe and also in the North West states such as, Kaduna, Sokoto, Kebbi and Zamfara. In the South East, yam, cocoyam and cassava were planted as base crops. Intercrops such as yam/maize, cassava/melon/cowpea was common in this zone. Livestock and fisheries activities in all the states were very low. Extension services in the states were not sufficient enough to boost livestock/fish production. A few farmers interviewed were involved in fish farming; they indicated participation as artisanal. The farmers also said they were not really in fish farming because it was difficult to get fingerlings and feeds. Although farm size per farmer interviewed remained small (between 0.85ha/farmer to 4.5ha/farmer), average grain yields for many crops were expected to increase slightly for key food crops due to good distribution of rainfall. Majority of farmers interviewed in Bayelsa State indicated that they do not require inorganic fertilizer to grow their crops.

Cultivation area marginally increased, when compared to that of 2011 due to good distribution of rainfall. This elicited higher output expectation from farmers. Marginal increases of hectares under cultivation were done for yam, maize and rice. Meanwhile, marginal production increase in cassava, melon, rice and maize was predicted. Crop conditions in the field generally look good especially with the even distribution of rain. It was however observed that most of the incidences of pests and disease infestation on crops and livestock came with either or light moderate loss. Average grain yield of maize among most farmers was anticipated to increase from 0.55t/ha to 0.58t/ha; although, most maize farmers may have yields of more than 605kg/ha. The average yield of rice was expected to decrease by 0.6% compared to 2011 due to the heavy rains in about 27 states. Sorghum could increase marginally from 1.8t/ha obtained in 2011 to 1.84t/ha and the increase in the average yield of cowpea may move up to 2.05%. The yield of yam could be more than 11.70t/ha while that of cassava might increase significantly from about 15.25t/ha to 16.00t/ha at the end of harvest in 2012.

3.8.1 RAINFALL AND CROP PRODUCTION

The rains arrived early by February and March in the South West and the South East but stabilized for meaningful agricultural activities in April. Farmers confirmed that the rains started between the months of April and May in all the states in the North East Zone, North West Zone and the North Central Zone. Dry spells occurred throughout the northern states (except in Bauchi State) varying of between 14 and 30 days.

Frequency of rainfall

South West states, such as Ekiti, Lagos, Ogun, Osun, Oyo and all states of the South East Zone experienced scanty rainfall for 4-6 weeks in the month of February and March. Heavy flooding and crop submerge were reported in Adamawa, Bauchi, Jos, Niger, Oyo and Yobe states in the month of July and September. Rainfall extended into October across the country even in the drier ecological zones. Farmers predicted bumper harvest of cassava, yam, sorghum, melon, and cowpea and normal harvest for maize and rice.

3.8.2 FARM INPUTS

3.8.2a Use of Improved Seeds

The use of spared seeds from previous seasons (years) by farmers was still popular during the 2012 season. About 67% of the farmers interviewed relied on own conserved seeds (a downward movement from 73% in 2011). It may however be noted that most of the seeds used by farmers were improved seeds that were acquired several years ago (up to 7-10 years). Provision of improved seeds under ATA benefited only about 6 percent of the farmers interviewed. This indicated a viable opportunity to enhance productivity at farmers' level through innovative schemes for early deployment of improved seeds to farmers. Although more than 18% of the respondents were registered under the ATA e-wallet scheme, late delivery of seeds, coupled with the fact that seeds of interest were not made available was a constraint to the success of the scheme.

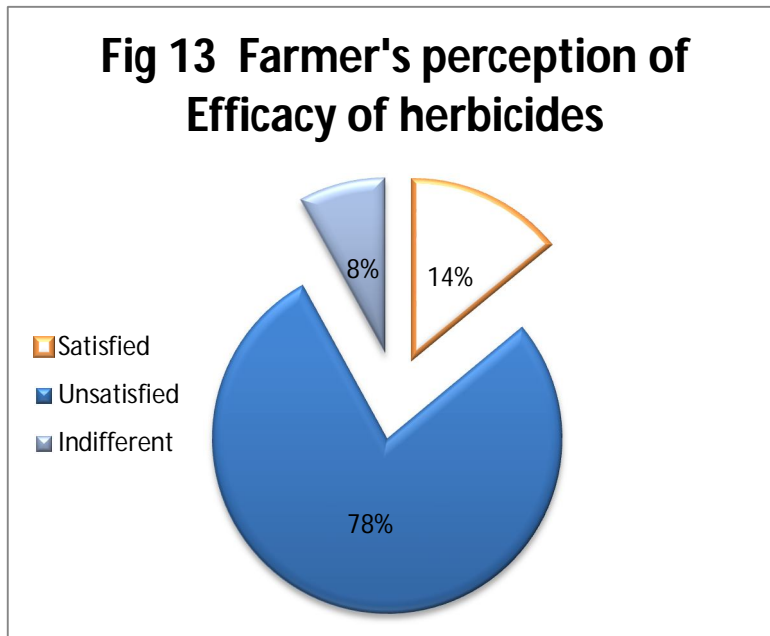
Across the country, farmers expressed the desire to use improved seeds. Some of the improved seeds used by farmers during the year included cotton in Zamfara and Katsina states; rice in Nassarawa, Niger, Ebonyi and Edo states; maize in Kaduna, Kano, Bauchi, Gombe and Adamawa states; sorghum in Kano and Katsina states; soybean in Kaduna, Benue and Plateau states; and cassava cuttings in Rivers, Cross River and Edo states. Many of the farmers expressed satisfaction with the provision of improved seeds but complained of poor yields and inadequacy of the seeds for large farm planting.



Plate 4: Soybean farm

3.8.2b USE OF HERBICIDES

Herbicide usage increased among farmers. But about 78% of the farmers interviewed were unsatisfied with the efficacy of herbicides, against 14% that were satisfied, while 8% were indifferent.



Although dissatisfaction level was high, many farmers continued to use herbicides because of lack of viable alternatives. Herbicides are increasingly being used on maize, rice, cocoa, yam and soybean and less used on cotton, sorghum and cowpea. Some of the reasons for this dismal picture of herbicide use include inadequate knowledge of herbicide-crop-environment relationship, use of cheap but low

quality products, adulterated herbicide, and lack of adequate application skills among farmers and extension agents. Proper regulation of herbicide trade, rigorous product stewardships and capacity building for extension agents and farmers will greatly improve herbicide use among farmers. This will also serve as cost-saving strategies, especially as labour accounts for almost 70% of cost of production of most crops.



3.8.3 FERTILIZER SOURCE/QUANTITY BOUGHT BY FARMERS

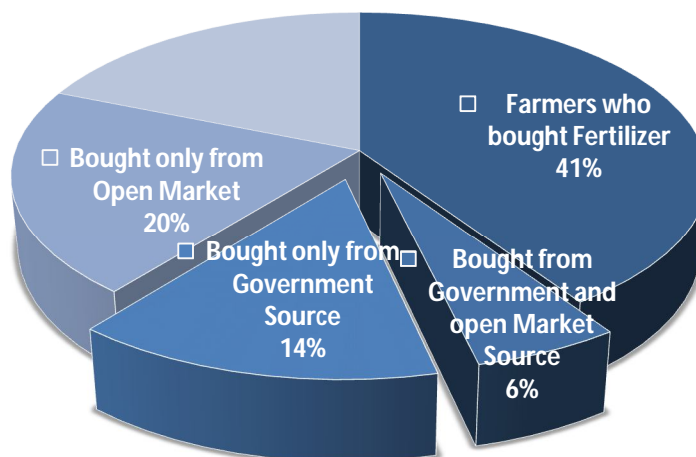
Data from the questionnaire administered on farmers in 35 states (with the exception of Delta State) and FCT Abuja was analyzed. A total of 752 farmers responded to the questionnaire.

Table 3.8.3a: Fertilizer Source/Quantity Bought by Farmers in 2012

Category of Farmers	Number of Farmers	Percentage of Farmers	Number of Bags of Fertilizer	Number of Bags Per Farmer
Farmers who bought Fertilizer	514	68.35	3598	7
Bought from Government and open Market Source	73	9.71	584	8
Bought only from Government Source	182	24.20	364	2
Bought only from Open Market	259	34.44	1554	6
Farmers that did not Purchase Fertilizer	238	31.65		

There should be timely, adequate and well planned inputs distribution system and action towards improving the funding of activities in the areas of extension, especially in the areas of Village Extension Agents (VEA), agro-forestry, livestock and fisheries. Improvement of all these will sustain agric output and the living standard of farmers.

Figure 3.8.1: Source of Fertilizer Bought By Farmers



Farmers interviewed indicated that the open market was their source of input. Fertilizers that were procured by government were distributed late to the farmers. The most common types of fertilizer used were NPK and Urea. About 68.35% bought different grades of fertilizers, against 31.65% that did not purchase this input at all. Thus 24.20% (i.e. 182 of 752) of the farmers bought only from government source. A bag of NPK or Urea was sold at ₦2,750 - ₦3,000 by government, while in the open market, NPK was sold at ₦6,000 - ₦6,500 and Urea was sold at ₦5,500 – ₦6,500. Farmers appeared to be more motivated to augment their fertilizer need when they are able to buy from government at a subsidized rate. Farmers that were able to procure fertilizers from government and the open market used more fertilizers than those who bought only from the open market. Those that relied on the open market used up to 6 bags as against 2 bags used by farmers who relied solely on government sources (table 3.8.3a). Many farmers in all the states were not able to buy more than 3 bags from Government and this reflected on the average number of bags/farmer i.e. 2 bags. Most farmers rarely had access to 1 bag and, in some cases, less than 1 bag/farmer. A good number of farmers interviewed in all the states were unable to buy fertilizer from government source due to some constraints in the e-wallet or voucher system of distribution of fertilizers. No single farmer got fertilizers free from the government this year.

3.8.3b FERTILIZER USAGE BY FARMERS

Due to the untimely and inadequate supply and distribution, in addition to the high cost of inorganic fertilizer, some farmers resorted to the use of organic manure and utilized a lot of it to complement the short supply of inorganic fertilizer.

Table 3.8.3b: Organic fertilizer usage by Farmers in 2012

Category of Farmers	Number of Farmers	Percentage of Farmers
Farmers who used Organic Fertilizer	344	45.75
Farmers who did not use Organic Fertilizer	408	54.26

Figure 3.8.3a
Fertilizer Usage By Farmers

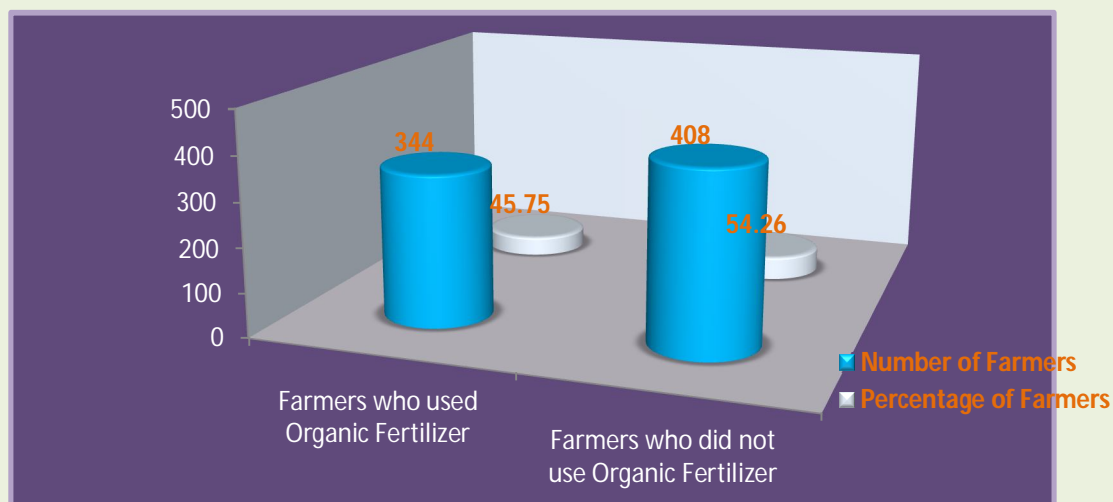
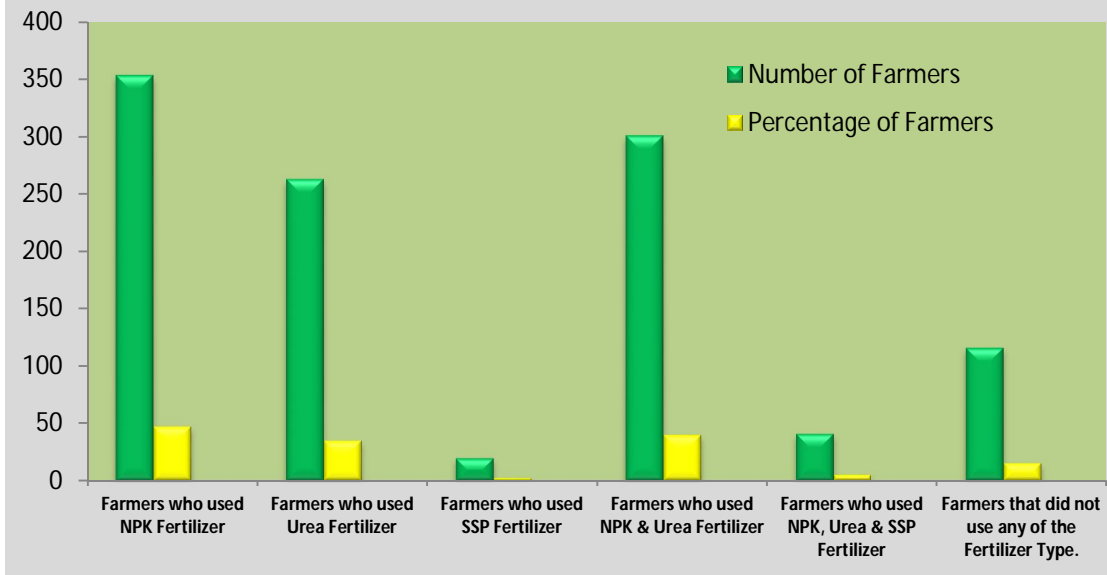


Table 3.8.3c: Inorganic fertilizer Type used by Farmers in 2012

Category of Farmers	Number of Farmers	Percentage of Farmers
Farmers who used NPK Fertilizer only	353	46.94
Farmers who used Urea Fertilizer only	263	34.97
Farmers who used SSP Fertilizer only	20	2.66
Farmers who used NPK & Urea Fertilizer	301	40.03
Farmers who used NPK, Urea & SSP Fertilizer	41	5.45
Farmers that did not use any of the Fertilizer Type.	116	15.43

Figure 3.8.3b: Types of Inorganic Fertilizer Used by Farmers



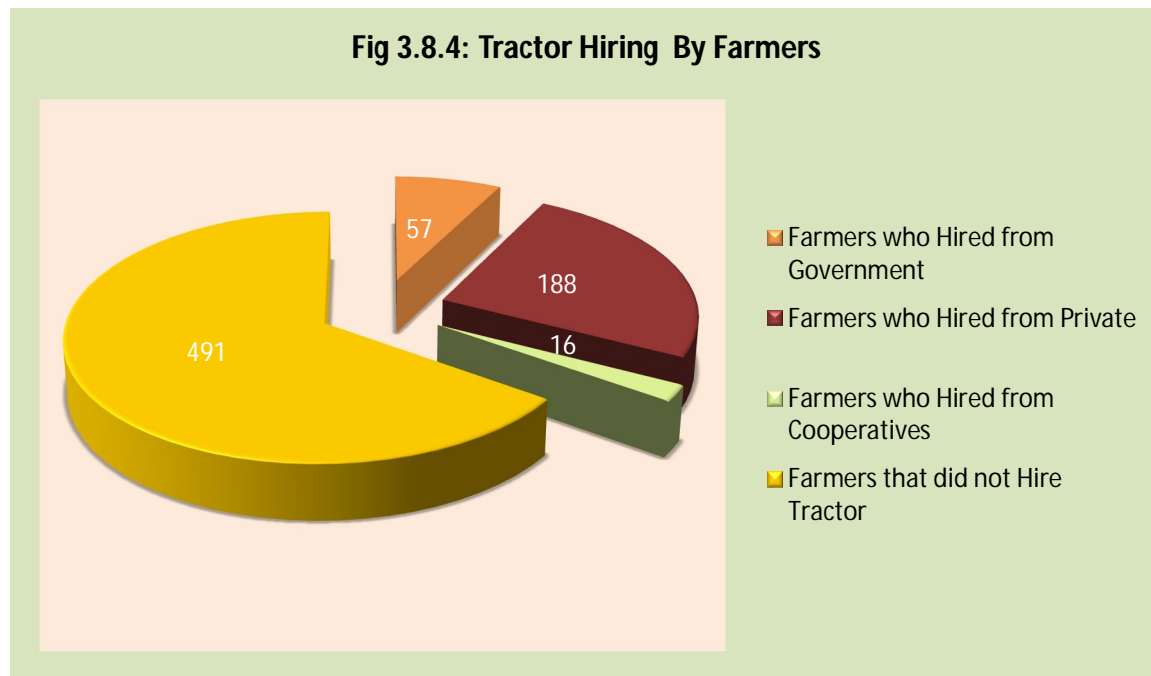
Farmers usually invest heavily on farm inputs and farm operations due to the lack of subsidy on inputs by the government. For the 2012 agricultural activities, this was not any different. Farmers who did not receive government allocation opined that the procurement of fertilizer should be of utmost priority in government plans in order to reduce the scarcity of the product during the farming season. This is probably responsible for farmers' desire for credit support. Where there is no access to credit facilities, the money from seeds and seedlings are diverted for use by farmers on other farming activities. The amount of money from the proceeds relatively depend on the quantity and quality of preserved seeds. Invariably, the amount of seeds available for planting is affected, which may equally lead to reduction of the average yield per farm.

3.8.4 Source of Tractor Hired by Farmers

Category of Farmers	Number of Farmers	Percentage of Farmers
Farmers who Hired from Government	57	7.58
Farmers who Hired from Private organization/individuals	188	25.00
Farmers who Hired from Cooperatives	16	2.13
Farmers that did not Hire Tractor	491	65.29

Traditional farm tools still dominated agricultural activities in Nigeria. This has resulted in low productivity and also limited the engagement of youth in agriculture. Farmers that could not access or hire tractors to work on their farm were 65% (491 farmers), which is well above average. Only about 8% (57 farmers) were able to hire from the government.

Fig 3.8.4: Tractor Hiring By Farmers



A typical small-scale farmer needs access to tractor and fertilizer for easy farming. These are the least affordable farm inputs to the majority of farmers. But the farmers also indicated that they have access to tractors from private resource persons or companies. The figure of farmers in this category was 188 (25%); about 16 (2%) farmers hired tractors from cooperative societies.

3.8.5 Farmers Priority Needs

Among the 752 farmers interviewed availability of fertilizer at all time and at moderate cost were ranked the most critical element for sustainable agricultural growth in the country (Table 8.5). This was followed by access to credit for farm input procurement. Availability and affordability of irrigation facilities and farm equipment and support of large and small scale irrigation schemes will be highly appreciated by the farmers. Farmers also desire a stronger linkage to the open market, to improve gate price of produce than what currently prevails. It was posited that improvement in value addition and development of new trade corridors for farm produce would induce fair farm gate price to enhance farmers' income and livelihood. Provision of pest control and

other agricultural chemicals and cheaper feeds for livestock and fisheries will equally go a long way to improving crop and fisheries production. By making processing equipment affordable and available above farm inputs, government will only be attending to the least worry of farmers. This was a fact that emanated from the responses of the farmers. The study underscores the need to ensure the availability and accessibility of farmers to inorganic fertilizer and enhance farmers' access to credit for farm input procurement. Constraint, such as limited availability of farm infrastructure, poorly developed markets and credit delivery to the agricultural sector by commercial banks should be properly addressed.

Table 3.8.5: Ranking of Farmers' Needs in Nigeria

Farmers Priority Needs	Scores (%)	Rank
Make fertilizer available all the time at moderate cost.	98	1
Access to credit for farm inputs procurement.	95	2
Make irrigation facilities and farm equipment available and affordable.	87	3
Support of large and small-scale irrigation schemes.	84	4
Government intervention in marketing produce to improve gate price.	63	5
Provision of pest control and other agricultural chemicals.	60	6
Provision of good rural roads.	54	7
Revival of the ADP extension service system.	42	8
Cheaper feeds for livestock and fisheries.	35	9
Government should make processing equipment affordable and available.	33	10

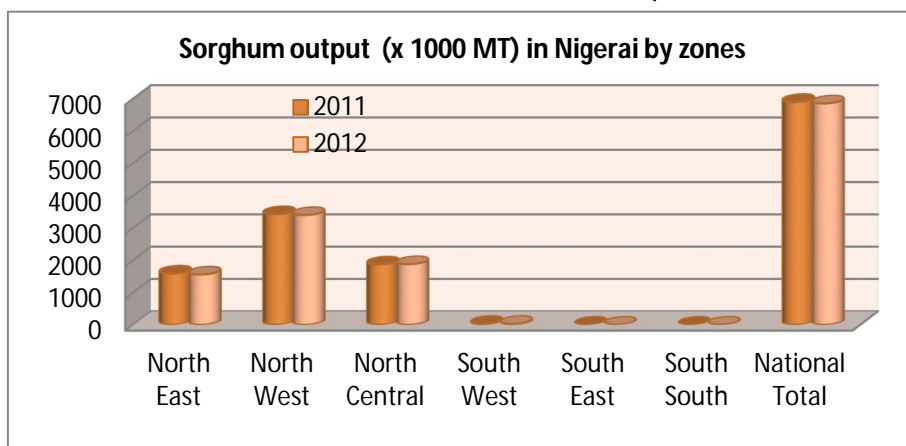


3.9 CULTIVATED LAND AREA AND PRODUCTION ESTIMATES OF CROPS IN 2012

3.9.1 Sorghum

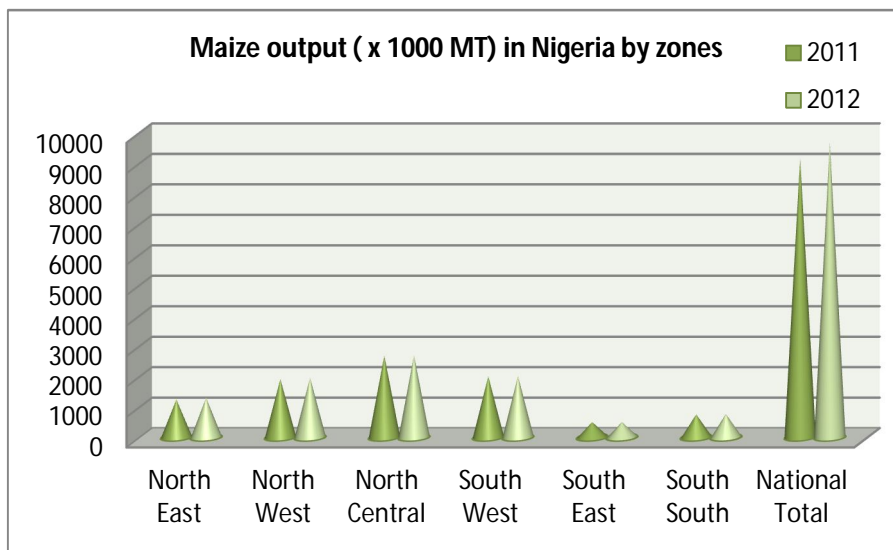
Sorghum is mostly grown in the northern states of Nigeria with total estimated planted land area of 4,870,800/ha in 2012, indicating a decline in cultivated land area by -0.42% relative to 4,891,200/ha recorded for in 2011. The production of sorghum in 2012 recorded a drop in the North East and North West zones, when compared to what was obtained in 2011. The North Central Zone recorded an increase in production with the exception of

Taraba State that recorded a drop of 0.89% when compared to 2011. The output of sorghum of 4,605,500 MT represented a decrease of about 0.67%, compared with 2011 production figure.



3.9.2 Maize

Maize is produced in all agro-ecological zones of Nigeria. The total estimated land area devoted for maize production in Nigeria is about 5,995,420ha, indicating a 16.34% increase. From the 2011

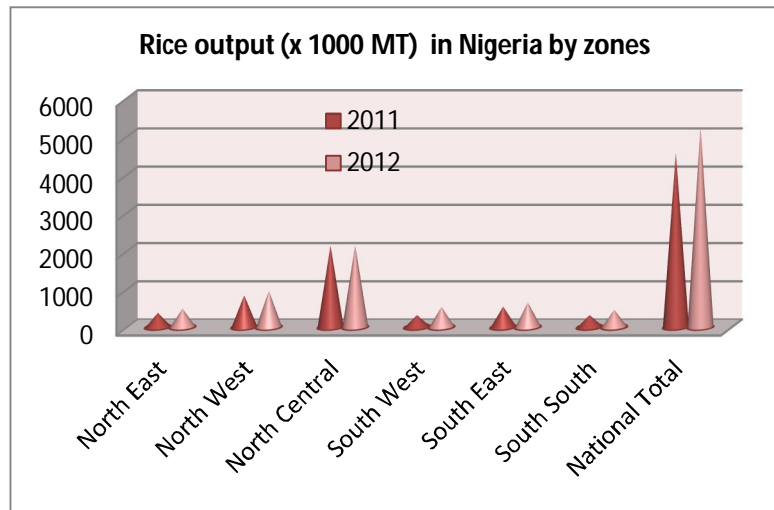


estimates, the crop recorded spectacular increase in output in all the zones of the country. In the North East, Yobe and Borno recorded production increase of 39.20 and 25.04% respectively; In the North West, Sokoto, Zamfara and Jigawa states recorded a rise of 14.42, 8.88 and 7.89%. In the North Central Zone, only Nasarawa recorded a rise

in output of up to 3.59%. The increases in South West and South East were however less than 1% per state. But Ebonyi State recorded up to 7.36% rise in output of maize in 2012. In the South South Zone, Edo and Bayelsa recorded an increase of over 26% each. The total increase in the output of maize in 2012 on a national scale was 6.74%, which is equivalent to 612, 801MT of grains.

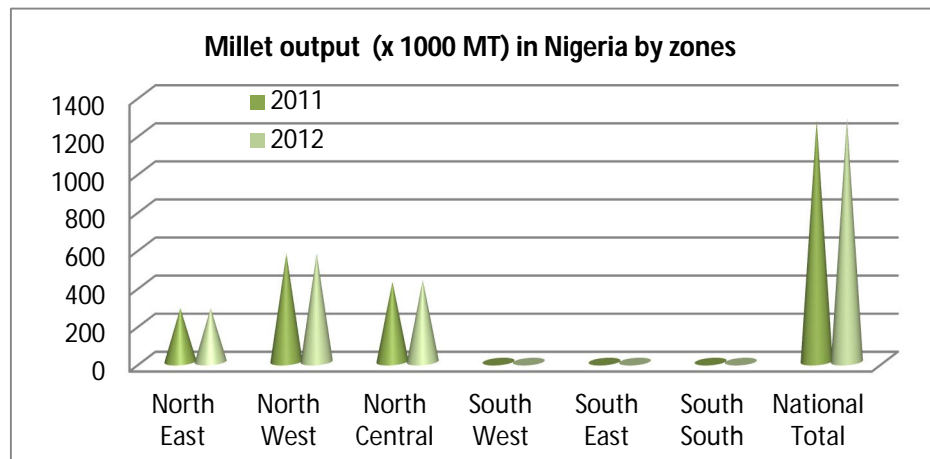
3.9.3 Rice

Rice is a staple in Nigeria, and it is grown in all agro-ecological zones of the country. The estimated crop area for rice in 2012 was 2,605,290ha, which represented an increase of about 13.3% over the 2,505,290ha cultivated in 2011. Owing to the Federal Government initiatives under the Agricultural Transformation Agenda (ATA), especially the Rice Value Chain improvement, rice recorded a substantial burst in production. All the zones recorded increases in the output of rice 65.1% for South West; 41.3% for South-South; 28.87% for North East; 19.96% for South East; 14.17% for North West and 0.37% for North Central. Increase on a national scale was 35.19% in 2012.

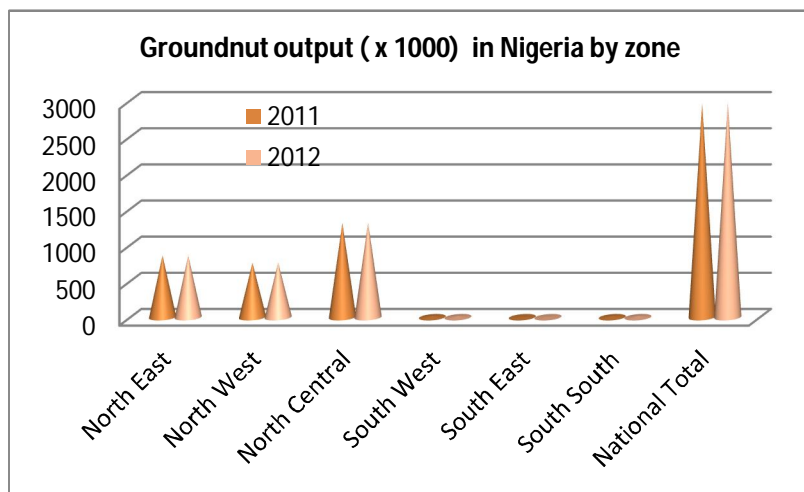


3.9.4 Millet

Millet is cultivated in the northern states of Nigeria. It has a total crop area of 2,894,810/ha in 2012, compared with 2,889,100 in 2011. The North West zone is the



major producer of this crop, followed by North Central and the North East zones. In 2012, the crop recorded a marginal increase in output of 0.72%.



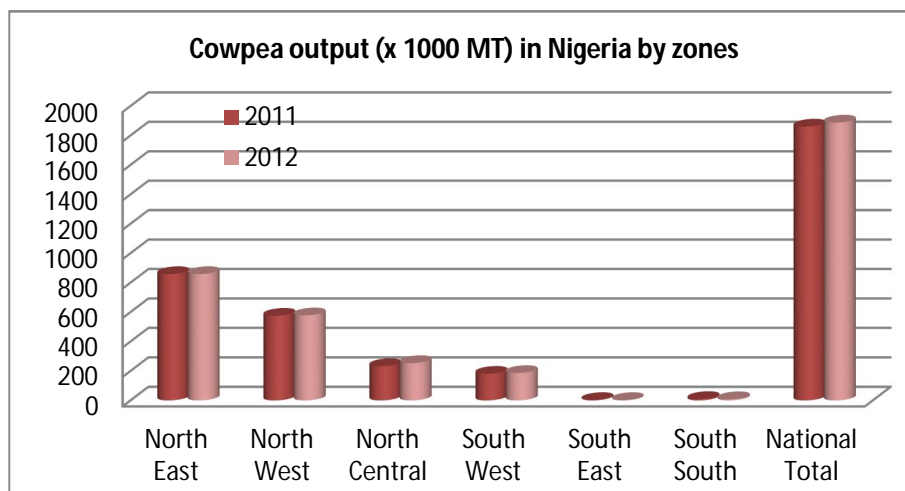
3.9.5 Groundnut

Groundnut is produced mainly in the northern states of Nigeria; however some few southern states also produce small amounts. The estimated land area put to production of groundnut in 2012 was 2,351,820//ha which is an increase of 0.39% over 2,342,750ha under groundnut cultivation in

2011. The major groundnut producing states in the country are Nassarawa, Niger, Kano, Jigawa, Katsina, Benue, Taraba, Gombe, Adamawa, and Zamfara. Although these states recorded marginal increase in the production of groundnut, the South West Zone posted a drop of 0.79%. The percentage increase on a national scale was of 0.42%.

3.9.6 Cowpea

Cowpea is cultivated mostly in the northern states of Nigeria. The total land area put to

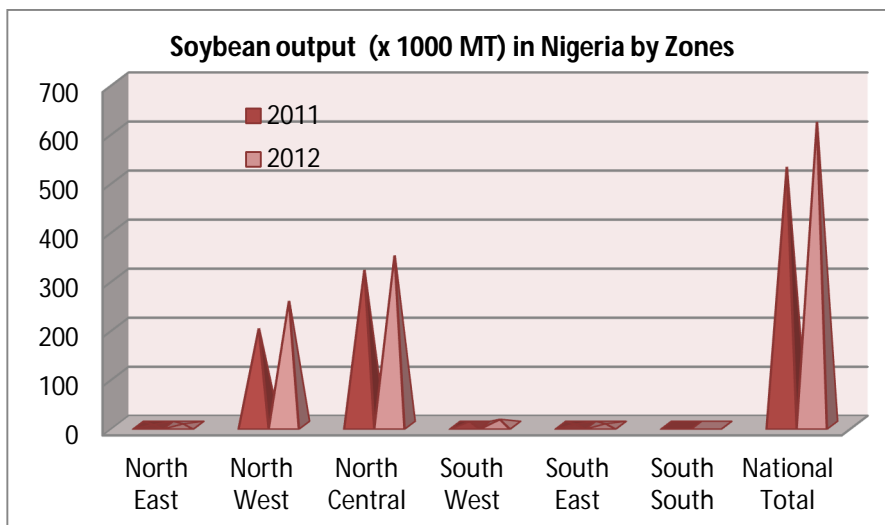


production of cowpea in 2012 was 3,201,450ha, which is an increase of 0.37% over 3,189,500ha cultivated in 2011. The North East Zone is the highest producer of

cowpea, contributing over 45% to cowpea production in the country. The zone is closely followed by the North West, which contributed 30.60% of the total output. The South East and South-South zones recorded decreases in cowpea production, probably due to excessive rainfall received in 2012 which resulted in flooding and high incidence, of crop pests and diseases. The major cowpea producing states are Borno, Bauchi, Zamfara, Kano, Jigawa, Katsina, Sokoto, and Gombe. National output figure for cowpea in 2012 showed an increase of 1.46% when compared to that of 2011.

3.9.7 Soybean

Soybean is also mainly produced in the northern parts of Nigeria. The estimated land area put to production of soybean in 2012 was 616,220ha, representing an increase

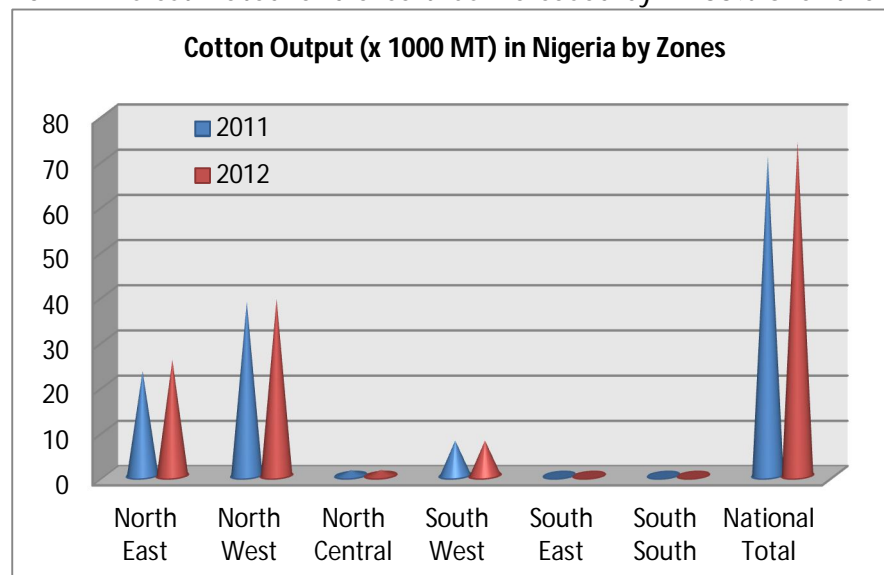


1.24% over the 2011 figure of 608,670ha. The North Central and North West zones are the major soybean-producing areas, accounting for 97.70% of the production. The major producing states are Benue, Kaduna, Taraba

and Nassarawa. The crop recorded a modest increase of 9.70% over the figure of 2011. Soybean is an important cash crop and a very good raw material for the extraction of oil and cake. The cake is used in compounding feeds for livestock, especially poultry.

3.9.8 Cotton

Cotton is the most important fibre crop in Nigeria, with a total crop area of 288,870ha in 2012. This estimated land area thus increased by 11.33% over the 259,560ha cultivated in

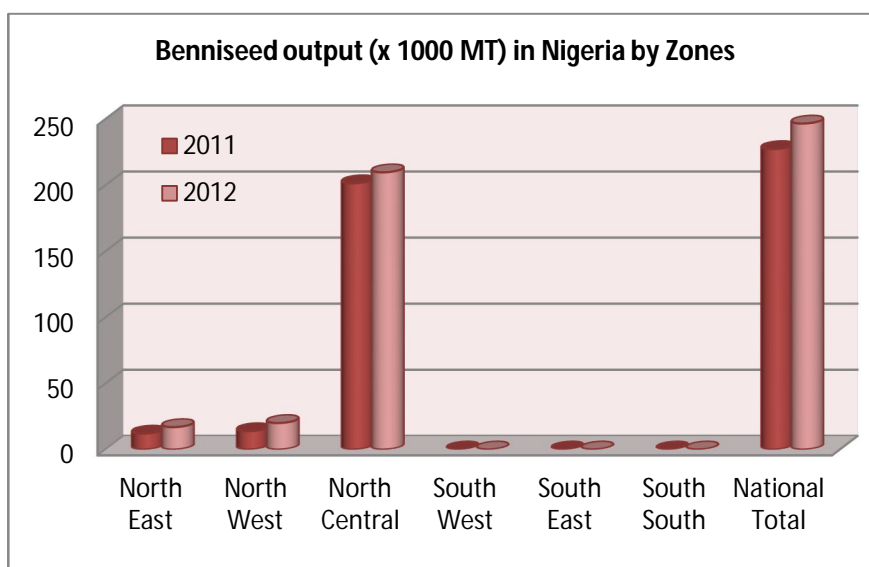


2011. Production of cotton, especially the long staple varieties in the South West, is on the increase. The major producers of cotton in Nigeria are Katsina, Zamfara, Kano, and Kaduna, Gombe, Adamawa, Borno and Bauchi states.

The output of cotton recorded a marginal increase of 2.87%, most of it coming from Katsina, Zamfara and Niger states. Before 2012, cotton production was declining, the new interest and incentive to produce cotton stem from a growing demand, following the resuscitation of the textile industry in 2012.

3.9.9 Benniseed

Benniseed is an important oil crop cultivated in many parts of Nigeria. It has an



estimated crop area of 181,440 ha in 2012, which is a decrease of -5.25% over the 191,500ha recorded in 2011. It is more readily cultivated in the North Central, North West and North East Zones. Despite the decrease in land area, a marginal increase of 0.10%

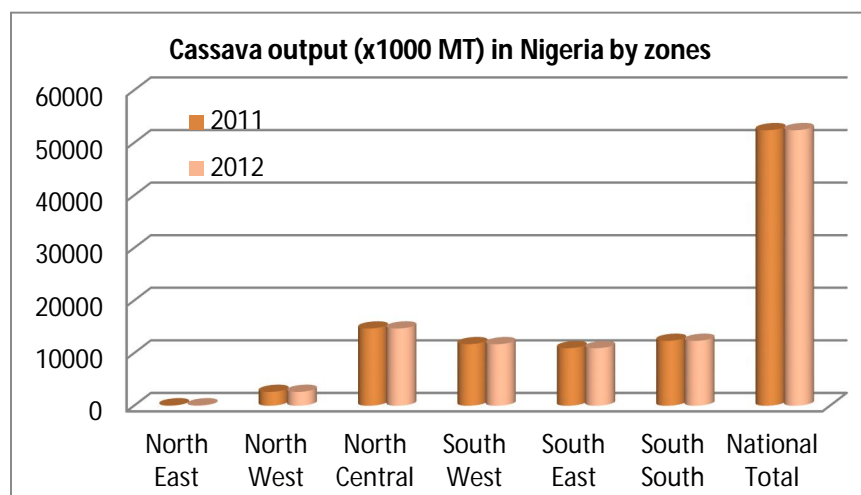
was recorded for the output of the crop, from 326, 570 MT in 2011 to 326, 897MT in 2012.

3.9.10 Yam

Yam is an important tuber crop in Nigeria. The crop is found in all the agro ecological zones of the country. The total land area put to production of yam in 2012 was 4,329,660ha which is an increase of 1.45% over the 2011 record of 4,267,880ha. The major producing zone is the North Central, followed by the South East Zone and North West Zone. The output of yam in the country had recorded a marginal increase of only 0.02% when compared to what obtained in 2011.

3.9.11 Cassava

Cassava is also cultivated in all agro-ecological zones of Nigeria. Estimated cassava area in 2012 was 3,922,100ha, reflecting 0.11% increase of 3,917,800ha of 2011. The major produces of cassava are states in the North Central

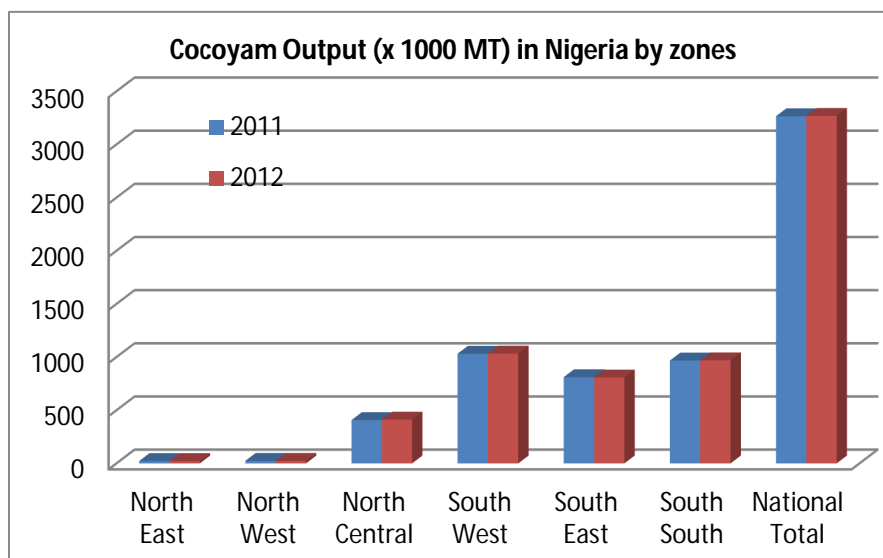


Zone, followed by the South-South and South West zones. Cassava is one of the major root crops in the country but it did not record a significant change in output in 2012. An increase of about 0.01% in output is forecast for the crop in 2012.

3.9.12 Cocoyam

Cocoyam is generally cultivated across the country. The area devoted to it in 2012 was 415,340ha, which

represents a 0.89% increase over the 2011 estimate of 415,660 ha. Due to the excessive rainfall received in 2012 cocoyam recorded a drop of 6.34% in output.



3.9.13 Vegetables

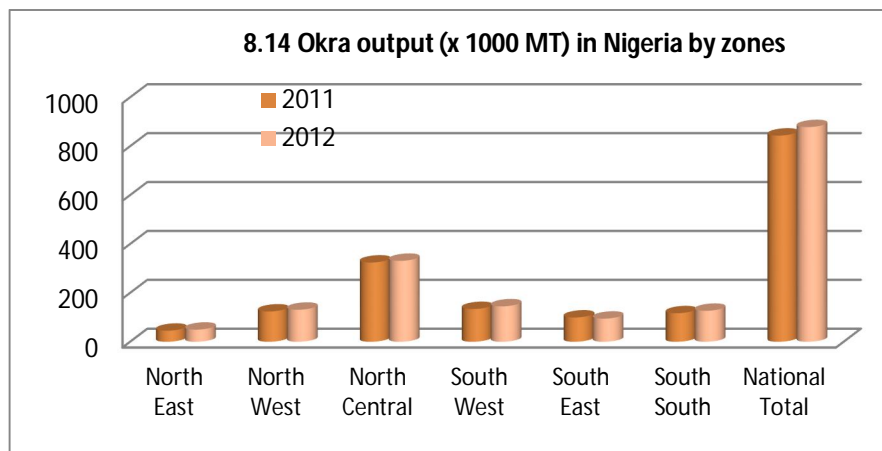
Three major vegetables were surveyed in 2012; namely, tomato, onion and okra.

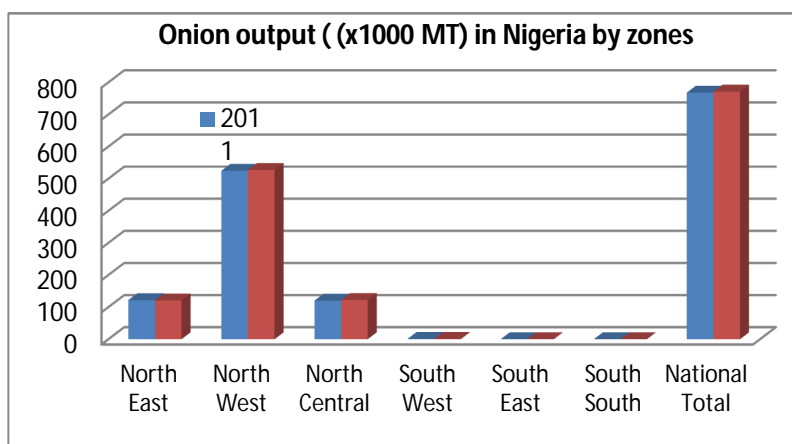
Tomato is cultivated in all the agro-ecological zones of the country. Vegetable production area is estimated at 323,750ha in 2012, which represents about 8.70% increase over

that recorded for 2011. The output of tomato increased by 2.37%. Onion is cultivated mainly in the northern states of Nigeria with very small amounts in the South West Zone.

The total crop

area for onion was 382,480ha in 2012, which is an increase of 2.42% over the 373,450ha recorded for 2011. The production of onion increased marginally in 2012 by 0.40% Okra is grown in all agro-ecological zones of Nigeria with a total estimated crop land area of 850,380ha, which is an increase of 4.38% over the figure of 2011. The production output figure of okra also increased by 4.11% in 2012.





3.9.16 Ginger

Ginger is an important spice crop cultivated in the North West and North Central zones with some production in the South West. The land area for ginger is estimated at 51,950ha, and of 6.22% over the 2011 figure. Similarly, output of ginger increased by 2.07% in 2012.

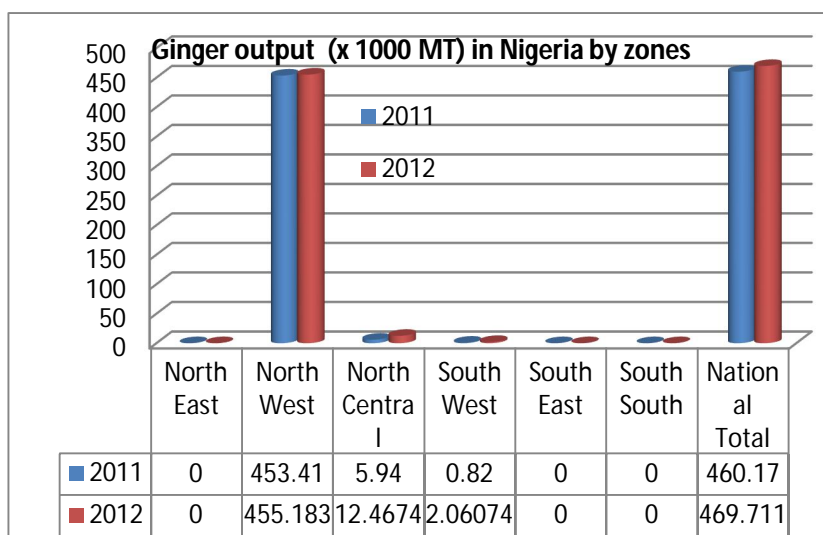


Table 3.9.1: Cultivated Land Area Estimate (Sorghum, Maize and Rice) (X 1000 hectares)

North East Zone

STATE	SORGHUM			MAIZE			RICE		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
BORNO	911.11	912.23	0.12	93.9	94.0	0.06	134.83	136.65	1.35
YOBE	208.17	210.05	0.90	99.4	99.9	0.54	42.06	42.06	0.00
BAUCHI	183.53	185.66	1.16	84.0	84.5	0.60	37.37	37.48	0.27
GOMBE	142.72	144.19	1.03	98.7	99.7	1.02	48.60	50.84	4.62
ADAMAWA	114.72	113.99	-0.63	81.9	81.0	-1.08	35.42	36.84	4.02
Total	1560.3	1566.1	0.38	213.8	234.9	9.88	298.3	303.9	1.87

North West Zone

STATE	SORGHUM			MAIZE			RICE			GINGER		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
JIGAWA	242.94	245.57	1.08	86.6	65.8	-24.03	40.92	42.69	4.34	n.a	n.a	n.a
KATSINA	354.24	354.86	0.17	288.2	289.9	0.60	57.43	59.70	3.95	n.a	n.a	n.a
SOKOTO	199	203.76	2.39	119.0	119.2	0.15	45.52	48.21	5.91	n.a	n.a	n.a
KEBBI	177.00	166.80	-5.77	166.6	166.9	0.20	35.68	37.80	5.97	n.a	n.a	n.a
ZAMFARA	186	186	0.00	44.2	46.8	5.79	24.45	25.84	5.69	n.a	n.a	n.a
KANO	609.69	607.48	-0.36	211.0	219.0	3.77	117.79	114.49	-2.80	n.a	n.a	n.a
KADUNA	270.65	269.72	-0.34	396.8	404.8	2.03	170.59	171.98	0.82	45.59	48.12	5.55
Total	2039.5	2034.2	-0.26	1312.4	1312.4	0.00	492.4	500.8	1.70	45.6	48.1	5.55

North Central Zone

STATE	SORGHUM			MAIZE			RICE			GINGER		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
TARABA	204.7	206.5	0.90	303.5	313.0	3.12	203.74	203.73	-0.01	n.a	n.a	n.a
PLATEAU	203.8	203.3	-0.23	259.0	262.1	1.20	75.90	78.23	3.07	n.a	n.a	n.a
NASARAWA	106.6	107.7	1.02	185.2	188.1	1.57	80.33	83.41	3.83	1.25	1.38	10.73
FCT	30.5	30.5	0.19	23.1	24.2	4.97	25.69	25.72	0.15	n.a	n.a	n.a
NIGER	433.4	423.1	-2.38	416.4	417.6	0.28	156.81	157.06	0.16	n.a	n.a	n.a
KWARA	90.3	93.7	3.76	132.5	138.0	4.12	150.29	152.46	1.44	n.a	n.a	n.a
KOGI	92.3	87.2	-5.54	331.9	342.4	3.17	60.92	62.29	2.24	n.a	n.a	n.a
BENUE	97.7	93.8	-4.02	113.9	115.9	1.80	144.34	147.29	2.04	1.73	2.10	21.89
Total	1259.3	1245.8	-1.07	1765.4	1801.2	2.03	898.1	910.2	1.35	3.0	3.5	17.21

South West Zone

STATE	SORGHUM			MAIZE			RICE			GINGER		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
OSUN	n.a	n.a	n.a	86.95	81.5	-6.22	22.25	22.25	0.00	n.a	n.a	n.a
OYO	32.05567	24.61157	-23.22	284.37	284.4	0.01	23.9	23.9	0.00	n.a	n.a	n.a
EKITI	n.a	n.a	n.a	157.54	160.8	2.07	80.82	82.25	1.78	n.a	n.a	n.a
ONDO	n.a	n.a	n.a	238.80	238.8	0.00	51.04	52.85	3.53	n.a	n.a	n.a
OGUN	n.a	n.a	n.a	350.92	353.4	0.69	12.01	12.09	0.70	n.a	n.a	n.a
LAGOS	n.a	n.a	n.a	71.97	74.9	4.07	8.07	7.70	-4.56	0.34	0.34	0.00
Total	32.1	24.6	0.00	1190.5	1193.8	0.27	198.1	201.1	0.00	0.3	0.3	0.00

South East Zone

STATE	MAIZE			RICE		
	2011	2012	% Change	2011	2012	% Change
ANAMBRA	38.29	38.58	0.76	15.78	15.77	-0.03
ENUGU	81.55	84.48	3.59	41.58	41.95	0.90
EBONYI	2.96	2.91	-1.74	113.02	114.57	1.37
ABIA	69.27	72.68	4.93	9.04	9.04	0.00
IMO	121.24	133.25	9.91	329.64	329.55	-0.03
Total	313.3	331.9	5.94	509.1	510.9	0.36

South -South Zone

STATE	SORGHUM			MAIZE			RICE			GINGER		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
AK/IBOM	n.a	n.a	n.a	59.06	62.22	5.35	8.49	8.56	0.81	n.a	n.a	n.a
BAYELSA	n.a	n.a	n.a	34.42	35.75	3.86	42.2	43.45	2.97	n.a	n.a	n.a
C/RIVER	n.a	n.a	n.a	121.92	105.27	-13.66	90.96	92.17	1.33	n.a	n.a	n.a
DELTA	n.a	n.a	n.a	89.71	90.19	0.54	13.36	13.51	1.09	n.a	n.a	n.a
EDO	n.a	n.a	n.a	47.97	48.68	1.50	13.09	13.71	4.77	n.a	n.a	n.a
RIVERS	n.a	n.a	n.a	63.80	64.07	0.43	15.48	15.59	0.75	n.a	n.a	n.a
Total	0.0	0.0	0.00	357.83	344.0	-3.87	175.1	178.5	1.91	0.0	0.0	0.00
National Total	4891.2	4870.8	-0.42	5153.3	5218.2	1.26	2571.1	2705.3	5.22	48.9	52.0	6.22

Table 3.9.2: Cultivated land area estimates for yam, groundnut, millet, millet and cassava (X 1000 hectares)
North East Zone

STATE	YAM			GROUNDNUT			MILLET			CASSAVA		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
BORNO	n.a	n.a	n.a	216.86	215.3178	-0.71	217.07	217.17	0.05	n.a	n.a	n.a
YOBE	n.a	n.a	n.a	42.12	42.52	0.95	166.40	166.18	-0.13	4.89	3.91	-19.87
BAUCHI	n.a	n.a	n.a	393	392.50	-0.13	393.90	391.58	-0.59	2.04	2.38	16.43
GOMBE	n.a	n.a	n.a	37.42	37.49	0.17	137.49	137.82	0.28	3.05	3.06	0.35
ADAMAWA	112.70	112.55	-0.13	44.21	42.61	-3.63	169.95	168.69	-0.74	17.57	17.76	1.08
Total	112.7	112.6	-0.13	733.6	730.4	-0.43	1084.8	1081.5	-0.31	27.6	27.1	-1.58

North West Zone

STATE	YAM			GROUNDNUT			MILLET			CASSAVA		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
JIGAWA	n.a	n.a	0	112.93	111.45	-1.32	155.48	155.53	0.03	n.a	n.a	n.a
KATSINA	5.51	7.17	30.29	126.53	128.56	1.60	108.77	107.76	-0.93	14.77	15.96	8.09
SOKOTO	n.a	n.a	n.a	110.9	110.79	-0.10	165.93	166.70	0.46	4.49	4.68	4.12
KEBBI	12.63818	12.78	1.15	106.39	106.89	0.46	139.97	142.57	1.85	83.56	84.60	1.25
ZAMFARA	4.988182	4.46	-10.39	134.9	134.9	0.00	162.89	165.36	1.52	n.a	n.a	n.a
KANO	n.a	n.a	n.a	162.08	163.41	0.82	130.70	128.43	-1.73	2.63	2.76	4.98
KADUNA	258.90	258.70	-0.08	60.69	62.75	3.40	180.44	180.46	0.01	106.46	106.46	0.00
Total	282.0	283.1	0.39	814.4	818.8	0.53	1044.2	1046.8	0.25	211.9	214.5	1.20

North Central Zone

STATE	YAM			GROUNDNUT			MILLET			CASSAVA		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
TARABA	214.41	214.10	-0.18	167.88	170.14	1.34	101.33	102.29	0.95	127.41	128.41	0.78
PLATEAU	137.21	135.32	-1.38	38.66	39.86	3.11	25.98	25.02	-3.69	373.49	375.54	0.55
NASARAWA	143.82	144.79	0.67	132.88	134.13	0.94	66.00	67.16	1.76	18.44	18.16	-1.54
FCT	120.83	120.88	0.04	14.16	13.86	-2.15	15.42	15.88	3.02	18.46	21.18	14.71
NIGER	335.97	333.84	-0.63	85.01	85.35	0.40	309.77	311.46	0.55	281.90	281.29	-0.22
KWARA	83.70	82.39	-1.57	141.08	140.06	-0.73	25.02	23.85	-4.64	19.076	19.01	-0.30
KOGI	119.66	124.07	3.69	107.96	109.51	1.43	48.20	50.32	4.40	22.13	22.23	0.46
BENUE	228.71	229.06	0.12	33.50	35.33	5.49	106.38	106.67	0.27	41.46	38.58	-6.93
Total	1384.5	1384.5	0.00	721.2	728.3	0.98	698.1	702.7	0.65	902.4	904.4	0.23

South West Zone

STATE	YAM			GROUNDNUT			MILLET			CASSAVA		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
OSUN	112.06	112.18	0.11	1.95	1.89	-2.77	n.a	n.a	#VALUE!	84.7	85.4	0.83
OYO	138.03	138.47	0.32	13.93	14.48	3.94	8.230856	8.60	4.59	148.89	149.01	0.08
EKITI	175.12	177.62	1.43	27.87	27.60	-0.98	n.a	n.a	#VALUE!	191.5	189.09	-1.26
ONDO	133.21	133.96	0.56	n.a	n.a	n.a	n.a	n.a	#VALUE!	127.24	126.7	-0.42
OGUN	135.98	135.78	-0.14	6.49	6.39	-1.67	35.04	35.04	0.00	219.77	219.98	0.10
LAGOS	146.80	147.18	0.27	1.61	1.65	2.01	2.98	2.98	0.00	61.32	61.52	0.33
Total	841.2	845.2	0.00	51.9	52.0	0.00	46.3	46.6	0.00	833.4	831.7	0.00

South East Zone

STATE	YAM			GROUNDNUT			MILLET			CASSAVA		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
ANAMBRA	128.17	129.88	1.33	n.a	n.a	n.a	n.a	n.a	n.a	106.93	106.98	0.05
ENUGU	122.88	123.02	0.12	1.84	1.81	-1.60	1.65	2.75	66.31	288.66	288.67	0.00
EBONYI	154.49	154.85	0.23	1.69	1.74	2.80	1.05	1.05	0.00	176.59	176.59	0.00
ABIA	159.80	160.57	0.48	0.44	0.47	8.46	n.a	n.a	n.a	149.7	150.01	0.21
IMO	166.61	167.97	0.81	n.a	n.a	n.a	n.a	n.a	n.a	240.44	241.03	0.25
Total	732.0	736.3	0.59	4.0	4.0	1.39	2.7	3.8	40.58	962.3	963.3	0.10

South -South Zone

STATE	YAM			GROUNDNUT			MILLET			CASSAVA		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
AK/IBOM	257.74	258.98	0.48	13.01	13.52	3.93	n.a	n.a	n.a	106.93	106.98	0.05
BAYELSA	279.51	281.43	0.69	n.a	n.a	n.a	n.a	n.a	n.a	150.18	151.02	0.56
C/RIVER	244.52	292.9	19.78	13.05	13.68	4.82	13.01	13.07	0.39	357.24	357.2	-0.01
DELTA	120.07	120.94	0.72	n.a	n.a	n.a	n.a	n.a	n.a	157.24	157.24	0.00
EDO	98.47	98.62	0.15	4.59	4.59	0.00	n.a	n.a	n.a	123.7	123.7	0.00
RIVERS	172.85	174.04	0.68	n.a	n.a	n.a	n.a	n.a	n.a	191.8	191.9	0.05
Total	915.5	967.9	5.73	17.6	18.3	0.00	13.0	13.1	0.39	980.2	981.1	0.09
National Total	4267.9	4329.7	1.45	2342.8	2351.8	0.39	2889.1	2894.5	0.19	3917.8	3922.1	0.11

Table 3.9.3: Cultivated land area estimates for cowpea, cocoyam, benniseed and soybean(X 1000 hectares)
North East Zone

STATE	Cowpea			Cocoyam			Benniseed			Soybean		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
BORNO	n.a	n.a	n.a	0.021	0.021	0.00	12.38	14.91	20.46	n.a	n.a	n.a
YOBE	10.98	10.97	-0.08	n.a	n.a	n.a	5.17	6.48	25.21	n.a	n.a	n.a
BAUCHI	1.96	1.10	1.73	0.28	0.28	0.00	0.19	-0.06	-106.54	39.57	40.57	2.54
GOMBE	191.8	192.48	0.36	n.a	n.a	n.a	1.11	1.11	0.00	10.07	11.07	10.01
ADAMAWA	154.23	154.07	-0.11	n.a	n.a	n.a	11.19	9.45	-21.13	22.84	25.08	9.85
Total	359.0	359.5	0.15	0.3	0.3	0.00	31.7	31.9	0.76	72.5	76.7	5.88

North West Zone

STATE	Cowpea			Cocoyam			Benniseed			Soybean		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
JIGAWA	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
KATSINA	14.77	13.36	-9.53	8.26	8.92	7.95	n.a	n.a	n.a	26.35	25.90	-1.71
SOKOTO	4.91	4.87	-0.92	n.a	n.a	n.a	n.a	n.a	n.a	18.62	21.40	14.93
KEBBI	84.04	84.64	0.72	n.a	n.a	n.a	8.85	11.15	26.04	11.15	12.71	13.97
ZAMFARA	n.a	n.a	n.a	n.a	n.a	n.a	3.48	8.70	149.88	6.22	7.59	21.92
KANO	2.60	2.64	1.54	n.a	n.a	n.a	0.91	-18.06	-2087.03	49.14	46.87	-4.63
KADUNA	168.17	163.70	-2.66	2.80	2.98	6.49	8.63	5.74	-33.54	68.70	68.59	-0.17
Total	274.5	269.2	-1.92	11.1	11.9	7.58	21.9	7.5	-65.55	180.2	183.1	1.59

North Central Zone

STATE	Cowpea			Cocoyam			Beniseed			Soybean		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
TARABA	285.76	289.16	1.19	15.22	15.50	1.91	45.92	45.79	-0.29	72.09	73.62	2.13
PLATEAU	39.83	41.09	3.16	6.58	6.94	5.47	68.96	70.35	2.02	31.11	28.37	-8.80
NASARAWA	140.32	140.48	0.11	11.19	11.10	-0.80	n.a	n.a		61.07	62.90	2.99
FCT	4.15	4.43	6.68	n.a	n.a		17.31	18.90	9.75	3.76	3.23	-14.22
NIGER	89.23	92.85	4.06	23.60	24.70	4.70	5.79	6.87	18.82	11.99	12.95	8.07
KWARA	83.86	86.75	3.45	n.a	n.a	n.a	n.a	n.a	n.a	24.33	26.25	7.93
KOGI	292.46	294.75	0.78	11.42	11.06	-3.12	n.a	n.a	n.a	n.a	n.a	n.a
BENUE	276.76	277.29	0.19	15.05	15.30	1.65	n.a	n.a	n.a	114.44	111.53	-2.55
Total	1212.4	1226.8	1.19	83.1	84.6	1.88	138.0	142.0	2.92	318.8	318.9	0.02

South West Zone

STATE	Cowpea			Cocoyam			Soybean		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
OSUN	86.5545	88.75	2.54	25.64	25.33	-1.23	n.a	n.a	n.a
OYO	149.26	149.52	0.17	5.97	5.67	-5.07	5.55	7.81	40.65
EKITI	91.30	94.06	3.02	23.48	23.98	2.11	4.89	4.72	-3.57
ONDO	125.35	123.09	-1.80	41.33	41.82	1.18	9.28	9.28	0.00
OGUN	219.77	220.97	0.55	33.09	33.09	0.00	n.a	n.a	n.a
LAGOS	61.31	63.26	3.18	11.05	11.27	1.92	5.99	5.39	-9.93
Total	733.6	739.7	0.00	140.6	141.2	0.00	25.7	27.2	0.00

South East Zone

STATE	Cowpea			Cocoyam			Soybean		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
ANAMBRA	86.92	86.67	-0.29	20.29	20.66	1.83	n.a	n.a	n.a
ENUGU	208.65	201.28	-3.53	27.65	27.28	-1.35	8.85	10.35	16.84
EBONYI	76.58	77.53	1.24	10.03	10.19	1.60	2.62	0.01	-99.82
ABIA	49.69	51.94	4.53	10.9	10.64	-2.32	n.a	n.a	n.a
IMO	140.14	140.35	0.15	16.92	15.78	-6.74	n.a	n.a	n.a
Total	562.0	557.8	-0.75	85.8	84.6	-1.44	11.5	10.4	0.00

South -South Zone

STATE	Cowpea			Cocoyam			Beniseed			Soybean		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
AK/IBOM	89.18	89.12	-0.06	43.64	44.45	1.87	n.a	n.a	n.a	n.a	n.a	n.a
BAYELSA	28.42	28.56	0.50	27.56	27.92	1.32	n.a	n.a	n.a	n.a	n.a	n.a
C/RIVER	17.7	17.9	1.13	46.20	47.27	2.33	n.a	n.a	n.a	n.a	n.a	n.a
DELTA	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
EDO	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
RIVERS	1.95	1.99	2.05	17.08	17.58	2.92	n.a	n.a	n.a	n.a	n.a	n.a
Total	48.1	48.5	0.80	90.8	92.8	0.00	0.0	0.0	n.a	0.0	0.0	0.00
National Total	3189.5	3201.5	0.37	411.7	415.3	0.89	191.5	181.4	-5.25	608.7	616.2	1.24

Table 3.9.4: Cultivated land area estimates for cotton, okra, onion and tomato (x 1000 hectares)

North East Zone

	Cotton			Okra			Onion			Tomato		
STATE	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
BORNO	29.58	39.63	33.99	4.11	4.85	17.98	n.a	n.a	n.a	23.54	24.27	3.11
YOBE	na	na	na	2.55	1.38	-45.83	n.a	n.a	n.a	13.98	13.01	-6.97
BAUCHI	na	na	na	2.42	2.33	-3.58	45.15	45.4	0.59	16.32	16.22	-0.61
GOMBE	na	na	na	3.6	3.52	-2.34	36.53	37.9	3.75	4.99	5.60	12.18
ADAMAWA	19.8	21.29	7.54	1.64	1.64	0.00	33.8	33.8	0.00	5.57	5.56	-0.12
Total	49.4	60.9	23.39	14.3	13.7	-4.19	115.5	117.1	1.42	64.4	64.7	0.40

North West Zone

	Cotton			Okra			Onion			Tomato		
STATE	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
JIGAWA	na	na	na	10.1	11.00	8.95	32.77	32.09	-2.07	na	na	na
KATSINA	66.51	64.83	-2.53	2.17	2.02	-7.06	39.01	39.68	1.73	2.15	2.15	0.00
SOKOTO	19.44	20.61	6.06	6.35	9.62	51.47	46.15	47.51	2.96	47.09	48.21	2.38
KEBBI	10.99	11.33	3.00	10.61	10.80	1.79	43.1	44.29	2.76	17.45	17.97	2.99
ZAMFARA	42.2	42.2	0.00	12.99	12.99	0.00	17.35	19.06	9.85	28.05	30.66	9.30
KANO	36.27	44.93	23.90	1.95	4.06	107.93	9.46	8.41	-11.11	0.31	0.31	0.00
KADUNA	na	na	na	32.48	34.36	5.78	53.45	54.27	1.54	5.96	7.47	25.29
Total	175.4	183.9	4.84	76.7	84.8	10.69	241.3	245.3	1.67	101.0	106.8	5.70

North Central Zone

STATE	Cotton			Okra			Onion			Tomato		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
TARABA	10.79	16.81	55.81	5.39	5.76	6.94	8.25	12.04	45.97	4.19	7.41	76.80
PLATEAU	23.98	27.31	13.90	3.75	5.94	58.42	1.49	-1.77	-218.99	2.06	4.05	96.61
NASARAWA	n.a	n.a	n.a	15.61	12.61	-19.21	na	na	na	2.00	4.05	102.55
FCT	n.a	n.a	n.a	0.27	0.24	-10.25	na	na	na	1.44	2.00	39.10
NIGER	n.a	n.a	n.a	47.09	47.16	0.14	na	na	na	16.01	17.73	10.77
KWARA	n.a	n.a	n.a	17.07	17.74	3.89	na	na	na	1.68	2.89	72.07
KOGI	n.a	n.a	n.a	9.51	9.62	1.11	na	na	na	5.14	8.37	62.82
BENUE	n.a	n.a	n.a	22.06	25.74	16.70	6.57	7.57	14.10	9.42	10.94	16.10
Total	34.8	44.1	26.91	120.8	124.8	3.36	16.3	17.8	8.93	41.9	57.4	36.96

South West Zone

STATE	Okra			Onion			Tomato		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
OSUN	3.97	2.97	-25.25	n.a	n.a	n.a	8.12	10.87	33.86
OYO	25.3	25.38	0.31	n.a	n.a	n.a	10.25	10.74	4.81
EKITI	1.92	3.52	83.09	n.a	n.a	n.a	5.12	5.32	3.91
ONDO	1.48	3.56	140.49	n.a	n.a	n.a	0.88	0.88	0.00
OGUN	22.12	21.31	-3.67	n.a	n.a	n.a	11.03	11.47	4.15
LAGOS	18.56	16.80	-9.46	0.37	2.27	-71.79	7.97	7.47	-6.30
Total	73.4	73.5	0.00	0.4	-2.3	0.00	43.4	46.8	0.00

South East Zone

STATE	Okra			Tomato		
	2011	2012	% Change	2011	2012	% Change
ANAMBRA	3.91	7.09	81.38	2.20	3.59	63.15
ENUGU	4.64	6.40	38.00	3.83	5.16	34.71
EBONYI	13.97	13.04	-6.63	10.00	7.87	-21.33
ABIA	8.74	11.70	33.86	3.11	3.11	0.00
IMO	11.00	11.74	6.69	4.75	4.75	0.00
Total	42.3	50.0	0.00	23.9	24.5	0.00

South -South Zone

STATE	Cotton			Okra			Onion			Tomato		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
AK/IBOM	n.a	n.a	n.a	151	151	0.00	n.a	n.a	n.a	n.a	n.a	n.a
BAYELSA	n.a	n.a	n.a	96.79	97.88	1.13	n.a	n.a	n.a	n.a	n.a	n.a
C/RIVER	n.a	n.a	n.a	89.92	89.82	-0.11	n.a	n.a	n.a	11.38	12.09	6.22
DELTA	n.a	n.a	n.a	79.94	89.9	12.46	n.a	n.a	n.a	6.25	5.77	-7.68
EDO	n.a	n.a	n.a	54.7	58.39	6.74	n.a	n.a	n.a	5.59	5.77	3.22
RIVERS	n.a	n.a	n.a	166.0	167.5	0.90	n.a	n.a	n.a	n.a	n.a	n.a
Total	0.0	0.0	0.00	487.4	503.5	0.00	0.0	0.0	0.00	23.2	23.6	0.00
National Total	259.6	289.0	11.33	814.7	850.4	4.38	373.4	377.9	1.20	297.8	323.7	8.70

Table 3.9.2: Production Estimates (Sorghum, Maize, Rice and Ginger (X 1000 MT)

North East Zone

STATE	SORGHUM			MAIZE			RICE		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
BORNO	905.32	894.00	-0.25	498.98	623.92	25.04	146.39	246.43	68.34
YOBE	202.98	200.44	-0.25	18.15	25.27	39.20	33.15	98.23	196.32
BAUCHI	186.60	176.06	-4.69	346.51	373.75	7.86	66.95	68.21	1.88
GOMBE	159.81	154.72	-2.20	203.00	209.44	3.17	92.60	99.98	7.97
ADAMAWA	129.99	129.94	0.97	189.18	189.71	0.28	42.27	43.60	3.16
Total	1584.7	1555.2	-0.87	1255.8	1422.1	13.240	381.4	556.4	45.91

North West Zone

STATE	SORGHUM			MAIZE			RICE			GINGER		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
JIGAWA	283.40	282.67	-0.74	120.48	129.98	7.89	13.49	98.41	629.54	n.a	n.a	n.a
KATSINA	387.69	367.73	4.37	273.13	288.97	5.80	56.82	60.09	5.74	n.a	n.a	n.a
SOKOTO	249.99	247.44	0.01	16.90	19.346	14.42	58.57	66.65	13.79	n.a	n.a	n.a
KEBBI	222.58	215.90	2.06	150.88	159.92	5.99	58.75	63.61	8.27	n.a	n.a	n.a
ZAMFARA	718.78	718.90	-1.02	50.27	54.73	8.88	23.58	25.02	6.09	n.a	n.a	n.a
KANO	1074.86	1076.34	-1.14	546.82	558.78	2.19	268.86	269.01	0.06	n.a	n.a	n.a
KADUNA	484.31	485.98	-1.34	770.68	792.61	2.85	360.67	361.06	0.11	453.41	455.18	0.39
Total	3421.6	3395.0	-0.22	1929.2	2004.3	3.90	840.7	943.8	12.26	453.4	455.2	0.00

North Central Zone

STATE	SORGHUM			MAIZE			RICE			GINGER		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
TARABA	190.943	187.361	0.893	430.518	433.035	0.585	294.233	294.312	0.027	n.a	n.a	n.a
PLATEAU	385.166	386.259	0.284	643.419	645.529	0.328	170.383	170.414	0.018	n.a	n.a	n.a
NASARAWA	184.831	189.969	2.780	181.215	182.516	0.718	184.896	185.804	0.491	0.650	3.840	490.842
FCT	52.247	52.980	1.402	43.929	45.506	3.591	57.079	58.920	3.225	n.a	n.a	n.a
NIGER	598.350	600.419	0.346	661.072	662.644	0.238	141.193	143.096	1.348	n.a	n.a	n.a
KWARA	143.496	146.777	2.286	195.196	195.716	0.267	501.414	502.300	0.177	n.a	n.a	n.a
KOGI	107.912	109.188	1.182	375.912	377.150	0.329	490.429	492.441	0.410	n.a	n.a	n.a
BENUE	201.355	201.708	0.175	165.713	168.764	1.841	306.878	307.084	0.067	5.290	8.627	63.080
Total	1864.3	1874.7	0.56	2697.0	2710.9	0.515	2146.5	2154.4	0.37	5.9	12.5	0.00

South West Zone

STATE	SORGHUM			MAIZE			RICE			GINGER		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
OSUN	n.a	n.a	n.a	149.573	150.394	0.549	36.398	49.600	36.271	n.a	n.a	n.a
OYO	26.465	26.248	-0.821	224.850	225.299	0.200	42.260	97.300	130.241	n.a	n.a	n.a
EKITI	n.a	n.a	n.a	342.919	345.925	0.877	76.839	79.841	3.907	n.a	n.a	n.a
ONDO	n.a	n.a	n.a	553.087	556.216	0.566	106.055	107.678	1.530	n.a	n.a	n.a
OGUN	n.a	n.a	n.a	536.887	541.138	0.792	34.941	39.900	14.194	n.a	n.a	n.a
LAGOS	n.a	n.a	n.a	211.860	212.466	0.286	29.451	43.800	48.720	0.820	2.06	151.31
Total	26.5	26.2	-0.82	2019.2	2031.4	0.607	325.9	418.1	28.28	0.8	2.1	0.00

South-East Zone

STATE	MAIZE			RICE		
	2011	2012	% Change	2011	2012	% Change
ANAMBRA	90.203	91.219	1.126	36.628	98.200	168.102
ENUGU	153.860	154.220	0.234	76.790	77.782	1.291
EBONYI	6.329	6.795	7.358	407.550	404.782	-0.679
ABIA	90.496	90.491	-0.005	23.800	23.800	0.000
IMO	171.776	172.683	0.528	1.819	33.100	1720.163
Total	512.7	515.4	0.535	546.6	637.7	16.66

South -South Zone

STATE	SORGHUM			MAIZE			RICE			GINGER		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
AK/IBOM	n.a	n.a	n.a	65.476	67.505	3.099	1.157	1.389	20.021	n.a	n.a	n.a
BAYELSA	n.a	n.a	n.a	35.450	44.841	26.493	78.038	99.300	27.246	n.a	n.a	n.a
C/RIVER	n.a	n.a	n.a	330.655	333.203	0.771	196.770	187.067	-4.931	n.a	n.a	n.a
DELTA	n.a	n.a	n.a	164.523	167.370	1.731	12.380	18.200	47.014	n.a	n.a	n.a
EDO	n.a	n.a	n.a	74.248	94.287	26.988	23.056	129.300	460.817	n.a	n.a	n.a
RIVERS	n.a	n.a	n.a	96.100	99.902	3.956	14.760	115.350	681.505	n.a	n.a	n.a
Total	0.0	0.0	#DIV/0!	766.5	807.1	5.305	326.2	550.6	68.81	0.0	0.0	0.00
National Total	6897.1	6851.0	-0.67	9180.2	9701.241	5.675	4567.3	5261.0	15.19	460.2	469.7	2.07

Table 3.9.2: Production estimates for yam, groundnut, millet and cassava (X 1000 MT)
North-East Zone

STATE	YAM			GROUNDNUT			MILLET			CASSAVA		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
BORNO	n.a	n.a	n.a	201.309	201.354	0.022	59.330	59.340	0.017	n.a	n.a	n.a
YOBE	n.a	n.a	n.a	67.170	66.931	-0.356	65.860	65.860	0.000	24.614	24.915	1.223
BAUCHI	n.a	n.a	n.a	454.353	453.342	-0.223	63.920	63.950	0.047	18.799	17.472	-7.056
GOMBE	n.a	n.a	n.a	49.267	49.282	0.029	72.590	72.600	0.014	12.653	13.232	4.583
ADAMAWA	3.020	3.020	0.000	84.284	85.753	1.743	19.940	19.950	0.050	21.869	21.957	0.401
Total	3.0	3.0	0.00	856.4	856.7	0.00	281.6	281.7	0.02	77.9	77.6	0.00

North West Zone

STATE	YAM			GROUNDNUT			MILLET			CASSAVA		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
JIGAWA	n.a	n.a	n.a	9.769	8.737	-10.564	92.950	92.980	0.032	135.845	135.845	0.000
KATSINA	2.100	2.100	0.000	85.710	85.710	0.000	83.980	80.990	-3.560	143.457	144.160	0.490
SOKOTO	n.a	n.a	n.a	65.477	68.167	4.108	81.240	81.280	0.049	n.a	n.a	n.a
KEBBI	14.340	14.340	0.000	58.490	59.165	1.153	82.700	82.920	0.266	607.485	607.514	0.005
ZAMFARA	4.890	4.890	0.000	134.534	137.048	1.869	79.370	83.600	5.329	n.a	n.a	n.a
KANO	n.a	n.a	n.a	33.578	32.684	-2.665	84.540	83.300	-1.467	25.025	24.209	-3.260
KADUNA	723.322	723.305	-0.002	366.790	367.037	0.067	64.030	64.020	-0.016	1725.616	1725.652	0.002
Total	744.7	744.6	0.00	754.3	758.5	0.00	568.8	569.1	0.05	2637.4	2637.4	0.00

North-Central Zone

STATE	YAM			GROUNDNUT			MILLET			CASSAVA		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
TARABA	2894.368	2894.257	-0.004	240.195	243.059	1.192	88.500	98.090	10.836	2384.474	2384.414	-0.002
PLATEAU	255.363	255.113	-0.098	20.752	23.090	11.266	97.600	98.800	1.230	453.366	453.358	-0.002
NASARAWA	2956.277	2956.340	0.002	86.713	86.949	0.272	25.510	24.732	-3.050	1485.854	1486.212	0.024
FCT	2595.118	2596.140	0.039	8.060	8.056	-0.046	31.320	29.400	-6.130	45.911	46.932	2.224
NIGER	362.331	362.861	0.146	432.934	432.840	-0.022	79.060	79.100	0.051	938.225	939.737	0.161
KWARA	5298.697	5298.403	-0.006	35.012	35.135	0.351	23.500	23.567	0.286	1310.425	1310.453	0.002
KOGI	1489.249	1489.869	0.042	78.142	78.145	0.004	19.280	19.800	2.697	4406.420	4406.650	0.005
BENUE	1059.581	1060.063	0.045	402.051	402.164	0.028	56.150	56.294	0.257	3663.742	3663.804	0.002
Total	16911.0	16913.0	0.01	1303.9	1309.4	0.00	420.9	429.8	2.11	14688.4	14691.6	0.00

South-West Zone

STATE	YAM			GROUNDNUT			MILLET			CASSAVA		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
OSUN	675.828	675.388	-0.065	n.a	n.a	n.a	n.a	n.a	n.a	1401.876	1401.865	-0.001
OYO	779.587	779.544	-0.006	10.650	10.559	-0.859	n.a	n.a	n.a	1726.045	1726.250	0.012
EKITI	1554.917	1555.049	0.009	0.060	0.060	0.000	n.a	n.a	n.a	1520.744	1520.782	0.002
ONDO	2289.260	2289.330	0.003	0.060	0.060	0.000	n.a	n.a	n.a	2908.310	2908.611	0.010
OGUN	259.009	260.027	0.393	5.910	6.080	2.877	n.a	n.a	n.a	3183.610	3183.692	0.003
LAGOS	61.521	63.522	3.253	3.711	3.471	-6.469	n.a	n.a	n.a	968.583	968.367	-0.022
Total	5620.1	5622.9	0.05	20.4	20.2	0.00	0.0	0.0	#DIV/0!	11709.2	11709.6	0.00

South-East Zone

STATE	YAM			GROUNDNUT			MILLET			CASSAVA		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
ANAMBRA	960.147	960.340	0.020	n.a	n.a	n.a	n.a	n.a	n.a	1730.295	1730.387	0.005
ENUGU	3254.245	3254.407	0.005	1.249	1.963	57.224	n.a	n.a	n.a	3685.040	3685.241	0.005
EBONYI	1788.522	1789.831	0.073	1.010	1.010	0.000	n.a	n.a	n.a	1204.656	1205.981	0.110
ABIA	618.780	619.467	0.111	7.210	7.210	0.000	n.a	n.a	n.a	701.343	702.093	0.107
IMO	782.654	782.913	0.033	0.080	0.080	0.000	n.a	n.a	n.a	3626.333	3626.383	0.001
Total	7404.3	7407.0	0.04	9.5	10.3	0.00	0.0	0.0	#DIV/0!	10947.7	10950.1	0.00

South -South Zone

STATE	YAM			GROUNDNUT			MILLET			CASSAVA		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
AK/IBOM	306.180	306.295	0.038	0.901	1.013	12.394	n.a	n.a	n.a	1535.130	1535.822	0.045
BAYELSA	170.226	170.171	-0.032	n.a	n.a	n.a	n.a	n.a	n.a	481.903	480.493	-0.293
C/RIVER	3402.960	3403.084	0.004	13.318	14.142	6.185	n.a	n.a	n.a	5956.600	5956.657	0.001
DELTA	1231.265	1231.368	0.008	n.a	n.a	n.a	n.a	n.a	n.a	1725.409	1725.269	-0.008
EDO	355.426	355.428	0.000	4.018	4.977	23.865	n.a	n.a	n.a	696.073	696.073	0.000
RIVERS	966.315	966.864	0.057	n.a	n.a	n.a	n.a	n.a	n.a	1947.750	1948.022	0.014
Total	6432.4	6433.2	0.01	18.2	20.1	0.00	0.0	0.0	#DIV/0!	12342.9	12342.3	0.00
National Total	37115.5	37123.7	0.02	2962.8	2975.3	0.42	1271.4	1280.6	0.72	52403.5	52408.5	0.01

Table 3.9.3: Production estimates for cowpea, cotton, cocoyam, benniseed (X 1000 MT)
North-East Zone

STATE	Cowpea			Cotton			Cocoyam			Benniseed		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
BORNO	445.726	445.766	0.009	11.900	12.941	8.748	0.460	0.460	0.000	n.a	n.a	n.a
YOBE	56.297	56.505	0.371	n.a	n.a	n.a	n.a	n.a	n.a	1.851	4.713	154.600
BAUCHI	245.221	244.381	-0.343	n.a	n.a	n.a	2.010	2.010	0.000	9.307	10.259	10.226
GOMBE	83.535	84.760	1.466	9.200	9.861	7.187	20.311	20.367	0.275	0.869	1.938	122.990
ADAMAWA	27.859	27.425	-1.559	2.100	2.892	37.735	n.a	n.a	n.a	n.a	n.a	n.a
Total	858.6	858.8	0.02	23.2	25.7	0.00	22.8	22.8	0.24	12.0	16.9	0.00

North-West Zone

STATE	Cowpea			Cotton			Cocoyam			Benniseed		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
JIGAWA	56.639	56.921	0.499	n.a	n.a	n.a	n.a	n.a	n.a	3.436	-0.605	-117.599
KATSINA	68.247	69.030	1.147	9.900	10.415	5.198	n.a	n.a	n.a	1.808	5.127	183.625
SOKOTO	94.820	95.075	0.269	11.900	11.968	0.570	n.a	n.a	n.a	n.a	n.a	n.a
KEBBI	55.764	54.702	-1.905	9.960	9.848	-1.125	n.a	n.a	n.a	8.602	15.490	80.077
ZAMFARA	158.605	160.075	0.926	2.000	2.210	10.500	n.a	n.a	n.a	n.a	n.a	n.a
KANO	98.530	98.899	0.375	4.790	4.718	-1.503	n.a	n.a	n.a	n.a	n.a	n.a
KADUNA	42.624	43.226	1.412	n.a	n.a	n.a	24.335	23.946	-1.601	n.a	n.a	n.a
Total	575.2	577.9	0.47	38.6	39.2	0.00	24.3	23.9	-1.60	13.8	20.0	0.00

North-Central Zone

STATE	Cowpea			Cotton			Cocoyam			Benniseed		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
TARABA	26.483	29.584	11.710	0.417	0.427	2.416	66.913	68.924	3.006	49.900	51.123	2.451
PLATEAU	14.582	18.018	23.566	0.800	0.830	3.750	16.395	15.757	-3.893	6.980	7.559	8.299
NASARAWA	46.476	50.843	9.397	n.a	n.a	n.a	62.736	63.652	1.460	57.481	58.954	2.563
FCT	10.958	15.041	37.264	n.a	n.a	n.a	6.960	6.960	0.000	4.933	5.822	18.018
NIGER	49.600	51.604	4.041	n.a	n.a	n.a	92.448	92.586	0.150	9.070	10.304	13.603
KWARA	3.270	3.239	-0.940	n.a	n.a	n.a	53.523	54.210	1.284	8.907	8.907	0.000
KOGI	53.723	55.926	4.102	n.a	n.a	n.a	71.030	72.480	2.041	13.410	15.401	14.841
BENUE	27.997	29.406	5.034	n.a	n.a	n.a	37.043	36.996	-0.126	50.765	51.653	1.750
Total	233.1	253.7	8.83	1.2	1.3	0.00	407.0	411.6	1.11	201.4	209.7	0.00

South-West Zone

STATE	Cowpea			Cotton			Cocoyam		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
OSUN	1.469	3.785	157.654	n.a	n.a	n.a	228.992	226.000	-1.307
OYO	6.690	7.600	13.595	n.a	n.a	n.a	47.320	46.854	-0.985
EKITI	18.431	19.649	6.610	n.a	n.a	n.a	256.438	257.667	0.479
ONDO	151.070	151.070	0.000	7.790	7.790	0.000	296.836	297.308	0.159
OGUN	2.130	2.130	0.000	n.a	n.a	n.a	152.817	155.101	1.495
LAGOS	1.430	2.138	49.493	n.a	n.a	n.a	49.877	49.591	-0.575
Total	181.2	186.4	2.84	7.8	7.8	0.00	1032.3	1032.5	0.02

South-East Zone

STATE	Cowpea			Cocoyam		
	2011	2012	% Change	2011	2012	% Change
ANAMBRA	n.a	n.a	n.a	163.016	163.896	0.540
ENUGU	1.350	1.350	0.000	262.139	261.738	-0.153
EBONYI	1.188	0.978	-17.632	97.960	96.924	-1.057
ABIA	0.380	0.380	0.000	146.417	144.299	-1.447
IMO	n.a	n.a	n.a	142.156	141.731	-0.299
Total	2.9	2.7	-7.18	811.7	808.6	-0.38

South -South Zone

STATE	Cowpea			Cotton			Cocoyam			Beniseed		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
AK/IBOM	1.274	0.776	-39.085	n.a	n.a	n.a	263.400	263.400	0.000	n.a	n.a	n.a
BAYELSA	n.a	n.a	n.a	n.a	n.a	n.a	152.248	150.477	-1.164	n.a	n.a	n.a
C/RIVER	6.727	5.941	-11.678	n.a	n.a	n.a	290.705	292.216	0.520	n.a	n.a	n.a
DELTA	n.a	n.a	n.a	n.a	n.a	n.a	62.681	65.536	4.555	n.a	n.a	n.a
EDO	1.690	1.690	0.000	n.a	n.a	n.a	110.569	110.578	0.008	n.a	n.a	n.a
RIVERS	n.a	n.a	n.a	n.a	n.a	n.a	87.970	87.312	-0.748	n.a	n.a	n.a
Total	9.7	8.4	-13.24	0.0	0.0	0.00	967.6	969.5	0.20	0.0	0.0	0.00
National Total	1860.8	1887.9	1.46	70.8	73.9	4.44	3265.7	3269.0	0.10	227.3	246.6	8.50

Table 3.9.4: Production estimates for soybean, Okror, onion, tomato (X 1000 MT)
North East Zone

STATE	Soybean			Okra			Onion			Tomato		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
BORNO	n.a	n.a	n.a	18.960	19.172	1.119	15.900	15.900	0.000	253.696	254.288	0.233
YOBE	n.a	n.a	n.a	9.640	9.640	0.000	35.900	37.608	4.758	4.280	3.114	-27.237
BAUCHI	0.942	1.200	27.433	5.717	7.452	30.346	59.715	59.420	-0.493	92.393	90.665	-1.870
GOMBE	0.100	0.100	0.000	4.982	4.821	-3.234	4.980	2.615	-47.484	73.600	73.600	0.000
ADAMAWA	0.360	0.380	5.556	5.980	8.569	43.290	5.400	5.400	0.000	9.020	9.693	7.461
Total	1.4	1.7	19.857	45.3	49.7	9.662	121.9	120.9	-0.78	433.0	431.4	-0.376

North West Zone

STATE	Soybean			Okra			Onion			Tomato		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
JIGAWA	20.01	21.64	8.16	0.34	0.34	0.00	56.78	56.78	0.00	9.02	8.246	-8.58
KATSINA	35.02	35.90	2.51	12.83	13.62	6.15	35.44	36.91	4.15	7.21	13.775	91.00
SOKOTO	7.69	7.98	3.77	19.17	22.11	15.32	116.02	116.08	0.047	267.83	271.276	1.28
KEBBI	4.09	5.09	24.45	38.22	38.96	1.92	109.43	109.65	0.209	56.38	56.709	0.58
ZAMFARA	4.44	5.02	13.02	32.61	34.78	6.64	95.35	95.37	0.025	134.42	134.738	0.24
KANO	60.26	61.02	1.24	9.79	10.58	8.00	94.16	94.86	0.742	4.301	6.23	44.75
KADUNA	67.00	67.90	1.34	10.96	10.74	-1.93	17.51	17.51	0.000	68.679	68.13	-0.81
Total	198.5	204.6	3.039	123.9	131.1	5.812	524.7	527.2	0.47	547.9	559.1	2.05

North Central Zone

STATE	Soybean			Okra			Onion			Tomato		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
TARABA	52.32	53.96	3.136	46.78	43.66	-6.66	59.40	60.42	1.729	43.99	46.33	5.30
PLATEAU	1.60	1.97	22.89	49.13	47.40	-3.51	19.46	18.24	-6.272	23.88	26.09	9.26
NASARAWA	6.47	6.78	4.68	23.31	24.88	6.71	n.a	n.a	n.a	18.95	19.78	4.38
FCT	4.89	4.99	2.02	29.79	33.95	13.96	n.a	n.a	n.a	18.95	19.86	4.83
NIGER	14.32	16.05	12.09	0.78	1.86	136.20	n.a	n.a	n.a	73.90	74.72	1.11
KWARA	33.03	34.53	4.55	48.11	49.69	3.28	n.a	n.a	n.a	9.21	11.78	27.94
KOGI	15.01	15.75	4.94	74.36	76.41	2.75	n.a	n.a	n.a	33.63	35.58	5.80
BENUE	190.00	191.05	0.55	51.91	53.31	2.69	41.57	43.32	4.213	29.51	31.35	6.23
Total	317.7	325.1	2.342	324.2	331.2	0.00	120.4	122.0	1.29	252.0	265.5	5.349

South West Zone

STATE	Soybean			Okra			Onion			Tomato		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
OSUN	n.a	n.a	n.a	7.411	13.31	79.66	n.a	n.a	n.a	25.42	27.14	6.76
OYO	0.36	0.38	5.55	35.65	36.24	1.65	n.a	n.a	n.a	28.62	29.81	4.15
EKITI	6.94	8.01	15.31	9.00	14.23	58.05	n.a	n.a	n.a	17.17	19.05	10.94
ONDO	n.a	n.a	n.a	4.02	4.02	0.00	n.a	n.a	n.a	3.04	4.38	44.07
OGUN	n.a	n.a	n.a	27.49	26.73	-2.77	n.a	n.a	n.a	80.89	81.89	1.24
LAGOS	0.64	0.69	7.81	50.48	50.43	-0.10	1.070	1.085	1.398	33.09	31.65	-4.34
Total	7.9	9.1	14.27	134.1	145.0	0.00	1.1	1.1	1.40	188.2	193.9	3.027

South-East Zone

STATE	Soybean			Okra			Tomato		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
ANAMBRA	n.a	n.a	n.a	18.64	17.23	-7.56	9.94	11.60	16.75
ENUGU	1.12	1.21	8.03	19.89	19.02	-4.37	11.06	12.45	12.58
EBONYI	1.26	1.29	2.38	17.70	14.77	-16.50	20.62	20.13	-2.37
ABIA	n.a	n.a	n.a	19.22	17.94	-6.63	1.39	2.85	105.55
IMO	n.a	n.a	n.a	23.85	25.67	7.62	1.48	3.55	140.49
Total	2.4	2.5	5.04	99.3	94.7	0.00	44.5	50.6	0.00

South -South Zone

STATE	Soybean			Okra			Onion			Tomato		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
AK/IBOM	n.a	n.a	n.a	11.39	13.60	19.46	n.a	n.a	n.a	n.a	n.a	n.a
BAYELSA	n.a	n.a	n.a	15.72	21.13	34.43	n.a	n.a	n.a	n.a	n.a	n.a
C/RIVER	n.a	n.a	n.a	12.55	13.91	10.82	n.a	n.a	n.a	n.a	n.a	n.a
DELTA	n.a	n.a	n.a	20.40	20.31	-0.41	n.a	n.a	n.a	22.46	22.46	0.000
EDO	n.a	n.a	n.a	13.19	13.56	2.76	n.a	n.a	n.a	12.31	13.02	5.733
RIVERS	n.a	n.a	n.a	43.53	44.16	1.44	n.a	n.a	n.a	n.a	n.a	n.a
Total	0.0	0.0	0.00	116.8	126.7	0.00	0.0	0.0		34.8	35.5	0.00
National Total	527.9	619.6079	9.70	843.6	878.3	4.11	768.1	771.2	0.40	1500.4	1536.0	2.37

Table 3.9.4: Summary of crop land area: sorghum, maize, millet, rice and ginger (X 1000 Ha)

Zone	SORGHUM			MAIZE			RICE			GINGER		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
North East	1560.3	1566.1	0.38	213.78	1074.08	402.42	298.30	303.89	1.87	0.00	0.00	0.00
North West	2039.5	2034.2	-0.26	1312.40	1212.42	-7.62	492.40	500.75	1.70	45.59	48.12	5.55
North Central	1259.3	1245.8	-1.07	1765.41	1806.22	2.31	898.07	910.24	1.35	2.98	3.49	17.21
South West	32.06	24.61	-23.22	1190.55	1223.79	2.79	198.10	201.06	1.49	0.34	0.34	0.00
South East	0.0	0.0	0.00	313.40	334.92	6.87	509.08	510.90	0.36	0.00	0.00	0.00
South South	0.0	0.00	0.00	357.83	343.99	-3.87	175.10	178.45	1.91	0.00	0.00	0.00
National Total	4891.2	4870.8	-0.42	5153.37	5995.41	16.34	2571.06	2605.29	1.33	48.91	51.95	6.22

Table 3.9.5: Summary of crop land area : yam, groundnut, millet and cassava (x 1000 ha)

Zone	YAM			GROUNDNUT			MILLET			CASSAVA		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
North East	112.70	112.55	-0.13	733.62	730.44	-0.43	1084.79	1081.46	-0.31	27.56	27.13	-1.58
North West	282.05	283.14	0.39	814.44	818.77	0.53	1044.22	1046.83	0.25	211.93	214.48	1.20
North Central	1384.49	1384.48	0.00	721.18	728.28	0.98	698.12	702.69	0.65	902.41	904.45	0.23
South West	841.22	845.22	0.48	51.88	52.03	0.28	46.25	46.63	0.82	833.42	831.70	-0.21
South East	731.97	736.32	0.59	3.98	4.04	1.39	2.71	3.80	40.58	962.32	963.28	0.10
South South	915.45	967.95	5.73	17.64	18.27	3.57	13.02	13.07	0.39	980.16	981.06	0.09
National Total	4267.88	4329.65	1.45	2342.75	2351.82	0.39	2889.10	2894.48	0.19	3917.80	3922.09	0.11

Table 3.9.6:: Summary of crop land area: cowpea, cocoyam, benniseed and soybean (x 1000 ha)

Zone	cowpea			cocoyam			benniseed			soybean		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
North East	358.98	359.52	0.15	0.30	0.30	0.00	31.66	31.90	0.76	72.48	76.74	5.88
North West	274.49	269.22	-1.92	11.06	11.90	7.58	21.87	7.54	-65.55	180.19	183.05	1.59
North Central	1212.39	1226.80	1.19	83.07	84.63	1.88	137.97	142.00	2.92	318.80	318.87	0.02
South West	733.56	739.67	0.83	140.58	141.15	0.41	0.00	0.00	0.00	25.71	27.20	5.79
South East	562.01	557.79	-0.75	85.81	84.58	-1.44	0.00	0.00	0.00	11.48	10.36	-9.78
South South	48.07	48.45	0.80	90.85	92.78	2.13	0.00	0.00	0.00	0.00	0.00	0.00
National Total	3189.50	3201.45	0.37	411.66	415.34	0.89	191.50	181.44	-5.25	608.67	616.22	1.24

Table 3.9.7: Summary of crop land area: cotton, okra, onion and tomato (x 1000 ha)

Zone	Cotton			Okro			Onion			Tomato		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
North East	49.38	60.93	23.39	14.32	13.72	-4.19	115.48	117.12	1.42	64.40	64.66	0.40
North West	175.41	183.91	4.84	76.66	84.85	10.69	241.29	245.32	1.67	101.01	106.77	5.70
North Central	34.77	44.13	26.91	120.75	124.81	3.36	16.31	17.77	8.93	41.94	57.44	36.96
South West	0.00	0.00	0.00	73.35	73.53	0.25	0.37	2.27	514.79	43.37	46.77	7.83
South East	0.00	0.00	0.00	42.26	49.97	18.25	0.00	0.00	0.00	23.89	24.48	2.45
South South	0.00	0.00	0.00	487.35	503.49	3.31	0.00	0.00	0.00	23.22	23.63	1.76
National Total	259.56	288.96	11.33	814.69	850.38	4.38	373.45	382.47	2.42	297.83	323.74	8.70

Table 3.9.8 Zonal summary of outputs (sorghum, maize, Rice, Ginger (X 1000 MT)

Zone	Sorghum			Maize			Rice			Ginger		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
North East	1584.70	1555.16	-1.86	1255.81	1315.08	4.72	381.35	491.44	28.87	0	0	0.00
North West	3421.60	3394.95	-0.78	1929.16	1977.34	2.50	840.74	959.83	14.17	453.41	455.18	0.39
North Central	1864.3	1874.66	0.56	2696.97	2710.86	0.51	2146.50	2154.37	0.37	5.94	12.46	109.89
South West	26.465	26.24	-0.82	2019.17	2031.43	0.61	325.94	538.11	65.10	0.82	2.06	151.31
South East	0	0	0.00	512.66	515.40	0.54	546.58	655.7	19.96	0	0	0.00
South South	0	0	0.00	766.45	783.10	2.17	326.16	461.60	41.53	0	0	0.00
National Total	6897.076	6851.03	-0.67	9180.24	9701.24	5.68	4567.29	5261.03	15.19	460.17	469.71	2.07

Table 3.9.9 Summary of outputs for yam, groundnut, millet, cassava (X 1000 MT)

Zone	Yam			Groundnut			Millet			Cassava		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
North East	3.02	3.02	0.00	856.38	856.66	0.03	281.64	281.7	0.02	77.93	77.97	0.05
North West	744.65	744.63	0.00	754.34	758.54	0.56	568.81	569.09	0.05	2637.42	2637.38	0.00
North Central	16910.98	16913.05	0.01	1303.85	1309.43	0.43	420.92	429.78	2.11	14688.42	14691.56	0.02
South West	5620.12	5622.86	0.05	20.39	20.22	-0.79	0	0	0.00	11709.17	11709.57	0.00
South East	7404.34	7406.95	0.04	9.54	10.26	7.48	0	0	0.00	10947.67	10950.09	0.02
South South	6432.37	6433.21	0.01	18.23	20.13	10.39	0	0	0.00	12342.86	12342.34	0.00
National Total	37115.5	37123.73	0.02	2962.767	2975.27	0.42	1271.37	1280.574	0.72	52403.48	52408.9	0.01

Table 3.9.10 Summary of outputs – cowpea, cocoyam, benniseed, soybean (X 1000 MT)

Zone	Cowpea			Cocoyam			Benniseed			Soybean		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
North East	858.63	858.83	0.02	39.46	31.69	-19.70	22.78	22.83	0.24	12.03	1.68	-86.03
North West	575.22	577.92	0.47	228.90	218.45	-4.56	24.33	23.94	-1.60	13.84	240.25	1635.23
North Central	233.08	253.66	8.83	7.70	7.93	3.01	407.04	411.56	1.11	86.44	325.09	276.07
South West	181.22	186.37	2.84	7.79	7.79	0.00	1032.28	1032.52	0.02	0	9.08	0.00
South East	2.91	2.70	-7.18	0	0	0.00	811.68	808.585	-0.38	0	2.5	0.00
South South	9.69	8.41	-13.24	0	0	0.00	967.57	969.51	0.20	0	0	0.00
National Total	1860.78	1887.91	1.46	283.8665	265.87	-6.34	3265.70	3268.97	0.10	527.90	619.6079	9.70

Table 3.9.11 Summary o outputs- cotton, okora, onion, tomato (X 1000 MT)

Zone	Cotton			Okra			Onion			Tomato		
	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change	2011	2012	% Change
North East	1.41	2.35	67.98	45.28	49.65	9.66	121.9	120.94	-0.78	432.99	431.36	-0.38
North West	235.02	234.62	-0.17	123.94	131.14	5.81	524.70	527.183	0.47	547.85	559.10	2.05
North Central	318.01	328.86	3.41	324.21	331.20	2.15	120.43	121.99	1.29	252.03	265.51	5.35
South West	7.95	12.65	59.16	134.07	144.98	8.13	1.07	1.09	1.40	188.25	193.95	3.03
South East	2.38	2.49	4.79	99.314	94.66	-4.69	0	0	0.00	44.50	50.62	13.74
South South	0	0	0.00	116.80	126.7	8.48	0	0	0.00	34.78	35.48	2.03
National Total	564.76	580.97	2.87	843.62	878.33	4.11	768.10	771.20	0.40	1500.40	1536.02	2.37

Table 3.9.12 Cultivated Area Land in Nigeria in 2011 and 2012 (X 1000 hectares)

Crop	2011	2012
Maize	5153.37	5218.195
Sorghum	4891.151	4870.802
Rice	2571.055	16971.80
Ginger	48.91	51.95399
Yam	4267.879	4329.655
Cowpea	3189.502	3201.452
Groundnut	2342.752	2351.824
Millet	2889.102	2894.478
Cassava	3917.796	3922.094
Cocoyam	411.6595	415.3407
Benniseed	191.5011	181.4389
Soybean	608.6675	616.2248
Cotton	259.5606	288.9603
Okra	814.69	850.3776
Onion	373.445	382.4748
Tomato	297.829	323.7375

Table 3.9.13: Crop Production in Nigeria in 2011 and 2012 (X 1000 MT)

Crop/Year	2011	2012
Maize	9180.242	9701.241
Sorghum	6897.076	6851.034
Rice	4567.29	5261.039
Ginger	460.17	469.7111
Yam	37115.5	37123.73
Cowpea	1860.784	1887.913
Groundnut	2962.767	2975.27
Millet	1271.37	1280.574
Cassava	52403.48	52408.5
Cocoyam	3265.707	3268.976
Benniseed	227.3194	246.6463
Soybean	527.9041	619.6079
Cotton	70.7574	73.90043
Okra	843.624	878.3311
Onion	768.1033	771.2032
Tomato	1500.406	1536.015

Table 3.9.14: Average Crop Yield in Nigeria in 2011 and 2012

Crop	2011			2012		
	Area	Production	Yield	Area	Production	Yield
Maize	5101.84	9088.44	1.781405	5218.195	9701.241	1.859118
Sorghum	4842.24	6828.106	1.410113	4870.802	6851.034	1.406552
Rice	2545.345	4521.617	1.776426	2605.285	5261.039	2.019372
Ginger	48.4209	455.5683	9.408505	51.95399	469.7111	9.040905
Yam	4225.2	36744.34	8.696473	4329.655	37123.73	8.574294
Cowpea	3157.607	1842.177	0.583409	3201.452	1887.913	0.589705
Groundnut	2319.325	2933.139	1.264652	2351.824	2975.27	1.265091
Millet	2860.211	1258.656	0.440057	2894.478	1280.574	0.442419
Cassava	3878.618	51879.44	13.37575	3922.094	52408.5	13.36238
Cocoyam	407.5429	281.0278	0.689566	415.3407	3268.976	7.870589
Benniseed	189.5861	3233.05	17.05321	181.4389	246.6463	1.359391
Soybean	602.5808	559.1124	0.927863	616.2248	619.6079	1.00549
Cotton	256.965	72.0621	0.280436	260.9603	73.90043	0.283186
Okra	806.5431	835.1878	1.035515	850.3776	878.3311	1.032872
Onion	369.7106	760.4222	2.056804	382.4748	771.2032	2.01635
Tomato	294.8507	1485.402	5.037809	323.7375	1536.015	4.744632



3.9B: FLOOD AND IMPACTS IN 2012 CROPPING SEASON IN NIGERIA

Flood occurrence

Heavy floods occurred across the country that affected about 30 states of the federation in 2012. About 198 LGA were economically affected in addition to over 350 persons that lost their lives. A huge chunk

of agricultural land was washed away and a substantial number of livestock and fishes were destroyed.



Heavy flood at Lokoja caused severe damages and obstructed movement of persons and goods in ways never imagined.

The tables below provide an estimated crop loss that occurred during the year owing to the flood. The estimated losses due to flood as reflected in the survey were 862,800 metric tons (16.4%) of rice, 1,105,900 metric tons (11.5%) of maize and 4.26 million tons of yam and 4.87 million

tons of cassava. For most of the other crops affected, output losses were less than 100,000 metric tons. Although these losses are huge, the quantity of outputs of each of the crops affected remained closed to the output figures for 2011 indicating no apparent danger of food insecurity except of course for the displaced communities. Obviously the increases in outputs that were the gains of the ATA were more or less wiped away by the flood. The estimated losses however represent very significant economic losses of about 400 billion naira based on Guarantee Minimum Price (GMP) (55,000 naira per ton of maize, 40,000 naira per ton of rice, 60,000 naira/ton of sorghum, 20,000 naira per ton of cassava, 75,000 per ton of soybean) regime adopted in December 2012 by the Federal Government.

Using the same GMP, the six crops significantly affected by flood in 2012 posted an aggregate value of over 3.3 trillion naira despite the about 400 billion naira lost to flood. Imagine the value of these crops at competitive market prices!

States affected

Three categories of flood impact occurred in 2012: extensive (A), moderate (B) and low (C). The table below indicates the extent of flood and high variability exists in terms of damages caused by the flood across about 20 states affected.

3.9.16: Table: The value of major crops in 2012 and impact of flood in Nigeria

Crop	Production in 2011	Estimated Production in 2012	Estimated losses due to flood in 2012 (x1000 MT)	% yield lost due flood in 2012	Potentially available for consumption in 2013	Value of Losses in Naira in 2012	Estimate value of current major crop output in 2012 less depression caused by flood
Rice	4567.29	5261.039	862.8	16.4	4398.23	34.5 million	175.93 billion
Maize	9180.242	9701.241	1,105.9	11.4	8,595.34	60.82 billion	472.74 billion
Cassava	52403.48	52408.9	4,874.0	9.3	47,534.0	97.48 billion	950,7 billion
Sorghum	6897.076	6851.034	431.6	6.3	6,419.43	25.9 billion	385.16 billion
Soybean	564.76	619.6079	58.86	9.5	560,747	4.4 billion	42.1 billion
Cocoyam	283.8665	265.8793	14.62	5.5	251.26	365.5 million	6.28 billion
Yam	37115.5	37123.73	4,269.2	11.5	32,854.53	170.76 billion	1.31 trillion
Total						394.226 billion	3.342.9 trillion

Table 3.9.17: States affected by flood, crops and livestock affected and the extent of flooding in 2012

State	Flood damage Category	Crops affected	Livestock /fish affected
Adamawa	A	Sorghum, Maize, Cowpea	Cattle, Sheep and Goat, Fish
Anambra	A	Maize cassava, yam, cocoyam	Cattle, Sheep and Goat, Fish
Bayelsa	A	Maize cassava, yam, cocoyam	Cattle, Sheep and Goat, Fish
Benue	A	Maize cassava, yam, Rice, soybean	Cattle, Sheep and Goat, Fish
Delta	A	Maize cassava, yam, cocoyam, Plantain and banana	Chicken, Goat Fish
Edo	B	Maize cassava, yam, Plantain and banana cocoyam	Goat
Imo	c	Maize. cassava	

Jigawa	A	Millet, Sorghum, maize, Benniseed	Cattle, Sheep and Goat,
Kebbi	B	Sorghum, millet, maize	Cattle, Sheep and Goat,
Kogi	A	Maize, cassava, Plantain and banana	Cattle, Sheep and Goat, Fish
Kwara	B	Maize cassava, yam, Plantain and banana cocoyam	Cattle, Sheep and Goat, Fish
Niger	C	Maize cassava, yam, Plantain and banana cocoyam	Cattle, Sheep and Goat, Fish
Plateau	C	Maize cassava, yam, Plantain and banana cocoyam	Chicken
Kaduna	C	Maize, Rice	-
Lagos	B	Water melon, maize, cassava	-
Oyo	B	Maize, cassava	-
Ogun	C	Maize	-
Nassarawa	A	Rice, maize, cassava, soybean, yam	Cattle, Sheep and Goat, Fish
Katsina	B	Maize, sorghum, rice, millet	Chicken, sheep and goat
Cross Rivers	B	Yam, cassava, mazie	
Ebonyi	C	Rice	
Enugu	C	Maize, cassava, cocoyam	
Ekiti	C	Maize	
FCT	C	Rice.	

3.10 LIVESTOCK

Livestock has historically constituted one of Nigeria's major economic resources in terms of livelihood but has remained the poor stepchild of petroleum and crop production in terms of its contribution to trade and export. The value of livestock, based on mid-1991 market prices, was crudely estimated to be in the region of ~~N~~60 billion; undoubtedly a major national asset and a renewable resource worthy of sustained development. However, some factors limit the development of the livestock sub-sector of agriculture in Nigeria. These limiting factors have continued to vary in zones and species.

The most widely reported constraints to livestock production relate to: animal health care and disease control; the limited capacity of extension services; conflict between pastoralists and arable farmers; and the prevalence of theft. All these deter investments. Previous reports of Agricultural Performance Survey in Nigeria had illustrated the near-absence of livestock data. This year's report is not in any form different in terms of lack of livestock data in many states. Recommendations had been made severally by previous reports for the establishment of livestock census units in all the three tiers of government in Nigeria.

3.10.1 Livestock population

Table 10.1 shows livestock population and commercial farms in Nigeria. Large populations of cattle, sheep and goats were also reported in Borno, Bauchi, Ekiti, Enugu, FCT and Kano states. A large population of poultry were reported in Bauchi, Ekiti, Ondo, Kano and Rivers states. Large population of rabbits was reported in Bauchi and Ondo states. Bayelsa State reported the existence of domesticated grasscutters.

Table 3.10.1: LIVESTOCK POPULATION AND COMMERCIAL FARMS IN NIGERIA

	LIVESTOCK TYPE	TOTAL POPULATION	POPULATION OF COMMERCIAL STOCK	No of COMMERCIAL FARMS AND AVERAGE HOLDINGS	
				No of Farms	Average Herd or Flock Size
North East					
Borno	Cattle, sheep and goats	250000	10000	Over 20	200 - 500
Bauchi	Cattle	2,000,000	500,000	25,000	20
	Sheep	3,000,000	1,000,000	34,000	30
	Goat	4,000,000	2,000,000	66,600	20
	Poultry	5,000,000	20,000,000,	600,067	3,000;
	Rabbits	500,000	Nil	Nil	Nil
Gombe	Cattle; Poultry	36; 2377	NA	NA	NA
North West					
Kano	Cattle	1000000			>1000
	sheep	3000000			
	goat	4000000			
	poultry (exotic)	4000000			
	poultry (local)	6000000			
North Central					
FCT	Cattle, sheep/goats, poultry	1530000	1300000	41000	10-1515-400
		250000	50000	12115	50 - 1000
		16,600,000	15600000	10039	
Kwara	Cattle	220		40; 5	20 Nil Nil Nil
	Goat	7,200		Nil	
	Sheep	1,920		Nil	
	Chicken	400,000			
South West					
Ondo	Poultry	630795	10094		200 25 8 Nil Nil
	Pigs	24918			10
	Cattle	32923			
	Sheep	85804			
	Goats	7880			
	Rabbits				
Ekiti	Poultry;	NA	1125400	2507 22 550	4010 85 10 36
	cattle		2015	42	
	sheep and goats		250000		
	pig		5000		
South East					
Enugu	Poultry	40000	40000 9000 3000	200 160	100-200 10-50 5-
	Pig	9000	800.	300 80.	10; 5-10.
	goats	3000			
	sheep	800.			
Cross River	Poultry	NA	500000	250	NA
Bayelsa	Cattle	400	NA	NA	7; 12 10 8 10 3
	sheep	340			2000
	goats	570			
	pigs	490			
	rabbit grasscutter	365			
	poultry	300			
		135000			
Rivers	Poultry; Cattle	12,700	1,100,000 100	57; 1	3,000; 100

Not: Data were not available for most of the states and remained a serious challenge to the development of the livestock sub-sector.

3.10.2 Livestock Diseases and Pests

Data on livestock diseases and pest are shown in Tables 10.3a and 10.3b.



Fulani herdsmen and the dairy merchants rely mainly on cattle

Cattle

In cattle production, the following diseases were prevalent: CBPP in Bauchi, Gombe, Jigawa, Katsina and Kano; FMD in Bauchi, Bayelsa, Benue, Gombe, Jigawa, Kano and Plateau states while feed poisoning occurred in Bayelsa State. Other reported disease conditions that

affected cattle were streptotricosis, LSD and trypanosomiasis. Gombe, Katsina, Jigawa, Kano, Lagos and Bayelsa vaccinated their stocks against some of the prevalent diseases.

Sheep and goats

There were reported cases of PPR, worm infestation, pneumonia, foot rot and mange as the most common diseases that affected sheep and goats in 2012. Bayelsa, Gombe, Jigawa, Katsina, Kano, Lagos and Rivers treated and vaccinated large populations of their sheep and goats.

Poultry

There was intensified poultry production this year. The practice of intensive, semi-intensive and free range systems of rearing chicken and other poultry species existed side by side. However, a clear shift of farmers to intensive system of production was reported across the country. In a few large-scale commercial farms, exotic birds were introduced. Inadequate feed and veterinary services were among the drawbacks that farmers complained about in most of the states. Some poultry farmers had some difficulties in securing veterinary services, resulting in mortality due to the severity of outbreak of the diseases like Marek, Newcastle, Gumboro and fowl typhoid in most parts of the country.

Table 3.10.1:Livestock pest and diseases (Cattle)

	Disease or Pest	Location of incidence	Total stock of Animal	No of Animal Affected	%	NoVaccinated or Treated	Number Culled due to infection	Remarks
North East								
Bauchi	CBPP, FMD	Bauchi, Gamawa, Zaki, Misau, Katagum, Darazo.	NA	NA	NA	NA	NA	
Gombe	CBPP FMD LSD	Dukku & Gombe State wide Akko, Kaltungo & Balanga	85 150 46	20 40 8	23.526. 7 17.4	84 40 8	1	Controlled; Controlled; Controlled;
North West								
Katsina	CBPP	Ung-Doka; Faskari	46.	17.	36	29	5.	Ring vaccination
Jigawa	CBPP		15250	40	0.26	8750		
Kano	CBPP	State-wide	1000000	370000	NA	144388	-	
North Central								
Plateau	FMD; Tricosis	Jos South; Jos South;						
FCT	Trypanosomiasis, tick, worm, FMD	Paiko-Kore						
Benue	FMD	State wide	NA	NA	NA	NA	NA	
South West								
Lagos	Mastitis Ticks Trypanosomosis	Ojo Apa Agbowo	50 30 45	20 30 1		20 30 1	1	
South East and South- South								
Cross River	Strestioitricosis/Ectoparasites	Obudu cattle ranch		206	NA	NA	NA	
Bayelsa	Food poisoning; Damatophilosis; FMD; Tick infestation	Ayakoro Kaiaama Elebele Elebele.	21 6 60 60.	18 3 5 32.	86 50 8.3 53			

Table 3.10.2: Livestock pest and disease (sheep, goats and poultry)

	Disease or Pest	Location of incidences	Total stock of Animal	No. of Animal Affected	%	NoVaccinated or Treated	Number Culled due to infection	Remarks
North East								
Bauchi	PPR, IBD	Bauchi, Gamawa, Zaki, Misau, Katagum, Darazo.	NA	NA	NA	NA	NA	
Gombe	PPR Helminthosis NCD; Fowl typhoid CRD;	State wide State wide Deba & Gombe Gombe State wide	80; 80,358 15,000 18,000 16,000	35 19,675 4,000 7000 6,000	43.8 24.5 26.7 38.9 37.5	75 80,358 9,000 7,000 8,000	5 Nil 1,000 1,200 2,000	Controlled Controlled Controlled
North West								
Katsina	PPR; Mareks NCD	Jibia; Zango Batagarawa Katsina	50; 378 120 1004 1200 800.	8 14 50 30 40	2 11.66 4 2.5 5.	370 106 950 1100 800.		
Jigawa	PPR		12272	1712	13.95	15000		
Kano	PPR NCD	State-wide	7000000 10000000	311000 670000	4 7	144388 194825	273000	
Kaduna	NA	NA	NA	NA	NA	NA	NA	
North Central								
FCT	Tick, PPR	Paikon-Kore	NA	NA	NA	NA	NA	
Benue	PPR	Statewide	NA	NA	NA	NA	NA	
South West								
Ekiti	Diarrhoea Mange Cold-catarrh Coccidiosis Newcastle	Igede/Ilawe Ado/Ilawe Statewide - -	50 33 200 - -	5 4 10 - -	1 1 - - -			
Lagos	Mastitis Footrot Hardware Newcastle Gumboro Coccidiosis	Ojo Agbowo Imota Ojo Imota Agege	20 10 7 1500 800 300	5 1 1 500 250 300	5 1 1 500 250 300			

South East and South-South								
Enugu	Ticks, worms/ flukes							
Akwa-Ibom	Newcastle disease, coccidiosis and fowl typhoid	Essen Udim	NA	NA	NA	NA	NA	
Bayelsa	Foot rot Mange PPR Coccidiosis Lice Gumboro.	Bomadi Bomadi Yenagoa Imiringi Etegwe Elebele.	80 80 21 2500 1800220 0.	15; 23; 04	1929 19;	15; 23 21; 2500 1800; 2200.	NA, NA, 1 10; NA; 2.	
Rivers	PPR Helminthosis Mange Coccidiosis Newcastle disease Fowl typhoid	State wide				Nil; 850; 121; 164,000; 187,000; 92,0000;	11,000; 24,000; 2,300;	

3.11 FISHERIES

3.11.1 Fisheries Input

The fisheries input procurement and distribution across the country was dismal in 2012 compared to 2011. Only Edo State provided data in support of procurement and distribution of fisheries input, such as out board engines, fishing nets and floats. The procurement and distribution data of fisheries inputs was unavailable from all the other states and the FCT. This perhaps could be due to lack of funds or low budgetary allocation for fisheries production, hence there is an urgent need to recognize the importance of fish production and accord it the required attention to enhance the production which has seriously reduced across the states.

3.11.2 Fisheries Diseases

Aquaculture productions were affected by various diseases (Table 3.9.2). These diseases included bacterial, fungal and viral infections. Broken skull disease had a spread across most of the states. Fish parasites such as Hirudinea, leeches, lue, helminthes, skin infections, ulcerative caudal fin, white patches on the head, broken head and predator attacks from Dragons flies, Monitor lizards, snakes and frogs were reported in Ekiti, Taraba, Ondo, Rivers, Bauchi, Jigawa, Kaduna, Bayelsa, Kano and Edo states. Effects ranged between light and heavy. Pest and diseases consisted a major challenge to fish farmers because of lack of know-how and manpower in disease diagnosis and treatment. Poor feeding, insufficient water supply and poor management of fish stock were other challenges confronting fish farmers.

There is, therefore, the urgent need to train fisheries technical staff on fish disease prevention, diagnosis and treatment to forestall avoidable losses. Fish farmers, if possible, should also be trained on how to produce own feeds using locally available but nutritionally balanced feed resources.

Table: 3.11.1 Fisheries (input) Supply in 2011 and 2012 by states

State	Type of input	Quantity procured by Government		Quantity distributed by govt.	
		2011	2012	2011	2012
Adamawa	NA	Na	Na	Na	Na
Bauchi	Fingerlings Fish feeds Drugs	30,000 1300 bags 200 sachets	Na	30,000 1300 bags 200 sachets	Na
Borno	Na	Na		Na	
Gombe	Na	Na		Na	
Yobe	Fingerlings Feeds	10,000 180bags	Na	Na	Na
Jigawa	Gill nets Hooks Cast nets Seine nets Trawl nets Boats	Na	Na	Na	Na
Kaduna	Fish feeds Drugs Local feeds	150bags/15kg	Na	Na	Na
Kano	Na	Na	Na	Na	Na
Katsina	Na	Na	Na	Na	Na

State	Type of input	Quantity procured by Government		Quantity distributed by govt.	
		2011	2012	2011	2012
Kebbi	Bundles of nets	150	NA	150	
	Assorted hooks	50		50	
	Wooden boats	50		50	
Bayelsa	Heterobranchusfingerlings	NA	NA	Na	Na
Delta	Fish seeds	Na	Na	Na	Na
	Tarpaulin tanks	Na	Na	Na	Na
	Burkinabe smoking kilns	Na	Na	Na	Na
Edo	25Hp obe	3	Na	25Hp obe	3
	8Hpobe	7	Na	8Hpobe	7
	Fishing nets	250bundles	Na	Fishing nets	250bundles
	Twine	1,111 pcs	Na	Twine	1,111 pcs
	Floats	4,445 pcs	Na	Floats	4,445 pcs
Ekiti	7	Na	Na	Na	Na
Lagos	250bundles	4	Nil	4	Nil
		76 Bundles	Nil	74 Bundles	Nil
Ogun	1,111 pcs	Na	Na	Na	Na
Osun	4,445 pcs	250 rolls	Na	200 rolls	Na
		200 bundles		200 bundles	
		600,000 tilapia		600,000 tilapia	
		250 dozens		250 dozens	
		150 sheets		150 sheets	

Table 3.11.2: Fisheries Pests and Disease Situation

Fish species	Pest/diseases	States Where Reported	Severity	Control Measures undertaken
Catfish Clarias Spp Heterobranchus Spp	Bacterial infection, Lue, Salmonella. Protozoa, helminths Broken head	Ekiti Taraba, Kaduna	Low	Managed
Heterobranchus spp	Nutritional deficiency, skin infection broken head	Rivers	High Low	
Catfish (Clarias Spp)	Hirudinea Leeches, Ulcerative caudal fin White head broken head Gill rot Barbell rot	Bayelsa Bauchi	Severe	Water quality management
Catfish Hybrid	Fungal	Jigawa	Mild	Little / no treatment
Catfish	Fungal and Viral infections	Kano	Severe	Anti biotics and Good Watermanagement

3.11.3 Fisheries Production Estimate

Data from seven states on artisanal fisheries output in 2012 were compared with those of 12 states in 2011 (Table 3.11.3). This included both inland and coastal artisanal fisheries. Fifteen (15) states also had data on fisheries output which included both artisanal and aquaculture production in 2011.

In 2012, of 10 states had data on fisheries output including both artisanal and aquaculture productions. Eight states had data for aquaculture production while 6 others had for artisanal inland output production. Artisanal fisheries production indicated some levels of increase in 3 states, i.e. Sokoto (21.01%), Bauchi (0.73%) and Kano (100.22%). However, Niger (3.64%), Gombe (19.51) and Jigawa (10.10%) states had reduced production by 3.64%, 19.51% and 10.10% respectively, compared to data of 2011. This may be attributed to lack of operational inputs for fishing.

Data on aquaculture production for 4 out of 6 states indicated an appreciable increase in production output in 2012. The states are Abia, Bauchi, Ekiti, and Ondo, with 5.10%, 6.38%, 12.50% and 7.10% values accordingly.

In Kano and Benue states and the FCT, reduced values of output were recorded at (48.00%, 63.71% and 52.72%) in 2012 compared with those of 2011. The reduction could be attributed to lack of support from government, insufficient aquaculture skills, diseases' infection and high cost of feed and fingerlings.

Table 3.11.4: Domestic fish Production in Nigeria (2001-2011)

Year	Tons
2001	487,313
2002	511,720
2003	510,762
2004	509,201
2005	579,544
2006	636,848
2007	615,506
2008	684,575
2009	780,705
2010	849,026
2011	893,099

Figure 3.11.1: Projected Domestic Fingerlings Production from 2000 – 2011

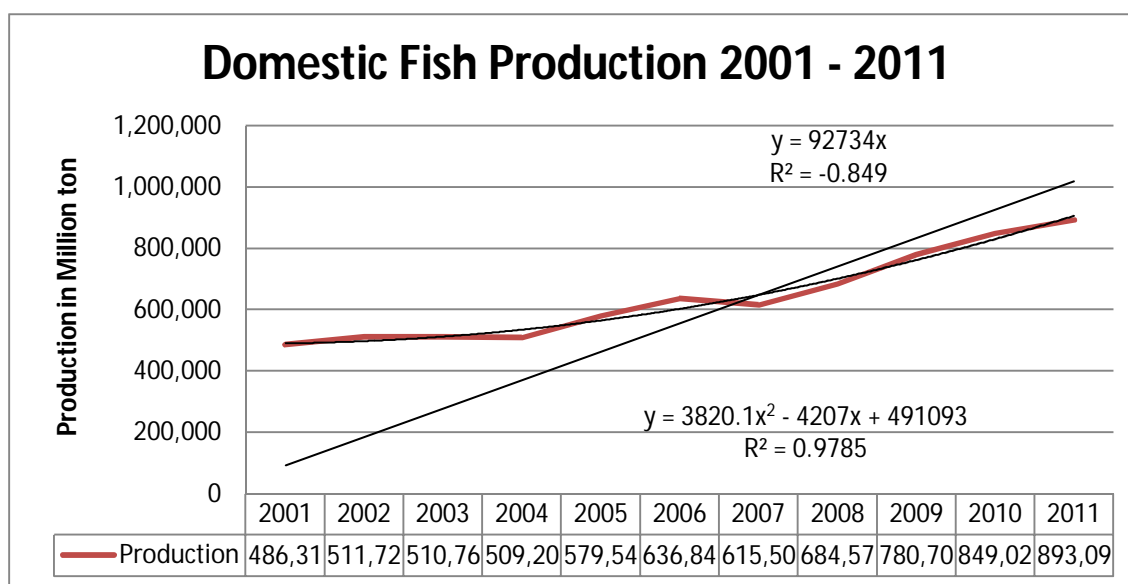


Table 3.11.5: Projected Domestic Fingerlings Production from 2000 –

Year	Fingerlings Production
2000	20000
2001	2800000
2002	4500000
2004	9500000
2005	22900000
2006	30000000
2007	32500000
2008	35000000
2009	44110870
2010	50238587
2011	56366304

Table 3.11.6: Production Estimates for Fisheries by various states (MT) 2011 and 2012

S/N	State	Artisanalinland fish catch			Artisanal CoastalFish catch			Aquaculture		
		2011	2012	%Change ¹	2011	2012	%Change	2011	2012	%Change
1	Bauchi	12.31MT	12.40MT	0.73	NA	NA		47.00MT	50.00MT	6.38
2	Gombe	1.39MT	7.42MT	-19.51	NA	NA		2.46MT	1.98MT	43.38
3	Jigawa	29,770MT	17,341MT	-41.75	NA	NA		1,099MT	2,930MT	62.49
4	Sokoto	19,180MT	23.210MT	21.01	NA	NA		NA	NA	
5	Kano	46.45MT	93.0MT	100.22	NA	NA		7,800MT	15,000MT	-48.00
6	Taraba	NA	NA		NA	NA		16,000MT	NA	
7	Nasarwa	7.500MT	NA		NA	NA		82MT	NA	
8	FCT	NA	NA		NA	NA		27,811MT	18,211MT	-52.72
9	Niger	55,000MT	53,000MT	-3.64	NA	NA		NA	NA	
10	Kogi	NA	NA		NA	NA		318.24MT	NA	
11	Benue	NA	NA		NA	NA		964.52MT	350.06MT	-63.71
12	Osun	400MT	NA		NA	NA		1,200MT	NA	
13	Oyo	NA	NA		NA	NA		27,000MT	NA	
14	Ekiti	NA	NA		NA	NA		40MT	45MT	12.5
15	Ondo	NA	NA		NA	NA		219.649MT	235.249MT	7.10
16	Ogun	13,170.790MT	NA		NA	NA		8,374.610MT	NA	
17	Lagos	NA	NA		95,077MT	NA		14.911MT	NA	
18	Abia	NA	NA		NA	NA		2160.35MT	2270.53MT	5.10
19	Bayelsa	36,409.59	68,048.85		NA	NA		48,000	NA	

Table 3.11.7: Fish Import by Sector from 2001 – 2009

SECTOR	2001	2002	2003	2004	2005	2006	2007	2008	2009
fresh or chilled s almonidae	57,191,702	4,358,596	9,315,960	91,538	9,021,453	4,021,248	NA	NA	65,518,949
fresh or chilled herrings	96,285,454	540,353	4,358,596	NA	NA	74,003,015	2,093,923,252	20524619	437,646,485
fresh or chilled sardines, brisling or sparts	1,053,584	2,821,728,221	88,662,529	1,242,107	NA	97,351,094	53,342,286	21,259,082	14,216,862
fresh or chilled mackerel	33,679,787	171,383,567	68,590,372	52,148,896	NA	457,485,060	989,287,889	NA	341,814,207
frozen pac.salmon	1,103,050,002	130,635,275	7,224,158	14,274,216	NA	NA	2,382,687	6544700	NA
frozen trout	111,147,026	11,518,989	17,600,956	859,103	NA	27,522,006	NA	NA	NA
frozen atlantic and danube salmon	219,641	653,900	17,600,956	NA	159,290,652	849,620	49,294	42,904,767	150,713,385
frozen salmon	52,920,551	NA	241,110,110	27,160,687	159,290,652	1,159,798,152	13,279,647	115,440	64,487,242
frozen halibut	178,739	30,953,400	701,403	474,014,245	38,150,007	NA	20,775,000	3,968,281	NA
frozen cod	732,566,364	NA	22,724,818	149,092,096	6,953,650	NA	53,342,286	68,799,781	NA
frozen haddock	55,439,721	NA	204,220,730	4,190,482	NA	66,995,392	NA	NA	NA
frozen dogfish & sharks	85,777,015	111,297,643	1,754,676	63,839,268	NA	1,209,236,277	11,584,470	435,493,291	NA
frozen hake	112,692,142	70,437,049	8,658,306	90,987,786	90,293,974	7,279,812	3,579,727,037	94,023,140	174,680,063
TOTAL	2,442,201,728	3,353,506,993	692,523,570	877,900,424	463,000,388	3,104,541,676	6,817,693,848	693,633,101	1,249,077,193

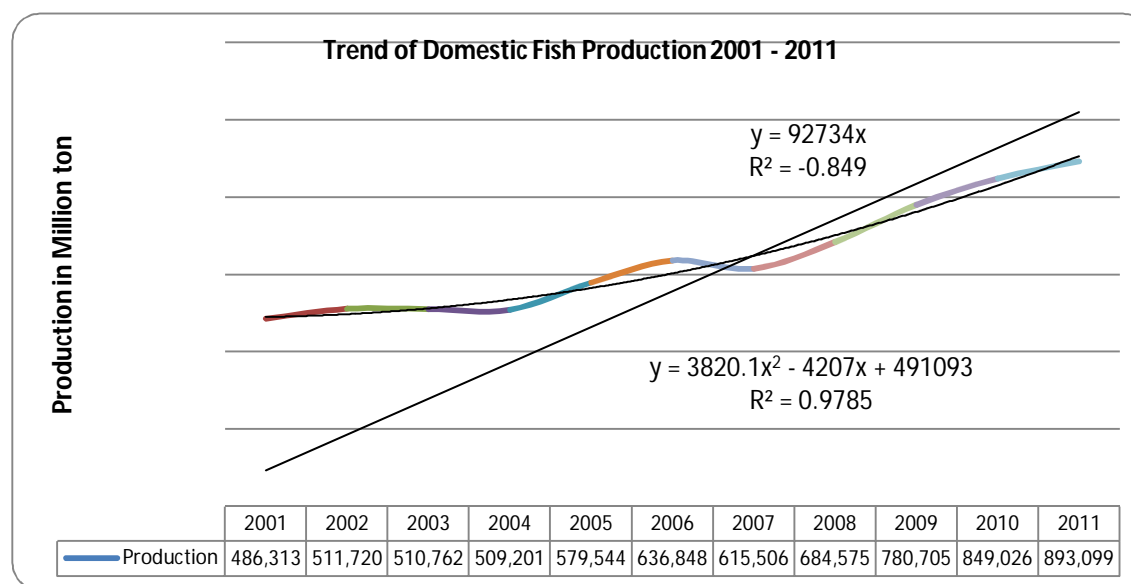
Source: NBS (2010)

Table 3.11.8: Nigerian Fish Supply by Sectors (tones) 1995-2011

S/N o	Sectors/year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
1	Artisanal: Sub total	320,955	309,200	360,220	433,069	426,786	418,064	433,537	450,965	466,203	434,830	490,594	518,539	504,227	511,382	598,211	616,981	638,486
	Coastal & Brackish	159,201	138,274	175,126	219,073	239,228	236,801	239,311	253,063	241,823	227,523	259,831	269,878	260,099	264,988	309,981	323,332	346,381
	Inland: Rivers & Lakes	161,754	170,926	185,094	213,996	187,558	181,268	194,226	197,902	204,380	207,307	230,763	248,659	244,128	246,394	288,230	288,649	292,105
2	Aquacult ure	16,619	19,490	25,265	21,738	20,458	25,720	24,398	30,664	30,677	43,950	56,355	84,533	85,087	143,207	152,796	200,535	221,128
3	Industrial Trawlers	33,479	27,244	27,703	29,955	31,139	23,308	28,378	30,091	33,882	30,421	32,595	33,778	26,193	29,986	29,698	31,510	33,485
	Fish (Inshore)	21,191	15,425	15,326	17,943.0 0	14,180	13,877	15,792	16,065	17,542	16,063	19,724	19,129	18,040	18,585	18,820	19,261	19,736
	Shrimp (Inshore)	12,252	9,551	10,807	10,716	15,249	8,056	12,380	12,797	11,416	12,469	10,946	13,767	5,999	9,881	10,878	12,249	13,749
	EEZ	36	2,268	1,570	1,291	1,709.70	1,375	206	1,229	4,924	1,889	1,925	882	2,158	1,520			
4	Distant water	226,448	403,273	382,442	373,044	466,840	557,884	648,197	681,152	663.18	648,033	611,520	646,484	739,666	937,428	718030	718387	718745
	GrandTotal	637,501	759,207	856,526	946,503	1,024,982	1,134,510	1,192,872	1,173,942	1,157,234	1,191,064	1,283,332	1,355,173	1,283,332	1,622,033	1,780,705	1,849,026	1,893,099

Summary Table 3.11.9: Nigerian Fish Supply by Sectors (tones) 1995-2011

S/No	Sectors/year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
1	Artisanal: Sub total	320,955	309,200	360,220	433,069	426,786	418,064	433,537	450,965	466,203	434,830	490,594	518,539	504,227	511,382	598,211	616,981	638,486
2	Aquaculture	16,619	19,490	25,265	21,738	20,458	25,720	24,398	30,664	30,677	43,950	56,355	84,533	85,087	143,207	152,796	200,535	221,128
3	Industrial Trawlers	33,479	27,244	27,703	29,955	31,139	23,308	28,378	30,091	33,882	30,421	32,595	33,778	26,193	29,986	29,698	31,510	33,485
4	Distant water	226,448	403,273	382,442	373,044	466,840	557,884	648,197	681,152	663,180	648,033	611,520.50	646,484	739,666	937,428	937,415	939,410.5	948,406.5



3.12 EXTENSION ACTIVITIES OF AGRICULTURAL DEVELOPMENT PROGRAMMES

3.12.1 ADP Funding and Staffing Adequacy in 2012

Activities of Agricultural Development Programmes (ADPs) nationwide in 2012 included regular training of extension personnel, farm visits, and extension programme planning, monitoring and evaluation. However, most of the public-funded extension institutions were weakened by inadequate and untimely release of funds from government. Tables 3.12.1a-12.1g highlight ADPs' activities, funding and staffing situation in 2012. Generally, they show that funding, number and quality of staff in ADPs across the country are inadequate. The challenge of poor funding was visible in Kano, Edo, Delta, Enugu, Benue, Zamfara and Bauchi states. Most other states also recorded poor funding or non-release of funds. The ADPs in Gombe, Kano and Edo states received fair levels of funding in 2011; though inadequate, it was not sustained in 2012. It can be seen that the ADPs are increasingly being poorly-funded in addition to their long standing problem of inadequate and poorly motivated extension personnel.

3.12.2 Staffing

ADPs' current staffing situation is highlighted in the column for EA/farmers ratio on the table for each zone. Generally, the staff strength is weak due to financial and other problems. In most of these organizations, there were vacant positions waiting to be filled, especially the Extension Agents (EAs) category. Most extension staff/members lack adequate skills and practical exposure relevant to their functions perhaps due to lack of access to training opportunities. The poor level of funding discouraged the recruitment of young extension staff in most of the ADPs. Currently, the average age of extension agents in most of the ADPs is in the range of 45 to 55 years. In many states, up to 35% of the staff in the next 4 years and more than 74% in the next 10 years. Unless the challenges of poor funding and ageing staff are urgently addressed, short to medium-term sustainability of agricultural growth, anchored on effective and energetic extension staff, may not be realistic. Already, poor funding is creating a wide EA: farm family ratio and poor extension services across the states. To save these agencies from total collapse, urgent and innovative intervention at the federal level is imperative.

3.12.3 Farm families

Kano State has the highest population of farm families of 994,656. This was followed by Akwa-Ibom State, with 685,095 and Kaduna State, with 606,007. However, none of these states recorded any major change in the population of farm families from the 2011 figures, a factor likely connected with rural-urban migration of youths and the low number of VEAs (Table 12.1a).

3.12.4 Number of VEAs

The UN recommended a EA: Farmer ratio of 1:500 – 800. This ratio is the ideal for ease of coverage by village extension agents (VEAs). However, in developing countries with

low or moderate economy, an EA: Farmer ratio of 1:1000 is considered reasonable. This year, Kano, Bauchi and Ebonyi states had the highest number of VEAs of 705,600 and 553 respectively. However, when compared to 2011, only Enugu and Kwara states recorded increase from 22 to 80 and 120 to 137 respectively. The funding inadequacy of the ADPs across the country might have been the cause of non-employment of additional VEAs.

3.12.5 EA: Farmer ratio: Bayelsa, Anambra, Cross River and Benue states had the highest EA: Farmer ratio with 1:10,568, 1:9409, 1:4721 and 1:4000 respectively. On the other hand, Adamawa had the lowest EA: farmer ratio of 1:1212. Again this prevalence of large EA: farmer ratio is closely connected with the low number of frontline EAs. The current trend has persisted for several years. Thus, transforming agriculture in Nigeria in the light of the current number of extension personnel would require pragmatic personnel out-sourcing mechanisms as short to medium-terms measures.

3.12.6 Number of Subject Matter Specialists (SMSs): SMSs are the main link between research institutes and ADPs. Proven and relevant technologies from research are taught by SMSs to VEAs. Feedback to research as a way of evaluating progress is also achieved through SMS, especially during Fortnightly Trainings (FNTs) and Monthly Technology Review Meetings (MTRMs). Hence, the availability of SMS in different agricultural enterprises – crop, livestock and fisheries, agro-processing and women-in-agriculture – remains a major performance indicator in the ADP system. Akwa-Ibom, Oyo and Bauchi states had the highest number: 30, 28 and 27 SMSs respectively while Edo State had the least (only 3). In most cases, the number of available SMS depended on the number of zones operational in a state ADP. For instance, Katsina, Osun, Lagos and Ondo had no SMS. Generally, there was low number of SMS across the country. This implied that transfer of improved agricultural technologies to farmers and other end users was seriously affected.

3.12.7 Number of Block Extension Supervisors (BESs): A BES has an important role to play in extension activities, especially under the Training and Visit extension system. The BESs is the supervisory agent who ensures EA's promptness. The number of BES should depend on the number of VEAs at a standard BES: VEA ratio of 1:8). In 2012, Akwa-Ibom's BEAs and VEAs were 35 and 205; Abia had 38 and 79; Adamawa, 42 and 297; while Kano had 87 and 705. Majority of the states had low BES: VEA ratios.

3.12.8 Block Extension Agents (BEAs): Borno, Adamawa Jigawa, Niger, Benue, Osun, Cross-River and Bayelsa states reported no BEAs. Extension contact to women empowers them in order to meet social and/or development challenges. Thus, women were probably not adequately served in the 5 states during the year under review. On the other hand, Akwa-Ibom, Imo and Abia states had the highest number of BEAs: 39, 38 and 38 respectively.

3.12.9 Number of Extension Visits to Farmers: Thirteen state ADPs (Borno, Adamawa, Jigawa, Kebbi, Sokoto, Kano, Taraba, Kwara, Osun, Lagos, Ondo, Enugu, and Cross River) did not report any farm visit conducted. Meanwhile, Kaduna and Plateau had the highest number of visits: 45,604 and 31,500 respectively, while Zamfara and Bayelsa conducted very low number of visits.

3.12.10 SPAT, MTP and OFAR: The success in technology dissemination and adoption by farmers depends on the number and effectiveness of SPAT, MTP and OFAR techniques conducted by ADPs. Against the 2001 figures, these techniques drastically declined in 2012. Borno, Adamawa, Katsina, Jigawa, Sokoto, Niger and Ondo states conducted very few SPATs, MTPs and OFARs in 2012. But the following states had more MTPs in 2012 than in 2011: Yobe (650) and Kogi (250). Plateau and Yobe recorded the highest (77 and 75) OFARs in 2012. Taraba and Abia states had the highest number of SPATs conducted: 4,106 and 3,375 respectively.

3.12.11 FNTs/MTs and MTRMs/QTRMs: The accomplishment of extension delivery largely depends on regular training and meetings of frontline VEA, which was usually carried out through FNTs/MTs and MTRMs. FNTs/MTs and MTRMs were not conducted by 41% of the ADPs due to financial and logistics problems. However, Anambra, Ekiti, Benue and Kogi conducted the highest number of FNTs of 68, 48, 32 and 22 in 2012 respectively. MTRM is an interactive forum where researchers train subject-matter specialists who in turn train VEAs during FNT meetings and go round to train farmers on new technologies. Funding problems compelled many ADPs to modify the MTRM to QTRM. Yet the achievement across the country was low. In 2012, 65% of the ADPs conducted MTRMs. Only Nasarawa and Abuja fully met their MTRM targets, while Abia and Ogun each had only one MTRM.



Exhibiting new tech and Encouraging farmers at field days

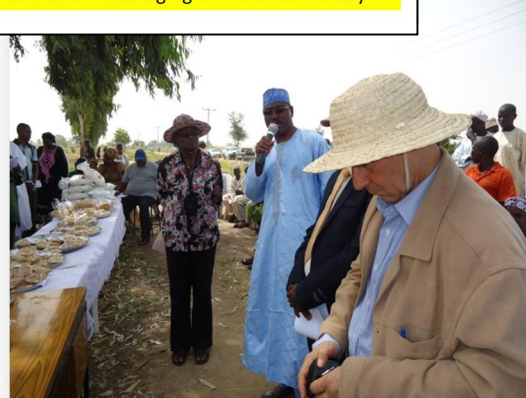


TABLE 3.12.1a: ADP Extension Activities

NORTH EAST ZONE

Extension Activities																		
State	Years		No. of Farm Families	Zones	SMSS	BES	BEA's/WIA	VEAs	VEA Visits	SPATs	FNTs/MTs	MTRMs / QTRMs	MTPs	OFARs	No. of Groups /Coops	EA/Farmer Ratio	No. of farmers Trained	No. of farmers field schools
Borno	2011	Tar	536,322	3	8	63	-	600	-	1395	-	-	-	-	-	1:1000	-	-
		Ach	536,322	3	8	63	-	273	-	360	-	-	-	-	-	1:1964.55	-	-
	2012	Tar	536,322	3	8	63	--	600	-	1395	-	-	--	-	-	-1:1000	-	-
		Ach	536,322	3	8	63	-	273	-	360	-	-	-	-	-	1:1964.55	-	-
Yobe	2011	Tar	407,834	2	12	32	32	350	31872	-	24	12	830	90	54	1:2472	8	1350
		Ach	407,834	2	12	32	8	265	31872	-	11	8	650	75	54	1:2472	-	1350
	2012	Tar	407,834	2	12	32	32	350	31872	-	-	12	830	90	54	1:2472	-	1350
		Ach	407,834	2	12	32	8	265	31872	-	11	8	650	75	54	1:2472	-	1350
Bauchi	2011	Tar	34,837	3	30	44	140	500	-	-	12	12	290	-	100	-	20,000	81
		Ach	34,837	3	30	44	16	306	-	-	5	3	290	-	52	-	-	81
	2012	Tar	-	3	27	50	110	600	2845	-	-	12	224	60	500	1:800	5000	81
		Ach	648510	3	27	24	36	285	1328	-	-	4	224	47	1768	1:1731	3375	76
Gombe	2011	Tar	253,378	11	7	81	81	250	9	250	20	12	-	-	81	1:1000	2430	108
		Ach	253,378	11	7	81	81	169	0	49	0	24	-	-	68	1:1255	1146	42
	2012	Tar	253,378	11	7	81	81	250	40	89	20	12	-	-	81	1:1000	2430	81
		Ach	253,378	11	7	81	81	169	9	89	0	24	-	-	81	1:1255	2025	81
Adamawa	2011	Tar	450,000	4	20	46	-	450	10,000	-	26	4	200	20	450,000	1:1000	30,000	-
		Ach	360,000	4	6	42	-	297	-	-	-	-	-	-	360,000	1:1212	30,000	-
	2012	Tar	450,000	4	20	46	-	450	151,000	-	26	4	200	20	450,000	1:1000	30,000	-
		Ach	360,000	4	6	42	-	297	-	-	-	-	-	-	360,000	1:1212	30,000	-

**TABLE 3.12.1b: ADP Extension Activities
NORTH WEST ZONE**

Extension Activities																		
State	Years		No. of Farm Families	Zones	SMSSs	BES	BEA's/WIA	VEAs	VEA Visits	SPATs	FNTs/MTs	MTRMs / QTRMs	MTPs	OFARs	No. of Groups /Coops	EA/Farmer Ratio	No. of farmers Trained	No. of farmers field schools
Jigawa	2011	Tar	373,000	4	8	47	-	376	10,752	-	24	12	224	50	-	1:1000	-	-
		Ach	373,000	4	8	47	-	224	10,752	-	-	-	218	32	-	1:2054	-	27
	2012	Tar	525,000	4	8	47	-	376	-	-	24	12	183	19	-	-	-	-
		Ach	373,000	4	8	47	-	183	-	-	-	-	183	15	-	-	-	27
Katsina	2011	Tar	500,000	-	4	54	500	-	30,000	-	-	-	-	-	-	1:1000	-	-
		Ach	250,000	-	-	54	500	-	30,000	-	-	-	-	-	-	1:3000	-	-
	2012	Tar	500,000	3	-	54	500	-	30,000	-	-	-	-	-	-	1:1000	300,000	-
		Ach	500,000	3	-	25	500	-	30,000	-	-	-	-	-	-	1:3000	468,000	-
Sokoto	2011	Tar	432,133	2	8	32	27	256	-	-	12	-	100	2	-	1:4000	1000	24
		Ach	432,133	2	5	16	27	72	-	-	-	-	-	1	-	1:4000	460	24
	2012	Tar	NA	2	8	32	37	256	-	-	12	-	100	1	-		1200	24
		Ach	NA	2	5	16	5	72	-	-	-	-	-	1	-		560	24

**Table 3.12.1b: ADP Extension Activities
NORTH WEST ZONE**

Extension Activities																		
State	Years		No. of Farm Families	Zones	SMSS	BES	BEA's/WIA	VEAs	VEA Visits	SPATs	FNTs/MTs	MTRMs / QTRMs	MTPs	OFARs	No. of Groups /Coops	EA/Farmer Ratio	No. of farmers Trained	No. of farmers field schools
Kebbi	2011	Tar	-	-	25	32	40	205	-	-	24	4		24	-		-	-
		Ach	525,000	4	20	32	36	198	-	-	-	-	242	4	-	1:2608	-	-
	2012	Tar	-	-	25	32	40	205	-	-	-	-		24	-	-	-	-
		Ach	-	-	20	32	36	198	-	-	-	-	185	4	-	-	-	-
Zamfara	2011	Tar	350,000	2	10	48	48	272	12	-	-	-	240	5	100	1:1000	300	27
		Ach	180,000	2	8	34	34	172	4	-	-	-	120	3	25	1:1944	60	9
	2012	Tar	350,000	2	10	48	48	272	12	-	-	-	250	5	100	1:1000	300	81
		Ach	180,000	2	8	34	34	172	4	-	-	-	240	1	25	1:1944	150	27
Kano	2011	Tar	1.2m	3	9	399	255	1625	-	-	-	12	-	-	30,000	-	-	-
		Ach	840,895	3	9	85	85	705	-	-	-	6	-	-	12,000	1:1,844	-	-
	2012	Tar	1.3m	3	12	705	255	1625	-	-	-	12	-	-	30,000	-	-	-
		Ach	994,656	3	9	87	85	705	-	-	-	-	-	-	12,000	-	-	-
Kaduna	2011	Tar	606,007	4	6	60	132	606	116,352	4000	12	12	-	3000	1,066	1:1000	27	-
		Ach	606,007	4	6	29	47	187	45,604	702	12	3	-	630	1,066	1:3240	5	-
	2012	Tar	606,007	4	6	60	132	606	116,352	4000	12	12	-	3000	1,066	1:1000	27	-
		Ach	606,007	4	6	29	47	187	45,604	574	7	2	-	470	1,066	1:3240	-	-

**Table 3.12.1c: ADP Extension Activities
NORTH CENTRAL ZONE**

Extension Activities																		
State	Years		No. of Farm Families	Zones	SMs	BES	BEA's/WIA	VEAs	VEA Visits	SPATs	FNTs/MTs	MTRMs / QTRMs	MTPs	OFARs	No. of Groups /Coops	EA/Farmer Ratio	No. of farmers Trained	No. of farmers field schools
Taraba	2011	Tar	288,000	4	5	30	30	288	-	8,000	24	12	200	-	100	1:1000	-	-
		Ach	230,000	4	5	18	-	90	-	4,920	-	-	10	-	64	1:13200	-	-
	2012	Tar	288,000	4	5	30	30	288	-	8,000	24	12	200	-	100	1:1000	-	-
		Ach	230,000	4	5	18	-	90	-	4,106	-	-	-	-	64	1:3200	-	-
Plateau	2011	Tar	325,082	3	18	32	32	192	67,200	-	24	11	-	90	-	1:1000	-	81
		Ach	325,082	3	18	32	14	102	35,350	-	18	4	-	74	-	1:3187	-	32
	2012	Tar	325,082	3	18	32	32	192	67,200	-	24	11	276	103	-	1:1000	-	-
		Ach	325,082	3	18	26	11	90	31,500	-	10	3	180	77	-	-	-	-
Nasarawa	2011	Tar	180,433	3	18	26	19	156	25,344	-	26	12	200	12	24	1:1000	4,146	81
		Ach	180,433	3	18	26	19	132	24,192	-	26	11	200	12	24	1:1368	1002	81
	2012	Tar	180,433	3	18	26	19	156	25,344	-	26	12	200	14	24	1:1000	1305	81
		Ach	180,433	3	18	26	19	130	16,896	-	26	8	200	13	8	1:1388	189	14
FCT	2011	Tar	120,000	4	20	12	24	93	22,360	-	24	12	140	16	7,500	-	7,440	27
		Ach	100,000	4	20	12	24	83	8,880	-	6	7	7	14	7,100	-	2,000	27
	2012	Tar	120,000	4	20	12	24	93	22,360	-	24	12	140	10	8,000	-	7,440	27
		Ach	101,000	4	20	12	24	81	9,000	-	8	16	-	4	7,600	-	2,100	-

**Table 3.12.1c: ADP Extension Activities
NORTH CENTRAL ZONE**

Extension Activities																		
State	Years		No. of Farm Families	Zones	SMs	BES	BEA's/WIA	VEAs	VEA Visits	SPATs	FNTs/MTs	MTRMs / QTRMs	MTPs	OFARs	No. of Groups /Coops	EA/Farmer Ratio	No. of farmers Trained	No. of farmers field schools
Niger	2011	Tar	-	3	15	18	-	200	2,880	1792	24	12	550	38	150	1:1000	150	-
		Ach	-	3	15	18	-	192	2,105	-	1	1	-	3	150	1:2000	50	-
	2012	Tar	-	3	15	18	-	200	2,880	1792	24	12	-	38	150	1:1000	150	-
		Ach	-	3	15	18	-	192	1500	-	-	1	-	-	150	1:2000	30	-
Kwara	2011	Tar	250,000	4	4	16	16	300	-	-	25	12	43	-	-	1:2000	-	-
		Ach	200,000	4	4	4	4	120	-	-	20	10	43	-	-	1:2500	-	-
	2012	Tar	300,000	4	20	29	28	280	-	-	25	12	20	-	-	1:2000	-	-
		Ach	280,000	4	12	7	9	137	-	-	12	6	12	-	-	1:2190	-	-
Kogi	2011	Tar	228,964	4	20	24	24	192	11,904	-	26	12	3180	5	80	1: 300	-	60
		Ach	228,964	4	15	24	24	100	6,100	-	22	5	3064	2	80	1: 1000	-	50
	2012	Tar	-	4	20	24	24	192	11,904	-	26	12	670	5	80	1: 300	-	-
		Ach	-	4	15	24	24	100	3,000	-	22	2	250	5	80	1: 1000	-	-
Benue	2011	Tar	413,159	3	8	46	-	398	38,658	-	48	12	2000	-	-	1:1000	-	-
		Ach	413,159	3	6	46	-	98	8658	-	48	12	1141	-	-	1:3500	-	-
	2012	Tar	413,159	3	8	46	-	398	40,000	-	48	12	2500	-	-	1:1000	-	-
		Ach	413,159	3	4	-	-	98	10,000	-	32	8	1500	-	-	1:4000	-	-

**Table 3.12.1d: ADP Extension Activities
SOUTH WEST ZONE**

Extension Activities																		
State	Years		No. of Farm Families	Zones	SMs	BES	BEA's/WIA	VEAs	VEA Visits	SPATs	FNTs/MTs	MTRMs / QTRMs	MTPs	OFARs	No. of Groups /Coops	EA/Farmer Ratio	No. of farmers Trained	No. of farmers field schools
Osun	2011	Tar	256,000	3	-	30	-	248	-	-	26	12	4	9	-	1:1000	-	-
		Ach	-	3	-	24	-	-	-	-	23	8	3	2	181	1:1984	11,145	-
	2012	Tar	256,000	3	-	30	-	248	-	-	26	12	3	7	-	1:1000	-	-
		Ach	-	3	-	18	-	-	-	-	15	5	-	3	-	1:1984	5,525	-
Oyo	2011	Tar	415,030	4	20	28	28	224	26,928	-	26	12	-	-	-	1:800	415,030	27
		Ach	162,908	4	15	28	21	85	8,136	-	16	1	-	-	-	1:3773	162,908	50
	2012	Tar	415,030	4	28	28	28	224	26,928	-	26	12	-	-	-	1:800	415,030	81
		Ach	119,895	4	28	28	21	85	9,370	-	17	4	-	-	-	1:3997	131,266	35
Ekiti	2011	Tar	123,000	2	16	16	16	128	10,652	3,040	48	12	-	10	146,000	1:1000	-	-
		Ach	123,000	2	8	16	12	46	7,763	1,278	48	12	-	3	98,000	1:3000	-	81
	2012	Tar	200,000	3	24	16	16	128	3,500	480	72	12	16	10	-	1:1000	-	-
		Ach	200,000	3	12	16	12	46	2960	645	48	8	-	-	-	1:3000	-	81
Ogun	2011	Tar	360,000	4	20	20	20	128	4980	698	26	12	266	-	47	1:800	166	81
		Ach	125,000	4	16	20	13	83	1743	47	26	4	188	-	27	1:3364	83	46
	2012	Tar	360,000	4	20	20	20	128	4980	1200	26	12	152	-	164	1:800	246	81
		Ach	130,000	4	16	20	13	83	2805	800	16	1	40	-	40	1:3364	140	40

**Table 3.12.1d: ADP Extension Activities
SOUTH WEST ZONE**

TExtension Activities																		
State	Years		No. of Farm Families	Zones	SMSS	BES	BEA's/WIA	VEAs	VEA Visits	SPATs	FNTs/MTs	MTRMs / QTRMs	MTPs	OFARs	No. of Groups /Coops	EA/Farmer Ratio	No. of farmers Trained	No. of farmers field schools
Lagos	2011	Tar	332,401	3	-	16	16	128	12,662	40	26	3	60	-	2,000	1:1600	50	27
		Ach	130,000	3	-	16	13	64	10,009	40	26	3	53	-	1,500	1:1612	50	30
	2012	Tar	332,401	3	-	16	16	128	-	-	-	-	-	-	-	-	-	-
		Ach	135,000	3	-	16	11	62	4993	32	13	3	32	-	-	1:1612	-	-
Ondo	2011	Tar	1,000	2	-	18	36	160	33,000	1,084	1004	12	2000	91	1,296	1:1480	2,000	91
		Ach	1,480	2	-	18	22	92	10,450	162	162	6	400	40	1,296	1:1480	400	42
	2012	Tar	-	2	-	18	36	160	-	-	-	-	-	-	-	-	-	-
		Ach	-	2	-	18	22	92	-	-	-	-	-	-	-	-	-	-

**Table 3.12.1e: ADP Extension Activities
SOUTHEAST ZONE**

Extension Activities																		
State	Years		No. of Farm Families	Zones	SMSS	BES	BEA's/WIA	VEAs	VEA Visits	SPATs	FNTs/MTs	MTRMs /OIRMs	MTPs	OFARs	No. of Groups /Coops	EA/Farmer Ratio	No. of farmers Trained	No. of farmers field schools
Anambra	2011	Tar	338,721	4	20	24	22	176	2276	204	104	12	250	5	290	1:1000	1890	54
		Ach	2700	4	18	13	8	29	1135	180	92	2	160	-	210	1:9409	1280	41
	2012	Tar	338,721	4	20	24	22	176	2,296	204	104	12	250	5	270	1:1000	1890	33
		Ach	0	4	18	13	8	29	1,160	150	68	2	138	-	230	1:9409	1140	0
Enugu	2011	Tar	246,542	3	15	24	24	192	1,092	118	24	12	-	5	180	1:1500	200	-
		Ach	246,542	3	10	15	15	22	817	360	16	2	-	-	152	1:6848	103	-
	2012	Tar	246,542	3	15	17	17	427	1092	2316	24	12	-	6	-	1:1000	1000	-
		Ach	246,542	3	15	17	17	80	Nil	534	17	Nil	-	-	-	1:3081	200	-
Ebonyi	2011	Tar	-	3	5	24	24	435	32,032	2000	26	12	154	6	-	-	200	81
		Ach	-	3	5	24	24	257	-	900	18	-	26	-	-	-	45	9
	2012	Tar	-	3	5	24	24	435	32,032	2320	26	12	154	6	-	-	200	81
		Ach	435,229	3	5	24	24	154	16,016	770	9	-	13	-	-	-	-	27
Imo	2011	Tar	303,333	3	20	38	38	526	144	2137	24	12	-	-	1000	1:1000	3	81
		Ach	303,333	3	15	32	32	49	144	1446	24	12	-	-	900	1:3333	29	72
	2012	Tar	303,333	3	20	38	38	526	150	1912	24	12	-	6	1000	1:1000	59,000	81
		Ach	-	3	15	27	38	43	140	761	16	8	-	-	500	1:3333	49650	72
Abia	2011	Tar	-	3	18	38	38	279	17796	2180	26	12	600	3	-	1:800	2340	81
		Ach	315,910	3	18	38	38	79	2451	333	24	3	77	2	2158	1:5265	-	-
	2012	Tar	-	3	18	38	38	279	17796	20563	26	12	600	3	-	1:800	2340	81
		Ach	410345	3	18	38	38	79	2691	3375	15	1	38	2	2158	1:5265	-	6

**Table 3.12.1f: ADP Extension Activities
SOUTH - SOUTH ZONE**

Extension Activities																		
State	Years		No. of Farm Families	Zones	SMSs	BES	BEA's/WIA	VEAs	VEA Visits	SPATs	FNTs/MTs	MTRMs / QTRMs	MTPs	OFARs	No. of Groups /Coops	EA/Farmer Ratio	No. of farmers Trained	No. of farmers field schools
Edo	2011	Tar	180,000	3	6	18	18	144	1,697	400	26	12	100	4	2500	1:3750	1000	-
		Ach	180,000	3	3	10	1	27	1,245	300	18	4	60	1	2000	1:3750	1000	-
	2012	Tar	180,000	3	3	18	18	144	1,697	500	26	12	100	4	2500	1:3750	1000	-
		Ach	180,000	3	3	10	1	27	1,245	390	18	4	60	2	2000	1:3750	1000	-
Bayelsa	2011	Tar	-	3	7	16	16	174	100	50	24	12	50	5	300	1:1000	-	81
		Ach	95,100	3	5	-	-	9	20	20	-	-	16	-	180	1:10,568	-	27
	2012	Tar	-	3	7	16	16	174	100	50	24	12	50	5	600	1:1000	-	81
		Ach	95,100-	3	5	-	-	14	10	4	1	-	2	-	-	1:10,568	-	27
Delta	2011	Tar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Ach	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2012	Tar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Ach	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C/River	2011	Tar	-	3	15	18	-	144	12,960	-	-	4	-	-	225	1:1000	-	54
		Ach	481,506	3	15	18	-	120	5563	-	-	-	-	-	225	1:4013	-	54
	2012	Tar	-	3	15	18	-	144	12,960	-	-	4	-	-	225	1:1000	-	54
		Ach	481,506	3	15	18	-	102	-	-	-	2	-	-	225	1:4721	-	63
Ak/Ibom	2011	Tar	685,092	6	30	40	40	274	44,304	8755	26	12	231	-	-	1:1000	-	-
		Ach	685,095	6	30	40	40	219	9,144	4551	26	4	27	-	-	1:3086	-	-
	2012	Tar	685,095	6	30	40	40	274	44,304	8990	26	6	231	-	-	1:2902	-	-
		Ach	685,092	6	30	35	39	205	15825	2006	14	3	16	-	-	1:2902	-	-
Rivers	2011	Tar	500,000	3	12	48	48	282	9,360	1632	26	12	-	-	3000	1:1000	-	81
		Ach	479,186	3	7	20	9	68	3,093	482	16	-	-	-	2942	1:6749	-	36
	2012	Tar	500,000	3	12	48	48	282	7,040	1560	26	12	3	3	-	1:1000	3	50
		Ach	350,000	3	7	21	7	55	3,400	600	17	-	-	-	-	1:3450	-	1

Table 3.12.1.g: Status of ADP Funding, Adequacy and Quality of Staff in 2012
North East Zone

State	Funding		Adequacy and quality of staffing		Remarks
	2011	2012	2011	2012	
ADAMAWA	Poor	Poor	Inadequate	Inadequate	Funding should be improved while more extension agents should be employed.
BAUCHI	Fair	Fair	Fair	Fair	Funding and staffing need to be improve
BORNU	Nil	Nil	Inadequate	Inadequate	Funding should be provided while more extension agents should be employed.
GOMBE	Inadequate	Fair	Fair	Fair	More extension agents should be employed.
YOBE	Inadequate	Fair	Inadequate	Fair	

North West Zone

State	Funding		Adequacy and quality of staffing		Remarks
	2011	2012	2011	2012	
KADUNA	Weak	Fair	Fair	Fair	Funding should be improved while more extension agents should be employed.
KANO	Inadequate	Fair	Inadequate	inadequate	Funding should be maintained and more Extension agents should be employed to meet the standard EAs/Farmer ratio.
JIGAWA	Fair	Fair	fair	Inadequate	Funding and EAs staffing should be improve
KATSINA	NA	NA	NA	NA	-
KEBBI	Fair	Fair	Fair	Fair	Funding should be improved while more staffs should be recruited
SOKOTO	NA	NA	Very inadequate	Very inadequate	There is dire need for adequate funding and staffing
ZAMFARA	Very weak	Very weak	Fair	Fair	Improved funding and staffing with EAs is very necessary

North Central Zone

State	Funding		Adequacy and quality of staffing		Remarks
	2011	2012	2011	2012	
BENUE	Adequate	Adequate	Inadequate	Inadequate	Improved funding and employ more EA staffing
FCT	Fair	Fair	Fair	Fair	Funding should be improve and recruit additional extension staff.
KOGI	Inadequate	NA	Fair	Fair	Government should ensure adequate and timely release of fund, while more extension agents should be employed.
KWARA	Inadequate	NA	Fair	Fair	Additional funds should be provided and more Extension agents should be employed
NASSARAWA	Fair	Fair	Inadequate	Fair	More fund should be provided while additional EAs should be recruited
NIGER	Fair	Nil	Fair	Fair	Funding should be provided and more EA's staff should be improved.
PLATEAU	Weak	Weak	Inadequate	Inadequate	Improved funding and staffing is very necessary
TARABA	Poor	Poor	Inadequate	Inadequate	Government need to provide fund and also recruit additional extension staff.

South West Zone

State	Funding		Adequacy and quality of staffing		Remarks
	2011	2012	2011	2012	
Osun	Fair	Fair	Nil	Nil	More fund should be provided while EAs should be employed
Ogun	No fund was released	Fair	Inadequate	Inadequate	Adequate and timely funding is essential while additional EAs should be recruited
Oyo	Nil	Nil	Inadequate	Inadequate	Funding should be provided while additional EAs should be recruited
Lagos	Fair	Fair	Fair	Fair	Funding and stuffing should be improve
Ondo	Weak	Inadequate	Fair	Fair	Funding should be adequately providedand staffing with SMSs is very essential
Ekiti	Inadequate	Fair	Fair	Nil	Improved funding and staffing of EAs is very necessary

South East

State	Funding		Adequacy and quality of staffing		Remarks
	2011	2012	2011	2012	
Anambra	Fair	Poor	Poor	Poor	Improved funding and adequate staffing of EAs is very necessary
Enugu	Nil	Nil	Inadequate	Inadequate	Funding should be improved while more extension agents should be employed.
Imo	No was fund release	No fund was release	Inadequate	Poor	Funding should be adequately and timely release while more extension agents should be employed.
Abia	Nil	Nil	Poor	Poor	Fund should be adequately provided and more EAs should be recruited
Ebonyi	Nil	Nil	Inadequate	Inadequate	Fund should be allocated to ADP while adequate and qualified EAs should be recruited

South South Zone

State	Funding		Adequacy and quality of staffing		Remarks
	2011	2012	2011	2012	
River	Nil	Nil	Inadequate	Inadequate	Government need to provide fund and also recruit additional extension staff.
Bayelsa	Nil	Nil	Inadequate	Inadequate	Government need to provide adequate fund and recruit more extension staff.
Akwa- Ibom	No fund was release	No fund was release	Poor	Very Poor	Adequate and timely funding is very essential> Agricultural extension is at the back burner in the state.
Cross River	Fair	Adequate	Fair	Fair	Funding should be maintained and more EAs should be employed.
Edo	Inadequate	Fair	Poor	Poor	Improve funding and recruit enough EAs. Extension infrastructure is very weak.
Delta	Poor	Poor	Poor	Very Poor	Adequate and timely funding is essential. Agricultural extension is at the back burner in the state. Extension infrastructure is very weak.

3.12.12 TRAINING NEEDS OF ADPs

This year's survey assessed the training needs of the 36 State Agricultural Development Programmes (ADPs) in the country. Although the response rate was good (72%), 10 states (28%) failed to provide data on their training needs. A table 12.3 illustrates, the trainings needed were location-specific. Many ADPs, require training in: data processing and analysis, extension management, GPS application in extension, ICTs on full-time academic programmes and short refresher training courses. Proportionally, the key areas in which trainings were needed were: full-time academic course. (16%), short refresher trainings/MTRMs/pre-season (9%) and data collection processing/analysis (4%). Other important areas of training needs include: extension management (3%), farm management (3%), GPS application in extension (3%) and ICTs (3%).

Regular training of staff is a major challenge confronting ADPs in Nigeria. Over the years, the main hindrance to training has been shortage of funds. As a result, most of the ADPs have not been able to sustain regular training of their personnel. Since agricultural information is a public good, state governments should adequately fund ADPs. On their part, the ADPs should look inwards and direct more effort towards exploring alternative ways of raising funds to support their activities. On the issue of research, there is need for national studies – to document and increase the understanding of the complex nature and extent of the effects of poor funding of extension services, including the implications for personnel development and succession. In this way, the impacts on agriculture in Nigeria will be easily captured and appropriate measures put in place to correct the anomaly.

Table 3.12.3: Capacity building needs of ADPs in Nigeria reported in 2012

		Reference	Grade Point
1	Farmer sensitization on ATA (how to facilitate farmers access to inputs under (ATA)	2	1.73
2	Financial management & accounting	2	1.73
3	Fish breeding and feeding techniques	1	0.86
4	Fish post-harvest technologies	1	0.86
5	Fisheries production	2	1.73
6	Full-Time Academic Courses [OND, HND, BSc, PGD, MSc, PhD]	18	15.51
7	Gender issues including gender budgeting	1	0.86
8	GPS application in extension	3	2.58
9	Graphic Art	1	0.86
10	Human resource management	1	0.86
11	ICTs	3	2.58
12	Leadership & group dynamics	2	1.73
13	Livestock production practices	2	1.73
14	Management of extension service Institution	2	1.73
15	Human resource and infrastructure Management	1	0.86
16	Managing grassroots development and rural cooperatives	1	0.86
17	Market information system support techniques	2	1.73
18	Methods of sourcing credit, administration and recovery of credits	1	0.86
19	Participatory extension methodologies	1	0.86
20	Pre-season, MTRMs, Workshops & Refresher Courses	10	8.64
21	Production & processing	2	1.73
22	Project management and Reporting	1	0.86
23	Project monitoring and evaluation	2	1.73
24	Public administration	2	1.73
25	Radio & TV programming	2	1.73

26	Records & information management	1	0.86
27	Rural institutions development (Group operations and management)	1	0.86
28	Safety & defensive driving	1	0.86
29	Safety handling of agrochemicals	1	0.86
30	Skill gap analysis	1	0.86
31	Soil analysis	2	1.73
32	Spraying techniques and pesticide usage skill	1	0.86
33	Stores management	1	0.86
34	Strategic management	1	0.86
35	Use of internet	1	0.86
36	Use of Microsoft Excel	1	0.86
37	Value Addition (to perishable products- (Processing)	1	0.86
38	Value Chain Analysis and approaches	1	0.86
39	Techniques for Mobilizing and ensuring participation of Women in Agriculture	2	1.73
	Total	85	100
	Mean	1.8	

3. 12.13 **Summary of the problems needing research**

Table 12.4.1e shows field problems requiring research intervention. The problems differ from zone to zone. Development of feed formula from local materials, especially for poultry and fish, were ranked the most pressing problems requiring the attention of research in all the zones. These were followed by need for innovative heat-tolerant and disease-resistant varieties of tomato in the North East and North West. The southern states request, heat tolerant wheat and low temperature-tolerant maize and rice varieties for irrigation farming.

Problems of premature fruit and flower abortion, dieback and other diseases of cocoyam were identified in all the zones. Low productivity of most of the varieties of crops and livestock species in use by farmers remained a problem for research. Striga infestation, high cost of production and how to secure agricultural land, especially at peri-urban sites and improving farm gate prices are major concerns of farmers.

The other problems for research are related to multipurpose tree species, crops and livestock species are adaptable to climate change, especially drought and resistant to pests and diseases. More so, farmers want research to produce commercialized process of upgrading local crops for advanced saleable product development of new commercializable products from local crops.

Cocoyam wilt was prevalent in 2012 inflicting heavy losses to farmers in Kaduna and Katsina



TABLE 3.12.4: Problems for Research Attention According to states

North East

	CROPS	LIVESTOCK	FISHERIES	AGROFORESTRY	IRRIGATION ENGINEERING	EXTENSION	WIA	OTHERS
ADAMAWA, BAUCHI	Heat tolerant tomato variety (tomato that tolerate heat), Maize variety that do with less fertilizer, Cowpea variety that is resistance to Striga Nutrient efficient maize varieties Drought tolerant varieties	Genetic improvement to our local breads (Cattle and Sheep), Improvement of pasture development for ruminant animal utilization, Improvement on local feed formulation for efficient poultry production	Fresh feed formulation using locally available materials	Research on the importance and use of jatropha and terapa plant (seeds, leaves, stem etc.)	Rain water harvesting using available local materials for agricultural purposes, Research on drip irrigation to minimise water losses through evapotranspiration and leaching	Lack of supervision visit, Inadequate quality staff	Research on pest harvest technologies on perishable agricultural commodities, Labour saving devices on WIA activities	Crop production, Rearing of Animals, Poultry farming
BAUCHI								
BORNO	Problems of nematodes in tomato field, Stem borer in millet farms	Lack of drugs and feeds	No fingerlings for fish ponds Fish feeds from local materials	Multi-purpose trees species	NA	Lack of enough staff and extension materials, Non proper funding and non or late arrivals of input	Lack of storage and processing equipment such as refrigerator and cooking materials	NA
GOMBE	Drought-resistance varieties Heat-tolerant wheat and tomato varieties	Animal nutrition and Livestock diseases control	Substitute to fish meal, Hypophysation of latex sp gymnastic sp, use of cashew, melon etc as a source of protein	Drought resistance tree crops	NA	Use of super-Gro, selective post-emergence herbicide on parasitic weeds and yellow twining weed on field crop	Dadawa processing, energy saving cooking stoves that is cheap	Animal traction
TARABA	Striga-resistance varieties of maize and sorghum	NA	Feed formulation using available local material	Eradication of cancer worms in citrus both in nursery and orchard	NA	NA	NA	NA
YOBE	Control of common diseases of crops	Effective method of livestock farming, Pest and diseases management skill	NA	Method of forestry enhancement	NA	Communication skill	NA	NA

NORTH WEST

JIGAWA	Heat tolerant tomato variety	NA	NA	NA	NA	NA	NA	NA
KADUNA	High yielding variety of maize, rice, sorghum, millet, Improved agronomic practices and Cereals and legumes diseases and pest control Simple Ginger splitting machines. Control for Cocoyam wilt	Develop improved breed and upgrade the local breeds animal feeds and feeding methods, Feed formulation and nutrition and tracing and demarcation of grazing facilities for a more reward livestock production system and effective diseases control	Feed formulation to reduce cost of production and maximize profit, improve hatchery technology and sourcing of good stock, improve technology on fish farm management, diseases control in fish stock management	Biological control on fruit flies and mealy-bugs on tree crops, Method of establishing of nursery and production of improved seedlings	NA	NA	NA	
KANO	Problems of nematodes-insect attack, diseases and drought tolerant variety	Diseases proliferation, Feed conversion	Improve species, feed, medication husbandry improved technology	Improved variety, Diseases tolerant, Drought tolerant	Simple and modern technology	New approach to extension delivery, Information technology	NA	NA
KATSINA	Pest and disease-resistant varieties, Drought-tolerant variety, Early maturing varieties		NA	NA	NA	NA	NA	NA
KEBBI	soil fertility, Processing and storage	Cross breeding in poultry and small ruminant,	NA	NA	NA	NA	NA	NA
SOKOTO	Improved crop varieties in terms of drought/striga resistance, short duration and fertilizer responsiveness/ Improved bird-scaring technologies	Feed formulation using local feedstuffs Fast growing livestock breeds Feed conversion efficiency using indigenous breeds	Species combination Feed formulation using local materials	Improved forage species for livestock feeding Improved indigenous tree species that are fast growing for shelterbelt and desert control	Soil and water management practices for irrigation Irrigation scheduling Storage and preservation structures for farm produce	Research methodology Adaptive rates of inputs Teaching and extension methods	Agro-processing Preservation techniques	Farming systems research (Crop densities, ratios etc)

ZAMFARA	Pest and diseases on vegetable especially tomato that cause powdery web on the crop and does not respond to pesticide application,	Research on deworming of livestock need to be conducted especially on antihelminthes which becomes resistance to drugs application	Intergeneric hybridization of claris sp., Identification of cross with the best growth performance, Identification and analysis of the best agro-waste ingredient for formulation of floating fish feeds Low cost and long duration improve fresh fish presentation techniques/equipment	NA	Underground water monitoring for effective utilization of underground water resources	NA	NA	NA
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NORTH CENTRAL

BENUE	Improved production and storage of yam. High yielding soybean and rice varieties	NA	NA	NA	NA	NA	NA	NA
KOGI	Pest control on cowpea at the peak of rains, Stem borer control in maize	NA	Economic analysis and evaluation of local pelleted feeds and foreign floating feeds on claris sp. Composition of fish production in an earthen concrete and plastic ponds	Problem of premature dropping of fruit trees such as citrus, pawpaw, mango	NA	Training and evaluation of extension officers	processing and preservation of fresh vegetables, processing equipment and packaging to add value to the products	NA
FCT	Development of drought resistance variety of crops, Control of leaf hopper on vegetables, Indigenous pest control methods	Development of local drugs and vaccine for poultry	Fish feed formulation, Fish sp. Combination for profit maximization	Improved variety of fruit and vegetables crops	Fabrication of simple farm tools, Improved irrigation tools	Development of improved participatory extension	Expansion of cassava based cuisine, improved juice making technique	NA
KWARA	Development of drought resistance variety of crops, Control of leaf hopper on vegetables, Indigenous pest	NA	Formulation of fish feeds from local materials	Dual purpose tree species and control of termites	Efficient irrigation and water management for increasing crop production (therefore	NA	NA	NA

	control methods				reducing crop stress)			
NASSARAWA	Flower abortion, Post emergency herbicide for mixed cropping, Control of taro-blast on cocoyam	Hatching of eggs (chicken) using kerosene incubator	High mortality of heterobranchus hatching to fry	Research on farming system related to agro-forestry for farmers adoption			Processing and preservation of fresh vegetables for 1-7 days	NA
NIGER	Best method of controlling scale insect on yam setts, Best variety of groundnut for oil production, Groundnut Sheller, Striga control options in cereals	Use of indigenous technology for the treatment dermatophilosis (kirchi) in cattle as compare to the use orthodox medicine	Hybrid of tilapia, Formulation of feed using local materials, Improved water quality for the fish	NA	NA	NA	NA	NA
PLATEAU	Control of fungal diseases of cocoyam, Control of field and store potato tuber moth	Control of coccidiosis in piglets, Control of neo-natal mortality in rabbits and dogs	Fish feed formulation and preservation, Fish fingerlings production and management	Control of fruitlessness in mango and avocado pear, Processing of strawberry coffee and sheanuts	NA	NA	Value addition on agricultural produce such as cassava, tomato, beniseed, soybeans, moringa, sheanut and etc.	NA

South West

EKITI	Tomato wilt pathogens, Fruit flies in citrus, Stem borer in maize and rice	prevention of catarrh in small ruminants, Effective control of infection and diseases	NA	Fruit flies diseases	Effective technology on small scale irrigation systems /schemes	Appropriate Information Technology for extension officer	Food processing and utilisation, Storage of major crops produced in Ekiti State	
LAGOS	Tomato wilt, Coconut fruit abortion, Brown blotch of ugu, Black sigatoka diseases of plantain	Alternative and cheap energy ingredient in animal/fish feeds, Conversion of waste into protein and energy, Quail bird management, Odour control in poultry	Fresh water culture fish species, Locally made floating feed, Alternative to fish meal as protein source, Diagnosis of fish diseases, Fresh water shrimp culture. Appropriate moisture level determination in Fish smoking	Packaging and packaging material for Agricultural product, Appropriate drying temperature for agricultural produce	Water application: quality and timing in vegetable production and rice cultivation, Appropriate irrigation method for lagos state soil	Market network linkage for agric enterprises, Appropriate extension communication strategies	Revalidation of new technology on gender specific, Nutritional benefit of value crops, Improved processing techniques on tomato into paste	appropriate application of salt in aquaculture
OGUN	Control of bacterial blight in tomato, Right cotton variety suited south west agro ecology, Yam non staking method, Control of insect on cotton	Provision of prolific breeds of sheep and goats and Complete enumeration census of livestock farmers in the state	Complete fisheries and aquaculture diagnostic survey in ogun state, Fish health stress (water mould) finserostin and broken skull.	Determination of planting time for optimum yield of plantain and banana	Training on the use of small scale irrigation technique and equipment	Conduct survey on the level of continuance and discontinuance of agricultural technologies	Alternative utilization option and packaging of products-Maize, Iru, Soya, Milk and Cassava	

OSUN	Insect pest attack (stem/pod borer), Determination of level of Vitamin A in the popular cassava cultivar, Factors causing the oblivion of local tomato among farmers in the south west	Epidermio-research on diseases patterns in birds, cattle, pigs and goats, Simple technology to check feed quality, Database of livestock farmer, Eco-friendly litter material, Farmers participatory approach in value chain development, Agricultural database in the state of osun	Breeding of heteriotisniticus	NA	NA	NA	Mechanical processing of locust bean	NA
OYO	Tomato wilting and pepper rot, Pawpaw (fungal attack), Maize (stem borer), Cowpea segregation	Feed: Alternative Supplement to maize	Production of locally made floating feed, Post harvest Technology, Fish diseases	NA	NA	NA	NA	NA

South East

ENUGU	Leaf curl and shedding in pepper, Lipson and die-back of cocoyam	Using cheaper material for poultry feed formulation	NA	Rot and abortion of green guava fruit, Flower and fruit abortion in coconut and citrus	Using local material to build irrigation channel and pump to cut cost of installation	Integration of LG agric department into extension service		
EBONYI	Rice africanGullImage, Yam processing and storage	Poultry, Alternative to compounded feed to reduce cost	NA	NA	NA	NA	NA	NA
ABIA	Menace of rodent on maize in the field, Screening of cocoyam variety that withstand die-back diseases	High cost of feed and the need for alternative uses/substitutes	Production of made floating feed using locally agricultural raw materials.	NA	NA		Storage ability of soybean milk	NA
ANAMBRA	Incidence of yam beetle and cricket attack, millipede attack, Cocoyam fungal rot and die back.	Scarcity and high cost of D.O.C and feeds, Stock improvement in pig, goat and sheep and rabbit through upgrading and artificial insemination.	Floating fish feed production (Dryer), Equipment for fish processing, Getting all male tilapia fish	Mealy bug and diseases problems on paw-paw and guava, Cracking coconut	NA	NA	NA	NA
IMO	Coconut rot and leaf rot, Abortion of fruit in coconut, breadfruit and others, Black patch pest and diseases on guava	Local goat/sheep upgrading, Preservation of fodder	Value addition in fish production through the use of modern smoking kiln machine, Collomaries on tilapia (cause and control)	Abortion in indigenous fruit trees, Mortality in snail	Massive erosion problem and control, Locally adopted fabricated tillage machines	Extension inconsistency policy and evaluation	Value addition to some perishable local foods such as green amaranthus, pineapple, tomatoes etc.	Early/timely release of approved project fund, poor synergy between ADP and other world bank projects. The state should include payment of hazard allowance as it is in MANR

SOUTH-SOUTH

BAYELSA	Development of improved and adaptable variety of cocoyam	Feed formulation for livestock	Feed formulation for fisheries	NA	NA	NA	NA	NA
RIVERS	Incidence of millipede attack on cassava, Cocoyam (colocasia spp) bacterial blight diseases	By-product of food industry used for production of carbohydrate component of livestock feeds e.g. yam and cassava peel etc.	Possibility of breeding and stocking on brackish water	NYPA-palm: The utilization and its economic value, Improve quality honey bee keeping	NA	NA	NA	NA
AKWA-IBOM	Yam beetle attack on yam tuber	NA	Lack of alternative fish to catfish, Diseases of fish	Leaf chlorosis Gnetum africanum	NA	High ratio of extension to farmers	Storage and preservation of fruit juice, Drying of agric product, Elimination of alkaloids when boiling xanthosoma. Spp. Of cocoyam	NA
CROSS RIVER	Red rice (weed) menace in rice fields, Post harvest produce management,	The use of cotton seed to produce animal feeds, Crossing the sokoto red with WAD	NA	Use of local materials for mushroom production, Feeding regime in homestead snail production	NA	Cocoyam leaf blight, Cocoyam corm rot	Glutin enriched cassava variety, Modern technology in post harvest management	NA
EDO	Tomato wilt, Absorption of tree crops	PPR	Feed utilization/pound construction	NA	Sprinkler		Processing and utilization of different crops	

SOUTH WEST

ONDO								
ONDO	NPK variety for different crops, Control of pest and diseases especially for tomato, Weed control alternative to chemical control	Improvement in small ruminant breeding, Improvement in local chicken breeding, In-breeding in small ruminants	Cost reduction in fish meal	Production of mango	General cost reduction in irrigation engineering	NA	Storage of farm produce, Processing technique for major crops	Mushroom culture and commercial production

TABLE 3.12.5: Problems for Research Attention According to Zones
NORTH EAST

Problems for Research							
CROPS	LIVESTOCK	FISHERIES	AGROFORESTRY	IRRIGATION ENGINEERING	EXTENSION	WIA	OTHER
Heat tolerant tomato, Wheat varieties	Genetic improvement of local breads Cattle and Sheep	Fresh feed formulation using locally available materials	Research on importance and use of jatropha and terapia plant	Rain water harvesting using available local materials for agricultural purposes	Communication skill	Research on pest harvest technologies on perishable agricultural commodities	Crop production
High yielding maize varieties that do with less fertilizer And also resistant to striga	Pasture development for ruminant animal utilization	Lack of fingerlings on fish ponds	Drought resistance tree crops	Research on drip irrigation to minimise water losses through evapotranspiration and leaching		Labour saving devices on WIA activities	Rearing of Animals
Cowpea variety that is resistance to Striga	Improvement on local feed formulation for efficient poultry production	Hypophysation of latex sp gymnastic sp	Eradication of cancer worms in citrus both in nursery and orchard			Low staff strength	Poultry farming
Problems of nematodes in tomato field	Lack of drugs and feeds	Use of cashew, melon etc as a source of protein	Method of forestry enhancement			Lack of materials such as refrigerator and cooking materials	Animal traction
Stem borer in millet farms	Animal nutrition and Livestock diseases control					Dadawa processing	
Drought resistance varieties of crops	Effective method of livestock farming					Energy saving cooking stoves that is cheap	
Common diseases on crop	Pest and diseases management skill						

NORTH WEST

Problems for Research							
CROPS	LIVESTOCK	FISHERIES	AGROFORESTRY	IRRIGATION ENGINEERING	EXTENSION	WIA	OTHER
Heat tolerant tomato variety	Development improved breed and upgrade of the local breeds	Feed formulation to reduce cost of production and maximize profit	Biological control of fruit flies and mealy-bugs on tree crops	Simple and modern technology	New approach to extension delivery	Nil	Nil
High yielding variety of maize, rice, sorghum and millet,	Animal feeds and feeding methods	Improve hatchery technology and sourcing of good stock, improve technology on fish farm management	Method of establishing of nursery and production of improved seedlings	Underground water monitoring for effective utilization of underground water resources	Information technology		
Improved agronomic practices and the Cereals and legumes diseases and pest control	Food formulation and Nutrition	Diseases control in fish stock management	Diseases and drought tolerant improved variety				
Problems of nematodes insect attack and pest, diseases and drought tolerant variety	Tracing and demarcation of grazing facilities for a more reward livestock production system and effective diseases control	Improve fish species and medication					
Early maturing varieties	Diseases proliferation	Intergeneric hybridization of claris sp.					
Processing and storage of crops	Feed conversion	Identification of cross with the best growth performance					
Pest and diseases on vegetable especially tomato that cause powdery web on the crop and does not respond to pesticide application	Cross breeding in poultry and small ruminant,	Identification and analysis of the best agro-waste ingredient for formulation of floating fish feeds					
	Research on deworming of livestock need to be conducted especially on antihelminthes which becomes resistance to drugs application	Low cost and long duration improve fresh fish preservation techniques/equipment					

NORTH CENTRAL

Problems for Research

CROPS	LIVESTOCK	FISHERIES	AGROFORESTRY	IRRIGATION ENGINEERING	EXTENSION	WIA	OTHER
Improved production and storage of crops especially tubers	Development of local drugs and vaccine for poultry	Economic analysis and evaluation of local pellet feeds and foreign floating feeds on claris sp.	Problem of premature dropping of fruits such as citrus, pawpaw and mango	Fabrication of simple farm tools	Training and evaluation of extension officers	Processing equipment	Nil
Pest control on cowpea at the peak of rains	Hatching of eggs (chicken) using kerosene incubator	Composition of fish production in an earthen concrete and plastic ponds	Improved variety of fruits	Improved irrigation tools	Development of improved participatory extension	Expansion of cassava based cuisine	
Stem borer control in maize and rice	Use of indigenous technology for the treatment dermatophilosis (kirchi) in cattle as compare to the use of orthodox medicine	Fish sp. Combination for profit maximization	Research on farming system related to agro-forestry for farmers adoption	Distribution of irrigation pumps to dry season farmers		Improved juice making technique	
Development of drought resistance variety of crop, Control of worms/pests in cotton	Control of coccidiosis in piglets		Control of fruitlessness in mango and avocado pear	Efficient irrigation and water management for increasing crop production (therefore reducing crop stress)		Processing and preservation of fresh vegetables for 1-7 days	
Control of leaf hopper on vegetables	Control of neo-natal mortality in rabbits and dogs	Hybrid of tilapia	Processing of strawberry coffee and sheanuts				Value addition on agricultural produce: cassava, tomato, beniseed, soybeans, moringa, sheanut and etc.

Problems for Research

CROPS	LIVESTOCK	FISHERIES	AGROFORESTRY	IRRIGATION ENGINEERING	EXTENSION	WIA	OTHER
Indigenous pest control methods		Formulation of feed using local materials					
Flower abortion		Improved water quality for the fish					
Post emergency herbicide for mixed cropping		Fish fingerlings production and management					
Control of taro-blast on cocoyam							
Best method of controlling scale insect on yam setts							
Best variety of groundnut for oil production							
Development of groundnut Sheller and pod picker							
Control of fungal diseases of cocoyam							
Control of field and store potato tuber moth							

SOUTH WEST

Problems for Research

CROPS	LIVESTOCK	FISHERIES	AGROFORESTRY	IRRIGATION ENGINEERING	EXTENSION	WIA	OTHER
Processing equipment	Prevention of catarrh in small ruminants	Fresh water culture fish species	Fruit flies diseases	Effective technology on small scale irrigation systems/schemes	Appropriate programming for extension on Information Technology	Food processing and utilisation	Appropriate application of salt in aquaculture
Expansion of cassava based cuisine	Effective control of infection and diseases	Locally made floating feed	Packaging and packaging material for Agricultural product	Water application: quality and timing in vegetable and rice cultivation	Market network linkage for agric enterprises	Storage of major crops produced in Ekiti State	
Improved juice making technique	Alternative and cheap energy ingredient in animal and fish feeds	Alternative to fish meal as protein source	Appropriate drying temperature for agricultural produce	Appropriate irrigation method for lagos state soil	Appropriate extension communication strategies	Revalidation of new technology on gender specific	
Processing and preservation of fresh vegetables for 1-7 days	Conversion of waste into protein and energy	Diagnosis of fish diseases	Determination of planting time for optimum yield of plantain and banana	Procurement of irrigation pumps at low price	Conduct survey on the level of continuance and discontinuance of agricultural technologies	Nutritional benefit of value crops	
Value addition on agricultural produce: cassava, tomato, beniseed, soybeans, moringa, sheanut and etc.	Quail bird management	Fresh water shrimp culture		Training on the use of small scale irrigation technique and equipment		Improved processing techniques of tomato into paste	
	Odour control in poultry	Appropriate moisture level determination in Fish smoking		Alley farming		Alternative utilization option and packaging of produce: Maize, Iru, Soybean, Milk and Cassava	
	Provision of prolific breeds of sheep and goats	Complete fisheries and aquaculture diagnostic survey in ogun state				Mechanical processing of locust bean	
	Complete enumeration census of livestock farmers in the Ogun state	Fish health stress (water mould) finserostin and broken skull.					
	Epidermal-research on diseases patterns in birds, cattle, pigs and goats	Breeding of heteriotisniticus					

Problems for Research							
CROPS	LIVESTOCK	FISHERIES	AGROFORESTRY	IRRIGATION ENGINEERING	EXTENSION	WIA	OTHER
	Simple technology to check feed quality	Post harvest Technology					
	Database of livestock farmer	Fish diseases					
	Eco-friendly litter materials						
	Farmers' participatory approach in value chain development						
	Agricultural database in the state of osun						
	Feed: Alternative Supplement to maize						

South East

Problems for Research

CROPS	LIVESTOCK	FISHERIES	AGROFORESTRY	IRRIGATION ENGINEERING	EXTENSION	WIA	OTHER
Leaf curl and shedding in pepper	Using cheaper material for poultry feed formulation	Production floating feed using locally agricultural raw materials.	Rot and abortion of green guava fruit	Using local material to build irrigation channel and pump to cut cost of installation	Integration of LG agric department into extension service	Storage of soybean milk	Early/timely release of approved project fund
Rice African Gullmage	Poultry, Alternative to compounded feed to reduce cost	Floating fish feed production (Dryer)	Flower and fruit abortion in coconut and citrus	Massive erosion problem and control	Extension inconsistency policy and evaluation	Value addition to some perishable local foods such as telferia, green amaranthus, pineapple, tomatoes etc.	Synergy between ADP and other World Bank project
Yam processing and storage	High cost of feed and the need for alternative uses/substitutes	Equipment for fish processing	Mealy bug and diseases problems on paw-paw and guava	Locally adopted fabricated tillage machines			The state should include payment of hazard allowance as it is in MANR
Menace of rodent on maize in the field	Scarcity and high cost of D.O.C and feeds	Getting all male tilapia fish	Cracking coconut				
Screening of cocoyam variety that withstand die- back diseases	Stock improvement in pig, goat and sheep and rabbit through upgrading and artificial insemination.	Value addition in fish production through the use of modern smoking kiln machine	Abortion in indigenous fruit trees				
Incidence of yam beetle, cricket and millipede attack	Local goat/sheep upgrading	Cause and control of Collomaries on tilapia	Mortality in snail				
Coconut fruit and leaf rot	Preservation of fodder						
Abortion of fruit in coconut, breadfruit and others							
Black patch pest and diseases on guava							
Telfena leaves scorching							

SOUTH-SOUTH

Problems for Research

CROPS	LIVESTOCK	FISHERIES	AGROFORESTRY	IRRIGATION ENGINEERING	EXTENSION	WIA	OTHER
Development of improved and adaptable variety of cocoyam	Feed formulation for livestock	Cost effective feed formulation for fisheries	NYPA-palm: The utilization and its economic value	General cost reduction in irrigation engineering	High ratio of extension agent to farmers	Storage and preservation of fruit juice	Mushroom culture and commercial production
Incidence of millipede attack on cassava	By-product of food industry used for production of carbohydrate component of livestock feeds e.g. yam and cassava peel etc.	Possibility of breeding and stocking on brackish water Shrimps production techniques in local ponds	Improve quality honey bee keeping		Cocoyam leaf blight	Drying of agric product	
Cocoyam (colocasiaspp) bacterial blight diseases	The use of cotton seed to produce animal feeds	Lack of alternative fish to catfish	Leaf chlorosis Gnetum africanum		Cocoyam corm rot	Elimination of alkaloids when boiling xanthosoma Sp. of cocoyam	
Bettle attack on yam tuber	Crossing the sokoto red with WAD	Control of fish diseases	Use of local materials for mushroom production			Gluten enriched cassava variety	
Red rice (weed) menace in rice fields	Improvement in small ruminant breeding		Feeding regime in homestead snail production			Modern technology in post harvest management	
Post harvest produce management	Improvement in local chicken breeding		Production of mango			Storage of farm produce	
NPK variety for different crops	In-breeding in small ruminants					Processing technique for major crops	
Control of pest and diseases especially for tomato		Fish feeds from local sources, periwinkle production in fresh water, local techniques for tilapia sexing					
Alternatives to chemical Weed control							

3.12.5 GENERAL CONSTRAINTS

Major constraints from the field this year have to do with the ATA programme; and these are the commencement of registration of farmer and the late delivery of planting materials, as well as (inadequate) knowledge of how ATA operates. The operation of e-wallet scheme for the purchase of fertilizers and seeds through GSM was not well understood by farmers especially, in the Northern and Eastern zones. Moreover, the scheme was not patronized by farmers in most of the South-South Zone due to lack of awareness. Rigorous efforts should be made to educate farmers more about the e-wallet and other ATA programmes in order to increase the range of beneficiaries across the country, especially in the South-South Zone.

State ministries of agriculture and ADPs are faced with problems of inadequate or none availability of funds, lack of qualified extension agents, lack of mobility and poor remuneration of staff. Other general constraints are such hazards insecurity, floods and drought. Meanwhile, the most destructive incidence to agricultural activities in 2012 was the massive flooding of farms and displacement of communities in 20 states. This was compounded by the scarcity of food and health problems recorded in these states and the neighbouring ones. The event, for the first time in several challenged the capacity of both the federal and state governments to respond to food, health and security crises.

Other identified problems are related to the:-

- ❖ Weak extension service
- ❖ Declining crop yields and soil fertilities
- ❖ Low adoption of technologies
- ❖ Massive urban drift by youths
- ❖ Poor quality inputs, especially seeds and agrochemicals
- ❖ High cost of land preparation and tractors
- ❖ Inadequate skill for irrigated agriculture
- ❖ Poor understanding of value chain approach and innovation platform concept
- ❖ Shortage of manpower (some extension cells were vacant)
- ❖ Late release of funds and poor supervision
- ❖ Lack of requisite data for planning, leading to myriad of estimates from various sources.

Table 3.12.6:General situation of ADPs in Nigeria

North East Zone

State	Problems of Extension	Problems Needing Research	Commodity	NGO Name	Email Address/Address	Activities	Location Covered
Borno State	Lack of funds, Lack of mobility, lack of extension materials and Insufficient Staff	Quality seeds, Nematodes in tomato, Stem borers in millet	Sorghum, Rice, Tomato and Cassava.	AFAN, RIFAN, Cassava farm, Vegetable Producers, Fish Farmers.	NA	Crop production, rice production, Cassava farming, vegetable production and fish farming.	27 LGAs
Yobe State	Inadequate funding, inadequate extension agents	Effective methods of commercial farming, pest and disease management skills, forestry enhancement	NA	Women right initiative, CIDB	woyoright@yahoo.com	Agric support, microfinance	Yobe state
Bauchi	Inadequate Extension Staff &Mobility	Heat Tolorant Tomato, Cowpea Variety, Rearing of Animals	Millet, Surgum, Maize,G/Nut	Women Empowerment Initiative,	winbinig@yahoo.com	Capacity Building, Agricultural Loans	Bogoro, Darazo, Ganjuwa, Alkalari,T/Balewa &Bauchi
Gombe	Lack of Trained Extension Workers	Drought Resistant Tree Crops	Millet, Surgum, Maize,G/Nut	DEC Bauchi	Bauchi	Extension, Microfinance	Kano, Gombe, Bauchi
Adamawa	High Farmer E.A. Ratio, Mobility, Lack of Incentives		Maize, Cassava, Surgum	Sebore Farms	Yola	Training of Farmers	Yola

North West Zone

State	Problems of Extension	Problems Needing Research	Commodity	NGO Name	Email Address/Address	Activities	Location Covered
Katsina	Lack of Adequate Extension Staff	Drought Tolerant Varieties	Millet, Surgum, Maize,G/Nut				
Sokoto	Inadequate staffing, lack of mobility, inadequate funding.	Drought resistance crop varieties, farming system research, improved forage specie for livestock feeding	Rice, sorghum, tomato and onion	USAID and SG2000	ADP Sokoto	Rice value chain and crop production	State wide
Kebbi	Poor Funding and Mobility	Soil Fertility, Processing & Sporage	Raice, Maize, Cassava	BATN	gbengaibikunke@bat.com	Support Farmers to Extension Service	Bugudo/Dandi
Zamfara	Poor Funding, Incentives, Inadequate Extension Agents, and lack of mobility.	Pest and diseases of tomatoe and Eggplant,Resistant of Antihelinihthes to drug application, Intergeneric hybridization of ClariasSp, low cost fresh fish preservation techniques	Cotton, Sorghum, Rice and Tomato	Sasakawa and IITA	NA	NA	NA
Jigawa	Understaffing, lack of mobility, lack of training	NA	Cassava, tomato and sorghum	SG2000 and IFAD	NA	Crop production, agro-processing, dissemination of agric technologies	All LGAs, some selected LGAs for IFAD
Kano	Funding, Lack of mobility for staff, no training package, absence of incentives, lack of demonstration materials and lack of access to modern information technology	Insects attacks on Leguminous crops, Drought tolerant varieties of crops, Yield increase, Diseases of crops and livestock, feed conservation, Improved fish specie, Fish feeds, Food processing, mordern farming system.	Sorghum, Maize, Onion, Rice, Tomato, Soya bean and Livestock.	SG 2000, IITA, AGRA, N2 Africa and KKM	Tukur road and IITA	Extension	All over the states. But KKM covered only 6 LGAs
Kaduna	Staffing, Mobility, Poor Remuneration	Method of Establishment of Nursery & Production of improved Seedlings	Rice, Maize, Ginger, G/Nut	SG 2000	-	Maize Foundation	All Zones

North Central Zone

State	Problems of Extension	Problems Needing Research	Commodity	NGO Name	Email Address/Address	Activities	Location Covered
Taraba	inadequate Staffing, mobility, & Funds	No Activities	NA	CRCN IRD	Marraraba	poultry, livestock, seedling, crop production	16 LGA's
Plateau	Staffing, Mobility, Funding	Control of coccidiosis in Piglets	Irish Potato, Soybean, Tomato	CRUDAN	Bukuru	Extension Services	State Wide
Nassarawa	Shortage of staff, lack of mobility and poor motivation	Flower abortion, Post-emergence herbicides for mixed cropping, Control of taro-blast on cocoyam, Hatching of eggs using kerosine incubator.	Cassava, Rice, Maize and Soyabeans.	YMCA and AGRA	Farm Training Centre Ikposoge	Yam minisett technology, Maize and Soyabean	Ikposoge, Duduguru, Kwara, Adogi, Doma and NasarawaEggon
FCT	Shortage of Manpower, Funds,	Development of drought resistance varieties	Rice, Cassava, Sorghum, Sweet Potato				
Niger	Funds and Logistics	Method of controlling scale insects on Yam setts	Maize, Rice, G/Nut, Cowpea	Dizengoff Nig. Ltd	57, Usman St. Maitama, Abuja	Demonstration & Sales of Chemicals	Zone 1 & Zone 2
Kwara	Inadequate Extension Staff, Untimely release of funds	NA	Cassava, Maize, Rice and Oil palm.	Action AID, Hellankella and Pro-green.	Ilorin	Empowering of women in production and processing, Production of purdue bags for storage of cowpea	Asa, Ilorin North, Ilorin South and Ilorin Central
Kogi	Lack of farm inputs, Lack of extension Kits	Pest control on cowpea at the peak of rains, Stem borer control on maize	Cassava, Rice, Oil palm and Cocoa	NA	NA	NA	NA
Benue	Funding	Improved Production Storage	Cassava, Tomatos, Rice, Soyabeans, Maize				

South West Zone

State	Problems of Extension	Problems Needing Research	Commodity	NGO Name	Email Address/Address	Activities	Location Covered
Oyo	Funds & Mobility	Tomato Wilting & Pepper Rot.	Cassava, Yam, Maize, Cotton, Sheabutter	JDPC	OritaBasorun	Extension & Empowerment	All the LGAs
Osun	lack of vehicles, lack of incentives, Inadequate extension staff, lack of extension tools and poor remuneration of extension staff	Quality control on cassava and tomato processing and packaging, insect pest, determination of level of Vit . A in the popular cassava cultivar, Factors causing Oblivion of local tomato in the South West	Fish processing, Cassava, tomato, beef packaging, fattening of beef cattle, cocoa and oil palm	German International Cooperative(GIZ), Catholic Diocese of Osogbo, Justice Development and Peace Commission	Akure, Osogbo and P.O.Box 78 Osogbo	Cocoa livelihood programme, Fish farming	5 LGAs, Olapoma/Osogbo
Ondo	Inadequate mobility, Inadequate extension officers/agents	NPK varieties for different crops, Control of pest and diseases of crops especially tomato, weed control alternative to chemical control	NA	Country Women Association of Nigeria (CWDN), Catholic Millennium Farm.	Ijapo, Akure and Ondo road	Women empowerment, Micro financing, Skill development and Commercial farming	NA
Ogun	Funding	Cotton variety suited to south west, survey on level of continuance of agricultural technologies	NA	IDDC Ijebu Ode and JDPC	ldbpr@yahoo.com , 234-8037-432182	Micro credit financing	Ijebu zone
Ekiti	Funds & Mobility	Tomato Wilt, Fruit Rot	Cassave, Rice, Oilpalm, Cocoa				
Lagos	Inadequate funding, inadequate mobility, inadequate office accommodation.	tomato wilting, black sigatoka disease of plantain/banana, coconut fruit abortion, odour control in poultry, quails bird management; Fresh water culturable fish specie, fresh water shrimp culture.	Maize, rice, cassava, Livestock and fishery	COWAN, Dangote foundation, APT/quick project, BATN, CMD, CDF, USAID, CEDPA/FORD foundation	20, Oduyemi street, Ikeja; 44/46 olarenwaju street, Ikeja; Epe and Magodo	Credit and training; empowerment; capacity building; fish farming	All LGAs, Oregun, Epe

South East and South-South Zones

Edo	Inadequate funding, poor staffing and mobility.	Tomato wilt, processing and utilization of different crops	NA	LAPO (living above poverty organization)	B/C	Financial assistance to farmers	All the 18 LGAs
Delta	Inadequate funding, poor staffing and mobility	NA	NA	NA	NA	NA	NA
State	Problems of Extension	Problems Needing Research	Commodity	NGO Name	Email Address/Address	Activities	Location Covered
Enugu	Inadequate extension agents, lack of capacity training, mobility.	Leaf curl in pepper, flower and fruit abortion in coconuts	Rice, cassava, maize, cocoa, hides and skin	Women for CIDJAP, ASRUDE	Independence L/out Enugu, 2/5 IkwanostUwani Enugu, 22 2 nd AOC Trans Ekulu	Economic empowerment of women, Credit lending, training of farmers	6 LGAs, State wide
Ebonyi	Funding, Mobility, and Rain Coats	Poultry alternative to compounded feed to reduce cost	Rice, Cassava, Okro, Maize	Sudan United Mission, St. Joseph Farms	Igbengulzzi&Omenyinlzzi	Extension Delivery and Plant Breeding	Izza LGA, Izzi LGA, Abakaliki LGA
Cross River	Late release of funds, Non payment of field allowances, Non improvement of Extension Agents/ Farmer Ratio.	Red rice (Weed) and Post-harvest Produce Management, Use of cotton seed to produce animal feeds, Crossing Red Sokoto with West African Dwarf.	Cocoa, Oilpalm, Rice, Cassava, Aquaculture and Livestock	SARO Agro Science, GIZ Cocoa, Livelihood and POWER	Saros Place, Plot 2068 Blk 18C Apapa, P.O.Box KIA 9698, Accra-Ghana and MOWA-CAL	Collaboration Extension, Strengthening of farmers Business skills, Support to Extension	State-Wide and Cocoa producing area of the State
Akwabom	Funds & Mobility	Yam Beattie Attack on Yam Tubers	Cocoa, Oilpalm, Rubber, Plantain	Agromania	Odotsitaitai LGA	Extension Services	Akwa-Ibom State
Abia	Staffing, Funding and Mobility	Rodents on Maize, Cocoyam varieties that will withstand die back disease, High cost of animal feed and need for alternatives	Cassava, Cocoa, Oil palm and Rice.	NA	NA	NA	NA
Anambra	Staffing, Mobility, Poor Remuneration	Yam, Cocoa Yam	Oil Palm, Cassava, Rice	Nawial National Association for Women in Agric	No. 40 Tasia Rd, Onitsha	Gender Issues	Onitsha North LGA

Imo	Mobility, Funding, Low ratio of Extension Agents to Farmers, Lack of Irrigation Facilities.	Cocoyam root and leaf rot, Abortion of fruits in Coconuts, Pest and disease in guava, Telferia leave Scorching, Upgrading of local goat and sheep.	Cassava processing, Palm oil processing, Fruit processing.	UJA-NGOZI Forum, AFAN, AGRON, Foward Africa, OhiamoFarms.	ZhimeMbano, Owerri and Avu	Youth empowerment in Agric, Extensio services in crop and L/Stock, Rice production, Crop production and processing.	Imo State
Bayelsa	Staffing, Mobility, and Funding	High cost of Animal Feed.	NA	NA	NA	NA	NA
Rivers	Funding, Staffing, mobility, absense of capacity building	Millipede attack on cassava and yam, cocoyam Bacterial Blight, Coconut die back disease	Cassava, Rice, Oil palm and Cocoa	NIMA, Green River Project, RSSDA	Port Harcourt and Agip Base, PH	Rural financing, Extension services	Rivers State, AGIP Host Communities

4.0 SUMMARY AND CONCLUSION

The Wet Season Agricultural Performance Survey (APS) for the year was conducted between 26th August and 3rd September, 2012. The survey was carried out by the National Agricultural Extension and Research Liaison Services (NAERLS) in collaboration with several other stakeholders in agricultural data generation and use. A broad scope of participation has been maintained to sustain improvement in the quality, utility and depth of data generated from the survey. The objectives of the survey were to: assess the agricultural performance during the wet season; make production forecasts; identify constraints to increased agricultural productivity and effective extension delivery service; and provide feedbacks for improved research and policy performance.

Nineteen multi-disciplinary teams of 57 scientists carried out the exercise across the states and FCT using Participatory Rural Appraisal (PRA) techniques, village listing and crops and area surveys conducted by the ADPs and other primary and secondary data sources. Structured questionnaire/ checklists, farm visits, interviews of over 1,764 farmers and Ministry/ADP officials were conducted during the exercise.

The rainfall situation in 2012 was substantially higher than of 2011. Heavy rains beyond expectations that resulted in floods occurred this year across the country causing severe crop damages, some casualties and displacement of several farming communities. The rainy season extended beyond long-term established duration in most parts of the country, thus including a longer period of cloud overcasts that impeded optimum solar reception on crop surfaces. The early onset of the rains enabled earlier planting of crops this year but the extended rainy season raised prospects of damage of early planted crops that matured during the rains because sundrying option was constrained. The cloudy nature of the season also raised the issue of mycotoxin, especially aflatoxin which farmers and consumers have to contend with.

The release of water into Nigeria from a dam in Cameroon in early September compounded the situation, resulting in more colossal losses of agricultural products especially along the shores of River Niger and River Benue, the confluence town of Lokoja and all the states in the Niger Delta.

The data from 28 states and FCT showed that the number of functional tractors for farm operations decreased from Similarly, the number of non-functional tractors increased from within the same period. The number of privately owned functional tractors however increased from 868 in 2011 to 1,096 in 2012. Privately owned non-functional tractors were 61 in 2011 and 196 in 2012 indicating an increasing lack of capacity for private tractor operators to maintain their tractor. Related to this is the gradual disappearance of Tractor Hiring Units in many states.

In many states, private individuals and organizations are providing tractor hiring services and the prospects of increased involvement of private participation in such service received a boost under the Agricultural Transformation Agenda (ATA) of the

Federal Government. Many private tractor service providers were able to access credits under the Growth Enhancement Support Scheme of ATA. A class of private tractor service providers is emerging across the country. Available records show a total number of functional tractors of 2,530 owned by Government and private organizations in the country in 2012. This value reflects the level of the challenges that farmers were confronted with in their quest to mechanize agriculture in the country. The fact that the number of functional tractors continue to decrease is an issue of concern. It is becoming obvious that incentives may be required to stimulate sustainable private sector engagement to improve tractors availability to farmers at fair prices. Also, proper record-keeping of farm machinery and equipment for efficient scheduling of farm operations to achieve timeliness in agricultural production activities should be ensured.

As in previous years, the use of work bulls increased this year, especially in Katsina, Borno, and Kano. And with regard to inputs, a few states made efforts to procure and distribute seeds, seedlings and cuttings of various crops and tree crops. The quantities made available, however varied from one agro-ecological zone to the other but was grossly inadequate and late. In Gombe, Adamawa and Buachi states, farmers applauded the early supply of drought-tolerant maize seeds by the Community-Based Agriculture and Rural Development (AfDB-CBARD) which is driving the adoption of improved seeds in these states.

Farmers reported that seeds of sorghum, soybeans, rice and maize, were supplied by ATA at no cost to only registered farmers. It is reported that less than 10% of the farmer's population were able to register before the closure of registration (there was observed scarcity of registration forms). Recipients of the seeds supplied by ATA reported that they were supplied very late in August after most of them had planted and that they were keeping the seeds for future use. Across the country, the private sector seed dealers and the informal and community-based seed trade remained the primary source of seeds to farmers. Incidences of adulteration or poor quality seeds were reported and the need for timely supply of seed remained a challenge for the National Agricultural Seed Council.

A few State governments also procured and distributed agro-chemicals such as crystallizers and agrolyzers, insecticides, herbicides, fungicides and lime. As in others years, poor access to modern inputs compromised expansion of production and the prospects of increasing youth's participation in agriculture.

Farmers applauded the initiative by the Federal Government to promote private sector dominance in the supply of agricultural inputs under Agricultural Transformation Agenda (ATA) to leverage on government Growth Enhancement Support (GES) scheme. Implementation and compliance with the initiative varied across the country especially as it related to the use of e-wallet scheme of fertilizer supply to their farmers. About 50% of the states that provided data on GES showed very encouraging

progresses in the implementation of the initiative. One key achievement of the scheme is that it eliminated the role of middlemen and government officials in the channel of fertilizer acquisition by farmers as well as made the product relatively affordable. Under GES a bag of fertilizer sold for between N3,000 - N3,500 depending on the type. The open market prices for the same fertilizer bag ranged between N4,500 – N6,000 during the 2012 season. Farmers however complained that the two bags each farmer was allowed to buy under the scheme was too low and made appeal for upward reviews in addition to their appeal for extended period of registration and coverage of more farmers. Many farmers claimed ignorant of the scheme which calls for increased publicity and farmers' education at community level.

Labour Cost of Farm Operations

Labour cost of all farm operations increased during the 2012 season when compared to 2011. The cost of land clearing recorded the highest price of N14, 000/ Ha in Ondo, FCT and Akwa-Ibom states. The cost of ploughing was reported to be high in Nasarawa state (N 20,000/Ha) while the cost of ridging, planting and harvesting were high in Akwa-Ibom, Lagos and Kaduna states respectively.

Food Commodity Prices

Market prices of major food commodities across the country as at July 2012 were compared with that of July 2011. The price of millet increased by 100%, in Gombe, 39% in Lagos, 33% in Bauchi and 30% Zamfara states. The price of maize increased by between 13 and 38% in most of the states with highest level of increase (38%) occurring in Lagos State followed by Akwa-Ibom State (30%) and least 13% in Kaduna State. During the period under review, the price of rice decreased between 45 and 6%. The highest level of rice price decrease occurred in Benue (45%) followed by Adamawa and Ebonyi states. The reduction in the price of rice implies that the increasing domestic production under ATA is impacting positively on local prices of rice across the country and likely to reduce rice imports (Figure 1).

The prices of Sorghum and Cowpea increased in all the zones of the country. Yobe state reported more than 100% increase in the price of sorghum. In Taraba State, sorghum price increase was 33% while Kaduna, Akwa-Ibom, Bauchi and Gombe each reported about 20%, increases in sorghum price. The price of cowpea sky-rocketed this year to unprecedented levels across the country. Zamfara reported about 100% increase in the price of cowpea over the period under review while Benue and Adamawa states reported about between 39% and 16% increases. In September of 2012, the price of cowpea reached record level of N350, 000 per ton. Also, the prices of Cassava products increased in all the Zones with Oyo and Osun states reporting increases of more than 100% for cassava tuber 75% in Edo State and 38% in Nassarawa State. The price of cassava gari increased by 20% in Enugu State in 2012 compared with 2011. However, a significant reduction in the prices of cassava gari was reported in Zamfara, Nassarawa and Oyo states. Ondo reported 22% reduction in the price of Cassava flours; and Kaduna & FCT reported 17% decreased in the price of cassava flour while Nassarawa,

Gombe, Imo and Ebonyi State reported 1% increase in the price of Cassava flour. In many states, the marketing of cassava remained a challenge as substantial of the cassava tubers have been left harvested because the cost of harvesting (in Benue and Oyo states in particular) out-weighted the value of harvested tubers during the year under review.

Yam tubers, flour and sweet potato prices increased across the country. Adamawa reported about 167% increase in Sweet Potato price, while Niger, Cross River, Nassarawa, Ondo, Akwa-Ibom and Kebbi reported an increase in the price of yam tuber of between 56%, and 17%. A significant decrease in the prices of sweet potato in Osun (47%), Ondo (33%), Rivers (20%), Kwara (15%) and Plateau (11%) State was also reported. The price of Melon was reported to have increased sharply in the NEZ, SWZ, SEZ and SSZ. In Bauchi State, an increase of 130%, compared with Ogun State that recorded about 65% increase and Cross River State that reported 50% increase in melon price. Price of melon however decreased in Ondo State by 44% and by about 42% in Enugu Benue and Akwa-Ibom states. As much as 69% increase in soybean price was recorded in Kaduna State, 44 -45% in Bauchi states Bauchi Benue states, and 31% in Oyo State 31%. Irish potato prices increased in Akwa-Ibom State by 41%, 25% in Oyo State and about 11% in both Nassarawa and Abia states.

Beef and goat meat prices experienced sharp increase across the nation. A rise of 100% in price of beef and goat meat was reported in Adamawa State while increases ranged from 33- 79% in most of the southern states.

The price of Mutton which increased across the country was more than 100% in Adamawa State, 127% in Nassarawa State and about 82% in Taraba and Kebbi states. In Ebonyi State, 40% increase in the price of Chickens was reported.

The price of fresh fish was also increased by 79% in Kaduna State, 59% in Kwara State and 29% in Ogun State. In Cross River and Plateau states, the price of fresh fish recorded a decrease of 28% and 14% respectively.

Prices of dry fish decreased by 15% and 23% in Cross River and Rivers states respectively unlike in Kwara, Nassarawa and Lagos states where increases of 57%, 49% and 36% were posted. Imo state reported more than 115% increase in dry fish price. The prices of eggs decreased marginally in SWZ and in a few other states. For example, egg price decreased by 28% in Oyo State and by 4-7% in Ekiti, Plateau and Bauchi states.

CROP AREA ESTIMATES

The area devoted to the production of various crops increased except cocoyam that decreased by -5.39% this year in response to Government drive and incentives for increased agricultural contribution to national economy under its ATA. The increases were however more remarkable with rice, soybean and maize. Maize area increased from 5.1million hectares in 2011 to 5.3million hectares in 2012 which represent about

4% level of increase (Fig 2).Soybean area increased from 602,580 hectares in 2011 to 627,224 in 2012 reflecting about 6% level of increase.That of sorghum increased from 4.842 million to 4.891 million hectares which is about 1.0%.Rice area increased from 2.55 million hectares in 2011 to 2.7 million hectares in 2012

Production area of cotton showed signs of growth for the first time in seven years. A slight increase in cotton area from 256,967 hectares in 2011 to 260,960 hectares in 2012 was recorded. Cassava area also increased slightly from 3.878 million hectares in 2011 to 3.922 million hectares in 2012.Cowpea area increased by marginally from 3.157 million hectares to 3.2 million hectares which a 1.39% level of increase. The area devoted to ginger production this year also increased by 7.3% from 48,910 hectares to 51.954 hectares.

PRODUCTION ESTIMATES

The out forecast this year for maize is 9.7 million tons compared with 9.088 million tons produced in 2011 which represent a 6.74% increase. Sorghum production will again inch up little by 0.34% from 6.829 million tons produced in 2011 to 6.851 million tons in 2012.Record output of rice is the forecast for this year reflecting an increase of16.35% from 4.521 million tons to 5.261 million tons. Substantial part of outputs had been lost due to massive floods that occurred during the year. Attempt was made to quantify the impact of the flood.

The estimated output for yam this year is 37.123 million tons against the 36.744 million tons produced in 2011. Millet output forecast is 1.28 million tons this year compared with the 1.258 million tons produced last year which is an increase of 1.72%.Soybean is expected to post remarkable increase and the forecast is 10.82% increase from 559,112 tons in 2011 to 619,608 tons in 2012. Cotton production is estimated to increase by 1.3% this year over the figures for 2011.

On overall, the food and agricultural raw material prospects for 2012 looked good until the damaging impacts of heavy downpours and floods across the country.

The massive floods were experienced in more than 20 states in Nigeria during the last week of August and in September, 2012 which had damaging effects on output expectations captured in the forecasts made at the beginning of September 2012.Crops planted in flood plains areas along River Benue, its tributaries, part of River Niger and its tributaries as well as Niger – Delta region were mostly destroyed by more than 3 weeks of submerge. The crops in the following states Adamawa, Nasarawa, Benue, Niger, Kogi, Ebonyi, Anambra, Delta and Byelsa were lost to flood in 2012. The crops mostly affected are rice, maize, yam, soybean, cocoyam and cassava, respectively. The effect of the heavy downpours on cowpea was increased pests and disease pressures on the crop which is likely to depress its yield this year.

Impact of Flooding on the output forecasts

Following the heavy downpours and flooding that occurred in September of 2012, it has become expedient to quantify the impact of the flood on the anticipated outputs in order to enable pragmatic plans to manage potential negative fallouts of the event. The projected output reduction anticipated to emanate from the flood based on the exposure to the risk of damage because of the ecologies in which the crops are produced and the areas so far affected are as follows:-

The flood has already on a national scale, induced about 22.4% depression on rice output, 14.6% depression on maize output; 11.2% decrease in soybean output; 9.3% reduction in cassava output and about 6.3% reduction in cowpea output. These represent losses of about 1.178 million tons of rice, 1.416 million tons of maize, 69,060 tons of soybean, 4.87 million and 118,944 tons of cassava and cowpea outputs respectively.

Strategic Grain Reserve

The purpose of national strategic grain reserves is to ensure year round food availability of food and food commodity price control and to meet the challenges of natural and civil disasters. However, private sector involvement in the provision of strategic grains is negligible and the process is laden with high level inefficiency that can be corrected.

LIVESTOCK AND FISHERIES

Livestock

The most widely reported constraints to livestock production were animal health care and disease control; the limited capacity of extension services; conflict between pastoralists and arable farmers; and the prevalence of theft and feed scarcity deter investment in livestock production. Previous years reports of Agricultural Performance Survey in Nigeria had indicated the near absence of livestock data. This year's report is not in any form different in terms of lack of livestock data in some states of Nigeria. Recommendations made severally by various stakeholders and in previous APS reports for the establishment of livestock census unit in the Federal Department of Livestock of the Federal Ministry of Agriculture and Rural Development and the paucity of livestock data encountered during the survey again justify the creation of such unit.

Livestock population

Huge populations of cattle, sheep and goats exist in Borno, Bauchi, Ekiti, Enugu, FCT and Kano states but no reliable data is available to understate projections. Large populations of poultry were reported in Bauchi, Ekiti, Ondo, Kano and Rivers State. Large population of rabbits was reported in Bauchi and Ondo states. In Bayelsa State, the promotion of grass-cutter is progressing remarkably.

LIVESTOCK DISEASES AND PEST

Cattle

The occurrence of CBPP was reported in Bauchi, Gombe, Jigawa, Katsina and Kano State. Foot and Mouth Disease reported in Bauchi, Bayelsa, Benue, Gombe, Jigawa, Kano and Plateau states. Feed poisoning was reported in Bayelsa State. Other reported disease conditions for cattle were Tricosis, LSD and *trypanosomiasis*. States like Gombe, Katsina, Jigawa, Kano, Lagos and Bayelsa vaccinated their stocks against some of the prevalent diseases.

Sheep and goats

PPR, Worm infestation, pneumonia, foot rot and mange were the most common diseases reportedly affected sheep and goats in 2012. However, Bayelsa, Gombe, Jigawa, Katsina, Kano, Lagos and Rivers states treated and vaccinated high population of their sheep and goats.

Poultry

An increased level of intensification of poultry production was recorded this year. While the practice of intensive, semi-intensive and free range system of rearing of chicken and other poultry birds exist side by side, an increasing shift to intensive systems were reported across the country. In a harmful of large scale commercial farms, exotic birds have been introduced. High cost of Feed and inadequate veterinary services (i.e. advisory service and drug administration) were among challenges that the farmers complained of in most of the states. Some poultry farmers had some difficulties in accessing veterinary services. Disease conditions that were severe that were encountered across the country this year include- Newcastle disease, Gumboro and fowl typhoid and cholera. Many Poultry farms complained of scarcity of locally made vaccines from NVRI, VOM which seems to enjoy broad based patronage owing to their efficacies. Expanding as well as decentralizing the local production capacities of vaccines of NVRI without compromising quality seems a viable intervention.

AQUACULTURE AND FISHERIES:

As in previous years, data for aquaculture and fisheries were largely not available in many states and even those available were very scanty and unreliable.

Fisheries Diseases

Pest and diseases of fish persisted in most the states; this is a major challenge to fish farmers because of lack of knowledge and manpower in the aspects of disease diagnosis and treatment. Poor feeding, insufficient water supply and poor management of fish stocked was another challenge faced by the fish farmers.

There is urgent need to develop a crop of efficient fisheries technical staff to provide advisory services for fish diseases prevention, diagnosis and treatment to forestall losses encountered when farmers are faced with these challenges. Also, a growing number of fish farmers have expressed desire for improved production and handling skills as well as on local feed formulation skills that optimizes the use of locally available feed resources.

From available records, the leading aquaculture production states in 2012 are FCT (27,811MT), Oyo (27,000MT), Kano (15,000MT) and Ogun (8,374MT). Catfishes-clarias and Heterobranchus dominated farmed species across the country. Artisanal fisheries production increased in 3 states which are Sokoto (21.01%), Bauchi (0.73%) and Kano (100.22%). The trend in aquaculture output show reduction of -3.64% in Niger, -19.51% in Gombe and -10.1% in Jigawa states respectively. There was a reduction in aquaculture output in many states and the FCT in 2012 compared with 2011. The reduction may be attributed to lack of proper support from government, insufficient aquaculture skills, diseases, and cost of feed and fingerlings and market uncertainties in the wake of civil crisis that occurred in many states.

Many of the state governments appeared to have abandoned the funding of extension service. In a majority of the states where some forms of special projects such as FADAMA III is being implemented, commitment to agricultural extension in 2012 was essentially limited to the payment of counterpart funds. The challenge of poor funding was visible in Kano, Edo, Delta, Enugu, Benue, Zamfara and Bauchi states. Most of the other states recorded poor funding or non-release of funds. The poor level of funding discouraged the recruitment of young extension staff in most of the ADPs. Currently the average age of extension agents in most of the ADPS ranged from 45 to 55 years. In many states, up to 35% of the existing staff will retire over the next 4 years and more than 74% will retire within the next 10 years. Unless the challenges of poor funding and ageing staff are urgently addressed, short to medium term sustainability of agricultural growth anchored on effective and energetic extension staff will be compromised. To save these agencies from total collapse, urgent and innovative intervention at the Federal level seems compelling. The poor funding is reflecting on a widening EA: Farm family ratio across the states.

In 2012, the number of Extension Agents reduced in many states owing to retirements, mortality and movement of staff to other jobs. It is reported that poor funding problems of the ADPs across the country constrained the employment of additional VEAs.

EA: Farm family ratio in Bayelsa, Anambra, Cross River and Benue states was the highest with 1:10,568, 1:9409, 1:4721 and 1:4000 respectively. Adamawa State appears to be the state with low EA; farm family of 1:1212. This trend of dwindling number of VEAs had persisted over the years in most ADPs and is worsening.

Most ADPs especially Sokoto, Kano, Taraba, Osun, Lagos, Ondo, Enugu, Cross River states did not conduct farm visits. In contrast, Kaduna, Gombe, Bauchi and Plateau states conducted several on-farm visits related to special projects such as AfDB-CBARD, Fadama III and TL2 being implemented in these states.

Fort Nightly Training (FNT) of farmers was not conducted by 41% of the ADPs due to financial and other logistics problems. Also, 65% of the ADPs conducted MTRM.

The highest number of farmers trained in 2012 was recorded by Katsina, Oyo, Adamawa, Bauchi, Anambra states and FCT which aggregated to less than 30,000 farmers. About 60% of the ADPs did not conduct any direct training for farmers this year including states that had well trained Farmers field school master trainers. Most of the states however sustained technical messages to farmers using the radio and Television programmes on Network and states media stations.

Many states did not establish farmer's field schools. Gombe, Ekiti Bauchi, Imo, Cross-river and Ogun states had the highest number of FFS recording 81, 81, 76, 72, 63 and 40 respectively while Oyo, Nasarawa, Abia and Rivers states had the lowest number of 1, 6 and 14, respectively.

Most of the technologies under OFAR are crop based. In Kwara, Nasarawa, Imo, Abia, Anambra Ekiti, Lagos, Osun, Bayelsa and Cross River states efforts were made to include OFAR packages on livestock. About 54% of the ADPs did not establish MTPs due to inadequate and untimely release of fund by government. Considerable improvement in the level of funding and commitment to support agriculture and extension services however occurred in Born State in 2012 unlike in the last 10 years when agriculture was completely neglected in the state.

The Federal Government during the years rolled out broad based programs (ATA) intended to induce investment driven strategic partnerships with the private sector and provide a range of incentives to unlock the potentials of agriculture to increase the sector contribution to economic growth. Under the ATA the country took giant strides to improving market connections and enhanced commodity value chain performance by promoting innovative incentive schemes in which deployment of agricultural subsidies get to intended beneficiaries. The quality of the inputs deployed to farmers under the scheme improved remarkably and the confidence farmers should have in the use of novel technologies are being re-instated by the participating private input suppliers who have expectedly up-scaled stewardship in support of their products.

Area devoted to the production and the expected outputs of most of the commodities of target under ATA increased in 2012 over figures of 2011 by a range of 11- 19%. Natural calamity of massive floods experienced during the year significantly impacted on outputs. Under ATA improved seeds and fertilizer were distributed to farmers in 26 states of the federation and the FCT through the Growth Enhancement Support Scheme and e-wallet ICT application concept.

The objectives of the Agricultural Transformation Agenda are:

- ✓ Increase food and nutritional security;
- ✓ Enhance income of rural populace;
- ✓ Increase export earnings;
- ✓ Reduce imported dependency;
- ✓ Employment and job creation and;
- ✓ Provide correct policy, regulation and administrative framework

Most states have commenced implementation of activities on rice, cassava and maize/soybean value chains. So far, the Agricultural Transformation Agenda intervention created jobs in a few states like Gombe, Jigawa, Kebbi, Benue, Ekiti, Osun, Enonyi, Anambra, and Imo.

The use of vouchers and electronic-wallets (mobile phones) being used to distribute subsidizes on inputs to farmers, with the target of reaching 20 million farmers in 2015 was commended by most of the farmers especially in Kaduna State and by several development workers interviewed though there are areas of improvement.

5.0 RECOMMENDATIONS

The following recommendations are made based on data collected, interactions with stakeholders in agriculture, observations during the survey and regular field feedback through the six NAERLS zonal offices:

1. The heavy downpours in September which forced the release of water from the Dadin-Kowa Dam in Gombe state and another Dam in Cameroon caused massive floods in more than 20 states of the country. Many farmlands were submerged and crops worth several millions of naira destroyed. The forecasts of improved production due to field observations conducted late in August and early September have been negated.

There is an urgent need to lay emphasis on dry season farming this year to ameliorate the expected shortfalls in Wet Season production arising from the damage inflicted by the heavy flooding and to ensure stable food supply and prices. Residual moisture from the floods will increase the production potential of significant areas to be used for dry-season production this 2012/2013 dry season. Serious investments in irrigation infrastructure and broad-based skill improvement to optimize the use of existing and yet to be developed irrigation facilities presents as overriding actions to be taken arising from the events of 2012.

2. Traditional farm tools still dominate agricultural production in Nigeria. This limits productivity and is a disincentive for engagement of youths in Agriculture. In spite of government efforts in acquiring tractors, the number of tractors available for field work has been reducing annually. Many tractors are down because of minor problems. Concerted efforts should be made towards ensuring effective after sales services for tractors, a more comprehensive inventory of tractors and other farm machines, and skill development for tractor repairs to keep existing tractors functional while acquiring new ones.
3. The effects of climate change are becoming more apparent and are complicating the pressure on the national research system to provide novel technologies for transformation of the nation's agriculture.
Improved funding should be provided for research to develop appropriate technologies/maintain germplasm of biological resources for mitigating the effects of climate change- multi-purpose tree species for checking soil erosion, desertification, nutrient efficient crops, control of pests and diseases of crops, livestock and fisheries and low cost feeds and feeding techniques for fisheries and livestock.
4. Sustainable agricultural transformation requires active engagement of skilled extension personnel. Presently, the number of such personnel available is uncertain and the poor funding of the ADPs is negating efforts of the federal Government to revitalize agriculture. An Innovative federal intervention on the

issue of sustainable funding and personnel development at the ADPs would be a strategic development initiative to contemplate quickly to avert total collapse of the agriculture extension service in the country.

A complement to such intervention is a clear perspective support for the conduct of a national census of extension personnel and unemployed graduates with a view to factoring their integration into agricultural value chain incubation schemes upon which the transformation agenda would be leveraged.

5. The strategic grain reserve of the Federal Government is currently not being complemented at the state levels. To enhance effectiveness of the programme, state governments and the private sector need to take a more active responsibility in ownership, stocking and distribution and linked to commodity market evolution pathway. A situation in which the operation of the strategic grain reserve scheme is almost under the exclusive control of the Federal Government is unlikely to be sustainable.
6. There is paucity of data on livestock and fisheries production across the states. There is therefore the need to initiate the conduct of livestock population census and nationwide fisheries production survey in order to enhance the reliability of livestock and fisheries data for development planning.
7. There is the urgent need to train livestock and fisheries technical staff on diseases prevention, diagnosis and treatment to forestall losses encountered when farmers are faced with these challenges. Fish farmers especially should be trained on how to produce their feeds using locally available feed resources since over 70% of production cost is expended on feed purchases
8. Cassava glut was reported in many states especially Oyo, Kwara and Kogi with an estimated yield loss of 100% by most farmers. The current policy of cassava inclusion in bread and the establishment of Cassava Bread development Fund are steps in the right direction but some clarity on the mode and structure for the enforcement of the policy is necessary.
9. Inputs received by farmers through e-wallet under the Growth Enhancement Scheme, GES of ATA for the wet season was late and inadequate. The process of fine-tuning the scheme should be continued without off season holidays in order to address the anomalies detected in 2012
10. The progress made in the establishment of the Department of Extension at the Federal Ministry of Agriculture and Rural Development is highly commendable. The Department should be supported and strengthened for effective take-off to quickly deal with yet to be attended issue of lack of extension policy for the country.

Appendix 1
NAERLS ZONAL OFFICES AND CONTACTS

S/No	Addresses	Mailing	E-mails/Telephones	Website
1	Headquarters	NAERLS, ABU, PMB 1067, Zaria	director@naerls.gov.ng +23469879449	www.naerls.gov.ng
2	North West Zonal Office	NAERLS, ABU, PMB 1067, Zaria	nwoffice@naerls.gov.ng +2348054468701	
3	North East Zonal Office	C/O Lake Chad Research Institute, PMB 1293, Maiduguri, Borno State	neoffice@naerls.gov.ng +2347028149679	
4	North Centl Zonal Officer	C/O National Cereals Research Institute, Box 770, Bida, Niger State	ncoffice@naerls.gov.ng	
5	South East Zonal Office	C/O National RootCrop Research institute, PMB 1006, Umudike, Umuahia, Abia State	seoffice@naerls.gov.ng +2348037800712	
6	South West Zonal Office	C/O Moore Plantation, PMB 5029, Ibadan, Oyo State	swoffice@naerls.gov.ng	
7	South-South Zonal Office	School to land, Port Harcourt, Rivers State	ssoffice@naerls.gov.ng +2348063928230	

