

# AGRICULTURAL PERFORMANCE SURVEY OF 2011 WET SEASON IN NIGERIA

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## NATIONAL REPORT



By

**National Agricultural Extension and Research Liaison Services (NAERLS)**  
**Federal Ministry of Agriculture and Rural Development**  
**Ahmadu Bello University, Zaria**  
[www.naerls.gov.ng](http://www.naerls.gov.ng)

And

**National Programme of Food Security (NPFS)**  
**Federal Ministry of Agriculture and Rural Development**  
**Abuja**

**December, 2011**

**Agricultural Performance Survey of 2011 Wet Season in Nigeria**  
**National Agricultural Extension and Research Liaison Services,**  
**Ahmadu Bello University**  
**P.M.B. 1067**  
**Zaria, Nigeria**  
[www.naerls.gov.ng](http://www.naerls.gov.ng)

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**Certified By**  
**National Technical Committee on Agricultural Statistics**

**Collaborators: PPASD, NBS, FDA, FDF, FDL, IAR, IAR&T, NCRI, NRCRI, NPC**  
**and State ADPs**

## P R E F A C E

The assessment of field situation of wet season agriculture in Nigeria is an annual exercise. This year, it was jointly conducted in September 2011 by the National Agricultural Extension and Research Liaison Services (NAERLS), National Programme of Food Security (NPFS), National Bureau of Statistics (NBS), Federal Department of Fisheries (FDF), Nigeria Meteorological Agency (NIMET), Planning, Policy, Analysis and Statistics Department (PPAS), Federal Department of Agriculture (FDA), Federal Livestock Department (FLD), National Productivity Centre (NPC) and the five Zonal Coordinating Research Institutes. Eighteen teams of three specialists each covered all the 36 states of Nigeria and the Federal Capital Territory (FCT) involving 148 LGAs across the country.

We wish to express our sincere appreciation to officials of the Ministries of Agriculture and Rural Development, State Agricultural Development Projects (ADPs), other State parastatals and LGA officials across the country that made all the necessary arrangements to facilitate the smooth conduct of the study and also provided the required data. The outputs of the evaluation exercise have been put together into an executive summary, state and national reports, which are being circulated to all states and relevant Federal agencies and other stakeholders. This National Report of the assessment of the 2011 wet season providing principal trends and findings that can guide decision-makers and researchers. The continued involvement of agencies such as NBS, NPC, FDF and NIMET has raised the scope and enriched the reports. It is also gratifying that the National Technical Committee on Agricultural Statistics continued to provide the necessary backstopping for the exercise and has officially certified the publication. This also is to express our commitment to continued improvement of the methodology of the exercise and quality of the data in the report. We will therefore appreciate to receive comments on the report.

**Prof. S.Z. Abubakar**

**Executive Director, NAERLS**

E-mail: [director@naerls.gov.ng](mailto:director@naerls.gov.ng)

Website: [www.naerls.gov.ng](http://www.naerls.gov.ng)

**Alhaji AbdulAziz Mohammed**

**National Coordinator, NPFS**

E-mail: [info@NPFsnigeria.org](mailto:info@NPFsnigeria.org)

## ACRONYMS

ADP	-	Agricultural Development Programmes
APS	-	Agricultural Performance Survey
APSR	-	Agricultural Performance Survey Report
ASC	-	Agro Service Centers
BES	-	Block Extension Agent
CAYS	-	Crop, Area and Yield Survey
EA	-	Extension Agent
FAO	-	Food and Agriculture Organization
FDA	-	Federal Department of Agriculture
FDF	-	Federal Department of Fisheries
FLD	-	Federal Livestock Department
FGD	-	Focus Group Discussion
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
MANR	-	Ministry of Agriculture and Rural Development
MOP	-	Muriate of Potash
MT	-	Monthly Training
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
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 of Food Security
NSPFS	-	National Special Programme for Food Security
OFAR	-	On Farm Adaptive Research
PM	-	Programme Manager
PPASD	-	Planning Policy Analysis and Statistics Department
PRSD	-	Planning Research and Statistics Department
QTRM	-	Quarterly Technology Review Meeting
RID	-	Rural Infrastructure Department
RTEP	-	Root and Tuber Expansion Programme
SPAT	-	Small Plot Adaptation Technique
SMS	-	Subject Matter Specialist
SSP	-	Single Super Phosphate
T & V	-	Training and Visits
ZEO	-	Zonal Extension Officer
UN	-	United Nation



## LIST OF RESOURCE PERSONS

Team	Scientists	Organization/ Agency/ Department	States Covered	
	Prof Johnson Onyibe	NAERLS	National Coordinator	
	Mr Chris Okonjo	NPFS	Deputy National Coordinator	
1	Mr A. Adole (TL) Mr. Umar Rilwanu Dr (Mrs) A. A. Muthar	NPFS NAERLS IAR	Kebbi	Sokoto
2	Dr M K Othman (TL) Mr Ali Onoche Dr Ikechukwu Ofomate	NAERLS NPFS FLD	Kano	Jigawa
3	Dr Sani Yusuf (TL) Mr Shehu Hamza Dr Goni Mohammed	NAERLS NPFS NAERLS	Yobe	Gombe
4	Dr M M Jaliya (TL) Mr Abdulmalik Nura Dr D Anogie	NAERLS NPFS LCRI	Adamawa	Borno
5	Dr F. K. Idefoh (TL) Mrs Rose Onu Mr. Ikawu John	NPFS NAERLS FDA	Plateau	Bauchi
6	Mr. Agwu Okorie (TL) Mr. T. D. Bidoli Mr. S. O. Iseyemi	NPFS NAERLS NBS	Nassarawa	Kaduna
7	Mrs C. Ezeali (TL) Mr Bishop Ohioma Mr. F O Issa	NPFS NBS NAERLS	Akwa-Ibom	Cross- River
8	Dr Isa Annatte (TL) Mr H Akwashiki Mr. Shehu Madhi	NAERLS NPFS NPC	Bayelsa	Rivers
9	Mal Usman Aliyu (TL) Mr M Balasom Dahiru Baba	NCRI NPFS NAERLS	Benue	Taraba
10	Mr Bassey Okoro (TL) Mr. H D Bagy Mr O O Ibeagi	NAERLS NPFS NRCRI	Anambra	Enugu
11	Prof Bolorunduro (TL) Ms Nkechi Ike Mr. Shugaba Modu	NAERLS NPFS NPC	Delta	Edo
12	Mr J Taiwo (TL) Mr. Isaac Adedokun Mr N D Okafor	NPFS NAERLS PPAS	Ekiti	Ondo
13	Mr. S. Ailemen (TL) Mr. Ahmed Ibrahim Mrs Patricia Okonji	NPFS NAERLS FDF	Oyo	Osun
14	Dr J Ukut (TL) Mr Ibegbu H Obi Mr Abe Jibrin Allanana	NPFS NAERLS FDF	Abia	Ebonyi, & Imo
15	Dr A Coker (TL) Ms Elizaberth Ohageria YusufAbdullahi	NPFS FDA NAERLS	FCT	Kogi
16	Mr J O Abugu (TL) Mr. Bala Shehu Mr Dauda Bulama	PPAS NAERLS NPFS	Zamfara	Katsina
17	Dr Oluwatosin (TL) Mr M A Adesina Mrs V Okotie	IAR&T NAERLS NPFS	Lagos	Ogun
18	Dr C K Daudu (TL) Mr S. Ajuwon Mrs Felicia Offor	NAERLS NPFS NBS	Niger	Kwara

## EXECUTIVE SUMMARY

The Wet Season Agricultural Performance Survey (APS) for this year was conducted between 4<sup>th</sup> and 14<sup>th</sup> September, 2011. The survey was jointly carried out by the National Agricultural Extension and Research Liaison Services (NAERLS) and the National Programme of Food Security (NPFS), in collaboration with several other stakeholders in agricultural data generation and use. These other agencies include the National Bureau of Statistics (NBS), Federal Department of Agriculture (FDA), Nigerian Meteorological

*The objectives of the survey were to assess the agricultural performance of 2011 wet season, make production forecasts for the season; identify constraints to increased agricultural productivity and effective extension delivery service; and to provide feedbacks for improved research and policy performance.*

Agency (NIMET), Planning, Policy Analysis and Statistics Department (PPASD), Federal Department of Fisheries (FDF), Federal Livestock Department (FLD), National Productivity Centre (NPC) and the five Zonal Coordinating Research Institutes (IAR, LCRI, NCRI, IAR&T and NRCRI). The widened scope of participation has been maintained to sustain improvement in the quality, utility and depth of the 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.

Eighteen multi-disciplinary teams of three scientists each carried out the exercise across the federation (all 36 states and the FCT), using Participatory Rural Appraisal (PRA) techniques. This involved the use of structured questionnaire/ checklists, farm visits, interviews with farmers and Ministry/ADP officials. In every state, two communities each were selected from two LGAs in each of two selected agricultural zones for evaluation. From each community, five farmers were interviewed in addition to focused group discussions held at every site. A total of 54 scientists were involved in the survey. 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. It should be noted that the crop production figures used in this report are adjusted based on 2010 forecast, while those of the current year 2011 are forecast.

## Rainfall Situation

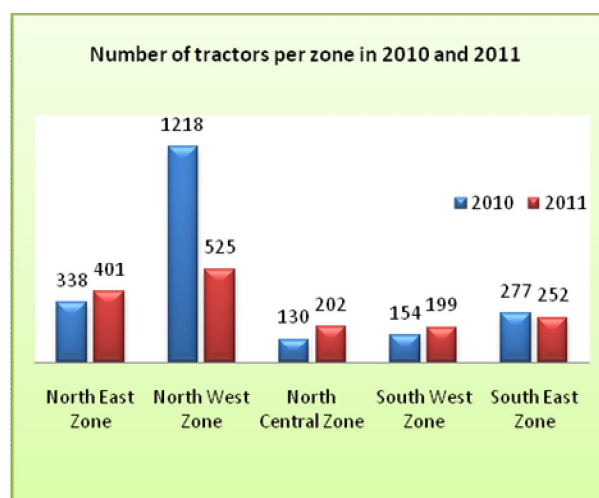
The rainfall situation in 2011 was substantially similar to that of 2010. The rains started between April and May in the North-East and North-West zones. Most of the states in the North-Central and South-West Zones had their first rains in January except Plateau and Taraba states that had their first rains in February. Heavy downpours occurred across the country but in different months. Heavy rains that resulted in floods occurred this year in Oyo, Ondo, Lagos Sokoto, Kano, Jigawa and Adamawa states causing severe crop damages and casualties.

There was a more even rain distribution across the country in June, July and August than for the corresponding periods in 2010, except that dry spells also occurred in Bauchi, Katsina, Kwara and Gombe which affected maize, sorghum and cassava. Ekiti and Edo states had more rains this year than in 2010, while Oyo, Osun, Ondo, Ogun and Lagos had less this year relative to corresponding periods in 2010. The trends of rainfall in Delta state were similar for the two years. In the South-East zone, rainfall this year was generally higher than that for 2010. There are indications that the rainy season will be extended, which has potential to damage early planted crop, especially as effective grain-drying options beside sun-drying are not available.

## Agricultural Mechanization

Agricultural production in the country still relies mostly on manual labour. A total of 8 states and the FCT did not provide any data on availability of tractors. This paucity of information is worrisome, as it makes proper planning for tractorization virtually impossible. The data available showed that the number of functional tractors for farm operations decreased from 2,117 in 2010 to 1,579 in 2011. Similarly, the number of non-functional tractors

increased from 876 to 1,004 within the same period. Information on privately owned tractors was not readily available, as only 5 states (Bauchi, Kebbi, Nassarawa, Benue and Bayelsa) provided data. The increase in the number of non-functional tractors between 2010 and 2011 also reflects a worrisome trend of closure of tractor maintenance and servicing workshops across the country. Related to this is the gradual disappearance of functional Tractor Hiring Units in many states. The average price charged for farm operations (₦12,000 to ₦15,000 per tillage operation) showed an increase beyond that for 2010 (₦8,000 - ₦9,000) which is putting the patronage of such services beyond farmers' reach. Frequent breakdowns, scarcity of genuine spare parts, poor maintenance practices, high running costs and lack of reliable tractor operators remain the major problems farmers listed. In Borno, Zamfara and Kano states, however, there was 20-25% increase in the adoption of work-bulls.



### Use of Improved Farm Inputs

During the year, many states procured and distributed planting materials for major cereals, legumes, tree crops and solanaceous crops. The commitment shown by the states in the amounts released for the procurement was, however, inadequate, as most of the planting materials were insufficient. The materials were only slightly considered affordable by farmers and there were limited reports of questionable viability. Sources of planting materials remained the National Agricultural Seed Council, Seed Companies and Research Institutes. Many states did not put sufficient efforts on the procurement and distribution of cash crops, such as groundnuts, ginger, sesame, cocoa, oil palm, and rubber.

In addition to seeds and other planting materials, some quantities of agro-chemicals (herbicides, pesticides, fungicides and insecticides); agricultural equipment, such as tractors, storage bins, sprayers, water pumps, work-bulls and agro-processing equipment like rice huller were procured and sold to farmers. Though the demand for boom sprayers increased during the year under review, their prohibitive cost and unavailability

hindered widespread usage. In Yobe, Plateau, Kogi, Benue, Ogun, Delta, Anambra and the FCT, some farm inputs and agro-chemicals were procured and distributed to farmers. The sources of these equipment/agro-chemicals included various agro-chemical companies, ADPs, NPFS and the open market.



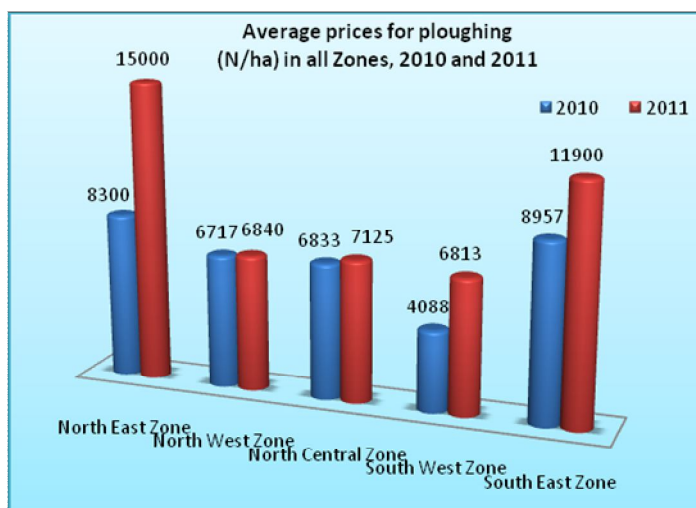
Most of the equipment and agro-chemicals supplied were neither adequate nor affordable to farmers in many of the states that provided information. As in others years, the impaired access to modern inputs compromised expansion of production and the prospects of increasing youth's participation in agriculture.

### Fertilizer Procurement and Distribution

Fertilizer procurement data were available for most of the states, except for Gombe, Katsina, Kwara, Osun, Ondo, Lagos, Enugu, Ebonyi, Cross River and Rivers states. The data also indicated a decline in procurement and distribution in comparison with those of 2010. Government-subsidized price per 50kg of NPK ranged from ₦1,000 to ₦3,500. Zamfara State distributed fertilizers to farmers at the lowest rate of ₦1,000 per 50kg, while other states sold for between ₦2,500 and ₦3,500. Fertilizer distribution was grossly inadequate throughout the country, as data indicated that farmers' access to government procured fertilizers was insufficient during the year.

## Labour Cost of Farm Operations

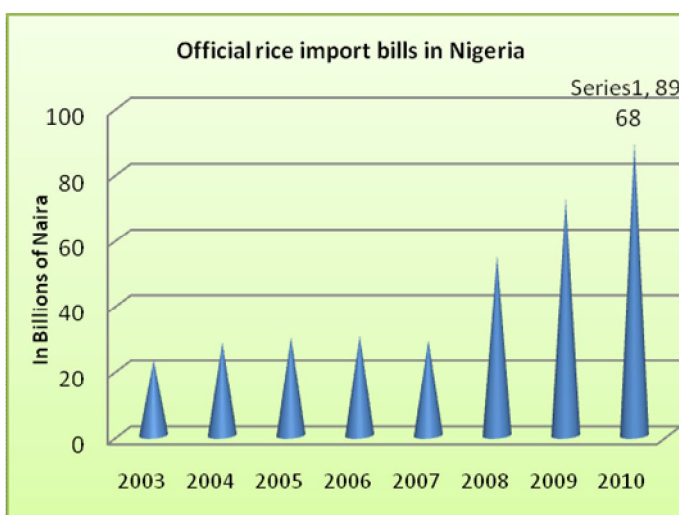
Labour costs for farming operations varied slightly during the 2011 cropping season, as compared to 2010. The North East had the lowest marginal increase of about 7%, while South West recorded the highest increase of about 32%. The national average of labour cost record increase was 15%.



## Food Commodity Prices

Comparison of market prices of major food commodities across the country were made for July 2010 and July 2011. There was an increase in the prices of maize, millet and rice in the NE, NC and the SW zones. Adamawa State experienced about 56% increase in the price of rice despite growing rice imports, while in the FCT, maize and millet had 40% price increase. There was, however, decrease in the prices of maize, millet and rice in the NW and SE/SS; while Sokoto had about 23% decrease in maize prices and 36% in millet, Kano and Imo had 52% and 32% decrease in rice prices respectively and Rivers had a decrease of about 33% in the price of maize.

Increase in the price of sorghum was experienced in the NE, NC and NW, with Kaduna having the highest (52%). There was a slight decrease in the prices of cowpea in the NW, NC and SW. Stable prices was reported for cassava products in the NE while an increase was reported in the NW, with Sokoto having an increase of 27% and Oyo, 56% in gari prices. There was a



sharp increase in the prices for cassava products in the SE/SS. Ebonyi reported about 250% increase in cassava tuber price and 85% increase for cassava flour. A significant decrease in the prices of cassava products was reported in the NC, the SW and the SE/SS. Kwara reported about 63% reduction in the price of cassava tubers; 35% for gari and 48% in cassava flour.

Oyo reported 69% decrease in cassava tuber price, and 30% decrease in the price of cassava flour, while Ebonyi had about 36% decrease in gari prices. Sharp increases in the prices of yam tubers, flour and sweet potato were recorded in the NW, NC and SW, with Kaduna having 169% increase in yam tuber price and 158% for sweet potato. Kwara experienced 55% increase in sweet potato price, while Oyo and Ogun had about 58% and 42% increase, respectively, for yam tubers and sweet potatoes. A significant decrease in the prices of yam tuber, yam flour and sweet potato was reported in Niger (50-61%), Ondo (35-40%), Abia and Rivers (30-33%).

A sharp increase in the price of melon was reported. The increases were 35% in Bauchi 70% in Nassarawa 89% and 81% in Osun and Ebonyi states respectively. Price increases for potatoes were more than 94% and 45% in Bauchi and Imo states respectively. Also price of soybean this year increased by more than 80% over that of 2010 in Kano, Oyo, Zamfara and Kaduna States

With regard to animal products, a slight increase in the prices of beef and goat meat was reported in the NE and NW, with Bauchi (16%), Adamawa (18%), Sokoto (13%) and Zamfara (17%). But in NC and SE, significant increases in the prices of beef and goat meat were reported with Kwara (78%), Cross Rivers (97%) and Rivers (136%). No data for pork prices were received from all the zones. Sokoto and Niger reported an increase of 71% and 78% respectively in the price of mutton. Kwara indicated 30% increase in chicken prices, Cross Rivers 41% and Oyo and Ondo reported more than 20%. Bauchi however, reported a 56% reduction in the prices of chickens. Marginal increases in the prices of eggs were reported in Bauchi (32%), Kaduna (28%) and Benue (26%). Taraba and Cross River reported an increase of 42% and 425% respectively in fresh fish prices. Very high increases were experienced in the prices of both smoked and dried fish with Rivers (433%), Cross Rivers (261%) and Bauchi (76%). In general, significant price increases occurred in markets in all zones for major agricultural commodities.

### **Crop area estimates**

The area devoted to production of maize increased slightly from 5.06 million hectares in 2010 to 5.153million in 2011. The land area under yam and cowpea cultivation remained substantially unchanged at 4.26 million hectares, 3.2million hectares respectively. That of sorghum decreased slightly from 5.04million hectares to 4.89million hectare. Rice area increased from 2.55million hectares to 4.57 million hectare during the same period. Production area for millet and soybean however decreased slightly. Also cotton area decreased again this year for the sixth time in a row.



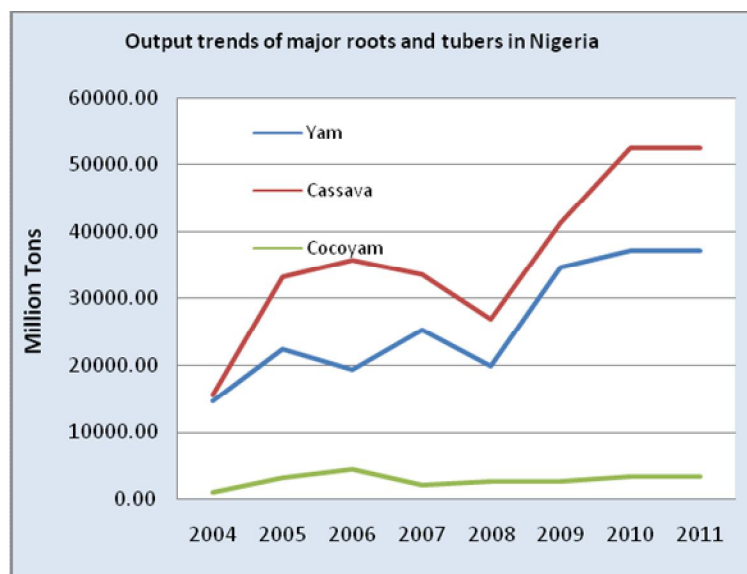
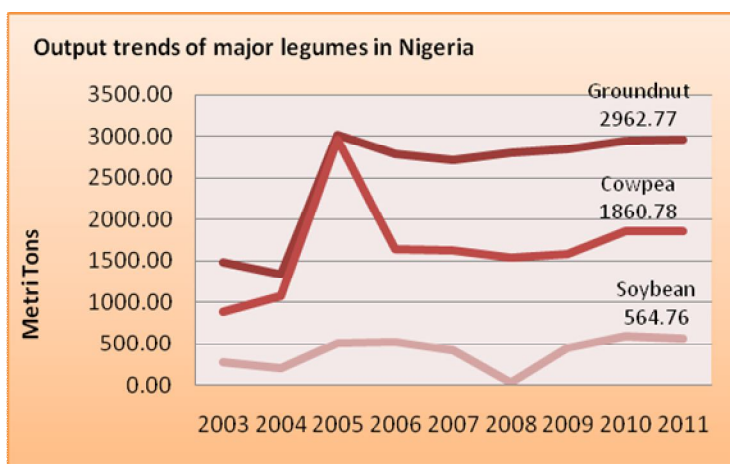
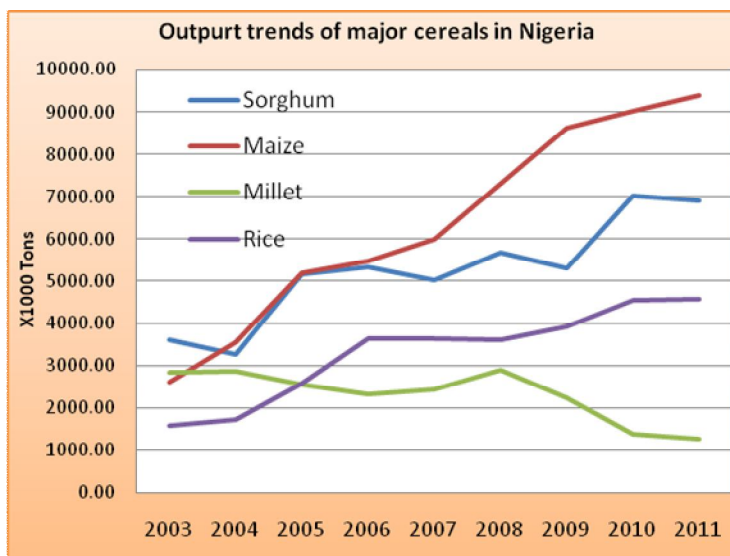
## Production Estimates

The output forecast this year for maize is 9.38 million tons compared with 9.0 million tons produced in 2010 which represent a 4% increase. Sorghum production will decline slightly from 7.02 to 6.89 million tons. About 4.56 million tons of rice is the forecast this year, which is comparable with that of last year.

The estimate output for yam this year is 37.12 million tons which is similar to that of 2010. Millet production is estimated to decrease from 1.38 million tons to 1.27 million tons this year. The record 52.3 million tons of cassava produced in 2010 will be raised slightly to 52.4 million tons this year.

Soybean output is anticipated to decrease slightly from 599,559 tons produced in 2010 to 564,760 tons expected in 2011. Groundnut production will increase marginally from 2.952 million tons produced in 2010 to 2.963 million tons in 2011. Cotton output will however decreased from 73,097 tons in 2011.

On overall, the food situation prospect for 2011



is only slightly better than that of 2010 despite favourable rainfall situation that prevailed in 2011. Several factors accounts for the poor growth in output figures expected in 2011 among which are poor extension services, low use of improved inputs such as seeds, poor access to credits, high cost of inputs, pests and disease attacks and incidence of floods and dry spells that occurred at different parts of the country.

### **Grain Reserve**

The purpose of national grain reserve is to ensure an all year round availability of food and food commodity price control. However, majority of the states in the country did not have any record of stored grains and distribution for 2011.



**A storage facility for fertilizer, which is needed for increased yields**

### **Crops Pests and Diseases**

In the 2011 cropping season, incidences of crop pests and diseases were generally light or moderate in severity across the country. In a few cases however, heavy infestations occurred. For instance quela bird attacks on rice and cereals were heavy in Gombe, Ogun, Ondo, Edo and Anambra states; stem borer and striga attacks remained severe on millet, sorghum and maize and on cowpea and Alectra parasitic weed attack on groundnut occurred in NE, NC, and SE/SS. Also, blast attack on rice was heavy across the country especially South East and South South zones. Thrips attack on cowpea, was heavy in Ekiti and Kano. Also leaf spot infestation on groundnut was heavy in Adamawa and Nassarawa State while mealy bug on yam was reported heavy in Plateau. Dieback infestation on cocoyam was heavy in the South East and South South zones and light in North West zone. Tomato wilt was especially heavy in Oyo State just as termites attack on yam and early maturing maize. Owing to delay in the



cessation of rainfall, concerns for aflatoxin in many of the early maturing grain crops has arisen and may warrant implementation of elaborate control measures, of which farmers are yet to learn.

### **Livestock and Fisheries**

As in the previous years, unavailability of data still plagues the livestock and fisheries sub-sectors in Nigeria. Only twelve states provided scanty data on livestock population and fish production. In many states, production estimates for cattle, sheep, goats and poultry were not very impressive. Large populations of poultry were estimated in Abia, Ekiti, Niger and Kano. Rivers State reported the highest estimates of pig (3.6 million). In cattle production, the following diseases were reported: CBPP in Bauchi and Jigawa; FMD in Bauchi, Bayelsa, Jigawa, Kano, and Rivers states; and feed poisoning in Bayelsa, Jigawa and Kano states. Other reported disease conditions for cattle were diarrhea, catarrh, mange, helminthiasis and ectoparasites. The coverage of diseases that affected cattle was state wide in the affected states. Many of the stocks were vaccinated against the prevalent diseases. There were reported cases of PPR, worm infestation, pneumonia, diarrhoea, helminthiasis and chronic respiratory diseases in Kebbi, Kaduna, Niger, Kogi and Ondo respectively. It is noteworthy that Kano, Kogi, Bayelsa and Rivers states treated and vaccinated a high number of sheep and goats. Most of the farmers are practising both intensive and free range local fowls, and a few exotic birds were reared mainly by large-scale commercial farms in most of the states.

High costs of feed and medication were major constraints to farmers in the livestock industry in the country. However, a good number of birds in all the states were vaccinated to enhance production. Data for aquaculture and fisheries were largely not available in many states and even those available were scanty. Out of the 36 states and FCT, only Osun procured and distributed fisheries input, such as fishing nets, fingerlings and feeds in 2011. Many states did not procure inputs due to lack of fund in 2011. In aquaculture, major diseases experienced include bacterial, fungal, viral diseases and broken skull. Fish parasites, such as leeches, helminthes, and predators, such as dragon flies, monitor lizards, snakes and frogs were reported in Ekiti, Gombe, Bayelsa and Edo states, although, their effect was light, except in Bauchi State where heavy infestation was reported. Pest and diseases persist in most states; this is a major challenge to fish farmers, who also lack knowledge and manpower in disease diagnosis and treatment. Poor feeding, insufficient water supply and poor management of fish stock are other challenges faced by farmers.

### **Agricultural Development Programme Extension Activities**

Across the states, the number of VEAs and other front-line extension agents did not improve. Extension to farmers' ratios remained at record levels that are higher than 1:1800 famers. In Bauchi, Kano, Yobe and Ebonyi states which had the highest number of VEAs of 306, 780, 265 and 257 respectively. The number of VEAs in Ebonyi state was an increase of 65% over the 2010 record. The dwindling funding of ADPs across the country might have been responsible

for non-employment of additional VEAs. Anambra, Enugu and Rivers states have the highest EA : farmer ratio, with 1:9,407, 1:6,848 and 1:6,749, respectively. With respect to farm visits, Taraba State ADP recorded the highest number of visits to farmers by VEAs (150,000); while Zamfara State had the lowest record of visits of 56. The use of Management Training Plot (MTP) and On-Farm Adaptive Research (OFAR) slightly increased in a few ADPs. About 62% of the ADPs did not conduct Small Plot Adoption Technique (SPAT) for the year under review. Ekiti State conducted the highest number of SPATs (1,278), while Adamawa State had the highest number of MTPs (10,000) and Imo State, the highest number of OFAR trials (900) which it conducted under the AFDB-CBARBD Project. Kwara, Delta and Ekiti states mounted innovative OFAR and SPAT on fisheries using traditional earthen ponds.

The conduct of fortnightly training (FNT) was not a popular activity among many ADPs. For instance, about 40.5% of the states did not record any FNT for 2011. The modification of FNT to MT did not help matters. In Edo, Imo states and FCT however, almost 100% achievement of FNT targets was recorded. Similarly, only Lagos State and the FCT reported 100% achievement of MTRM targets. Many ADPS have abandoned the conduct of MTRMs owing to funding constraints.

Many states reported delay or lack of payment of counterpart fund for Key development Projects, and also complained of inadequate skilled extension personnel, lack of mobility for fieldwork, as well as the lack of incentives/motivation for extension staff.

In 2011/2012, the major training needs of the ADPs include skill improvement in areas of crop improvement, pests and disease management; agricultural project planning and monitoring; building agricultural extension communication skills of extension specialists; management of tractor operations, fish culture handling, nutrition and breeding; and agricultural produce' storage, processing and preservation and strategy for promoting public compliance to agricultural policy.

## **Recommendations**

The following recommendations are made based on data collected, interactions with stakeholders in agriculture and observations during the field trips:

1. Traditional farm tools remained dominant in Agriculture in Nigeria and a dis-incentive for the engagement of youths. Though government had made some modest investments in the provision of tractors, lack of processing machines is constraining optimal use of the tractors and expansion of production.

In order to stimulate youth participation in agriculture and productive use of available tractors, significant investment in processing machines and cottage level processing skill development is required.

2. Inventory of agricultural machineries in Nigeria is currently lacking which makes planning for mechanization difficult.

A nationwide survey should be commissioned to document the actual needs and available tractors and machines for processing in order to guide the transformation agenda of the country.

3. Climate change is complicating the pressure on the national research system to provide novel technologies for transformation of the nations agriculture but they are beseeched by myriad of infrastructural and funding/ personnel problems.

Improved funding for research to develop appropriate technologies 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. Also, the number of unemployed graduates that could be mobilized to realize the transformational agenda is yet to be determined.

A national census of extension personnel and unemployed graduates should be conducted 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 complimented 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. 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.

**Earthen fish pond common in Nigeria**



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. Increasing production cost coupled with low producer prices is making agriculture unattractive. Provision of growth support incentives need to be enhanced and sustained using schemes that benefit the target farmers such as the improved voucher scheme.



**A good maize stand likely to produce high yield**

8. Across the country, extension service institutions are weak and showing signals that they cannot anchor anticipated transformation agenda of government unless there are reforms. Central to the problem of extension service is the structure of its funding and administration. At a national level, extension services do not have a coordinating or supervisory supports that trickle down to all levels of governance such that there are fairly good measures of congruence towards the national food security goal. This has occasioned an extension system in disarray. In many states, provision for counterpart funding is overarching or the only provision for agriculture. Uncoordinated intervention of projects by donor agencies in many states depletes extension personnel and the capacity of the ADPs to institutionalize statewide agricultural development. The problem is complicated by poor involvement of the Local Government Area councils in agricultural extension service.



**Improved breeds of cow are becoming popular**

There is an urgent need for the establishment of a Department of Agricultural Extension at the Federal Ministry of Agriculture and Rural Development to coordinate and promote active involvement of all tiers of government in agricultural extension services.

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## 1.0 Introduction

The Annual Agricultural Performance Survey (APS) was conducted between 23<sup>rd</sup> August and 3<sup>rd</sup> September, 2010. The National Agricultural Extension and Research Liaison Service (NAERLS) and the National Programme on Agriculture and Food Security (NPAFS)/National Food Reserve Agency (NFRA) conducted the national survey in collaboration with several other The agencies include the National Bureau of Statistics (NBS), Federal Department of Agriculture (FDA), Nigerian Meteorological Agency (NIMET), Planning, Policy Analysis and Statistics Department (PPASD), Federal Department of Fisheries (FDF), Federal Livestock Department (FLD), National Productivity Center (NPC) and the five Zonal Coordinating Research Institutes (IAR, LCRI, NCRI, IAR & T and NRCRI). All these organizations contributed scientists and logistics to facilitate the conduct of the survey. The expansion in the range of participating Institutions was strategic in order to improve the depth, quality and utility of the output of the exercise.

The key objectives of the survey were to:

- Assess 2011 wet season agricultural performance and to make forecasts for the season;
- Identify constraints to increased agricultural productivity and effective extension service delivery; and
- Provide feedback for improved research and policy directive.

## 2.0 Methodology

A multi-disciplinary team of three scientists conducted the survey in each state using a menu of participatory techniques. Primary data were collected through questionnaires, field visits/observations and Focused Group Discussions (FGD). The team included officials of state Agricultural Development Programmes (ADPs), NIMET and Ministries of Agriculture and Natural Resources as well as individual farmers/farmers groups in 148 Local Government Areas across the country (four LGAs in two ADP zones in each state). Five farmers were interviewed in each LGA. The ADP zones and farmer groups visited were purposefully selected to reflect agro-ecological zones and farmers that are representative of the farmers in the State. Each of the thirty six states and the Federal Capital Territory (FCT) were visited for three days/state. A total of 56 scientists were involved in the survey. On the last day of the visit in each State, wrap up meetings were organized to highlight the team's observations, validate records and to improve on crop production forecasts with State officials. Each team used 2010 Cropped Area Yield Survey (CAYS) report from NPAFS, MTRM & Focused Group Discussion Reports as guide for the forecasts.



## 3.0 Findings/ Observations

### 3.1 WEATHER SITUATION

#### 3.1.1 RAINFALL DISTRIBUTION IN NIGERIA

The comparative data for 2011 and 2010 rainfall situation in Nigeria for the five ecological zones of Nigeria are shown in the tables within this section.

#### NORTH EAST ZONE

In Rainfall started in April in 2011 access the North East zone as in 2010 though the volume of rainfall remained low in the zone until June when it increased significantly in both years. More rainfall occurred in June, July and August in 2010 than those of the corresponding months in 2011 at Adamawa state. In Bauchi state rainfall in June, July, September and October

of 2010 was higher than those of the same months in 2011. Heavy rainfall that resulted in floods occurred in Bauchi state in August of 2011. In Yobe state, rainfall figures for 2011 were slightly higher than in 2010 although figures for August – October in 2011 were slightly lower than those of the corresponding periods in 2010. The rainfall trend in Gombe state was similar to that of Yobe state except than rainfall figures in August and September in 2011 were higher than those of 2010.

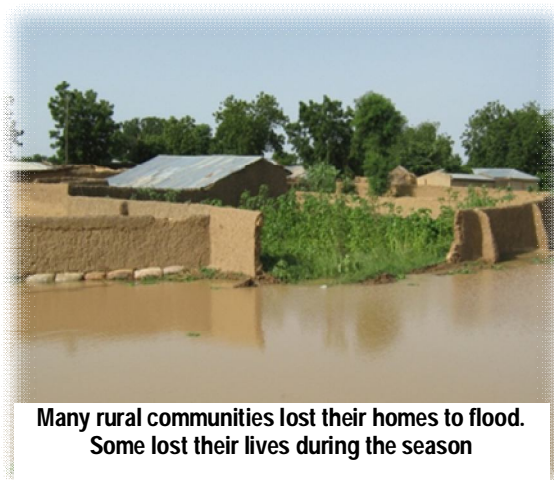


Farmers struggled with control of floods during the year

#### NORTH WEST ZONE

Rainfall started in April in both 2010 and 2011 although very light drizzles were recorded during these months in Sokoto, Kebbi and Zamfara states. In general the volume of rainfall across the zone did not vary significantly between the two years on aggregate basis in each state of the zone except in October in which rainfall was significantly lower in 2011 relative to 2010. Rainfall also terminated earlier in 2011 than 2010 in the zone. Floods occurred in Sokoto, Katsina and Kebbi States that resulted in casualties.

#### NORTH CENTRAL ZONE



Many rural communities lost their homes to flood. Some lost their lives during the season

Rainfall started in the North Central Zone in April in 2011 but in March in 2010. More rains occurred in April of 2010 than that of 2011 in the zone. Within the zone Plateau, Niger and Nassarawa States received more rainfall than the other states in the zone. Also rainfall terminated earlier in the North Central zone in 2011 than in 2010.

### **SOUTH WEST ZONE**

Unlike in 2010 in which rainfall was received in January at Ogun, Ondo, Oyo, Delta, Lagos and Edo States, no rain occurred throughout the south west zone during the month of January in 2011. More rainfall occurred in February of 2011 than that of 2010 throughout the zone. Rainfall in the zone gradually increased from February until June, dropped slightly in July then increased again in August and September before dropping again in October and November in both years.

### **SOUTH EAST ZONE**

Rainfall started in March in the South East Zone and the trend of the rainfall in the South East Zone was similar to that of South West zone. Also, the rains were so heavy in the zone that several incidences of flooding occurred especially in Lagos, Ogun and Oyo states that also resulted in casualties.

## **3.1.2 RAINY DAYS**

### **NORTH EAST ZONE**

In the North East Zone, mean rainy days in each month was generally low with 18 rainy days being highest which occurred at Adamawa State during the month of September in 2011. This same state had more rainy days in 2010 than in 2011 during the month of June and July. Rainy days in Adamawa, Borno, Yobe and Bauchi states was less than ten days in 2011 for most of the wet season except during August and September in Adamawa State, June – September in Bauchi state then August in Gombe state and June – August in Yobe state. Throughout 2011 wet season, rainy days was less than ten days per month at Ngu in Yobe state except in August. For most of the states in the zone, there were less rainy days in 2011 compared with 2010.

### **NORTH WEST ZONE**

Rainy days during the wet season in the North West Zone showed general reduction across the zone except at Kaduna that observed more rainy days in 2011 than in 2010. In Katsina State, the number of rainy days in 2011 was less than 10 per month throughout the year except during the month of August. Despite the low rainy days, floods occurred in many states in the zone during the wet season owing to the intensity of the downpour each time there was rain.

### **NORTH CENTRAL ZONE**

The number of rainy days in each month across the North Central Zone was less than 10 days in 2011 in the early part of the year January – May and in November. Rainy days were however, more than 10 days for most of the rainy season months in 2011 except in July at Kwara State



that recorded only 7 days. Between the years, the number of rainy days on overall was similar. The record of rainy days in the zone also reflected level of the rainfall earlier reported for the two year under reference.

### **SOUTH WEST ZONE**

The number of rainy days in the South West Zone during the early period of the year January – April was essentially less than 10. The number of rainy days in May was remarkably higher in 2011 than in 2010 across the state in the zone. During the peak period of the rain, rainy days were as high as 26 at Warri in Delta State and ranged from 14 – 23 at other locations in the zone..

### **SOUTH EAST ZONE**

The trend of rainy days in the South East Zone was similar to that of the South West Zone although there were generally more rainy days in the South East Zone than in the South West Zone. Many locations in the South East Zone had rainy days above 15 during the rainy season. Rainy days was as high as 29 at Eket in Akwa-Ibom state in July 2011 and 30 in August 2011 at Calabar in Cross Rivers State which means that it rained every day in Calabar and Eket.

### **3.1.3 Maximum Temperature (°C)**

Maximum Temperatures across the country were documented. The zonal mean temperature did not differ remarkably between 2010 and 2011 for each of the months within each of the zones.

North West and North East Zones recorded the highest temperature followed by the North Central Zone. While the highest zonal mean temperature of 41.1 °C was recorded in Ngu, Yobe State in the North East Zone, the least zonal mean temperature of 26.7 °C was recorded in the South West Zone in August at Oyo.



**High consumption of fuelwood ascentuated by high cost of kerosine**

**COMPARISON OF 2010 AND 2011 MEAN MONTHLY MAXIMUM TEMPERATURE (T<sub>max</sub>), TOTAL MONTHLY RAINFALL (R<sub>r</sub>) AND TOTAL MONTHLY RAINY-DAY (R<sub>d</sub>) FOR ALL THE METEOROLOGICAL STATIONS IN NIGERIA**  
(Source: NIMET)

**TABLE 3.1.1: RAINFALL DISTRIBUTION TOTAL MONTHLY RAINFALL (mm)**  
**NORTH EAST ZONE**

		January		February		March		April		May		June		July		August		September		October		November		Dec
State	Station	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010
Adamawa	Yola	0	0	0	0	0.7	0	34.9	2.5	42.5	58.8	185	29.9	196.7	92.2	145	134	161.7	210	104	55.9	0	0	0
Borno	Maid	0	0	0	0	0	0	4.8	7.6	2.3	57.8	81.8	143	68.5	165	98.6	218	136.4	89.7	24.3	20	0	0	0
Bauchi	Bauchi	0	0	0	0	0	0	36.8	4.5	74.8	76.8	200	151	379.8	190	219	625	489.3	333	147	111	0	0	0
Gombe	Gom	0	0	0	0	0	0	48.5	47.5	34.4	33.8	115	78.9	174.8	221	98.8	278	91.5	101	112	56.8	0	0	0
Yobe	Ngu	0	0	0	0	0	0	0	0.8	3.9	36	85.2	59.2	113.2	89.9	153	162	108.3	37.1	6.8	15.2	0	0	0
Yobe	Potisk	0	0	0	0	0	0	1.6	0	0	27	34.6	152	142.6	145	263	220	118.5	98.8	32.5	27.2	0	0	0

**NORTHWEST ZONE**

		January		February		March		April		May		June		July		August		September		October		November		Dec
State	Station	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010
Kaduna	Kad	0	0	0	1.3	0	0	5.8	57.1	76.5	143	203	80.9	189.7	193	338	208	300.8	299	149	82.7	0	0	0
Kaduna	Zaria	0	0	0	0	0	0	41.1	21	214	136	161	93.3	228.6	317	294	262	204	184	87.2	24.8	0	0	0
Kano	Kan	0	0	0	0	0	0	61.4	12.5	43.6	114	121	149	266	235	176	379	248.9	226	53.9	32.2	0	0	0
Katsina	Kats	0	0	0	0	0	0	82.2	0	8.1	38	36	161	226.1	117	413	181	70.4	67.3	48.6	8	0	0	0
Kebbi	Yel	0	0	0	0	0	0	3.6	11.2	118	61.2	122	334	185.1	195	344	312	169.8	217	110	83.5	0	0	0
Sokoto	Sok	0	0	0	0	10	0	0.4	0	129	92.9	126	161	322.8	29.3	358	174	82.4	93.2	123	7	0	0	0
Zamfara	Gusau	0	0	0	0	0	0	49.9	1	108	62.5	160	83.6	206.3	106	241	301	160.5	141	111	19.5	0	0	0
Jigawa	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

## NORTH CENTRAL ZONE

		January		February		March		April		May		June		July		August		September		October		November		Dec
State	Station	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010
Benue	Makur	0	0	0	68.8	12.6	0	31.4	78	133	142	113	182	196.9	90	178	217	335.5	272	121	323	24	0	0
Kogi	Lok	0	0	0	0	2.2	0	65.1	65.7	115	160	104	163	136.5	128	133	151	140.1	191	167	148	7.4	0	0
Kwara	Ilor	0	0	0	23.6	29.4	0	73.5	20.4	93.9	123	72.5	253	95.1	93.1	144	202	207.2	248	173	248	15	0	0
Nassarawa	Lafia	0	0	0	9.3	0	0	75	28.1	114	197	125	222	309	74.4	186	279	312.3	230	177	171	20	0	0
Niger	Bida	0	0	0	5.6	0	0	27.1	31.9	79.4	96.9	56.9	210	166	121	283	157	84.4	287	205	127	14.2	0	0
Niger	Minna	0	0	0	1.5	0	0	46.3	25.8	175	140	107	39.7	240.5	195	248	158	230.8	302	161	80.8	13	0	0
Plateau	Jos	0	0	0	7.4	48.4	0	92.7	45.9	145	187	169	171	270.6	237	347	282	222.1	112	93.2	197	0	0	0
Taraba	Ibi	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		125		103		244		193		0	
FCT	Abuja	0	0	0	43.5	7.51	0	37	52.2	311	105	175	128	314.8	306	278	184	271.5	273	216	130	0	0	0

## SOUTH WEST ZONE

		January		February		March		April		May		June		July		August		September		October		November		Dec
State	Station	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010
Ogun	Abeo	0	0	6.8	68.2	134	19.6	104	56.5	173	148	51	103	385.9	285	207	41.8	259.6	294	216	255	57.3	13.6	12.6
	I-Ode	2.6	0	30.8	61.6	91.6	8.9	107	66.1	71.5	218	267	233	150	436	245	109	554.4	307	146	319	85.9	32.5	0
Ondo	Akure	63	0	25.6	88.1	56.7	96.1	112	114	148	144	121	219	169.5	181	279	92.4	220.5	325	121	167	71.8	25.8	0
	Ondo	4.5	0	10.5	88.4	21.7	68	109	73.6	152	190	213	224	169.6	364	465	181	323.3	270	200	230	78.5	4.9	65.2
Osun	Osh	0	0	47.2	90.5	59.9	28.8	99.8	89.2	231	105	105	161	177.5	122	256	114	229.5	146	352	305	135	64.8	0
Oyo	Ibadan	0.8	0	17.4	60.8	63.4	66.6	88	94.1	195	151	134	285	112	298	319	211	305.3	238	215	213	140	19.4	0
	Iseyin	0	0	19.5	62.1	132	38.6	43.5	36.2	204	65.7	168	145	107.1	141	206	308	244.8	245	241	164	101	0.6	0
	Shaki	16.2	0	0	53.6	75.6	40	167	93.4	159	98.4	103	210	227.4	136	246	182	186	159	155	240	14.1	0	0
Delta	Asaba	0	0	0.5	54.5	27.6	97.8	280	169	111	465	247	269	246.7	507	337	484	200.1	459	190	213	114	0	0
	Warri	5.4	0	119	136	89.5	67	219	143	380	368	269	334	191.8	673	302	458	546.6	255	296	199	158	114	4.7
Edo	Benin	15.5	0	8.9	77.8	55.3	81.4	322	321	79.6	297	145	421	91.6	535	332	424	615.1	409	267	278	307	63.6	40.7
Lagos	Ikj	34	0	32.6	86.6	11.4	21.6	104	74.7	159	169	226	341	130.8	477	191	43.7	192.8	195	133	209	119	241	76.7
	Oshd	48.9	0	48.8	202	70.1	5.1	139	64.6	125	227	425	327	112.9	413	277	57.8	228.7	217	203	257	146	135	55.3
Ekiti	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

## SOUTH EAST ZONE

		January		February		March		April		May		June		July		August		September		October		November		Dec
State	Station	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010
Abia	Umuahia	0	0	30.4	60.8	34.5	111	129	104	211.4	342	439.8	220	288.9	246	412	392	298	385	228	252	83.5	12.7	0
A-Ibom	Eket	147	0.2	99.8	141	99.7	264	364	174	452	484	431	876	618.6	755	649	573	451.1	562	402	494	197	121	11.7
	Uyo	0	0	30.2	53.8	32.7	197	50.4	91.8	290	553	808	384	311.4	780	685	384	487.7	501	282	562	272	195	0
Anambra	Awka	0.2	0	66.8	18.5	13.6	59.9	204	110	161	281	192	191	132.2	221	329	187	315.8	512	167	212	43.2	13.7	0
C/Rivers	Calab	31.8	0	86.9	153	63.2	123	126	209	307	341	881	695	287	807	396	551	451.3	184	303	519	272	324	56.2
	Ikom	0	0	20.2	122	66.1	40.2	196	260	258	306	596	253	141.4	239	282	361	311.1	385	389	415	60	63.2	0
	Ogoja	0	0	0	51.1	25.5	21.7	140	155	422	437	435	328	270.4	117	247	477	282.5	626	555	402	26.6	1.7	0
Enugu	Enugu	1	0	0	44.6	2.2	118	163	118	151	220	384	190	229.7	195	150	237	398.1	439	208	154	1	2	0
Imo	Ower	0	0	53	99.4	34.1	84.2	164	115	293	451	255	181	272	305	453	500	237.8	377	295	245	22.4	40.3	1.6
Rivers	PHC	0	0	102	111	40.8	0.2	128	114	232	323	196	149	167.9	299	173	213	402.1	251	178	192	82.8	53.5	0
Bayelsa	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ebonyi	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 3.1.2: RAINY DAYS IN NIGERIA

## NORTH EAST ZONE

		January		February		March		April		May		June		July		August		September		October		November		Dec
State	Station	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010
Adamawa	Yola	0	0	0	0	1	0	4	3	7	7	13	8	11	7	13	13	14	18	6	7	0	0	0
Borno	Maid	0	0	0	0	0	0	1	1	1	4	8	8	9	8	11	12	8	8	4	3	0	0	0
Bauchi	Bauchi	0	0	0	0	0	0	2	1	9	6	11	10	19	14	14	17	17	11	10	7	0	0	0
Gombe	Gom	0	0	0	0	0	0	3	3	10	5	11	7	14	9	12	16	15	7	10	6	0	0	0
Yobe	Ngu	0	0	0	0	0	0	0	1	1	1	7	5	12	8	9	14	7	5	1		0	0	0
Yobe	Potisk	0	0	0	0	0	0	1	0	0	3	5	12	12	11	13	12	10	9	9	5	0	0	0

## NORTH WEST ZONE

State		January		February		March		April		May		June		July		August		September		October		November		Dec
	Station	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010
Kaduna	Kad	0	0	0	1	0	0	2	3	11	15	12	15	16	16	21	15	19	22	14	9	0	0	0
Kaduna	Zaria	0	0	0	0	0	0	1	2	8	10	13	10	18	14	18	14	18	13	10	2	0	0	0
Kano	Kan	0	0	0	0	0	0	1	1	4	5	9	9	15	8	12	16	13	9	3	1	0	0	0
Katsina	Kats	0	0	0	0	0	0	1	0	2	4	5	7	15	6	18	13	9	4	6	1	0	0	0
Kebbi	Yel	0	0	0	0	0	0	2	1	10	4	6	16	15	13	20	14	15	14	10	8	0	0	0
Sokoto	Sok	0	0	0	0	2	0	1	0	6	5	7	5	11	6	16	11	11	8	6	1	0	0	0
Zamfara	Gusau	0	0	0	0	0	0	4	1	10	5	10	13	14	6	13	18	12	15	12	2	0	0	0
Jigawa	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

## NORTH CENTRAL ZONE

State		January		February		March		April		May		June		July		August		September		October		November		Dec
	Station	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010
Benue	Makur	0	0	0	3	1	0	5	7	7	6	11	10	13	13	13	13	16	10	12	18	1	0	0
Kogi	Lok	0	0	0	0	1	0	3	6	6	7	5	7	14	10	16	8	15	12	12	13	2	0	0
Kwara	Ilor	0	0	0	3	5	0	9	3	10	7	6	15	15	7	11	12	21	18	18	17	2	0	0
Nassarawa	Lafia	0	0	0	2	0	0	4	4	7	6	8	10	15	8	17	17	12	16	12	8	1	0	0
Niger	Bida	0	0	0	1	0	0	5	4	8	11	9	9	14	11	18	9	16	17	13	10	2	0	0
Niger	Minna	0	0	0	1	0	0	3	2	10	9	12	7	17	12	17	19	16	22	17	9	1	0	
Plateau	Jos	0		0	1	4	0	9	3	17	9	17	16	19	21	22	22	19	15	12	11	0	0	0
Taraba	Ibi	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		12		12		14		13		0	
FCT	Abuja	0	0	0	2		0	5	4	16	12	14	13	18	14	21	17	21	18	20	14	0	0	0

## SOUTH WEST ZONE

State		January		February		March		April		May		June		July		August		September		October		November		Dec
	Station	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010
Ogun	Abeo	0	0	3	5	6	2	9	5	16	9	9	17	15	18	14	8	19	17	17	15	9	2	1
	I-Ode	2	0	5	4	9	2	8	8	5	19	15	19	14	17	19	14	24	17	15	18	9	5	0
Ondo	Akure	1	0	3	5	6	8	8	7	13	8	10	14	16	13	17	12	20	17	8	14	9	2	0
	Ondo	2	0	4	9	7	6	12	9	19	14	19	15	20	20	20	14	24	16	18	20	7	1	3
Osun	Osh	0	0	3	7	4	5	7	7	13	11	10	13	15	12	18	15	23	17	23	21	8	4	0
Oyo	Ibadan	1	0	3	6	4	5	7	5	19	9	10	14	12	16	17	14	18	14	19	16	9	2	0
	Iseyin	0	0	5	6	2	4	6	5	13	12	10	12	14	15	18	17	23	21	21	13	6	1	0
	Shaki	1	0	0	3	2	2	6	5	10	11	9	12	13	8	16	15	18	8	16	15	2	0	0
Delta	Asaba	0	0	1	1	1	4	9	7	10	14	13	15	16	22	14	19	18	15	15	12	4	0	0
	Warri	1	0	8	7	8	7	12	8	19	23	17	16	20	26	21	23	24	23	22	22	9	9	3
Edo	Benin	4	0	3	4	6	3	11	12	9	10	15	16	15	21	18	16	21	22	16	21	11	8	3
Lagos	Ikj	2	0	2	5	5	2	7	8	9	8	14	22	10	11	14	8	18	14	10	17	8	10	5
	Oshd	2	0	4	6	8	2	6	9	11	10	18	19	11	15	17	15	20	14	12	15	10	8	5
Ekiti	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

## SOUTH EAST ZONE

State	Station	January		February		March		April		May		June		July		August		September		October		November		Dec
		2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010
Abia	Umuahia	0	0	1	6	4	8	9	8	12	18	17	14	16	22	18	26	16	19	20	13	7	4	0
A-Ibom	Eket	8	0	6	10	10	16	17	15	18	21	22	24	25	29	24	29	24	24	24	26	21	15	2
	Uyo	0	0	4	6	2	10	8	8	17	23	22	14	17	22	21	22	22	14	19	19	15	9	0
Anambra	Awka	0	0	1	2	3	4	12	9	14	18	13	16	15	16	18	15	20	19	20	13	10	2	0
C/Rivers	Calab	4	0	7	7	5	13	15	15	20	20	20	26	21	28	27	30	24	20	23	22	14	14	4
	Ikom	0	0	2	9	6	4	16	13	18	19	22	20	22	22	20	27	23	23	21	23	7	4	0
	Ogoja	0	0	0	5	2	2	7	7	16	16	16	13	15	11	16	20	18	19	22	20	4	1	0
Enugu	Enugu	1	0	0	2	1	5	8	14	14	14	11	14	18	19	17	18	20	20	16	13	1	1	0
Imo	Ower	0	0	3	5	4	5	10	6	19	19	22	15	19	19	21	20	21	21	18	18	4	2	1
Rivers	PHC	0	0	5	10	7	0	17	10	19	24	13	17	16	19	18	20	20	19	20	18	10	6	0
Bayelsa	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ebonyi	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 3.1.3: MONTHLY TEMPERATURE

(°C)

## NORTH EAST ZONE

State	Station	January		February		March		April		May		June		July		August		September		October		November		Dec
		2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010
Adamawa	Yola	36.6	33.4	39.6	38.7	40.6	41.2	41.8	40.3	37.1	36.9	33.4	34.7	31.4	33.1	31	31	31.1	30.6	32.5	33.4	36.4	36.4	35.7
Borno	Maid	34.6	31	37	37.6	38.5	39.8	42.8	41	41.8	40.3	38.1	38.1	29.7	34.4	31.2	31.2	32.7	33.6	35.1	36.8	37.3	35.7	33.1
Bauchi	Bauchi	33.2	30.2	36.6	35.8	37.4	38.1	39.6	38	36.7	36.2	32.7	33.6	30.2	30.9	29.9	29.2	30.2	30.6	31.9	32.6	34.4	33.9	31.9
Gombe	Gom	33.1	30.1	36.9	36.3	37.8	38.3	39.8	37.6	36.2	35.6	32.2	33.5	29.4	30.2	29.4	28.1	29.8	29.7	32.3	32	34.9	33.3	32.1
Yobe	Ngu	Xx,	29.6	37.1	36.2	38.1	39	41.8	40.2	41.8	41.1	37.3	37.7	33	34.8	31.5	31.7	33.3	34.4	36.4	36.8	36.9	35.5	31.8
Yobe	Potisk	34.4	30.3	38.1	36.9	38.8	38.9	41.9	37.8	40.9	39.6	37.1	36.5	32.4	33.2	32.2	30.7	32.6	32.4	35.5	34.7	36.8	34.7	32.5

## NORTH WEST ZONE

State	Station	January		February		March		April		May		June		July		August		September		October		November		Dec
		2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010
Kaduna	Kad	33.2	30.6	36	35.1	36.2	36.6	36.6	35.1	33.4	32.9	30.6	30.7	28.6	29.5	28.7	28.6	29.4	30.3	31	31.5	32.9	32.9	32.1
	Zaria	32.3	29	35.6	35.4	35.6	37.3	37.4	36.8	33.7	34.5	30.9	31.2	28.6	29.5	28.7	29	30	30.6	31.8	31.8	33.3	32.4	30.7
Kano	Kan	32	27.7	36.1	35.4	37.2	38.2	40	39.2	38.6	39.2	35.1	34.9	31.3	32	30.9	30	31.7	32.2	34.3	34.2	34.8	33.3	30.6
Katsin`12a	Kats	32.4	28.6	35.9	35.1	36.9	37.8	39.5	38.9	38.5	38.9	36.4	36.4	31.2	33.2	30.2	30.8	31.4	33.3	33.7	35.8	35.2	34.2	30.6
Kebbi	Yel	37.7	35.1	40.5	37.2	41.1	41	40.2	39.3	35.6	36.9	33.3	33.5	30.9	32	30.7	30.6	30.6	30.9	32.2	33.1	36.5	37.1	36.7
Sokoto	Sok	35.2	31.8	39.3	37.2	39.7	40.7	41.9	39.9	40.1	39.7	35.6	35.6	32	34	31.1	31.8	30.6	33.9	34.7	37.1	36.9	36.8	33.8
Zamfara	Gusau	33.5	30.5	37.5	36.5	37.9	38.8	39.7	38.3	36.1	38.3	33.2	34	30	32.3	30.2	30	31	31.6	32.5	33.7	34.4	35.3	32
Jigawa	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

## NORTH CENTRAL ZONE

State	Station	January		February		March		April		May		June		July		August		September		October		November		Dec
		2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010
Benue	Makur	36.5	34.5	38.4	35.4	38.5	37.1	37.4	35.4	34	33.1	31.3	31.1	30.2	30.7	30.3	29.5	30.5	30.2	31.8	30.8	33.6	34	34.8
Kogi	Lok	35.9	24.4	37.7	37.5	38.2	38.4	38.4	36.1	33.5	34.3	32.6	32.4	31.3	31.4	30.6	30.5	31	31.2	31.8	31.6	33.8	34.7	34.7
Kwara	Ilor	36	33.8	37.7	35.6	37.1	35.9	36.1	34.9	32.9	33.9	31.9	31	29.3	29.2	29.4	28.5	30	29.9	31	30.6	33.3	34.1	34.3
Nassarawa	Lafia	37	35.4	39	37.3	39	39.1	37.5	37.4	34	34.3	32.4	31.4	30.5	31.6	30.2	29.8	30.5	30.9	31.7	31.3	35	33.2	35.1
Niger	Bida	36.2	34.6	38.7	37.5	39.3	38.5	38.4	37.3	35.1	34	32.5	32	30.3	31.2	30.4	30.3	30.7	31.1	31.8	32.1	34.8	35.6	35.2
	Minna	36.4	34.6	38.5	37.3	38.9	39.2	38.1	37.2	33.6	33.4	31.3	31.4	29.3	30.7	29.1	29.4	29.7	30.3	30.8	31.2	34.5	35.4	35.7
Plateau	Jos	28.7	27.5	31.9	31.1	31.2	32.5	31.9	32	28.1	28.7	26.8	26.6	24.3	25.5	24.6	24	25.7	25.2	27.8	27.7	28.5	28.1	27.7
Taraba	Ibi	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.2	NA	30.2	NA	30.2	NA	22.4	NA	32.3	NA
FCT	Abuja	35.3	34.6	37.4	35.9	37.6	37.7	36.4	35.4	31.8	33.3	30.8	30.8	28.8	30	28.7	28.4	29.4	29.8	30	31.2	33.7	34.3	35



## SOUTH WEST ZONE

State	Station	January		February		March		April		May		June		July		August		September		October		November		Dec
		2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010
Ogun	Abeo	35.3	34.7	37.8	35.3	37.6	35.6	34.5	35.2	33.7	33.9	32.2	31.5	30.4	29.3	29.7	30	30.7	30.8	32.1	31.6	33.7	34.2	34.7
	I-Ode	33.5	33.6	35.7	34.1	34.2	34.8	33.6	33.7	32.1	32.2	30.7	29.8	29.4	28.4	28.7	28.4	29.9	29.9	31.3	30.6	32.6	32.9	33.2
Ondo	Akure	33.3	34.1	35	34.2	34.4	34.1	33.4	31.9	31.7	32	30.9	30.6	28.7	29.2	28.4	28.1	29.8	29.9	30.7	30.5	32.2	33.6	34.3
	Ondo	33.6	32.7	36.1	34	35.5	34	33.7	32.3	32	32	30.8	30.6	29.3	28.5	28.4	28.5	29.6	29.7	30.8	30.3	31.3	33.5	32.9
Osun	Osh	32.5	33.7	36.2	33.7	34.8	33.8	34.4	33.3	30.7	32	30.9	30.3	28.4	28.3	28.5	27.7	29.5	29.1	30.4	30.3	32	32.6	33.9
Oyo	Ibadan	34.3	33.6	36.2	34.5	34.8	34.8	34.3	33.3	32.1	32.8	31.2	30.7	29.3	28.4	28.8	28.1	29.9	29.9	31.3	30.6	32.3	33.1	33.7
	Iseyin	35.4	33.9	36.5	34.2	35.1	33.7	34.2	33.2	31.5	32.5	30.8	30.4	28.4	27.9	28.1	27.1	29.2	29	30.3	30.1	31.8	32.7	33.5
	Shaki	34.8	33.5	36.6	34.2	35.9	34.7	34.2	33.1	31.6	32.4	30.4	29.8	27.8	27.9	27.5	26.7	28.5	28.4	29.7	29.5	32.4	32.3	33.5
Delta	Asaba	35.4	34.9	36.4	36.1	36.6	36.8	35.6	34.7	33.6	33.9	31.9	32	31.3	30.8	31.1	29.7	31.7	31	32.4	32.4	33.9	35	35.2
	Warri	34.6	33.8	35.3	33.9	34.3	34.3	34.5	33.8	32.9	32.8	31.7	31.1	30.8	29.2	29.6	29.4	30.3	30.7	31.1	31.4	33.2	34	34
Edo	Benin	34	33.6	35.16	34	34.7	34.4	33.8	32.8	33.1	32.7	31	30.7	29.7	28.8	29.1	28.5	30.3	29.8	31.8	31.3	33	33.5	33.5
Lagos	Ikj	32.9	33.4	34.9	33.8	34.3	34	33.8	33.7	32.6	32.5	30.5	29.8	29.4	28.9	28.9	29.4	29.9	30.3	31	30.8	32	32.3	33.4
	Oshd	32.5	33.1	34.6	33.3	34.1	33.8	34.2	33	32.6	32.5	30.6	30.3	29.5	28.8	29.1	29.1	30	29.9	31	31.2	32.4	32.6	33
Ekiti	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

## SOUTH EAST ZONE

State	Station	January		February		March		April		May		June		July		August		September		October		November		Dec
		2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010
Abia	Umuahia	34.8	32.9	34.8	33.1	34.5	33.5	34.2	32.4	32.2	31.5	30.1	30.3	29.3	29.2	29.3	28.8	29.4	29.5	30.5	30.1	31	32.3	32.6
A-Ibom	Eket	30.7	29.9	30.5	29.6	30.6	30.6	31.1	30.3	30.2	29.9	28.5	28.5	27.5	26.7	27.1	26.6	27.1	27.1	28.1	28.1	29	29.4	30.2
	Uyo	34.6	33.3	34.1	32.2	33.8	32.8	32.8	31.6	32.1	31.7	29.4	30.2	28.4	28.3	28.2	27.4	28.7	28.5	30.8	29.8	30.7	31.6	32
Anambra	Awka	35.4	34.3	35.9	35.3	36.1	36	34.6	33.9	32.6	32.5	30.9	31.1	30.3	29.7	30.6	28.8	30.7	30.3	31.3	31.5	32.5	34	34.3
C/Rivers	Calab	33.9	32.1	33.6	32	33	33	33.1	31.8	31.5	31.5	29.8	29	29.1	27.4	28.6	27.7	29	28.7	30.6	29.8	30.8	31.6	31.7
	Ikrom	34.3	32.6	35.9	34	35.4	34.8	34.7	32.8	33.1	32.4	31.2	30.4	30.1	29.5	29.8	28.5	31.1	30	32.5	30.7	32.3	32.6	33.3
	Ogoja	36.7	35.5	38.2	35.9	37.9	37.3	37.3	35.3	33.4	33.2	31.8	31.7	31.1	30.8	30.8	29.5	31.5	31.2	32.3	32.3	33.2	34.9	34.9
Enugu	Enugu	35.2	33.8	36.2	34.3	36.6	35	35.1	33	32.1	32.2	30.9	30.6	29.9	29.9	30.1	29.1	30.1	30	31.1	31	32.9	33.6	33.8
Imo	Ower	34.4	33.4	34.5	32.7	34.4	33.3	33.7	32.9	31.8	31.8	30.5	30.1	29.5	29.3	29.1	28.6	29.4	29.7	30.8	30.5	31.6	32.5	33.5
Rivers	PHC	34.5	33.8	34.7	32.8	34.2	33.2	34.5	33.5	31.9	31.8	30.1	30	29.8	28.7	29.4	28.9	29.5	30.4	30.7	30.8	31.5	32.4	33.6
Bayelsa	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ebonyi	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

### **3.2 USE OF IMPROVED FARM INPUTS**

Availability and access to farm inputs are critical to improving productivity and food security. It is expected that the use of improved farm inputs in both crop and livestock/fisheries production will enhance growth, healthy and high quality products, increased output, better market access/prices and improved incomes and livelihood for farmers in Nigeria. The data collected on planting materials, agro-chemicals, farm equipment and fertilizers have been variously presented in tables.

#### **3.2.1 PLANTING MATERIALS**

During the year under review, few states made efforts to provide seeds and planting materials to farmers using established government sale/distribution outlets. The scale of distribution was grossly inadequate. Some of the planting materials procured and distributed during the season included those of cereals (Rice, Maize, Sorghum and Millet), legumes (Cowpea and Soybean), tree crops (Citrus, Mango, Guava, Oil Palm, Cashew, Cocoa and Neem) and solanaceous crops (Tomato, Cabbage and Okro). Others included Plantain, Banana and Pineapple suckers. Varying quantities of these planting materials were procured and distributed to farmers. However, the adequacy and affordability of these materials was generally not so satisfactory. Source of planting materials included the National Agricultural Seed Council, Seed Companies and Research Institutes. It was observed that most states did not put sufficient efforts on the procurement and distribution of cash crops with great export potentials such as Groundnuts, Ginger, Sesame, Cocoa, Oil Palm, Rubber, etc. Also, data on livestock and fisheries was not reflected for the period.

#### **North East Agro-Ecological Zone**

This zone basically occupies the Northern Guinea and Sudan savannahs. Efforts were made by Borno, Adamawa and Bauchi states to procure and distribute various quantities of seeds. Farmers expressed their discomfort with scarcity and high cost of the inputs this year across the country especially in Adamawa and Bauchi states. In many instances, cases of fake seeds were the major concern which is discouraging adoption of improved seed. This is creating new challenges to the bid to raise the level of adoption of improved seed which is currently below 30% for improved Open pollinated varieties and about 15% for hybrids in the country. Indeed, dealing with the problem of fake and substandard seeds remained a critical strategy to increasing adoption of improved seed. Data on planting materials was not available for Yobe and Gombe states. In Gombe, Bauchi, Adamawa States however, many farmers reported receiving drought tolerant seeds under a "seed dropped scheme" of Community Based- Rural Development (CBARD) Project for the first time since the inception of the Project five years ago. The provision of seeds to non-target communities under the scheme by the project was applauded by the farmers and raised scope for realizing the objectives of the CBARD Project.

#### **North West Agro-Ecological Zone**

The zone has Southern Guinea Savannah (SGS), Northern Guinea Savannah (NGS) and Sudan Savannah (SS) ecologies. Data on state involvement in seed procurement and distribution were not available for Zamfara, Katsina and Kano states. However, Kaduna, Sokoto and Kebbi states procured and distributed some planting materials which again were grossly inadequate leading to

affordability problem. Cases of fake seeds were reported in, Kaduna and Kano States which incidentally are the states where the level of adoption of improved seeds is high.

### **North Central Agro-Ecological Zone**

This zone lies within the Guinea Savannah (northern and southern). All the states, except Niger and Benue, managed to procure and distribute some quantities of planting materials to farmers. Farmers reported that most of the materials were generally neither inadequate nor affordable. As in the North West Agro-ecological zone, incidence of fake seeds was also rampant especially in Nassarawa and Plateau States.

### **South West Agro-Ecological Zone**

This zone is found within the Forest and Rain forest areas of Nigeria. Most of the states in this zone supplied planting materials to farmers except Oyo state where data was not available. However, the materials were not adequate. There were instances in which some of the improved planting materials were supplied free of charge under some special projects which tended to stimulate demand for the planting materials that could not be met.

### **South East Agro-Ecological Zone**

South East Agro-Ecological Zone is also found within the Forest belt and mangrove swamp in the coastal plains. Except for Bayelsa state, all the states in the zone supplied various quantities of seeds to farmers. The seed materials were generally not adequate but farmers' considered their prices at government sources affordable.

## **3.2.2 AGRO-CHEMICAL AND SOME FARM EQUIPMENT**

Data on the procurement and distribution of agro-chemicals/farm equipment across the country within the 2011 wet season were also gathered. Agro-chemicals procured and distributed by state governments were herbicides, fungicides and insecticides; while the agricultural equipment included Tractors, storage bins, sprayers, water pumps, work bulls and agro-processing equipment like Rice Huller. In many instances, provision of inputs to farmers was restricted to NPAFS & Fadama Project sites and Commercial Agriculture Project communities.

Thirteen (13) states including Gombe, Katsina, Kano, Adamawa, Taraba, Ekiti, Lagos, Edo, Imo, Bayelsa, Rivers, Cross Rivers and Ebonyi did not supply data on the status of agro-chemical/farm equipment procurement in 2011. However, states like Yobe, Plateau, Kogi, Benue, Ogun, Delta, Anambra and the FCT were able to procure and distribute a little quantity of



agrochemicals, farm equipment to farmers. While States like Borno, Bauchi, Kebbi, Kaduna, Niger, Kwara, Oyo, Osun, Ondo, Enugu, Akwa Ibom and Abia procured and distributed only agrochemicals to farmers within the period. In many states especially in southern states, tractors procured for farmers remained un-distributed and being overshadowed by weeds. Farmers reported that because most of the tractors are new brands which may warrant spares problems and difficulties in finding competent repairers accounts for lack of patronages of government tractors. The sources for the supply these equipment/agro-chemicals included various agro-chemical companies, ADPs/MANR, NPFS. Majority of farmers obtained their pesticides and farm machines from open markets at prohibitive costs.

This implies that farmers did not experience any favourable operating environment with regard to the availability and affordability of inputs in 2011 wet season as in 2010.

### **3.2.3 FERTILIZER PROCUREMENT AND DISTRIBUTION**

Many states supplied fertilizer procurement and distribution figures except in Gombe, Katsina, Kwara, Osun, Ondo, Lagos, Enugu, Ebonyi, Cross River and Rivers States. The data indicated a sharp decline in procurement and distribution of fertilizer in 2011 compared with 2010. In the North-East Agro-Ecological Zone, only Adamawa State procured and distributed the three grades of fertilizer; NPK, Urea and SSP. Kaduna in North- West and Benue in North Central Agro- Ecological zones procured and distributed the three grades of fertilizer while in the South-East Agro- Ecological zone, only five states also, (Ebonyi, Cross River, Akwa Ibom, Anambra, and Bayelsa) procured and distribute the three fertilizer grades. Subsidized price of 50 kg bag of NPK ranged from N2500 to N3500. Zamfara State distributed fertilizers to farmers at the lowest rate of N2500 per 50 kg bag. Fertilizer distribution was grossly inadequate throughout the country as discussions with farmers across the country indicated that farmers' access to government procured fertilizers was lower in 2011 than in 2010 which probably impacted in the level of usage. It would seem, political activities and elections that held in 2011 negatively impacted in government resolve to increase access to agricultural production inputs reflecting a shift in priorities.

**Table 3.2.1: Use of Improved Farm Inputs: Planting Materials**  
**North East Agro-Ecological Zone**

State	Crop	Quantities		Adequacy		Affordability		Source
		Procured	Distributed	Yes	No	Yes	No	
<b>Borno</b>	Maize	400	300		No		No	Premier Seeds , CBARD
	Rice	3000	2000		No		No	NCRI
	Soybean	4000	4000		No		No	Premier Seeds
	Millet	20	20		No		No	LCRI
	Sorghum	18	18		No		No	Premier Seeds
	Cowpea	4000	4000		No			IITA (CBARD)
	Mango	500	500				No	NPAFS
	Banana	500	500		No		N	"
	Guava	1000	1000		N			"
<b>Yobe</b>	NA	NA	NA	NA		NA	NA	
<b>Bauchi</b>	Maize, MT	47,284	47,284		No		No	Premier seeds, Jirkur Seeds, Maina Seeds IITA (CBARD)
<b>Gombe</b>	NA	NA	NA	NA	NA			
<b>Adamawa</b>	Maize, MT	70	70		No		No	IAR Zaria /IITA (CBARD)
	Cowpea, MT	50	50		No		No	IAR Zaria
	Mango, seedlings	80	80		No	Yes		Yola
	Citrus, seedlings	50	50		No	Yes		Yola
	Jumbo Guava, seedlings	43	43		No		No	Yola
	Cashew, seedlings	20	20		No		No	Yola
	Neem, seedlings	625	625		No		No	Yola

# North West Agro-Ecological Zone

State	Crop	Quantities		Adequacy		Affordability		Source
		Procured	Distributed	Yes	No	Yes	No	
Sokoto	Rice, MT	5	5		No		No	MASLAHA SEED COMPANY
	Sorghum, MT	3	3		No		No	"
	Maize, MT	5	5		No		No	"
	Soya Bean, MT	1	1		No		No	"
	Vegetable	N/A	N/A		No		No	"
Kebbi	Rice, MT	12	12		No		No	NA
	Millet, MT	12	12		No		No	NA
Zamfara	NA	NA	NA	NA	NA	NA		NA
Katsina	NA	NA	NA	NA	NA	NA		NA
Jigawa								
Kano	NA	NA	NA	NA	NA	NA		NA
Kaduna	Maize, MT	24.5	23.0		No		No	Out Growers
	Rice, MT	9	8.4		No		No	Out Growers
	Soybeans, MT	2.2	2.0		No		No	Out Growers
	Cowpea, MT	1.35	1.0		No		No	Out Growers
	Sorghum, MT	2.0	1.95		No		No	Out Growers
	Cassava,	20	20	Yes			No	NRCRI
	cuttings	2,700	2,700	Yes			No	Market
	Neem Tree,						No	
	seedlings	10,000	10,000		No		No	NIFOR
	Oil Palm							

**Middle Belt Agro-Ecological Zone**

State	Crop	Quantities		Adequacy		Affordability		Source
		Procured	Distributed	Yes	No	Yes	No	
<b>Taraba</b>	Maize, MT	1.5	1.39		No		No	NA
	Tomatoes, MT	NA	1140		No		No	NA
	Cabbage	NA	685		No		No	NA
	Carrots	NA	500		No		No	NA
	NERICA 1, MT	3.0	2.3	Yes		Yes		NASC
<b>Plateau</b>	Maize, MT	1.5	1.39		No		No	NA
<b>Nassarawa</b>	Maize, MT	7.8	7.29	Yes			No	ADP
	Rice, MT	3.6	2.005	Yes			No	ADP
	Soybean, MT	0.4	0.3	Yes			No	ADP
	Citrus, seedlings	700	100		No		No	ADP
	Mango, seedlings	500	NA		No		No	ADP
	Oil palm, seedlings	100	100		No			NIFOR
<b>FCT</b>	Maize, MT	129	129	Yes			No	NASC
	Fluted pumpkin (Ugu)	1.02	1.02	Yes			No	NASC
	Cassava, cuttings	3,800	3,800	Yes	No		No	NA
	Palm, seedlings	6,000	6,000		No		No	NA
	Citrus, seedlings	11,000	5,250		No		No	NA
	Guava, seedlings	1,200	750		No		No	NA
<b>Niger</b>	NA	NA	NA	NA	NA	NA	NA	NA
<b>Kwara</b>	Maize, MT	2	2		No	Yes		NA
<b>Kogi</b>	Maize, MT	5.22	5.22		No		No	Premier Seeds, NASC, Zaria.
	Rice, MT	3.5	3.5		No		No	Premier Seeds
	Cowpea, MT	3.0	2.9		No		No	Premier Seeds
	Sorghum, MT	2.5	2.5		No		No	Premier Seeds
	Cassava, seedlings	100	100	Yes			NO	RTEP
	Cocoa, seedlings	10,000	10,000		No		No	CRIN
<b>Benue</b>	NA	NA	NA	NA			NA	NA

# South West Agro-Ecological Zone

State	Crop	Quantities		Adequacy		Affordability		Source
		Procured	Distributed	Yes	No	Yes	No	
<b>Ekiti</b>	NA	NA	NA	NA			NA	
<b>Oyo</b>	Maize, MT	NA	NA	NA				NA
	Rice, MT	NA	NA	NA				NA
	Soybean, MT	NA	NA	NA				NA
	Cassava, cuttings	NA	NA	NA				NA
<b>Osun</b>	Maize, MT	12,568	9,557	Yes		Yes		Contract outgrower
	Cassava, cuttings	10, 000	10, 000	Yes		Yes		RTEP
<b>Ondo</b>	Maize, MT	45	4.5		No		No	Ondo ADP
	Cassava, cuttings	400,000	400,000		"		"	
	Cocoa, seedlings	60,000	60,000		"		"	
	Oil Palm, seedlings	20,000	20,000		"		"	
<b>Ogun</b>	Rice(NERICA), MT	8,633	5,378		No		No	Ogun ADP
	Maize, MT							
	Cassava, cuttings	5.0	4.91	Yes			Free	
	Citrus, seedlings	5,896	5,896					
<b>Lagos</b>		2750	2750					
	Citrus	1,540	1,540		No	Free		NPFS
	Cashew	1,000	1,000		"	"		"
	Guava	1,600	1,600		No	"		"
<b>Edo</b>	Plantain	48	48		No	"		"
	Oil palm seedlings	NA	45,000					
<b>Delta</b>			Cuttings					
	Maize, MT	10	10	Yes		No	No	
	Cassava, cuttings	NA	NA				No	
	Vegetable, seeds	0.39	0.39				No	



**South East Agro-Ecological Zone**

State	Crop	Quantities		Adequacy		Affordability		Source
		Procured	Distributed	Yes	No	Yes	No	
<b>Enugu</b>	Rice	0.73	0.73		No	Yes		Premier Seeds
<b>Ebonyi</b>	Maize	1.5	1.2	Yes		Yes		ADP
	Rice	25	25		No		No	"
	Okra	200Sachets	200Sachets		No		No	"
	Cassava	280Bundles	280Bundles		No		No	"
<b>Cross River</b>	Cassava cuttings	1,875	1,875	Yes	No		No	CARES, NGO and Reputable Farmers
<b>Akwa Ibom</b>	Telfaria	8,200	8,200	Yes		Yes		AKADEP Seed multiplication centre
	Cassava, cuttings	2,420	2,420		No	Yes		AKADEP Seed multiplication centre
	Plantain, suckers	900	900		No	Yes		AKADEP Seed multiplication centre
	Pineapple, suckers	3,500	3,500	Yes		Yes		AKADEP Seed multiplication centre
<b>Abia</b>	Maize	8.5	8.0	Yes			No	NSC
	Rice	8.0	8.0		No	Yes		NSC
	Cassava	3600	3600		No	Yes		Rivilla, NRCRI, ADP
	Citrus	2500	2440		No	Yes		NPFS
	Mango	2500	2300		No	Yes		NPFS
	Oil Palm	4000	2,800		No	Yes		NIFOR/ADP
<b>Anambra</b>	Hybrid Maize, MT	2	2		No	No		Premier Seed LTD
<b>Imo</b>	Maize	16.2	16.2		No		No	Premier Seeds
	Rice	12.0	12.0		No	Yes		
	Cassava	12,000	Na		No	Yes		NRCRI, Imo ADP
	Citrus	13,000	13,000		No	Yes		NIHORT
	Mangoes	20,000	20,000		No	Yes		NIFOR
<b>Bayelsa</b>	NA	NA	NA	NA	NA	NA	NA	
<b>Rivers</b>	Maize, MT	5,000	5,000	NA	NA	NA	NA	NASC
	Rice, MT	6,000	6,000	"	"	"	"	"
	Tomy Mango, seedling	9,30	920	"	"	"	"	NA
	Jumbo Guava, seedlings	700	700	"	"	"	"	NA
	Seedless Citrus, seedlings	800	800	"	"	"	"	NA
				"	"	"	"	

**Table 3.2.2: Use of Agro-Chemicals and Some Farm Equipment**  
**North East Agro-Ecological Zone**

State	Crop	Quantities		Adequacy		Affordability		Source
		Procured	Distributed	Yes	No	Yes	No	
Borno	Queltox	1500	Nil	Yes			No	NA
	Cypermtrine	1500	Nil	Yes			No	NA
	Penetration	1500	Nil	Yes			No	NA
Yobe	Pesticides/Herbicides	23,100	23,100		No	Yes		NPFS
	Workbulls	108						
	Sprayers and other Facilities	1,250						
	Storage Bins	500						
	Agroprocessing equipment	1						
Bauchi	Orizo Plus	1000	1000		No		No	Candle LTD
	Lara Force	500	500		No		No	Jubail Agro
	Magic Maize	500	500		No		No	"
	Rocket	1000	1000	Yes			No	"
Gombe	NA	NA	NA					
Adamawa	NA	NA	NA	NA	NA	NA	NA	NA

**North West Agro-Ecological Zone**

State	Crop	Quantities		Adequacy		Affordability		Source
		Procured	Distributed	Yes	No	Yes	No	
Sokoto	NA	NA	NA					
Kebbi	Pesticides	4,200 ltr	4,200 ltr		No		No	
Zamfara	Nil	Nil	Nil					
Katsina	NA	NA	NA	NA	NA	NA	NA	NA
Jigawa								
Kano	NA	NA	NA	NA	NA	NA	NA	NA
Kaduna	Insecticides ltr	22,410	22,410		No	Yes		(ADP) African Agro
	Herbicides ltr	47,650	47,650		No	Yes		
	Fungicides kg	17,250	17,250		No	Yes		

**Middle Belt Agro-Ecological Zone**

State	Crop	Quantities		Adequacy		Affordability		Source
		Procured	Distributed	Yes	No	Yes	No	
<b>Taraba</b>	NA	NA	NA	NA	NA	NA	NA	
<b>Plateau</b>	Pesticides ltr	50	6		No		No	
	Herbicides ltr	242	151		No		No	
	Ox Ridgers	2			No		No	
	Sprayers	10			No		No	
	Water Pump	1			No		No	
	Rice Huller	1			No		No	
	Tractors	6			No		No	
<b>Nassarawa</b>	Pesticides	680	662					
<b>FCT</b>	Herbicides, ltr	20,000	15,000		No	Yes		Agro Allied companies
	Insecticides, ltr	6,000	4,000	Yes		Yes		
	Sprayers	NA	278					
	Agro processing	NA	8					
<b>Niger</b>	Herbicides, ltr	560	436		No	Yes		Saro Company
<b>Kwara</b>	Glyphosphate	0.4	0.27	Yes		Yes		
	Paraquat	0.4	0.26	Yes				
	Atrazine	0.2	0.13	Yes				
<b>Kogi</b>	Herbicides, ltr	10,200	10,186		No	Yes		CANDEL, AFRICAN AGRO SASOSC, JUBAILI, WACOT
	Insecticides, ltr	7,000	700		No	Yes		
	Seed dressing powder	75	75	Yes		Yes		
	Sprayers	350	300		No	Yes		
	Water pumps	200	200		No	Yes		
	Storage bins	200	200		No	Yes		
<b>Benue</b>	Pesticides ltr	50	6		No		No	NA
	Herbicides ltr	242	151		No		No	"
	Ox Ridgers	2			No		No	"
	Sprayers	10			No		No	"
	Water Pump	1			No		No	"
	Rice Huller	1			No		No	"
	Tractors	6			No		No	"

### South West Agro-Ecological Zone

State	Crop	Quantities		Adequacy		Affordability		Source
		Procured	Distributed	Yes	No	Yes	No	
Ekiti	NA	NA	NA	NA	NA	NA	NA	
Oyo	Herbicides (Liquid), litre	NA	120		No	Yes		NA
	Herbicides (Solid), kg	NA	6		No	Yes		"
Osun	Herbicides	4,539	29,170	Yes		Yes		NA
	Herbicides	1177 kg	852 kg	Yes		Yes		"
	Insecticides	130	68	Yes		Yes		"
	Fungicides (Sachets)	13,805	5675	Yes		Yes		"
Ondo	Premextra	300litres	300litres		No		No	Ondo ADP
	Gramaxone	150litres	150litre		"		"	
	Insecticides	70litres	70litres		"		"	
	Apron Plus	50 Sachets	50 Sachets		"		"	
Ogun	Tractors	10	4	NA	NA	NA	NA	Ogun ADP
	Irrigation Dams	6	6	"	"	"	"	
	Storage Bins	2	2	"	"	"	"	
	Sprayers	100	100					
Lagos	NA	NA	NA	NA	NA	NA	NA	NA
Edo	NA	NA	NA	NA	NA	NA	NA	NA
Delta	Liquid Pesticides/Herbicides, litre	79	79		No	Yes	No	FGN
	Solid pesticides/herbicides, kg	432	432		No		No	FGN
	Sprayers	744	744		No			FGN

### South East Agro-Ecological Zone

State	Crop	Quantities		Adequacy		Affordability		Source
		Procured	Distributed	Yes	No	Yes	No	
Enugu	Pesticides	0.16	0.16		No	Yes		Open Market
Ebonyi	NA	NA	NA	NA	NA	NA	NA	NA
Cross River	NA	NA	NA	NA	NA	NA	NA	NA
Akwa Ibom	Pesticides, ltr	800	800		No		Yes	Agents
	Herbicides, ltr	980	980		No		Yes	
Abia	Insecticides, Ltr	250	250	NA	NA		Yes	NA
	Herbicides, Ltr	420	404	NA	NA		Yes	
Anambra	Insecticides, ltr	13,492	14,800	NA		NA		NA
	Tractors	30		NA		NA		NA
Imo	NA	NA	NA		NA	NA	NA	NA
Bayelsa	NA	NA	NA	NA	NA	NA	NA	NA

Rivers	NA	NA	NA	NA	NA	NA	NA	NA
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**Table 3.2.3: Fertilizer Procurement and Distribution**

**North East Agro-Ecological Zone**

State	NPK (MT)			Urea (MT)			SSP (MT)		
	Qty. Procured	Qty distributed	Unit Price (N)	Qty. Procured	Qty distributed	Unit Price (N)	Qty. Procured	Qty distributed	Unit Price (N)
Borno	15000	15000	2,200	13500	10000	2,200	NA	NA	NA
Yobe	100	100	2,000	5000	5000	2,000	NA	NA	NA
Bauchi	24,500	24,500	2000	20,500	20,500	1500	NA	NA	NA
Gombe	NA	NA	2,000	NA	NA	2,000	NA	NA	NA
Adamawa	26,000	18,130	2,100	21,000	21,000	2,100	1,200	NA	NA

**North West Agro-Ecological Zone**

State	NPK (MT)			Urea (MT)			SSP (MT)		
	Qty. Procured	Qty distributed	Unit Price (N)	Qty. Procured	Qty distributed	Unit Price (N)	Qty. Procured	Qty distributed	Unit Price (N)
Sokoto	5,000	3,500	1900	6,000	4,000	1900	NA	NA	NA
Kebbi	20,000	20,000	1750	25,000	25,000	1700	NA	NA	NA
Zamfara	23,000	NA	1000	NA	NA	2500	NA	NA	NA
Katsina	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jigawa									
Kano	100,920	77,242		109,680	74,549		NA	NA	NA
Kaduna	40,000	40,000	2700	15,000	15,000	2450	10,000	10,000	NA

**North Central Agro-Ecological Zone**

State	NPK (MT)			Urea (MT)			SSP (MT)		
	Qty. Procured	Qty distributed	Unit Price (N)	Qty. Procured	Qty distributed	Unit Price (N)	Qty. Procured	Qty distributed	Unit Price (N)
Taraba	1,116.1	1,116.1	2500	2,272.3	2,272.3	3500	NA	NA	NA
Plateau	90,000	NA	NA	NA	NA	NA	NA	NA	NA
Nassarawa	5,370	3,870	1,800	12,000	9,000	1800	NA	NA	NA
FCT	11,100	11,100	2,500	3,900	3,900	2,500	NA	NA	NA
Niger	7,000	7,000	2,500	6,000	6,000	2500	NA	1800	NA
Kwara	NA	NA	3,000	NA	NA	2700	NA	NA	NA
Kogi	3,470	3,070	3,000	11,687.89	11,287.89	3000	NA	NA	NA

Benue	6,780	NA	2,200	4,350	1,800	2200	30	30	NA
<b>South West Agro-Ecological Zone</b>									
State	NPK (MT)			Urea (MT)			SSP (MT)		
	Qty. Procured	Qty distributed	Unit Price (N)	Qty. Procured	Qty distributed	Unit Price (N)	Qty. Procured	Qty distributed	Unit Price (N)
Ekiti	5,370	1,000	2,800	3,000	205.75	2,800	NA	NA	NA
Oyo	3,670	3,600	2,500	4,200	3,900	2,500	NA	NA	NA
Osun	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ondo	NA	NA	3,800	NA	NA	2,400	NA	NA	NA
Ogun	3,500	1,853	NA	2,245	1,167	NA	NA	NA	NA
Lagos	NA	2,000	NA	NA	1,000	NA	NA	NA	NA
Edo	NA	3,000	NA	NA	NA	NA	NA	NA	NA
Delta	1,610	1,610	NA	1,500	1,500	NA	NA	NA	NA

#### South East Agro-Ecological Zone

State	NPK (MT)			Urea (MT)			SSP (MT)		
	Qty. Procured	Qty distributed	Unit Price (N)	Qty. Procured	Qty distributed	Unit Price (N)	Qty. Procured	Qty distributed	Unit Price (N)
Enugu	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ebonyi	NA	NA	2,800	NA	NA	2,800	NA	NA	NA
Cross River	NA	NA	4, 000	NA	NA	3,500	NA	NA	NA
Akwa Ibom	125	125	1,800	NA	NA	1,800	NA	NA	NA
Abia	4000	4000	NA	1800	1800	NA	75	75	NA
Anambra	120	120	2,900	88	88	2,500	22	22	NA
Imo	52.03	51.4	NA	26.0	25.0	NA	NA	NA	NA
Bayelsa	1,116.1	1116.1	2500	2,272.3	2,272.3	2500	NA	NA	NA
Rivers	NA	NA	NA	NA	NA	NA	NA	NA	NA

### 3.3 CROP PESTS, DISEASES AND NATURAL HAZARDS

#### 3.3.1 Crop Diseases

There were reported incidence of pests, diseases and natural hazards on various crops across the country during the 2011 wet season. The results indicated that pests and diseases varied in severity among the affected crops in the states covered. The major crop pest infestation reported on cereal



**Leaf curl in several vegetable crops observed**

crops were stem borer (34 – 60%) which was more prevalent on maize compared to other cereals such as sorghum, millet and rice. Striga and quela birds affected all cereals in Adamawa, FCT and Nassarawa states and their severity were moderate to light. Data obtained revealed that maize in storage were attacked by weevils in FCT, army worm in Adamawa and

FCT, termites on maize in Oyo State, rodent on rice in Anambra State, mealy bug on rice in Rivers State, millipede on sorghum in Adamawa State, spittle bug on sorghum in Zamfara and Bauchi States. While the major diseases on cereals recorded across the southern states were Downey mildew (23-54 %) in maize, millet and sorghum, aflatoxin in maize (12.8%), blasts (34-80 %) on rice, leaf spots (15 %) on rice, and smuts (5-45 %) on sorghum and millet which was severe.

The major diseases of legumes reported were blight (44%), mosaic (40%), black pod (22%), rosette (12-55%), leaf spot (40%), and anthracnose (8-44%) while the prevalent insect pests of legumes were aphids (45%), pod borer (25%), weevils (33%), thrips (80%), grasshopper (23%), bug (34%), nematode (20%) and millipedes (43%). In terms of severity, the effects of anthracnose on cowpea and soybean were moderate in Lagos, Ogun and Adamawa while it was heavy in Taraba and Plateau States. The blight disease affected cowpea in FCT while mosaic on groundnut in Taraba state were reported which were moderately in Kogi state. The light to moderate



**Cases of Aflatoxin occurred warranting increased interest in its control in Nigeria**

infestation of aphids on cowpea and groundnut occurred in Adamawa, Bauchi, Ekiti, Kebbi, Taraba, Kano and Zamfara states. The heavy incidence of pod borer on cowpea, weevils on cowpea and soybean, and light attack of nematode and millipedes on groundnut in FCT were reported. Grass hopper attack on cowpea in Adamawa State but was light in severity.

### **3.3.2 Crop Pests**

The major pests of root and tuber crop that were reported in the 2011 wet season report were beetle on yam recorded in Ekiti, FCT, Oyo Taraba, Plateau, Akwa Ibom states and Rivers states where the severity was moderate. Cassava root rot was also reported in a number of states like Edo, Lagos, Akwa Ibom, Cross Rivers and Anambra states where all the infestation were light while it was moderate in River state. Yam tuber rot was occurred in Kogi, Taraba and Rivers states while cocoyam rot was moderate in severe in FCT, Ekiti Cross River and Anambra States. The cassava mosaic, cocoyam and yam leaf curl was moderate in Bauchi and Kebbi, Kano and Enugu and in Kogi states, respectively. The results indicated that leaf blight infestation on cassava and cocoyam was light in Ekiti, Plateau, Rivers, Kaduna and Anambra states, mealy bug on yam was heavy in Plateau state while die back and termites were heavy on cocoyam in Cross River, Abia and Ekiti states. The wilt and fruits drop and early wilt were severe in tomato and pepper. In Oyo State incidence of tomato wilt was heavy this year as in 2010 wet season. The Sigatoka on plantain was light in Delta state unlike in 2010 when it was heavy. The incidence of beetle on ginger was moderate in FCT. The degree of leaf spot infestation on beniseed which was moderate was reported only in Kano and Jigawa.

### **3.3.3 Natural Hazard**

The natural hazards that occurred in 2011 were mainly flood and dry spell. Floods that affected maize, cocoyam and rice were heavy in the following states; Adamawa, Bauchi, Plateau and Lagos; Rivers, Cross River and Akwa Ibom; Ogun, Cross River and FCT states, respectively, moderate on yam in Lagos, Akwa Ibom, and Cross River. The effect of floods was light on sorghum in FCT, on cassava in Akwa Ibom and Cross River states. On the other hand, dry spell hazard was reported to have affected maize, sorghum, soybean, groundnut, cassava, rice and cocoyam in some states. The effect of dry spells was severe in Gombe, Adamawa, Kwara, Ekiti and Lagos states. The crops affected were Soybean, sorghum, groundnut, cocoyam and maize in FCT, Adamawa, Zamfara, Gombe and Kaduna states as well as rice and cassava in Lagos.



**Table3.3.1 Incidence of Pests, Diseases and Hazards on Crops in 2011**

Infested/affected	Pests/ Diseases/Hazard	Affected State	Severity	Control measure(s) undertaken
Maize	Army worms	Adamawa, FCT,	moderate	Chemical
Maize	Stem borer	Adamawa, Plateau, Kogi, Ondo, Rivers, Cross River, Akwa Ibom, Zamfara, Benue, Bauchi, Anambra, Imo, Enugu, Kano, Abia	Moderate	Chemical, improve variety
Maize	Downy mildew	Edo, Ogun, Rivers, Taraba	Moderate	Chemical
Maize	Weevils	FCT	moderate	pesticides
Maize	Streak	Taraba	Light	Fungicides
Maize	Weaver birds	Akwa Ibom, Imo, Enugu	Moderate	Scaring, timely harvesting
Maize	Dry spells	Adamawa, FCT, Zamfara, Kaduna, Gombe, Bauchi, Kwara	Moderate	Drought tolerant variety, replanting
Maize	Streak	Adamawa, Ebonyi, Imo	Light	Chemical
Maize	Striga	Adamawa, Nassarawa, Gombe, Zamfara, Katsina, Kano, Kaduna, Niger	Moderate	cultural practice, resistance variety,
Maize	Termites	Oyo, Niger, Benue, Delta	Moderate	Chemical
Maize	Smut	Oyo		Chemical
Maize	Flood	Adamawa, Plateau, Lagos, Bauchi	Heavy	Drainage
Millet	Smut	Taraba, Nassarawa,	Moderate	Chemical, seed dressing
Millet	Stem borer	Benue, Gombe, FCT Bauchi	Light Heavy	Seed dressing, insecticides
Millet	Grass hopper	FCT, Taraba	Moderate	Chemical, Spray
Millet	Downy mildew	Taraba, Kano	Light	Chemical, Spray
Rice	Blast	Benue, Adamawa, Akwa Ibom, FCT, Kaduna, Zamfara, Kano,	Moderate	Chemical, spray, use of improve variety, Fungicides
Rice	Fire outbreak	Anambra	Light	Control burning, early harvesting
Rice	Rodents	Anambra, Imo, Ebonyi, Kano	Light	Pesticides
Rice	Quaela Birds	Gombe, Ogun, Ekiti, Ondo, Edo, Anambra	Moderate	Using traps, Scaring
Rice	Stem borer	Adamawa, Cross River, FCT, Imo, Kano, Niger, Benue	Moderate	Insecticides, use of improve variety

Infested/affected	Pests/ Diseases/Hazard	Affected State	Severity	Control measure(s)undertaken
Rice	Striga	FCT, Nassarawa,	Moderate	Tolerant variety, Fungicides
Rice	Mealy bug	Rivers	Light	None
Rice	Brown spot	Kogi	Moderate	Chemical
Rice	Grass cutter	Ondo, Ebonyi, Osun	Moderate	Setting trap
Rice	Flood	Ogun, Cross River, FCT, Abia	Heavy	Scaring
Rice	Dry spell	Lagos	Moderate	Irrigation, drought tolerant
Sorghum	Striga	Adamawa, Nassarawa, FCT, Niger, Gombe, Bauchi, Kano, Katsina, Zamfara	Moderate	Chemical, Tolerant variety
Sorghum	Spittle bug	Zamfara, Bauchi, Kano	Moderate	Systematic insecticides spray
Sorghum	Stem borer	Kebbi, Kaduna, Kano, Nassarawa	Moderate	Chemical
Sorghum	Millipedes	Adamawa	Moderate	Chemical
Sorghum	Quaala birds	Gombe	Heavy	Scaring
Sorghum	Down mildew	Taraba	Moderate	Fungicides
Sorghum	Flood	FCT	Light	Drainage
Sorghum	Dry spell	Adamawa, Gombe, Zamfara	Light	Irrigation, drought tolerant
Cowpea	Anthraxnose	Taraba, Plateau, Kaduna Lagos, Ogun	Moderate	Chemical
Cowpea	Aphids	Bauchi, Adamawa, Taraba, Kebbi,	Moderate	Insecticides
Cowpea	Weevils	Ekiti, Taraba FCT,	Light	Insecticides
Cowpea	Cormidbug	Bauchi	Light	Chemical
Cowpea	Thrips	Ekiti, Kano	Heavy	Chemical
Cowpea	Pod borer	FCT, Kogi, Kano	Moderate	Insecticides
Cowpea	Blight	FCT	Moderate	Chemical
Cowpea	Mosaic	Kogi	Moderate	Tolerant variety, Spray
Cowpea	Grass hopper	Adamawa	Light	Pesticides
Soybean	Weevils	FCT	Light	Early harvest
Soybean	Aphids	Adamawa	Moderate	Chemical
Soybean	Anthraxnose	Adamawa	Light	Chemical
Soybean	Black pod	FCT	Light	Chemical

Infested/affected	Pests/ Diseases/Hazard	Affected State	Severity	Control measure(s)undertaken
Soybean	Dry spell	Zamfara	Light	Irrigation, drought tolerant
Groundnut	Rosette	Taraba, Gombe	Moderate	Chemical
Groundnut	Nematode	FCT	Moderate	Insecticides, Seed dressing
Groundnut	Leaf spot	Adamawa, Katsina	Heavy	Spray, Chemical
Groundnut	Rosette	Adamawa, FCT, Kogi,	Moderate	Spray chemical
Groundnut	Dry spell	Gombe FCT	Light	Irrigation, drought tolerant
Groundnut	Aphids	Bauchi, Ekiti, Zamfara, Kebbi, Kano	Moderate	Pesticides spray
Groundnut	Millipedes	Adamawa	Moderate	Chemical
Cassava	Mosaic	Bauchi, Kebbi,	Moderate	Chemical, planting improve variety
Cassava	Rot	Cross River, Anambra, Edo, Lagos, Akwa Ibom, Delta	Moderate	Chemical
Cassava	Grass hopper	Ekiti, Imo	Moderate	Hand picking, spray
Cassava	Leaf blight	Ekiti, Anambra	Moderate	Resistant variety, fungicides
Cassava	Dry spell	Lagos	Light	Insecticides
Cassava	Termite	Ekiti	Moderate	Chemical
Cassava	Flood	Akwa Ibom. Cross River	Light	Drainage
Cassava	Millipedes	Rivers	Moderate	Nematocides
Cassava	Rodent	Bayelsa, Akwa Ibom	Moderate	Insecticides
Yam	Beetle	Ekiti, Oyo, Taraba, FCT, Plateau, Rivers, Cross River, Akwa Ibom, Imo, Enugu	Moderate	Insecticides, replanting
Yam	Mealy bug	Plateau	Heavy	Use of neem leaf
Yam	Mosaic	Kogi	Moderate	chemical
Yam	Rot	Kogi, Taraba, Rivers	Moderate	chemical
Yam	Nematode	Ekiti, Ebonyi	Light	Nematocides
Yam	Flood	Lagos, Akwa Ibom, Cross River,	Moderate	drainage
Cocoyam	Leaf blight	Plateau, Kaduna, Rivers, Anambra, Enugu	Heavy	Fungicides, Resistant varieties
Cocoyam	Termites	Cross River	Heavy	chemical
Cocoyam	Die back	Ekiti, Cross River, Enugu, Abia	Heavy	chemical

Infested/affected	Pests/ Diseases/Hazard	Affected State	Severity	Control measure(s)undertaken
Cocoyam	Dry spell	Ekiti, Lagos	Heavy	Insecticides
Cocoyam	Flood	Rivers, Cross River, Akwa Ibom	Heavy	Timely planting/harvesting
Cocoyam	Rot	FCT, Cross River, Ekiti, Anambra, Imo, Abia	Moderate	Fungicides, Resistant varieties
Cocoyam	Mosaic	Enugu, Kano	Moderate	chemical
Sweet potato	Nematodes	Kebbi	Moderate	Chemical
Sweet potato	Weevil	Taraba	Moderate	Insecticides
Citrus	Die-back	Rivers, Bayelsa	Heavy	Chemical
Citrus	Flood	Rivers	Light	Irrigation, drought tolerant
Citrus	Fruit rot	Bayelsa	Moderate	chemical
Tomato	Wilt	Oyo,	Heavy	Tolerant variety
Pepper	Fruits drop	Oyo	Moderate	Tolerant variety
Plantain	Sigatoka	Delta	Light	chemical
Coconut	Die-back	Rivers	Heavy	Chemical
Ginger	Beetle	FCT	Light	Pesticide
Ginger	African black	FCT	Moderate	Need national control
Beniseed	Leaf spot	Kano , Jigawa	Moderate	Chemical

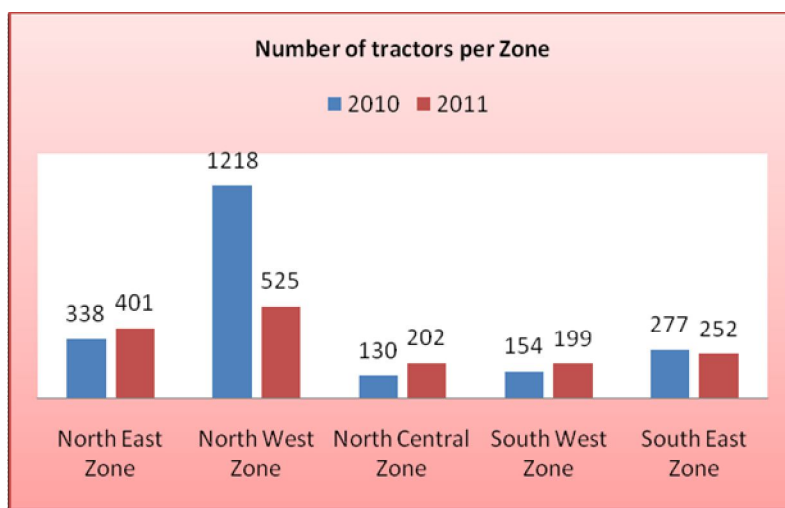
### 3.4 Agricultural Mechanization

#### 3.4.1 Tractor

Tractor is a critical input for agricultural mechanization and a major indicator for assessing level of agricultural development for a country. FAO recommended 0.2 Hp/ha tractorization density level for developing countries while developed countries have 1.2 Hp/ha. In Nigeria, data of tractor availability and condition is very scanty. In 2010, 8 out of 36 states and



Federal capital did not give data on tractor availability. Available data show that about 28 states and FCT had a total of 2,117 functional tractors in 2010 that dropped to 1,579 in 2011. The non-functional tractors for the states were 876 and 1004 in 2010 and 2011, respectively. Record for the privately owned tractors was 1,426 and 618 for 2010 and 2011. The figures showed that North West topped the zones with 1218 and 525 tractors in 2010 and 2011, respectively.



North east followed the North West while North Central had the least number of the tractors. Across the states, Kebbi was reported to have the highest number of government owned tractors with 735 numbers of tractors in 2010 followed by Borno with 370 tractors in 2011. As for the privately owned tractors, more

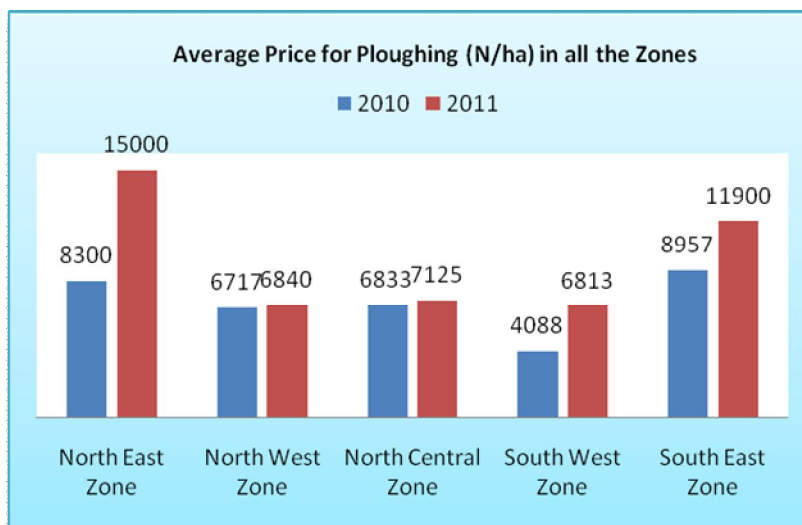
than 70 % of the states did not present any information on tractors availability and functionality. Only five states supplied information on privately owned tractors in 2010 and 2011; they were Bauchi, Kebbi, Nassarawa, Benue and Bayelsa. The number of tractors owned by government and private individuals/organizations, as obtained from the records of the states' ministries of agriculture throughout the country, was not grossly inadequate. Moreover, the inadequate information on agricultural machineries owned by private sectors and government at various levels is worrisome because it complicates planning for mechanization of agriculture in the country.

### 3.4.2 Prices of tractor operations

The cost of various tractor supported operations is a key factor for farmer in adopting the use of tractors or other alternatives such as animal traction or direct human labour in a similar fashion the masses are relying on fuel wood for domestic energy. Because of low number of tractors the price of tractor operation has skyrocketed beyond the reach of most farmers.

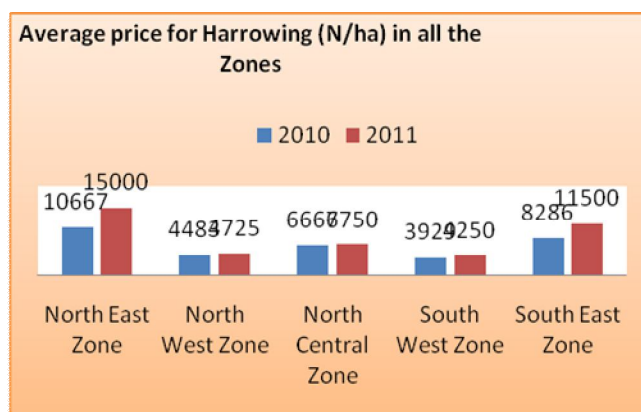
The price in the North East for harrowing, ploughing and ridging was N15,000 per ha. This price was found to high compared to other states.

The Zonal prices for South East were N8,957 and N11,900 per ha in 2011. However, the price fluctuates depending on the price of fuel, which was very unstable during the 2011 season. The cost of using tractor for farm operation in Nigeria is significantly high compared to other countries within the region.



### 3.4.3 Problems on tractorisation

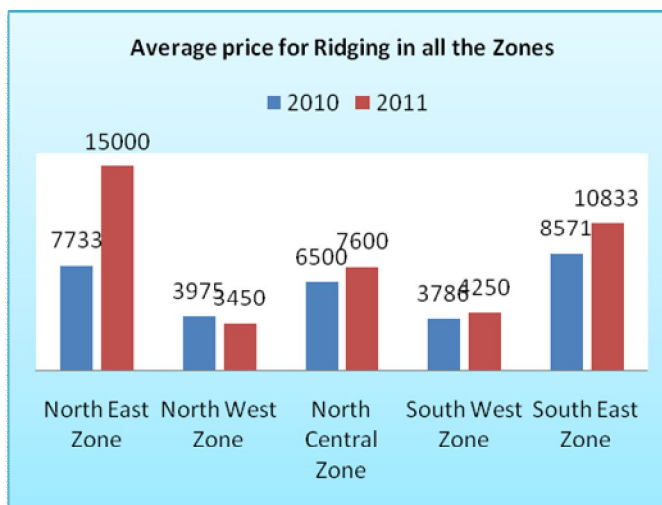
Some of the problems identified affecting tractor availability and functionality were high cost of purchasing new tractors, Low quality/scarcity of spare parts, and adulteration of fuel and frequent breakdown of the tractors as well as low skill for the operators (lack of skill tractor operators and mechanics).



Although the use of animal traction can reduce the dependence on tractors and human labour, data on these are not readily available. Only three States Borno, Zamfara and Kano had reports on animal traction. Work bulls remained the preferred animal power in 2011. Number of animals used in Borno in 2010 and 2011 were 2,000 and 2,500 respectively which represented an increase of 25%. Zamfara State also had 25% increase in number of animals used for agriculture between 2010 and 2011 that is 120,000 in 2010 and 150,000 in 2011. Kano reported 10,000 number of animals used in 2010 and 12,000 in 2011 representing an increase of 20%.

Some of the problems that affected agricultural mechanization in Nigeria during 2011 are:

- 1) Lack of funds to procure spare parts to ensure continual maintenance of existing machines.
- 2) Low level of private sectors participation in THS in States.
- 3) Lack of an effective monitoring plan for tractor use and management haulage.
- 4) Shortage of field agricultural Engineers.
- 5) Shortage of certified tractor drivers/operators.
- 6) Delay in release of fund to carry out regular maintenance of tractors.
- 7) Scattered farm holdings on small hectares (i.e. non-contiguous farmland).
- 8) Inadequate agricultural land clearing and farm road support.
- 9) Lack of training of tractor mechanics and operators.
- 10) Most of the tractors purchased by the States governments are different from the traditional types that farmers and operators are used to without prior idea in the use of new ones.
- 11) Lack of proper maintenance facilities.
- 12) Lack and high cost of spare parts, as well as high cost of fuel and lubricants.
- 13) Insufficient skill in crops water management.
- 14) Need of appropriate tube wells and bore-hole technology.
- 15) Soil and water quality analysis.
- 16) Method and equipment for irrigating crops.
- 17) Improved and cost effective irrigation methods.
- 18) Irrigation scheduling.
- 19) Management of irrigated soils.
- 20) General cost reduction on irrigation works in plantation.
- 21) Procurement of irrigation pumps at low price.
- 22) Training on the use of small irrigation techniques and equipment.
- 23) Water requirement for commonly propagated vegetables.





**Table 3.4.1: Number of Tractors owned by Government and Private Individuals/Organizations**

**North East Zone**

State	Government Tractors						Private Tractors					
	Functional			Non-functional			Functional			Non functional		
	2010	2011	% change	2010	2011	% change	2010	2011	% change	2010	2011	% change
<b>Borno</b>	300	370	23.33	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Yobe</b>	22	15	-31.82	37	54	45.95	NA	NA	NA	NA	NA	NA
<b>Bauchi</b>	16	16	0	113	50	-55.75	350	350	0	350	350	0
<b>Gombe</b>	NA	NA	NA	25	25	0	NA	NA	NA	NA	NA	NA
<b>Adamawa</b>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Total</b>	338	401	-8.48	175	129	-9.81	350	350	0	350	350	0

**North West Zone**

State	Government Tractors						Private Tractors					
	Functional			Non-functional			Functional			Non functional		
	2010	2011	% change	2010	2011	% change	2010	2011	% change	2010	2011	% change
<b>Jigawa</b>	80	NA	NA	65	NA	NA	660	NA	NA	300	NA	NA
<b>Katsina</b>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Sokoto</b>	321	305	-4.98	NA	NA	NA	75	66	13.64	NA	NA	NA
<b>Kebbi</b>	735	NA	NA	NA	NA	NA	244	NA	NA	NA	NA	NA
<b>Zamfara</b>	18	24	33.33	33	45	36.36	NA	NA	NA	NA	NA	NA
<b>Kano</b>	9	10	11.11	16	17	6.25	NA	NA	NA	NA	NA	NA
<b>Kaduna</b>	55	186	238.18	55	186	238.18	NA	NA	NA	NA	NA	NA
<b>Total</b>	1218	525	277.64	169	248	280.80	979	66	13.64	300	NA	NA

**North Central Zone**

State	Government Tractors						Private Tractors					
	Functional			Non-functional			Functional			Non functional		
	2010	2011	% change	2010	2011	% change	2010	2011	% change	2010	2011	% change
<b>Taraba</b>	43	31	-27.907	141	152	7.80	NA	NA	NA	NA	NA	NA
<b>Plateau</b>	23	23	0	18	18	0	NA	NA	NA	NA	NA	NA
<b>FCT</b>	NA	77	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Kogi</b>	4	4	0	4	4	0	NA	NA	NA	NA	NA	NA
<b>Nassarawa</b>	24	10	-58.33	NA	8	NA	6	3	100	NA	3	NA
<b>Benue</b>	15	52	246.67	187	234	25.13	13	100	-87	19	23	-17.39
<b>Kwara</b>	8	2	-75	15	24	60	NA	NA	NA	NA	NA	NA
<b>Niger</b>	13	3	-76.92	2	12	500	NA	NA	NA	NA	NA	NA
<b>Total</b>	130	202	8.50	367	452	592.94	19	103	13	19	26	-17.39

**South West Zone**

State	Government Tractors						Private Tractors					
	Functional			Non-functional			Functional			Non functional		
	2010	2011	% change	2010	2011	% change	2010	2011	% change	2010	2011	% change
Osun	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oyo	68	72	5.88	3	NA	NA	NA	NA	NA	NA	NA	NA
Ogun	19	5	-73.68	4	3	-25	NA	NA	NA	NA	NA	NA
Ekiti	30	21	-30	42	51	21.43	NA	NA	NA	NA	NA	NA
Ondo	16	88	450	22	22	0	70	93	-24.73	NA	NA	NA
Lagos	9	8	-11.11	18	19	5.56	NA	NA	NA	NA	NA	NA
Edo	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Delta	12	5	-58.33	35	42	20	NA	NA	NA	NA	NA	NA
Total	154	199	282.75	124	137	21.98	70	93	-24.73	NA	NA	NA

**South East Zone**

State	Government Tractors						Private Tractors					
	Functional			Non-functional			functional			Non functional		
	2010	2011	% change	2010	2011	% change	2010	2011	% change	2010	2011	% change
Anambra	30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Enugu	54	73	35.19	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ebonyi	53	53	0	8	6	-25	NA	NA	NA	NA	NA	NA
Cross rivers	100	89	-11	25	26	4	NA	NA	NA	NA	NA	NA
Abia	1	1	0	2	2	0	NA	NA	NA	NA	NA	NA
Akwa Ibom	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Imo	NA	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bayelsa	21	17	-19.05	3	NA	NA	8	6	33.33	2	NA	NA
Rivers	18	18	0	3	4	33.33	NA	NA	NA	NA	NA	NA
Total	277	252	5.14	41	38	12.33	8	6	33.33	2	NA	NA

**Table 3.4.2: Prices of farm Operations (Ploughing, Harrowing and Ridging) for 2010 and 2011 in each state**

**North East Zone**

State	Ploughing (N/Ha)			Harrowing (N/Ha)			Ridging (N/Ha)		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
<b>Borno</b>	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Yobe</b>	7,000	NA	NA	7,000	NA	NA	7,000	NA	NA
<b>Bauchi</b>	15,000	15,000	0	15,000	15,000	0	15,000	15,000	0
<b>Gombe</b>	1,200	NA	NA	NA	NA	NA	1,200	NA	NA
<b>Adamawa</b>	10,000	NA	NA	10,000	NA	NA	NA	NA	NA
<b>Z. Mean</b>	8300	15,000	0	10666.67	15000.00	0.00	7733.33	15000	0

**North West Zone**

State	Ploughing (N/Ha)			Harrowing (N/Ha)			Ridging (N/Ha)		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
<b>Sokoto</b>	5,800	5,700	-1.72	5,000	5,000	0	NA	NA	NA
<b>Kebbi</b>	NA	NA	NA	5,000	7,000	-28.57	NA	NA	NA
<b>Zamfara</b>	3,000	5000	66.67	2,500	3,500	40	2,500	3,500	40
<b>Katsina</b>	8,500	NA	NA	5,000	NA	NA	3,000	NA	NA
<b>Jigawa</b>	7,500	7500	NA	NA	NA	NA	NA	NA	NA
<b>Kano</b>	7,500	8,000	6.67	3,400	3,400	0	3,400	3,400	0
<b>Kaduna</b>	8,000	8000	NA	6,000	NA	NA	7,000	NA	NA
<b>Z. Mean</b>	6,717	6840.00	23.87	4483.33	4725	2.86	3975.00	3450.00	20.00

### North Central Zone

State	Ploughing (N/Ha)			Harrowing (N/Ha)			Ridging (N/Ha)		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Taraba	7,000	7,000	0	7,000	7,000	0	7,000	7,000	0
Plateau	5,000	5,000	0	5,000	5,000	0	5,000	5,000	0
Nassarawa	2,000	NA	NA	2,000	NA	NA	2,000	NA	NA
FCT	NA	NA	NA	NA	NA	NA	NA	NA	NA
Niger	11,000	11,500	4.55	11,000	11,000	0	11,000	11,500	4.55
Kwara	11,000	NA	NA	11,000	NA	NA	11,000	11,500	0.91
Kogi	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benue	5,000	5,000	0	4,000	4,000	0	3,000	3,000	0
Z. Mean	6,833	7,125	1.14	6,667	6,750	0	6,500	7,600	1.09

### South West Zone

State	Ploughing (N/Ha)			Harrowing (N/Ha)			Ridging (N/Ha)		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Oyo	4,000	7,750	93.75	4,000	NA	NA	4,000	NA	NA
Osun	3,500	NA	NA	3,500	NA	NA	3,500	NA	NA
Ekiti	7,500	7,500	0	3,000	4,500	50	3,000	4,500	50
Ondo	4,500	4,500	0	4,000	4,000	0	4,000	4,000	0
Ogun	3,200	NA	NA	3,000	NA	NA	3,000	NA	NA
Lagos	7,500	7,500	NA	NA	NA	NA	NA	NA	NA
Edo	1,500	NA	NA	4,000	NA	NA	1,000	NA	NA
Delta	1,000	NA	NA	6,000	NA	NA	8,000	NA	NA
Z. Mean	4,088	6,813	31.25	3,929	4,250	25	3,785.71	4,250.00	25

### South East Zone

State	Ploughing (N/Ha)			Harrowing (N/Ha)			Ridging (N/Ha)		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
<b>Ebonyi</b>	10,000	12,000	20	10,000	12,000	20	10,000	13,000	30
<b>Enugu</b>	4,000	NA	NA	2,500	NA	NA	2,500	NA	NA
<b>Anambra</b>	5,000	NA	NA	4,000	NA	NA	6,000	NA	NA
<b>Bayelsa</b>	5,000	NA	NA	5,000	NA	NA	5,000	NA	NA
<b>Rivers</b>	12,500	12,500	0	12,500	12,500	0	12,500	12,500	0
<b>Abia</b>	10,200	11,200	9.80	8,000	10,000	25.00	7,000	7,000	0
<b>Ak/ Ibom, Imo</b>	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>C/Rivers</b>	16,000	NA	NA	16,000	NA	NA	17,000	NA	NA
<b>Z. Mean</b>	8957.14	11900.00	9.93	8285.71	11500.00	15.00	8571.43	10833.33	10.00
<b>Nat. Mean</b>	6978.93	9535.50	13.24	6806.19	8445.00	8.57	6113.10	8226.67	11.22

### 3.5 Farm Management

#### 3.5.1 Labour cost of some farm operations

Labour cost of farm operations per hectare slightly varied during the 2011 season when compared to the 2010 season. North East agro-ecological zone recorded the lowest cost of labour on all the farming operations compared with the other agro-ecological zones. The North East zone recorded a marginal increase of 7% in 2011 when compared with 2010 season, while the South West zone recorded the highest increase of 32%. The national mean value increased by 15%.

The cost of labour for land clearing was averagely low in North East, North West and North Central zones when compared with the South West and South East ecological zones because the former zones have relatively plain surfaces and the nature of the vegetation is characterised by short grasses and shrubs while in the later have more trees and tall grasses, which make it inaccessible and land operations very hard and costly.



Ploughing and ridging are two operations that are sometimes carried out simultaneously or in some zone only one of the operations is carried out in order to reduce the cost of labour. The cost of labour for ploughing and ridging marginally increased in 2011 by 10% and 7% respectively in the North East agro-ecological zone, 14% and 13% in North West zone, 9% and 8% in North Central zone, 7% and 3% in South West zone and 11% and 7% in the South East zone. North East zone recorded the lowest cost of ploughing and ridging with an average of ₦5500 and ₦5300 per hectare respectively when compared with the other zones. The highest cost of labour for ploughing of ₦40,000 per hectare was recorded in Plateau and Anambra states; Ogun state recorded the highest cost of labour in ridging operation (₦ 75,000 per hectare) in 2011 season.

Planting operation cost recorded a marginal increase of 13%, 11%, 6%, 7%, and 8% in North East, North West, North Central, South West and South East zones respectively in 2011 when compared with 2010 session. The national average cost was ₦ 9,986 per hectare.

Fertilizer application cost recorded an increase of 9% in North East, North Central and South East zones, while North West and South West zones recorded an increase of 13%, 6% respectively.

The cost of Crop Spraying operation per hectare in 2011 session was relatively low in all the zones when compare with other operations. Delta state recorded the highest cost of ₦ 10000 per hectare while Taraba, Lagos, Anambra, Imo and Abia recorded the lowest cost (₦1000 per hectare).The nation mean value for harvesting operation cost per hectare was ₦17,801 for 2011 session and the mean difference between 2011 and 2010 sessions was 6%.

### 3.5.2 Cost of Production of Major crops

The cost of production for a hectare of sorghum increased noticeably in 2011 over that of 2010 by about 29% and over 27% in Jigawa and Niger States respectively, but decreased by about -3% in Nassarawa State. This may probably be as a result of availability of subsidized production inputs in Nassarawa State. Production cost of Maize decreased by over -88% in Plateau State but increased by 39% in Kebbi State. Increasing domestic rice demand is inducing an increase in domestic rice production cost in States like Bauchi (16.6%), Kebbi (27.1%) and Jigawa (26.7%) while in Nassarawa State the production cost for rice did not vary remarkably in 2011 compared with 2010. An increase of about 14% in the cost of production was observed for cassava in Edo State, compared with observed reduction in the cost by -4% recorded in Nassarawa State. Production cost of yam, cocoyam, groundnut and soybeans increased sharply with overall national means of 27%, 17%, 4%, 6% respectively.



**A good rice crop like this can lower importation if promoted**



**Making available plantain at home is always welcomed. A man from a wedding ceremony examines an offer for his home.**

There were serious changes that cropped up in levels of the production cost of major crops among the States and within zones between the two years under reference. These wide variations might be attributed to relative scarcity and price differences of the inputs across the five agro-ecological zones which were so pronounced in 2011 when compared with 2010.



Among the factors accounting for the increasing cost of production are scarcity of manual labour and traditional to small farm holdings that limit mechanization high cost of input especially fertilizers, pesticides and labour. Farmers' accessibility and affordability to labour saving devices will greatly help in minimizing production, invariable maximizing farmers' incomes. Adulteration, high price and scarcity of inputs such as fertilizer, improved seeds, and agrochemicals for the control of disease and pests and mechanized farm implements are among the other factors that need to be resolved in order to reduce the high production cost.



**A good millet yield is an increased work load for farm animals**

**TABLE 3.5.1 :Labour Cost for some farm operations in Nigeria (N/ha)**

North East Zone

	Land Clearing (N/ha)			Ploughing (N/ha)			Ridging (N/ha)			Planting(N /Ha)		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
<b>Borno</b>	4500.0	5000.0	11.1	5000.0	6000.0	20.0	5000.0	6000.0	20.0	7500.0	7500.0	0.0
<b>Yobe</b>	2000.0	2000.0	0.0	2500.0	2500.0	0.0	7500.0	7500.0	0.0	5000.0	6000.0	20.0
<b>Bauchi</b>	3500.0	4000.0	14.3	3500.0	4000.0	14.3	4000.0	4000.0	0.0	5000.0	6000.0	20.0
<b>Gombe</b>	5000.0	5500.0	10.0	6000.0	7000.0	16.7	3000.0	3000.0	0.0	4000.0	5000.0	25.0
<b>Adamawa</b>	5000.0	5000.0	0.0	8000.0	8000.0	0.0	5000.0	6000.0	20.0	5000.0	5000.0	0.0
<b>Z. Mean</b>	4000.0	4300.0	7.1	5000.0	5500.0	10.2	4900.0	5300.0	8.0	5300.0	5900.0	13.0

	Fertilizer application (N/ha)			Crop Spraying(N/ha)			Harvesting (N/ha)		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
<b>Borno</b>	3000.0	3000.0	0.0	1500.0	1500.0	0.0	12000.0	12000.0	0
<b>Yobe</b>	1500.0	1500.0	0.0	1500.0	1500.0	0.0	12000.0	12500.0	4.1667
<b>Bauchi</b>	4000.0	5000.0	25.0	4000.0	4000.0	0.0	17000.0	18000.0	5.8824
<b>Gombe</b>	2500.0	3000.0	20.0	2000.0	2500.0	25.0	10000.0	10200.0	2
<b>Adamawa</b>	3000.0	3000.0	0.0	2500.0	3000.0	20.0	16000.0	16500.0	3.125
<b>Z. Mean</b>	2800.0	3100.0	9.0	2300.0	2500.0	9.0	13400.0	13840.0	3.0348

North West Zone

	Land Clearing (N/Ha)			Ploughing (N/ha)			Ridging (N/Ha)			Planting(N /Ha)		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
<b>Sokoto</b>	17500.0	21000.0	20.0	17500.0	21000.0	20.0	17500.0	21000.0	20.0	15000.0	18000.0	20.0
<b>Kebbi</b>	2800.0	3500.0	25.0	14500.0	15000.0	3.4	4500.0	5000.0	11.1	1000.0	1000.0	0.0
<b>Zamfara</b>	3200.0	4000.0	25.0	3200.0	4000.0	25.0	3200.0	4000.0	25.0	6400.0	8000.0	25.0
<b>Katsina</b>	NA	NA	0.0	NA	NA	0.0	NA	NA	0.0	NA	NA	0.0
<b>Jigawa</b>	4000.0	5000.0	25.0	5500.0	6500.0	18.2	5500.0	6500.0	18.2	4000.0	5000.0	25.0
<b>Kano</b>	NA	NA	0.0	NA	NA	0.0	NA	NA	0.0	NA	NA	0.0
<b>Kaduna</b>	10000.0	12000.0	20.0	20000.0	25000.0	25.0	25000.0	30000.0	20.0	8000.0	9000.0	12.5
<b>Z. Mean</b>	5357.1	6500.0	16.4	8671.4	10214.3	13.1	7957.1	9500.0	13.5	4914.3	5857.1	11.8

	Fertilizer application (N/Ha)			Crop Spraying(N/Ha)			Harvesting (N/Ha)		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
<b>Sokoto</b>	7000.0	8000.0	14.3	5000.0	6000.0	20.0	24000.0	24000.0	0
<b>Kebbi</b>	5000.0	6000.0	20.0	1500.0	1700.0	13.3	10500.0	12500.0	19.048
<b>Zamfara</b>	6400.0	8000.0	25.0	3500.0	4000.0	14.3	14000.0	15000.0	7.1429
<b>Katsina</b>	NA	NA	0.0	NA	NA	0.0	NA	NA	0
<b>Jigawa</b>	4000.0	5000.0	25.0	5000.0	6000.0	20.0	14000.0	15000.0	7.1429
<b>Kano</b>	NA	NA	0.0	NA	NA	0.0	NA	NA	0
<b>Kaduna</b>	3800.0	4000.0	5.3	3000.0	3600.0	20.0	25000.0	30000.0	20
<b>Z. Mean</b>	3742.9	4428.6	12.8	2571.4	3042.9	12.5	17500.0	19300.0	7.619

North Central Zone

	Land Clearing (N/Ha)			Ploughing (N/ha)			Ridging (N/Ha)			Planting(N /Ha)		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Taraba	6000.0	6000.0	0.0	12000.0	12000.0	0.0	4000.0	4000.0	0.0	4000.0	4000.0	0.0
Plateau	4200.0	4800.0	14.3	36000.0	40000.0	11.1	36000.0	40000.0	11.1	9000.0	10000.0	11.1
Nassarawa	12500.0	12500.0	0.0	12000.0	12000.0	0.0	NA	NA	0.0	15000.0	15000.0	0.0
FCT	12500.0	14000.0	12.0	7000.0	7000.0	0.0	14000.0	14000.0	0.0	3000.0	3000.0	0.0
Niger	3000.0	3000.0	0.0	10000.0	12000.0	20.0	10000.0	10000.0	0.0	5000.0	5000.0	0.0
Kwara	14000.0	16000.0	14.3	10000.0	12000.0	20.0	15000.0	15000.0	0.0	10000.0	12000.0	2.2
Kogi	14000.0	16000.0	14.3	14000.0	16000.0	14.3	20000.0	25000.0	25.0	6000.0	7000.0	16.7
Benue	12000.0	15000.0	25.0	24000.0	25000.0	4.2	24000.0	30000.0	25.0	10000.0	12000.0	20.0
Z. Mean	9775.0	10912.5	10.0	15625.0	17000.0	8.7	15375.0	17250.0	7.6	7750.0	8500.0	6.3

	Fertilizer application (N/Ha)			Crop Spraying(N/Ha)			Harvesting (N/Ha)		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Taraba	4000.0	4000.0	0.0	1000.0	1000.0	0.0	NA	NA	0
Plateau	6400.0	6400.0	0.0	4000.0	4000.0	0.0	24000.0	24000.0	0
Nassarawa	5000.0	5000.0	0.0	5000.0	5000.0	0.0	17500.0	17500.0	0
FCT	3000.0	3000.0	0.0	3000.0	3000.0	0.0	NA	NA	0
Niger	5000.0	6000.0	20.0	1200.0	1200.0	0.0	10000.0	12000.0	20
Kwara	5000.0	6000.0	20.0	3000.0	3500.0	16.7	40000.0	60000.0	4
Kogi	9000.0	10500.0	16.7	4000.0	5000.0	25.0	18000.0	21000.0	16.667
Benue	5000.0	6000.0	20.0	5000.0	6000.0	20.0	20000.0	25000.0	25
Z. Mean	5300.0	5862.5	9.6	3275.0	3587.5	7.7	16187.5	19937.5	8.2083

South West Zone

	Land Clearing (N/Ha)			Ploughing (N/ha)			Ridging (N/Ha)			Planting(N /Ha)		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Oyo	24000.0	30000.0	25.0	24000.0	30000.0	25.0	37500.0	37500.0	0.0	3000.0	3000.0	0.0
Osun	18000.0	18000.0	0.0	10000.0	10000.0	0.0	28800.0	28800.0	0.0	2800.0	2800.0	0.0
Ekiti	37500.0	40000.0	6.7	17000.0	20000.0	17.6	20000.0	20000.0	0.0	30000.0	35000.0	16.7
Ondo	25000.0	30000.0	20.0	25000.0	25000.0	0.0	25000.0	25000.0	0.0	10000.0	10000.0	0.0
Ogun	25500.0	30000.0	17.6	5500.0	5500.0	0.0	75000.0	75000.0	0.0	14500.0	16000.0	10.3
Lagos	24000.0	25000.0	4.2	20000.0	24000.0	8.5	25000.0	30000.0	20.0	15400.0	16000.0	3.9
Edo	9600.0	9600.0	0.0	9600.0	9600.0	0.0	9600.0	9600.0	0.0	8000.0	8000.0	0.0
Delta	10800.0	11700.0	8.3	14000.0	15200.0	8.6	14000.0	15200.0	8.6	14000.0	15200.0	8.6
Z. Mean	21800.0	24287.5	10.2	15637.5	17412.5	7.5	29362.5	30137.5	3.6	12212.5	13250.0	4.9

	Fertilizer application (N/Ha)			Crop Spraying(N/Ha)			Harvesting (N/Ha)		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Oyo	2500.0	2500.0	0.0	4000.0	4000.0	0.0	16000.0	17000.0	6.25
Osun	2800.0	2800.0	0.0	4000.0	4000.0	0.0	14000.0	14000.0	0
Ekiti	4000.0	4000.0	0.0	5000.0	5000.0	0.0	50000.0	60000.0	20
Ondo	4500.0	4500.0	0.0	4000.0	5000.0	25.0	17200.0	17500.0	1.7442
Ogun	5400.0	6500.0	20.4	2800.0	3500.0	25.0	8500.0	9000.0	5.8824
Lagos	1000.0	1000.0	0.0	1000.0	1000.0	0.0	12000.0	12000.0	0
Edo	4000.0	4000.0	0.0	5000.0	5000.0	0.0	13200.0	13200.0	0
Delta	5000.0	6000.0	20.0	8000.0	10000.0	25.0	14800.0	15200.0	2.7027
Z. Mean	3650.0	3912.5	5.0	4225.0	4687.5	9.4	18212.5	19737.5	4.5724

South East Zone

	Land Clearing (N/Ha)			Ploughing (N/ha)			Ridging (N/Ha)			Planting(N /Ha)		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
<b>Ebonyi</b>	10000.0	10000.0	0.0	10000.0	10000.0	0.0	12000.0	15000.0	25.0	17000.0	18000.0	5.9
<b>Enugu</b>	20000.0	25000.0	25.0	25000.0	30500.0	22.0	30000.0	35000.0	16.7	10000.0	10000.0	0.0
<b>Anambra</b>	30000.0	32000.0	6.7	36000.0	40000.0	11.1	25000.0	30000.0	20.0	18000.0	18000.0	0.0
<b>Imo</b>	10000.0	10000.0	0.0	10000.0	10000.0	0.0	30000.0	30000.0	0.0	10000.0	10000.0	0.0
<b>Bayelsa</b>	21000.0	21000.0	0.0	20000.0	22000.0	10.0	30000.0	32000.0	6.7	10000.0	12000.0	20.0
<b>Rivers</b>	20000.0	20000.0	0.0	10000.0	10000.0	0.0	10000.0	10000.0	0.0	15000.0	18000.0	20.0
<b>Abia</b>	10000.0	12000.0	20.0	10000.0	12000.0	20.0	10000.0	10000.0	0.0	15000.0	16000.0	6.7
<b>Ak/ Ibom</b>	28000.0	28000.0	0.0	28000.0	28000.0	0.0	28000.0	28000.0	0.0	17500.0	17500.0	0.0
<b>C/Rivers</b>	13375.0	15250.0	14.0	17500.0	19000.0	8.6	9000.0	10000.0	11.1	7500.0	8800.0	17.3
<b>Z. Mean</b>	20463.9	21948.6	7.3	20237.5	22101.4	8.8	23706.9	25570.8	7.9	14690.3	15727.8	8.3
<b>Nat. Mean</b>	12279.2	13589.7	10.2	13034.3	14445.6	9.6	16260.3	17551.7	8.1	8973.4	9847.0	8.9

	Fertilizer application (N/Ha)			Crop Spraying(N/Ha)			Harvesting (N/Ha)		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
<b>Ebonyi</b>	5000.0	6000.0	20.0	2000.0	2000.0	0.0	15000.0	15000.0	0
<b>Enugu</b>	3500.0	3500.0	0.0	3000.0	3000.0	0.0	10000.0	12000.0	20
<b>Anambra</b>	4000.0	4800.0	20.0	1000.0	1000.0	0.0	15000.0	16000.0	6.6667
<b>Imo</b>	1000.0	1000.0	0.0	1000.0	1000.0	0.0	10000.0	10000.0	0
<b>Bayelsa</b>	5000.0	5000.0	0.0	5000.0	5000.0	0.0	16000.0	16000.0	0
<b>Rivers</b>	1000.0	1000.0	0.0	1000.0	1000.0	0.0	15000.0	18000.0	20
<b>Abia</b>	4000.0	5000.0	25.0	4000.0	5000.0	25.0	10000.0	10000.0	0
<b>Ak/ Ibom</b>	6000.0	6000.0	0.0	3000.0	3000.0	0.0	12000.0	12000.0	0
<b>C/Rivers</b>	5500.0	6000.0	9.1	2000.0	2500.0	25.0	15000.0	17000.0	13.333
<b>Z. Mean</b>	4294.4	4690.3	8.8	2913.9	3131.9	6.6	15134.7	16193.1	7.1747
<b>Nat. Mean</b>	3957.5	4398.8	9.0	3057.1	3390.0	9.0	16086.9	17801.6	6.1219

**Table 3.5.2a Costs of Production for Major Crops in Nigeria (N/Ha): Sorghum, Maize, Rice, Cowpea & Groundnut**

NORTH EAST ZONE																		
	Sorghum			Maize			Rice			Millet			Cowpea			Groundnut		
State	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Borno	50000.0	55000.0	10.0	45000.0	50000.0	11.1	65000.0	70000.0	7.7	50000.0	55000.0	10.0	85000.0	90000.0	5.9	60000.0	65000.0	8.3
Bauchi	37289.6	40398.0	8.3	52209.7	60812.0	16.5	71571.8	83431.0	16.6	30277.7	32802.0	8.3	47114.9	55449.0	17.7	36082.6	40601.0	12.5
Adamawa, Gombe, Yobe	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Z. Mean	43644.8	47699.0	9.2	48604.8	55406.0	13.8	68285.9	76715.5	12.1	40138.8	43901.0	9.2	66057.4	72724.5	11.8	48041.3	52800.5	10.4

NORTH WEST ZONE																		
	Sorghum			Maize			Rice			Millet			Cowpea			Groundnut		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Jigawa	68800.0	88400.0	28.5	80000.0	100000.0	25.0	75000.0	95000.0	26.7	68800.0	88400.0	28.5	70000.0	90000.0	28.6	75000.0	95000.0	26.7
Katsina	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sokoto	50000.0	55000.0	10.0	55000.0	60000.0	9.1	60000.0	70000.0	16.7	50000.0	55000.0	10.0	40000.0	40000.0	0.0	40000.0	45000.0	12.5
Kebbi	56200.0	58000.0	3.2	129200.0	180000.0	39.3	101500.0	129000.0	27.1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zamfara	46141.0	48172.0	4.4	70246.0	73052.0	4.0	75674.1	77789.4	2.8	42719.1	44276.4	3.6	50324.8	53054.2	5.4	55009.8	58106.1	5.6
Kano	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kaduna	94500.0	110000.0	16.4	129600.0	145000.0	11.9	127200.0	135000.0	6.1	NA	NA	NA	96000.0	105000.0	9.4	75000.0	85000.0	13.3
Z. Mean	63128.2	71914.4	12.5	92809.2	111610.4	17.9	87874.8	101357.9	15.9	53839.7	62558.8	14.0	64081.2	72013.6	10.8	61252.5	70776.5	14.5



NORTH CENTRAL ZONE																		
	Sorghum			Maize			Rice			Millet			Cowpea			Groundnut		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Taraba	NA	NA	NA	65,000	70,000	7.7	75,000	80,000	6.66667	45,000	45,000	0	80,000	90,000	12.5	65,000	70,000	7.69231
Plateau	55250	61050	10.498	910090	106650	-88.3	82750	90300	9.12387	48780	56000	14.80115	NA	NA	NA	71150	72900	2.45959
Nassarawa	93000	90000	-3.226	100000	90000	-10.0	100000	100000	0	68000	65000	-4.41176	45000	45000	0	65000	65000	0
FCT	68000	70000	2.9412	75000	78000	4.0	90000	90800	0.88889	65000	67400	3.692308	80000	83100	3.875	76000	79000	3.94737
Niger	98,152	125,000	27.353	103,330	108,000	4.5	94,180	108,000	14.674	62,280	NA	NA	72,360	NA	NA	71,600	NA	NA
Kwara	50,000	50,000	0	48,000	50,000	4.2	60,000	65,000	8.33333	NA	NA	NA	48,000	50,000	4.166667	55,000	55,000	0
Kogi	126700	127000	0.2368	128700	130000	1.0	144500	160000	10.7266	NA	NA	NA	122600	125000	1.957586	NA	NA	NA
Benue	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Z. Mean	81850.33	87175	6.3006	204302.9	90378.57	-10.98	92347.14	99157.14	7.20192	57812	46680	2.816338	74660	65516.67	3.749875	67291.67	56983.3	2.34988

SOUTH WEST ZONE																		
	Sorghum			Maize			Rice			Millet			Cowpea			Groundnut		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Osun	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oyo	78500	78500	0	92000	96000	4.3478	NA	NA	NA	NA	NA	NA	NA	NA	NA	68000	71000	4.41176
Ekiti	NA	NA	NA	80000	100000	25	200000	220000	10	NA	NA	NA	78500	100000	27.38854	NA	NA	NA
Ondo	NA	NA	NA	50000	53000	6	65000	70000	7.69231	NA	NA	NA	60000	60000	0	NA	NA	NA
Ogun	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lagos	NA	NA	NA	110000	125000	13.636	220000	225000	2.27273	NA	NA	NA	NA	NA	NA	NA	NA	NA
Edo	NA	NA	NA	23500	25000	6.383	NA	NA	NA	NA	NA	NA	NA	NA	NA	24000	NA	NA
Delta	NA	NA	NA	93000	95000	2.1505	97000	98000	1.03093	NA	NA	NA	NA	NA	NA	62000	65000	4.83871
Z. Mean	78500	78500	0	74750	82333.33	9.5863	145500	153250	5.24899	0	0	0	69250	80000	13.69427	51333.33	45333.3	3.08349

SOUTH EAST ZONE																		
	Sorghum			Maize			Rice			Millet			Cowpea			Groundnut		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Anambra	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Enugu	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ebonyi	NA	NA	NA	95000	102000	7.3684	198000	200000	1.0101	NA	NA	NA	NA	NA	NA	70000	74000	5.71429
C/River	NA	NA	NA	71200	75600	6.1798	78300	84000	7.27969	NA	NA	NA	NA	NA	NA	53000	54100	2.07547
Abia	NA	NA	NA	84000	88000	4.7619	108000	120000	11.1111	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ak/Ibom	NA	NA	NA	112000	119000	6.25	NA	NA	NA	NA	NA	NA	110000	120000	9.090909	NA	NA	NA
Imo	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bayelsa	NA	NA	NA	100000	100000	0	180000	180000	0	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rivers	NA	NA	NA	135,000	139,000	2.963	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Z.Mean	0	0	0	119440	124720	5.5046	112860	116800	3.88018	0	0	0	22000	24000	1.818182	24600	25620	1.55795
Nat. Mean	53424.66	57057.68	5.5935	107981.4	92889.66	7.1515	101373.6	109456.1	8.86658	30358.1	30627.96	5.205908	59209.73	62850.94	8.378091	50503.75	50302.7	6.39028

**Table 3 .5.2b : Costs of Production for Major Crops in Nigeria (N/Ha): Cassava, Cocoyam, Yam, Melon, Soybean & Cotton**

NORTH EAST ZONE																		
	Cassava			Cocoyam			Yam			Melon			Soybean			Cotton		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Borno, Yobe, Gombe, Adamawa	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	75000	110000	46.67	NA	NA	NA
Bauchi	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34,901.55	39,090	12.00	NA	NA	NA
Z. Mean	0	0	0	0	0	0	0	0	0	0	0	0	54950.78	74545	29.33	0	0	0

NORTH WEST ZONE																		
	Cassava			Cocoyam			Yam			Melon			Soybean			Cotton		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Jigawa	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Katsina	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sokoto	40,000	45,000	12.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	40,000	45,000	12.5	NA	NA	NA
Kebbi	82200	86200	4.8662	35650	36500	2.3843	450500	450500	0	NA	NA	NA	66200	66500	0.453172	NA	NA	NA
Zamfara	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	44,598.60	47,085.90	5.577081	46,269.30	48,741	5.34199
Kano	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kaduna	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	85000	106000	24.70588	NA	NA	NA
Z. Mean	61100	65600	8.6831	35650	36500	2.3843	450500	450500	0	0	0	0	58949.65	66146.48	10.80903	46269.3	48741	5.34199

NORTH CENTRAL ZONE																		
	Cassava			Cocoyam			Yam			Melon			Soybean			Cotton		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Taraba	50,000.0	55,000.0	10.0	NA	NA	NA	60,000.0	65,000.0	8.3	NA	NA	NA	45,000.0	45,000.0	0.0	NA	NA	NA
Plateau	78,460.0	87,900.0	12.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	58,950.0	59,280.0	0.6	NA	NA	NA
Nassarawa	50,000.0	48,000.0	-4.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	90,000.0	85,000.0	-5.6
FCT	130,000.0	135,000.0	3.8	NA	NA	NA	320,000.0	331,300.0	3.5	NA	NA	NA	NA	NA	NA	NA	NA	NA
Niger	103,060.0	110,000.0	6.7	NA	NA	NA	137,800.0	199,049.0	44.4	NA	NA	NA	98,537.5	105,340.0	6.9	NA	NA	NA
Kwara	60,000.0	65,000.0	8.3	NA	NA	NA	65,000.0	70,000.0	7.7	48,000.0	50,000.0	4.2	46,850.0	48,000.0	2.5	NA	NA	NA
Kogi	149,550.0	150,000.0	0.3	256,300.0	260,000.0	1.4	432,600.0	450,000.0	4.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benue	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Z. Mean	88,724.3	92,985.7	5.3	256,300.0	260,000.0	1.4	203,080.0	223,069.8	13.6	48,000.0	50,000.0	4.2	62,334.4	64,405.0	2.5	90,000.0	85,000.0	-5.6

SOUTH WEST ZONE																		
	Cassava			Cocoyam			Yam			Melon			Soybean			Cotton		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Osun, Ogun	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oyo	78500	82500	5.0955	NA	NA	NA	105000	115000	9.52381	65000	68000	4.615385	NA	NA	NA	NA	NA	NA
Ekiti	100000	150000	50	98000	100000	2.0408	500000	550000	10	59800	65000	8.695652	80000	120000	50	NA	NA	NA
Ondo	45000	45000	0	55000	50000	-9.091	100000	110000	10	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lagos	200000	210000	5	180500	180800	0.1662	600000	610000	1.66667	85000	88000	3.529412	NA	NA	NA	NA	NA	NA
Edo	37000	42000	13.514	31500	NA	NA	53000	350000	560.377	21500	23000	6.976744	21560	23000	6.679035	NA	NA	NA
Delta	76000	78000	2.6316	72000	73000	1.3889	102000	105000	2.94118	60000	63000	5	NA	NA	NA	NA	NA	NA
Z.Mean	89416.67	101250	12.707	87400	80760	-1.099	243333.3	306666.7	99.0848	58260	61400	5.763439	50780	71500	28.33952	0	0	0

SOUTH EAST ZONE																		
	Cassava			Cocoyam			Yam			Melon			Soybean			Cotton		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Anambra, Imo	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Enugu	170000	174200	2.4706	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ebonyi	90000	95000	5.5556	85000	85000	0	300000	320000	6.66667	NA	NA	NA	NA	NA	NA	NA	NA	NA
C/River	99400	98000	-1.408	34000	37000	8.8235	186000	190000	2.15054	26000	29400	13.07692	NA	NA	NA	NA	NA	NA
Abia	148000	154000	4.0541	94000	98000	4.2553	240000	253000	5.41667	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ak/Ibom	180000	195000	8.3333	200000	215000	7.5	420000	440000	4.7619	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bayelsa	150000	150000	0	130000	130000	0	120000	120000	0	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rivers	150,000	155,000	3.3333	300,000	1,543,000	414.33	750,000	769,000	2.53333	NA	NA	NA	145,500	100,070	-31.2234	NA	NA	NA
Z.Mean	141057.1	145885.7	3.1912	140500	351333.3	72.485	336000	348666.7	3.58818	26000	29400	13.07692	145500	100070	-31.2234	0	0	0
Nat. Mean	76059.62	81144.29	5.9804	103970	145718.7	15.043	246582.7	265780.6	23.2557	26452	28160	4.601406	74502.96	75333.3	7.947677	27253.86	26748.2	-0.04271

**Table 3.5.2c: Cost of Production for Major Crops in Nigeria (N/Ha): Vegetables, Onion, Beniseed, Egusi & Tomato**

NORTH EAST ZONE																		
	Vegetables			Onion						Beniseed			Egusi			Tomato		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Borno	NA	NA	NA	120000	125000	4.1667	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Yobe, Gombe, Adamawa	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bauchi	NA	NA	NA	142,905	166,732	16.673	NA	NA	NA	39,700	47,144	18.75063	NA	NA	NA	NA	NA	NA
Z. Mean	0	0	0	131452.5	145866	10.42	0	0	0	39700	47144	18.75063	0	0	0	0	0	0

NORTH WEST ZONE																		
	Vegetables			Onion						Beniseed			Egusi			Tomato		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Jigawa	NA	NA	NA	NA	NA	NA	NA	NA	NA	65000	85000	30.76923	NA	NA	NA	NA	NA	NA
Katsina, Sokoto, Zamfara, Kaduna	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kebbi	NA	NA	NA	NA	NA	NA	NA	NA	NA	42200	50200	18.95735	NA	NA	NA	NA	NA	NA
Z. Mean	0	0	0	0	0	0	0	0	0	53600	67600	24.86329	0	0	0	0	0	0

NBORTH CENTRAL ZONE																		
	Vegetables			Onion						Beniseed			Egusi			Tomato		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Taraba	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	60,000	65,000	8.333333	NA	NA	NA
Plateau	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	102700	112250	9.29893
Other states	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Z.Mean	0	0	0	0	0	0	0	0	0	0	0	0	60000	65000	8.333333	102700	112250	9.29893

SOUTH WEST ZONE																		
	Vegetables			Onion						Beniseed			Egusi			Tomato		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Oyo	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	64000	66500	3.90625
Ekiti	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	48000	60000	25
Ondo	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30000	40000	33.3333
Ogun, Osun, Edo, Delta	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lagos	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	85000	86000	1.17647
Z.Mean	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56750	63125	15.854

OUTH EAST ZONE																		
	Vegetables			Onion						Beniseed			Egusi			Tomato		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Enugu	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ebonyi	NA	NA	NA	NA	NA	NA	NA	NA	NA	30000	31500	5	NA	NA	NA	NA	NA	NA
Other states	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Abia	81000	86000	6.1728	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Z.Mean	81000	86000	6.1728	0	0	0	0	0	0	30000	31500	5	0	0	0	0	0	0
Nat. Mean	16200	86000	6.1728	131452.5	145866	10.42	0	0	0	123300	146244	48.61392	60000	65000	8.333333	159450	175375	25.1529

**Table 3.5.2.d : Cost of Production for Major Crops in Nigeria (N/Ha): Pepper, Pumpkin, Ginger, Okra, Pigeon Peas & Plantain**

NORTH EAST ZONE																		
	Pepper			Pumpkin			Ginger			Okra			Pigeon peas			Plantain		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Borno	100000	110000	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other States	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Z. Mean	100000	110000	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NORTH CENTRAL ZONE																		
	Pepper			Pumpkin			Ginger			Okra			Pigeon peas			Plantain		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Taraba	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Plateau	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nassarawa	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FCT	NA	NA	NA	NA	NA	NA	NA	NA	NA	85000	90000	5.882353	NA	NA	NA	NA	NA	NA
Niger	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kwara	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Kogi	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	113100	115000	1.679929	NA	NA	NA
Benue	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Z.Mean	0	0	0	0	0	0	0	0	0	85000	90000	5.882353	113100	115000	1.679929	0	0	0

SOUTH WEST ZONE																		
	Pepper			Pumpkin			Ginger			Okra			Pigeon peas			Plantain		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Oyo	62500	72500	16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ekiti, Edo, Ogun, Lagos, Osun	NA	NA	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ondo	40000	45000	12.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Delta	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	97000	98000	1.03093
Z. Mean	51250	58750	14.25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	97000	98000	1.03093



SOUTH EAST ZONE																		
	Pepper			Pumpkin			Ginger			Okra			Pigeon peas			Plantain		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Anambra, Enugu, Ak/Ibom, Imo	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ebonyi	55000	55000	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
C/River	18000	21000	16.667	NA	NA	NA	NA	NA	NA	12500	16700	33.6	NA	NA	NA	NA	NA	NA
Abia	35000	37000	5.7143	NA	NA	NA	NA	NA	NA	52000	57000	9.615385	NA	NA	NA	NA	NA	NA
Bayelsa	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	250000	250000	0
Rivers	135,000	115,000	-14.81	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	909,450	914,200	0.52229
Z.Mean	60750	57000	1.8915	0	0	0	0	0	0	32250	36850	21.60769	0	0	0	579725	582100	0.26115
Nat. Mean	42400	45150	5.2283	0	0	0	0	0	0	23450	25370	5.498009	22620	23000	0.335986	135345	136020	0.25841

**Table 3.5.2e: Cost of Production for Major Crops in Nigeria (N/Ha): Telfaria, Banana, Garden Egg, Bambara nut, Oil Palm & Irish Potatoes (NB: data for SW not available)**

NORTH EAST ZONE																		
	Telfaria			Banana			Garden Egg			Bambara nut			Oil Palm			Irish Potatoes		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Borno	NA	NA	NA	NA	NA	NA	NA	NA	NA	60000	60000	0	NA	NA	NA	NA	NA	NA
Others, States	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Z. Mean	0	0	0	0	0	0	0	0	0	60000	60000	0	0	0	0	0	0	0

### NORTH WEST ZONE

	Telfaria			Banana			Garden Egg			Bambara nut			Oil Palm			Irish Potatoes		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Sokoto	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	40,000	43,000	7.5	NA	NA	NA
Kebbi	NA	NA	NA	NA	NA	NA	NA	NA	NA	39550	40250	1.769912	NA	NA	NA	NA	NA	NA
Other States	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Z. Mean	0	0	0	0	0	0	0	0	0	39550	40250	1.769912	40000	43000	7.5	0	0	0

### NORTH CENTRAL ZONE

	Telfaria			Banana			Garden Egg			Bambara nut			Oil Palm			Irish Potatoes		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Plateau	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	260000	272800	4.92308
Nassarawa	NA	NA	NA	NA	NA	NA	NA	NA	NA	60000	60000	0	NA	NA	NA	NA	NA	NA
Other States	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Z. Mean	0	0	0	0	0	0	0	0	0	60000	60000	0	0	0	0	260000	272800	4.92308

### SOUTH EAST ZONE

	Telfaria			Banana			Garden Egg			Bambara nut			Oil Palm			Irish Potatoes		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Anambra, Enugu, Ebonyi, C/Rivers, Imo	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Abia	NA	NA	NA	NA	NA	NA	78000	82500	5.76923	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ak/Ibom	245000	250000	2.0408	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bayelsa	100000	100000	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	250000	250000	0	NA	NA	NA
Rivers	148,500	250,240	68.512	NA	NA	NA	144,500	148,250	2.59516	NA	NA	NA	NA	NA	NA	NA	NA	NA
Z. Mean	164500	200080	23.518	0	0	0	111250	115375	4.18219	0	0	0	250000	250000	0	0	0	0
Nat. Mean	32900	40016	4.7035	0	0	0	22250	23075	0.83644	31910	32050	0.353982	58000	58600	1.5	52000	54560	0.98462

**Table 3.5.2f: Cost of Production for Major Crops in Nigeria (N/Ha): Celosia, Water Melon, Acha, Wheat, Sugarcane & Cotton (data for NW & N-C zones)**

NORTH WEST ZONE																		
	Celosia			Water Melon			Acha			Wheat			Sugar Cane			Cotton		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Jigawa	NA	NA	NA	75000	95000	26.667	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sokoto	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	50,000	60,000	20	NA	NA	NA
Others States	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Z. Mean	0	0	0	75000	95000	26.667	0	0	0	0	0	0	50000	60000	20	0	0	0

NORTH CENTRAL ZONE																		
	Celosia			Water Melon			Acha			Wheat			Sugar Cane			Cotton		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Taraba	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Plateau	NA	NA	NA	NA	NA	NA	56950	59450	4.38982	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nassarawa	NA	NA	NA	63000	60000	-4.762	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FCT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	210000	220000	4.761905	NA	NA	NA
Others States	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Z.Mean	0	0	0	63000	60000	-4.762	56950	59450	4.38982	0	0	0	210000	220000	4.761905	0	0	0
Nat. Mean	0	0	0	27600	31000	4.381	11390	11890	0.87796	0	0	0	52000	56000	4.952381	0	0	0

**Table 3.5.2.g Cost of Production for Major Crops in Nigeria (N/Ha): Sweet potato, Acha, Carrot, Cabbage, Ugu & Pineapple (data for NW not available)**

NORTH EAST ZONE																		
Sweet potato				Acha			Carrot			Cabbage			Ugu			Pineapple		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Bauchi	NA	NA	NA	46,823.38	54,628	16.668	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other States	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Z. Mean	0	0	0	46823.38	54628	16.668	0	0	0	0	0	0	0	0	0	0	0	0

### NORTH CENTRAL ZONE

	Sweet potato			Acha			Carrot			Cabbage			Ugu			Pineapple		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Plateau	53180	56700	6.619	NA	NA	NA	99000	110950	12.0707	110750	126650	14.35666	NA	NA	NA	NA	NA	NA
Other States	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Z.Mean	53180	56700	6.619	0	0	0	99000	110950	12.0707	110750	126650	14.35666	0	0	0	0	0	0

### SOUTH WEST ZONE

	Sweet potato			Acha			Carrot			Cabbage			Ugu			Pineapple		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Osun, Oyo, Ogun	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ekiti	70000	80500	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ondo	35000	30000	-14.29	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lagos	110000	115000	4.5455	NA	NA	NA	NA	NA	NA	NA	NA	NA	125000	120000	-4	NA	NA	NA
Edo	20000	Na	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Delta	68000	70000	2.9412	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Z.Mean	60600	59100	1.6402	0	0	0	0	0	0	0	0	0	125000	120000	-4	0	0	0

SOUTH EAST ZONE																		
	Sweet potato			Acha			Carrot			Cabbage			Ugu			Pineapple		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Anambra, Imo, Enugu	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ebonyi	100000	110000	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
C/River	56000	59200	5.7143	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Abia	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	184000	207000	NA
Ak/Ibom	215000	220000	2.3256	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bayelsa	100000	100000	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	130000	130000	NA
Rivers	230,000	145,000	-36.96	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Z.Mean	140200	126840	-3.783	0	0	0	0	0	0	0	0	0	0	0	0	157000	168500	0
Nat. Mean	50796	48528	0.8952	9364.676	10925.6	3.3336	19800	22190	2.41414	22150	25330	2.871332	25000	24000	-0.8	31400	33700	0

**Table 3.5.2h : Cost of Production for Major Crops in Nigeria (N/Ha): Mango, Orange, Coffee, Rubber and Apple (national data)**

	Mango			Orange			Cocoa			Coffee			Rubber			Apple		
State	2010	2011	% Change <sup>1</sup>	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Delta	92000	94000	2.1739	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Other States	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mean	92000	94000	2.1739	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

### **3.6.GRAIN RESERVE**

#### **3.6.1 Grain stored**

The aim of grain reserve is to ensure all -year round availability of food and price control. Most of the states did not have any records of grain stored and distributed in both in 2010 and 2011. In 2010, maize was the major grain stored in the following states, Kebbi, Bauchi, Kano, Oyo, and Niger. Other grains include Millet, Cowpea and Sorghum. The state appeared to know very little about the strategic grain reserve efforts in their respective states.

The price per Metric ton of maize was ₦32,000 and ₦57,000 in Niger and Oyo States, respectively. In Kano millet, sorghum and maize was stored in 2010 but not in 2011. In Niger, Maize, Millet, Cowpea and Sorghum were stored both in 2010 and 2011. In Oyo State only Maize was stored, distributed and sold in both 2010 and 2011 respectively. The effort of Bayelsa state government to procure 450,000 tons of maize for storage in 2010 was not sustained in 2011.



**Table 3.6.1 Grain Reserve** (NB: data for SE not available)

**North East Zone**

State	Grain Type	Quantity Stored(mt)			Quantity Distributed(Mt)			Selling Price N/Mt)		
		2010	2011	% Change	2010	2011	% Change	2010	2011	%Change
<b>BORNO, Yobe, Gombe, Adamawa</b>	Millet, Sorghum, Maize	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Cowpea	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Bauchi</b>	Sorghum	NA	180	NA	180	180	NA	180	NA	NA
	Maize	NA	300	NA	300	300	NA	NA	NA	NA
<b>Z. Mean</b>		0	96	0	96	96	0	36	0	0

**North West Zone**

State	Grain Type	Quantity Stored(mt)			Quantity Distributed(Mt)			Selling Price N/Mt)		
		2010	2011	% Change	2010	2011	% Change	2010	2011	%Change
<b>Kebbi</b>	Millet	2,100	NA	2,100	NA	2,100	NA	2,100	NA	NA
	Sorghum	1,500	NA	1,500	NA	1,500	NA	1,500	NA	NA
	Maize	1,800	NA	1,800	NA	1,800	NA	1,800	NA	NA
<b>Katsina</b>	Millet, Sorghum, Maize	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Jigawa</b>	Millet	921.7	NA	921.7	921.7	NA	921.7	NA	NA	NA
<b>Kano</b>	Millet	1.16	NA	1.16	1.16	NA	1.16	20,000	NA	NA
	Sorghum	0.56	NA	0.56	0.56	NA	0.56	17,000	NA	NA
	Maize	1.13	NA	1.13	1.13	NA	1.13	20,000	NA	NA
<b>Kaduna</b>	Millet, Sorghum, Maize	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Z. Mean</b>		880.91	80	1380.91	220.91	1160	220.684	12560	0	0



### North-Central Zone

State	Grain Type	Quantity Stored(mt)			Quantity Distributed(Mt)			Selling Price N/Mt)		
		2010	2011	% Change	2010	2011	%Change	2010	2011	%Change
Niger	Millet	241.1	120	50.21	241.1	120	241.1	50.21	3 4,000	30,000
	Sorghum	1056	120	780	1056	120	780	120	28,000	30,000
	Maize	969.6	240	304	969.6	240	304	304	32,000	32,500
	Cowpea	262	51.2	411.7	262	51.2	411.7	262	32,000	42,500
Other States	Millet, Sorghum, Maize	NA	NA	NA	NA	NA	NA	NA	NA	NA
Z. Mean		505.74	106.24	309.182	505.74	106.24	347.36	147.242	18400	27000

### South West Zone

State	Grain Type	Quantity Stored(mt)			Quantity Distributed(Mt)			Selling Price N/Mt)		
		2010	2011	% Change	2010	2011	% Change	2010	2011	%Change
Oyo	Millet, Sorghum, Maize, cowpea	714	626	72.2	714	626	72.2	50,000	57,000	NA
Other States	Millet, Sorghum, Maize, cowpea	NA	NA	NA	NA	NA	NA	NA	NA	NA
Z. Mean		142.8	125.2	14.44	142.8	125.2	14.44	10000	11400	0
Nat. Mean		18305.89	81.488	18340.906	193.09	297.488	116.4968	4548.6484	5960	5400

### **3.7.Food Commodity Prices**

#### **3.7.1 Food Commodity**

With regard to comparison of market prices of major food commodities January and July 2010 and 2011, no data were obtained for Gombe, Jigawa and Katsina states. But generally, the prices of maize, millet and rice increased in the NEZ, the NCZ and the SWZ. Adamawa reported more than 56% increase in the prices of rice. The FCT reported more than 40% increase in the prices of maize and millet. There was also a decrease in the prices of maize, millet and rice in the NWZ and the SEZ between the two years under review. Sokoto reported more than 23% reduction in maize prices and more than 36% reduction in the prices of millet. Kano had more than 52% reduction in rice prices. Rivers reported a decrease of more than 33% in the prices of maize while Imo had more than 32% reduction in rice price reflecting that the increasing domestic production is impacting positively on local prices across the country. .

Increase in the prices of sorghum in the NEZ, the NCZ and the NWZ was reported. Kaduna reported more than 52% increase in sorghum price. There was also slight decrease in the prices of cowpea in the NWZ, the NCZ and the SWZ. Zamfara reported more than 20% reduction in cowpea price over the period under review.

Near stable prices for cassava products in the NEZ was reported. There was an increase in the prices for cassava products in the NWZ with Sokoto reporting an increase of more than 27% in the price of gari. There was a sharp increase in the prices for cassava products in the SWZ and SEZ. Oyo reported 56% increase in gari price. Ebonyi reported more than 250% increase in cassava tuber price and 85% increase in the price of cassava flour. A significant reduction in the prices of cassava products was reported in the NCZ, the SWZ and the SEZ. Kwara reported more than 63% reduction in the price of cassava tubers; more than 35% reduction for gari prices and more than 48% decreased in the price of cassava flour. Oyo reported 69% decrease in cassava tuber price, and 30% decrease in the price of cassava flour. Ebonyi reported more than 36% decrease in gari prices.

Sharp increase in the price of yam tubers, flour and sweet potato was recorded in the NWZ, the NCZ and the SWZ. Kaduna reported more than 169% increase in yam tuber price, with a corresponding increase of more than 158% for sweet potato. Kwara State reported more than 55% increase in sweet potato price. Oyo and Ogun States reported a significant increase of more than 58% and 42% respectively for yam tubers and sweet potatoes. A significant decrease in the prices of yam tuber, yam flour and sweet potato was reported. Niger State reported more than 61% decrease in the price of yam tuber while Ondo State reported about 40% decrease in sweet potato price. Abia and Rivers States reported about 33% reduction in yam tuber price. Imo had 34% reduction in sweet potato prices.

A sharp increase in the price of melon is reported. Bauchi reported an increase of more than 35%. Nassarawa State reported more than 70% increase in the price of melon. Osun reported 89% increase in the price of melon. Ebonyi State reported 81% increase in melon prices. Bauchi and Imo reported increases of more than 94% and 45% respectively for Irish potato. Cross River recorded 83% increase in soybean price. In Zamfara and Kano States increases of more than 60% in prices of soybean occurred. Nassarawa reported more than 53% increase in soybean prices

A slight increase in the price of beef and goat meat was reported in the NEZ and NWS. Bauchi State posted a 16% rise in beef price. Adamawa State had 18% increases in goat meat price, while Sokoto and Zamfara States reported price increases of 13% and 17% respectively for beef.

A significant increase in the prices of beef and goat meat were reported from the NCZ and the SEZ. Kwara State reported more than 78% increase in the price of beef. Niger indicated more than 137% increase in goat meat prices. In Cross Rivers State, 97% increase in beef price was recorded. Rivers State had 136% increases in goat meat price. No data for pork prices were received from all zones. Sokoto and Niger reported increases of 71% and 78% respectively in the price of mutton. Kwara recorded 30% in chicken prices that was slightly lower than the 41% recorded in Cross Rivers but higher than the 20% posted by Oyo and Ondo States. Curiously, Bauchi reported a 56% reduction in the prices of chickens. Marginal increases in the prices of eggs were reported: Bauchi 32%; Kaduna 28%; and Benue 26%.

Taraba and Cross River reported an increase of 42% and 425% respectively in fresh fish prices. Cross Rivers reported more than 261% increase in the prices of both smoked and dried fish. The prices of smoked dry fish increased by over 433% in Rivers State which were remarkably higher than the 76% increase recorded in Bauchi State.



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**Table 3.7.1a: Commodity Prices in Nigeria (Maize, Millet and Rice)**

**North East Zone**

State	Maize			Millet			Rice		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Borno	150	180	20	150	180	20	400	400	0
Yobe	63	65	3.17	58	60	3.44	146	146	0
Bauchi	60.7	58.63	-3.41	54.86	57.93	5.59	130.73	146.21	11.8412
Gombe	NA	NA	N/A	NA	NA	N/A	NA	NA	N/A
Adamawa	56	67.08	19.79	56	68	21.42	80	125	56.25
Zonal means	65.94	74.142		63.772	73.186		151.346	163.442	

**North West Zone**

State	Maize			Millet			Rice		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Jigawa	NA	NA	NA	NA	NA	NA	NA	NA	NA
Katsina	NA	NA	NA	NA	NA	NA	NA	AN	NA
Sokoto	64.41	49.55	-23.07	66.44	42.16	-36.54	95.06	107.5	13.09
Kebbi	76	68	-10.52	65	60	-7.69	270.5	275	1.66
Zamfara	57	66	15.78	63	61.5	-2.38	193.88	173.44	-10.54
Kano	61.67	55	-10.81	68.97	60.35	-12.49	120.97	57.26	-52.6
Kaduna	56	64.64	15.42	68	100	47.06	151.34	157.72	4.21
Zonal means	45.0114	43.3129		47.3443	46.2871		118.821	110.131	

### North Central Zone

State	Maize			Millet			Rice		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Taraba	100	80	-20	75	80	6.67	236.3	250	5.79
Plateau	74.04	78.69	6.28	86.35	98.74	14.34	225.75	230.71	2.19
Nassarawa	70.98	66.96	-5.66	74.43	71.43	-4.03	121.13	112.69	-6.96
Niger	50.16	57.72	15.07	54.41	65.07	19.59	109.29	112.92	3.32
Kwara	75.87	71.25	-6.08	88.61	85.8	-3.17	125.9	106.81	-15.16
Kogi	56.67	87.5	54.4	100	81.25	-18.75	195	200	2.56
Benue	81.96	79.24	-3.31	80.52	87.63	8.83	159.42	182.68	14.59
FCT	53.3	75	40.71	71	100	40.84	166	180	8.43
Zonal means	70.3725	74.545	10.17452	78.79	83.74	8.04132	167.349	171.976	1.84

### South West Zone

State	Maize			Millet			Rice		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Osun	59.57	81.01	35.99	N/A	N/A	N/A	148.63	169.16	13.8
Oyo	65.94	90.36	37.03	81.82	88.97	8.74	N/A	N/A	N/A
Ekiti	80	100	25	N/A	N/A	N/A	200	200	0
Ondo	130	122.62	-5.67	125	139.92	11.94	266.25	206.93	-24.16
Ogun	67.24	69.11	2.78	92.41	97.24	5.2	195.24	210.48	8
Lagos	118.87	98.65	-17.01	N/A	N/A	N/A	165	160.2	2.9
Edo	120.5	115	-4.56	N/A	N/A	N/A	N/A	N/A	N/A
Delta	149.42	140.8	-5.76	N/A	N/A	N/A	190.3	215.78	13.39
Zonal means	98.9425	102.194	8.4732	37.4038	40.7663	3.235	145.678	145.319	1.74125

### South East Zone

State	Maize			Rice		
	2010	2011	%Change	2010	2011	%Change
Anambra	6415	69240	7.35	13275	13560	2.1
Enugu	87.05	86.4	-0.747	146.8	143.05	-2.55
Ebonyi	125	150	20	130	143.83	10.63
Cross River	137.5	148.84	8.24	192.51	209.31	8.72
Abia	206.3	112.45	-45.49	170.9	159	-6.96
A/Ibom	136.66	125.93	-7.85	184.43	162.01	-12.15
Imo	135	125	-7.4	230	155	-32.6
Bayelsa	260	230	-11.53	300	350	16.66
Rivers	150	100	-33.33	200	167	-16.5
Zonal means	154.6888	134.828	-9.76528	194.33	186.15	-4.3438

**Table 3.7.1b: Commodity Prices in Nigeria (Sorghum, Cowpea and Groundnut)**

### North East Zone

State	Sorghum			Cowpea		
	2010	2011	%Change	2010	2011	%Change
Borno	150	180	20	400	450	12.5
Yobe	25	30	20	135	140	3.7
Bauchi	52.1	54.92	5.41	120.02	105.63	-11.99
Gombe	NA	NA	N/A	NA	NA	NA
Adamawa	56	65	16.07	150	120	-20
Zonal means	56.62	65.984	#DIV/0!	161.004	163.126	

### North West Zone

State	Sorghum			Cowpea		
	2010	2011	%Change	2010	2011	%Change
Jigawa	NA	NA	NA	NA	NA	NA
Katsina	NA	NA	NA	NA	NA	NA
Sokoto	54.69	54.19	-0.91	122.21	68.34	-44.07
Kebbi	80	80	0	120.5	130	7.88
Zamfara	55	66	20	110	87	-20.9
Kano	57.5	52.53	-8.64	113.34	115	1.46
Kaduna	52	79.51	52.9	120	123.25	2.7
Zonal means	42.74143	47.4614		83.7214	74.7986	

### North Central Zone

State	Sorghum			Cowpea			G/nut		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Taraba	100	70	-30	200.8	140	-30.27	N/A	N/A	
Plateau	82.63	90.31	9.29	139.19	150.67	8.24	N/A	N/A	
Nassarawa	N/A	N/A	NA	124.61	120.3	-3.45	N/A	N/A	
Niger	51.63	56.99	10.38	93.34	93.36	0.02	N/A	N/A	
Kwara	65.03	81.25	24.94	147.54	151.6	2.75	132.23	164.65	24.51789
Kogi	73.33	92	25.46	150	220	46.66	N/A	N/A	
Benue	84.34	79.11	-6.2	151.26	160.89	6.36	N/A	N/A	
FCT	64.2	112	74.45	150	196	30.66	N/A	N/A	
Zonal means	65.145	72.7075		144.593	154.103	7.62	16.5288	20.5813	

### South West Zone

State	Sorghum			Cowpea			G/nut		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Osun	62.2	76.9	23.6	148.26	145.1	-2.1	N/A	N/A	N/A
Oyo	76.73	81.56	6.29	107.29	111.38	3.89	N/A	N/A	N/A
Ekiti	N/A	N/A	N/A	240	200	-16.7	N/A	N/A	N/A
Ondo	N/A	N/A	N/A	183.75	157.34	-14.37	N/A	N/A	N/A
Ogun	73.46	95.71	3.06	189.24	204.41	8.01	N/A	N/A	N/A
Lagos	N/A	N/A	N/A	165	172	4.2	N/A	N/A	N/A
Edo	N/A	N/A	N/A	150	144.1	3.9	157.1	170.9	8.8
Delta	N/A	N/A	N/A	190.5	172.8	-9.3	N/A	N/A	N/A
Zonal means	26.54875	31.7713	4.11875	171.755	163.391	-2.8088	19.6375	21.3625	1.1

### South East Zone

State	Cowpea		
	2010	2011	%Change
Anambra	12637	12751	0.89
Enugu	120.1	110.03	-8.38
Ebonyi	200	166.6	-16.7
Cross River	124.12	171.15	37.89
Abia	208.3	174	-16.46
A/Ibom	176.55	177.11	0.31
Imo	N/A	N/A	
Bayelsa	300	300	0
Rivers	140	171	22.14286
Zonal means	158.634	158.736	



**Table 3.7.1c: Commodity Prices in Nigeria (Tuber, Gari and Flour)**

**North East Zone**

State	Tuber			Gari			Flour		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Borno	N/A	N/A		340	350	2.94	135	155	14.81
Yobe	90.1	100	10.98	122	132	8.19	N/A	N/A	
Bauchi	67.42	44.08	-34.61	128.5	109.74	-14.59	114.13	107.9	-5.45
Gombe	NA	NA	NA	NA	NA	NA	NA	NA	NA
Adamawa	45	60	33.33	90	90	0	75	65	-13.33
Zonal means	40.504	40.816		136.1	136.348		64.826	65.58	

**North West Zone**

State	Tuber			Gari			Flour		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Jigawa, Katsina	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sokoto	55.45	60.28	8.71	83.82	106.78	27.39	N/A	N/A	
Kebbi	N/A	N/A	NA	105.5	120	13.74	N/A	N/A	
Zamfara	N/A	72.5		142.5	136	-4.56	N/A	N/A	
Kano	N/A	N/A	NA	90.8	100	10.13	95	-	
Kaduna	21.24	39.39		115	107.51	-6.51	150	101.93	-32.04
Zonal means	7.9214	24.5957		76.8029	81.47		35	14.5614	

### North Central Zone

State	Tuber			Gari			Flour		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Taraba	81.73	100	22.35	200	150	-25	107.2	100	-6.71
Plateau	62.5	51.22	-18.04	120	112.04	-6.63	80.97	69.87	-13.7
Nassarawa	33.84	26.23	-22.488	99.41	77.87	-21.66	53.8	75.83	40.94
Niger	48.13	60.92	26.57	97.6	93.88	-3.81	59.1	51.82	-12.31
Kwara	23.01	8.5	-63.05	102.15	65.79	-35.59	100	51.85	-48.15
Kogi	26.13	34.92	33.63	100	70	-30	50	66.67	33.34
Benue	N/A	N/A		69.44	83.95	20.89	93.36	101.84	9.083
FCT	80	125	56.25	120	130	8.33	70	72	2.85
Zonal means	44.4175	50.8488		113.575	97.9413		76.8038	73.735	0.66686

### South West Zone

State	Tuber			Gari			Flour		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Osun	21.25	9.53	-55.2	94.04	64.49	-31.4	N/A	N/A	N/A
Oyo	35.25	10.91	-69.05	83.86	62.19	-56.64	138.79	95.83	-30.95
Ekiti	13.52	9.55	-39.7	80	100	25	150	160	6.7
Ondo	90	70.56	-21.6	97.5	108.76	11.54	145	167.7	15.51
Ogun	6.25	6.42	2.8	85.65	90.47	6	110.46	125.86	14
Lagos	13	14.45	11.15	100	120	20	138	138.05	0.036
Edo	24.9	38.6	55	94.3	97.7	3.6	83.9	90.3	7.6
Delta	18.65	17.3	-7.24	120.3	100.2	-16.71	N/A	N/A	N/A
Zonal means	27.8525	22.165	-15.48	94.4563	92.9763	-9.33375	95.7688	97.2175	1.612

### South East Zone

State	Tuber			Gari			Flour		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Anambra	3800	3900	2.56	9457	9551	0.98	7290	7396	1.43
Enugu	47	39	-17.02	84.12	64	-23.92	N/A	N/A	
Ebonyi	12.1	42.41	250.49	125	79.66	-36.27	35	65	85.71
Cross River	21.41	23.93	11.77	116.67	110.8	-5.03	N/A	N/A	
Abia	12.6	15.12	20	133.5	126.96	-4.89	175	175	0
A/Ibom	48.91	20.44	-58.2	121.47	90.69	-25.33	116.67	125	7.13
Imo	150	115	-23.33	200	95	-52.5	100	100	0
Bayelsa	450	460	2.22	260	267	2.69	N/A	N/A	
Rivers	120	166.64	38.87	100	85	-15	N/A	N/A	
Zonal means	107.7525	110.318	28.09892	142.595	114.889	-20.033	53.3338	58.125	

**Table 3.7.1d: Commodity Prices in Nigeria (Yam(tuber), Yam(flour) and Sweet potato)**

### North East Zone

State	Yam (tuber)			Sweet potato		
	2010	2011	%Change	2010	2011	%Change
Borno	300	300	0	N/A	N/A	
Yobe	N/A	N/A		95	95	0
Bauchi	N/A	N/A		91.25	70.68	-22.54
Gombe	NA	NA	NA	NA	NA	NA
Adamawa	120	100	-16.67	50	45	-10
Zonal means	84	80		47.25	42.136	

### North West Zone

State	Yam (tuber)			Sweet potato		
	2010	2011	%Change	2010	2011	%Change
Jigawa	NA	NA	NA	NA	NA	NA
Katsina	NA	NA	NA	NA	NA	NA
Sokoto	130.98	161.49	23.29	77.52	44.67	-42.37
Kebbi	260	270	3.84	64.25	55	-14.39
Zamfara	137.5	155	12.73	N/A	N/A	
Kano	N/A	N/A		73.01	26.68	-63.45
Kaduna	62.5	168.32	169.31	36.28	93.62	158.04
Zonal means	84.42571	107.83		35.8657	31.4243	

### North Central Zone

State	Yam (tuber)			Yam (flour)			Sweet potato		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Taraba	150	150	0	N/A	N/A		150	160	6.67
Plateau	152.87	168.73	10.37	116.88	119.62	2.34	69.17	60.01	-13.24
Nassarawa	80.9	55.82	-31	96.51	75.83	-21.42	51.15	75	46.62
Niger	105.07	40.69	-61.27	N/A	N/A		65.64	88.42	34.7
Kwara	77.42	73.96	-4.46	-	68.38		37.29	57.87	55.18
Kogi	70.03	66.5	-5.04	50	45.5	-9	45	50.56	12.35
Benue	68.55	70.32	2.58	N/A	N/A		N/A	N/A	
FCT	250	260	4	100	130	30	30	57	90
Zonal means	119.355	110.753		45.4238	54.9163		56.0313	68.6075	

### South West Zone

State	Yam (tuber)			Yam (flour)			Sweet potato		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Osun	59.3	77.86	31.29	N/A	N/A		93.17	83.32	-10.5721
Oyo	39.3	62.19	58.24	264.46	260.06	-1.66	N/A	N/A	
Ekiti	80	120	50	160	160	0	55	55	0
Ondo	98.13	119.2	21.47	179.83	169.38	-5.81	99.83	60	-39.89
Ogun	172.82	182.4	5.54	157.24	161.47	2.69	80.74	115.3	42.8
Lagos	145	165.85	14.37	160	158	-1.25	132.32	130	-1.75
Edo	88.3	120	35.9	N/A	N/A		117.3	92.8	-20.88
Delta	115.3	115.28	-0.017	N/A	N/A		136.5	118.3	-13.33
Zonal means	99.76875	120.348	27.10249	115.191	113.614		89.3575	81.84	

### South East Zone

State	Yam (tuber)			Sweet potato		
	2010	2011	%Change	2010	2011	%Change
Anambra	8010	8400	4.64	6500	7060	7.93
Enugu	123	119.13	-3.14	63.2	70.54	11.61
Ebonyi	100	145.83	45.83	50	122.5	145
Cross River	110.16	117.43	6.59	59.18	64.08	8.27
Abia	190	125.7	-33.84	100	91.72	-8.28
A/Ibom	154.38	162.42	5.2	87.91	84.15	-4.27
Imo	140	110	-21.42	260	170	-34.61
Bayelsa	550	580	5.45	80	85	6.25
Rivers	450	303.7	-32.51	200	250	25
Zonal means	227.1925	208.026	-3.47952	112.536	117.249	18.6214

**Table 3.7.1e: Commodity Prices in Nigeria (Melon, Soybean and Irish potato)**

**North East Zone**

State	Melon			Soybean			Irish potato		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Borno	N/A	N/A		240	250	4.17	N/A	N/A	
Yobe	N/A	N/A		100	100	0	95	100	5.26
Bauchi	290.56	393	35.25	77.37	98.65	27.5	60	116.48	94.13
Gombe	NA	NA	NA	NA	NA	NA	NA	NA	NA
Adamawa	90	115	27.78	N/A	N/A		100	106.67	6.67
Zonal means	76.112	101.6		83.474	89.73		51	64.63	

**North West Zone**

State	Melon			Soybean			Irish Potato		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Jigawa	NA	NA	NA	NA	NA	NA	NA	NA	NA
Katsina	NA	NA	NA	NA	NA	NA	NA	NA	
Sokoto	50	30	-40	70.05	60.15	-14.13	N/A	N/A	
Kebbi	100	95	-5	90	100	11.11	190.2	200	5.15
Zamfara	N/A	N/A		63.5	102	60.62	N/A	N/A	
Kano	N/A	N/A		60	100.2	67	116.67	-	
Kaduna	N/A	N/A		57.09	80.23	40.53	150	142.86	-4.76
Zonal means	21.42857	17.8571		48.6629	63.2257		65.2671	48.98	

### North Central Zone

State	Melon			Soybean			Irish potato		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Taraba	195	195	0	140	150	7.14	70	80	14.28
Plateau	187.18	200.11	6.9	123.98	142.08	14.59	85.69	73.56	-14.15
Nassarawa	360.45	615.49	70.75	66.18	101.83	53.86	106.07	63.02	-40.58
Niger	N/A	N/A		52.98	105.88	99.84	130.68	181.25	38.69
Kwara	229.56	288.5	25.67	91.65	122	33.11	175.47	-	
Kogi	290	300	3.44	120	100	-16.67	N/A	N/A	
Benue	220	250	13.63	111.42	112.93	1.35	N/A	N/A	
FCT	204	178	-12.74	57.1	60	5.07	N/A	N/A	
Zonal means	210.7738	253.388		95.4138	111.84	24.7927	70.9888	49.7288	

### South West Zone

State	Melon			Soybean			Irish potato		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Osun	336.09	635.01	88.94	73.75	102.15	38.5	N/A	N/A	
Oyo	380.46	393.52	3.43	86.61	102.89	18.79	N/A	N/A	
Ekiti	870	870	0	100	140	40	N/A	N/A	
Ondo	405	669.12	65.21	150	168.85	12.56	N/A	N/A	
Ogun	241.47	285.67	18.3	N/A	N/A		N/A	N/A	
Lagos	500	480	-4	95	122	28.42	180.68	164.55	-8.92
Edo	561.3	670	19.36	N/A	N/A		N/A	N/A	
Delta	325.5	486.2	49.37	N/A	N/A		N/A	N/A	
Zonal means	452.4775	561.19	30.07856	63.17	79.4863		22.585	20.5688	

### South East Zone

State	Melon			Soybean			Irish potato		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Anambra	N/A	N/A	N/A	9230	9130	-1	7270	7680	5.33
Enugu	225	239.16	6.29	120.1	125.37	4.38	N/A	N/A	
Ebonyi	450	817.5	81.67	125	175	40	N/A	N/A	
Cross River	315.48	412	30.59	81.01	148.69	83.54	54.54	73.92	35.53
Abia	410.2	316.6	-22.818	137.5	180.6	31.34	100	100	0
A/Ibom	N/A	N/A		-	150.72		125.97	149.79	18.9
Imo	425	505	18.82	130	106	-18.46	120	175	45.83
Bayelsa	-	500		N/A	N/A		N/A	N/A	
Rivers	200	469	134.5	N/A	N/A		-	139	
Zonal means	253.21	407.408		74.2013	110.798		50.0638	79.7138	

**Table 3.7.1f: Commodity Prices in Nigeria (Beef, Goat meat and Pork)**

### North East Zone

State	Beef			Goat meat		
	2010	2011	%Change	2010	2011	%Change
Borno	750	800	6.67	700	750	7.14
Yobe	N/A	N/A		450	450	0
Bauchi	574	666.33	16.08	550.02	571.99	3.99
Gombe	NA	NA	NA	NA	NA	NA
Adamawa	400	500	25	400	470	17.5
Zonal means	344.8	393.266		420.004	448.398	



### North West Zone

State	Beef			Goat meat		
	2010	2011	%Change	2010	2011	%Change
Jigawa	NA	NA	NA	NA	NA	NA
Katsina	NA	NA	NA	NA	NA	NA
Sokoto	287.05	326.67	13.8	162.17	167.09	3.03
Kebbi	550	600	9.09	450.5	500	10.98
Zamfara	775	800	3.22	725	850	17.24
Kano	N/A	N/A	NA	468.75	537.5	14.67
Kaduna	600	506.67	-15.55	650	675	3.84
Zonal means	316.0071	319.049		350.917	389.941	

### North Central Zone

State	Beef			Goat meat		
	2010	2011	%Change	2010	2011	%Change
Taraba	1000	1000	0	N/A	N/A	N/A
Plateau	692.04	701.35	1.35	538.33	619.76	15.13
Nassarawa	731.53	1000	-37	653.5	620.02	5
Niger	550	764.42	38.99	133.33	316.08	137.06
Kwara	380	678.06	78.44	385	465	20.78
Kogi	N/A	N/A	N/A	600	700	16.7
Benue	822.14	821.44	-0.09	830	712.77	-16.45
FCT	800	900	12.5	800	800	-
Zonal means	621.9638	733.159	11.77375	492.52	529.204	22.2775

### South West Zone

State	Beef			Goat meat		
	2010	2011	%Change	2010	2011	%Change
Osun	697.43	729.26	4.56	N/A	N/A	NA
Oyo	N/A	N/A	NA	730	960	31.5
Ekiti	800	1000	25	400	420	5
Ondo	754.15	793.75	5.25	507.25	312.6	-38.37
Ogun	N/A	N/A	NA	617.28	652.46	5.69
Lagos	650	700	7.69	760	700	-7.89
Edo	450	500	11.11	N/A	N/A	NA
Delta	960.1	860.1	-10.41	560.5	580	3.47
Zonal means	538.96	572.889		446.879	453.133	

### South East Zone

State	Beef			Goat meat		
	2010	2011	%Change	2010	2011	%Change
Anambra	37550	39900	5.88	33800	33168	-1.9
Enugu	N/A	N/A		485.18	530	9.23
Ebonyi	775	800	3.22	700	783.3	11.9
Cross River	579.21	1142.84	97.31	589.14	973.23	65.19
Abia	620	550	-11.29	415	412.5	-0.6
A/Ibom	210.45	-		741.02	997.65	34.63
Imo	N/A	N/A		800	850	6.25
Bayelsa	N/A	N/A		NA	1250	
Rivers	NA	770		550	1,300.00	136.3636
Zonal means	273.0825	407.855		535.043	887.085	

**Table 3.7.1g: Commodity Prices in Nigeria (Mutton, Chickens and Fresh Fish)**

**North East Zone**

State	Mutton			Chickens			Fresh Fish		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Borno	700	800	14.28	1000	1200	20	N/A	N/A	
Yobe	450	450	0	N/A	N/A		N/A	N/A	
Bauchi	590.73	628.83	6.44	638.89	1000	56.52	500	450	-10
Gombe									
Adamawa	400	470	17.5	600	750	25	380	480	26.31579
Zonal means	428.146	469.766		447.778	590		176	186	

**North West Zone**

State	Mutton			Chickens			Fresh Fish		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Jigawa									
Katsina									
Sokoto	144.83	248.39	71.5	309.22	309.22	0	372.8	437.5	17.35
Kebbi	460	500	8.69	800	700	-12.5	470	500	6.38
Zamfara	740	850	14.86	N/A	N/A		265	N/A	
Kano	345.45	485.12	40.43	N/A	N/A		N/A	N/A	
Kaduna	650	675	3.84	800	825	3.13	250	447.92	79.16
Zonal means	334.3257	394.073		272.746	262.031		193.971	197.917	

### North Central Zone

State	Mutton			Chickens			Fresh Fish		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Taraba	1000	1000	0	800	900	12.5	700	1000	42.85
Plateau	660.73	732.11	10.8	702.14	750	6.81	700	750	7.14
Nassarawa	473.33	500	5.63	1708.34	1000	-41.46	466.31	504.69	8.23
Niger	195.05	348.78	78.81	485.17	564.11	16.27	375	431.01	14.93
Kwara	N/A	N/A		355.63	465	30.75	195.61	260	32.91
Kogi	600	600	0	1200	1500	25	650	850	30.76
Benue	N/A	N/A		1300	1333.33	2.56	833.33	926.25	11.15
FCT	N/A	N/A		700	800	14.28	600	700	16.67
Zonal means	366.1388	397.611		906.41	914.055	8.34084	565.031	677.744	20.5838

### South West Zone

State	Mutton			Chickens			Fresh Fish		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Osun	N/A	N/A		N/A	N/A		340.89	385.24	13.01
Oyo	N/A	N/A		525.75	631.26	20.06	502.04	595.45	18.6
Ekiti	N/A	N/A		N/A	N/A		600	900	50
Ondo	N/A	N/A		600	721.13	20.18	417.5	478.13	14.52
Ogun	N/A	N/A		1,480	1550	4.72	580	660	13.79
Lagos	550	600	9.09	1350.55	1350	-0.04	540	560	3.7
Edo	N/A	N/A		705.6	675	-4.33	669.5	670	0.07
Delta	N/A	N/A		650.9	670.2	2.96	560	568.4	1.5
Zonal means	68.75	75		664.1	699.699		526.241	602.153	14.4012

### South East Zone

State	Mutton			Chickens			Fresh Fish		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Anambra	28500	28700	0.69	42737	43365	1.44	20742	21028	1.36
Enugu	N/A	N/A		653	570	-12.71	283.17	265	-6.41
Ebonyi	550	600	9.09	750	500	-33.33	N/A	N/A	
Cross River	N/A	N/A		950.1	1340.56	41.09	220.42	1158.74	425.69
Abia	340	340	0	480	454.76	-5.25	412	-415	-200.72
A/Ibom	N/A	N/A		644.85	517.05	-19.81	774.21	405.98	-47.56
Imo	N/A	N/A		N/A	N/A		700	655	-6.4285
Bayelsa	N/A	N/A		2000	2200	10	N/A	N/A	
Rivers	N/A	N/A		800	1000	25	800	1200	50
Zonal means	111.25	117.5		784.744	822.796		398.725	408.715	

**Table 3.7.1h: Commodity Prices in Nigeria (Eggs, Smoked fish and Dry fish)**

### North East Zone

State	Eggs			Smoked Fish			Dry Fish		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Borno	800	900	12.5	250	300	20	200	250	25
Yobe	N/A	N/A		N/A	N/A		N/A	N/A	
Bauchi	680.1	900	32.33	N/A	N/A		450	792.15	76.03
Gombe	NA	NA	NA	NA	NA		NA	NA	
Adamawa	700	750	7.14	450	600	33.33	N/A	N/A	
Zonal means	436.02	510		140	180		130	208.43	

### North West Zone

State	Eggs			Smoked Fish			Dry Fish		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Jigawa	NA	NA	NA	NA	NA	NA	NA	NA	NA
Katsina	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sokoto	N/A	N/A		N/A	N/A		N/A	N/A	
Kebbi	600	700	16.67	571.42	650	13.75	560.8	600	6.99
Zamfara	675	825	22.22	312.5	352.5	12.8	N/A	N/A	
Kano	N/A	N/A		N/A	N/A		N/A	N/A	
Kaduna	700	900	28.57	350	435.99	24.56	N/A	N/A	
Zonal means	282.1429	346.429		176.274	205.499		80.1143	85.7143	

### North Central Zone

State	Eggs			Smoked Fish			Dry Fish		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Taraba	700	750	7.14	2300	2400	4.34	1300	1200	-7.69
Plateau	650	700	7.69	N/A	N/A		1000	1250	25
Nassarawa	N/A	N/A		N/A	N/A		1456.55	1225.5	-15.86
Niger	N/A	N/A		N/A	N/A		N/A	N/A	
Kwara	750	900	20	304.79	339.58	11.41	N/A	N/A	
Kogi	700	750	7.14	N/A	N/A		2,000.00	2,500.00	25
Benue	750	800	6.67	1000	1000	0	868.75	1100	26.61
FCT	700	750	7.14	N/A	N/A		1,300	1,300	0
Zonal means	531.25	581.25		450.599	467.448		990.663	1071.94	

### South West Zone

State	Eggs			Smoked Fish			Dry Fish		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Osun	621.5	608.33	-2.11	N/A	N/A		N/A	N/A	
Oyo	620	650	4.83	322.15	369.58	14.72	640.13	652.74	1.96
Ekiti	650	750	15.38	N/A	N/A		320	300	-6.25
Ondo	700	720	2.85	257.5	265	2.91	582.5	675	15.87
Ogun	620	650	4.83	350	359.6	2.74	587.2	600.4	2.24
Lagos	750	600	-20	N/A	N/A		850	945	11.17
Edo	600	600	0	N/A	N/A		795.5	726.6	-8.66
Delta	645.4	660.5	2.33	600.58	570.8	-4.95	N/A	N/A	
Zonal means	650.8625	654.854	1.017468	191.279	195.623		471.916	487.468	

### South East Zone

State	Eggs			Smoked Fish			Dry Fish		
	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Anambra	N/A	N/A	N/A	N/A	N/A	N/A	37000	37700	18.9
Enugu	N/A	N/A		N/A	N/A	N/A	331.1	361.23	9.09
Ebonyi	N/A	N/A		N/A	N/A	N/A	610	675	10.65
Cross River	815.51	920	12.81	312.1	1129.23	261.8167	312.1	1129.23	261.81
Abia	650	650	0	520	580	11.53846	505	505.11	0.021
A/lbom	307.22	370.21	20.5	N/A	N/A	N/A	808.87	1083.66	33.97
Imo	600	750	25	700	750	7.142857	810	760	-6.17
Bayelsa	650	850	30.76	N/A	N/A	N/A	500	900	80
Rivers	650	-		450	2400	433.3333	600	-	
Zonal means	459.0913	442.526		247.763	607.404	34.1663	559.634	676.779	

### 3.8 FARMERS ASSESSMENT OF CROPPING PERFORMANCE

Farmers' assessment of cropping performance for the year 2011 was carried out with total number of 682 farmers which were individually interviewed during the survey.

Mixed cropping was generally practiced among 83.5% of the farmers interviewed while 8.8% were engaged in mixed farming; keeping livestock such as sheep and goats, poultry and swine as well as crop farms. Only 2.4% and 5.7% of the farmers interviewed were keeping cattle and engaged in fish farming and fishing respectively.

Maize cultivation increased in popularity in the drier zones of

North East especially in Adamawa, Borno, Bauchi, Gombe, and also in the North West such as, Kaduna, Sokoto, Kebbi and Zamfara States as key coping strategy against drought. In the South East, yam and cassava are planted as base crops. Intercrops such as yam/maize, cassava/melon/cowpea is common. Livestock and fisheries activities in all the states appeared still very minimal. There seems to be no serious extension effort to boost livestock/fish production. Although farm size per farmer interviewed remained small ranging between 0.7ha/farmer to 4.0ha/farmer, average grain yields for many crops are expected to increase slightly for key food crops due to good distributions of rainfall. As a result of high cost or lack of access to fertilizers and improve seeds in many states such as Edo, Rivers, Ekiti, Osun, Imo and Bayelsa, crop yield might be affected and overall improvement in average yield may not be realized this year.



**Documenting farmer's point of view**

Area cultivation in 2011 wet season marginally increased when compared to that of 2010 due to good distribution and enough rainfall patterns with higher output expected. Marginal increases of hectares put under cultivation were seen in yam, maize and rice while marginal productions increase in cassava, melon, rice and maize was predicted. Crop conditions in the field generally look good especially where mixed cropping is practice with leguminous crops. It was however observed that most of the incidences of pests and diseases infestation inflicted between light to moderate losses. Average grain yield of millet among the most progressive farmers is anticipated to increase from 0.44t/ha to 0.55t/ha while most millet farmers may have yield figures of more than 575kg/ha. The average yield of rice is expected to increase by 2.5% compared to 2010 while that of sorghum may increase marginally from 1.68t/ha obtained in 2010 to about 1.8t/ha and the increase in the average yield of maize to 2.05%. The yield of yam is likely to be more than



11.39t/ha while that of cassava may increase significantly from about 14t/ha to 15.25t/ha in the year 2011.

### 3.8.1 RAINFALL AND CROP PRODUCTION

The rains arrived early by the month of February 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 Zones, North West Zones, except Yobe and Zamfara states and the North Central Zones. Dry spells occurred throughout the northern states with varying levels that ranged between 12 and 27 days but better this year compared with 2010. A few southern states such as Ekiti, Lagos, Ogun, Osun, Oyo, and all states of the South East zone experienced scanty rainfall for 3-5 weeks between the month of February and March. In Ondo state, there was abrupt cessation of the rain which resulted in drought across the zones in the state. Flooding and crop submergence were reported to have occurred in Bauchi, Lagos, Ondo, and Oyo, states in the month of July and September. Rainfall extended into October across the country even for the drier ecological zones. Farmers predicted bumper harvest of maize, cassava, yam, sorghum, melon, rice, and cowpea.

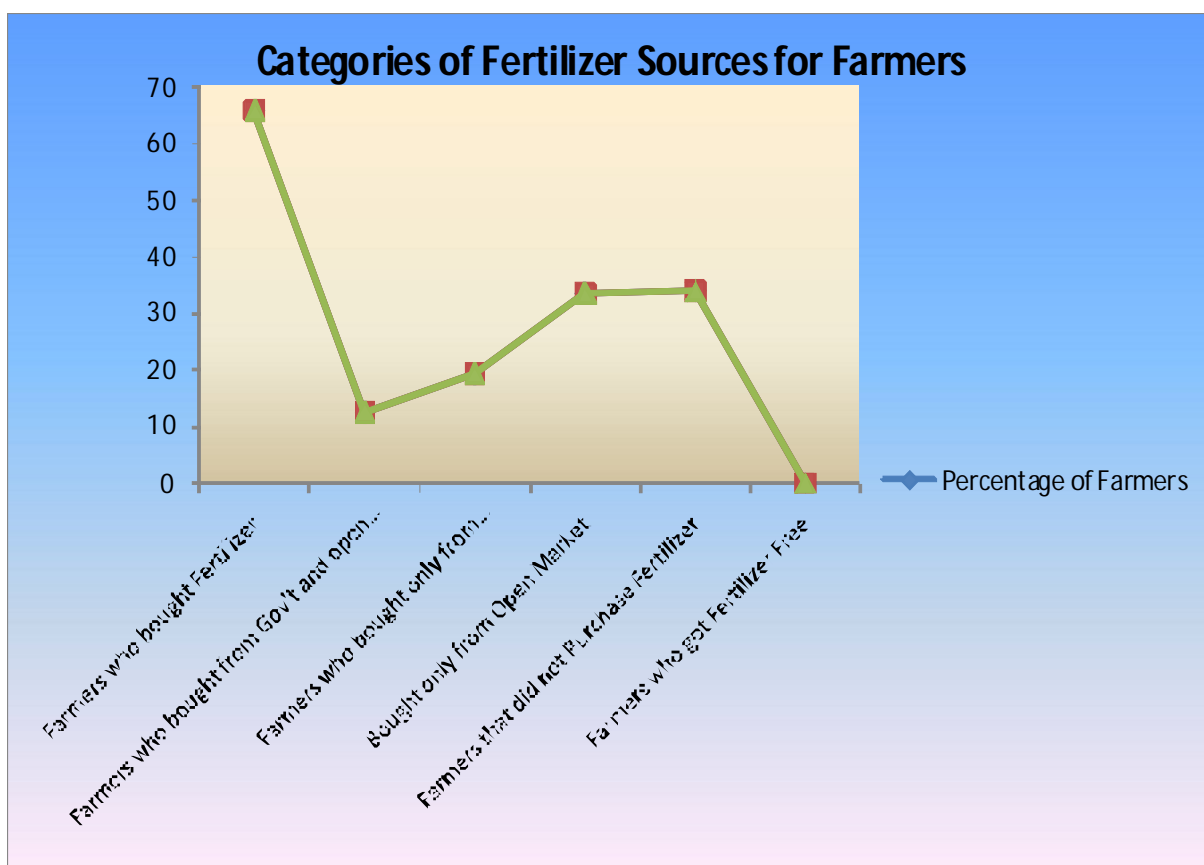
### 3.8.2 FERTILIZER SOURCE/QUANTITY BOUGHT BY FARMERS

Farmers' questionnaires from 34 states (with the exception of Katsina and Plateau states) and FCT Abuja were analysed. A total of 682 farmers responded to the questionnaires.

**Table 3.8.1: Fertilizer Source/Quantity Bought by Farmers in 2011**

Category of Farmers	Number of Farmers	Percentage of Farmers	Number of Bags of Fertilizer	Number of Bags Per Farmer
Farmers who bought Fertilizer	449	65.84	2694	6
Bought from Government and open Market Source	87	12.76	696	8
Bought only from Government Source	133	19.50	266	2
Bought only from Open Market	229	33.58	1145	5
Farmers that did not Purchase Fertilizer	232	34.02		
Farmers who got Fertilizer Free	1	0.15		

Source: Survey 2011



Across the country, farmers demonstrated increasing reliance on chemical fertilizers in their farm Enterprise. About 65.84% bought different grades of fertilizers they used against 34.02% that did not purchase this input this year while 19.50% (i.e. 133 of 682) of the farmers bought only from government source. A bag of fertilizer was sold at ₦1500 - ₦3,500 from the government source while in the open market; it was sold at ₦3,500 - ₦5,500. Farmers appeared to be more motivated to augment their fertilizer need when they are able to buy from government sources at a subsidized rate. The farmers that were able to procure more fertilizers from government and the open market used more fertilizers than those who bought only from the open market. Farmers that relied on the open market used up to 5bags compared with 2 bags used by farmers who rely solely on government sources. Many farmers in Nassarawa and Niger States were able to buy in excess of 4bags from Government sources; and this reflected on the average number of bags/farmer (2bags). Most of the farmers rarely had access to 1bag and in some cases, less than 1bag/farmer. Most farmers interviewed in Edo, and Lagos States were unable to buy any fertilizer from government source. Few got free fertilizer which was grossly inadequate for their farming.

### 3.8.3 FERTILIZER USAGE BY FARMERS

There are indications that the inorganic fertilizer was not sufficient. The distribution was untimely and inadequate. Farmers resorted to the use of organic manure and utilized a lot of it to compliment the inorganic fertilizer.

**Table 3.8.3: Fertilizer usage by Farmers in 2011**

Category of Farmers	Number of Farmers	Percentage of Farmers
Farmers who used Inorganic Fertilizer	333	48.83
Farmers who used Organic Fertilizer	68	9.97
Farmers who used Inorganic & Organic Fertilizer	134	19.65
Farmers that did not use Fertilizer	147	21.55

Source: Survey 2011



Farmers reported heavy investments on farm inputs and farm operations due to the lack of subsidy on the inputs by the government. Farmers who did not receive government allocation opined that the procurement of fertilizer should be of utmost priority by the government in order to reduce the scarcity of the product during the

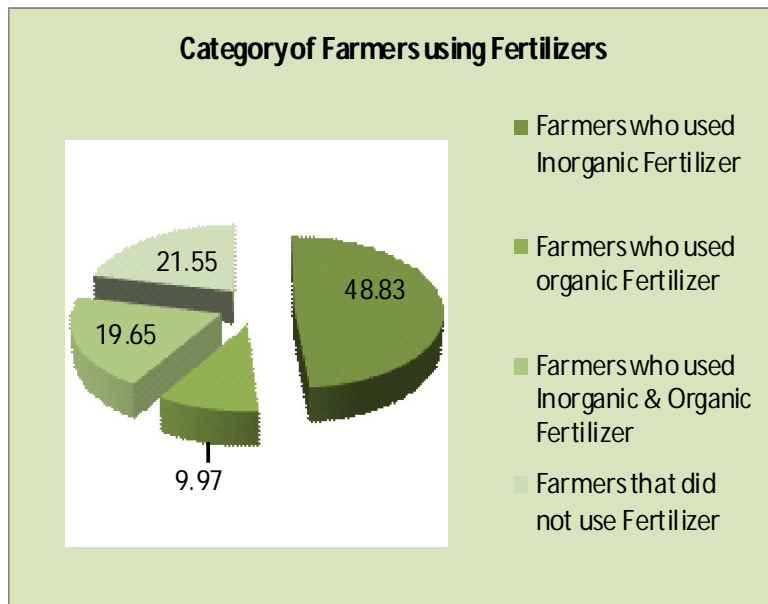
farming season. This is probably responsible for farmers' desire for credit support. Instances where farmers do not have access to credit facilities, the cost on seeds and seedlings are circumvented by farmers depending on saved seeds which may lead to reduced average yields posited for several crops.

### 3.9 FARMERS PRIORITY NEEDS

#### 3.91. Farmers Needs Assessment

Among the 682 farmers interviewed, government intervention in marketing produce to improve gate price were ranked the most critical element for sustainable agricultural growth in the country, followed by access to credit for farm inputs procurement. Fertilizer availability all the time at moderate cost and ADP extension services followed. Apparently, farmers desire a stronger linkage to the open market 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 that can enhance farmers' income and livelihood. Dredging of water channels is the least concern of farmers interviewed perhaps because there are substitutes such as wells dug individually by the farmers, and also the availability of streams and rivers. The study underscores the need to ensure the availability and accessibility of



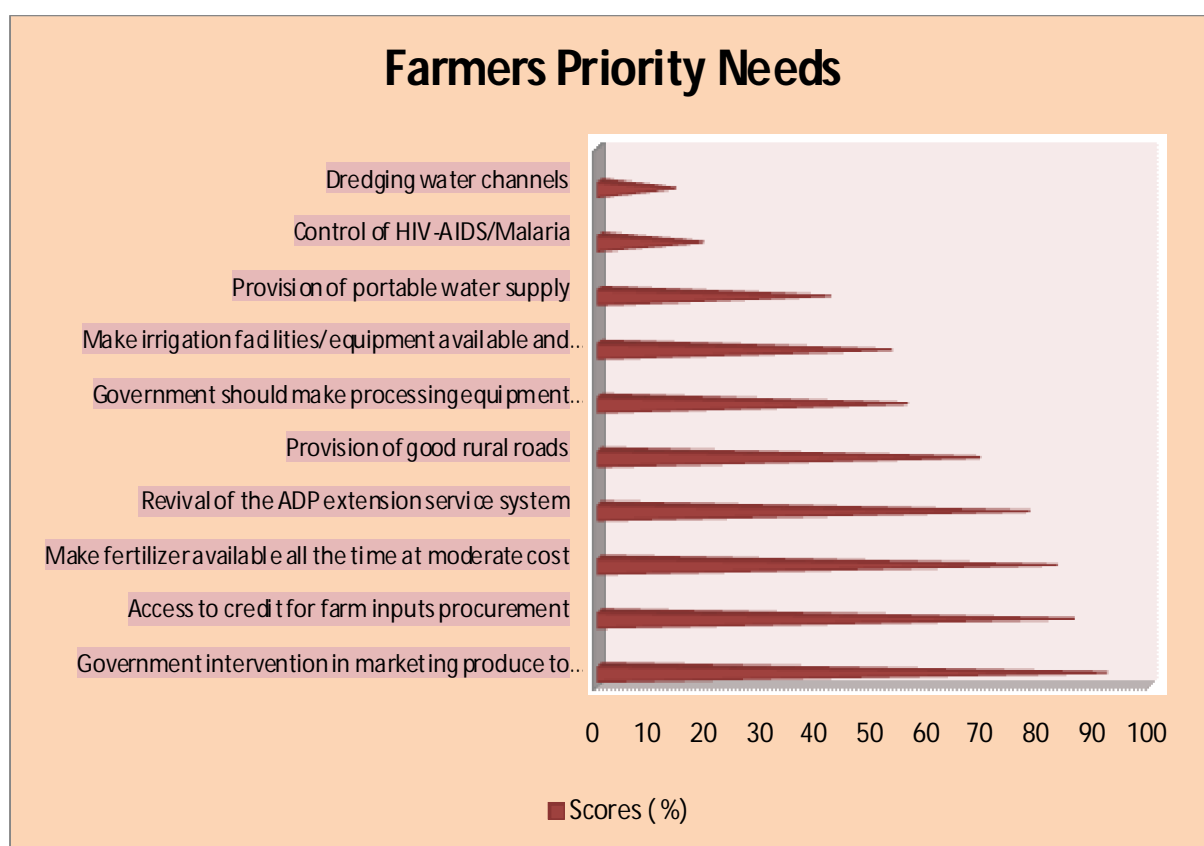
farmers to inorganic fertilizer and enhance farmers' access to credit for farm inputs procurement. Constraints such as limited availability of farm infrastructure, poorly developed markets and credit delivery to the agricultural sector by the commercial banks should be properly addressed.



**Table 3.9.1 Ranking of Farmers Needs from 36 States of the Federation and FCT Abuja**

Farmers Priority Needs	Scores (%)	Rank
Government intervention in marketing produce to improve gate price.	92	1
Access to credit for farm inputs procurement.	86	2
Make fertilizer available all the time at moderate cost.	83	3
Revival of the ADP extension service system	76	4
Provision of good rural roads.	69	5
Government should make processing equipment affordable and available.	56	6
Make irrigation facilities/equipment available and affordable.	53	7
Provision of potable water supply	42	8
Control of HIV-AIDS/Malaria	19	9
Dredging water channels	14	10

Source: Survey 2011



### 3.10 Estimated Cultivated Land Area and Crop Production Estimates

As in the previous years, the forecasts reported in the 2010 Wet Season Report (NAERLS and NPAFS, 2010) had been adjusted and presented in the 2010 CAYS Report of NPAFS and used as based data set to estimate both land area cultivated and the production outputs for each crop and validated in each state. Harmonized and adjusted figures for 2010 were adopted and incremented by the appropriate percentage increase or decrease arrived at by State ADP Planning and Monitoring Units (PMU) in order to derive the land area cultivated and the production figures for each crop in 2011. Various tables in this report thus show the land area devoted to the cultivation of each crop in 2010 and 2011 in the respective five agro-ecological zones and consolidated into national production outputs for each crop in 2010 and 2011.

### **3.10.1 Land Area Cultivated for various Crops**

The land area devoted to the cultivation of the most of the crops increased marginally in 2011 compared with those of 2010 although the area of a few crops decreased. The land area of sorghum decreased by about -2.96% from 5.040million hectares in 2010 to 4.891 million hectares in 2011; maize area increased slightly from 5.060 million hectares to 5.154 million hectares which represent 1.85% increase that is occurring mainly in the drier ecologies owing to increased adoption of drought tolerant maize; rice area also increased slightly from 2.554 million hectares to 2.58 million hectares which is just about 1.0%; ginger area increased by 2.47% (from 47,730 hectares to 48,910 hectares), the area for yam increased by 0.27 % (4.256 million hectares to 4.267 million hectares); Cowpea area decreased slightly from 3.227 million hectares to 3.189.95 million hectares which represent a -1.15 % reduction in 2011; groundnut area in 2011 was 2.34 million hectares as in 2010; millet area increased slightly by 0.39 % from 2.877 million hectares to 2.889 million hectares; cassava area increased by less than 5 % from 3.898 million hectares to 3.917 million hectares, cocoyam area increased by 0.72% from 475,00 hectares to 479,060 hectares , beniseed area decreased remarkably by -16.27% (from 228,720 hectares to 191,500 hectares; soybean area also decreased slightly from 609,560 hectares to 608,670 hectares; area under cotton cultivation increased by 2.51 % from 253,190 to 259,540 hectares; okra area increased by 0.72 % and tomato area increased by 0.16% in 2011.

### **3.10.2 Production Forecasts**

The estimated production output figure of most crops in 2011 is expected to increase although the forecast for a few crops is marginal decreases over that of 2010. The output for sorghum is anticipated to drop by about 9.25 % from 7,600,460 metric tons in 2010 to 6,897,080 metric tons in 2011 because of dry spells and widespread flood that occurred in 2011. The forecast for maize output is a slight increase of 1.92 % (almost by the same magnitude of its production area) from 9,006,990 metric tons to 9,180,060 metric tons; rice production will post an increase of less than 1.0% from 4,537,800 metric tons to 4,567,290 metric tons. Huge domestic demand for rice is yet to significantly impact on local production and represents great opportunity. The forecast for yam production is a light increase of 0.21% from 37.039 million metric tons to 37.115 million metric tons, Cassava output increased by 0.17 % from 52,316,500 to 52,403,480 metric tons which can support the wheat-cassava bread policy,; the forecasts for millet and soybean are decreases of -7.97 %



(from 1.38 to 1.27 million metric tons) and -5.8% (from 599,560 to 564,760 metric tons). The reduction in soybean production in 2011 is likely to induce early scarcity and high farm gate price. The forecast for cotton production is decrease of -2.36% despite increase in its production area.



Use of poor quality cotton seeds, flood and dry spells are some of the factors that contributing to the reduction in cotton output this year. Beniseed production will increase by about 0.93 % despite sharp decrease in its cultivated area. Favourable weather, especially late rains, favours its production similar to that of cowpea. Output of groundnut is anticipated to increase slightly by 0.34 % from 2,952,790 to 2,962,770 metric tons; cocoyam output will increase by less than 0.1 % from 3,263,720 to 3,265,710 metric tons within the same period.

### 3.10.1a CULTIVATED LAND AREA ESTIMATES ( Sorghum, Maize, Rice & Ginger) (X1000 HA)

#### North East Zone

	SORGHUM			MAIZE			RICE			GINGER		
STATE	2010	2011	%Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
BORNO	901.1	911.11	1.11	492.32	493.95	0.33	132.43	134.83	1.81	n.a	n.a	n.a
YOBE	204.36	208.18	1.87	9.31	9.36	0.54	42.06	42.06	0.00	n.a	n.a	n.a
BAUCHI	179.73	183.54	2.12	234.7	239.00	1.83	38.49	37.38	-2.89	n.a	n.a	n.a
GOMBE	140.66	142.72	1.46	142.68	144.69	1.41	47.54	48.60	2.23	n.a	n.a	n.a
ADAMAWA	115.56	114.72	-0.72	182.59	181.88	-0.39	34.59	35.42	2.41	n.a	n.a	n.a
Total	1541.410	1560.275	1.22	212.320	213.78	0.69	295.11	298.30	1.08	0.00	0.00	n.a

#### North West Zone

	SORGHUM			MAIZE			RICE			GINGER		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
JIGAWA	236.734	242.94	2.62	67.092	66.56	-0.80	39.82	40.92	2.76	n.a	n.a	n.a
KATSINA	352.09	354.25	0.61	281.23	288.17	2.47	56.17	57.44	2.26	n.a	n.a	n.a
SOKOTO	190	199	4.74	18.98	19.02	0.21	44.34	45.53	2.68	n.a	n.a	n.a
KEBBI	197.01	177.01	-10.15	165.28	166.62	0.81	34.94	35.68	2.12	n.a	n.a	n.a
ZAMFARA	186	186	0.00	44.6	45.24	1.43	24.12	24.45	1.39	n.a	n.a	n.a
KANO	623.38	609.69	-2.20	211.34	213.05	0.81	121.79	117.79	-3.28	n.a	n.a	n.a
KADUNA	273.17	270.65	-0.92	396.4	397.76	0.34	168.26	170.59	1.39	44.47	45.59	2.52
Total	2058.384	2039.539	-0.92	1184.922	1196.41	0.97	489.44	492.40	0.61	44.47	45.59	2.52



### North Central Zone

State	SORGHUM			MAIZE			RICE			GINGER		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
TARABA	201	204.69	1.84	303.09	310.51	2.45	203.77	203.74	-0.01	n.a	n.a	n.a
PLATEAU	227.46	203.75	-10.42	258.15	260.97	1.09	74.19	75.91	2.32	n.a	n.a	n.a
NASSARAWA	105.5	106.64	1.08	185.5	187.17	0.90	77.95	80.34	3.06	1.23	1.25	1.63
FCT	30.461	30.48	0.06	23.32	24.05	3.13	25.68	25.69	0.04	n.a	n.a	n.a
NIGER	543.24	433.43	-20.21	416.77	417.45	0.16	156.44	156.82	0.24	n.a	n.a	n.a
KWARA	87.317	90.27	3.38	132.636	138.52	4.44	147.13	150.30	2.16	n.a	n.a	n.a
KOGI	97.26	92.31	-5.09	331.54	339.86	2.51	60.11	60.93	1.36	n.a	n.a	n.a
BENUE	113.44	97.71	-13.86	113.7	114.89	1.05	140.23	144.35	2.94	1.69	1.73	2.37
Total	1405.678	1259.282	-10.41	1764.706	1793.41	1.63	885.50	898.07	1.42	2.92	2.98	2.05

### South West Zone

State	SORGHUM			MAIZE			RICE			GINGER		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
OSUN	n.a	n.a	n.a	86.01	83.95	-2.40	21.70	22.25		n.a	n.a	n.a
OYO	34.62	32.06	-7.41	284.3	284.37	0.03	23.90	23.90	0.00	n.a	n.a	n.a
EKITI	n.a	n.a	n.a	157.56	159.54	1.25	79.68	80.82	1.43	n.a	n.a	n.a
ONDO	n.a	n.a	n.a	238.8	238.80	0.00	50.15	51.05	1.79	n.a	n.a	n.a
OGUN	n.a	n.a	n.a	350.02	375.92	7.40	12.00	12.01	0.08	n.a	n.a	n.a
LAGOS	n.a	n.a	n.a	71.6	72.97	1.92	8.10	8.07	-0.37	0.34	0.34	0.00
EDO	n.a	n.a	n.a	47.22	48.97	3.70	13.01	13.09	0.62	n.a	n.a	n.a
DELTA	n.a	n.a	n.a	89.71	89.94	0.26	13.24	13.36	0.94	n.a	n.a	n.a
Total	34.620	32.056	-7.41	1325.220	1354.46	2.21	221.78	224.56	1.25	0.34	0.34	0.00

### South East Zone

State	SORGHUM			MAIZE			RICE			GINGER		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
ANAMBRA	n.a	n.a	n.a	38.39	39.27	2.30	15.33	15.78	2.94	n.a	n.a	n.a
ENUGU	n.a	n.a	n.a	81.00	82.55	1.92	41.43	41.58	0.37	n.a	n.a	n.a
EBONYI	n.a	n.a	n.a	2.88	2.96	2.86	111.31	113.02	1.54	n.a	n.a	n.a
C/RIVER	n.a	n.a	n.a	101.53	105.92	4.33	89.89	90.97	1.20	n.a	n.a	n.a
ABIA	n.a	n.a	n.a	69.95	71.07	1.61	9.04	9.04	0.00	n.a	n.a	n.a
AK/IBOM	n.a	n.a	n.a	59.78	61.06	2.15	8.41	8.50	1.06	n.a	n.a	n.a
IMO	n.a	n.a	n.a	121.35	132.24	8.97	329.95	329.65	-0.09	n.a	n.a	n.a
BAYELSA	n.a	n.a	n.a	34.62	35.42	2.32	41.68	42.20	1.25	n.a	n.a	n.a
RIVERS	n.a	n.a	n.a	63.37	64.80	2.26	15.31	15.48	1.11	n.a	n.a	n.a
Total	0.000	0.000	n.a	572.870	595.314	3.92	662.350	666.224	0.58	0.000	0.000	n.a
National Total	5040.092	4891.151	-2.96	5060.038	5153.369	1.84	2554.176	2579.555	0.99	47.730	48.910	2.47

### 3.10.1bCULTIVATED LAND AREA ESTIMATES: (Millet, Cowpea, Groundnut & Yam) (X1000 HA)

#### North East Zone

STATE	MILLET			COWPEA			GROUNDNUT			YAM		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
BORNO	192.32	204.08	6.12	725.06	725.29	0.03	216.86	217.07	0.10	n.a	n.a	n.a
YOBE	194.87	188.51	-3.26	118	116.12	-1.59	46.51	46.41	-0.22	n.a	n.a	n.a
BAUCHI	196.47	190.61	-2.98	682.31	673.76	-1.25	403.23	393.91	-2.31	n.a	n.a	n.a
GOMBE	198.79	197.53	-0.63	142.34	142.43	0.06	37.30	37.44	0.38	n.a	n.a	n.a
ADAMAWA	36.43	36.76	0.90	44.93	44.21	-1.60	65.43	63.96	-2.25	12.72	12.70	-0.15
Total	818.880	817.488	-0.17	1712.640	1701.807	-0.63	769.330	758.786	-1.37	12.720	12.701	-0.15

### North West Zone

State	MILLET			COWPEA			GROUNDNUT			YAM		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
JIGAWA	192.34	194.64	1.20	114.632	112.94	-1.48	55.46	55.49	0.05	n.a	n.a	n.a
KATSINA	199.71	196.60	-1.55	124.03	126.53	2.02	109.88	108.77	-1.01	5.42	5.51	1.66
SOKOTO	290.3	276.00	-4.93	111.02	110.90	-0.11	65.44	65.94	0.76	n.a	n.a	n.a
KEBBI	252.23	253.16	0.37	105.88	106.40	0.49	38.97	39.98	2.58	12.62	12.64	0.14
ZAMFARA	268.33	269.68	0.50	134.9	134.90	0.00	158.99	162.89	2.46	4.27	4.39	2.77
KANO	240.53	243.63	1.29	159.96	162.08	1.33	30.08	29.70	-1.26	n.a	n.a	n.a
KADUNA	205.46	215.46	4.87	59.47	60.69	2.05	220.10	220.35	0.11	59.03	58.91	-0.20
Total	1648.900	1649.185	0.02	809.892	814.444	0.56	678.920	683.118	0.62	81.340	81.446	0.13

### North Central Zone

State	MILLET			COWPEA			GROUNDNUT			YAM		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
TARABA	98.17	98.42	0.25	66.4	67.89	2.24	140.00	141.34	0.95	215.34	214.50	-0.39
PLATEAU	106.04	113.50	7.03	38.21	38.67	1.20	26.23	25.98	-0.95	37.93	37.22	-1.88
NASSARAWA	18.5	18.45	-0.28	131.25	132.88	1.24	65.25	66.00	1.15	142.46	143.83	0.96
FCT	17.98	18.47	2.70	14.21	14.17	-0.30	15.35	15.42	0.46	20.82	20.83	0.05
NIGER	83.624	83.91	0.34	84.73	85.02	0.34	304.63	309.77	1.69	343.23	335.97	-2.11
KWARA	18.087	19.58	8.23	142.544	141.09	-1.02	25.31	25.02	-1.16	81.15	81.70	0.68
KOGI	22.51	24.25	7.74	72.14	73.97	2.54	47.21	48.21	2.11	114.62	119.66	4.40
BENUE	42.68	43.46	1.83	32.9	33.50	1.83	205.80	206.38	0.28	228.14	228.78	0.28
Total	407.591	420.026	3.05	582.384	587.179	0.82	829.783	838.123	1.01	1183.690	1182.487	-0.10

### South West Zone

State	MILLET			COWPEA			GROUNDNUT			YAM		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
OSUN	n.a	n.a	n.a	1.98	1.95	-1.34	n.a	n.a	n.a	11.81	12.06	2.12
OYO	2.29	2.32	1.31	13.86	13.94	0.55	8.20	8.23	0.38	37.87	38.04	0.44
EKITI	n.a	n.a	n.a	28.52	27.88	-2.26	n.a	n.a	n.a	75.50	75.13	-0.50
ONDO	n.a	n.a	n.a	35.55	n.a	n.a	n.a	n.a	n.a	132.24	133.22	0.74
OGUN	n.a	n.a	n.a	6.44	6.50	0.89	35.04	35.04	0.00	99.15	96.98	-2.19
LAGOS	n.a	n.a	n.a	1.65	1.62	-2.05	2.98	2.98	0.00	46.62	46.80	0.39
EDO	n.a	n.a	n.a	4.59	4.59	0.00	n.a	n.a	n.a	37.42	37.48	0.15
DELTA	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	87.59	86.08	-1.72
Total	2.290	2.320	1.31	92.590	56.468	-39.01	46.220	46.251	0.07	528.200	525.777	-0.46

### South East Zone

State	MILLET			COWPEA			GROUNDNUT			YAM		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
ANAMBRA	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	126.03	128.18	1.70
ENUGU	n.a	n.a	n.a	1.87	1.85	-1.32	1.94	1.96	0.79	23.31	22.88	-1.84
EBONYI	n.a	n.a	n.a	1.75	1.70	-2.93	1.05	1.05	0.00	54.30	54.49	0.36
C/RIVER	n.a	n.a	n.a	12.6	13.05	3.61	13.58	13.52	-0.45	43.33	44.53	2.76
ABIA	n.a	n.a	n.a	0.43	0.44	2.33	n.a	n.a	n.a	59.35	59.81	0.77
AK/IBOM	n.a	n.a	n.a	12.95	13.02	0.51	n.a	n.a	n.a	254.59	257.74	1.24
IMO	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	65.73	66.62	1.35
BAYELSA	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	274.26	279.51	1.91
RIVERS	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	170.85	172.86	1.18
Total	0.000	0.000	n.a	29.600	30.055	1.54	16.570	16.525	-0.27	1071.750	1086.610	1.39
National Total	2877.661	2889.018	0.39	3227.106	3189.954	-1.15	2340.823	2342.802	0.08	2877.700	2889.021	0.39

### 3.10.1c CULTIVATED LAND AREA ESTIMATES: (Cassava, Cocoyam, Beniseed & Soybean) (X1000 HA)

#### North East Zone

State	CASSAVA			COCOYAM			Beniseed			Soybean		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
BORNO	n.a	n.a	n.a	0.021	0.021	0.00	12.08	12.38	2.52	n.a	n.a	n.a
YOBE	4.89	4.98	1.88	n.a	n.a	n.a	5.11	5.18	1.30	n.a	n.a	n.a
BAUCHI	2.04	1.96	-3.93	0.28	0.28	0.00	1.01	1.00	-1.06	39.18	39.57	1.00
GOMBE	3.34	3.30	-1.16	n.a	n.a	n.a	1.11	1.11	0.00	9.97	10.07	1.00
ADAMAWA	16.96	17.23	1.59	n.a	n.a	n.a	12.3	11.99	-2.52	22.34	22.84	2.24
Total	27.230	27.473	0.89	0.301	0.301	0.00	31.610	31.660	0.16	71.490	72.481	1.39

#### North West Zone

State	CASSAVA			COCOYAM			Beniseed			Soybean		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
JIGAWA	20.02	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
KATSINA	14.98	14.77	-1.40	7.97	8.26	3.64	n.a	n.a	n.a	26.47	26.35	-0.45
SOKOTO	4.45	4.51	1.35	n.a	n.a	n.a	n.a	n.a	n.a	18.12	18.62	2.77
KEBBI	83.53	84.04	0.60	n.a	n.a	n.a	8.65	8.85	2.29	10.98	11.15	1.55
ZAMFARA	n.a	n.a	n.a	n.a	n.a	n.a	3.31	3.48	5.19	6.14	6.22	1.36
KANO	2.68	2.60	-2.83	n.a	n.a	n.a	1.12	0.91	-18.87	50.28	49.14	-2.26
KADUNA	176	168.17	-4.45	2.85	2.80	-1.81	8.89	8.63	-2.88	68.78	68.70	-0.11
Total	301.660	274.091	-9.14	10.820	11.058	2.20	21.970	21.873	-0.44	180.770	180.189	-0.32

### North Central Zone

State	CASSAVA			COCOYAM			Beniseed			Soybean		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
TARABA	276.43	285.77	3.38	15.17	15.21	0.29	45.98	45.92	-0.13	71	72.08	1.53
PLATEAU	39.34	39.83	1.25	6.25	6.58	5.33	68.02	68.96	1.38	31.98	31.11	-2.72
NASSARAWA	140.12	140.33	0.15	11.09	11.19	0.91	n.a	n.a	n.a	59.98	61.07	1.82
FCT	4.015	4.15	3.26	n.a	n.a	n.a	17.02	17.31	1.68	3.79	3.77	-0.53
NIGER	86.12	89.23	3.61	23.34	23.60	1.10	5.72	5.78	1.08	11.8756	11.99	0.96
KWARA	81.518	83.86	2.88	n.a	n.a	n.a	n.a	n.a	n.a	23.872	24.33	1.92
KOGI	285.96	292.47	2.28	11.13	11.42	2.63	n.a	n.a	n.a	n.a	n.a	n.a
BENUE	275.3	276.76	0.53	15.02	15.06	0.25	38.4	n.a	n.a	117.87	114.45	-2.90
Total	1188.803	1212.388	1.98	82.000	83.065	1.30	175.140	137.968	-21.22	320.368	318.803	-0.49

### South West Zone

State	CASSAVA			COCOYAM			Beniseed			Soybean		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
OSUN	84.7	86.55	2.19	24.98	25.65	2.67	n.a	n.a	n.a	n.a	n.a	n.a
OYO	148.89	149.27	0.25	6.11	5.97	-2.29	n.a	n.a	n.a	5.43	5.55	2.25
EKITI	88.68	91.20	2.84	24.08	23.48	-2.49	n.a	n.a	n.a	4.95	4.89	-1.17
ONDO	128.24	125.36	-2.25	39.95	41.34	3.47	n.a	n.a	n.a	9.28	9.28	0.00
OGUN	217.17	219.77	1.20	33.09	33.09	0.00	n.a	n.a	n.a	n.a	n.a	n.a
LAGOS	60.15	61.32	1.94	11.03	11.05	0.21	n.a	n.a	n.a	5.85	5.99	2.39
Total	727.830	733.464	0.77	139.240	140.576	0.96	0.000	0.000	n.a	25.510	25.714	0.80

### South East Zone

State	CASSAVA			COCOYAM			Beniseed			Soybean		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
ANAMBRA	106.14	106.93	0.74	20.63	20.30	-1.62	n.a	n.a	n.a	n.a	n.a	n.a
ENUGU	281.31	288.66	2.61	27.76	27.66	-0.37	n.a	n.a	n.a	8.73	8.86	1.48
EBONYI	75.87	76.59	0.94	10.22	10.03	-1.83	n.a	n.a	n.a	2.69	2.62	-2.60
C/RIVER	354.29	357.24	0.83	45.71	46.20	1.07	n.a	n.a	n.a	n.a	n.a	n.a
ABIA	48.61	49.70	2.24	11.15	10.90	-2.24	n.a	n.a	n.a	n.a	n.a	n.a
AK/IBOM	148.78	150.18	0.94	43.29	43.64	0.81	n.a	n.a	n.a	n.a	n.a	n.a
IMO	239.64	240.14	0.21	17.12	16.93	-1.13	n.a	n.a	n.a	n.a	n.a	n.a
BAYELSA	28.38	28.42	0.14	26.93	27.56	2.35	n.a	n.a	n.a	n.a	n.a	n.a
RIVERS	190.5	191.80	0.68	16.95	17.08	0.79	n.a	n.a	n.a	n.a	n.a	n.a
Total	1473.520	1489.646	1.09	219.760	220.300	0.25	0.000	0.000	n.a	11.420	11.480	0.52
National Total	3719.043	3737.062	0.48	452.121	455.301	0.70	228.72	191.50	-16.27	609.56	608.67	-0.15

### 3.10.1d CULTIVATED LAND AREA ESTIMATES: (Cotton, Okra, Onion & Tomato) (X 1000 HA)

#### North East Zone

State	Cotton			Okra			Onion			Tomato		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
BORNO	26.89	29.58	10.00	4.08	4.11	0.74	n.a	n.a	n.a	23.37	23.54	0.73
YOBE	n.a	NA	NA	2.58	2.55	-1.16	n.a	n.a	n.a	1.01	0.98	-2.97
BAUCHI	n.a	NA	NA	1.46	1.42	-2.74	5.13	5.15	0.39	6.22	6.22	0.00
GOMBE	n.a	NA	NA	1.54	1.6	3.90	1.14	1.13	-0.88	4.96	4.99	0.60
ADAMAWA	19.51	19.80	1.49	1.64	1.64	0.00	3.8	3.80	0.00	1.51	1.57	3.97
Total	46.400	49.380	6.42	11.300	11.320	0.18	10.070	10.08	0.10	37.07	37.30	0.62

### North West Zone

State	Cotton			Okra			Onion			Tomato		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
JIGAWA	n.a	NA	NA	10.01	10.1	0.90	0.76	0.77	1.32	0.18	n.a	n.a
KATSINA	67.64	66.51	-1.67	2.09	2.17	3.83	8.95	9.01	0.67	2.15	2.15	0.00
SOKOTO	19.21	19.44	1.17	6.15	6.35	3.25	75.13	76.15	1.36	46.57	47.09	1.12
KEBBI	10.96	11.00	0.33	10.59	10.61	0.19	48.01	48.10	0.19	17.36	17.45	0.52
ZAMFARA	42.20	42.20	0.00	12.99	12.99	0.00	17.06	17.35	1.70	27.34	28.05	2.60
KANO	33.39	36.27	8.63	1.91	1.95	2.09	9.56	9.46	-1.05	0.31	0.31	0.00
KADUNA	n.a	n.a	n.a	31.89	32.486	1.87	4.59	4.45	-3.16	5.87	5.96	1.50
Total	173.400	175.411	1.16	75.630	76.656	1.36	164.060	165.285	0.75	99.780	101.008	1.23

### North Central Zone

State	Cotton			Okra			Onion			Tomato		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
TARABA	10.18	10.79	5.99	5.37	5.39	0.37	7.95	8.25	3.77	4.06	4.19	3.20
PLATEAU	23.21	23.98	3.32	3.67	3.75	2.18	1.54	1.49	-3.25	2.02	2.06	1.98
NASSARAWA	n.a	n.a	n.a	16.09	15.61	-2.98	n.a	n.a	n.a	1.96	2.00	2.04
FCT	n.a	n.a	n.a	0.27	0.271	0.37	n.a	n.a	n.a	1.43	1.44	0.56
NIGER	n.a	n.a	n.a	47.06	47.091	0.07	n.a	n.a	n.a	15.74	16.01	1.72
KWARA	n.a	n.a	n.a	16.96	17.072	0.66	n.a	n.a	n.a	1.66	1.68	1.20
KOGI	n.a	n.a	n.a	9.5	9.51	0.11	n.a	n.a	n.a	4.98	5.14	3.21
BENUE	n.a	n.a	n.a	21.28	22.06	3.67	6.51	6.57	0.92	9.28	9.42	1.51
Total	33.390	34.770	4.13	120.200	120.754	0.46	16.000	16.310	1.94	41.130	41.938	1.96



### South West Zone

State	Cotton			Okra			Onion			Tomato		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
OSUN	n.a	n.a	n.a	4.01	3.97	-1.00	n.a	n.a	n.a	7.95	8.12	2.14
OYO	n.a	n.a	n.a	25.28	25.3	0.08	n.a	n.a	n.a	10.20	10.25	0.49
EKITI	n.a	n.a	n.a	1.89	1.92	1.59	n.a	n.a	n.a	5.12	5.12	0.00
ONDO	n.a	n.a	n.a	1.45	1.48	2.07	n.a	n.a	n.a	0.88	0.88	0.00
OGUN	n.a	n.a	n.a	22.3	22.12	-0.81	n.a	n.a	n.a	10.98	11.03	0.46
LAGOS	n.a	n.a	n.a	18.89	18.56	-1.75	0.38	0.37	-2.63	8.01	7.97	-0.50
EDO	n.a	n.a	n.a	5.45	5.47	0.37	n.a	n.a	n.a	5.58	5.59	0.18
DELTA	n.a	n.a	n.a	7.72	7.94	2.85	n.a	n.a	n.a	6.28	6.25	-0.48
Total	0.000	0.000	n.a	86.990	86.760	-0.26	0.380	0.370	-2.63	55.000	55.210	0.38

### South East Zone

State	Cotton			Okra			Onion			Tomato		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
ANAMBRA	n.a	n.a	n.a	3.79	3.91	3.17	n.a	n.a	n.a	2.17	2.20	1.38
ENUGU	n.a	n.a	n.a	4.56	4.64	1.75	n.a	n.a	n.a	3.78	3.83	1.32
EBONYI	n.a	n.a	n.a	14.1	13.97	-0.92	n.a	n.a	n.a	10.22	10.00	-2.12
C/RIVER	n.a	n.a	n.a	8.67	8.92	2.88	n.a	n.a	n.a	10.97	11.08	1.00
ABIA	n.a	n.a	n.a	8.49	8.74	2.94	n.a	n.a	n.a	0.11	0.11	0.00
AK/IBOM	n.a	n.a	n.a	0.51	0.51	0.00	n.a	n.a	n.a	n.a	n.a	n.a
IMO	n.a	n.a	n.a	10.92	11.00	0.73	n.a	n.a	n.a	1.75	1.75	0.00
BAYELSA	n.a	n.a	n.a	10.78	10.79	0.09	n.a	n.a	n.a	n.a	n.a	n.a
RIVERS	n.a	n.a	n.a	18.00	18.6	3.33	n.a	n.a	n.a	n.a	n.a	n.a
Total	0.000	0.000	n.a	79.820	81.080	1.58	0.000	0.000	n.a	29.00	28.97	-0.09
National Total	253.19	259.56	2.52	814.761	820.551	0.71	409.160	373.466	-8.72	834.468	835.797	0.16

### 3.10.2a CROP PRODUCTION ESTIMATES: Maize, Rice, Ginger (X 1000 MT)

#### North East Zone

STATE	SORGHUM			MAIZE			RICE			GINGER		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
BORNO	1020.24	905.32	-11.26	494.38	498.98	0.93	146.33	146.39	0.04	n.a	n.a	n.a
YOBE	400.27	202.98	-49.29	18.13	18.15	0.11	33.11	33.15	0.12	n.a	n.a	n.a
BAUCHI	208.48	186.60	-10.49	342.28	346.51	1.23	66.12	66.95	1.25	n.a	n.a	n.a
GOMBE	245.53	159.80	-34.91	190.77	203.00	6.41	90.46	92.60	2.37	n.a	n.a	n.a
ADAMAWA	249.1	129.99	-47.81	188.18	189.18	0.53	41.37	42.27	2.17	n.a	n.a	n.a
Total	2123.620	1584.709	-25.38	1233.740	1255.817	1.79	377.390	381.352	1.05	0.000	0.000	n.a

#### North West Zone

STATE	SORGHUM			MAIZE			RICE			GINGER		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
JIGAWA	375.909	283.40	-24.61	119.879	120.48	0.50	13.5	13.49	-0.08	n.a	n.a	n.a
KATSINA	483.78	387.69	-19.86	270.85	273.13	0.84	58.42	56.83	-2.73	n.a	n.a	n.a
SOKOTO	256.44	249.98	-2.52	16.5	16.90	2.42	54.21	58.57	8.04	n.a	n.a	n.a
KEBBI	238.43	222.58	-6.65	149.34	150.88	1.03	56.04	58.75	4.84	n.a	n.a	n.a
ZAMFARA	717.98	718.78	0.11	48.13	50.27	4.44	23.32	23.58	1.13	n.a	n.a	n.a
KANO	1059.28	1074.86	1.47	536.39	546.82	1.94	268.46	268.86	0.15	n.a	n.a	n.a
KADUNA	476.38	484.31	1.66	756.099	770.68	1.93	359.27	360.67	0.39	445.55	453.41	1.76
Total	3608.199	3421.602	-5.17	1897.188	1929.160	1.69	833.220	840.742	0.90	445.550	453.410	1.76

### North Central Zone

STATE	SORGHUM			MAIZE			RICE			GINGER		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
TARABA	198	190.94	-3.56	420	430.52	2.50	294	294.23	0.08	n.a	n.a	n.a
PLATEAU	381.02	385.17	1.09	630.19	643.42	2.10	170.33	170.38	0.03	n.a	n.a	n.a
NASSARAWA	175.84	184.83	5.11	178.9	181.22	1.29	183.24	184.90	0.90	0.63	0.65	3.17
FCT	51.869	52.25	0.73	43.25	43.93	1.57	56.635	57.08	0.78	n.a	n.a	n.a
NIGER	586.28	598.35	2.06	650.89	661.07	1.56	138.57	141.19	1.89	n.a	n.a	n.a
KWARA	138.96	143.50	3.26	194.19	195.20	0.52	506.457	501.41	-1.00	n.a	n.a	n.a
KOGI	106.56	107.91	1.27	371.34	375.91	1.23	480.804	490.43	2.00	n.a	n.a	n.a
BENUE	200.65	201.35	0.35	160.83	165.71	3.04	306.25	306.88	0.20	5.12	5.29	3.32
Total	1839.179	1864.300	1.37	2649.590	2696.974	1.79	2136.286	2146.505	0.48	5.750	5.940	3.30

### South West Zone

STATE	SORGHUM			MAIZE			RICE			GINGER		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
OSUN	n.a	n.a	n.a	148.36	149.57	0.82	36.8	36.40	-1.09	n.a	n.a	n.a
OYO	29.46	26.47	-10.17	223.85	224.85	0.45	42.25	42.26	0.02	n.a	n.a	n.a
EKITI	n.a	n.a	n.a	332.96	342.92	2.99	74.61	76.84	2.99	n.a	n.a	n.a
ONDO	n.a	n.a	n.a	536.387	553.09	3.11	104.37	106.06	1.61	n.a	n.a	n.a
OGUN	n.a	n.a	n.a	515.099	536.89	4.23	34.29	34.94	1.90	n.a	n.a	n.a
LAGOS	n.a	n.a	n.a	210.59	211.86	0.60	29.12	29.45	1.14	0.81	0.82	1.23
EDO	n.a	n.a	n.a	74.22	74.25	0.04	23.01	23.06	0.20	n.a	n.a	n.a
DELTA	n.a	n.a	n.a	159.99	164.52	2.83	12.42	12.38	-0.32	n.a	n.a	n.a
Total	29.460	26.465	-10.17	2201.456	2257.946	2.57	356.870	361.379	1.26	0.810	0.820	1.23

### South East Zone

State	SORGHUM			MAIZE			RICE			GINGER		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
ANAMBRA	n.a	n.a	n.a	89.3	90.20	1.01	36.83	36.63	-0.55	n.a	n.a	n.a
ENUGU	n.a	n.a	n.a	153.31	153.86	0.36	76.04	76.79	0.99	n.a	n.a	n.a
EBONYI	n.a	n.a	n.a	6.3	6.33	0.46	406.61	407.55	0.23	n.a	n.a	n.a
C/RIVER	n.a	n.a	n.a	322.48	330.66	2.54	196.19	196.77	0.30	n.a	n.a	n.a
ABIA	n.a	n.a	n.a	90.5	90.50	0.00	23.8	23.80	0.00	n.a	n.a	n.a
AK/IBOM	n.a	n.a	n.a	64.18	65.48	2.02	1.145	1.16	1.07	n.a	n.a	n.a
IMO	n.a	n.a	n.a	170.24	171.78	0.90	1.8	1.82	1.03	n.a	n.a	n.a
BAYELSA	n.a	n.a	n.a	32.42	35.45	9.35	76.65	78.04	1.81	n.a	n.a	n.a
RIVERS	n.a	n.a	n.a	96.29	96.10	-0.20	14.97	14.76	-1.40	n.a	n.a	n.a
Total	0.000	0.000	0.000	1025.020	1040.345	16.433	834.035	837.312	3.475	0.000	0.000	0.000
National Total	7600.458	6897.076	-9.25	9006.994	9180.242	1.92	4537.801	4567.290	0.65	452.110	460.170	1.78

### 3.10.2b CROP PRODUCTION ESTIMATES: Yam, Cowpea, Groundnut and Millet (X 1000 MT)

#### North East Zone

STATE	YAM			COWPEA			GROUNDNUT			MILLET		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
BORNO	n.a	n.a	n.a	445.55	445.73	0.04	201.22	201.31	0.04	72.98	59.33	-18.70
YOBE	n.a	n.a	n.a	56.18	56.30	0.21	67.33	67.17	-0.24	70.03	65.86	-5.96
BAUCHI	n.a	n.a	n.a	247.29	245.22	-0.84	458.97	454.35	-1.01	69.66	63.92	-8.23
GOMBE	n.a	n.a	n.a	82.53	83.54	1.22	49.26	49.27	0.01	77.51	72.59	-6.34
ADAMAWA	3.02	3.02	0.00	27.98	27.86	-0.43	83.07	84.28	1.46	21.64	19.94	-7.86
Total	3.020	3.020	0.00	859.530	858.639	-0.10	859.850	856.383	-0.40	311.820	281.642	-9.68

## North West Zone

STATE	YAM			COWPEA			GROUNDNUT			MILLET		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
JIGAWA	n.a	n.a	n.a	56.48	56.64	0.28	9.87	9.77	-1.03	98.64	92.95	-5.77
KATSINA	2.1	2.10	0.00	67.72	68.25	0.78	85.71	85.71	0.00	84.7	80.98	-4.39
SOKOTO	n.a	n.a	n.a	94.58	94.82	0.25	63.77	65.48	2.68	99.09	91.24	-7.92
KEBBI	14.34	14.34	0.00	56.36	55.76	-1.06	58.1	58.49	0.67	88.56	82.70	-6.62
ZAMFARA	4.89	4.89	0.00	156.32	158.61	1.46	131.25	134.53	2.50	89.08	83.37	-6.41
KANO	n.a	n.a	n.a	98.17	98.53	0.37	33.88	33.58	-0.89	89.66	84.54	-5.71
KADUNA	723.45	723.32	-0.02	42.37	42.62	0.60	365.89	366.79	0.25	78.59	74.03	-5.81
Total	744.780	744.652	-0.02	572.000	575.230	0.56	748.470	754.348	0.79	628.320	589.808	-6.13

## North Central Zone

STATE	YAM			COWPEA			GROUNDNUT			MILLET		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
TARABA	2,897.56	2894.37	-0.11	25.69	26.48	3.09	233.54	240.20	2.85	98.47	84.27	-14.42
PLATEAU	256	255.36	-0.25	14.1	14.58	3.42	20.28	20.75	2.33	97.56	89.27	-8.50
NASSARAWA	2954.41	2956.28	0.06	44.54	46.48	4.35	86.51	86.71	0.23	25.51	23.93	-6.21
FCT	2568.99	2595.12	1.02	10.53	10.96	4.06	8.06	8.06	0.00	23.32	21.62	-7.29
NIGER	360.428	362.33	0.53	48.63	49.60	1.99	433.34	432.93	-0.09	89.062	80.69	-9.40
KWARA	5314.22	5298.70	-0.29	3.271	3.27	-0.03	34.969	35.01	0.12	21.504	19.38	-9.86
KOGI	1480.11	1489.25	0.62	52.57	53.72	2.19	78.14	78.14	0.00	19.28	18.18	-5.68
BENUE	1054.524	1059.58	0.48	27.61	28.00	1.40	401.6	402.05	0.11	66.15	61.21	-7.47
Total	16886.242	16910.983	0.15	226.941	233.088	2.71	1296.439	1303.859	0.57	440.856	398.558	-9.59

### South West Zone

State	YAM			COWPEA			GROUNDNUT			MILLET		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
OSUN	678.8	675.83	-0.44	1.436	1.47	2.30	n.a	n.a	n.a	n.a	n.a	n.a
OYO	779.92	779.59	-0.04	6.63	6.69	0.90	10.66	10.65	-0.09	n.a	1.10	n.a
EKITI	1552.87	1554.92	0.13	18.21	18.43	1.21	0.06	0.06	0.00	n.a	n.a	n.a
ONDO	2287.67	2289.26	0.07	151.07	151.07	0.00	0.06	0.06	0.00	n.a	n.a	n.a
OGUN	256.41	259.01	1.01	2.13	2.13	0.00	5.9	5.91	0.17	n.a	n.a	n.a
LAGOS	60.32	61.52	1.99	1.42	1.43	0.70	3.72	3.71	-0.24	n.a	n.a	n.a
EDO	355.42	355.43	0.00	1.69	1.69	0.00	3.98	4.02	0.95	n.a	n.a	n.a
DELTA	1,230	1231.26	0.10	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Total	7201.410	7206.813	0.08	182.586	182.910	0.18	24.380	24.409	0.12	0.000	1.100	n.a

### South East Zone

STATE	YAM			COWPEA			GROUNDNUT			MILLET		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
ANAMBRA	958.31	960.15	0.19	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
ENUGU	3249	3254.24	0.16	1.35	1.35	0.00	1.24	1.25	0.71	n.a	n.a	n.a
EBONYI	1,765.52	1788.52	1.30	1.19	1.19	-0.21	1.01	1.01	0.00	n.a	n.a	n.a
C/RIVER	3398.76	3402.96	0.12	6.78	6.73	-0.78	13.21	13.32	0.82	n.a	n.a	n.a
ABIA	614.58	618.78	0.68	0.38	0.38	0.00	7.21	7.21	0.00	n.a	n.a	n.a
AK/IBOM	305.83	306.18	0.11	1.28	1.27	-0.50	0.9	0.901	0.11	n.a	n.a	n.a
IMO	780.64	782.65	0.26	n.a	n.a	n.a	0.08	0.08	0.00	n.a	n.a	n.a
BAYELSA	170.32	170.23	-0.05	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
RIVERS	961.065	966.32	0.55	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Total	12204.025	12250.029	0.370	10.980	10.918	-0.165	23.650	23.768	0.182	0.000	0.000	0.000
National Total	37039.477	37115.497	0.21	1852.037	1860.784	0.47	2952.789	2962.767	0.34	1380.996	1271.108	-7.96

### 3.10.2c. CROP PRODUCTION ESTIMATES: Cassava, Cocoyam, Beniseed and Soybean (X 1000 MT)

#### North East Zone

STATE	CASSAVA			COCOYAM			Beniseed			Soybean		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
BORNO	n.a	n.a	n.a	0.46	0.46	0.00	n.a	n.a	n.a	n.a	n.a	n.a
YOBE	24.54	24.61	0.30	n.a	n.a	n.a	1.8	1.85	2.85	n.a	n.a	n.a
BAUCHI	19.05	18.80	-1.32	2.01	2.01	0.00	9.22	9.31	0.95	0.96	0.94	-1.91
GOMBE	12.58	12.65	0.58	20.3	20.31	0.06	0.86	0.87	1.06	0.1	0.10	0.00
ADAMAWA	21.85	21.87	0.09	n.a	n.a	n.a	n.a	n.a	n.a	0.35	0.36	2.86
Total	78.020	77.934	-0.11	22.770	22.781	0.05	11.880	12.028	1.24	1.410	1.402	-0.59

#### North West Zone

STATE	CASSAVA			COCOYAM			Beniseed			Soybean		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
JIGAWA	135.845	135.845	0.00	n.a	n.a	n.a	3.58	3.44	-4.02	19.69	20.01	1.63
KATSINA	142.46	143.46	0.70	n.a	n.a	n.a	1.75	1.81	3.30	35.14	35.02	-0.34
SOKOTO	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	7.86	7.69	-2.16
KEBBI	607.31	607.48	0.03	n.a	n.a	n.a	8.05	8.60	6.85	3.98	4.09	2.76
ZAMFARA	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	4.34	4.44	2.34
KANO	25.23	25.03	-0.81	n.a	n.a	n.a	0.84	n.a	n.a	60.64	60.27	-0.61
KADUNA	1725	1725.62	0.04	24.43	24.34	-0.39	n.a	n.a	n.a	107.83	103.50	-4.02
Total	2635.845	2637.428	0.06	24.430	24.335	-0.39	14.220	13.846	-2.63	239.480	235.020	-1.86

### North Central Zone

STATE	CASSAVA			COCOYAM			Beniseed			Soybean		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
TARABA	2385.88	2384.47	-0.06	65.6	66.91	2.00	49.3	49.9	1.22	51.48	52.32	1.63
PLATEAU	453.4	453.37	-0.01	16.5	16.40	-0.64	6.94	6.98	0.58	1.57	1.60	2.11
NASSARAWA	1,480.59	1485.85	0.36	62.17	62.74	0.91	56.65	57.48	1.47	6.35	6.48	1.99
FCT	45.449	45.91	1.02	6.96	6.96	0.00	4.89	4.93	0.88	4.843	4.89	0.99
NIGER	924.32	938.22	1.50	92.32	92.45	0.14	8.96	9.07	1.23	14.08	14.32	1.72
KWARA	1310.0523	1310.42	0.03	53.16	53.52	0.68	8.907	8.907	0.00	32.546	33.03	1.50
KOGI	4396.34	4406.42	0.23	70.02	71.03	1.44	13.15	13.41	1.98	14.9	15.01	0.74
BENUE	3661.48	3663.74	0.06	37.06	37.04	-0.05	50.32	50.76	0.88	190.12	190.35	0.12
Total	14657.511	14688.416	0.21	403.790	407.048	0.81	199.117	201.446	1.17	315.889	318.009	0.67

### South West Zone

STATE	CASSAVA			COCOYAM			Beniseed			Soybean		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
OSUN	1402.03	1401.88	-0.01	236.02	228.99	-2.98	n.a	n.a	n.a	n.a	n.a	n.a
OYO	1722.53	1726.04	0.20	47.54	47.32	-0.46	n.a	n.a	n.a	0.35	0.36	2.86
EKITI	1520.17	1520.74	0.04	253.34	256.44	1.22	n.a	n.a	n.a	6.93	6.95	0.23
ONDO	2899.63	2908.31	0.30	295.45	296.84	0.47	n.a	n.a	n.a	32.49	n.a	n.a
OGUN	3,181	3183.61	0.08	149.42	152.82	2.27	n.a	n.a	n.a	n.a	n.a	n.a
LAGOS	970.67	968.58	-0.21	50.02	49.88	-0.29	n.a	n.a	n.a	0.63	0.64	1.59
EDO	696.07	696.07	0.00	110.56	110.57	0.01	n.a	n.a	n.a	n.a	n.a	n.a
DELTA	1,727.81	1725.41	-0.14	60.95	62.68	2.84	n.a	n.a	n.a	n.a	n.a	n.a
Total	14119.910	14130.649	0.08	1203.300	1205.531	0.19	0.000	0.000	n.a	40.400	7.946	-80.33



### South East Zone

STATE	CASSAVA			COCOYAM			Beniseed			Soybean		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
ANAMBRA	1,728.72	1730.30	0.09	161.6	163.02	0.88	n.a	n.a	n.a	n.a	n.a	n.a
ENUGU	3677.69	3685.04	0.20	263.19	262.14	-0.40	n.a	n.a	n.a	1.11	1.12	0.90
EBONYI	1,188.98	1204.66	1.32	98.98	97.96	-1.03	n.a	n.a	n.a	1.27	1.26	-0.79
C/RIVER	5953.24	5956.60	0.06	286.4	290.71	1.50	n.a	n.a	n.a	n.a	n.a	n.a
ABIA	696.15	701.34	0.75	149.57	146.42	-2.11	n.a	n.a	n.a	n.a	n.a	n.a
AK/IBOM	1524.63	1535.13	0.69	263.4	263.40	0.00	n.a	n.a	n.a	n.a	n.a	n.a
IMO	3,624.54	3626.33	0.05	142.76	142.16	-0.42	n.a	n.a	n.a	n.a	n.a	n.a
BAYELSA	488.761	481.90	-1.40	154.98	152.25	-1.76	n.a	n.a	n.a	n.a	n.a	n.a
RIVERS	1942.5	1947.75	0.27	88.55	87.97	-0.65	n.a	n.a	n.a	n.a	n.a	n.a
Total	20825.211	20869.051	0.21	1609.430	1606.012	-0.21	0.000	0.000	n.a	2.380	2.380	0.00
National Total	52316.497	52403.478	0.17	3263.720	3265.707	0.06	225.217	227.319	0.93	599.559	564.757	-5.80

### 3.10.2d CROP PRODUCTION ESTIMATES: Cotton, Okra, Onion and Tomato (X 1000 MT)

#### North East Zone

STATE	Cotton			Okra			Onion			Tomato		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
BORNO	15.34	15.02	-2.07	18.92	18.96	0.21	15.9	15.9	0.00	252.21	253.70	0.59
YOBE	n.a	n.a	n.a	9.64	9.64	0.00	35.3	35.9	1.70	4.33	4.28	-1.16
BAUCHI	n.a	n.a	n.a	5.62	5.72	1.73	59.89	59.71	-0.29	94.01	92.39	-1.72
GOMBE	6.3	6.01	-4.53	4.99	4.98	-0.16	5.1	4.98	-2.35	73.6	73.60	0.00
ADAMAWA	17.81	17.73	-0.44	5.83	5.98	2.58	5.4	5.4	0.00	8.96	9.02	0.67
Total	39.450	38.768	-1.73	45.000	45.279	0.62	121.590	121.895	0.25	433.110	432.989	-0.03

### North West Zone

STATE	Cotton			Okra			Onion			Tomato		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
JIGAWA	n.a	n.a	n.a	0.34	0.34	0.00	56.78	56.78	0.00	9.09	9.02	-0.77
KATSINA	69.04	65.12	-5.68	12.73	12.83	0.79	34.93	35.44	1.47	6.77	7.21	6.53
SOKOTO	19.04	19.14	0.53	18.63	19.17	2.92	415.8	416.03	0.05	258.98	267.84	3.42
KEBBI	5.39	5.24	-2.78	37.95	38.23	0.73	189	189.43	0.23	56.2	56.38	0.32
ZAMFARA	92.21	92.21	0.00	61.29	62.61	2.16	135.32	135.35	0.02	134	134.42	0.31
KANO	48.38	47.19	-2.46	9.72	9.80	0.78	143.17	144.16	0.69	4.22	4.30	1.91
KADUNA	n.a	n.a	n.a	106.404	106.96	0.52	17.51	17.51	0.00	69.06	68.68	-0.55
Total	234.060	228.901	-2.20	247.064	249.940	1.16	992.510	994.705	0.22	538.320	547.855	1.77

### North Central Zone

STATE	Cotton			Okra			Onion			Tomato		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
TARABA	0.43	0.42	-2.93	48.28	46.78	-3.10	58.8	59.40	1.02	43	44.00	2.32
PLATEAU	8.26	7.29	-11.74	49.99	49.13	-1.72	19.7	19.46	-1.21	23.37	23.88	2.20
NASSARAWA	n.a	n.a	n.a	22.96	23.32	1.56	n.a	n.a	n.a	22.76	23.21	1.99
FCT	n.a	n.a	n.a	28.61	29.79	4.14	n.a	n.a	n.a	18.78	18.95	0.91
NIGER	n.a	n.a	n.a	0.78	0.79	1.07	n.a	n.a	n.a	73.3	73.90	0.82
KWARA	n.a	n.a	n.a	150.751	150.12	-0.42	n.a	n.a	n.a	8.98	9.21	2.56
KOGI	n.a	n.a	n.a	72.881	74.37	2.04	n.a	n.a	n.a	32.99	33.63	1.94
BENUE	n.a	n.a	n.a	51.2	51.91	1.39	40.86	41.57	1.74	28.98	29.51	1.83
Total	8.690	7.707	-11.31	425.452	426.213	0.18	119.360	120.434	0.90	252.160	256.299	1.64

### South West Zone

STATE	Cotton			Okra			Onion			Tomato		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
OSUN	n.a	n.a	n.a	7.00	7.41	5.87	n.a	n.a	n.a	25	25.43	1.71
OYO	n.a	n.a	n.a	35.45	35.66	0.59	n.a	n.a	n.a	28.29	28.63	1.18
EKITI	n.a	n.a	n.a	8.56	9.01	5.20	n.a	n.a	n.a	16.86	17.18	1.87
ONDO	7.79	7.79	0.00	4.02	4.02	0.00	n.a	n.a	n.a	3.00	3.04	1.33
OGUN	n.a	n.a	n.a	27.71	27.50	-0.76	n.a	n.a	n.a	80.088	80.89	1.00
LAGOS	n.a	n.a	n.a	70.52	70.48	-0.05	1.1	1.07	-2.72	33.57	33.09	-1.43
EDO	n.a	n.a	n.a	7.93	8.20	3.35	n.a	n.a	n.a	12.23	12.32	0.70
DELTA	n.a	n.a	n.a	20.42	20.40	-0.09	n.a	n.a	n.a	22.46	22.46	0.00
Total	7.790	7.790	0.00	181.610	182.675	0.59	1.100	1.070	-2.72	221.498	223.024	0.69

### South East Zone

	Cotton			Okra			Onion			Tomato		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
ANAMBRA	n.a	n.a	n.a	8.77	8.65	-1.40	n.a	n.a	n.a	9.78	9.94	1.66
ENUGU	n.a	n.a	n.a	9.78	9.89	1.12	n.a	n.a	n.a	10.91	11.06	1.38
EBONYI	n.a	n.a	n.a	18.23	17.70	-2.91	n.a	n.a	n.a	20.73	20.63	-0.49
C/RIVER	n.a	n.a	n.a	12.27	12.56	2.35	n.a	n.a	n.a	n.a	n.a	n.a
ABIA	n.a	n.a	n.a	19.47	19.22	-1.27	n.a	n.a	n.a	1.37	1.39	1.46
AK/IBOM	n.a	n.a	n.a	1.36	1.39	2.21	n.a	n.a	n.a	n.a	n.a	n.a
IMO	n.a	n.a	n.a	23.43	23.85	1.81	n.a	n.a	n.a	1.45	1.48	2.07
BAYELSA	n.a	n.a	n.a	19.45	19.72	1.41	n.a	n.a	n.a	n.a	n.a	n.a
RIVERS	n.a	n.a	n.a	43.26	43.53	0.63	n.a	n.a	n.a	n.a	n.a	n.a
Total	0.000	0.000	n.a	156.020	156.517	0.32	0.000	0.000	n.a	44.240	44.502	0.59
National Total	72.498	70.792	-3.810	211.029	212.125	0.574	308.640	309.526	-0.338	297.866	300.934	0.933

### 3.11.1a ZONAL SUMMARY FOR CROP LAND AREA: Sorghum, Maize, Rice and Ginger (X 1000 HA)

State	SORGHUM			MAIZE			RICE			GINGER		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
North East	1541.41	1560.2748	1.223867	212.32	213.776478	0.68598	295.11	298.2956	1.0794	n.a	n.a	n.a
North West	2058.384	2039.5393	-0.91551	1184.922	1196.40759	0.96931	489.44	492.4037	0.6055	44.47	45.59	2.51855
North Central	1405.678	1259.2816	-10.4146	1764.706	1793.41461	1.62682	885.496	898.073	1.4203	2.92	2.98	2.05479
South west	34.62	32.055674	-7.40706	1325.22	1354.45634	2.20615	221.78	224.5586	1.2529	0.34	0.34	0
South East	0.000	0.000	n.a	572.870	595.314	3.92	662.350	666.224	0.58	0.000	0.000	n.a

### 3.11.1b ZONAL SUMMARY FOR CROP LAND AREA: Millet, Cowpea, Groundnut and Yam (X1000 HA)

State	MILLET			COWPEA			GROUNDNUT			YAM		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
North East	818.88	817.48773	-0.17002	1712.64	1701.80745	-0.6325	769.33	758.7856	-1.3706	12.72	12.70126	-0.1473
North West	1648.9	1649.1847	0.017266	809.892	814.444449	0.56211	678.92	683.1182	0.6184	81.34	81.44602	0.13034
North Central	407.591	420.02597	3.050844	582.384	587.179235	0.82338	829.783	838.1226	1.005	1183.69	1182.487	-0.1016
South west	2.29	2.32	1.310044	92.59	56.4678141	-39.013	46.22	46.25086	0.0668	528.2	525.777	-0.4587
South East	0	0	n.a	29.6	30.054949	1.53699	16.57	16.52471	-0.2733	1071.75	1086.61	1.38649

### 3.11.1c ZONAL SUMMARY FOR CROP LAND AREA : Cassava, Cocoyam, Beniseed and Soybean (X1000 HA)

State	CASSAVA			COCOYAM			Beniseed			Soybean		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
North East	27.23	27.473079	0.892688	0.301	0.301	0	31.61	31.66028	0.1591	71.49	72.4813	1.38663
North West	301.66	274.09052	-9.13925	10.82	11.0584375	2.20367	21.97	21.87272	-0.4428	180.77	180.1892	-0.3213
North Central	1188.803	1212.388	1.983926	82	83.0653433	1.2992	175.14	137.9681	-21.224	320.3676	318.8032	-0.4883
South west	727.83	733.4644	0.774136	139.24	140.576167	0.95961	n.a	n.a	n.a	25.51	25.71411	0.8001
South East	1473.52	1489.6457	1.094368	219.76	220.30008	0.24576	n.a	n.a	n.a	11.42	11.47963	0.52215

### 3.11.1d ZONAL SUMMARY OF CROP LAND AREA: Cotton, Okra, Onion and Tomato (X1000 HA)

State	Cotton			Okra			Onion			Tomato		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
North East	46.4	49.38	6.422414	11.3	11.32	0.17699	10.07	10.08	0.0993	37.07	37.3	0.62045
North West	173.4	175.41057	1.159499	75.63	76.656	1.3566	164.06	165.285	0.7467	99.78	101.008	1.23071
North Central	33.39	34.77	4.132974	120.2	120.754	0.4609	16	16.31	1.9375	41.13	41.938	1.9645
South west	n.a	n.a	0.00	86.99	86.76	-0.2644	0.38	0.37	-2.6316	55	55.21	0.38182
South East	n.a	n.a	0.00	79.82	81.08	1.57855	n.a	n.a	0.00	29	28.973	-0.0931

### 3.11.2a ZONAL SUMMARY OF CROP OUTPUTS: Sorghum, Maize, Rice and Ginger (X 1000 MT)

State	SORGHUM			MAIZE			RICE			GINGER		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
North East	2123.62	1584.7093	-25.377	1233.74	1255.81702	1.78944	377.39	381.3525	1.05	n.a	n.a	n.a
North West	3608.199	3421.6017	-5.17148	1897.188	1929.15989	1.68523	833.22	840.7419	0.9028	445.55	453.41	1.76411
North Central	1839.179	1864.3003	1.365898	2649.59	2696.97412	1.78836	2136.29	2146.505	0.4783	5.75	5.94	3.30435
South West	29.460	26.465	-10.17	2201.456	2257.946	2.57	356.870	361.379	1.26	0.810	0.820	1.23
South East	0.000	0.000	0.000	1025.020	1040.345	16.433	834.035	837.312	3.475	0.000	0.000	0.000

### 3.11.2b ZONAL SUMMARY OF CROP OUTPUTS: Yam, Cowpea, Groundnut and Millet (X 1000 MT)

State	YAM			COWPEA			GROUNDNUT			MILLET		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
North East	3.02	3.02	0	859.53	858.63866	-0.1037	859.85	856.3831	-0.4032	311.82	281.6419	-9.678
North West	744.78	744.65241	-0.01713	572	575.229937	0.56467	748.47	754.3475	0.7853	628.32	589.808	-6.1294
North Central	16886.242	16910.983	0.146515	226.941	233.087803	2.70855	1296.44	1303.859	0.5723	440.856	398.5581	-9.5945
South West	7201.41	7206.813	0.075027	182.586	182.90985	0.17737	24.38	24.40939	0.1205	n.a	1.1	n.a
South East	12204.025	12250.029	0.36964	10.98	10.9181836	-0.165	23.65	23.76809	0.1824	n.a	n.a	n.a

**3.11.2c ZONAL SUMMARY OF CROP OUTPUTS: Cassava, Cocoyam, Beniseed and Soybean (X 1000 MT)**

State	CASSAVA			COCOYAM			Beniseed			Soybean		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
North East	78.02	77.933728	-0.11058	22.77	22.7812648	0.04947	11.88	12.02773	1.2435	1.41	1.401673	-0.5905
North West	2635.845	2637.4279	0.060053	24.43	24.3352754	-0.3877	14.22	13.84559	-2.633	239.48	235.0203	-1.8623
North Central	14657.511	14688.416	0.210843	403.79	407.048165	0.8069	199.117	201.4461	1.1697	315.889	318.0087	0.67102
South West	14119.91	14130.649	0.076057	1203.3	1205.5309	0.1854	n.a	n.a	n.a	40.4	7.946129	-80.331
South East	20825.211	20869.051	0.210514	1609.43	1606.01186	-0.2124	n.a	n.a	n.a	2.38	2.38	n.a

**3.11.2d ZONAL SUMMARY OF CROP OUTPUT: Cotton, Okra, onion and Tomato (X 1000 MT)**

State	Cotton			Okra			Onion			Tomato		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
North East	39.45	38.76848	-1.72755	45	45.279149	0.62033	121.59	121.8945	0.2504	433.11	432.9894	-0.0278
North West	234.06	228.90059	-2.20431	247.064	249.940321	1.1642	992.51	994.705	0.2212	538.32	547.8549	1.77123
North Central	8.69	7.7074	-11.3072	425.452	426.212813	0.17882	119.36	120.4337	0.8996	252.16	256.2992	1.64151
South West	7.79	7.79	n.a	181.61	182.675111	0.58648	1.1	1.070064	-2.7215	221.498	223.024	0.68894
South East	n.a	n.a	n.a	156.02	156.516616	0.3183	n.a	n.a	n.a	44.24	44.50201	0.59224

**Table 3.12.1 Forecast for land area cultivated and outputs of different crops in Nigeria**

Crop	Area (000 Ha)			Production (000 mt)		
	2010	2011	% Change	2010	2011	% Change
Maize	5060.00	5153.70	1.85	9006.99	9180.06	1.92
Sorghum	5040.09	4891.15	-2.96	7600.46	6897.08	-9.25
Rice	2554.18	2579.55	0.99	4537.80	4567.29	0.65
Ginger	47.73	48.91	2.47	452.11	460.17	1.78
Yam	4256.26	4267.90	0.27	37039.48	37115.50	0.21
Cowpea	3227.11	3189.95	-1.15	1852.04	1860.78	0.47
G/Nut	2340.82	2342.80	0.08	2952.79	2962.77	0.34
Millet	2877.71	2889.02	0.39	1381.07	1271.01	-7.97
Cassava	3898.87	3917.76	0.48	52316.50	52403.48	0.17
Cocoyam	475.66	479.06	0.72	3263.72	3265.71	0.06
Beniseed	228.72	191.50	-16.27	225.22	227.32	0.93
Soybean	609.56	608.67	-0.15	599.56	564.76	-5.80
Cotton	253.19	259.54	2.51	72.50	70.79	-2.36
Okra	838.30	844.31	0.72	211.03	212.12	0.52
Onion	409.16	373.47	-8.72	308.64	309.53	0.29
Tomato	834.47	835.80	0.16	297.87	300.93	1.03

**Table 3.12.2. National Summary of Crop Areas, Outputs & Average yield per hectare**

Crop	Area	Production	Yield	Area	Production	Yield
	2010			2011		
Maize	5060.00	9006.99	1.78	5153.70	9180.06	1.78
Sorghum	5040.09	7600.46	1.51	4891.15	6897.08	1.41
Rice	2554.18	4537.80	1.78	2579.55	4567.29	1.77
Ginger	47.73	452.11	9.47	48.91	460.17	9.41
Yam	4256.26	37039.48	8.70	4267.90	37115.50	8.70
Cowpea	3227.11	1852.04	0.57	3189.95	1860.78	0.58
G/Nut	2340.82	2952.79	1.26	2342.80	2962.77	1.26
Millet	2877.71	1381.07	0.48	2889.02	1271.01	0.44
Cassava	3898.87	52316.50	13.42	3917.76	52403.48	13.38
Cocoyam	475.66	3263.72	6.86	479.06	3265.71	6.82
Beniseed	228.72	225.22	0.98	191.50	227.32	1.19
Soybean	609.56	599.56	0.98	608.67	564.76	0.93
Cotton	253.19	72.50	0.29	259.54	70.79	0.27
Okra	838.30	211.03	0.25*	844.31	212.12	0.25
Onion	409.16	308.64	0.75*	373.47	309.53	0.83
Tomato	834.47	297.87	0.36*	835.80	300.93	0.36

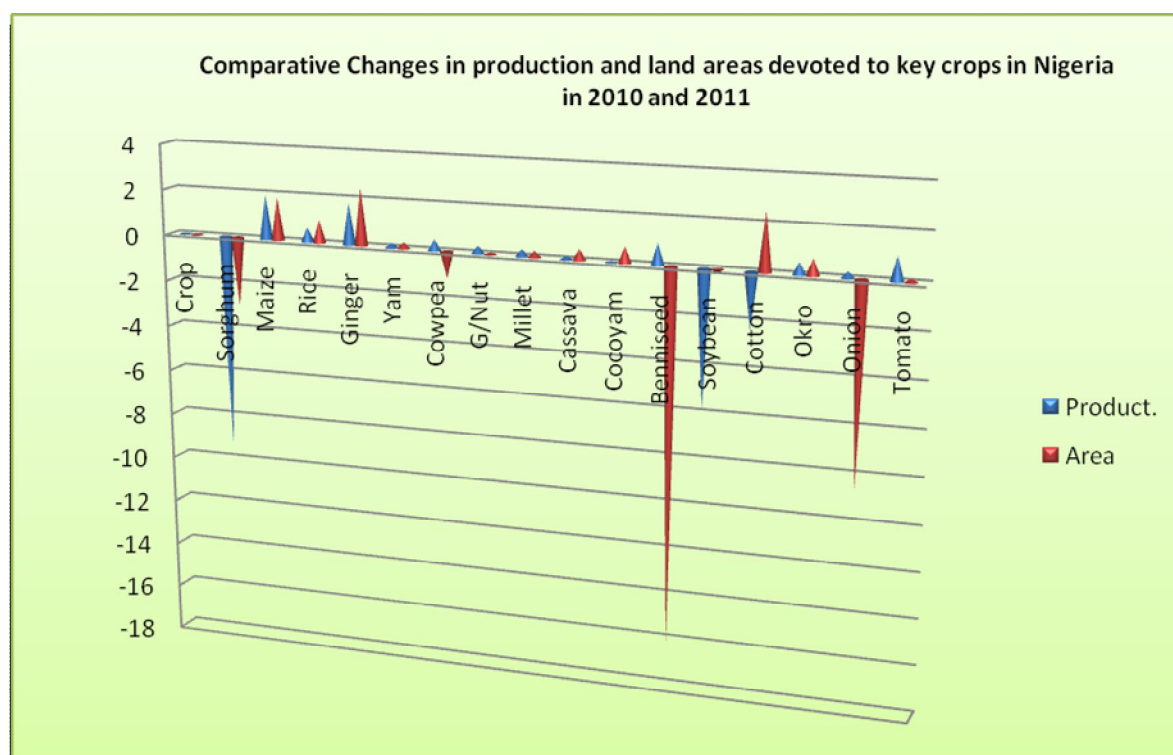
### 3.12.1 Estimated cultivated Land Area and Crop Production Outputs

The average yield of most of the crops were essentially the same between the two years under reference suggesting that the marginal increases in outputs were strongly related to the expansion in cultivated area. It also implies that productivity at farmers level remained low in some cases however, reduction in average yields were posted.

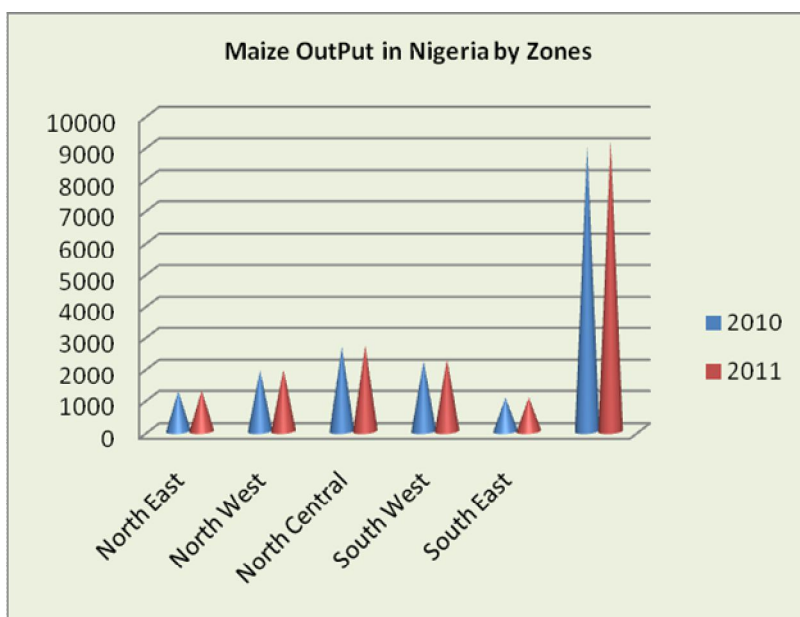
### 3.12.2 Crop production and Yield

The low productivity will likely discourage farmers' especially new entrants because profitability of the various enterprises is compromised. Some of the principal factors that are responsible for the low average yields include reliance on poor quality seeds (farmers saved seeds), delays in supply of farm inputs especially credit, fertilizers and labour, vagaries in weather conditions (dry spells and floods occurring in the same year), pest and disease attacks of which farmers lack requisite skills for containment or control measures and poor extension service.

A comparative review of areas devoted to key crops and their respective output figures shows that remarkable changes for soybean, beniseed and onion while slight changes occurred for most of the others crops during the years under review. A few crops such as cotton posted increase in area cultivated but a sharp decrease in its outputs.







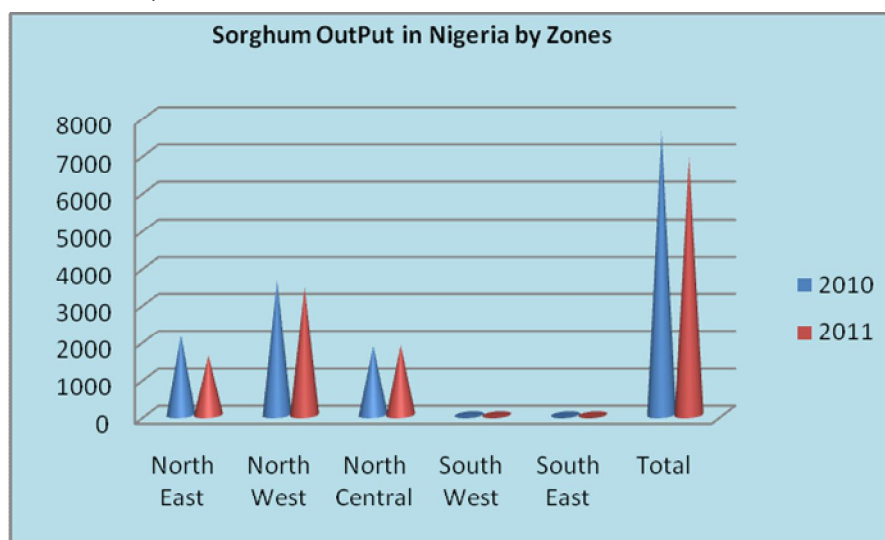
## Maize

Maize is the most important cereals crop in Nigeria in terms of crop area and output. It is widely produced across the country following the development and introduction of early, extra-early and medium maturing varieties that are tolerant to drought, striga, Downey mildew, and nutrient efficient. It is one crop that continues to witness expansion in production area and industrial usage. Owing to advances in

research, maize has become an indispensable food security as well as an industrial crop. In 2011, maize area increased slightly from 5.060 million hectares to 5.154 million hectares which represent 1.85% increase that is occurring mainly in the drier ecologies owing to increased adoption of drought tolerant maize. The area devoted to maize production and its output depends on the availability and cost of fertilizer. In 2011, fertilizer cost was very high hence only a few farmers were able to apply recommended rates/ grades hence national average yield of maize is low (1.78tons /ha). Indeed, improvement in the average yield of maize and cultivated will continue to depend on access to fertilizer and market for maize grains. The forecast for maize output is a slight increase of 1.92 % (almost by the same magnitude of its production area) from 9,006,990 metric tons to 9,180,060 metric tons.

## Sorghum

Sorghum is a major food and industrial crop. Demand from the industry for sorghum has been the main driver for sorghum production. The land area of sorghum decreased by about - 2.96% from 5.040million hectares in 2010 to 4.891 million hectares in 2011.

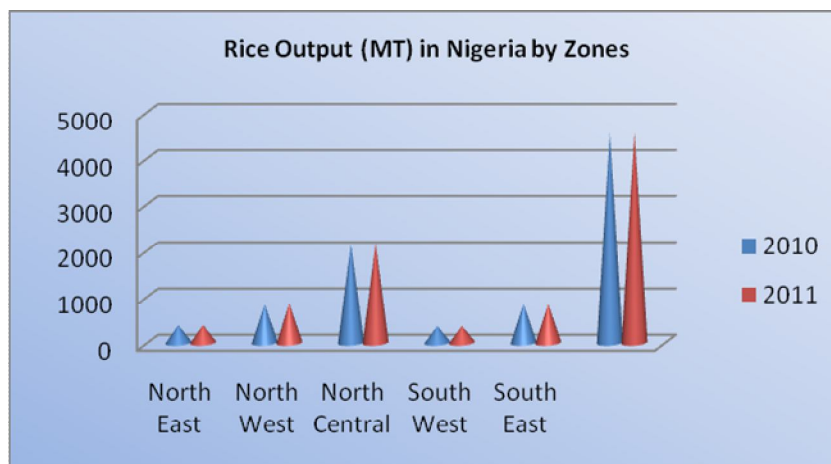


Striga and bird attacks and head smut were the main challenges experience in 2011 wet season that affected the output of the crop

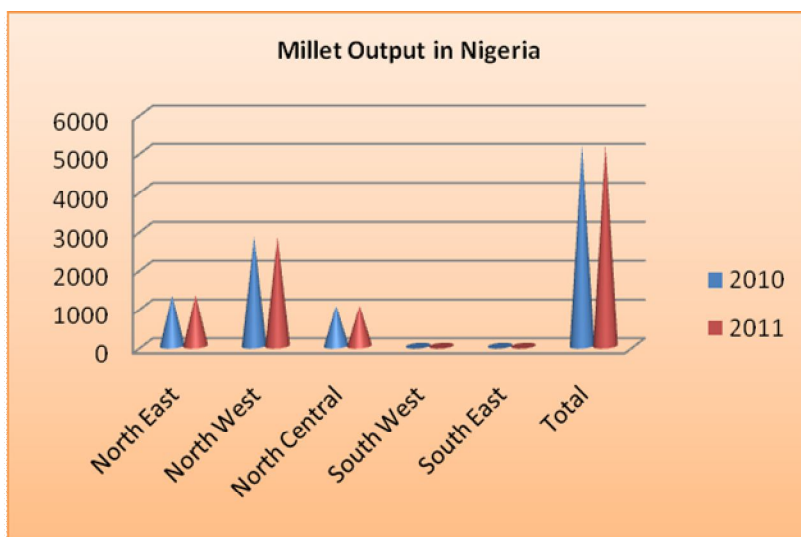
The output for sorghum is anticipated to drop by about 9.25 % from 7,600,460 metric tons in 2010 to 6,897,080 metric tons in 2011 because of dry spells and widespread flood that occurred in 2011.

## Rice

Rice is food staple that is fast becoming a cash crop because of urbanization and changing lifestyles of Nigerians. It is one commodity for which the taste of Nigerians is being impacted upon by cheap imports. Huge annual imports of rice have become the norm rather than an exception



despite the enormous production potential that abound on the country (fig 1). Many have noted that one of the reasons militating against rapid expansion in domestic production is the overriding effect of the rice imports. A national awakening is leading to a comprehensive promotion of domestic production and improvement of the quality of local processing efforts. In 2011, rice production area increased slightly from 2.554 million hectares to 2.58 million hectares which is just about 1.0%; Rice production will post an increase of less than 1.0% from 4,537,800 metric tons to 4,567,290 metric tons (Fig 12). It is anticipated that huge domestic demand for rice will significantly stimulate local production and investments on the commodity.



## Millet

Millet is a major staple food for millions of Nigerians. It is a vital coping strategy crop with long history in the country. Its cultivation is mostly by small holder farmers and average yields are very low. For this reason, it is being partially displaced by other high yield input responsive crops such as maize in the drier savannah zones. In 2011, millet area

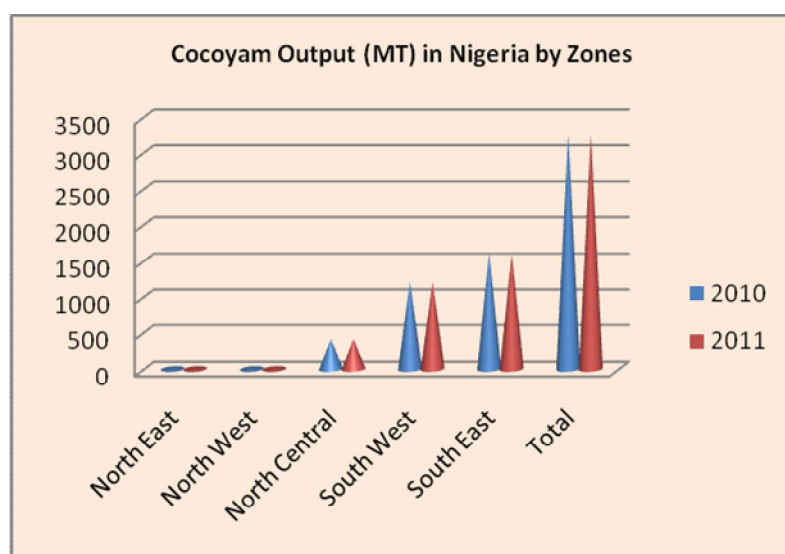
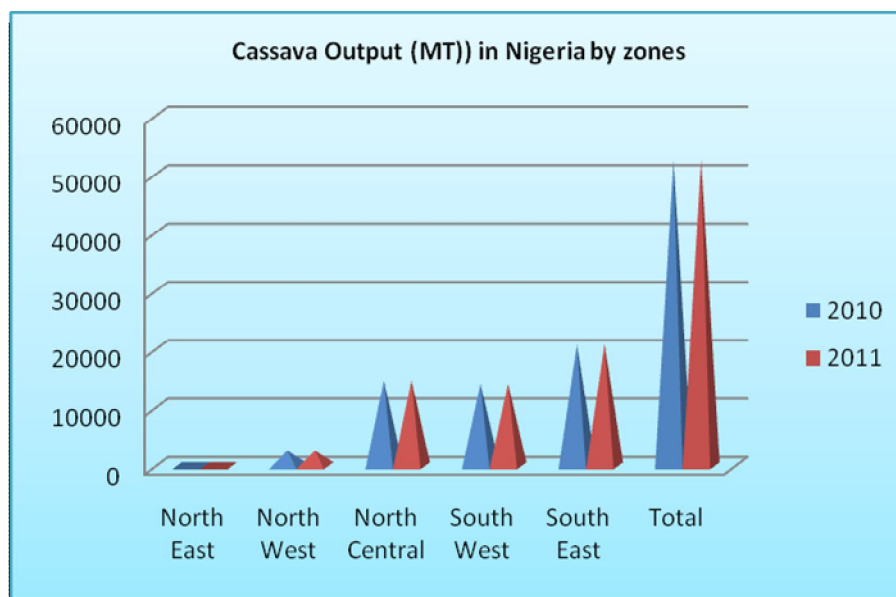
increased slightly by 0.39 % from 2.877 million hectares to 2.889 million hectares. The forecasts (Fig. 13) for millet is a decrease of -7.97 % (from 1.38 to 1.27 million metric tons)

## Cassava

Cassava is a high energy rich diet that has become a national staple and also fast becoming an industrial/export commodity. It is usually processed into gari, starch, flour, pellets glucose ethanol etc. Nigeria is the largest producer of cassava even though it also has one of the lowest average cassava yields

in the world. The problem of low cassava yields need to be reviewed urgently in order to enhance the profitability of this crop and to encourage its export. This will require promotion of high yielding disease resistant cultivars, strong extension service to teach farmers how to optimize input use in cassava enterprises and the provision of affordable labour saving devices and processing machines. In 2011, cassava area increased by less than 0.5 % from 3.898 million hectares to 3.917 million hectares,

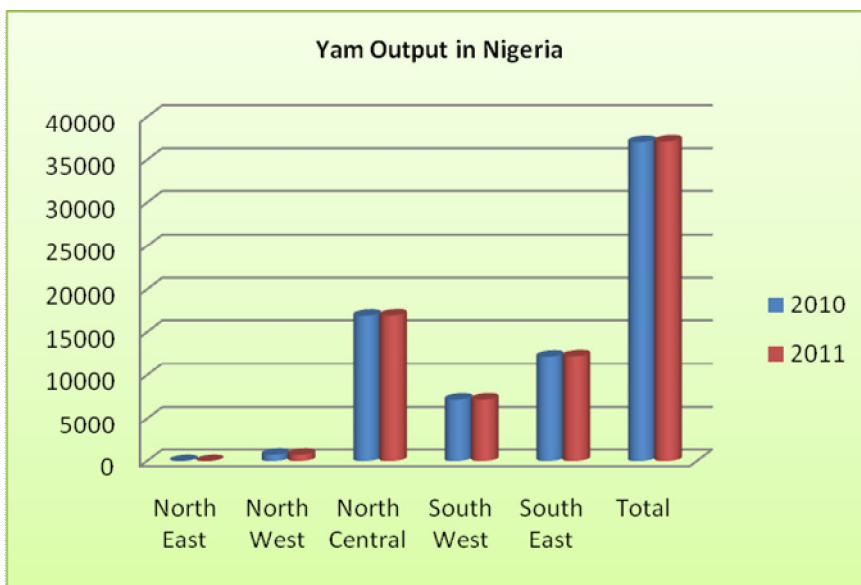
Cassava output increased in 2011 by 0.17 % from 52,316,500 to 52,403,480 metric tons (Fig. 14). The current level of output can support the wheat-cassava bread policy especially as efforts are on course to increase productivity per unit area.



## Cocoyam

Cocoyam is another staple across the country though it is not widely marketed as yam or cassava. Cocoyam production area increased by 0.72% from 475,000 hectares to 479,060 hectares,

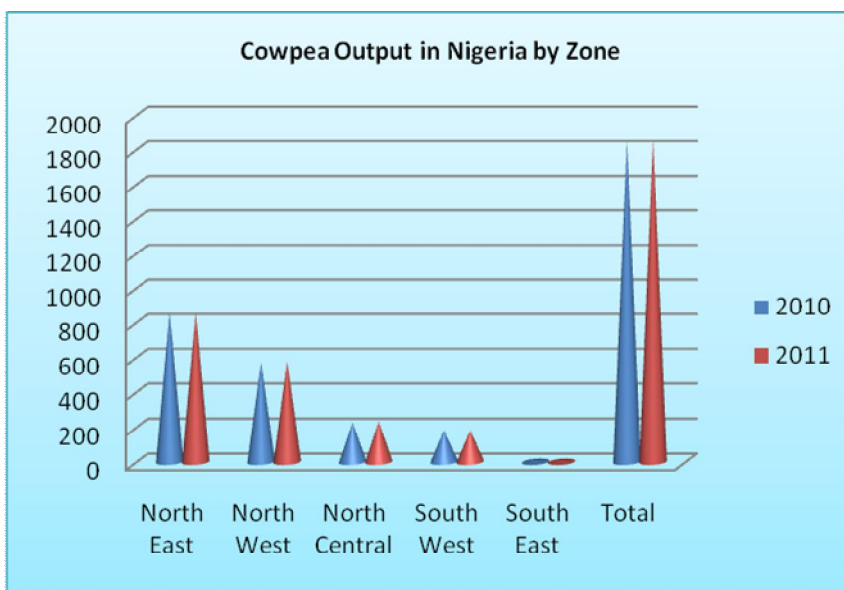
Cocoyam output (Fig. 15) will increase by less than 0.1 % from 3,263,720 to 3,265,710 metric tons within the same period.



### Yam

Yam is a major food staple that is fast becoming a cash crop owing to the changing lifestyle and the demand for yam from African in foreign countries. Nigeria is the largest producer of yam but a substantial quantity of what is produced is wasted because of low value addition and poor storage technologies

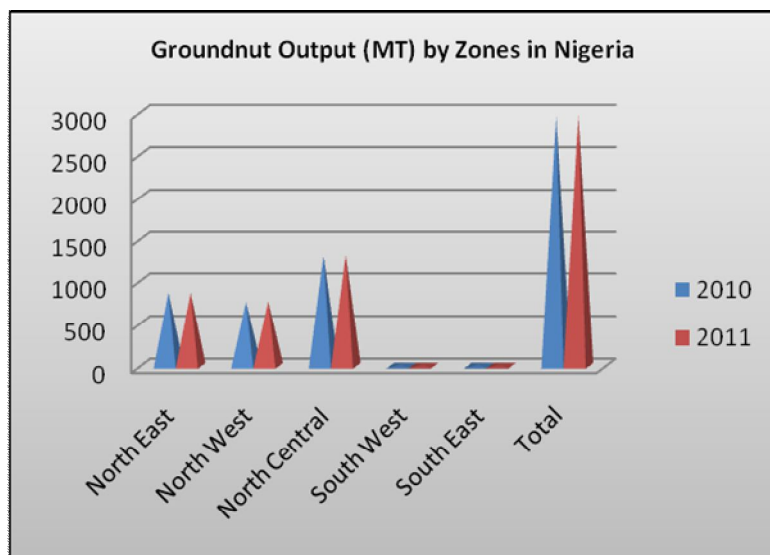
adopted by farmers. Almost every community in Nigeria have special recipes with yam. Though demand is all-year round, the seasonality of yam remain an issue for research because Nigerians love yam. The area devoted to yam production in 2011 increased by 0.27 % (4.256 million hectares to 4.267 million hectares). The forecast for yam production is a slight increase of 0.21% from 37.039 million metric tons to 37.115 million metric tons



### Cowpea

Cowpea is a national plant protein source that is produced mostly in the savannah ecologies because of disease pressure that is prevalent in the forest belt. Insect pests and recently parasitic weed attacks such as striga and alectra are serious problems in cowpea production. Though the production of cowpea is profitable the problem of pest control, low

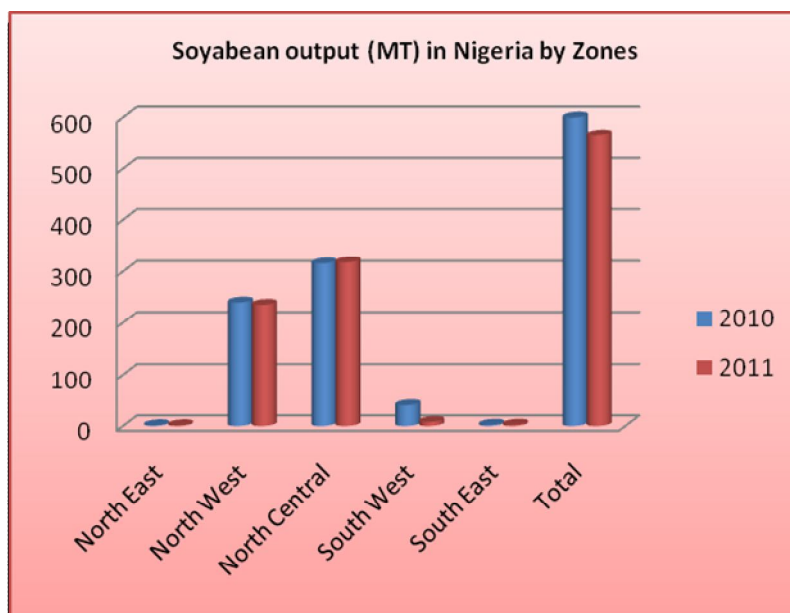
average grain yield (580 kg per hectare) and the tedious harvesting /storage requirements discourage many potential farmers. In 2011, cowpea area decreased slightly from 3.227 million hectares to 3.189.95 million hectares which represent a -1.15 % reduction. The forecast for cowpea output is an increase of 0.47% from 1,852,040 to 1,860,780 metric tons.



## Groundnut

Groundnut remains the country's legume cash crop. Huge domestic consumption has impeded its export. On daily basis, groundnut is eaten in various forms. It is a crop that is cherished by millions of people all over the world such that there can never be glut of it. In 2011, the area cultivated with groundnut area was 2.342 million hectares which did not differ significantly from 2.340 million hectares cultivated in 2010. Output of groundnut this year is anticipated to increase slightly by 0.34 % from 2,952,790 to 2,962,770 metric tons.

## Soybean



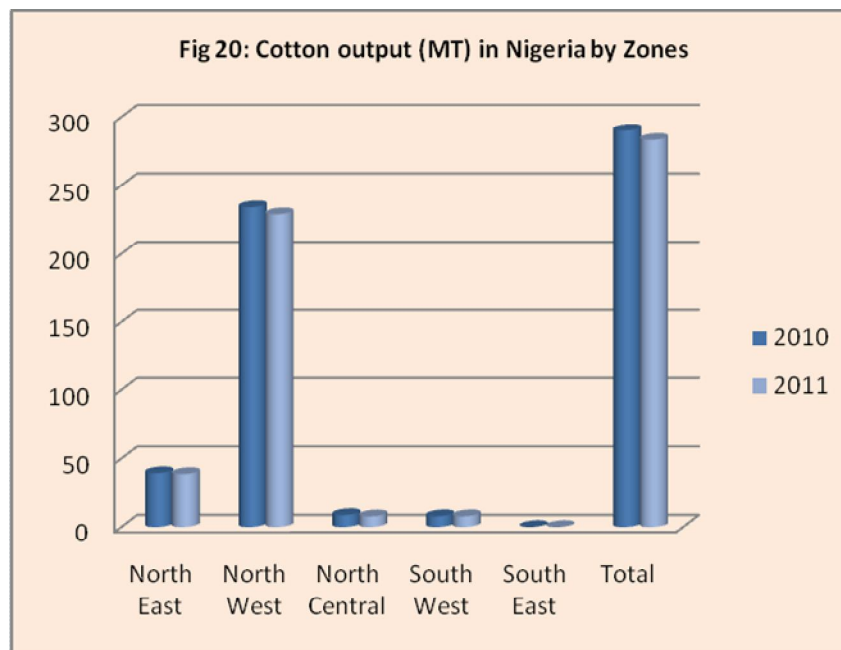
Soybean is a versatile legume crop. On the farmers' field and in the house, soybean benefits the farmer. It improves the nutrient status of the soil on which it is cultivated, its oil is low in cholesterol and its whole grain can be processed for both human foods and livestock feeds. The initial upsurge to process soybean for oil suffered a severe blow following the closure of some of the soybean mills. Expansion in the poultry industry has stimulated renewed interest in soybean because of the high quality amino-acid constituent of its grains. Despite

high demand for soybean, its production area decreased slightly in 2011 from 609,560 hectares to 608,670 hectares; the forecasts for soybean are decreases of -5.8% (from 599,560 to 564,760 metric tons). The reduction in soybean production in 2011 is likely to induce early scarcity and high farm gate price but more importantly pose serious problem for future production since the prospect exit for crushing all what had been produced without consideration for the provision of seeds for subsequent season.



## Cotton

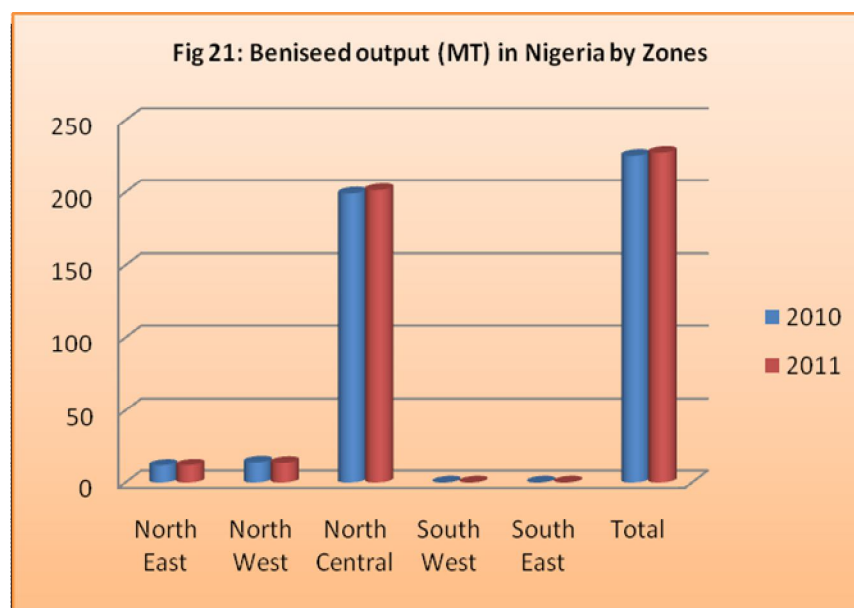
Cotton remain one of the cash crops of the drier savannah zones of the country though the need to provide food for the rapidly expanding population and poor producers prices had set the stage for dwindled interest in its production. Recent programme of government to revitalize the cotton sector served to raise the interest of some farmers to once again try to grow the crop as could be seen in the area cultivated in 2011. Indeed, the area under cotton cultivation increased by 2.51 % from 253,190 to 259,540 hectares this year following elaborate sensitization efforts.



The forecast for cotton production is however a decrease of -2.36% despite increase in its production area. Use of poor quality cotton seeds, flood and dry spells are some of the factors that contributing to the reduction in cotton output this year. The reduction in cotton production in 2011 (Fig 20) is likely to induce early scarcity and high farm gate price.

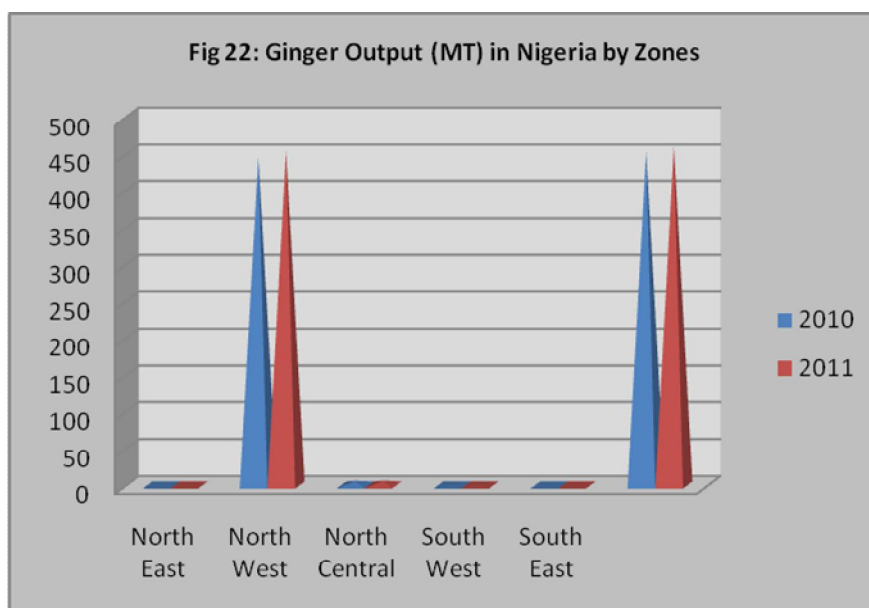
## Beniseed

Beniseed is one of the upcoming export crops of immense potential that is frown across the country. It is eaten in various forms and used in special ceremonies. Though different varies are grown, very strong market/consumers preferences exist which determine the variety that is cultivated. While the cream colour varieties are preferred in the international markets, the black seeded varieties are preferred for marriage



ceremonies in some parts of the country.

Production area of beniseed decreased remarkably by -16.27 % from 228,720 to 191,500 hectares, although this did not affect its output. The forecast (Fig 21) is that beniseed production will increase by about 0.93 % despite the sharp decrease in its cultivated area. Favourable weather especially late rains favoured its production this year.



## Ginger

Ginger is one of the foremost spices of Nigeria with huge export and industrial potentials. Its production is almost concentrated in the north central agro-ecologies with considerable production in the South Eastern agro-ecology. Its domestic use is growing remarkably in recent time and is driving production.

Ginger production area increased by 2.47% in 2011 (from 47,730 hectares to 48,910 hectares). The forecast for ginger output is an increase of 1.78 % in 2011 over that of 2010 from 452,100 to 460,170 metric tons.

### 3.13. Livestock

Livestock has historically constituted one of Nigeria's major economic resources in terms of livelihoods and its populations, but has remained the poor step child of petroleum and crop production in terms of its contribution to trade and export. The total value of livestock, based on mid 1991 market prices, is crudely estimated to be in the region of ₦60 billion; undoubtedly a major national asset, and a renewable resource worthy of sustained future development. However, some factors limit the development of the livestock sub-sector of agriculture in Nigeria. These limiting factors vary from area to area, and species to 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, which deters investment. Previous years reports of Agricultural Performance Survey (APS) 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 across the states of Nigeria. Recommendation had been made severally by previous APS Reports for the establishment of livestock census unit that should involve the three tiers of government in Nigeria.

### **3.13.1 Livestock population**

A large population of cattle, sheep and goats were reported in Bauchi, Jigawa, Kaduna, Kano, Niger and Taraba states. Large populations of poultry were estimated in Abia, Ekiti, Niger and Kano. Rivers State reported the highest estimates of pig to the tune of 3.6 million. Large population of guinea fowl was also reported in Abia State.



**Pig production is attracting interest of farmers  
owing to its high profitability**



**Table 3.13.1a: LIVESTOCK POPULATION AND COMMERCIAL LIVESTOCK FARMS IN NIGERIA**

STATE	LIVESTOCK TYPE	TOTAL POPULATION	POPULATION OF COMMERCIAL STOCK	No of COMMERCIAL FARMS AND AVERAGE HOLDINGS	REMARKS
				No of Farms	Average Herd or Flock Size
<b>Others States</b>	NA	NA	NA	NA	NA
<b>Bauchi</b>	Cattle, sheep, goat and poultry	2,000,000; 2,800,000; 3,200,000 and 6,000,000, respectively	250000,-,50 and 4500000, respectively	25,-,12,and 1136, respectively	70,-,60 and 2,000 - respectively
<b>Jigawa</b>	Cattle, sheep, goat and poultry	1000000, 2000000, 2000000 & 4000000	NA	40, numerous, numerous and 310	70, 30, 30 and 530
<b>Kano</b>	Cattle, sheep, goats and poultry	1100000, 3200000, 5400000 and 1260000, respectively	1000, NA, NA and 650,000, respectively	19, NA, NA and 200, respectively	50, NA, NA and 300, respectively
<b>Kaduna</b>	Cattle, sheep & goats	1,300,000; 1,200,000	200,000 cattle	25	100
<b>Taraba</b>	Cattle, sheep, goat and poultry	4723854, 2,592851, 3,122406 and 6,783461	1,807387, 992047 and 1,194659	23	7858

### 3.13.1b LIVESTOCK POPULATION AND COMMERCIAL FARMS IN NIGERIA (contd)

STATE	LIVESTOCK TYPE	TOTAL POULATION	POPULATION OF COMMERCIAL STOCK	No of COMMERCIAL FARMS AND AVERAGE HOLDINGS	Average Herd or Flock Size
<b>Niger</b>	Cattle, sheep, goat and poultry	2099800, 4656900, 6624000	501,000, 20500, and 5,000000	No of Farms 30,5,350 and 100	Average Herd or Flock Size 50,120,60 and 1000
<b>Kogi</b>	Cattle, sheep & goat pigs and poultry	2600, 3800, 800 and 6000, respectively	5807, 2431, 737, NA, respectively	63, 57, 22 and 217, respectively	97, 43, 34 and 1294, respectively
<b>Other States</b>	Cattle, sheep, goat and poultry	NA	NA	NA	NA
<b>Ondo</b>	Cattle, sheep & goat, poultry, pigs and rabbit	24918, 118787, 6938335, 12375 and 860, respectively.	24918, 118787, 642020, 12375 and 860, respectively.	55, 1176, 182, 52 and 3, respectively.	453, 101, 3528 and 287, respectively.
<b>Ekiti</b>	Cattle, sheep, goat, pigs and poultry	832121, 995604, 1072027, 559667 and 2565300, respectively.	732100, 890609, 980720, 259910 and 2270500, respectively.	10, -, 9, 46 and 127, respectively.	NA

### 3.13.1c LIVESTOCK POPULATION AND COMMERCIAL FARMS IN NIGERIA (contd)

	LIVESTOCK TYPE	TOTAL POULATION	POPULATION OF COMMERCIAL STOCK	No of COMMERCIAL FARMS AND AVERAGE HOLDINGS	Average Herd or Flock Size
<b>Other States</b>	Cattle, sheep, goat and poultry, Guinea fowl	NA	NA	NA	NA
<b>Abia</b>	Sheep, goats, duck, poultry and guinea fowl	352466, 3761595, 2032104, 5169311 and 2095512, respectively	2432622, 1701480, Nil, 3169311 and 2095512, respectively	Nil, 5887, Nil, 704 and 310915, respectively	Nil, 289, 6, 4500 and 7, respectively
<b>Bayelsa</b>	Cattle, sheep, goat and pigs	5400, 120, 7840 and 340, respectively.	3480, 30, 5320, and 200, respectively.	4, 10 and 5for cattle, goat and pigs, respectively.	35, 25, 60 and 60 in cattle, sheep, goat and pigs, respectively.
<b>Rivers</b>	Cattle, sheep, goat and pigs	100000; 600000. 3600000, respectively.	5000, 50000, 100000, respectively.	20,30, and 350, respectively.	10, 20, and 500, respectively.

**Table 3.14.1a Production estimates for cattle and Duck**

	CATTLE						DUCK					
	Opening Stock			Closing Stock			Opening Stock			Closing Stock		
State	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
Bauchi	2020000	2101252	4.02	2050001	2053784.5	0.18	NA	NA	NA	NA	NA	NA
Benue	276396	304196	10.06	283307	311502	9.95	271221	294954	8.75	298003	299079	0.36
Nassarawa	NA	NA	NA	NA	NA	NA	139128	135667	-2.49	132357	129060	-2.49
Plateau	7767680	8426680	8.48	7961873	8337348	4.72	331641	308433	-7.00	339933	337145	-0.82
Taraba	4723854	4863001	2.95	4841951	4787077.3	-1.13	NA	NA	NA	NA	NA	NA
Kebbi	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA
Kogi	206599	195399	-5.42	211765	208285	-1.64	NA	NA		NA	NA	
FCT	263360	266201	1.08	269945	275357	2.00	7437	7816	5.09	8624	8012	-7.09
Niger	2099800	2006105	-4.46	2152296	2161258.2	0.42	NA	NA	NA	NA	NA	NA
Kwara	359847	358847	-0.28	368844	369844	0.27	NA	NA		NA	NA	NA
Katsina	3427233	3417744	-0.28	3512915	3501489	-0.33	538122	535366	-0.51	551576	529501	-4.00
Jigawa	18000000	19506252	8.37	10950001	11068909	1.09	28127	27452	-2.40	26781	28939	8.06
Kano	1100000	1055690	-4.03	1127501	1084582.9	-3.81	NA	NA	NA	NA	NA	NA
Kaduna	1300000	1305815	0.45	1032501	1099961	6.53	NA	NA	NA	NA	NA	NA
Yobe	NA	NA	NA	NA	NA	NA	60494	63559	5.07	62007	63149	1.84
Ekiti	832121	844249	1.46	872925	896106.53	2.66	5255	5123	-2.51	5388	5463	1.39
Oyo	12451	12452	0.01	12763	13764	7.84	NA	NA		NA	NA	
Ondo	24918	25182	1.06	26542	26837.19	1.11	NA	NA	NA	NA	NA	NA
Delta	NA	NA	NA	NA	NA	NA	4570	4804	5.11	4686	4525	-3.43
Abia	NA	NA	NA	NA	NA	NA	12767	13416	5.08	13087	13752	5.08
Bayelsa	5400120	5373503	-0.49	5635124	5815341.8	3.20	NA	NA	NA	NA	NA	NA
Rivers	100000	102065	2.06	108501	107692.29	-0.75	NA	NA	NA	NA	NA	NA
Osun	161028	221617	37.63	195055	207158	6.21	NA	NA	NA	NA	NA	NA
Enugu	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anambra	NA	NA	NA	NA	NA	NA	137617	137231	-0.28	133883	120663	-9.87
Imo	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total	46055407	48284997	4.84	39563810	40272515	1.79	1536380	1533821	-0.17	1576326	1539288	-2.35

**Table 3.14.1b. Production estimates for Goat and Fowl**

	GOAT						FOWL					
	Opening Stock			Closing Stock			Opening Stock			Closing Stock		
State	2010	2011	%Change	2010	2011	%Change	2010	2011	% Change	2010	2011	% Change
Bauchi	3200000	3162002	-1.19	3280001	3446053	5.06	6090000	6303752.1	3.51	6350001	6461347	1.75
Benue	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nassarawa	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Plateau	7082641	7955641	12.33	8259708	8154533	-1.27	23611469	23604469	-0.03	24201757	15994582	-33.91
Taraba	3192406	3280480	2.76	3272217	3362493	2.76	7383461	7126875.8	-3.48	6953049	7305049	5.06
Kebbi	NA	NA	NA	NA	NA	NA	4126555	4335464	5.06	4229720	4443852	5.06
Kogi	3050350	3090810	1.33	31066110	31212456	0.47	992997	961997	-3.12	467823	473548	1.22
FCT	3009889	3453432	14.74	3085137	3539769	14.74	7397408	7920408	7.07	8582344	9143419	6.54
Niger	241221	253435	5.06	247253	259772	5.06	6824000	6959342.1	1.98	6989601	7133327	2.06
Kwara	421441	736441	74.74	491978	554853	12.78	NA	NA	NA	NA	NA	NA
Katsina	3911240	2764594	-29.32	4009022	3833710	-4.37	6735065	7463306	10.81	6903443	7649890	10.81
Jigawa	2090000	2101252	0.54	2142251	2153784	0.54	1712360	1796050	4.89	1755170	1744028	-0.63
Kano	5490000	5673377	3.34	5627251	5815213	3.34	1290000	1323789.6	2.62	1391501	1356885	-2.49
Kaduna	208000	210127.1	1.02	213201	215381	1.02	NA	2.12625	NA	23567890	22134567	-6.08
Yobe	NA	NA		NA	NA		762889	801512	5.06	791962	821551	3.74
Ekiti	597800	548950	-8.17	612746	562675	-8.17	2665300	2695170.4	1.12	2529434	2762551	9.22
Oyo	583226	612754	5.06	597808	628074	5.06	926900	933826	0.75	950074	988173	4.01
Ondo	90744	95340	5.06	93014	97725	5.06	662020	674524.39	1.89	688071.6	691389	0.48
Delta	4933824	3861428	-21.74	5057171	5957965	17.81	25443263	26495838	4.14	4729346	4810735	1.72
Abia	3480	3658.301	5.12	3568	3751	5.12	5074815	4571887	-9.91	5201686	4986185	-4.14
Bayelsa	3600000	3682252	2.28	3690001	3676809	-0.36	NA	NA	NA	NA	NA	NA
Rivers	1771006	2091224	18.08	1815282	2143506	18.08	NA	NA	NA	NA	NA	NA
Osun	247080	326651	32.20	283258	304818	7.61	6213210	5646208	-9.13	6368541	5762364	-9.52
Enugu	NA	NA	NA	NA	NA	NA	3914985	3913183	-0.05	4012861	4216014	5.06
Anambra	NA	NA	NA	NA	NA	NA	10766275	10311320	-4.23	11035433	10594104	-4.00
Imo	2560	4115	60.74	2925	3219	10.05	NA	NA	NA	NA	NA	NA
Total	40526908	40745962	0.54	70569901	72480505	2.71	116502972	117535174	0.89	121349705	113012212	-6.87

**Table 3.14.1c . Production estimates for Sheep and Guinea Fowl**

State	Sheep						GUNEAW FOWL					
	Opening Stock			Closing Stock			Opening Stock			Closing Stock		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
<b>Bauchi</b>	28000000	28417502	1.49	28900001	30152941	4.34	NA	NA	NA	NA	NA	NA
<b>Benue</b>	23170702	24752702	6.83	22724971	25121521	10.55	892019	938109	5.17	899571	906166	0.73
<b>Nassarawa</b>	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA
<b>Plateau</b>	9524212	9129212	-4.15	8712318	8357443	-4.07	10248000	9803000	-4.34	10116701	10605576	4.83
<b>Taraba</b>	2692851	2724116	1.16	2760173	2792220	1.16	NA	NA	NA	NA	NA	NA
<b>Kebbi</b>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Kogi</b>	458917	427917	-6.76	430391	391116	-9.13	NA	NA		NA	NA	
<b>FCT</b>	988443	1041696	5.39	982405	1067739	8.69	302288	326975	8.17	307346	335150	9.05
<b>Niger</b>	235640	247571	5.06	241532	253762	5.06	NA	NA	NA	NA	NA	NA
<b>Kwara</b>	1227892	1380892	12.46	1356090	1415415	4.37	139000	144000	3.60	142476	147601	3.60
<b>Katsina</b>	3120295	3360653	7.70	3198303	3444670	7.70	4503100	4590995	1.95	4590679	4705771	2.51
<b>Jigawa</b>	2000000	2091252	4.56	2150001	2153784	0.18	NA	NA	NA	NA	NA	NA
<b>Kano</b>	3200000	3162002	-1.19	3280001	3416053	4.15	NA	NA	NA	NA	NA	NA
<b>Kaduna</b>	1240000	1260752	1.67	1271001	1292272	1.67	NA	NA	NA	NA	NA	NA
<b>Yobe</b>	NA	NA		NA	NA		NA	NA	NA	NA	NA	NA
<b>Ekiti</b>	303500	316000	4.12	311089	323901	4.12	NA	NA	NA	NA	NA	NA
<b>Oyo</b>	62255	65409	5.07	63812	67045	5.07	NA	NA	NA	NA	NA	NA
<b>Ondo</b>	NA	NA		NA	NA		NA	NA	NA	NA	NA	NA
<b>Delta</b>	NA	NA		NA	NA		NA	NA	NA	NA	NA	NA
<b>Bayelsa</b>	8640	8239.026	-4.64	8857	8446	-4.64	NA	NA	NA	NA	NA	NA
<b>Rivers</b>	600000	630377.1	5.06	615001	646138	5.06	NA	NA	NA	NA	NA	NA
<b>Abia</b>	1139436	1214233	6.56	1167923	1244590	6.56	NA	NA	NA	NA	NA	NA
<b>Osun</b>	332486	361435	8.71	365799	370472	1.28	NA	NA	NA	NA	NA	NA
<b>Enugu</b>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Anambra</b>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Imo</b>	2736	2821	3.11	1780	NA	NA	NA	NA	NA	NA	NA	NA
<b>Total</b>	50308005	52177280	3.72	49641449	52366588	5.49	16084407	15803079	-1.75	16056772	16700264	4.01

**Table 3.14.d . Production estimates for Pig and Snail**

State	PIG						SNAIL					
	Opening Stock			Closing Stock			Opening Stock			Closing Stock		
	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change	2010	2011	% Change
<b>Other States</b>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Benue</b>	2791048	2904240	4.06	2835825	2976806	4.97	NA	NA	NA	NA	NA	NA
<b>Nassarawa</b>	4643028	4878083	5.06	4759105	5000037	5.06	NA	NA	NA	NA	NA	NA
<b>Plateau</b>	6873388	6790480	-1.21	7045224	6952743	-1.31	NA	NA	NA	NA	NA	NA
<b>Kogi</b>	830	843	1.52	861.05	864.74191	0.43	NA	NA	NA	NA	NA	NA
<b>Ekiti</b>	247000	288500	16.80	283176	293214	3.54	530062	546392	3.08	553064	560053	1.26
<b>Oyo</b>	160083	168189	5.06	169086	172395	1.96	NA	NA	NA	NA	NA	NA
<b>Bayelsa</b>	340	359	5.69	359.55	369.37222	2.73	NA	NA	NA	NA	NA	NA
<b>Abia</b>	291408	378529	29.90	326944	387993	18.67	NA	NA	NA	NA	NA	NA
<b>Osun</b>	288183	282633	-1.93	292889	289700	-1.09	OSUN	9645	NA	9409	9887	NA
<b>Total</b>	15295308	15691857	2.59	15713469	16074121	2.30	530062	556037	4.90	562473	569940	1.33

### 3.15 Livestock diseases and pest

#### Cattle

In Cattle production, the following diseases were reported: CBPP in Bauchi and Jigawa; FMD in Bauchi, Bayelsa, Jigawa, Kano, and Rivers States; other reported disease conditions for cattle were diarrhoea, mange, helminthiasis and ectoparasites. The spread of diseases that affected cattle were state wide in the affected States. Majority of the stocks were vaccinated against the prevalent diseases. Feed poisoning in Bayelsa, Jigawa and Kano states were reported. Local abattoirs with attendant health risks remained popular with no statistics on patronage.



Public health and meat sale remain a concern of FMARD, as compliance with regulations is largely elusive

#### Sheep and goats

There are reported cases of PPR, worm infestation, pneumonia, diarrhoea, helminthiasis and chronic respiratory disease in states like Kebbi, Kaduna, Niger, Kogi and Ondo respectively. However, it is interesting to note that Kano, Kogi, Bayelsa and Rivers treated and vaccinated high population of their sheep and goats.



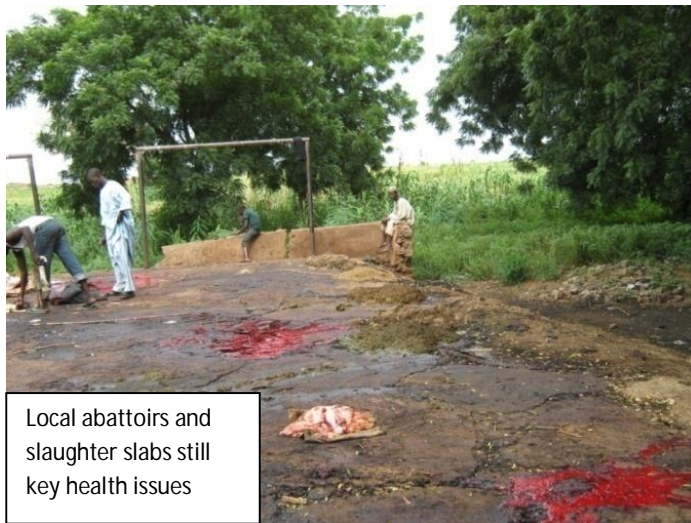
Sheep and goat production still a low intensive practice



## Poultry

Most of the farmers are practicing both intensive and free range local fowls and very few exotic birds like Geese were reared mainly by large scale commercial farms in most of the states. High cost of feed and limited access to veterinary services (i.e. consultancy and drug administration) were among drawback that the farmers complain about in most of the states. Limited veterinary services hastened mortality birds due to the severity of diseases like coccidiosis and fowl typhoid cases in Kebbi state, New

castle disease in Kano, chronic respiratory disease in Niger, poultry helminthiosis in Kogi, and coccidiosis in Bayelsa and Rivers state. Meanwhile, it is commendable to note that sizeable population of poultry in all the states were treated or vaccinated as deemed necessary.



Local abattoirs and slaughter slabs still key health issues



**Table 3.15.1b: Livestock pest and disease (Cattle)**

**North East Zone**

State	Disease or Pest	Location of incidence	Total stock of Animal	Number of Animal Affected	%	No Vaccinated or Treated	Number Culled due to infection
Other States	NA	NA	NA	NA	NA	NA	NA
Bauchi	CBPP and FMD	DARAZO, ZAKI and KATAGUM	5000 CBPP cases in Darazo, 150 CBPP cases in Zaki and 3 FMD cases in Katagum.	8 in Darazo, 50 in Zaki and 1 in Katagum.	0.16in Darazo, 33 in Zaki and Katagum	4900 in Darazo, 40 in Zaki and none in Katagum	8 and 7 in Darazo and Zaki, respectively.

**North West Zone**

State	Disease or Pest	Location of incidence	Total stock of Animal	Number of Animal Affected	%	No Vaccinated or Treated	Number Culled due to infection
Other States	NA	NA	NA	NA		NA	NA
Kebbi	FMD	State-wide	-	35000	-	Over 35000	NA
Jigawa	CBPP, FMD, Poisoning	State-wide	NA	400,000	NA	600,000	NA
Kano	FMD and Food poisoning	Mabosi and Albasu, respectively	15 and 69, respectively	NA	NA	15 and 63, respectively	NA
Kaduna	Helminthes	State-wide	700,000	73,000	1.04	201,000	NA

### North Central Zone

State	Disease or Pest	Location of incidence	Total stock of Animal	Number of Animal Affected	%	No Vaccinated or Treated	Number Culled due to infection
<b>Other States</b>	NA	NA	NA	NA	NA	NA	<b>NA</b>
<b>Niger</b>	Helminth, and ectoparasite	NA	NA	26083, 23205, 6245, 10348	NA	NA	<b>NA</b>
<b>Kogi</b>	-Helminthiasis, -Trypanosomiasis - Ectoparasite -Piroplasmiasis	<b>State-wide</b>	<b>NA</b>	<b>26736, 18815, 22672 and 10130, respectively.</b>	<b>NA</b>	<b>26736 18815 22672 10134</b>	<b>NA</b>

### South West Zone

State	Disease or Pest	Location of incidence	Total stock of Animal	Number of Animal Affected	%	No Vaccinated or Treated	Number Culled due to infection
<b>Other States</b>	NA	NA	NA	NA	NA	NA	<b>NA</b>
<b>Ondo</b>	<b>Diarrhoea, kata and mange</b>	<b>State-wide</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>

### South East Zone

State	Disease or Pest	Location of incidence	Total stock of Animal	Number of Animal Affected	%	No Vaccinated or Treated	Number Culled due to infection
<b>Other States</b>	NA	NA	NA	NA	NA	NA	<b>NA</b>
<b>Bayelsa</b>	Food poisoning, FMD and tick infestation	Ayakoro, Okordia.	14 cases of food poisoning in Ayakoro, 24 cases of FMD in Okordia and 45 cases of tick infestation in Okordia	-	-	14 in Ayakoro, 46 in Okordia	<b>3</b>
<b>Rivers</b>	FMD and Helminthiasis	NA	120 and 200	40 and 50	NA	NA	NA

**Table 3.15.1c Livestock pest and disease (sheep goats and poultry)**

**North East Zone**

SHEEP, GOAT AND POULTRY								
	Disease or Pest	Location of incidence	Total stock of Animal	Number of Animal Affected	%	No Vaccinated or Treated	Number Culled due to infection	REMARKS
Other States	NA	NA	NA	NA	NA	NA	NA	
Bauchi	PPR,IBD	MISAU, AZARE	83 and 250	4 and 58	4.8 and 19.2	79 and 195	1 and 49	Herd immunity

**North West Zone**

SHEEP, GOAT AND POULTRY								
	Disease or Pest	Location of incidence	Total stock of Animal	Number of Animal Affected	%	No Vaccinated or Treated	Number Culled due to infection	REMARKS
Other States	NA	NA	NA	NA	NA	NA	NA	
Kebbi	PPR and Worm infestation, coccidiosis and fowl typhoid	Yauri and Stateward	-	-	-	NA	NA	
Jigawa	PPR(Sheep and goats), NCD and IBD (Poultry)	State-wide	NA	10000, 800000, 800000, respectively	NA	NA	NA	Light severity
Kano	PPR, broiler salmonella, Layers New castle disease and coccidiosis	Bagwai, Kuboso, D/Kudu, Kumbotso and Gwale	NA	NA	NA	6,008 layers and 2500 broilers	NA	
Kaduna	PPR	State-wide	NA	NA	NA	NA	NA	

## North Central Zone

SHEEP, GOAT AND POULTRY							
	Disease or Pest	Location of incidence	Total stock of Animal	Number of Animal Affected	%	No Vaccinated or Treated	Number Culled due to infection
Other States	NA	NA	NA	NA	NA	NA	NA
Niger	Helminths, pneumonia, ectoparasite, newcastle, coccidiosis and chronic respiratory diseases	NA	NA	22608, 15609, 28020	NA	NA	NA
Kogi	PPR, Helminthiasis, ectoparasite, poultry helminthiasis	State-wide	NA	2573, 18674, 3158, 100280 respectively	NA	208114, 18674, 3158, 100280, respectively	-

## South West Zone

SHEEP, GOAT AND POULTRY							
	Disease or Pest	Location of incidence	Total stock of Animal	Number of Animal Affected	%	No Vaccinated or Treated	Number Culled due to infection
Other States	NA	NA	NA	NA	NA	NA	NA
Ondo	Helminthiasis, diarrhoea, kata and mange.	State-wide	NA	NA	NA	NA	NA
Ekiti	Mange in goat	State-wide	165	15	9.09	15	-
Delta	Diarrhoea	Ejeme-Unor		NA	20	NA	NA

## South East Zone

SHEEP, GOAT AND POULTRY							
	Disease or Pest	Location of incidence	Total stock of Animal	Number of Animal Affected	%	No Vaccinated or Treated	Number Culled due to infection
Other States	NA	NA	NA	NA	NA	NA	NA
Abia	PPR	State-wide	Nil	2	NA	NA	NA
Bayelsa	Foot-rot, mange, coccidiosis and fowl pox,	Otuokputi, Imiringi, Etegwe	NA	5 and 14 animals (sheep and goat) were affected by foot rot and mange, respectively 1200 pullets were affected by coccidiosis while 20 turkeys were affected by fowl-pox.	-	21 sheep and goat. 1200 pullets and 20 turkey	- <b>Very good</b>
Rivers	PPR, helminthiasis, mange, coccidiosis, NCD and fowl typhoid	Widespread	550,550,550, and 200,000	320, 210, 25, 160,000, 70,000, 45,000	69, 26, 22, 12, 28, 26	-, -, -, 160,000, 200,000, 100,000	120, -, -, -, 20,000, -

### 3.15.2 Fisheries

Data for aquaculture and fisheries were not available in most of the states and even those available are scanty. This probably related to inadequacy of fishery personnel to collect and collate data required on the field and poor funding.

#### 3.15.2a Fisheries inputs

Of the 36 states and the FCT, only 12 states procured and distributed fisheries and aquaculture inputs for 2010; in 2011, only Osun and Ebonyi states provided data in support of procurement and distribution of fisheries inputs, such as fishing nets, fingerlings and feeds. Fishing gear and craft were procured and distributed in 2010 by Jigawa, Kebbi, and Zamfara states under the NPSF programme; aquaculture input (fingerling, drugs, pelletizer, brood stock and feeds) were procured and distributed in 2010 by Bauchi, Kaduna, Kwara, Delta, Ogun and Ebonyi states. All states, with the exception of the two mentioned above, had no data on the procurement of inputs, perhaps due to lack of fund or the absence of budgetary allocation for fisheries, a situation that is unhealthy for fisheries development in Nigeria.

**Table:3.15.2a Data on Fish Input Supply for 2010 and 2011 (selected states)**

State	Type of input	Quantity procured by Government		Quantity distributed by govt.	
		2010	2011	2010	2011
<b>Bauchi</b>	Fingerlings	30,000	NA	30,000	NA
	Fish feeds	1300 bags		1300 bags	
	Drugs	200 sachets		200 sachets	
	Hatching materials	10 sets		10 sets	
<b>Yobe</b>	Fingerlings	10,000	NA	NA	NA
	Feeds	180bags			
<b>Jigawa</b>	Gill nets	633	NA	633	NA
	Hooks	1000		1000	
	Cast nets	20		20	
	Seine nets	25		25	
	Trawl nets	300		300	
	Boats	30		30	
<b>Kaduna</b>	Fish feeds	150bags/15kg	NA	NA	NA
	Drugs				
	Local feeds				
<b>Kebbi</b>	Bundles of nets	150		150	
	Assorted hooks	50		50	
	Wooden boats	50		50	
<b>Bayelsa</b>	Heterobranchus fingerlings	4800	NA	4800	NA
<b>Ebonyi</b>	Fish ponds	NA	200	NA	12
	Cold room	NA	78	NA	4
<b>Delta</b>	Fish seeds	1,000,000	NA	1,000,000	NA

	Tarpaulin tanks	1,000	Na	1,000	NA
	Burkinabe smoking kilns	500	Na	400	NA
<b>Ogun</b>	Lime	6.7t	NA	6.7t	NA
	Fingerlings	100,746,074		100,724,094	
<b>Osun</b>	Twine	150 rolls	250 rolls	150 rolls	200 rolls
	Nets	100 bundles	200 bundles	100 bundles	200 bundles
	Fish seeds	500,000 tilapia	600,000 tilapia	500,000 tilapia	600,000
	Floats	150 dozens	250 dozen	150 dozens	tilapia
	Lead weight	100 sheets	150 sheets	100 sheets	250 dozen
					150 sheets
<b>Oyo</b>	Juveniles	1700	NA	1700	NA
<b>Ondo</b>	Fish feeds	6000bags	NA	2800bags	NA

### 3.15.2b Fisheries Diseases

Aquaculture productions were affected with various diseases as reported. These diseases include bacterial, fungal and viral diseases. Broken skull disease has a wide spread as most of the states reported. Fish parasites such as leeches, helminthes, and predators such as dragon flies, monitor lizard, snakes and frogs were reported in Ekiti, Gombe, Bayelsa and Edo State though their effects was light except in Bauchi State where heavy infestation was reported. Pest and diseases persist 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 is another challenge faced by the fish farmers.



There is the urgent need to train fisheries technical staff on fish diseases prevention, diagnosis and treatment to forestall losses encountered when farmers are faced with these challenges. Fish farmers if possible should be trained on how to produce their feeds using locally available feed resources.

**TABLE:3.15.2b Fisheries Pests and Diseases Situation**

Fish species	Pest/diseases/Parasites	Severity	States Where Reported	Control Measures undertaken
<b>Claris</b>	1. Bacteria	Light	Ekiti, Gombe, Edo	Antibiotics
	2. Protozoa	Mild	Taraba	Pond Sanitation
	3. Gill rot	Light	Ondo, Bauchi,	Antibiotics
	4. Swollen Belly	Light	Ondo	Antibiotics
	5. Skin cancer	High	Rivers	Antibiotics
	6. Leeches/Louses	Mild	Bauchi, Ekiti, Gombe, Kaduna	Pond Sanitation
	7. Predatory birds	Mild	Bayelsa,	Nettin & fencing ponds
	8. Barbels rots	Mild	Bayelsa	Antibiotics
	9. Snakes& Frog/dragon flies	High	Bauchi	Fencing & Pond sanitation
	10. Monitor Lizard	High	Bayelsa	Fencing and Pond sanitation
<b>Heterobroncus</b>	Skin Cancer Broken Head	High	River, Bayelsa	Antibiotics Antibiotics/Good Feeding
<b>Tilapia</b>	Bacterial infection	Light	Edo	Antibiotics

### 3.15.2c. Fisheries Production Estimate

A total of 12 states presented data on artisanal fisheries output in 2010. This include both inland and coastal artisanal fisheries. Also compared with available output for 5 states in2011. 18 states presented data on aquaculture production output in 2010 compared with 6 states in 2011. Artisanal fisheries production indicated slight increase production in Sokoto are (21.01%) and Bauchi (0.73%). However, Niger (-3.64%) and Jigawa (-10.10%) states had negative values, indicating fish landing reduction compared with landing for 2010



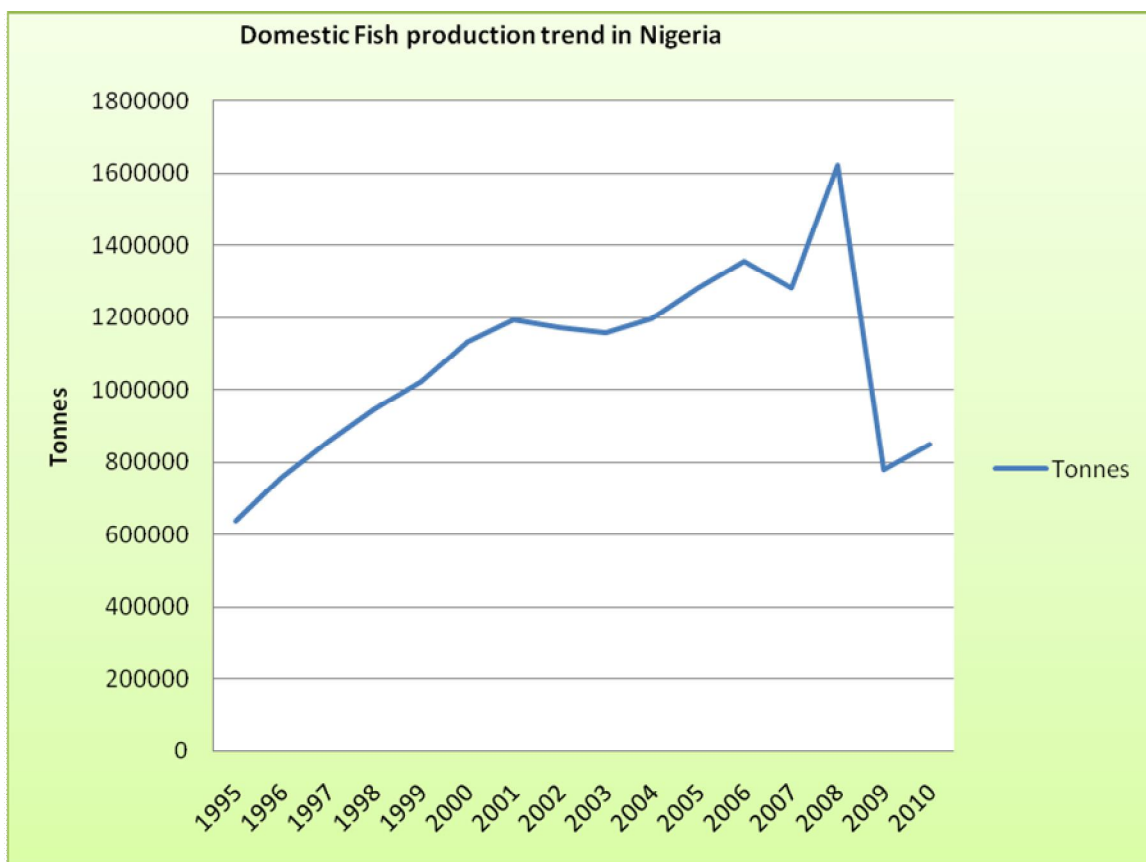
Table 3.15.2c Projected domestic fingerlings production (2000 – 2011)

Year	Fingerlings Production
2000	2000000
2001	2800000
2002	4500000
2004	9500000
2005	22900000
2006	30000000
2007	32500000
2008	35000000
2009	44110870
2010	50238587
2011	56366304

Source: FDF 2011

The aquaculture production for 4 states out of 6 that presented data on aquaculture indicated that there was an appreciable increase in production output in 2011. The states are Abia, Bauchi, Ekiti, and Ondo with 5.10%, 6.38%, 12.50% and 7.10% increases respectively.

In Jigawa and Benue states, negative values were recorded (-39.07% and -63.71% respectively). These showed that there was a reduction in aquaculture output in the two states in 2011 compared with 2010. The reduction may be attributed to lack of proper support from government, insufficient aquaculture skills, diseases, and high cost of fish feeds and fingerlings. The fish seedling for aquaculture production in Nigeria for 2010 and 2011 is shown in the appropriate .



Source FDF 2010

**TABLE 3.15.2c : Fisheries Production Estimates (MT)2010 -2011**

State	Artisanal inland fish catch			Artisanal Coastal Fish catch			Aquaculture			Industrial fishing		
	2010	2011	%Change <sup>1</sup>	2010	2011	%Change	2010	2011	%Change	2010	2011	%Change
Other States	NA	NA		NA	NA		NA	NA		NA	NA	NA
Yobe	400MT	NA		NA	NA		150MT	NA		NA	NA	
Bauchi	12.31MT	12.40MT		NA	NA		47.00MT	50.00MT	6.38	NA	NA	
Jigawa	33,587MT	30,196MT	-10.01	NA	NA		1,804MT	1,099MT	-39.07	NA	NA	
Sokoto	19,180MT	23.210MT	21.01	NA	NA		NA	NA		NA	NA	
Kebbi	54,000MT	NA		NA	NA		NA	NA		NA	NA	
Taraba	NA	NA		NA	NA		16,000MT	NA		NA	NA	
Plateau	NA	NA		NA	NA		20.212MT	NA		NA	NA	
Nassarawa	7.500MT	NA		NA	NA		82MT	NA		NA	NA	
Niger	55,000MT	53,000MT	-3.64	NA	NA		NA	NA		NA	NA	
Kwara	40,00MT	NA		NA	NA		28,000MT	NA		NA	NA	
Kogi	NA	NA		NA	NA		318.24MT	NA		NA	NA	
Benue	NA	NA		NA	NA		964.52MT	350.06MT	-63.71	NA	NA	
Osun	400MT	NA		NA	NA		1,200MT	NA		NA	NA	
Oyo	NA	NA		NA	NA		27,000MT	NA		NA	NA	
Ekiti	NA	NA		NA	NA		40MT	45MT	12.5	NA	NA	
Ondo	NA	NA		NA	NA		219.649MT	235.249MT	7.10	NA	NA	
Ogun	13,170.790MT	NA		NA	NA		8,374.610MT	NA		NA	NA	
Lagos	NA	NA		95,077MT	NA		14.911MT	NA		NA	NA	
Enugu	NA	NA		NA	NA		30MT	NA		NA	NA	
Abia	NA	NA		NA	NA		2160.35MT	2270.53MT	5.10	NA	NA	
Bayelsa	36,409.59	68,048.85		NA	NA		48,000	NA		NA	NA	

### 3.15.3 FISH IMPORTS BY PRODUCTS (MT) 000 FROM 2001 - 2009

Products	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 packet of 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 and 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
<b>TOTAL</b>	<b>2,442,201,728</b>	<b>3,353,506,993</b>	<b>692,523,570</b>	<b>877,900,424</b>	<b>463,000,388</b>	<b>3,104,541,676</b>	<b>6,817,693,848</b>	<b>693,633,101</b>	<b>1,249,077,193</b>

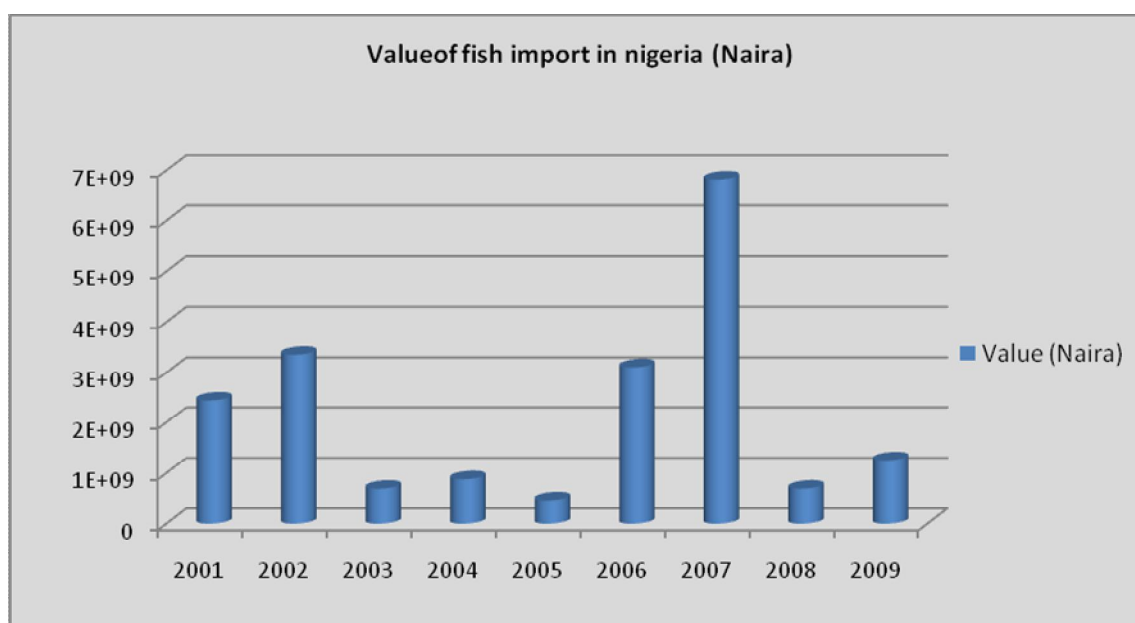
Source : NBS 2010

### 3.15.3 VALUE OF FISH IMPORT FROM 2001 – 2010 (Naira)

Year	Import (Naira Value)
2001	2,442,201,728
2002	3,353,506,993
2003	692,523,570
2004	877,900,424
2005	463,000,388
2006	3,104,541,676
2007	6,817,693,848
2008	693,633,101
2009	1,249,077,193

Source :NBS 2010

From the various data collated and presented in this report, it is obvious that Nigeria expend billions of naira on the import of fish annually which continue to increase.



### 3.16 AGRICULTURAL DEVELOPMENT PROGRAMMES EXTENSION ACTIVITIES

#### 3.16.1 ADP Funding and Staffing Adequacy in 2011

The most difficult and challenging policy issue facing extension today is to secure a stable source of funding. There has been a progressive decline in financial support for extension. This decline is occurring in a situation where funding of extension has been chronically inadequate. Federal allocations have not been received by most of the ADPs for several years. The data generally reflect dwindling funding situation between 2010 and 2011 with only about 13% of the ADPs recording fairly adequate funding. The current level of funding for extension in Nigeria is insufficient to provide adequate coverage for all groups of farmers, especially those who are resource poor and at the subsistence level. The funding for extension should be increased to levels that reflect the anticipated economic rates of return and the social benefits when public funds are properly invested and managed.

#### 3.16.2 Staffing

Extension commonly has staffing problems. It is not unusual for extension organizations to have posts that are either vacant or filled by under qualified personnel. The various data show that most ADPs are grossly understaffed while more detailed finding revealed that extension staffs are poorly exposed to relevant trainings due to funding inadequacy. This has resulted in increased EA: Farm family ratio in all the States.

Given the mission and scope of the work, and available resources, the ADPs are in dire need of not just full complement of frontline extension agents but also qualified and well trained ones in order for the system to function in its full capacity for transforming the country's agriculture.

**Table 3.16.1 : Status of ADP Funding, Adequacy and Quality of Staff in 2011**

North East Zone					
State	Funding		Adequacy and quality of staffing		Remarks
	2010	2011	2010	2011	
BAUCHI	Fair	Fair	Fair	Fair	Government need to provide fund and also recruit additional extension staff.
BORNU	Very weak	Inadequate	Adequate	Inadequate	Funding should be improved while more extension agents should be employed.
GOMBE	Inadequate	Fair	Fair	Fair	Additional funds should be provided and more EAs should be employed
YOBE	Fair	Fair	Fair	Fair	More fund should be provided while additional EAs should be recruited
ADAMAWA	NA	Poor	Fair	Inadequate	Government should improve ADP funding and recruit more EAs

### North West Zone

State	Funding		Adequacy and quality of staffing		Remarks
	2010	2011	2010	2011	
JIGAWA	Weak	Weak	Fair	Inadequate	Government need to provide fund and also recruit additional extension staff.
KADUNA	Weak	Fair	Fair	Fair	Funding should be improved while more extension agents should be employed.
KANO	Weak	NA	Fair	Fair	Additional funds should be provided and more EAs should be employed
KATSINA	NA	NA	NA	NA	-
KEBBI	Weak	NA	Fair	Fair	Funding should be improved while more staffs should be recruited
SOKOTO	Very weak	Very weak	Weak	Very inadequate	There is dire need for adequate funding and staffing
ZAMFARA	Very weak	Very weak	Fair	Fair	Improved funding and staffing is very necessary

### North Central Zone

State	Funding		Adequacy and quality of staffing		Remarks
	2010	2011	2010	2011	
BENUE	Fair	Poor	Fair	Inadequate	Improved funding and staffing is very necessary
FCT	Weak	Inadequate	Inadequate	Fair	Government need to provide fund and also recruit additional extension staff.
KOGI	Good	Fair	Adequate	Inadequate	Funding should be improved while more extension agents should be employed.
KWARA	Weak	Weak	Inadequate	Very inadequate	Additional funds should be provided and more EAs should be employed
NASSARAWA	Very weak	Weak	Adequate	Inadequate	More fund should be provided while additional EAs should be recruited
NIGER	Weak	Inadequate	Fair	Fair	Funding and staffing should be improved
PLATEAU	Weak	NA	Fair	Inadequate	Improved funding and staffing is very necessary
TARABA	NA	NA	Fair	Inadequate	Government need to provide fund and also recruit additional extension staff. Funding should be improved while more extension agents should be employed.

South West Zone					
State	Funding	Adequacy and quality of staffing	Remarks	State	Funding
DELTA	NIL	Very weak	Fair	Fair	Improved funding and staffing is very necessary
EDO	Fair	Poor	Inadequate	Inadequate	Government need to provide fund and also recruit additional extension staff.
EKITI	Very weak	Very weak	Fair	Inadequate	Funding should be improved while more extension agents should be employed.
LAGOS	Fair	Very weak	Inadequate	Very inadequate	Additional funds should be provided and more EAs should be employed
OGUN	Weak	Weak	Fair	Weak	More fund should be provided while additional EAs should be recruited
ONDO	NA	Very weak	Fair	Fair	There is dire need for adequate funding and staffing
OSUN	Weak	Weak	Fair	Inadequate	Improved funding and staffing is very necessary
OYO	Very weak	Very weak	Fair	Very inadequate	Additional funds should be provided and more EAs should be employed

South East Zone					
State	Funding	Adequacy and quality of staffing	Remarks	State	Funding
ABIA	Weak	Weak	Fair	Inadequate	Additional funds should be provided and more EAs should be employed
AKWA IBOM	Weak	Weak	Fair	Inadequate	More fund should be provided while additional EAs should be recruited
ANAMBRA	Very weak	Very weak	Fair	Very inadequate	Additional funds should be provided and more EAs should be employed
BAYELSA	Weak	Weak	Inadequate	Very inadequate	Additional funds should be provided and more EAs should be employed
CROSS RIVERS	NA	Weak	Fair	Inadequate	Improved funding and staffing is very necessary
EBONYI	Very weak	Weak	Fair	Inadequate	Funding should be improved while more staffs should be recruited
ENUGU	Weak	Very weak	Inadequate	Very inadequate	There is dire need for adequate funding and staffing
IMO	NA	Very weak	Fair	Inadequate	Improved funding and staffing is very necessary
RIVERS	NA	Inadequate	Fair	Very inadequate	Additional funds should be provided and more EAs should be employed



### 3.16.3 Extension Activities

#### **Farm families**

Kano State recorded the highest number of farm families with an achievement of 840,095. This is followed by Akwa Ibom State (685,095) then Kaduna State (606,007). However, for each of the States, there was no increase in the number of farm families from the 2010 figure. This may not be unconnected with the low number of VEAs.

**Number of VEAs:** The United Nation's (World Bank) standard for EA: Farmer ratio remained 1:500 – 800. This ratio is the ideal for ease of coverage by VEAs. Unfortunately, the realization of this ratio has being a wild goose chase. Bauchi, Yobe and Ebonyi States has the highest number of VEAs of 306, 265 and 257 respectively. However, only Ebonyi recorded an increase of 65% over the 2010 record. Others are static. The dwindling funding of the ADPs across the country might have being the cause of non-employment of additional VEAs.

**EA: Farmer ratio:** The data revealed that Anambra, Enugu and Rivers States has the highest EA:Farmer ratio with 1:9407, 1:6848 and 1:6749 respectively. In each of the States, the large ration was worsened by the low number of frontline EAs on board. This trend of dwindling number of VEAs had persisted over the years as most ADPs could not recruit new VEAs even with the dire needs.

**Number of SMSs:** The SMSs is the main link between the research institutes and the ADPs. Proven and relevant technologies from research are taught by the SMSs to the VEAs. Feedback to research as a way of evaluating progress is also achieved through the SMSs during the FNTs and MTRMs. Hence, the availability of SMSs in different agricultural enterprise – crop, livestock, fisheries, agro-processing and women-in-agriculture – remains a major performance indicator in the ADP system. Bauchi State has 30 SMSs while Taraba State has only 1. In most cases, the number of SMS depends on the number of Zones operated by the State. Yobe State with 11 block extension supervisors has only 7 SMSs. Generally, there is low number of SMSs across the country. This implies that technology transfer is inefficient.

**Number of BESS:** The role of BESS is very crucial in extension especially under the Training and Visit system. The BESS are the frontline supervisory agent. The number of BES should depend on the number of VEAs with a standard of 1:8 BES:VEA ratio. Ebonyi State has an average of 1:11 BES:VEA ratio. Most States ADPs have low BES:VEA ratio. This should be an advantage to supervision all things being equal.

**BEA(WIA):** Jigawa, Kano, Osun, Cross-Rivers and Bayelsa States did not have BEA(WIA). Edo State had only 1. Extension contact to women is a major avenue where women can be empowered in order to meet their challenges. Akwa Ibom, Kebbi and Kaduna States had the highest number of BEAs with 36, 35 and 33 respectively.

**Extension visits to farmers:** Taraba State ADP recorded the highest number of visits to farmers by VEAs (150,000); while Zamfara State had the lowest record of visit of 56.

**SPAT, MTP and OFAR:** The use of SPAT, MTP and OFAR as techniques for technology dissemination to farmers is on the increase across the ADPs. Borno, Bauchi, Adamawa, Jigawa, Sokoto, Kebbi, Zamfara, Kano, Kaduna, Taraba, Plateau, Nassarawa, FCT, Niger, Kwara, Kogi, Benue, Osun, Oyo, Enugu, Ebonyi, Imo and Bayelsa States did not conduct SPAT for the year under review. However Ekiti State conducted the highest number of SPATs (1,278). Adamawa State recorded the highest number of MTPs (10,000) while Imo had the highest number of OFAR trials (900).

Generally the use of MTP is on the increase across the nation. This is in agreement with the need for ADP to de-emphasise the use of SPAT and gradually replaced with MTP as advocated during the previous national Extension Planning and Review Meetings as mainly recommended due to success reported when it was introduced by Sasakawa Global 2000.

**FNTs/MTs and MTRMs/QTRMs:** The success of extension visit depends on regular training of frontline VEAs. This is usually carried out at the FNTs. For some years back, the FNT had disappeared in the activities of the ADPs. Borno, Gombe, Adamawa, Jigawa, Sokoto, Kano, Kaduna, Taraba, Plateau, Nassarawa, FCT, Niger, Kwara, Benue and Bayelsa did not record any FNT for 2011. The modification of the FNT to MT did not help matters. However, Edo, FCT and Imo States achieved a 100% target of the FNTs. Figures provided by Ekiti, Lagos, Ondo, and Anambra were outrageous.

The MTRM is an interactive forum for the researchers and the SMSs to interact to review the technologies disseminated to farmers through extension. Years back; due to funding problems, the MTRM was modified as QTRM yet the achievements across the country was low. Only Lagos State and FCT achieved 100% target of the MTRM.

**Number of cooperatives:** The high cost of extension visit and its time consumption necessitated the use of group approach. This has proved effective due to its multiplier effects in reaching the farmers. Hence, group formation and registration was adopted as a major performance indicator for the ADPs. Kano State and FCT recorded the highest number of group formed during the year under review 12,000 and 7,100 respectively. Osun and Nassarawa States had as low as 33 and 16 cooperative groups formed in the current year.

**Number of farmers trained:** The highest number of farmers trained in 2011 was recorded by Oyo and Kebbi States 162,908 and 150,000 respectively.

**Number of FFS:** Kebbi, Gombe, Nassarawa, Ekiti and Imo had the highest number of FFS recording 120, 81, 81, 79 and 72 respectively. The data revealed that Akwa Ibom, Delta, Edo, Kwara, Kano, Adamawa and Bauchi States did not have FFS.

**General:** Compared to the 2010 record, there is a general low performance in the activities of the ADPs across the country while only few of them have maintained steady performance.

**TABLE 3.16. 3 ADP Extension Activities: NORTH EAST ZONE**

Extension Activities																			
state	Years		No. of Farm Families	Zones	SMSs	BES	BEA's/WIA	VEAs	VEA Visits	SPAT's	FNTs/MTs	MTRMs / QTRMs	MTPs	OFARs	No. of Groups /Coops	EAF/ Farmer Ratio	No. of farmers Trained	No. of farmers field schools	
Borno	2010	Tar	-	3	27	63	-	450	-	-	-	-	-	-	-	-	-	-	
		Ach	536,322	3	25	63	-	224	-	-	0	0	-	-	0	-	0	0	
	2011	Tar	-	3	27	63	-	450	-	-	24	12	-	-	-	-	-	-	
		Ach	536,322	3	25	63	-	223	-	-	0	0	-	-	0	-	0	0	
Yobe	2010	Tar	407,834	2	12	32	32	350	31872	-	12	4	-	30	-	1:1000	2025	81	
		Ach	407,834	2	12	32	8	265	31872	-	3	3	-	25	-	1:1000	625	27	
	2011	Tar	407,834	2	12	32	32	350	31872	90	12	4	90	60	-	1:1000	2025	81	
		Ach	407,834	2	12	32	8	265	31872	90	2	1	90	60	-	1:1000	758	27	
Bauchi	2010	Tar	341,837	3	30	44	40	500	64,252	-	12	12	-	280	120	1:100	81	-	
		Ach	341,837	3	30	44	46	306	54,256	-	3	3	-	280	65	1:1700	79	-	
	2011	Tar	34837	3	30	44	40	500	-	-	12	12	-	-	100	-	20,000	-	
		Ach	34837	3	30	44	16	306	-	-	5	3	-	-	52	-	-	-	
Gombe	2010	Tar	253,378	11	7	81	81	250	-	250	60	12	-	-	81	1:1000	2430	108	
		Ach	253,378	11	7	81	32	169	-	49	0	24	-	-	68	1:1225	1146	42	
	2011	Tar	253,378	11	7	81	81	250	-	89	60	12	45	-	8	1:1000	2430	81	
		Ach	253,378	11	7	81	32	169	-	89	0	0	45	-	81	1:1225	2025	81	
Adamawa	2010	Tar	344,166	4	20	46	46	344	5000	-	-	-	10,000	-	-	1:1000	10,000	-	
		Ach	344,166	4	18	42	30	155	1300	-	-	-	10,000	-	-	1:1000	10,000	-	
	2011	Tar	344,166	4	20	46	46	344	5000	-	-	-	10,000	-	-	1:1000	10,000	-	
		Ach	344,166	4	18	42	30	155	1000	-	-	-	10,000	-	-	1:1000	10,000	-	

**NORTH WEST ZONE**

No. of Ext. Workers																		
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
Jigawa	2010	Tar	376,000	4	20	47	-	376	9,552	-	12	4	1,582	70	2,800	1:1000	750	27
		Ach	199,000	4	20	47	-	199	7,124	-	1	1	1,533	62	2,550	1:1889	600	27
	2011	Tar	376,000	4	20	47	-	376	10,752	-	12	4	286	12	3,200	1:1000	570	27
		Ach	224,000	4	20	47	-	224	8,960	-	-	-	224	12	180	1:1678	500	27
Sokoto	2010	Tar	432,133	2	8	32	27	256	-	-	12	4	100	-	-	1:4050	675	24
		Ach	432,133	2	5	16	27	72	-	-	-	-	-	-	-	1:4050	405	24
	2011	Tar	432,133	2	8	32	32	256	15,744	-	12	4	100	2	-	1:4000	1000	24
		Ach	432,133	2	5	16	5	72	3936	-	-	-	-	1	-	1:4000	460	24
Katsina	NA	NA	NA	NA	NA	NA	NA	N A	NA		NA	NA	NA	NA	NA	NA	NA	NA

**NORTH WEST ZONE (cont..)**

No. of Ext. Workers																			
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	EAI/Farmer Ratio	No. of farmers Trained	No. of farmers field schools	
Kebbi	2010	Tar	-	4	20	32	-	256	870,000	-	16	4	302	4	-	1:1000	256,000	108	
		Ach	-	4	20	32	-	198	185	-	-	1	189	4	-	1:3749	182,000	108	
	2011	Tar	-	4	35	32	40	205	-	-	12	4	700	13	-	-	220,000	120	
		Ach	-	4	20	32	36	198	-	-	1	1	340	4	-	-	150,000	120	
Zamfara	2010	Tar	256,411	2	10	34	10	256	96	-	12	12	500	5	500	1:1000		27	
		Ach	14,222	2	10	34	8	180	42	-	12	4	150	3	270	1:1479		27	
	2011	Tar	256,411	2	10	34	10	260	96	-	12	12	500	5	500	1:1000		27	
		Ach	14,222	2	10	34	8	180	56	-	12	1	120	2	270	1:1479		27	
Kano	2010	Tar	840,895	3	9	18	-	850	-	-	-	-	-	-	30,000	-	-	-	
		Ach	840,895	3	9	9	-	725	-	-	-	-	-	-	12,000	-	-	-	
	2011	Tar	1,200,000	3	9	18	-	850	-	-	-	-	-	-	30,000	-	-	-	
		Ach	840,895	3	9	9	-	235	-	-	-	-	-	-	12,000	-	-	-	
Kaduna	2010	Tar	606,007	4	13	23	45	250	-	40-00	12	2	-	-	1,066	1:2313	--	81	
		Ach	606,007	4	13	23	33	200	-	786	8	4	-	-	1,066	-	-	24	
	2011	Tar	606,007	4	13	23	45	300	-	-	-	-	-	-	1,066	-	-	-	
		Ach	606,007	4	13	23	33	200	-	-	-	-	-	-	1,066	-	-	-	

**NORTH CENTRAL ZONE**

No. of Ext. Workers																		
State	Years		No. of Farm Families	Zones	SMSS	BES	BEAs/WIA	VEAs	VEA Visits	SPATs	FNTs/MTs	MTRMs / OTRMs	MTPs	OFARs	No. of Groups /Coops	EA/Farmer Ratio	No. of farmers Trained	No. of farmers field schools
Taraba	2010	Tar	288,000	4	5	30	30	288	288,000	1100	96	12	800	10	160	1:1000	160	160
		Ach	288,000	4	1	24	4	110	110,000	500	-	NIL	120	-	160	1:13200	200	200
	2011	Tar	288,000	4	5	30	30	288	288,000	550	96	12	800	10	160	1:1000	160	160
		Ach	288,000	4	1	24	4	150	150,000	-	-	NIL	-	-	160	1:1920	-	-
Plateau	2010	Tar	-	3	18	32	32	192	19,968	-	24	10	394	-	-	1:1000	-	81
		Ach	325,082	3	18	14	14	107	10,696	-	9	1	93	-	115	1:3038	-	27
	2011	Tar	-	3	18	32	32	192	-	-	-	10	-	-	-	1:1000	-	81
		Ach	325,082	3	18	14	14	102	-	-	-	2	-	-	115	1:3187	-	32
Nassarawa	2010	Tar	180,433	3	18	26	26	156	26,304	-	-	12	-	12	24	1:1000	112	81
		Ach	180,433	3	18	26	22	135	26,750	-	-	12	-	10	24	1:1156	110	-
	2011	Tar	180,433	3	18	26	28	156	25,728	-	-	12	-	10	24	1:1000	210	81
		Ach	180,433	3	18	26	19	129	17,157	-	-	7	-	5	16	1:1136	205	81
FCT	2010	Tar	100,000	4	20	12	24	93	17,856	3000	24	12	80	14	6,960	1:1000	7,440	18
		Ach	100,000	4	20	12	24	83	17,856	3000	24	12	80	14	6,960	1:1282	7,440	18
	2011	Tar	100,000	4	20	12	24	93	22,360	-	24	12	140	16	7,500	1:1000	7,440	27
		Ach	100,000	4	20	12	24	67	8,880	-	24	12	7	14	7,100	1:1282	2,000	27

**NORTH CENTRAL ZONE (cont...)**

No. of Ext. Workers																			
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	
Niger	2010	Tar	-	3	15	37	37	330	71,040	2,984	26	112	90	-	-	1:1000	810	27	
		Ach	-	3	15	37	23	245	36,329	-	-	2	0	-	-	1:3000	577	27	
	2011	Tar	-	3	15	37	37	330	71,040	-	26	12	90	-	-	1:1000	810	27	
		Ach	-	3	15	37	23	227	-	-	-	1	0	-	-	1:3000	-	27	
Kwara	2010	Tar	300,000	4	4	16	16	300	14,280	-	24	12	43	3	300	1:1000	10	-	
		Ach	288,517	4	4	4	4	64	10,920	-	16	8	43	3	282	1:4000	10	-	
	2011	Tar	300,000	4	4	16	16	300	20,160	-	24	12	20	3	200	1:1000	10	-	
		Ach	295,730	4	4	4	4	120	13,440	-	-	-	12	3	120	1:2464	2	-	
Kogi	2010	Tar	228,964	4	20	24	24	192	16,336	-	24	12	780	4	200	1:1000	-	108	
		Ach	228,964	4	15	20	6	106	10,224	-	20	4	539	2	200	1:2160	-	60	
	2011	Tar	228,964	4	20	24	24	192	16,336	-	24	12	440	2	200	1:1000	-	81	
		Ach	228,964	4	13	18	5	100	3,432	-	14	12	65	1	200	1:2300	-	50	
Benue	2010	Tar	413,159	3	18	46	46	368	12384	1768	26	12	1747	36	-	-	-	1	
		Ach	-	3	18	46	46	368	12384	1768	26	12	1747	36	-	-	-	1	
	2011	Tar	413,159	3	18	46	21	129	10373	1768	26	12	1747	36	-	1:2600	-	1	
		Ach	-	3	-	-	-	-	-	-	-	-	-	-	-		-	-	

**SOUTH WEST ZONE**

No. of Ext. Workers																			
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	EAFarmer Ratio	No. of farmers Trained	No. of farmers field schools	
Osun	2010	Tar	256,000	3	15	31	-	248	-	-	26	12	28	9	-	-	-	-	
		Ach	254,984	3	8	27	-	182	12,160	-	26	9	13	2	223	-	20,356	49	
	2011	Tar	256,000	3	15	31	-	248	-	-	26	9	-	7	-	-	6	-	
		Ach	254,984	3	8	23	-	11	9,139	-	15	15	-	3	33	-	9,139	59	
Oyo	2010	Tar	415,030	4	20	28	28	224	26,928	-	26	12	-	-	-	1:800	415,030	27	
		Ach	284,956	4	17	28	21	110	15,928	-	23	1	-	-	-	1:3773	284,956	35	
	2011	Tar	415,030	4	20	28	28	224	26,928	-	26	12	-	-	-	1:800	415,030	27	
		Ach	162,908	4	17	28	21	90	8,125	-	16	4	-	-	-	1:3993	162,908	50	
Ekiti	2010	Tar	123,000	2	16	16	16	128	6,083	3,040	48	12	10	5	140	1:1000	20,000	81	
		Ach	123,000	2	8	16	12	46	6,750	3,000	48	10	4	1	80	1:2750	20,000	51	
	2011	Tar	123,000	2	16	16	16	128	6,083	3,040	48	12	16	10	140	1:1000	20,000	81	
		Ach	123,000	2	8	16	12	46	4,373	1,278	32	8	2	3	981	1:2750	20,000	79	
Ogun	2010	Tar	360,000	4	20	20	20	128	4980	450	24	6	240	10	30	1:800	180	87	
		Ach	125,000	4	16	20	13	83	2988	398	24	4	176	-	26	1:2812	184	46	
	2011	Tar	360,000	4	20	20	20	128	4980	450	24	6	240	10	47	1:800	180	81	
		Ach	125,000	4	16	20	13	83	1743	154	16	-	110	-	27	1:2812	147	46	



**SOUTH WEST ZONE (cont...)**

No. of Ext. Workers																		
State	Years		No. of Farm Families	Zones	SMSS	BES	BEA's/WIA	VEAs	VEA Visits	SPAT's	FNTs/MTs	MTRMs / OTRMs	MTPs	OFARs	No. of Groups /Coops	EA/Farmer Ratio	No. of farmers Trained	No. of farmers field schools
Lagos	2010	Tar	332,401	3	21	16	16	128	12,672	36	72	12	60	6	1,500	1:1200	50	27
		Ach	128,975	3	17	16	13	46	6,830	30	36	12	45	6	1,350	1:1612	47	27
	2011	Tar	332,401	3	21	16	16	128	12,672	41	72	12	60	6	2,000	1:1200	50	27
		Ach	130,000	3	16	16	13	48	7,350	35	42	12	47	6	1,500	1:2500	50	30
Edo	2010	Tar	180,000	3	15	18	18	144	1,697	300	26	12	63	7	2000	1:3750	1,000	-
		Ach	180,000	3	6	11	1	27	1,245	300	26	2	30	-	1500	1:3750	900	-
	2011	Tar	180,000	3	15	18	18	114	1,697	400	26	12	63	5	2000	1:3750	1,500	-
		Ach	180,000	3	6	11	1	27	1,273	400	26	3	40	-	1700	1:3750	1,000	-
Delta	2010	Tar	179,256	3	18	25	25	200	16,511	1,730	26	12	285	48	998	1:800	-	-
		Ach	179,256	3	11	23	13	105	8,922	1,004	13	3	-	-	725	1:1,559	-	-
	2011	Tar	179,256	3	18	25	25	200	16,511	1,730	26	12	285	48	998	1:800	-	-
		Ach	179,256	3	11	23	13	105	7,212	615	10	2	-	-	674	1:1,559	-	-
Ondo	2010	Tar	1,000	2	-	18	36	160	27,340	1,004	48	12	144	-	1,296	1:1480	2,000	91
		Ach	1,480	2	-	18	22	92	18,909	367	46	11	-	-	1,296	1:1480	500	91
	2011	Tar	1,000	2	-	18	36	160	33,000	1,084	48	12	18	-	1,296	1:1480	2,000	91
		Ach	1,480	2	-	18	22	92	10,450	162	32	6	16	-	1,296	1:1480	400	42

**SOUTH EAST ZONE**

No. of Ext. Workers																		
State	Years		No. of Farm Families	Zones	SMSs	BES	BEA's/WIA	VEAs	VEA Visits	SPAT's	FNTs/MTS	MTRMs / QTRMs	MTPs	OFARs	No. of Groups /Coops	EA/Farmer Ratio	No. of farmers trained	No. of farmers field schools
Anambra	2010	Tar	338,721	4	20	21	21	177	-	204	104	12	250	5	270	1:1000	-	-
		Ach	810	4	20	16	9	36	-	179	104	3	155	-	210	1:9409	-	-
	2011	Tar	338,721	4	20	21	21	177	2,276	204	104	12	250	5	270	1:1000	1890	54
		Ach	2,700	4	26	16	9	35	1,135	180	92	2	160	-	210	1:9409	1280	41
Enugu	2010	Tar	246,542	3	15	24	24	192	1,092	-	24	12	-	4	101	1:1500	200	81
		Ach	246,542	3	12	24	16	40	920	-	16	6	-	-	92	1:6013	150	37
	2011	Tar	246,542	3	15	24	24	192	1092	-	24	12	-	5	180	1:1500	200	27
		Ach	246,542	3	10	17	15	22	817	-	16	2	-	-	152	1:6848	103	27
Ebonyi	2010	Tar	435,329	3	15	24	24	260	35,776	-	26	12	-	6	50	-	-	13
		Ach	435,329	3	15	24	24	168	35,576	-	18	3	-	-	75	-	-	9
	2011	Tar	435,329	3	15	24	24	260	35,776	-	26	12	-	6	100	-	200	18
		Ach	435,329	3	15	24	24	257	10,000	-	9	0	-	-	55	-	45	9
C/River	2010	Tar	-	3	15	18	18	144	12,900	1200	12	12	1300	-	225	1:1000	-	30
		Ach	481,506	3	12	18	-	108	10,515	155	8	1	1000	-	225	1:4458	-	8
	2011	Tar	-	3	15	18	18	120	12,960	1200	12	12	1200	-	225	1:1000	-	54
		Ach	481,506	3	15	18	-	120	5,563	134	8	-	820	-	225	1:4013	-	54
Abia	2010	Tar	1,500,000	3	18	38	38	274	23,040	2,950	26	12	800	5	1,000	1:800	960	200
		Ac h	315,910	3	18	36	25	120	13,824	897	21	4	216	2	758	1:2700	936	-
	2011	Tar	1,533,315	3	18	38	38	274	11,232	9,940	26	12	600	5	1,000	1:800	960	200
		Ac h	315,910	3	18	36	22	117	3,728	360	19	2	240	-	768	1:2700	960	-

No. of Ext. Workers																		
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
Ak/Ibom	2010	Tar	685,095	6	35	40	40	272	45,312	-	26	12	472	-	-	1:1000	-	-
		Ach	685,095	6	35	40	35	222	35,915	-	26	4	107	-	-	1:3086	-	-
	2011	Tar	685,095	6	35	40	40	272	-	8,254	26	12	231	6	1,848	1:1000	-	-
		Ach	685,095	6	34	40	35	222	-	342	13	3	24	4	305	1:3086	-	-
Imo	2010	Tar	303,333	3	15	38	38	236	144	-	24	24	-	2,100	1000	-	1000	1000
		Ach	303,333	3	15	32	27	49	144	-	24	24	-	1,416	900	-	108	72
	2011	Tar	303,333	3	20	38	38	526	29,448	-	24	24	-	900	200	-	69	1000
		Ach	303,333	3	15	32	27	49	7,011	-	24	16	-	102	156	-	56	72
Rivers	2010	Tar	846,000	3	27	48	48	282	10,224	1,500	26	12	50	0	-	1:3000	100	0
		Ach	479,170	3	15	24	9	68	2,888	250	26	4	17	0	-	1:6748	88	0
	2011	Tar	500,000	3	12	48	48	282	9,360	1,632	26	12	0	0	300,000	1:1000	0	81
		Ach	479,186	3	7	20	9	68	3,093	482	16	0	0	0	2,942	1:6749	0	36
Bayelsa	2010	Tar	-	3	7	16	16	174	50	-	12	12	-	4	-	-	1000	27
		Ach	-	3	5	-	-	7	-	-	-	-	-	-	-	-	750	28
	2011	Tar	-	3	7	16	16	174	50	-	12	12	-	5	-	-	1200	81
		Ach	-	3	5	-	-	7	-	-	-	-	-	-	-	-	-	-

### 3.16.4 OFAR, SPAT and MTP Technologies

OFAR, (Small Holding Livestock Adoption Trial (SHLAT) for livestock) and MTP are different strategies for agricultural technology delivery to farmers. While OFAR is researcher-managed trials meant to adapt technologies to farmers' local conditions; SPAT is meant to popularize adapted technologies. Hence, the number of farmers participating in SPAT is more. MTP serves the same purpose as SPAT but the plot size is bigger. General evaluation reflects no improvement from that of 2010 record in the use of these strategies despite their importance in extension technology delivery. However, on Lagos and Oyo States provided reports on SHLAT while Kwara, Delta and Ekiti States report the use of OFAR and SPAT in fisheries.

#### 3.16.4a Technologies Evaluated under OFAR, SPAT and MTPs

States	Crops/ Livestock	OFAR Technology	Crops/ Livestock	SPAT Technology	Crop/ Livestock	MTPs Technology
Adamawa		Varietal trials Effect of planting dates on the yield of sweet potato Pest control on cowpea using insecticides and neem extract		Varietal trials Plant population 10x20cm for maize then 15cm drilling for rice		
Bauchi	Maize, millet, sorghum	Nitrogen efficiency in maize/cowpea mixture	Maize and cereal	Crop/livestock integration		Variety introduction, conservation tillage practice
Borno	Maize, cowpea and soy bean	Extra early maize varieties and high yielding varieties of soy bean	Lack of funding		Lack of funding	
Gombe	NA		Cowpea, rice, groundnut and soy bean	rice (varieties) NERICA 3& 2	maize	Quality protein maize (QPM)
Yobe		Varietal evaluation and cropping pattern	Sorghum, millet, sesame	Recommended agronomic practices		Varietal evaluation and trial
Jigawa	NA	NA				

**Table 3.16.4a Technologies Evaluated under OFAR, SPAT and MTPs (contd)**

States	Crops/ Livestock	OFAR Technology	Crops/ Livestock	SPAT Technology	Crop/ Livestock	MTPs Technology
Kaduna	Sorghum, groundnut and maize	Groundnut multi-location trial	Field crops	Fertilizer application technology, spacing for field crops	Maize, cassava and rice	Maize, cassava and rice production techniques
Kano	Not available		Not available		Not available	
Katsina	-	-	-	-	-	-
Kebbi	Groundnut, maize and soy bean	Maize/ soybean mixture research	None			Proper use of FYM and quick maturity varieties
Sokoto	None		None		None	
Zamfara	Maize, water melon and groundnut	Maize and water melon varietal trial, groundnut multi-location trials	Maize and groundnut	Use of vetiver grass for erosion	Millet and rice	Promotion of conservation tillage and improved millet varieties
Benue	Not available		Not available		Not available	
FCT	Yam, rice, cowpea	Cowpea, rice, and fluted pumpkin varietal trial	None		Yam, rice and cowpea	Yam minisett technique using mecca-musa
Kogi	Maize	Screening for striga-tolerant maize varieties	None			Important management practices for quality protein maize production
Kwara	Maize, rice and cattle	Demonstration of artificial insemination in cattle	Cassava, maize and fish	Maize striga & drought tolerance techniques.	Fish and vegetables	Improved fish processing technique (chokor)
Nassarawa	Yam, maize, pineapple	Organic fertilizers' performance on pineapple	None		Maize, cassava and yam	Cassava plant population and yam minisett technology
Niger	Not available		Not available		Not available	

### 3.16.4b Technologies Evaluated under OFAR, SPAT and MTPs (contd)

States	Crops/ Livestock	OFAR Technology	Crops/ Livestock	SPAT Technology	Crop/ Livestock	MTPs Technology
<b>Plateau</b>	Maize, rice, cowpea	Comparison of NERICA rice varieties	Not available		Crops	Performance of crystallizer and NEEM base in crops
<b>Taraba</b>	No OFAR on fields		No funds to conduct OFAR		No funds to conduct MTP	
<b>Other States</b>	-	-	-	-	-	-
<b>Akwa Ibom</b>	Cassava, cocoyam	Evaluation of the productivity and profitability of cocoyam peel in layer ration.	Cassava, maize and yam	Processing and storage of local food stuff	Cassava, maize and yam	
<b>Bayelsa</b>	None		None		None	
<b>C/Rivers</b>	Cassava	On farm evaluation of pre-released cassava varieties	Yam, cassava and sweet potato	Yam minisett, cassava sole	Cassava, maize and cocoyam	Cassava sole, cocoyam sole
<b>Rivers</b>	NIL at present		Plantain, cocoyam, egusi	Plantain/cocoyam inter-crop	NIL at present	
<b>Delta</b>	Sweet potato, fish, tomato	Effect if organic manure & NPK fertilizer on the growth and yield of sweet potato	Cassava, yam and goats	Housing goats raised on platforms	Maize, fish and rice	Hybrid maize production, home stead fish pond.
<b>Edo</b>	Goat, rice, banana	4 new rice varieties (trial) (collaborative work with UNAB)	Yam, cassava and maize	Yam minisett technology	Yam, cassava, maize	Cassava production
<b>Ekiti</b>	Cowpea and cassava	On-farm storage of grains, maize and cowpea in metal bins	Cassava, fish	Feeding of fish with pelleted feed	Not available	

**Table 3.16.4c Technologies Evaluated under OFAR, SPAT and MTPs (contd)**

Lagos	Goats, broiler chicks, coconut oil	Performance of goats feed assessment	Cassava, birds	Use of cassava waste as energy for laying birds ration		Important management practices for quality protein maize production
Ondo	Cocoyam, cowpea and rabbit	Evaluation of the performance of rabbit and sweet potatoes	Yam, soybean, sweet potatoes	Erosion control using sweet potatoes	Maize	Planting of maize on ridge
Ogun	None		Cassava, yam	Construction of concrete sun drying platform for cassava peel	Cocoyam and cassava	Cocoyam-white Ghana
Osun	-	-	-	-	-	-
Oyo	Maize, pigs, pepper	Enzyme in diets of growing pigs	Delayed funding		Delayed funding	

### 3.16. 5 TRAINING NEEDS OF THE ADPs in 2011

Generally all organizations need to train their personnel from time to time in order to strengthen skills, increase productivity and achieve higher organizational performance. This year as usual, the nation's Agricultural Development Programmes (ADPs) have provided data on their training needs. The needed trainings cover 31 subject matter areas and vary considerably across the ADPs. The **most-needed** training topics this year were: data gathering skills, Crop



improvement and pests & diseases management, Pre-season, post-season & other refresher trainings and Use of Computer, Web and other ICTs in agriculture. The **more-needed** ones were: Agricultural extension and communication methods, Agricultural projects planning and management, Fisheries culture, nutrition and breeding, human resource management and office administration, Participatory training techniques, and Survey methods and statistical analysis. Other trainings were **needed**, mostly indicated by only a few (less than 5% of the ADPs).

A major issue currently affecting training in most ADPs is its cost implications. Most ADPs indicated they are facing funding problems. Since they depend largely on government for funds, shortage of funds is now the primary problem in meeting their training needs. While staff trainings will continue to be a vital factor for their success, in the meantime in order to continue to train their staff, the ADPs have to explore other avenues of funding. Continuous advocacy for increased funding from states, establishment of collaborative and partnership linkages programmes which specifically favour training activities and diversifying their sources of income through direct revenue generation activities, are some of the possible options suggested.

**Table: 3.16.5 Training Needs of ADPs**

S/No.	Subject Matter of Training	No. of ADPs Requesting	Percentage
1	Accounting management	1	0.9
2	Agricultural extension and communication methods	6	5.4
3	Agricultural policy analysis	1	0.9
4	Agricultural products storage and preservation	3	2.7
5	Agricultural Projects Monitoring & Evaluation	3	2.7
6	Agricultural projects planning and management	9	8.1
7	Artificial insemination in cattle	1	0.9
8	Audio-visual Media Production	2	1.8
9	Community Demand-driven Development approach	2	1.8
10	Conflict resolution & management skills	1	0.9
11	Crop improvement and pests/diseases management	12	10.8
12	Farm Radio & TV programmes production	1	0.9
13	Farmer Field Schools (FFS) extension approach	2	1.8
14	Fisheries culture, nutrition and breeding	5	4.5
15	Food processing	1	0.9
16	Full-time academic training courses	1	0.9
17	Human resource management and office administration	5	4.5
18	Livestock extension methods	2	1.8
19	Livestock pests & diseases management	1	0.9
20	Livestock production and nutrition	2	1.8
21	Management of agricultural extension services	2	1.8
22	Market linkages	1	0.9
23	Meteorological training	1	0.9
24	On-farm soil erosion control	1	0.9
25	Participatory Agricultural Extension (PAE) approach	1	0.9
26	Participatory Rural Appraisal (PRA)	1	0.9
27	Participatory training techniques	6	5.4
28	Pre-season, post-season & other refresher trainings	13	11.7
29	Records and information management	3	2.7
30	Survey methods and statistical analysis packages	8	7.2
31	Use of Computer, Web and other ICTs in agriculture	13	11.7
			99.9



**Table 3.16.6 Training Needs of ADPs**

**NORTH-EAST ZONE**

STATE	TRAINING SUBJECT MATTER	CATEGORY OF PERSONNEL NEEDING TRAINING	NUMBER OF PERSONNEL	
			2011	2012
<b>Borno</b>	• NA	NA	NA	NA
<b>Yobe</b>	• Crop improvement	EAs, SMSs	323	323
	• Market linkages	EAs, SMSs	323	323
	• Preservation	EAs, SMSs	323	323
<b>Bauchi</b>	• Long term training programmes	All categories	20	30
	• Mid-term training courses	All categories	10	13
	• Short term courses	All categories	50	70
	• Refresher courses	Extension staff, Enumerators	510	510
<b>Gombe</b>	• Management of extension services	SMSs	3	5
	• Presentation and evaluation methods	SMSs	4	4
	• Computer application for project management	Management Staff	2	2
<b>Adamawa</b>	• Community driven development	EAs, SMSs	160	-
	• PRA	SMSs	18	-

**NORTH-WEST ZONE**

STATE	TRAINING SUBJECT MATTER	CATEGORY OF PERSONNEL NEEDING TRAINING	NUMBER OF PERSONNEL	
			2011	2012
<b>Sokoto</b>	• Data collection methods	SMSs	15	15
	• Pre-season training	BESs	50	50
	• Post-season training	BESs	50	50
<b>Kebbi</b>	• Extension	-	NI	NI
	• Meteorological training	Enumerators	"	"
	• Safety measures in spraying	-	"	"
	• Artificial insemination in cattle	-		
	• Fish breeding	-		
<b>Zamfara</b>	• Production technology	EAs, SMSs	40	40
	• CDD approach	EAs	30	40
	• Farmer Field Schools (FFS)	-	27	27
<b>Katsina</b>	NA	NA	NA	NA
<b>Jigawa</b>	• Crop pests and diseases identification	BESs, SMSs	271	271
<b>Kano</b>	NA	NA	NA	NA
<b>Kaduna</b>	• Integrated Pest Management (IPM)	EAs, BEAs, SZEOb	80	80

**NORTH-CENTRAL ZONE**

STATE	TRAINING SUBJECT MATTER	CATEGORY OF PERSONNEL NEEDING TRAINING	NUMBER OF PERSONNEL	
			2011	2012
<b>Taraba</b>	<ul style="list-style-type: none"> <li>Re-orientation training</li> <li>Proper handling of agro-chemicals</li> </ul>	Extension Staff Extension Staff, Community Reps	288 3000	288 3000
<b>Plateau</b>	<ul style="list-style-type: none"> <li>NA</li> </ul>	NA	NA	NA
<b>Nassarawa</b>	<ul style="list-style-type: none"> <li>Pre-season training</li> <li>APS training</li> <li>FUAs training</li> <li>Mid-season training</li> <li>Farmers training</li> <li>Women groups training</li> <li>Agro-forestry training</li> <li>Fisheries training</li> </ul>	Extension Staff, Technical Staff PME staff Fadama farmers Staff of: Ext, PHRD, TSD Farmer Groups Women Groups Forestry staff Practitioners staff	260 70 150 300 85 65 50 60	NI .. .. .. .. .. .. ..
<b>FCT</b>	<ul style="list-style-type: none"> <li>Research methodology</li> <li>Survey methodology</li> <li>Computer applications for project analyses</li> <li>Seed production and Certification</li> </ul>	Research officers Enumerators and extension Agents M&E Officers Subject Matter Specialists	10 67 6 12	10 67 7 12
<b>Niger</b>	<ul style="list-style-type: none"> <li>MSc degree</li> <li>PG Diploma</li> <li>HND</li> <li>OND</li> <li>MTRMs</li> <li>Pre-season training</li> <li>Post-season training</li> </ul>	BSc, BTech, HND Certificates Extension Workers ZPM, ZEO, SMSs, DDs ZPM, ZEO, SMSs, DDs ZPM, ZEO, SMSs, DDs	10 15 20 20 50 35 35	10 15 20 20 50 35 35
<b>Kwara</b>	<ul style="list-style-type: none"> <li>Communication training</li> <li>Computer media editing</li> </ul>	DESSs, Media Officers DESSs, Media Officers	4 4	4 4
<b>Kogi</b>	<ul style="list-style-type: none"> <li>New fish technologies</li> <li>Communication and Skills</li> <li>Farm Planning and Management</li> <li>Mgt of Extension and Advisory services</li> <li>Effective Livestock Extension methods</li> </ul>	SMS & EAs D. Extension, ZEO, BEAs & EAs Director PME,ZEO&ZMs Director Extn, ZM, DAS Director, Deputy Director, SMS and ZEO	4 10 20 10 20	6 15 20 10 20
<b>Benue</b>	<ul style="list-style-type: none"> <li>NA</li> </ul>	NA	NA	NA

**SOUTH-WEST ZONE**

STATE	TRAINING SUBJECT MATTER	CATEGORY OF PERSONNEL NEEDING TRAINING	NUMBER OF PERSONNEL	
			2011	2012
<b>Oyo</b>	<ul style="list-style-type: none"> <li>Basic computer training</li> <li>Effective store management</li> <li>Agric project planning &amp; management</li> </ul>	GL 01-09 GL 10-12 GL 15-16	5 3 2	7 4 3
<b>Osun</b>	<ul style="list-style-type: none"> <li>NA</li> </ul>	NA	NA	NA
<b>Ondo</b>	<ul style="list-style-type: none"> <li>Extension education</li> <li>Senior Management Training</li> <li>Audio-visual media production</li> <li>Records and information management</li> <li>ICTs</li> </ul>	Field Extension Staff Management staff Communication staff Record officers Communication staff	137 3 - 1 3	200 3 - 1 3
<b>Ogun</b>	<ul style="list-style-type: none"> <li>Demand-driven training methods</li> <li>Management training</li> <li>Data collection</li> <li>Gender specific training</li> </ul>	Heads: Ext, RID, BEA, WIA, BEAs Head: Ext, ZMs Head: WIA, SMSs, Enumerators BEAs, SMSs, WIA	119 46 23 17	119 25 23 17
<b>Ekiti</b>	<ul style="list-style-type: none"> <li>Statistical analysis</li> <li>Farm management practices</li> <li>Communication methods</li> <li>Use of excel for analysis</li> </ul>	PM&E Staff Extension Personnel/PM&E Staff PM&E Staff/Extension Staff PM&E Staff/Extension Staff	4 60 60 80	6 60 60 80
<b>Lagos</b>	<ul style="list-style-type: none"> <li>Methods of searching the web for agric info</li> <li>Use of computer graphics for report preparation and presentation</li> <li>Participatory extension methods</li> <li>Conflict management and resolution</li> </ul>	Heads: WIA, Field Activities, (HFA) Communication, ZMs  HFA, HWIA HFA	3 5  2 1	
<b>Edo</b>	<ul style="list-style-type: none"> <li>Crop and livestock pathology</li> <li>Evaluation needs</li> <li>Record keeping</li> </ul>	Chief Extension Officer (CEO) Zonal Eval. Officer (ZEO) BES, EAs, BEAs	7 4 45	Not Indicated (NI) NI NI
<b>Delta</b>	<ul style="list-style-type: none"> <li>Farm products storage</li> <li>Food processing</li> <li>Livestock production</li> <li>Oil palm</li> <li>Fisheries</li> <li>Crop pest and disease control</li> </ul>	Extension Agents (EAs) Block Extension Agents (BEAs) Chief Extension Officer (CEO) SMSs EAs	10 10 1 3 3 85	12 11 1 3 3 89

**SOUTH-EAST ZONE**

STATE	TRAINING SUBJECT MATTER	CATEGORY OF PERSONNEL NEEDING TRAINING	NUMBER OF PERSONNEL	
			2011	2012
<b>Enugu</b>	<ul style="list-style-type: none"> <li>Computer appreciation</li> <li>Human resource management</li> <li>Performance monitoring in agricultural organizations</li> <li>Project proposal writing</li> <li>Use of internet for agricultural and rural development</li> <li>Agricultural policy analysis</li> </ul>	Tech Officers Train. Officers, Admin. Officers Component HAS Planning Staff, Extension Staff Planning Staff	42 3 3 4 2 2	40 3 2 2 2 2
<b>Ebonyi</b>	NA	NA	NA	NA
<b>Cross River</b>	<ul style="list-style-type: none"> <li>Use of GPS</li> <li>Capacity building on ICTs</li> <li>Refresher training</li> </ul>	Extension staff EAs, SMSs EAs, SMSs	120 150 150	120 150 150
<b>Akwa Ibom</b>	<ul style="list-style-type: none"> <li>Advanced office management &amp; administration</li> <li>Human resource management</li> <li>Training needs and strategic programmes</li> <li>Account performance improvement skills</li> <li>Agric project monitoring &amp; evaluation</li> <li>Effective extension methods</li> <li>Effective records and investment management</li> </ul>	Directors, Asst. Ds, ZMs Directors, Manpower Officers Training Officers Account, Finance & Audit Officers Director M&E, Officers M&E SMSs Admin Officers	22 1 10 3 35 8 -	23 2 12 3 35 8 -
<b>Abia</b>	<ul style="list-style-type: none"> <li>Use of advanced ICTs</li> <li>Use of statistical packages for data analysis</li> <li>On-farm erosion control</li> </ul>	SMSs, Heads of departments Data analysts, evaluation officers, SMSs SMSs, Agric officers	38 45 28	38 50 30
<b>Anambra</b>	<ul style="list-style-type: none"> <li>Radio and TV programmes production</li> </ul>	Communication Officer Graphic Artist	1 1	- -
<b>Imo</b>	<ul style="list-style-type: none"> <li>Training on skill-gap analysis</li> <li>Livestock extension</li> <li>Management of programmes</li> <li>Computer appreciation</li> <li>Orientation training for junior staff</li> <li>Agricultural projects planning</li> </ul>	Heads of departments, Management Staff BESSs, SMSs Management Staff Secretarial staff Junior staff Senior management staff	6 6 20 10 230 40	- - - 10 200 10
<b>Bayelsa</b>	NA	NA	NA	NA
<b>Rivers</b>	<ul style="list-style-type: none"> <li>Use of ICTs</li> <li>Livestock feed formulation</li> <li>Fish feed formulation</li> <li>Utilization of NYPA palm</li> <li>Agric enterprise management</li> <li>Cocoyam bacterial treatment</li> <li>Coconut and orange dieback treatment</li> </ul>	Directors, SMSs, Facilitators EAs, BESSs, SMSs Farm Managers (FMs) EAs, BESSs, SMSs SMSs, FMs, Directors SMSs EAs, BESSs, SMSs	20 18 12 10 9 20 18	NI " " " " " "

### 3.16.5 Problems of Extension

Problems of Extension affecting all the Geo-political Zones, include Lack of Counterpart Funding for all Agricultural Development Projects and Ministries of Agriculture, inadequate and un-qualified Extension Personnel, lack of Mobility for field work, and late arrival of planting materials. Others are natural hazards such as in-security, drought, pests and diseases. However only the following states, Rivers State, Imo State, Anambra State, Edo State, Lagos State, Ogun State, Osun State, Benue State, Ondo State, Kogi State, Kwara State, Niger State, FCT, Kaduna State, Jigawa State, Kebbi State, Adamawa State, and Bauchi State reported that the funding they received From their various State Governments were fair for the conduct of basic Extension Activities. Other problems of Extension Services as reported by 80% of all the states involves in-adequate qualified Extension Personnel, while 20% of the other problems involves lack/in-adequate serviceable vehicles for Field Staff, as well as lack of incentives/motivation for Extension Staff. In Kwara State, lack of sufficient Laptops, Rain Coats, Rain Boots, and sprayer for Extension Services were reported.

### 3.16a General Problems

The general problems observed on the field includes lack of response to questionnaires by farmers, due to educational background and impression that Government is frustrating farmers effort, and late -arrival of planting materials, inadequate supply of inputs such as Agro-chemicals for fish, as well as high Cost of labour. Other problems are associated with natural hazards such as flood, drought, pests/diseases.

More specifically the following are major problems needing research:

- Shortages or high costs of farm machineries with the attendant high labour costs
- High cost of production inputs that tend to discourage their optimal use with particular recourse to fertilizer
- Low uptake of new improved crop varieties due to lack of quality seeds which is heightened by the influence of adulteration
- High incidence of pesticides failure due to adulteration and poor handling of pesticides and decreasing crop yields
- Declining soil fertility
- Increasing salinity/acidity
- Infestation of *Striga hermonthica* in cereals, *Alectra* and *Striga gesnerioides* attacks on some legumes
- Flooding in some cases

**Table 3.16.5 General Problems  
North East Zone**

State	Problems of Extension	Problem Research	Needing	Commodity	NGO Name	Email address/Address	Activities	Location covered
<b>Borno</b>	Lack of Funds	Effect of Striga and drought on crop performance		Crops	BMG Foundation	Gwoza and Biu	Non-use of Chemicals	<b>State Wide</b>
<b>Yobe</b>	Lack of permanent site	Agricultural development		Agro-forestry	Family alive network	Akinye base at yahoo.com	Agric. Support to rural people	<b>Whole state</b>
<b>Bauchi</b>	Extension Material Crop processing Preservation	Adaptable Irrigation Facilities		Irrigation Engineering Extension	SASAKAWA GLOBLE 2000	No 8 Kano road, Nassarawa GRA, Kano.	MTP Technology to farmers	<b>State wide</b>
<b>Gombe</b>	Inadequate number of extension personnel and funding constraints	Water potentials for irrigation		Irrigation and engineering	Development exchange centres. (DEC)	Bauchi	Extension micro financing	<b>Bauchi</b>
<b>Adamawa</b>	No capacity building. High EA/Farmer ratio	Production of woodlots to meet world standards.		Agro-forestry	SAA (SG 2000)	NA	TOP, WAD, PTPs, PHP	10 LGAs

**North West Zone**

State	Problems of Extension	Problem	Needing Research	Commodity	NGO Name	Email address/Address	Activities	Location covered
<b>Sokoto</b>	Under-funded and under-staffed and inadequate qualified personnel.	Inadequate equipment and chemicals		Crops				
<b>Kebbi</b>	Lack of training and incentives and poor extension services.	High cost of feeds		Livestock				
<b>Zamfara</b>	Poor Funding & lack of Mobility	Identification and control of insects causing powdery webs in irrigated vegetables		Crops	NA	NA	NA	<b>NA</b>
<b>Jigawa</b>	Lack of enough Extension Personnel	Intensify Research on Moringa Olifera		Agro-forestry	SG 2000	NA	Crop Production and Agro-Processing.	<b>State Wide</b>
<b>Kano</b>	Gross underfunding	Diseases on Cocoyam.		Crops	NA	NA	Extension Activities	<b>State Wide</b>
<b>Kaduna</b>	Salaries are not attractive. No incentives	Field formulation and nutrition		Livestock	BATN		Maize production	z/Aya, Igari LGAS

## North Central Zone

State	Problems of Extension	Problem Needing Research	Commodity	NGO Name	Email address/Address	Activities	Location covered
Taraba	Internal administrative deviation from set principles	Executing extension services with minimal funding	Extension	NA	NA	NA	NA
Plateau	Lack of mobility of field staff	Control of fruit-fly in mango. Processing of snearnut into oils and butter	Crops	Dev. ECWA	ECWA Hqtrs Jos	Training and Ext. services	State-wide
Nassarawa	Shortage of staff, poor funding, poor motivation and lack of mobility	Formulation of floating fish feeds locally.	Fisheries	YMCA	Ikposoge-Obi L.G.A	Demonstrations and private extension delivery	Obi L.G.C
FCT	Shortage of man power .	Species combination for profit maximization	Fisheries	PROGREEN		Storage of cowpea	All over FCT
Niger	Visual aids for extension workers. Extension guides flip-chart. Utility vehicles.	Use of indigenous technologies in the treatment of dermaphilonsim (Kirchi) in cattle.	livestock	NOICADA	AIFMF Qterslife camp. AI	Control input sales	Whole state and beyond
Kwara	Laptops, rain coat and boot, sprayer for Extension Services.	Addressing low yield of fish in aquaculture	Fisheries	Roll back malaria	NA	Distribution of mosquito treated nets to farmers	Ilorin
Kogi	Inadequate number of extension personnel	How to make local fish feed that floats	Fisheries	DDS	DDS-Idah		
Benue		Lack of fingerlings and poor funding	fisheries	NA	NA	NA	NA

## South West Zone

State	Problems of Extension	Problem Needing Research	Commodity	NGO Name	Email address /Address	Activities	Location covered
Oyo	Lack of funds	Die back in mango	Agro-forestry	JDC	Orita Basorun	Extension & empowerment	Entire state
Osun	Inadequate staffing due to retirement	Poor harvest storage	Crops	Catholic Diocese of Osun		Fish farming	Oloponna
Ondo	Inadequate mobility of staff in headquarters and zonal offices	Effective control of diseases in tomato(bacterial wilt)	Crops	COWAN	Ijapo Estate, Akure	Training of women farmers	Entire state
Ogun	Non recruitment of existing vacancies	Control of Bacterial Blight in Tomatoes	Crops	IDDC Ijebu-ode	<a href="mailto:ldbpr@yahoo.com">ldbpr@yahoo.com</a> 234-037-432182	Micro credit financing	Ijebu Axis
Ekiti	Poor fuelling allowance	Sigatoka disease	Agro-forestry	NA	NA	NA	NA
Lagos	Number of extension services officers .	Hatchery management.	Fisheries	BATN	Epe	Fish farming dev. Project	Epe
Edo	Shortage of vehicles and other logistics	High cost of feeds in fish farming	Fisheries	LAPO(live above poverty org.)	NA	Credit to farmers	Entire state
Delta	Poor Funding, Low Motivation & High Cost of Farm Inputs	Tomato Disease, Tuber Rot & Bird Flu	Agro-Forestry	Saros Agric	NA	Control input sales	Entire State

### South East Zone

State	Problems of Extension	Problem Research	Needing	Commodity	NGO Name	Email address/Address	Activities	Location covered
Enugu	Non-payment of Counterpart Funding	Maize Red Monkey attack		Economic empowerment of women	ASRUDE	22 <sup>nd</sup> , 2 <sup>nd</sup> Avenue T/Ekulu	Extension Activities	State Wide
Ebonyi	Inadequate Funding, Poor remuneration of Extension Workers	African Rice Gall Midge, Production of Poultry & Fish.		Crops	Sudan United Mission	Onuenyim Izzi LGA	Extension Crop Breeding	State Wide
Cross River	Non –payment of field allowance to EAS	Use of local materials for mushroom production		Agro-forestry	SARO AGRO SCIENCES	info@agrosaro.com	Collaborative Ext.	State-wide
Akwa Ibom	Inadequate funding of sub-programs	High mortality in poultry		Livestock	NA	NA	NA	NA
Abia	Inadequate Funding and lack of Vehicles.	Screening of Cocoyam varieties.		Crops	Idea Builders	info@builders.org	Crop Production	Arochukwu/Ohafia LGA
Anambra	Inadequate number of Extension Agents	Upgrading of Tilapia Production.		Crops	Duns Rural Industrialization Project	driping@usa.com	Extension Activities	Ameke Village, Nanka
Imo	Very low ratio of Extension Agents to farmers.	Mortality in Snails dry seasons		Agro-forestry	S-Six Farms	NA	Extension Activities	State Wide
Bayelsa	No mobility and funds	Storing of cassava stems during floods.		Fish feed formulation from locally available raw materials	NA	NA	NA	NA
Rivers	Insufficient staff	No fund for statistical collection and survey		Fisheries	NA	NA	NA	NA



## 4.0 Summary and Conclusion

This year's Wet Season Agricultural Performance Survey (APS) was conducted between 4<sup>th</sup> and 14<sup>th</sup> September 2011. The survey was jointly carried out by the National Agricultural Extension and Research Liaison Services (NAERLS) and the National Programme of Food Security (NPFS) in collaboration with several other stakeholders in agricultural data generation and use. 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.

Eighteen multi-disciplinary teams of three scientists each carried out the exercise across the states and FCT using Participatory Rural Appraisal (PRA) techniques. A total of 54 scientists were involved in the survey. 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 results showed that rainfall situation in 2011 was substantially similar to that of 2010. The rains started between April and May in the North-East and North-West zones. Heavy rains that resulted in floods occurred this year in Oyo, Ondo, Lagos Sokoto, Kano, Jigawa and Adamawa states, causing severe crop damages and casualties.

Agricultural production in the country still relies mostly on manual labour. About 8 states and the FCT did not provide any data on availability of tractors. This paucity of information is worrisome as it makes proper planning for tractorization virtually impossible. The data available showed that the number of functional tractors for farm operations decreased from 2,117 in 2010 to 1,579 in 2011. Related to this is the gradual disappearance of functional Tractor Hiring Units in many states. The average price charged for farm operations (N12,000 to N15,000 per tillage operation) showed an increase beyond that for 2010 (N8,000 - N9,000) which is putting the patronage of the services beyond farmers' reach.

Frequent breakdowns, scarcity of genuine spare parts, poor maintenance practices and high running costs and lack of reliable tractor operators remain the major problems farmers listed. In Borno, Zamfara and Kano states, however, 20-25% increases in the adoption in work bulls were reported.

During the year, many states procured and distributed planting materials for major cereals, legumes, tree crops and solanaceous crops. The commitment shown by the states in the amounts released for the procurement was, however, inadequate, as most of the planting materials were insufficient. The materials were only slightly considered affordable by farmers and there were limited reports of questionable viability. Sources of planting materials remained the National Agricultural Seed Council, Seed Companies and Research Institutes. Many states did not put sufficient efforts on the procurement and distribution of cash crops, such as groundnuts, ginger, sesame, cocoa, oil palm, rubber, etc.

In addition to seeds and other planting materials, some quantities of agro-chemicals (herbicides, pesticides, fungicides and insecticides); agricultural equipment, such as tractors, storage bins, sprayers, water pumps, work-bulls and agro-processing equipment like rice huller were procured and sold to farmers. Though the demand for boom sprayers increased during the year under review, their prohibitive cost and unavailability hindered widespread usage. In Yobe, Plateau, Kogi, Benue, Ogun, Delta, Anambra and the FCT, some farm inputs and agro-chemicals were procured and distributed to farmers. The sources of these equipment/agro-chemicals included various agro-chemical companies, ADPs, NPAFS and the open markets.

Most of the equipment and agro-chemicals supplied were neither adequate nor affordable to farmers in many of the states that provided information. As in others years, the impaired access to modern inputs compromised expansion of production and the prospects of increasing youth's participation in agriculture.

Fertilizer procurement data were available for most of the states, except for Gombe, Katsina, Kwara, Osun, Ondo, Lagos, Enugu, Ebonyi, Cross River and Rivers states. The data also indicated a decline in procurement and distribution in comparison with 2010. Government subsidized price per 50kg of NPK ranged from ₦1,000 to ₦3,500. Zamfara State distributed fertilizers to farmers at the lowest rate of ₦1,000 per 50kg, while other states sold for between ₦2,500 and ₦3,500. Fertilizer distribution was grossly inadequate throughout the country, as data indicated that farmers' access to government procured fertilizers was insufficient during the year.

Labour costs for farming operations varied slightly during the 2011 cropping season, as compared to 2010. North-East had the lowest marginal increase of about 7%, while South-West recorded the highest increase of about 32%. The national average of labour cost record increase was 15%.

Comparisons of market prices of major food commodities across the country were made for July 2010 and July 2011. There was an increase in the prices of maize, millet and rice in the NE, NC and the SW zones. Adamawa State experienced about 56% increase in the price of rice, despite growing rice imports, while in the FCT, maize and millet had 40% price increase. There was, however, decrease in the prices of maize, millet and rice in the NW and SE/SS; while Sokoto had about 23% decrease in maize prices and 36% in millet, Kano and Imo had 52% and 32% decrease in rice prices, respectively, and Rivers had a decrease of about 33% in the price of maize.

Increase in the prices of sorghum was experienced in the NE, NC and NW, with Kaduna having the highest (52%). There was a slight decrease in the prices of cowpea in the NW, NC and SW. Stable prices were reported for cassava products in the NE, while an increase was reported in the NW, with Sokoto having an increase of 27% and Oyo, 56% in gari prices. Kwara reported about 63% reduction in the price of cassava tubers; 35% for gari and 48% in cassava flour. Oyo reported 69% decrease in cassava tuber price, and 30% decrease in the price of cassava flour, while Ebonyi had about 36% decrease in gari prices. Sharp increases in the prices of yam tubers, flour and sweet potato were recorded in the NW, NC and SW.

Sharp increases in the prices of melon were reported. The increases were 35% in Bauchi, 70% in Nassarawa, 89% and 81% in Osun and Ebonyi states, respectively. Price increases for potatoes were more than 94% and 45% in Bauchi and Imo states, respectively. Also, the price of soybean this year increased by more than 80% over that of 2010 in Kano, Oyo, Zamfara and Kaduna states.

With regard to animal products, a slight increase in the prices of beef and goat meat was reported in the NE and NW— Bauchi (16%), Adamawa (18%), Sokoto (13%) and Zamfara (17%). But in NC and SE, significant increases in the prices of beef and goat meat were reported— Kwara (78%), Cross River (97%) and Rivers (136%). Bauchi, however, reported a 56% reduction in the price of chicken. Marginal increases in the prices of eggs were reported in Bauchi (32%), Kaduna (28%) and Benue (26%). Taraba and Cross River reported an increase of 42% and 425%, respectively, in fresh fish prices. Very high increases were experienced in the prices of both smoked and dried fish— Rivers (433%), Cross River (261%) and Bauchi (76%).

The area devoted to production of maize increased slightly from 5.06 million hectares in 2010 to 5.153 million in 2011. The land areas for yam and cowpea cultivation remained substantially unchanged at 4.26 million and 3.2 million hectares respectively. That of sorghum decreased slightly from 5.04 million to 4.89 million hectares. Rice area increased from 2.55 million to 4.57 million hectares during the same period. Production areas for millet and soybean, however, decreased slightly. Also, cotton area decreased again this year for the sixth time in a row.

The output forecast this year for maize is 9.18 million tons, compared with 9.0 million tons produced in 2010, which represents a 4% increase. Sorghum production will decline slightly from 7.02 to 6.89 million tons. About 4.56 million tons of rice is the forecast this year, which is comparable with that of last year. Millet production is estimated to decrease from 1.38 million tons to 1.27 million tons this year. The record of 52.3 million tons of cassava produced in 2010 will be raised slightly to 52.4 million tons this year.

Soybean output is anticipated to decrease slightly from 599,559 tons produced in 2010 to 564,760 tons in 2011. Groundnut production will increase marginally from 2.952 million tons produced in 2010 to 2.963 million tons in 2011. Cotton output will however decrease from 73,097 tons in 2010 to 72,097 tons in 2011. On overall, the food situation prospect for 2011 is only slightly better than that of 2010 despite favourable rainfall situation that prevailed in 2011. Several factors account for the poor growth in output figures expected in 2011 among which are poor extension services, low use of improved inputs, such as seeds, poor access to credits, high cost of inputs, pest and disease attacks and incidences of flood and dry spells that occurred at different parts of the country.

The purpose of establishing a national grain reserve is to ensure an all-year round availability of food and food commodity price control. However, majority of the states in the country did not have any record of stored grains and distribution for 2011 and the private sector is yet to key into the effort.

In the 2011 cropping season, incidences of crop pests and diseases were generally light or moderate in severity across the country. In a few cases however, heavy infestations occurred. For instance quaela bird attacks on rice and cereals were heavy in Gombe, Ogun, Ondo, Edo and Anambra states; stem borer and striga attacks remained severe on millet, sorghum and maize among the cereals and on cowpea and Alectra attack on groundnut occurred in NE, NC, and SE/SS. Also, blast attack on rice was heavy across the country especially South East and South South zones. Thrip attack on cowpea was also heavy in Ekiti and Kano. Leaf spot infestation on groundnut was heavy in Adamawa and Nassarawa states, while mealy bug on yam was reported heavy in Plateau. Dieback infestation on cocoyam was heavy in the South East/South-South Zone and light in the North West. Tomato wilt was especially heavy in Oyo State, just as termite attack on yam and early maturing maize. Owing to delay in the cessation of rainfall, concern for aflatoxin in many of the early maturing grain crops has arisen, as this may warrant implementation of elaborate control measures, of which farmers are yet to learn.

Like the case in the previous years, unavailability of data plagues the livestock and fisheries sub-sector in Nigeria. Only twelve states provided scanty data on livestock population and fish production. In many states, production estimates for cattle, sheep, goats and poultry were not very impressive. Large populations of poultry were estimated in Abia, Ekiti, Niger and Kano. Rivers State reported the highest estimate of pigs (3.6 million). In cattle production, the following diseases were reported: CBPP in Bauchi and Jigawa; FMD in Bauchi, Bayelsa, Jigawa, Kano and Rivers states; and feed poisoning in Bayelsa, Jigawa and Kano states. Other reported disease conditions for cattle were diarrhoea, catarrh, mange, helminthiasis and ectoparasites. The coverage of diseases that affected cattle was state-wide in the affected states. Yet many of the stocks were vaccinated against the prevalent diseases. There were reported cases of PPR, worm infestation, pneumonia, diarrhoea, helminthiasis and chronic respiratory diseases in Kebbi, Kaduna, Niger, Kogi and Ondo, respectively. It is noteworthy that Kano, Kogi, Bayelsa and Rivers states treated and vaccinated a high number of sheep and goats. Most of the farmers are practising both intensive and free range local fowls; a few exotic birds were reared mainly by large-scale commercial farms in most of the states.

High costs of feed and medication were major constraints to farmers in the livestock industry. However, a good number of birds in all the states were vaccinated to enhance production. Data for aquaculture and fisheries were largely not available in many states and even those available were scanty. Out of the 36 states and FCT, only Osun procured and distributed fisheries input, such as fishing nets, fingerlings and feeds in 2011. Many states did not procure inputs due to lack of fund in 2011. In aquaculture, major diseases experienced include bacterial, fungal, viral diseases and broken skull. Poor feeding, insufficient water supply and poor management of fish stock are other challenges faced by farmers.

Across the states, the number of VEAs and other front-line extension agents did not improve. Extension to farmers' ratios remained at record levels that are higher than 1:1,800 farmers. Kano, Bauchi, Yobe and Ebonyi states had the highest numbers of VEAs of 780, 306, 265 and 257, respectively. The number of VEAs in Ebonyi State was an increase of 65% over the 2010 record. The dwindling funding of ADPs across the country might have been responsible for non-employment of additional VEAs.

Anambra, Enugu and Rivers states had the highest EA: farmer ratio, with 1:9,407, 1:6,848 and 1:6,749, respectively. The use of Management Training Plot (MTP) and On-Farm Adaptive Research (OFAR) slightly increased in a few ADPs. About 62% of the ADPs did not conduct Small Plot Adoption Technique (SPAT) for the year under review. Ekiti State conducted the highest number of SPATs (1,278), while Adamawa State had the highest number of MTPs (10,000) and Imo State, the highest number of OFAR trials (900) which it conducted under the AFDB-CBARBD project. Kwara, Delta and Ekiti states mounted innovative OFAR and SPAT on fisheries, using traditional earthen ponds.

The conduct of fortnightly training (FNT) was not a popular activity among many ADPs. For instance, about 41% of the states did not record any FNT for 2011. The modification of FNT to MT seems not to have improved the exercise. In Edo and Imo states and FCT, however, almost 100% achievement of FNT targets was recorded. Similarly, only Lagos State and the FCT reported 100% achievement of MTRM targets. Many ADPS have abandoned the conduct of MTRMs owing to funding constraints.

Many states reported delay or lack of payment of counterpart fund for key development projects, and also complained of inadequate skilled extension personnel, lack of mobility for fieldwork, as well as the lack of incentives/motivation for extension staff.

In 2011/2012, the major training needs of the ADPs include skill improvement in areas of crop improvement; pest and disease management; agricultural project planning and monitoring; building agricultural extension communication skills of extension specialists; management of tractor operations; fish culture handling; nutrition and breeding; and agricultural produce' storage, processing and preservation, and strategies for promoting public compliance to agricultural policy.

## 5.0 Recommendations

The following recommendations are made based on data collected, interactions with stakeholders in agriculture and observations during the field trips:

1. Traditional farm tools remained dominant in agriculture in Nigeria and a disincentive for the engagement of youths. Though government had made some modest investments in the provision of tractors, lack of processing machines is constraining optimal use of the tractors and expansion of production.

In order to stimulate youth participation in agriculture and productive use of available tractors, significant investment in processing machines and cottage level processing skill development is required.

2. Inventory of agricultural machineries in Nigeria is currently lacking, which makes planning for mechanization difficult.

A nationwide survey should be commissioned to document the actual needs and available tractors and machines for processing in order to guide the transformation agenda of the country.

3. Climate change is complicating the pressure on the national research system to provide novel technologies for transformation of the nation's agriculture, but they are besieged by a myriad of infrastructural and funding/ personnel problems.

There should be improved funding for research to develop appropriate technologies for mitigating the effects of climate change, planting multipurpose 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. Also, the number of unemployed graduates that could be mobilized to realize the transformational agenda is yet to be determined.

A national census of extension personnel and unemployed graduates should be conducted 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 complimented 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. 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. Increasing production cost, coupled with low producer prices, is making agriculture unattractive. The provision of growth support incentives needs to be enhanced and sustained using schemes that benefit the target farmers, such as the improved voucher scheme.
8. Across the country, extension service institutions are weak and showing signals that they cannot anchor the anticipated transformation agenda of government unless there are reforms. Central to the problem of extension service is the structure of its funding and administration. At a national level, extension services do not have a coordinating or supervisory support that trickles down to all levels of governance such that there are fairly good measures of congruence towards the national food security goal. This has occasioned an extension system in disarray. In many states, the provision for counterpart funding is overarching or the only provision for agriculture. Moreover, uncoordinated intervention of projects by donor agencies in many states depletes extension personnel and the capacity of the ADPs to institutionalize state-wide agricultural developments. The problem is complicated by poor involvement of the local government councils in agricultural extension service.

There is thus an urgent need for the establishment of a Department of Agricultural Extension at the Federal Ministry of Agriculture and Rural Development to coordinate and promote active involvement of all tiers of government in agricultural extension services.



**Appendix 1**  
**NAERLS OFFICES AND CONTACTS**

NO	Addresses	Mailing	E-mail	Telephone/ Fax Nos	Website
1.	HEADQUARTERS	NAERLS, ABU, ZARIA P.M.B. 1067, Zaria	E-mail: <a href="mailto:director@naerls.gov.ng">director@naerls.gov.ng</a>	234-69- 879449	<a href="http://www.naerls.gov.ng">www.naerls.gov.ng</a>
2.	ZONAL LIAISON OFFICES	<i>Located in the 5 Agro-ecological Zones across the country</i>			
a.	NORTH WEST ZONAL OFFICE	NAERLS, P.M.B. 1067 Zaria, Kaduna State.	<a href="mailto:nwoffice@naerls.gov.ng">nwoffice@naerls.gov.ng</a>	08054468701	<a href="http://www.naerls.gov.ng">www.naerls.gov.ng</a>
b.	NORTH EAST ZONAL OFFICE	C/O Lake Chad Research Institute, P.M.B 1293, Maiduguri Borno State	<a href="mailto:neoffice@naerls.gov.ng">neoffice@naerls.gov.ng</a>	07028149679	<a href="http://www.naerls.gov.ng">www.naerls.gov.ng</a>
c.	NORTH CENTRAL ZONAL OFFICE	C/O National Cereals Research Institute, P.O. Box 770 Bida, Niger State.	<a href="mailto:ncoffice@naerls.gov.ng">ncoffice@naerls.gov.ng</a>	07028149676	<a href="http://www.naerls.gov.ng">www.naerls.gov.ng</a>
d.	SOUTH EAST ZONAL OFFICE	C/O National Root Crops Research Institute, P.M.B 1006 Umudike, Umuahia, Abia State.	<a href="mailto:seoffice@naerls.gov.ng">seoffice@naerls.gov.ng</a>	07028149680 08037800712	<a href="http://www.naerls.gov.ng">www.naerls.gov.ng</a>
e.	SOUTH WEST ZONAL OFFICE	C/O Moor Plantation, P.M.B. 5029, Ibadan, Oyo State.	<a href="mailto:swoffice@naerls.gov.ng">swoffice@naerls.gov.ng</a>	07028149784	<a href="http://www.naerls.gov.ng">www.naerls.gov.ng</a>
f	South South Zonal Office	c/o National Stored Products Research Institute (NSPRI), Ikwere Road, Port Harcourt, Rivers State	<a href="mailto:Ssoffice@naerls.gov.ng">Ssoffice@naerls.gov.ng</a>	08063928230	<a href="http://www.naerls.gov.ng">www.naerls.gov.ng</a>