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AND RURAL DEVELOPMENT



AGRICULTURAL TRANSFORMATION AGENDA

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By Honourable Minister of Agriculture
and Rural Development

Dr. Akinwumi Adesina, CON

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H.E. Goodluck Jonathan, President of the Federal Republic of Nigeria, center, addresses the World Economic Forum Grow Africa.

FOREWORD

In support of H.E. President Goodluck Jonathan's Transformation Agenda, the Federal Ministry of Agriculture and Rural Development is implementing an Agricultural Transformation Agenda (ATA).

The goal of ATA is to build commodity value chains and the institutions required to unlock the country's huge agricultural potentials. Expected outcomes include adding 20 million metric tons of food to the domestic food supply by 2015, creation of 3.4 million jobs, import substitution – through the acceleration of production of local staples to reduce dependence on food imports - and to turn Nigeria into a net exporter of food.

The principal strategy of the ATA is to treat agriculture in Nigeria as a business, rather than a government funded development project. Using a package of favourable government policies, including agricultural, fiscal, and infrastructural incentives, ATA seeks to attract private sector investments and skills needed to rebuild Nigeria's position as the region's undisputed agricultural powerhouse.

It is gratifying that under the ATA, the agricultural sector has witnessed tremendous progress and growth, while the momentum towards the actualization of the set goals continuously increases.

As you will observe in this mid-term report of ATA, the growth across all agricultural sub-sectors of Crops, Livestock and Fisheries has been revolutionary and the result remarkable.

The Growth Enhancement Support (GES) Scheme has provided for the first time an opportunity for small farmers to directly access input supplies, a critical factor with respect to primary production. In the past four decades, despite ever increasing fertilizer subsidies by the government, no more than 11% of smallholder farmers receive subsidized fertilizer from the government.

Under the ATA, the decades of input supply challenge for farmers has been replaced with an efficient and stress-free system of fertilizer delivery; farmers now enjoy a new lease on life with direct supplies. The dispensing of fertilizer and other agro-inputs to the farmers requires their registration, including capture of biometric data. The National Farmers Registration Exercise has captured data for close to 10 million farmers and collected them in the National Farmers' data base.



H.E. Goodluck Jonathan, President of the Federal Republic of Nigeria
and Dr. Akinwumi Adesina, Honourable Minister of Agriculture

Our gratitude goes to Almighty God and to His Excellency, President Jonathan, for his strong leadership and for his towering commitment, support, and motivation to reach for the skies in the implementation of ATA implementation process.

Our thanks also goes to the National Assembly for its support, and to our primary constituency, Nigeria's hard working farm families, to members of the Federal Ministry of Agriculture, and to my team of consultants for coming with us on this journey of faith and determination to rebuild the broken walls of Nigeria's agriculture.

*Honourable Minister Dr Akinwumi Adesina
Federal Ministry of Agriculture and Rural Development
Federal Republic of Nigeria*

Crop, livestock, and fisheries value chains have recorded spectacular successes in primary production, processing, and marketing as may be observed in this report.

No doubt, the performance of the agricultural sector has soared as demonstrated by the sector's ability to attract local and international private and public sector attention with concomitant growth in investment commitments from the private sector.

As you will observe in this mid-term report of ATA, the growth across all agricultural sub-sectors of Crops, Livestock and Fisheries has been revolutionary and the result remarkable.

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ACRONYMS

ATA	Agricultural Transformation Agenda	VEOPAN	Vegetable Oil Processors Association of Nigeria
GES	Growth Enhancement Support	RMRDC	Raw Material Research and Development Council
DFID	Department for Foreign Development (UK)	NIFOR	Nigerian Institute for Oil Palm Research
USAID	US Agency for International Development	NASC	National Agricultural Seeds Council
OMR	Optical Market Reading Forms	ARCN	Agricultural Research Council of Nigeria
RIFAN	Rice Farmers Association of Nigeria	FCAPT	Federal College of Agricultural Produce Technology
IITA	International Institute Tropical Agriculture	FAVC	Fisheries and Aquaculture Value Chains
FIRO	Food and Industrial Research Organization	FCWC	Fisheries Committee for the West Central Gulf of Guinea
TFI	Thai Farms International	FEPAR	Federal Public Administration Reform Programme
CTA	Cassava Transformation Agenda	SCPZs	Staple Crop Processing Zones
RTEP	Root and Tuber Expansion Program	SASCO	States' Agricultural Statistics Committee
NRCRI	National Root Crop Research Institute	SOPs	Standard Operating Procedures
BMGF	The Bill and Melinda Gates Foundation	CAHW	Community Animal Health Workers
STVC	Sorghum Transformation Value Chain	AI	Artificial Insemination
NACGRAB	National Centre for Genetic Resources and Biotechnology	PAN	Poultry Association of Nigeria
AMP	Aba Malting Plant	DOCs	Day Old Chicks
CMTDC	Cassava Market and Trade Development Corporation	FGCG	Feed Grade Cassava Grits
CMTC	Cocoa Marketing and Trade Corporation	PPR	Pestes des Petite Ruminante
F.C.T.	Federal Capital Territory	LVC	The Leather value Chain
CMS	Compact Milling System	NCD	Newcastle Disease
CocTA	Cocoa Transformation Agenda	SCC	Skin Collection Centres
CotVC	Cotton Transformation Value Chain	IBD	Infectious Bursal Disease
CFT	Confined Field Trials	LBM	Live Bird Market
SSF	Superfine Sorghum Flour	NVRI	National Veterinary Research Institute
CTG	Cotton/Textile/Garment	FDAE	Federal Department of Agricultural Extension
NACOTAN	National Cotton Association of Nigeria	AETA	Agricultural Extension Transformation Agenda
ACTIF	African Cotton and Textile Industries Federation	SPDC	Shell Petroleum Development Company
IAR	Institute for Agricultural Research	REFILS	Research Extension Farmer inputs Linkage System
ABU	Ahmadu Bello University	PPP	Public-Private-Partnership
NABDA	National Biotechnology Development Agency	ADP	Agricultural Development Projects
IDG	Industrial Development Group	AIT	Agribusiness and Investments
RSPO	Roundtable on Sustainable Palm Oil	FMARD	Federal Ministry of Agriculture and Rural Development
OPTVC	Oil Palm Transformation Value Chain	LOI	Letters of Intent
FDA	Federal Department of Agriculture	RMU	Resource Mobilization Unit
NASC	National Agricultural Seed Council	EPG	Eminent Persons Group
POFON	Plantation Owners Forum of Nigeria	ATIC	Agricultural Transformation Implementation Council
NPPAN	National Palm Produce Association of Nigeria	HQCF	High-Quality Cassava Flour
OPGAN	Oil Palm Growers Association of Nigeria	BoA	Bank of Agriculture
		TOT	Training of Trainers
		ATIC	Agricultural Transformation Implementation Council
		AVCTIG	Agricultural Value Chain Transformation Implementation Group

EXECUTIVE SUMMARY

The Agricultural Transformation Agenda (ATA) of the Federal Ministry of Agriculture and Rural Development (FMARD) is premised on the President's directive to transform the agricultural sector of the economy for employment generation, food security and poverty reduction. ATA is a private sector-driven, agri-business based, development of commodity value chains to create wealth, attain industrialization and sustain livelihood in the country.

The transformation of the sector is being executed through the Agricultural Transformation Implementation Council (ATIC) with the President/Vice President at the apex of the body; FMARD coordinates execution through the Agricultural Investment Transformation Implementation Group (AITIG) and Agricultural Value Chain Transformation Implementation Group (AVCTIG).

The results of the first two years of ATA have been outstanding. Within 90 days of the appointment of the Minister of Agriculture Dr. Akinwumi Adesina, direct procurement and distribution of fertilizers and seeds was eliminated, ending four decades of endemic corruption in the fertilizer sector. All fertilizer and seed contracts were scrapped and production of foundation seed handed over to the private sector. In its place the Government launched the Growth Enhancement Support (GES) programme to provide targeted support for seeds and fertilizer to 20 million farmers within four years. The GES programme is based upon an Electronic Wallet System, developed using mobile phones to deliver seeds at no cost and 50% subsidy on fertilizers, and a national farmer data base that now contains over 10 million farmers.

As a result of GES in the 2012/2013 dry season and 2013 wet season, 6 million farmers redeemed 567,302 metric tons of fertilizer, 21,356 metric tons of maize seeds, 38,227 metric tons of rice seeds, 480 metric tons of sorghum seeds; over 6 million spouted cocoa seedlings, and 59 million stems of improved cassava varieties. Food production from these inputs for both years exceed 15.5 million metric tons of additional food produced. In 2012, 267,491 rice farmers in ten leading rice producing states also participated in dry season farming, receiving 50 kilograms of seeds, two bags of NPK (15-15-15) fertilizer and one bag of urea free of charge. By 2013, the number had tripled to 610,317 in 24 states participating in the dry season rice farming. In both years, an estimated 60,266 metric tons of seeds were redeemed and produced an estimated additional 4.37 million metric tons of paddy.

Based on this impressive food production, Nigeria achieved the Millennium Development Goals (MDG) of halving the number of hungry people two years ahead of the deadline. The achievement was recognized by the FAO with an award in 2013.

Other outcomes of the agro input reforms include the number of seed companies growing from 11, at the start of the administration to, 77 and the acreage to improved seeds growing tenfold from 400,000 hectares in 2010 to four million hectares today. Global seed companies such as Syngenta, Du Pont, and Monsanto have decided to invest in the Nigerian seed sector, with Syngenta and Monsanto opening up a representative office in the country for the first time. Private sector fertilizer investors are cashing

in. Notore and Mitsubishi Corporation are expanding Notore's plant with an investment of NGN 211 billion (USD 1.3 billion). New investors such as Dangote plan to put up the largest urea plant in Africa at NGN 568 billion (USD 3.5 billion) and Indorama is investing NGN 195 billion (USD 1.2 billion) in a new fertilizer plant.

Value chain activities in the major commodities of rice, cassava, sorghum, cocoa, cotton, aquaculture, and livestock have also yielded outstanding results. In rice, 15 large, integrated private sector rice mills have sprung up with a total capacity of 534,000 metric tons. The quality challenges of local rice have been overcome by these modern mills with products comparable to imported milled rice. An American investor, Dominion Rice Farms, is investing NGN 6.5 billion (USD 40 million) in a 30,000 hectares commercial rice farm with an integrated rice mill in Taraba State. Local fabricators have also been trained to fabricate mechanical threshers for rapid deployment to farmers. Development of paddy aggregation centers is ongoing to facilitate accessibility by the mills to paddy produced in the country.

In cassava, government policy to reduce the huge wheat import bill of NGN 654 million (USD 4 million) a year by partially replacing wheat in bread and confectionaries with High Quality Cassava Flour (HQCF) recorded major successes with the launch of 20% cassava bread by four large industrial bakeries and four Master Bakers in 2012; this number increased to eight industrial bakers and 33 Master Bakers in 2013. The Cassava Bread Initiative received a tremendous boost with the release of NGN 10 billion (USD 60 million) by President Jonathan from the Wheat Levy fund to raise efficiency of production, expand HQCF processing, and train Master Bakers. The cassava starch value chain is a recipient of investments worth over NGN 16 billion (USD 100 million) for two large, 75,000 and 100,000 metric tons per annum, starch mills by two giant food processors. In the dried chip sector, orders for 3.2 million metric tons of dried chips were received from China. Six dried chips processing centers were established in Share, Abraka, Wukari, Ogke-Nike, Lafia, and Iseyin.

The Sorghum Transformation Value Chain (STVC) efforts to turn Nigeria into a leader in the consumption and exportation of sorghum malt, malt-based foods and beverages, and fortified composite flour for School Feeding Programs and for the World Food Program. The value chain received a boost by major investment in large processing facilities by major local food and beverage giants. Nigeria seeks to regain its former leading position in cocoa production through the release of four new cocoa hybrids that yield 2-4 times of existing varieties and 1-2 years sooner, and the distribution of over 6 million seedlings of these new varieties to farmers.

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The declining cotton sector was also revitalized in the 2012 growing season with the distribution of certified seeds of four improved varieties sufficient to plant 75,000 hectares and the revamping of 10 out of 17 cotton ginneries. Similarly, the oil palm sector was bolstered with the distribution of four million improved tenera nuts of high oil yield from NIFOR to oil palm estate farmers. It was also bolstered by the delivery of 10 oil palm mills with a processing capacity of 0.5 metric tons per hour of fresh fruit bunch to farmer cooperatives. Agreements were also signed with 18 oil palm estates in 11 participating states to raise a total of 1.34 million improved tenera nuts into mature seedlings. In 2013 they were able to plant 8,750 hectares on estates in Kogi, Edo, Ondo, Delta, Cross River, Ogun, Akwa Ibom, Bayelsa, Abia, Osun and Enugu states.

The Maize and Soybean Value Chains seek to double production through production intensification, in response to a rising demand for poultry feed and processed human food. Under ATA, maize production in 2013 was increased by 4.2 million metric tons or 39% of total production. The Aquaculture Value Chain agenda will raise national fish production by 250,000 metric tons of table fish, and 100,000 metric tons of fish and fisheries products through broodstock development, fish feed production, processing, and marketing of fish products. Other value chains of poultry, beef, sheep and goat, dairy, and leather have developed and are executing similar action plans to make Nigeria self-sufficient in these key sources of animal protein and products.

The aforementioned value chains are being greatly enhanced by Staple Crop Processing Zones (SCPZ); these are areas of major food production across the country that are being made conducive to agro-processing via investment in infrastructure and supply chain development that attract private sector investments into production and processing.

Nigeria's agricultural transformation is also receiving attention from local and international investors who have made a total commitment of NGN 1.3 trillion (USD 8 billion) worth of investments in the sector in the last 24 months. Investors receive guidance on processes and procedures for working in Nigeria's agri-business sector from the Agribusiness Investment (AIT) Unit, a customer oriented, one-stop-shop center of excellence, catering to the agribusiness and investment needs of the private sector.

Economic impact of ATA includes the creation of 1.4 million jobs in nine commodities, and increased food by 7.7 million metric tons. This together with 2012 food production is 15.5 million metric tons of food or 77% of the overall job creation Key Performance Indicator (KPI) for ATA by 2015. Other parameters of economic impact have been income generation; it is estimated that interventions under ATA has increased Nigerian Farmers' net income by NGN 341 billion (USD 2.1 billion) in five value chains of cassava, rice (dry and rainy season), sorghum, maize, and cotton. The overall contribution of ATA to GDP has also been estimated to be NGN 591 billion (USD 3.6 billion) injected into the Nigerian economy.

INTRODUCTION

In its second full year, ATA has demonstrated that smart investment in farmers and enabling environments for the private sector to invest in agriculture can yield tremendous returns for the country in the form of increased food supply, employment, and income generation. With production of another 7.5 million metric tons in its second year of existence or 15.5 million metric tons of additional food in two years, ATA has returned Nigeria to its former position of an agricultural powerhouse in the region and in the world.

The Growth Enhancement Support (GES), programme, centered upon the electronic wallet (e-wallet), has come of age with 6 million farmers receiving more than 400,000 metric tons of inputs. GES has empowered both farmers and agro-input suppliers. The total number of farmers in the National Farmer Database has increased from 4.5 million farmers in 2012 to 10.5 million in 2013. ATA is well on its target to reach a total of 20 million farmers by 2015.

Fertilizer companies sold a total of N 30 billion (USD 180 million) of fertilizers, nearly two-fold increase over 2012, directly to farmers. Seed companies sold nearly NGN 8 billion (USD 48 million) to farmers, a fivefold increase over 2012. The e-wallet system is so transformative that Kenya, Tanzania, Brazil, and India have indicated interest in learning from Nigeria.

Based on this impressive food production Nigeria achieved - two years ahead of the deadline the Millennium Development Goals (MDG) - its goal of halving the number of hungry people. The achievement was recognized by the FAO with an award in 2013 (Figure 1).



Figure 1: Recognition of Nigeria's achievement of Millennium Development Goal No.1 by FAO, June 16th, 2013.

In addition, ATA received worldwide recognition with the nomination of the Honorable Minister of Agriculture, Dr Akinwumi Adesina, as the FORBES AFRICA Man of the Year. To quote the magazine, ‘Nigeria’s weak farming industry stands on the cusps of a new dawn thanks to a minister on a mission’. The minister’s strong and transparent leadership has increased confidence, both locally and internationally, in Nigeria’s Agriculture and given farmers something to smile about.

Remarkable progress in the value chains was made in 2013. One major accomplishment was the establishment of an N 10 billion cassava bread fund by President Jonathan using funds obtained from the imposition of new levies on wheat imports for promotion of 20% cassava bread. CTA is resolved to replace half of all wheat bread eaten in Nigeria with 20% HQCF by 2015.

The number of farmers involved in dry season farming of rice also doubled in 2012 compared to 2011. Dry season farming of maize and groundnuts were also embarked upon this year. Another new initiative started this year was the State Agricultural Transformation Agenda (SATA), collaboration with the Bill and Melinda Gates Foundation. Lastly, ATA continued to have strong impact on the rural economy, especially with respect to job creation on-farms and across the value added chain. During the 2012/2013 dry season and 2013 rainy season, ATA stimulated the creation of 1.4 million jobs in nine commodities. The jobs came from labour absorption from expanded cultivated area and agricultural intensification. Reported below in more detail are the results of ATA intervention in Nigeria’s Agricultural sector.

1. GROWTH ENHANCEMENT SUPPORT (GES)

1.1 Ending Corruption in the Fertilizer and Seed Sectors

Forty years is the average life span in rural Nigeria, but in that period millions of farmers never saw or got subsidized fertilizers, supposedly meant for them. During that period, despite the billions of naira spent successively over four decades, no more than 11% of smallholder farmers got subsidized fertilizers from the government. The corruption in the system was massive due to the government’s direct procurement and distribution of fertilizers. The system disempowered small farmers as the political elites and power brokers siphoned off fertilizers meant for them. The private sector was displaced and as a result never built fertilizer supply chains to reach farmers. The corruption was so rife in the system that it was common for a bulk of the fertilizer supplied to be half sand and half fertilizer. Subsidized fertilizers were sold on the open market and exported into other neighboring countries. Farm productivity continued to decline, food security worsened and incomes of farmers declined, despite decades of massive increases in fertilizer subsidies. The system was no better for seeds as direct government procurement of seeds led to entrenched corruption and rent seeking, and government officials gave away contracts to cronies who supplied grains instead of high quality seeds to farmers.

With a strong resolve to ensure that all genuine farmers across the country get access to quality farm inputs, the Minister of Agriculture, with strong support from the President, embarked on a massive overhaul of the national fertilizer and seed supply system - the boldest in the nation’s history. The government succeeded in ending a corruption of over four decades within 90 days of the appointment of the Minister of Agriculture. Direct procurement and distribution of fertilizers and seeds were eliminated. All fertilizer and seed companies now sell directly to farmers, not to government. Contracts for fertilizer and seed supply were scrapped. The system where government monopolized the supply of foundation seed was scrapped. Today, all foundation seed supply – the lifeline of a viable seed industry – is now fully liberalized and handed over to the private sector.

The reforms have led to massive change in the fertilizer and seed sectors. The chairman of TAK, the 2nd largest fertilizer company in Nigeria, said: *“The only business we used to do then was supply government. When the new system was introduced we panicked. Today I can say it is the best decision ever taken by government. We now sell directly to farmers. Demand is rising fast and we cannot keep up”. Chairman of Notore, an indigenous fertilizer company, says: “We now have supply chains to reach farmers. We have also introduced packaging in small sizes for farmers. No one ever believed the old system would end. Ending it was a revolution in itself and has unleashed the power of the private sector”.*

Major investments have come into the sector due to these reforms. The number of seed companies has grown from 11 at the start of the administration to 70. Global seed companies such as Syngenta and Du Pont have decided to invest in the Nigerian seed sector, with Syngenta deciding to open a representative office in the country for the first time. Private sector fertilizer investors are cashing in. Notore and Mitsubishi Corporation are expanding Notore's plant with an investment of NGN 211 billion (USD 1.3 billion). New investors such as Dangote plan to put up the largest urea plant in Africa at NGN 568 billion (USD 3.5 billion) and Indorama is investing NGN 195 billion (USD 1.2 billion) in a new fertilizer plant.

1.2 Reaching Millions of Farmers with Agro-inputs and Revolutionizing Small Holder Agriculture

Improved seeds have been described as the engine of any agricultural revolution and fertilizer the fuel. Access by farmers to these modern agricultural inputs is therefore the backbone of ATA. The Growth Enhancement Support (GES) programme was launched to provide targeted support for seeds and fertilizer to five million farmers in the first year and 20 million farmers within four years. The GES programme was based upon technological, institutional, and financial innovations, namely:

- i. An electronic wallet system developed using mobile phones, to deliver seeds at no cost and 50% subsidy on fertilizers, for a maximum of two bags, to farmers. Electronic vouchers for seeds and subsidized fertilizers were sent to farmers on their mobile phones (Figure 2). The vouchers were then used as cash to redeem farm inputs from registered agro-dealers across the country. This was tested in several states and then rolled out across the entire country. Nigeria is the first country in Africa to launch an electronic wallet system for farmers to get subsidized farm inputs.
- ii. A database of 4.5 million farmers was developed in 2012 for GES; the number of farmers in the database has now been updated to 10 million farmers in 2013.
- iii. A total of N 30 billion was leveraged from commercial banks, using Government guarantees, to finance the seed and fertilizer supply in the country, without spending one Naira from the Federal Ministry of Agriculture and Rural Development. This is the first time this will be done in Nigeria.
- iv. A total number of 16 seed companies were able to draw down the sum of N 1,527,335,000 from the N 30 billion facility.
- v. The policy has spurred private sector activity to build supply chains that reach farmers – what they have never done in years. The GES program stimulates demand for fertilizer by putting cash directly into the hands of the farmers via E-wallets.



Figure 2: E-wallet System reaches millions of farmers with access to seeds and fertilizers on mobile phones

- vi. In the past 18 months farmers across Nigeria have been empowered by the e-wallet system and dignity has been restored to farmers (Figure 3). In 2012, a total of 1.5 million farmers were reached by the end of the dry season (see details in Annex 1) and in 2013, a total of 5.2 million farmers received inputs. For the first time, the government knew and could trace those who receive subsidized inputs.

GES has empowered both farmers and agro-input dealers. Nnenna, a female farmer from Abia State said: "For the first time I get my seeds and fertilizers without any political interference". A fertilizer trader from Sokoto affirmed: "I used to be a critic of the Minister of Agriculture's policy. But today I am one of your strongest supporters. I now sell 3 lorry loads of fertilizers daily to farmers, who are buying them with their e-wallets".

The e-wallet system is also farmer friendly as it allows farmers to conduct transactions in their local languages. To date, approximately 23 million e-wallet transactions have been completed by farmers on their mobile phones with majority in local Nigerian languages. For example, 45% of transactions were in Hausa, 25% were in English, 17% were in Yoruba, 12% were in pidgin while 1% was in Igbo.

GES has also stimulated rapid growth in the agro-input private sector. In 2012, fertilizer companies sold a total of NGN 15 billion (USD 100 million) of fertilizers directly to farmers. Seed companies sold a total of NGN 1.5 billion (USD 10 million) to farmers, directly. In 2013, fertilizer companies sold a total of NGN 75 billion (USD 500 million) of fertilizers directly to farmers. Seed companies sold a total of NGN 8 billion (USD 53 million) to farmers, directly

The state governments have also been full of praise for GES; the Commissioner of Agriculture for Kaduna State had this to say: "The GES has been a great success in Kaduna State. It is the best thing to happen to us in agricultural sector. With the GES, poor

farmers are benefitting a lot. Dignity has returned to the farmers”.

The GES program has also saved government a lot of money. Instead of the former blanket subsidy system, the GES involved direct contributions by the farmers, federal government and state governments. Of the total of NGN 15 billion (USD 92 million) spent on the program in 2012, farmers contributed NGN 7.5 billion (USD 42 million); state governments contributed NGN 3.8 billion (USD 23 million), while the federal government contributed NGN 5 billion (USD 31 million). The GES scheme saved the federal government NGN 25 billion (USD 154 million) in funds it would have otherwise paid out to private fertilizer and seed companies with no assurances of farmers getting the inputs.

In 2013, the FGN contributed NGN 31 billion (USD 191 million), state governments contributed NGN 20 billion (USD 123.3 million) and farmers contributed NGN 40 billion (USD 246.5 million).

With the e-wallet, dignity has returned to Nigerian farmers, as they now receive their support directly without any intermediaries or politicization of subsidized farm inputs as had been the case before these reforms (Figure 3). So transformative is the e-wallet system that other African countries, Brazil, and India have indicated interest to learn from Nigeria. International development organizations such as the World Bank, DFID, USAID, and the International Fund for Agricultural Development and the African Development Bank have initiated efforts to scale it up into other countries.



Figure 3: A smiling farmer who has just redeemed seeds and fertilizers using his e-wallet from an agro dealer

1.3 Highlights of the past 24 months of the GES Program

The national rollout GES program in Nigeria commenced on May 9th 2012; Ekiti State was the first state to commence rollout of GES in Nigeria. The e-wallet system is operated and implemented by Cellulant Corporation, a private sector contractor, on behalf of the FGN in 36 states and the Federal Capital Territory (FCT). The redemption or provision of improved seeds and fertilizers occurred in all 774 LGAs of the country. The private sector providers participating in the program over the past 24 months include 25 fertilizer producing, importing and blending companies, 77 seed companies, and 1800 agro-dealers that operated 2300 redemption sites, over a period of 6 months. GES has been able to increase the national agrodealers density to two agrodealers per LGA from one agro-dealer per 7 LGAs.

There were three programs in the first year (2012) of GES:

- GES for wet season farming
- GES for dry season farming (just rice)
- GES for flood relief

In the second year (2013) of GES, there were 2 programs:

- GES for wet season farming
- GES for dry season farming (just rice)

The results of the programs revealed the program is making significant progress year on year as evidenced by the KPIs described below:

- 1. Registration of farmers:** In 2013 an additional 5.2 million farmers were added into the National Farmer Database between March- October 2013 through the Annual National Farmer Registration Exercise. This brought the total number of farmers registered in the national farmer database to 9.6 million during the redemption period. An additional 700,000 farmers were also registered via the farmer associations for the dry season farming exercise. This brought the total number to 10.3 million. When compared to 2012, this represents an increase of 111% in terms of the total numbers of farmers in the national farmer database. Please be aware that for proper analysis of 2013 program this report is using 9.6 million as the absolute farmer registration figure for performance comparison purposes.

2. **Participation of farmers in 2013 wet season GES:** The measure of participation for GES is wallet activations or roll outs based on how many registered farmers e-wallet activated their e-wallets on the GES platform-wallet (Figure 4). These are the farmers whose names are on the farmer register at redemption center. In 2013, 7.2 million farmer e-wallets were activated or rolled out on the platform. This is an effective participation rate of 75%. The remaining 2.4 million farmers whose e-wallets were not activated or rolled out for redemption purposes are those who were registered while redemptions had either closed or were ongoing and their data did not get into the platform on time. Below are some of the enthusiastic responses of farmers to the GES program:

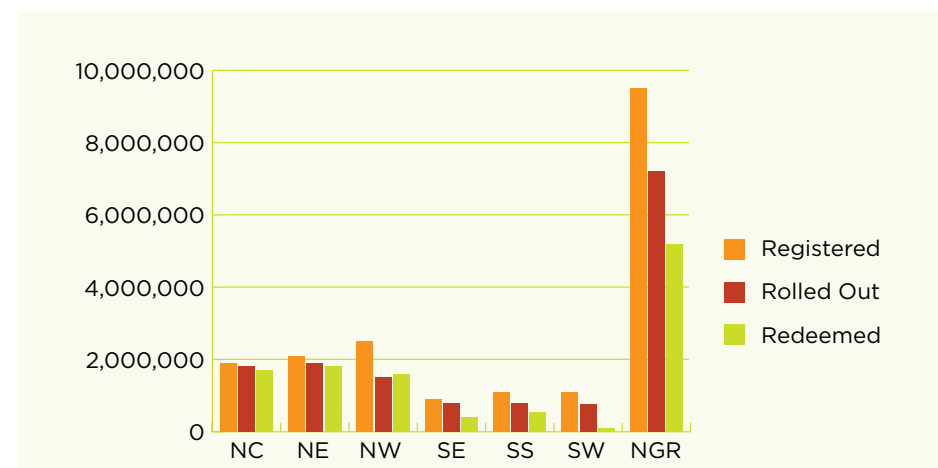


Figure 4: Participation of farmers in 2013 wet season

3. **Service (Inputs) delivery to farmers:** The measure of service delivery is how many farmers received inputs. For the 2013 wet season, 5.2 million farmers have received inputs (Figure 5). This gives us a service delivery performance of 71% of participating farmers. In comparison to 2012 service delivery, this is a 400% increase in terms of the total numbers of farmers served. With regards to inputs delivered to farmers, 273,000 metric tons of NPK and 237,000 metric tons of urea were delivered to farmers (Figure 6). In addition 15,000 metric tons of maize seeds and 24,847 metric tons of rice seeds were distributed to farmers (Figure 7).

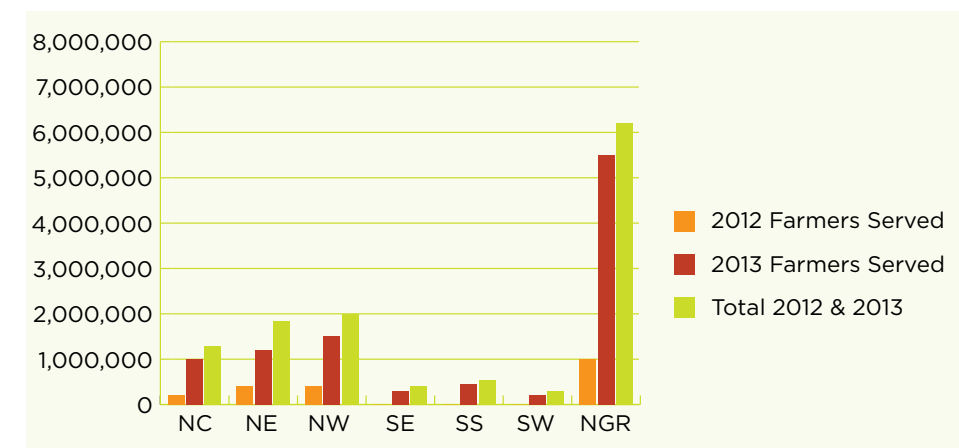


Figure 5: Number of farmers served (redemptions) in 2013 Wet Season

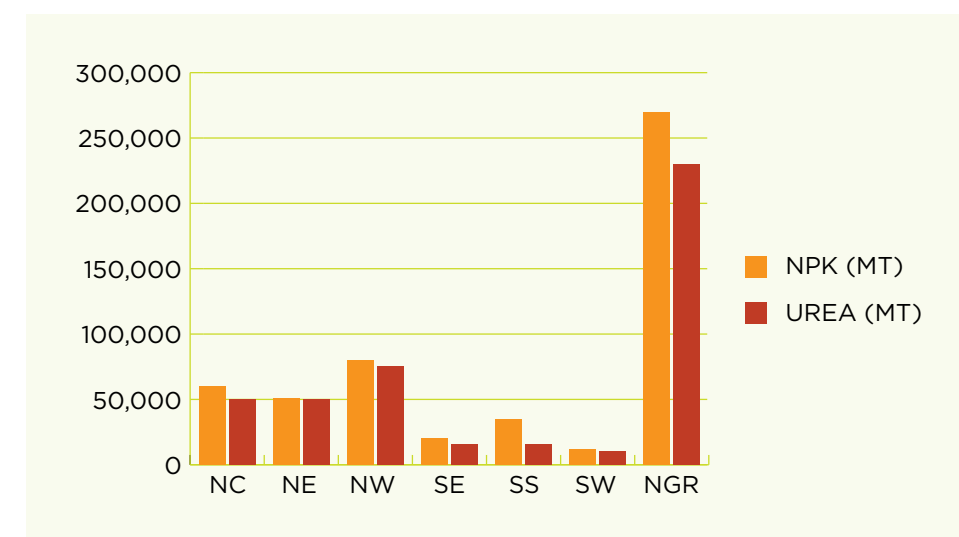


Figure 6: Quantity of Fertilizer redeemed

In 2013, seed supply during the wet season appeared to be an issue. Based on the data available after reconciliation 3.9 million farmers received seeds of which 1.5 million received maize seeds and 2 million received rice seeds.

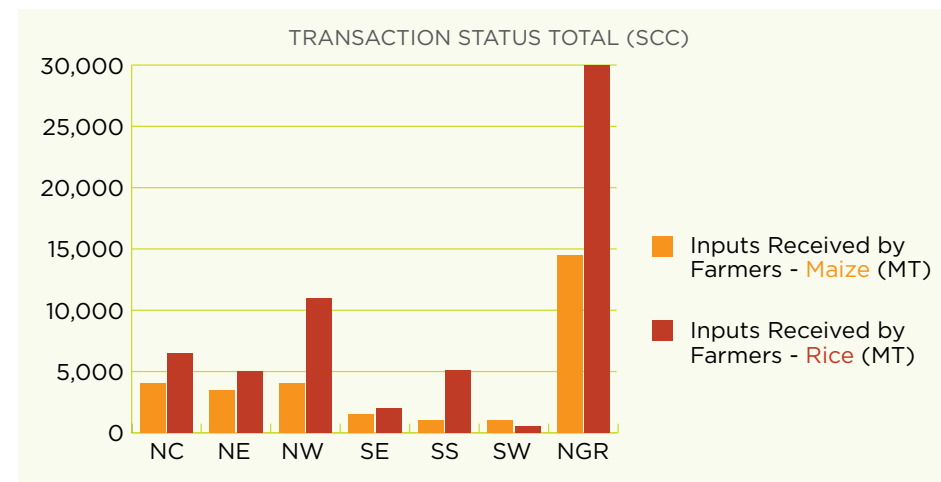


Figure 7: Quantity of rice and maize seed redeemed

4. **Use of the e-wallet platform for redemptions:** The GES platform was operated effectively for 34 weeks in the 2013 wet season. Transactions were coming into the platform from the entire country every single week. There was no week that we did not receive transactions. The total number of unique transactions during the wet season was 18.4 million. This is almost a four-fold increase from 2012. In terms of share of all transactions on the platform across the country the North Central (NC), North- East (NE), North-West (NW), South-East (SE), South-South (SS) and South-West contributed 25%, 25%, 19%, 11%, 12%, and 8% respectively (Figure 8). In terms of transaction status, 53% of all wallet transactions were successful and 47% failed (Figure 9-10). The source of failures were: no-inventory on the platform to back the requested redemptions, multiple redemption attempts, location errors, redemption against inactive agro-dealers and system flashing by non-GES users. These are major redemption center operations effectiveness issues.

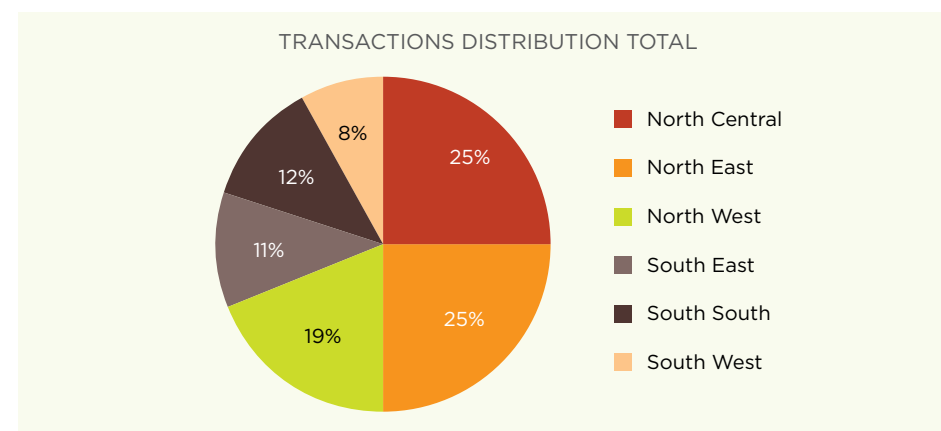


Figure 8: Distribution of total redemption transactions by GPZ

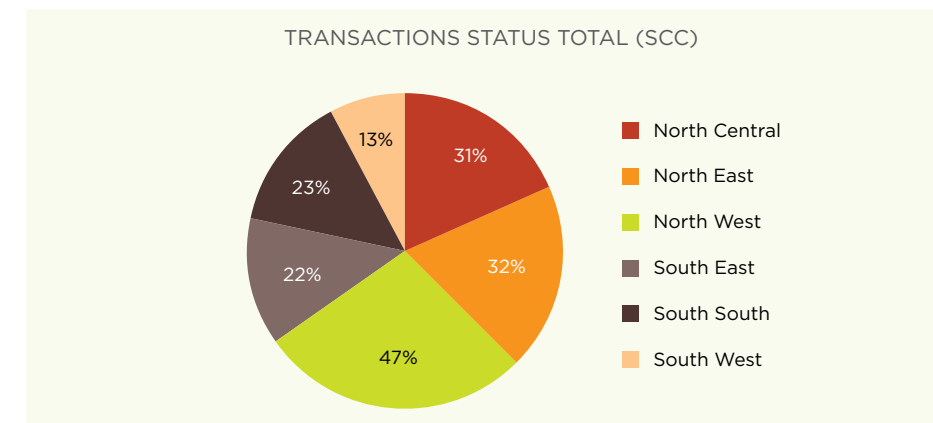


Figure 9: Distribution of total successful redemption transactions by GPZ

In terms transaction types wallet activations, direct farmer redemptions and indirect farmer redemption (Help-line staff-HLS) were 39%, 8% and 52% respectively across the country (Figure 11-12). This ratio is due to incentive bias within the 2013 program (HLS at a point were earning income comes from transactions that they do).

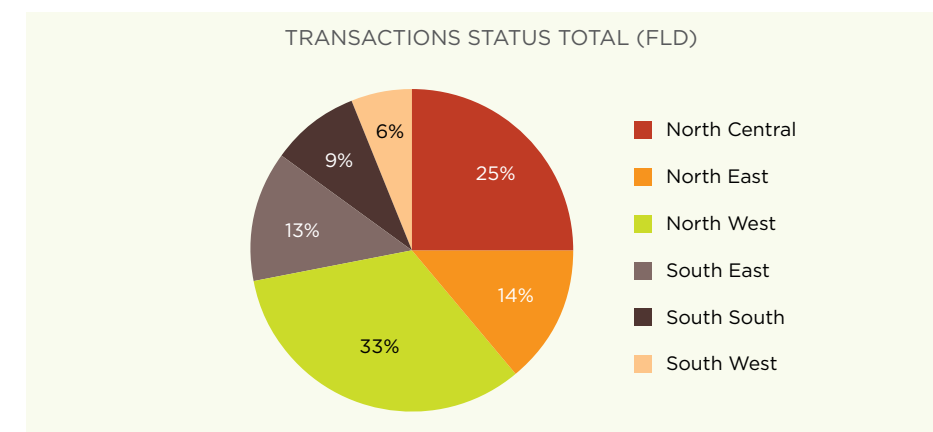


Figure 10: Distribution of total failed redemption transactions

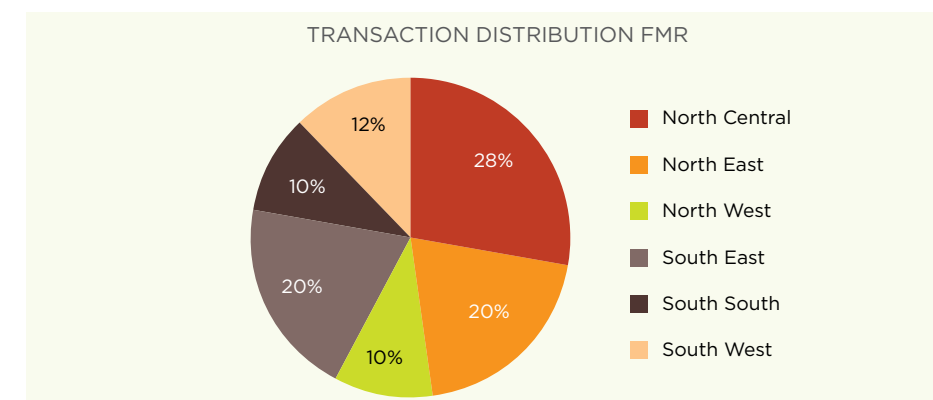


Figure 11: Distribution of transactions that farmers did themselves by GPZ

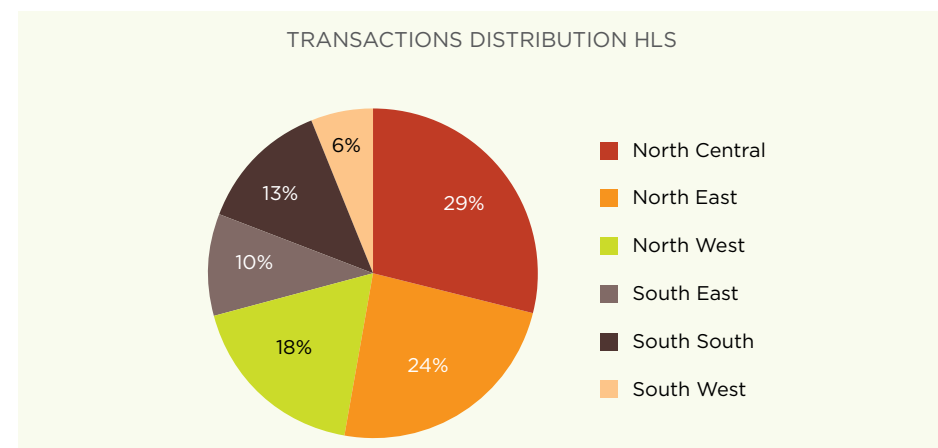


Figure 12: Distribution of transactions that SCM or HLS did for farmers by GPZ

5. **Coverage and distribution of redemption centers:** In 2013, a total of 1443 redemption centers were established of which 1360 were active (Figure 13). This doubled the 753 out of 804 redemption centers that were active in 2012. The redemption center activity rate was 93% with a farmer to redemption center density of 3824 farmers to one redemption center.

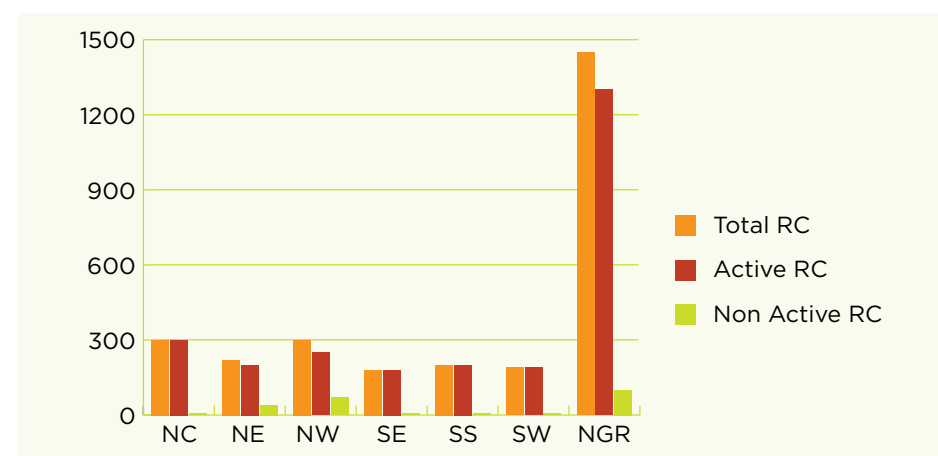


Figure 13: Distribution of active and inactive redemption centers

6. **Distribution of phones amongst farmers:** In 2013, we observed higher usage, ownership and penetration of phones amongst farmers (Figure 14). The number of farmers with handsets grew to almost 60% however, within the database the number of farmers whose phones are valid on a national basis is 67%. In the e-wallet system, 4 out of every 10 farmers have valid phone numbers and can be reached. A solution for self-record correction for farmers was implemented.

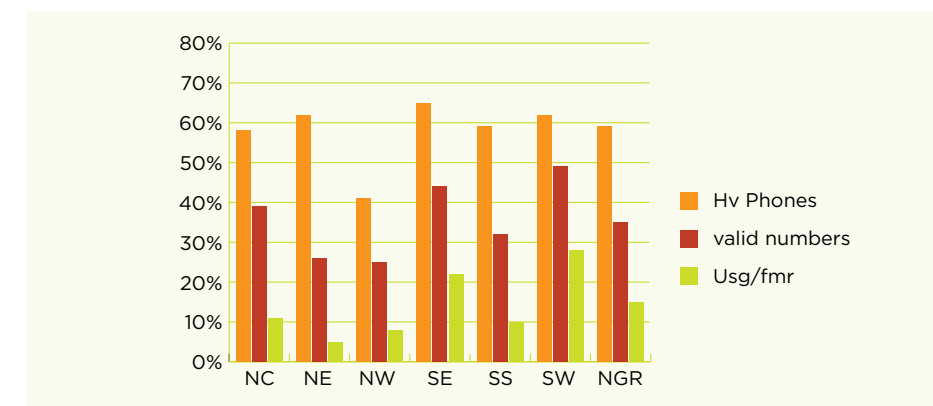


Figure 14: Distribution of phones / valid numbers and usage per farmer for redemptions

7. **Lending program:** The 2013 GES was financed by over NGN 20 billion (USD 123.3 million) loans lent to agro-dealers in by banks (Figure 15-17). This is a six-fold increase over 2012. The critical success factor was the deployment of the agro-dealer transaction management system. Information became transparent to banks and it led to more effective execution of the agreement with NIRSAL. Four banks lent to the seed companies; they made a total of 26 loans valued at NGN 8 billion (USD 53 million) (Figure 17); 50% of which was to one company, WACCOT.

On the GES subsidy to be paid by government, reconciliation and payments revealed that total claims settled so far in 2013 for wet season are NGN 36 billion (USD 221.9 million) broken down as follows:

- Wet Season Fertilizer – NGN 27.5 billion (USD 169.5 million)
- Wet Season Seeds – NGN 7.6 billion (USD 46.8 million)
- Value Chains Specialized Roll-out – NGN 340 million (USD 2.1 million)
- Commercial Seed Distribution – NGN 402 million (USD 2.5 million)

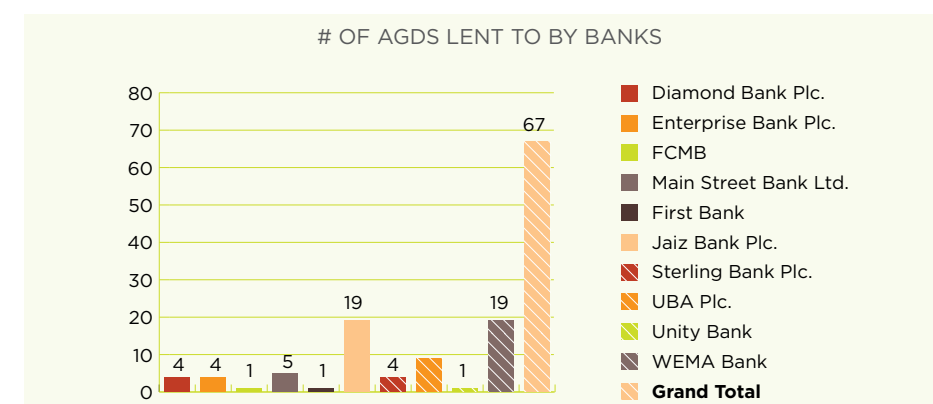


Figure 15: Distribution of loans (# of agrodealers) issued by bank totaling NGN 8.6 billion (USD 53 million)

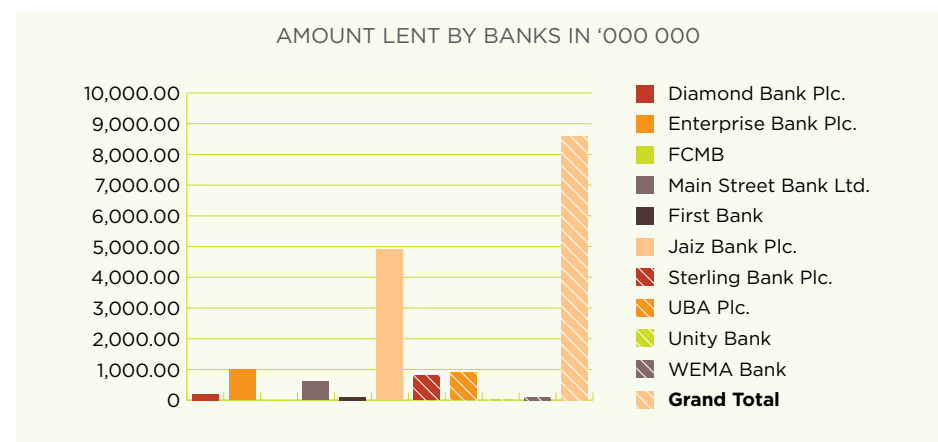


Figure 16: Distribution of total lending by bank to the GES program

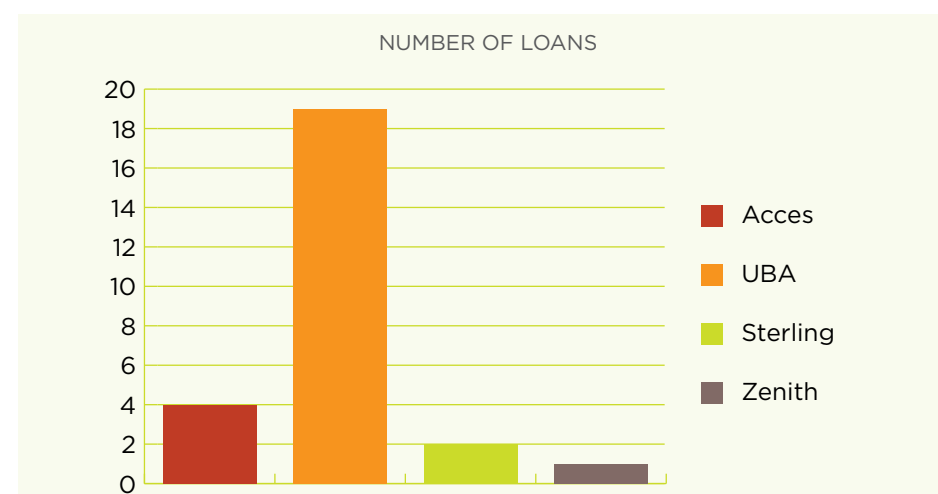


Figure 17: Distribution of loans (# of seed companies) by banks to seed companies

1.4 Other Achievements of GES in 2013

Other significant achievements of GES in 2013 GES include:

- Efforts to overcome the limited number of experienced agro-dealers in 2012 was embarked upon through a collaboration between the ministry and the International Fertilizer Development Commission [IFDC] to ensure the ratio of one agro-dealer to 800 farmers;
- Three (3) supply chain managers comprising IFDC, Jetlink Limited and Ecalpemos Technologies Limited were engaged in 2013 to implement the GES scheme;
- In many instances, state governments and FCT provided stores/warehouses to agro-dealers on lease or free to store inputs in their respective states. This was done with a view to complementing the one-stop-shops and warehouses built by the federal government which are to be released to the agro-dealers on rent under agreed terms and conditions;

- Private sector agricultural input companies have started building their supply chains through the network of agro-dealers to reach farmers in the villages and sell products to them directly under the GES scheme at 50% of open market price;
- Federal and state governments continue to share the cost of subsidy (GES) on equal basis at 25% each to make 50% subsidy to farmers;
- Two additional service providers are being engaged to support Cellulant Nigeria Limited; and
- NGN 60 billion (USD 369.8 million) guaranteed by NIRSAL, was facilitated under the financing agreement signed between NIRSAL/CBN and the FMARD in March 2013 for onward lending to agro-dealers by commercial banks. This was to support the supply of agro-inputs to farmers in all the sectors of agriculture.

1.5 Challenges of GES

The 2013 GES program had a number of structural challenges. They include:

- Registration of farmers started late and this created problems on the field because a number of farmers could not find their name on the farmer registers;
- Reconciliation of claims had problems because documents submitted from the field has serious quality control problems;
- Redemption center operations were not optimal due to the quality of staff and pressure of crowds during redemption;
- Quality of backbone infrastructure were a problem with mobile networks degraded at the start of the season. This affected the quality of technology service delivery;
- Poorly defined decision making prerogatives between the state director, GES coordinator and supply chain manager led to an inability to effectively control key processes like agro-dealer selection on the field; and
- Limited coverage of the rural areas by mobile phone networks continued to plague the redemption and reconciliation process. This problem is being resolved through the pilot of a smart card technology that does not require network in the rural areas.

1.6 Recommendations For 2014

The following are recommendations for 2014:

1. Institutionalization of GES: The GES has been a transformational program. It is proposed that the program be given the backing of the force of law by passing of a GES bill;
2. Registration of farmers: It is proposed that a system for registering farmers all year

round be established and that farmer's registration be concluded before the program starts. This will make implementation of the key GES processes (preparation of farmer register, roll-outs of e-wallets, redemptions, supply chain management reconciliation, and payment work smoother.

3. Improving Redemption Center Operations: It is proposed that additional channels for the registration of redemptions; especially those that improve record keeping be introduced at redemption centers. This will help in resolving the major reconciliation issue faced in 2013 which is inadequacy of presented documents. The major issue here is registering which farmer has collected input on the platform within 24 hours. This will help to achieve 2014 goals of monthly reconciliations.

Achieving visibility of participants in the lending program: It is proposed that all lending under the guarantee scheme be tightly linked to the number of farmers served to reduce the risk of loan default due to excessive lending. This should be done before approval is given by government.

For the first time in Nigeria, those who actually got subsidized fertilizers and are known and can easily be traced. It is also easier to determine the yields and production on farms of those that received the fertilizers and seeds - not possible until now - so we can determine impacts on food production. As a result of the 2013 GES, Nigeria added 7.5 million metric tons of food to national supply.

Below are some of the enthusiastic responses of farmers to the GES program:

- i. *"It is a happy day for us farmers and we feel honoured that the Minister and his entourage have come to deliver fertilizer to us which before now was beyond our reach."* – **Mr. Bassey, a farmer in Akwa Ibom State**
- ii. *"GES is a clear process, no corruption in it, nobody between me and my fertilizer and seeds."* – **Abdullahi Ndastu the first beneficiary of GES in FCT.**
- iii. *"This is the first time we have this type of distribution [GES] to the farmers, it will eliminate poverty. We thank Mr. President"* – **Mr. Omale, a farmer in Kogi**

Political leadership in state governments were also satisfied with progress made in the first year of GES as demonstrated by testimonials from State Commissioners of Agriculture and Governors below:

- i. *"The state is doing well in the GES programme. I am not bragging, Bauchi is number 1. We have given out 14,800 metric tons of fertilizer. We have access almost 98% of our commodity. I am saying this. Go and verify it"* – **Tasiu Mohammed, Bauchi State Commissioner of Agriculture**
- ii. *"The GES programme has been very successful. We also came back to the cellular companies to provide us with enough scratch cards which they did. And it was successful;*

particularly those who bought fertilizers and seeds to keep for next year." – **Dahiru Buba Biri, Commissioner of Agriculture, Gombe State**

- iii. *"For us, it is a fantastic idea because you find that it is a major departure from what we had in the past where those who were involved in the chain of distribution of these inputs usually diverted them. But with the current arrangements we were able to get these things to the end users. It is a major breakthrough."* – **His Excellency, the Governor of Kwara State**
- iv. *"I am glad that such a large number of farmers in the state have benefited from the scheme, which we are supposed to complement. We will key into it because it is a good policy which is designed to help our farmers to be more productive."* – **His Excellency, the Governor of Niger State**

1.7 Development of a National Data Base of Farmers

Until 2012 Nigeria did not have a database of its farmers which made it difficult to effectively target them, especially smallholder farmers, with public support programmes. The Ministry launched the first ever registration and development of a farmer data base for the country in 2012. A total of 4.2 million farmers were registered. To take the registration to scale in 2013, the Ministry produced 6 million Optical Market Reading (OMR) forms that were deployed across the country, to every ward in every Local Government Area. The target for 2013 was to register an additional 5.8 million farmers, bringing the total number to be reached directly with inputs to 10 million.

A total of 11,000 enumerators were employed across all 774 Local Government Areas of the country. Enumerators were trained and deployed to all the political wards across the country to man the enumeration centers. The OMR forms and large number of enumerators enabled farmers to be rapidly registered and the information transferred into the National Farmers' Registration Database. Farmers' biometric information was also captured enabling each farmer to be identified via a unique farmer identification card.

Farmers were registered at designated enumeration centers over a period of three (3) months. As of today, 10.6 million Nigerian farmers have been registered. The registration of farmers at this scale has already triggered massive interest by banks all across the country as they can now reach millions of farmers directly with loan and savings products, and micro-insurance. The Central Bank of Nigeria (CBN) is already working with the Federal Ministry of Agriculture and Rural Development and the National Identity Card Management Commission (NIMC) to use this platform to implement the Agricultural Payment Initiative. This will enable the Ministry and NIMC to capture the biometrics of all the farmers in the National Data Base of Farmers (NDBS).

In 2014, effort will be concentrated on the capturing of biometrics of the over 10 million farmers so far registered and the extension of the exercise to cover additional five million farmers.

2. RICE VALUE CHAIN

2.1 Nigeria's Drive for Self-Sufficiency in Rice

Total demand for milled rice in Nigeria is put at about 5.2 million metric tons a year, of which about 3.3 million metric tons are produced locally and 2.2 million metric tons are imported. Nigeria therefore spends over NGN 356 billion (USD 2.2 billion) importing rice annually, that is NGN 1 billion (USD 6.2 million) every day. Rice importation exports jobs from Nigeria, depresses local production, and is unsustainable given the rising demand for rice in Nigeria, currently put at 6% increase per year.

But Nigeria has vast amounts of land and favorable rice growing ecologies, to produce upland, lowland and irrigated rice. The drive of the government under ATA is to replace all the 2.1 million metric tons of milled rice imported annually into the country by 2015.

A rice transformation agenda with a focus to resolve the problems of low productivity, poor quality, and other disincentives to domestic rice production from the continued dumping of rice on the local market is needed. Under the rice transformation agenda, domestic rice producers will receive massive support to raise productivity of the local rice paddy and support rice millers to purchase the paddy.

To achieve this, the Rice Value Chain Transformation agenda is pursuing following interventions:

- i. Increase efficiency along the Rice Value Chain through (a) reduction of production costs. This would be done through the mechanization and intensification of paddy production in rain fed lowlands and irrigated rice ecologies, and use of improved rice varieties and (b) organization of farmers into cluster groups for easy access to improved technologies, market and mills;
- ii. Improved quality management along the commodity chain to raise the grain quality standard by avoidance of mixed seeds and mechanized post-harvest activities such as threshing, drying and milling in modern integrated mills;
- iii. Create an enabling environment for these changes to happen through enacting policies that encourage growth of the rice sector, including massive support to domestic rice producers and a tariff regime to discourage continued dumping of rice on the local market;
- iv. Increased accessibility to inputs such as seeds, fertilizers and agrochemicals; and
- v. Linkage with agricultural financing.

2.2 Rice Wet Season GES in 2012

In 2012, 135,631 rice farmers were supported with agro-inputs under GES. Support included access to low interest rate financing from banks for seed companies to embark on accelerated production and distribution of certified high quality seeds. A total of 6,782 metric tons of lowland preferred rice varieties Faro 44 and Faro 52, and small quantities of upland rice varieties were produced and distributed free of charge to rice farmers through the e-wallet system. An additional 135,631 hectares of rice were put under cultivation by farmers, with a total production of 339,078 metric tons of paddy rice.

Building on the momentum generated in 2012, the number of farmers participating in the rice GES scheme rose to 1,987,796 in the 2013 wet season. A total of 24,847 metric tons of improved seeds (mainly FAROs 44 and 52 were distributed to farmers free of charge through the e-wallet system. Each farmer received 12.5 kilograms for free. An additional 496,949 hectares of rice were put under cultivation by farmers using improved seeds and inputs, with a total estimated production of 1,739,322 metric tons of paddy rice.

To complement the wet season GES efforts, medium to large rice farms and the integrated mills who applied to the FMARD for help in organizing clusters of out growers were allocated bulk seeds under the special GES scheme. This scheme was extended to all the states in the federation.

2.3 Rice Wet Season GES in 2012

In response to demand for paddy by 14 new large rice mills, developed under a government sponsored program to raise rice processing capacity in the country, rice farmers were supported under GES to grow rice during the dry season taking advantage of the irrigation capacity in the north of the country and the high sunshine incidence during the dry season. For the first time ever, the federal government provided massive support for the cultivation of dry season irrigated rice across ten states in the Northwest, Northeast and North central regions of the country. Farmers in the ten leading rice producing states, Kebbi, Sokoto, Zamfara, Katsina, Kano, Jigawa, Bauchi, Gombe, Niger and Kogi, received 50 kilograms of seeds, two bags of NPK (15-15-15) fertilizer and one bag of Urea for free. A total of 267,591 rice farmers were reached with agro-inputs and also assisted with water pumps to bring water to their fields. Rice Farmers Association of Nigeria (RIFAN) was fully involved in the implementation in all the states.

The results were groundbreaking (Figures 18 and 19). The dry season accelerated rice production producing an additional 1,070,364 metric tons of paddy - enough to keep 20 integrated mills running until the main season of the 2013 crop harvest. Taken with the main season production, the total paddy production for 2012/2013 season is estimated at 1,409,442 metric tons.



Figure 18: A rice farmer in Jega, Sokoto state shows off his rice fields

In the words of Dan Rabi, a local entrepreneur who provides mobile threshing services for rice farmers, “We have never seen anything like this in 40 years of rice farming”. The income impact is massive for these farm households. Dan Rabi was elated: “I make NGN 15,000 (USD 92.45) per day threshing rice for farmers. We work through the night and I employ 22 people per day, just to thresh rice. Everyone is busy, jobs are everywhere”.

In Kebbi state, the Governor Saidu Dakingari says, “The Growth Enhancement Support Scheme of the federal government in partnership with the state and, in particular, the dry season support for rice farmers have transformed rice production; we no longer have unemployed or poor people in Kebbi state. For 400 to 500 kilometers, all you will see is paddy rice in production (Figure 20). Such is the power of the massive change we are witnessing.”



Figure 19: A proud female rice farmer, Hayija Ladi Baladi shows off her rice farm (in the bac kilograms round) to the Honorable Minister of Agriculture at Bakolori, Zamfara State

The palpable enthusiasm of a rice revolution is the same in Kogi state, where over 7,000 hectares were cultivated in the dry season – the first ever in the history of the state. Governor Wada states, “We are in rice because of the agricultural transformation agenda of the federal government. We are overwhelmed...every day we hear women crying ‘we want land, we want land’. We hear young people crying for land. So we had to hire more earth moving equipment to clear more land to allocate for them for rice production.” Yields from the dry season farming were as high 7.0 tons per hectare in Kebbi and Gombe states; and 5.5 tons hectare in Kogi. Average paddy yield was conservatively put at 4.0 tons per hectare.

An independent monitoring by IFPRI indicated that paddy yield was between 5.6 and 6.7 metric tons per hectare in irrigated schemes and 3.2 to 4.0 metric tons per hectare in the wash bowl fields. Using an average of 4 metric tons per hectare, the total rice paddy yield for 2012/2013 dry season was put at 1.07 million metric tons (Table 1). Taken with the 2012/2013 dry season production and the total paddy production for 2013 is estimated at 2.8 million metric tons or close to the total additional requirement of the country.

Table 1: Summary of acreage, estimated average yield, and total output of paddy and milled rice produced under the rice value-added chain till date

YEAR	PROGRAMME	CULTIVATED AREA (HA)	AVERAGE YIELD/ HECTARES (METRIC TONS)	TOTAL OUTPUT (METRIC TONS)	
				PADDY	MILLED RICE
2012	Wet Season	135,631	2.5 tons	339,078	220,400
2012/2013	Dry Season	267,591	4 tons	1,070,364	695,737
2013	Wet Season	496,949	3.5 tons	1,739,322	1,130,559
2013/2014	Dry Season (estimated)	305,159	4 tons	1,220,634	793,412

The 2012/2013 dry season rice paddy production in ten states of the Northwest, Northeast and North central opened a new chapter in rice production in Nigeria. It provided income during the usual idle period of the year for participating farmers and also generated many non-farm employment opportunities. Other advantages of dry season rice paddy production are higher grain yield due to higher insolation, that the paddy gets a chance to dry well in the field and therefore stores well, and it offers a chance to double paddy production.

Against this backdrop, in the 2013/2014 dry season farming, the Rice Value Chain received requests from all states in the federation to participate in the dry season rice growing scheme. A total of 26 states were selected based on the size of irrigated land, availability of water resources, and history of dry season paddy production. The selected states are listed (Table 2). For the 2013/2014 rice dry season, an unprecedented 610,317 farmers were registered.

In preparation for 2013/2014 paddy production programme the following activities were carried out:

- Sensitization of rice farmers for the dry season in the six geo-political zones of the country;
- Mobilization of Supply Chain Managers to deploy inputs to the various redemption centers across the country; and
- An official launch of the 2013/2014 Dry Season Paddy Production Programme (DDSP) by the president is planned for January 20, 2014.

Each farmer received 25 kilograms of seed at no cost, and 2 bags of NPK and one bag of Urea at 50% cost. Estimated total inputs to be redeemed by farmers include 61,032 metric tons metric tons of NPK, 30,516 metric tons of Urea, and 15,258 metric tons of improved rice seeds.

Table 2: List of States and Farmers Uploaded for the 2013/2014Dry Season Rice Paddy Production

S/NO	STATE	NUMBER OF FARMERS UPLOADED
1	Abia	954
2	Adamawa	5,897
3	Bauchi	7,219
4	Bayelsa	2,301
5	Benue	2,496
6	Cross River	1,306
7	Edo	2,154
8	Ekiti	439
9	Enugu	3,825
10	FCT	607
11	Gombe	6,591
12	Imo	1,009
13	Jigawa	98,201
14	Kano	46,073
15	Katsina	34,027
16	Kebbi	105,397
17	Kogi	9,852
18	Kwara	2,831
19	Nasarawa	3,080
20	Niger	31,845
21	Osun	446
22	Sokoto	58,433
23	Taraba	536
24	Zamfara	124,767
TOTAL		610,317



Figure 20: Large quantities of rice produced during the 2012/2013 dry season rice farming

2.4 Upsurge of Integrated Rice Mills

To achieve the goal, government initiated a major policy reform, by increasing tariff on imported brown rice and milled rice, and raising incentives for domestic milling of locally produced paddy rice. The policy has paid off with impressive results. In the first year alone, 15 private sector rice mills have sprung up with a total capacity of 534,000 metric tons. The organoleptic challenges of local rice which had discouraged consumers, especially when compared to imported milled rice, were overcome.

Today, several integrated local rice mills have their milled rice on the market. Consumer demand and preference for local rice has risen due to better quality, taste and price compared to imported rice. International grade local rice has hit the market, including Ashi rice, Mikap rice, Umza rice, Ebony rice and several others (Figure 21). A major foreign investor, Dominion Rice, is investing NGN 6.5 billion (USD 40 million) in a 30,000 hectare commercial rice farm with international grade rice mill in Taraba state. The Dominion rice farm, which is linked to out-growers of young commercial farmers, is expected to replace about 15% of the total milled rice imported into the country.

Before the launch of rice transformation agenda, not up to three integrated mills were operating at the same time in Nigeria. By December 2012, due to the rice policy reforms and sensitization efforts, 14 integrated mills were operating at the same time under private sector arrangements. By the third quarter of 2013, up to 25 such mills are expected to be in operation across the rice-growing ecologies in Nigeria. The milling capacity of these mills has been estimated at over 850,000 metric tons per annum.



Figure 21: Launch of Ebony Super Rice by Ebony Agro, an Indigenous Rice Processing Company

To complement them, plans have been concluded to import 40 new integrated rice mills, to be fully owned and run by the private sector, through a low interest rate facility from the China Exim Bank. By December 2015, the total milling capacity of all the integrated mills in the country will be over 2.0 million metric tons per annum. They will be producing high quality rice comparable with the highest grade of imported rice. For the first time ever, Nigeria will have the full capacity to mill all the domestic rice it produces, at international quality grade, to replace imported rice.

Furthermore, paddy aggregation and bulking centers to be managed by the private sector will be established strategically across the rice producing areas of the country. The centers will buy, clean, grade, and bag paddy in standard 100 kilogram bags. The cost of the infrastructure for the centers will be borne by the federal Ministry of Agriculture and Rural Development. A guaranteed minimum price will also be set for rice paddy to provide subsidies for farmers and ensure that they can sell their paddy at harvest rather than withhold the rice to wait for better prices. The USAID MARKETS II team was directed to lead the process by verifying how much subsidy is needed.

Lastly, implementation of a tariff rated quota import system for rice will be put in place bearing in mind the need to harmonize a common external tariff with neighbouring countries. Criteria for issuance of import licenses include the establishment of significant number of hectares of irrigated rice. A five year tariff system is shown in Table 3 on right.

Table 3: Five Year Plan for Tariff Rated Quota (Leading to Self-Sufficiency)

YEAR	DUTY	LEVY	% OF LOCAL PRODUCTION	% OF LOCALLY MILLED IMPORT QUALITY RICE	% OF IMPORTED RICE
2013	10	100	60	20	80
2014	10	30	70	40	60
2015	10	30	80	60	40
2016	10	30	90	80	20
2017	10	30	100	100	0

2.5 Other Achievements of the rice transformation agenda in 2013

Seeds Production for 2013

Recognizing the potentials of improved rice seed to improve yield per unit area and also produce uniform paddy for milling, RVC took delivery of 8 metric tons of breeder seeds and 220 metric tons of foundation seeds from Africa Rice Center in 2013. They will be used to boost the efforts of the Rice Transformation Agenda to double rice production from 3 million metric tons to 6 million metric tons by 2015. To promote the adoption and utilization of hybrid rice technology, a collaborative yield performance evaluation of hybrids rice varieties developed by Syngenta was carried out jointly by Syngenta Seed Company, NCRI and RVC at Wushishi in Niger state. After the evaluation, three hybrid varieties (SYN NG 3, 4 and 1) were selected for further testing. 18 hybrid rice varieties were also sent by Africa Rice Center to Nigeria for yield performance evaluation. The proposal for the yield performance evaluation was approved, the sites of the demo field were selected and land preparation is currently on going at both sites.

To guarantee availability of foundation seeds required for rice, estimated at 9,000 metric tons for 2013, the following organizations were assigned to produce foundation seeds African Rice (300 metric tons), NCRI (100 metric tons), GAWA (300 metric tons) (FARO 44), TOGO (200 metric tons) (Arranged through Africa Rice).

Training of Rice Farmers in the South-West and South-South Geo-Political Zones

ii) Training of 4,650 rice farmers in the North East, North Central, South East and North West geo-political zones on modern agronomic practices in rice production. The training covered all areas of rice production, post-harvest handling and processing. The training was conducted in collaboration with the state Ministries of Agriculture and the Agricultural Development Projects (ADPs).

Collaboration with Africa Rice Center

iii) Recruitment of three scientists from AfricaRice, namely an agronomist and water management specialist, a value chain and post-harvest specialist as well as a breeder and seed specialist. In addition, an agreement was reached with the Africa Rice Center

to strengthen the capacity of the Rice Value Chain Transformation in the area of post-harvest equipment fabrication and training. In collaboration with AfricaRice, training was organized for 28 Nigerian agro-machines fabricators selected from five geopolitical zones of Nigeria on the fabrication of a rice thresher. The training produced five prototypes of the 2.5 tons per hectare rice threshers at NCAM within a period of two weeks (Figure 22). RVC plans to demonstrate the utility of these threshers and to use them to replace imported ones.

Collaboration with Rice Miller and Status of Integrated Mills

iv) The Rice Value Chains worked with the USAID MARKETS II to tour some selected rice mills and produced a report for the Federal Ministry of Agriculture and Rural Development FMARD. Consequently, the Minister of Agriculture convened a meeting of rice industry stakeholders for the strategic revision of the rice import policy and the adoption of investments as criteria for the granting import quota permit. The RVC is currently working out the modalities for implementation. Work is also ongoing with USAID Markets on the development of mechanisms for paddy collection and purchase from smallholders for sale to large mills and improvement of the rice marketing structure.



Figure 22: The new rice thresher fabricated during a training workshop of Africa Rice Center in Ilorin

2.6 Rice Value Chain Activity in 2014

- Baseline survey of rice sub-sector in the six geo-political zones of the country.
- Proposal for cultivation of at least 600,000 hectares in about 24 states during the 2013/2014 DSPP.
- Collation of names of interested rice farmers for credit facilities from Nigeria Incentive Based Risk Sharing for Agricultural Lending (NIRSAL).

- iv. Establishment of Sawah eco-technology in ten states to promote optimum use of water in Fadama and irrigated fields through use of power tiller (soil puddling).
- v. Support for rice farmers with 164 7HP irrigation pumps, 3100 3HP irrigation pumps, 37 reapers and 74 threshers to enhance production.
- vi. Support for upgrading selected local mills with 111 destoners, 74 rapid steam parboilers, 37 probe moisture meters and 37 bag stitching machines to improve quality of milled rice from small mills.
- vii. Collaboration with USAID Markets in the development of mechanism for paddy collection/purchase from smallholders for sale to large mills and improvement of the rice marketing structure.

3. CASSAVA VALUE CHAIN

3.1 The Cassava Revolution: Driving Down Import Bill on Wheat and Raising Incomes from Value Addition and Import Substitution

Nigeria is the largest producer of cassava in the world, with a total production of 36.8 million metric tons in 2009. Despite this position, it contributes close to zero percent in terms of global value added for trade in cassava-based products. Cycles of boom and bust of production have created disincentives for farmers due to perennially low prices every third year as a result of limited market access. As a result, we do not exploit the higher value derivatives from cassava processing like flour, starch and sweeteners. For example, paradoxically, Nigeria is the largest importer of wheat flour in the world from United States of America, which accounts for over 90% of all wheat imports. With an import bill of over NGN 635 billion (USD 3.9 billion) annually on wheat imports, cheap wheat imports have meant massive loss of jobs in the local agricultural sector that can produce alternatives. Wheat flour can be partially substituted with HQCF which Nigeria can produce in abundance.

The government launched a cassava transformation agenda in 2012, with import substitution, particularly to replace up to 40% of the imported wheat with high quality cassava flour for use in bread, confectionaries, pasta, etc, as a major objective. Nigeria will re-direct NGN 125 billion (USD 770 million) to cassava farmers annually by substituting 20% of wheat flour with HQCF. To drive the policy, the president directed that accelerated policy measures, research, development, and innovations be taken to ‘turn cassava into gold’ for farmers, reduce dependency on wheat imports and stimulate jobs all across the cassava growing belts of the country. A bold cassava transformation agenda was developed to add value to cassava all across the entire value chain. Within one year significant strides and successes have been achieved.

Through research and collaboration, a 40% substitution of cassava flour for wheat flour in bread was achieved by October 2011, in partnership with the International Institute of Tropical Agriculture and the Federal Institute for Industrial Research Oshodi. The President directed on November 30, 2011 that the cassava bread should be commercialized. Within 90 days, the first ever commercialization of cassava bread was achieved by UTC, one of Nigeria’s largest corporate bakers, when it launched its 20% cassava flour bread (Figure 23). By April 2012, Food Concepts, the bakers of Butterfield bread, commercialized their own 20% cassava flour bread. In October 2012, Park n Shop, one of the largest supermarkets in the country, launched its own 20% cassava flour bread at its outlets in Abuja and Lagos, with plans to expand to other outlets across the country (Figure 24). Other corporate bakers, including Sweet Sensation, Grand Square Bakery, Exclusive Stores Bakery, ShopRite and Imperial Bakeries, have followed the trend. We had succeeded in moving beyond production in laboratories, to commercial production for public consumption. A goal of the Cassava Transformation Agenda (CTA) is the transition of cassava into an industrial raw material in addition to its traditional role as staple food crop. Priority value chains focused on include: HQCF for substitution of imported wheat in bread and confectionaries, and native and modified starch for import substitution and dried chips for export and animal feed. The partial replacement of imported wheat with HQCF in bread and confectionaries, also known as the 20% Cassava Bread Initiative, has recorded major successes in 2013. No less than six large industrial bakers and more than 20 Master Bakers have successfully launched 20% cassava bread across the country (Table 4).

95% of bread eaten in Nigeria is baked by 450,000 small bakeries (Master Bakers). To ensure that the cassava bread is available all across the country, training of Master Bakers was initiated. So far, 755 Master Bakers have been trained at six selected bakeries, one in each of the six geo-political regions (Figure 24). The training was conducted by experts from Park n Shop, FIIRO and IITA. Trained Master Bakers were each given starter packs of one 50 kilogram bag of blended flour (20% high quality cassava flour, 80% wheat flour) and one kilogram enzyme improvers to enable them begin production of cassava bread.



Figures 23A, B and C: UTC's 20% cassava bread and confectionaries with up to 40% HQCF; inset is 20% cassava bread from Butterfield and Park n Shop bakeries

In each of these areas there was great enthusiasm among the Master Bakers. Indeed, the quality of the cassava bread produced by some of the Master Bakers was high; the taste and feel indistinguishable from 100% wheat bread. Further training and support for the Master Bakers was planned from the third quarter of 2013, to get the cassava bread closer to the public. Many Master Bakers across the country, including ZUMA Bakery in Kubwa, FCT; Honey Bakery in Karu; Our Saviour Bakery in FCT already produce cassava bread.



Figure 24A and B: Honorable Minister of Agriculture at the Launch of 20% Cassava Bread by Park and Shop Spars in Lagos



Figure 25A and B: Training of Master Bakers and loaves of cassava bread produced by the Master Bakers during the training session

Demand by bakers for HQCF led to a resuscitation of the cassava flour market. Two large-scale cassava processing plants, Thai Farms International (TFI) and DATCO, which were on the brink of collapse when the flour millers stopped buying cassava flour from them before this Administration, were revamped. TFI almost doubled its production capacity from 60 to 100 metric tons per day, while DATCO is in the process of building a third HQCF factory. Some 152 SMES processors of HQCF which had collapsed prior to the new government were audited and a first set of 35 are being upgraded with new equipment to ramp up cassava flour production.

To support the use of cassava flour substitution in bread, the government put in place a number of fiscal policies. The tariff on the import of wheat and wheat flour was raised. Duty on the import of enzymes for the production of cassava bread was eliminated. Equipment and machinery for the production of cassava bread now attracts zero duty. Furthermore, government established the Cassava Bread Development Fund, funded through the increased tariff on wheat flour. The Cassava Bread Development Fund will be used to support the cassava bread value-chain, including: training of master bakers; support for master bakers to acquire new equipment to produce cassava bread; social marketing to boost demand for cassava bread, especially through school feeding programs; improved production of cassava flour by small and medium scale HQCF processors; and higher efficiency of fresh root production, to reduce the cost of feedstock to HQCF millers.

Current production of HQCF in Nigeria, even with the new investments by the private sector and government, stands at 60,000 metric tons per year. This is 10% of the total quantity of HQCF required for full implementation of 20% cassava bread, some 600,000 metric tons per annum. Plans have been concluded to import 10 new large HQCF mills (240 metric tons per day), to be fully owned and run by the private sector, through a low interest rate facility from the China Exim Bank. By December 2015, the total milling capacity of the new large HQCF and existing mills will be 760,000 metric tons per annum. They will assure sustained supply of HQCF.

Already these efforts to reduce wheat imports are paying off. Wheat imports to Nigeria declined from an all-time high of 4,051,000 metric tons in 2010 to 3,700,000 metric tons in 2012. As we implement accelerated HQCF production, with the installation of

the industrial-scale cassava flour plants, expand cassava production and deploy hundreds of compact modular milling systems, Nigeria’s dependency on imported wheat will decline even further.

To raise production further to meet competing needs for cassava, 24 million stems of improved cassava varieties high in starch were distributed to farmers and cultivated on 8,000 Ha. In 2013-2014, we will be distributing an additional 65 million stems to farmers. This will cultivate 21,000 Ha of cassava.

In addition, plans are nearing conclusion to import the first six of 20 new large HQCF mills (240 metric tons per day), to be fully owned and run by the private sector. By December 2015, the total milling capacity of the new large HQCF and existing mills will be 760,000 metric tons per annum. This will assure reliable supply of HQCF to sustain the cassava bread initiative.

Table 4: Small and Industrial Bakeries that already produce 20% HQCF bread

S/N	NAME OF BAKERY	LOCATION	CONTACT NO.
1	Park n Shop	All the Six outlets across the country	0805-318-4154
2	Sweet Sensation	Lagos and Abeokuta	0803-324-3373
3	Zuma Bakery	-Kubwa (2) -Bwari (FCT)	0803-308-8778
4	Honey Bakery	Bwari (FCT)	0803-840-4100
5	Hot Pot	Utako (FCT)	0815-230-5640
6	UTC	Lagos and the South-West	0803-535-5890
7	Shop Rite	All their outlets in the country	0803-427-3210
8	Wonder loaf	Ekiti and environs	0813-035-0020
9	Iveno Bakery	Oleh after Ughelli, Delta	0803-340-1479
10	Apaco Bakery	Kwale, Delta State	0703-373-6232
11	ADP Confectionery- (Purely Women Group)	Asaba, Delta State	0803-090-5591
12	Ceekay Precious	Enugu	0803-744-0142
13	Chisam	Enugu	
14	Chibueze	Enugu	
15	Over 10 others in Delta	Agbor and all over Delta State	
16	Imperial Bakery	Wuse Zone 4, Abuja	
17	Our Saviours Bakery	Mararaba, Off Keffi Road, Nassarawa State	
18	Food Concepts	Abeokuta, Lagos, Abuja, Port Harcourt	
19	Olaoluwa Bakery	Afon, Kwara State	

20	Ibunkun Oluwa Bakery	Amayo, Kwara State	
21	Itesiwaju Oluwa Bread	Ganmo, Ilorin, Kwara State	
22	Baba dense Bread	Idonfian, Kwara State	
23	Hankuri Bread	Amayo	
24	Gbo-Adurami Bread	Idofian	
25	Anu-Oluwapo Bread	Igbaja, Kwara State	
26	Omobororo Bread	Koko, Kwara State	
27	Adeyemi Bread	Afon, Kwara State	
28	Falola Bakery	Orete, Kwara State	
29	Saheed Majeolagbe Bakery	Ajase-Ipo, Kwara State	

The 20% Cassava Bread Initiative received a tremendous boost through the establishment of a NGN 10 billion (USD 61.6 million) cassava bread fund by President Jonathan using funds obtained from imposition of new levies on wheat imports (Figure 26). CTA is resolved to replace half of all wheat bread eaten in Nigeria with 20% HQCF by 2015. A sixteen-man ministerial oversight committee of the Cassava Bread Fund was inaugurated by the Honorable Minister of Agriculture and Rural Development on August 13th to oversee activities of the cassava bread fund. The committee will guide the development, adoption, and execution of an overall strategy on commercialization of the cassava bread fund.

- 3.1.1 At the second meeting of the Ministerial oversight committee on September 17th, a strategy document was reviewed by the committee. It proposes training of 5,000 bakers nationwide on production of cassava bread providing support to small and medium-sized HQCF producers through loans and grants for equipment, working capital, and Minimum Guaranteed Price (MGP). Other elements of the strategy include input and mechanization support to 29,500 out grower farmers and establishment of 5,000 hectares of mechanized farms near existing and proposed small and medium HQCF mills and social marketing for widespread adoption.



Figure 26: The 20% cassava bread initiative received a boost from President Goodluck Jonathan, GCFR with the establishment of the cassava bread fund

Work plans and budgets on activities described in the strategy were submitted to the committee at its third meeting on November 21 and no objection was granted for funding of the four major activities, namely:

- i. Development of Robust Root Supply Chain at the cost of NGN 4,768,139,999 (USD 29,386,046.81)
- ii. Expansion of high quality cassava flour production and supply at the total cost of NGN 1,743,000,000 (USD 10,742,109)
- iii. Support to Master Bakers at the total cost of NNG 2,423,600,000 (USD 14,936,646.80)
- iv. Social Marketing at the cost of NGN 1,065,260,000 (USD 6,565,197.38)

It was also recommended that funds for support to bakers and HQCF millers be managed by the Bank of Industry (BOI) and through Bank of Agriculture (BOA) for support to farmers. Below is a description of funds going to each bank:

I. BOA

- i. Mechanization support for 29,500 existing farmers – NGN 912 million (USD 5.6 million) (50% grant and 50% loan)
- ii. Planting materials for 29,500 farmers – NGN 708 million (USD 4.4 million) (100% grant)
- iii. Agro inputs for 29,500 farmers – NGN 796.5 million (USD 4.9 million) (50% grant and 50% loan)

TOTAL – NGN 2.416 billion (USD 14.9 million)

II. BOI

- i. Upgrade of capacity of 35 existing small HQCF mills from 1 metric ton per day to 3 metric tons per day – NGN 1,050 million (USD 6,471) (50% grant and 50% loan).
- ii. Provision of working capital for SMEs – NGN 425 million (USD 2.6 million) (100% loan)
- iii. Provision of working capital for medium and large HQCF Mill – NGN 468 million (USD 2.9 million) (100% loan)
- iv. Baking equipment support to Master Bakers and Industrial Bakers – NGN 2.43 billion (USD 15 million) (50% loan and 50% grant)

TOTAL – NGN 4.343 billion (USD 26.8 million)

Other activities, including land clearing, the establishment of 5,000 hectares of mechanized farms, and social marketing, will be managed out of the federal Ministry of Agriculture and Rural Development.

Achievements of the cassava bread fund to date include:

- a total of 865 Master Bakers trained so far on the production of cassava bread. Starter packs of HQCF and improvers were given at each training session, consisting of HQCF enzymes
- over 30 bakers routinely produce 20% HQCF for sale
- Memorandum of Understanding signed with BOA on support to farmers and with BOI on support to HQCF producers and bakers
- selection of the first 35 SMEs producing HQCF for upgrade based on audit of all 153 SMEs.

3.2 Import Substitution for Starch and Sweeteners

In addition to HQCF, two other cassava products that can reduce Nigeria's export of jobs in the agricultural sector are starch, both native and modified, and sweeteners - including glucose, maltose, sorbitol, etc. Two large end-users of starch: Cargill, the World's largest producer and trader of starch and sweeteners, and Flour Mills of Nigeria (FMN), Nigeria's largest food processor, have committed to building two large starch mills of 75,000 metric tons per annum in Agbadu, Kogi State, and 100,000 metric tons per annum in Shao, Kwara State respectively. The federal government has designated the Agbadu and Shao locations for the starch plants as Staple Crop Processing Zones (SCPZs). Starch produced will be converted into sweeteners at refineries - to be constructed by these companies - and supplied to their traditional customers in Nigeria. In addition to the large starch mills, two smaller mills 12,000 metric tons per annum and 6,000 metric tons per annum have been recently built in 2013 at Agbarra, Ogun State (Greentech), and Iseyin, Oyo State (Psaltery) respectively. To ensure adequate feedstock supply for these starch factories at the right price and quality, CTA undertook development of supply chains at each of the factories. Three commercial farmers from southern Brazil were brought to Agbadu, Shao, and Agbarra in February 2013 to advise on establishment of supply chains, consisting of a network of mechanized farm and root delivery to ensure high productivity and reduced production cost (Figure 27). Following submission of recommendations, the farmers returned in June and July 2013 and assisted in the establishment of a 200 hectare demonstration of mechanized farms in Agbadu Kogi state (Figure 28). NCAM provided mechanical planters, from its collaboration on cassava mechanization with the African Agricultural Technology Foundation (AATF), and IITA provided stems of the improved varieties TME419 and some farm implements. The cassava farms were established through complete mechanization of land preparation, planting, and pre-emergent herbicide application, all by tractor mounted implements. Nigerians were also trained in the proper use of this equipment.



Figure 27: Commercial cassava Brazilian farmer visiting Agbadu SCPZ site in February 2013



Figure 28: A 200 hectares mechanized cassava farm established in Agbadu, Kogi state as part

of the supply chain for Cargill's starch plant. Nigeria accounts for an insignificant fraction of the dried chips global trade, a NGN 811 billion (USD 5 billion) per annum trade, even though she is the world's largest producer. The Nigerian cassava farmers produce predominantly for an inelastic food market that leads to unstable prices for fresh roots in the absence of other value-added chains to absorb the harvest.

3.3 Earning foreign exchange through export of dried chips

CTA strives to link Nigerian cassava farmers to the dried chips for export value chains, via training in production and facilitating access to finance by exporters, earning foreign exchange revenues. A major achievement in 2012 was securing orders, totaling 2.2 million metric tons of dried chips, from China - the world's largest importer of cassava chips. The first shipment of dried chips to China took place in August 2012 (Figure 29). Efforts are underway to improve cassava chip production and supply chain systems to meet the their demand. The deal will earn 86.6 billion (USD 534 million) in revenue to cassava processors and farmers.



Figure 29A and B: Packing and fumigation of the first batch of dried cassava chips for export to China at the Lagos Port

The cassava dried chips for export and local animal feed industries are important value chains with respect to creation of reliable demand for cassava roots in the country. As of today, garri accounts for a disproportionate 70% of all cassava fresh roots produced by farmers in the country. The lack of a strong alternative market results in prices of cassava roots swinging widely every other season as farmers over produce for an inelastic garri market or reduce their cassava acreage in response to poor prices and an inability to sell the harvest.

Under the Cassava Transformation Agenda (CTA), the Honorable Minister of Agriculture is determined to create alternative markets for cassava, especially in the dried chips for export value added chain. Nigeria has received orders of over 3 million metric tons for dried chips from China and the Middle East. An economic feasibility study of the dried chip value chain commissioned by GEMS in 2012 and completed in 2013, at the request of CTA, revealed key bottlenecks that need to be resolved for the country to take advantage of the dried chips market orders. They include:

- i. Low productivity (11-12 metric tons per hectare) and high cost of production of cassava

- ii. Lack of financing for key actors in the value chain, partly due to limited understanding of the sector by local banks
- iii. Lack of reliable supply of dried chips, partly due to a lack of processing capacity
- iv. Inconsistent quality of dried chips product (and incoming roots)
- v. High transportation costs, partly driven by numerous hand-off points and lack of storage
- vi. A highly inefficient system for securing documentation including customs, plant quarantines, and produce inspections
- vii. Lack of contractual experience for sustained export

The Honorable Minister visited the African Export Import Bank (AFRIEXIM) in Cairo in February 2012 to negotiate a NGN 6.5 billion (USD 40 million) facility to support dried chips export. AFRIEXIM has offered the possibility of up to NGN 6.5 billion (USD 40 million) of loans channeled via BOA and BOI. For their part, FMARD drew up shortlist of eight exporters to receive assistance to apply for the loans; three exporters, namely Flo Malvina, Sajab, and Flour Mills of Nigeria. Those who have already or are in the process of developing robust supply chains and logistics for dried chips export were given utmost priority.

Flo Malvina, in collaboration with the Kogi state government, now has an operational dried chips processing plant in Odu, Kogi East, capable of producing 60 metric tons of chips a day. A second one is operational in Isanlu and 14 more are at different stages of completion across the state. Flo Malvina is currently supplying an animal feed miller in Jos. FMN is the process of buying six large dried chips production machines from Thailand and building 4 hectares of drying floors at each of the six locations of high cassava production; each of the production facility is capable of 200 metric tons of dried chips per day. Sajab was also working with the Sokoto state government to establish 100 hectares of cassava fields and a dried chip processing facility.

In addition to this, CTA is using the six recently completed model dry chips processing facilities in each of the six geo-political regions of the country (Figure 30). This is done as a means of sensitizing state governors and local government council chairmen on the use of these processing centers in dried chips processing to alleviate the debilitating challenge farmers' face of being unable to sell their harvest every other harvest season. State governments will be encouraged to build dried chips processing facilities, essentially a drying floor and warehouse (Figure 30), in LGAs where cassava production outstrips processing and consumption capacity.

Farmer cooperatives and private sector dried chips producers will be trained in production of quality cassava dried chips, modern cassava production methods, supply chain management, and linked to exporters. They will also be given sufficient stems of TME419, a high root yield and high starch varieties, to plant 50 hectares that can serve as a nursery for multiplication of stems to raise productivity.



Figure 30: Model dry chips production facility in Shabu, Nassarawa State.

3.4 Cassava GES 2013

Additional demand of cassava roots from the HQCF, starch, and dried chips value chains is in the excess of 10 million metric tons per annum, a 25% increase in cassava production. The expanded production must also ensure that the cassava products are competitive with imported alternatives. It is therefore important that productivity is high, via the use of high yielding improved varieties and agro-inputs, and production costs minimized, through mechanization.

To raise production to meet competing needs for cassava, a total of:

- 398,577 bundles of cassava were supplied by the three agencies saddled with the responsibility;
- 296,855 bundles were delivered to redemption centers in 26 states;
- 239,052 bundles were redeemed by 30,572, farmers according to supply chain managers records;
- 101,772 bundles of cassava stems (not included in SCM's records) were delivered to 'special project locations' such as Agbadu, Kogi State; Shao, Kwara State; Odogbolu and Ijebu-Igbo in Ogun State, Obasanjo Farms at Owiri and Iseyin; Kuta, in Osun State and Tureta, Sokoto state;
- A total of 56,416 bags out of 93,920 bags of cassava specific fertilizer were redeemed by farmers; and
- A total of 1,000 hectares of certified seed farms was also contracted to RTEP, and IITA to make improved, high yielding and disease resistant planting materials available to the farmers throughout the 30 cassava producing states. This will cultivate 21,000 hectares of cassava.

In addition, IITA, one of CTA's stem suppliers, conceived an innovative way of stem distribution outside of the GES platform using farmer field days. Farmers located around

their stem farms were invited on a certain day to harvest improved varieties on the stem farms and to take 15 bundles of stems (Figure 31).

One of the challenges of reaching a large number of farmers and acreage with improved cassava technology is the slow rate of multiplication of stems of improved cassava varieties, and the high cost of handling the stems. Based upon experiences in 2012, 2013, and the beginning of 2014, a different approach will be adopted for cassava GES to rapidly distribute improved varieties to farmers and raise productivity. Small, medium, and large farms, already organized into clusters around the proposed locations of the starch factories, and supported with inputs and mechanization will be used as stems out growers to disseminate stems of improved varieties.

Interventions in the primary production of HQCF, dried chips and starch value chains by CTA and other donor funded projects will amount to 96,000 hectares in the 2014/2015 season. Other donor funded projects include FADAMA III (additional funding), AFDB support to SCPZs, and IFAD. In exchange for this support, farmers will be made to commit 80% of their stems to be given away to other farmers around them who will be registered for the GES exercise. The locations of these interventions will be the new redemption centers for the 2015 GES via field days. We envisage being able to distribute 24 million bundles or 1.2 billion stems, sufficient to plant 400,000 hectares, to give an additional 10 million metric tons of roots in 2015, effectively meeting the fresh root needs for the new value chains.

Additional demand of cassava roots from the HQCF, starch, and dried chips value chains are in the excess of 10 metric tons per annum - a 25% increase in cassava production. The expanded production must also ensure that the cassava products are competitive with imported alternatives. It is therefore important that high productivity is achieved using high yielding, improved varieties and agro-inputs, as well as minimizing production costs through mechanization.

More than half of the stems to be distributed in the 2013/2014 planting season come from a total of 1,577 hectares of certified seed farms was also contracted to Root and Tuber Expansion Program (RTEP), International Institute of Tropical Agriculture (IITA), and National Root Crop Research Institute (NRCRI) to produce stems of improved high yielding and disease resistant varieties for distribution to farmers. The certified seed farms were spread across the whole country to facilitate of bulky cassava stems throughout the 30 major cassava producing states.

The number of improved stems distributed to farmers will be increased to 750 million stems, sufficient to plant 250,000 hectares in 2014/2015 with support from the cassava fund. These stems will partly come from 500 hectare nurseries and factories to be established in 2013/2014 planting season at each of the ten locations of proposed large HQCF and starch processing plants.



Figure 31: Bundles of improved stem cuttings and fertilizer are distributed to the farmers. Women farmers are not left out in cassava GES

3.5 Other Achievements of the Cassava Transformation

- i. Expanding cassava production base for HQCF production. 5,000 hectares are being cleared for 2014/2015 production in 12 locations of Ijebu Igbo (Ogun State), Oro (Kwara State), Abraka (Delta State), Abriba (Abia State), Obubra (Cross River State), Ore (Ondo State), Iyemero (Ekiti State), Otukpo (Benue State), Ilero (Oyo State), Shao (Kwara State), Agbadu (Kogi State) and Karshi (Nasarawa State). Mechanized cassava farms will be established on the cleared land
- ii. A Cassava Market and Trade Development Corporation (CMTDC): A consulting firm, Technoserve was engaged on the establishment of Cassava Market and Trade Development Corporation (CMTDC). A multi-pronged structure of: a) a growth pole, zones where commercial cassava farming and processor investment can successfully occur; b) farmer-led marketing bodies focused on improving smallholder cassava production efficiency. The firm held stakeholders' workshop and has submitted a report. The next step is incorporation of the CMTDC and action has been initiated by legal department.
- iii. Model gari processing centers: Contracts for six model gari processing centers have been awarded. This is to empower the local communities in production of hygienic gari for local and international markets. The locations of these centers are: Agbadu, Kogi State; Iji-Isin, Kwara State; Abraka, Delta State; Ijebu, Ogun State; Umuaiha, Abia State and Sabo-Kasia, Efunlete, Oyo State.
- iv. Upgrading of SMEs: The first batch of ten heat exchangers has been distributed to the beneficiaries and another batch of ten is ready for distribution (Figure 32).
- v. Selection of high starch content cassava varieties: 48 genotypes, 43 advanced high starch breeding lines and five commonly grown varieties, were established at 14

locations by NRCRI and IITA across the country in September 2012. The field trial design was a split plot design with three replications. The trial will be sequentially harvested at 10, 12, and 15 months after planting. Starch and dry matter content will be measured across the three harvest dates to identify high and stable starch varieties.

- vi. Establishment of demonstration trials: 121 hectares of demonstration trials were established at the following locations: Odogbolu, Ogun State 50 hectares; Kuta, Osun State 25 hectares; Agbadu, Kogi State, 147 hectares. The mechanization based Best Agricultural Practices were employed and the trials would be a kind of field school for skill acquisition and transfer of knowledge to farmers.
- vii. Development of cassava manual: Experts on cassava development from IITA, NRCRI, RTEP, FMARD, farmers and processors were gathered to prepare cassava manual which is going to be an authoritative document on commercial cassava production and processing in Nigeria. The manual will serve as a guide to commercial farmers.



Figure 32: Flash dryer of a small (one metric tons per day) HQCF mill. Upgrades of these mills to large and more efficient flash dryers is a major component of the cassava transformation

4. SORGHUM VALUE CHAIN

4.1 Sorghum as high nutrition food for northern Nigeria

The Sorghum Transformation Value Chain (STVC) seeks to ensure nutrition and food security for producers and consumers of sorghum and sorghum products through various interventions in primary production, processing, and linkage to market. Special focus is given to sorghum producing areas in Nigeria, especially the north-west and the north-east. In these areas, private sector partners are encouraged to invest and participate actively in processing, product development and STVC activities.

One of the goals of STVC is to enhance the image and awareness of sorghum and its products for local and regional markets to maintain Nigeria's position as a leader in the production of sorghum globally. Increased, utilization, consumption, and exportation of sorghum as high energy foods, malt, malt-based foods and beverages, nutrient dense composite flour for School Feeding Programs and to supply World Food Program (WFP) food aid is vigorously being pursued.

Nigeria is the largest producer of food sorghum in the world. The STVC aims to promote sorghum as a raw material for the industrial food market and highly nutritious, well packaged food product for local and regional markets. The geographic focus of STVC is in the North-East and North-West parts of the country where the crop is predominantly produced and has high levels of malnutrition (Figures 33 and 34).

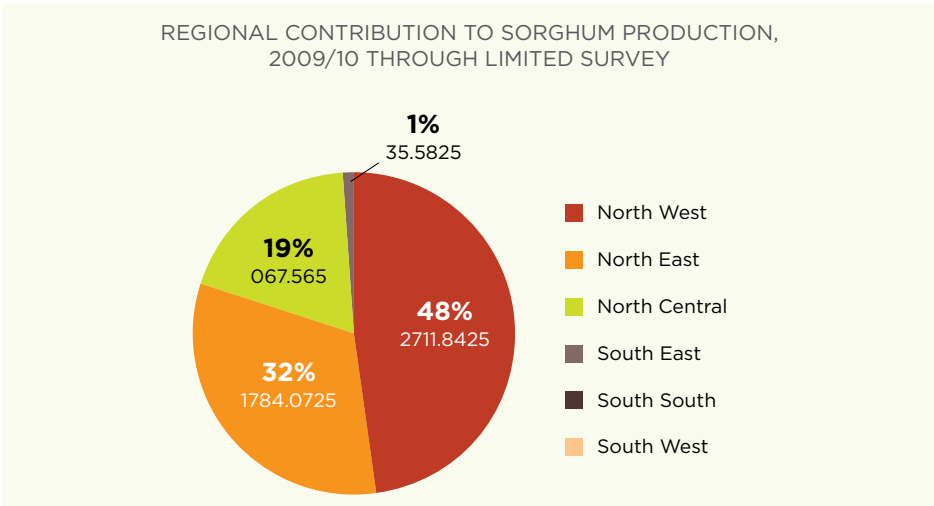


Figure 33: Regional contribution to sorghum production in Nigeria 2009/2010

The sorghum transformation plan is focusing on three value chains:

- i. **Fortified Foods (High Energy Foods):** Flour for high energy foods such as “Soy-Akamu” for school feeding programs, lactating mothers, children and convalescing adults; and eventual export commodity by World Food Program for use in other African regions needing food aid.
- ii. **Malt Beverages, Drinks and Foods:** “DawaMalt” and other malt beverages for school feeding programs.
- iii. **Superfine Sorghum Flour (SSF):** In convenient packaging as “TUWO Meal”, for compositing with wheat (up to 20%) to bake bread, up to 40% to produce noodles, macaroni, couscous, pancakes, breakfast buns, and biscuits.

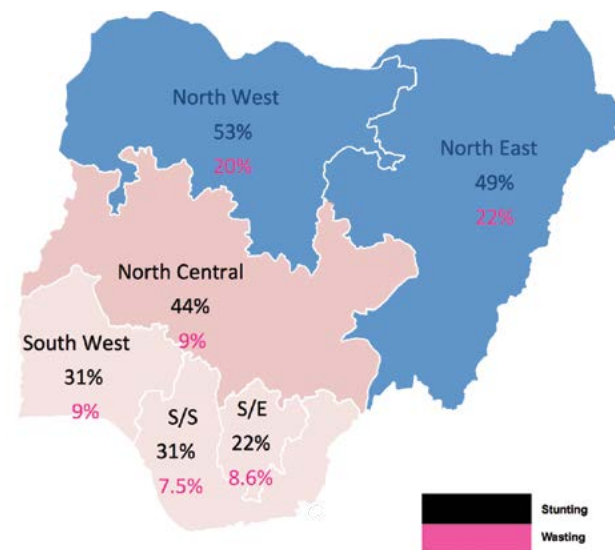


Figure 34: Map showing malnutrition distribution in Nigeria

Strategic plans have been prepared to improve the image of sorghum indigenous foods and to support improved packaging for ready to cook, convenient and nutritious products. Due to the high level of malnutrition in Nigeria especially in the north and south-south regions, the team also promotes the use of sorghum for Scale Up Nutrition (SUN).

STVC contributes to Agriculture Transformation Agenda (ATA) through its contribution to economic development in the north-east and north-west. STVC also partners other value chains, for example, groundnut, soybeans, cowpeas, chickpeas, pigeon peas and other legumes, which are protein-rich food sources and ingredients, with sorghum in high energy foods.

4.2 Sorghum 2013 GES

The STVC was able to generate an offline list of 72,400 farmers to support the sorghum farmers list in the Cellulant database for 2013 GES. The offline list helped to ensure an increased and wider coverage of our farmers. The STVC in the period under review distributed:

- 480 metric tons of improved varieties of sorghum seeds to 96,000 farmers in 10 states through the e-wallet platform at no cost. The states include Zamfara, Kano, Kebbi, Yobe, Taraba, Gombe, Bauchi, Kaduna, Adamawa, and Sokoto. Each farmer received 5 kilograms of seed of the four best sorghum OPV varieties (CSR-01, CSR-04/CSV 400, and KSV 8). This resulted in the cultivation of an additional 96,000 hectares.
- Farmers also redeemed 4,761 metric tons of NPK and 5,072 metric tons of Urea.

4.3 Other Achievements of the Sorghum Transformation Value Chain in 2013

- i. **Introduction of improved production technologies:** An MOA between ICRISAT and FMARD on boosting of production, utilization and commercialization of sorghum in Nigeria was signed in 2013. The MOU covers the multiplication of foundation seed, using our selected farmers in communities as out-growers, and the introduction of improved sorghum varieties and production methods. This raises productivity and drives commercialization of sorghum production in Nigeria.
- ii. **Capacity building to support hybrid seed production:** In 2013 we planned to continue creating awareness for sorghum’s industrial use in large quantities. Furthermore, Pioneer/Dupont, Nigeria was encouraged to register and released two hybrids (86W15 and 87W16) for commercialization by the Crop Variety Release Committee of Nigeria in June 2013. The hybrid work was a collaboration between the Institute of Agricultural Research (IAR, ABU), Samaru, Zaria; National Agricultural Extension Liaison Services (NAERLS, ABU), Samaru, Zaria; Department of Crop Protection, ABU, Samaru, Zaria, Lake Chad Research Institute, Maiduguri; National Agency for Food and Drug Administration and Control (NAFDAC), Yaba, Lagos; Diageo Group, Ikeja, Lagos; National and Agricultural Seeds Council, Abuja (NASC). These hybrids are naturally herbicide tolerant, early maturing (120 – 130 days), and adapted to the northern Guinea and Sudan savanna ecologies. They have a potential yield of 4 - 5 metric tons per hectare under non-striga conditions and a potential yield of 3.5 – 4 metric tons per hectare under striga-infested conditions. The release of these two more hybrids by Pioneer/Dupont is a welcome gesture as STVC is working hard to harness more markets for sorghum foods.

- iii. **Capacity development:** In 2013 the STVC successfully trained over 250 women and youth in the Training of Trainers (TOT) program for the processing and utilization of sorghum based high energy foods for school feeding (Figure 35). About 250 participants were empowered to further step down the trainings in the different Local Government Areas. About 260 farmers were also trained on the agronomic practices, harvesting and post-harvest management techniques of handling improved high yielding sorghum varieties distributed under the GES e-wallet scheme (Figure 36).

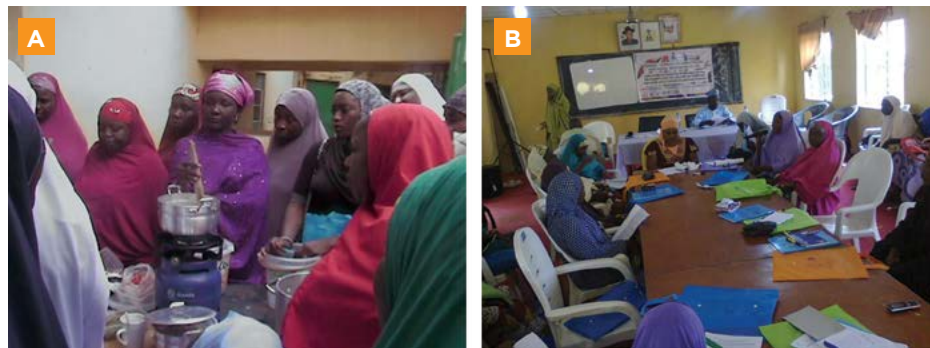


Figure 35A and B: Practical training session at a Training of Trainers (TOT) in Zamfara (A); Classroom training chaired by the rep. P.S. Zamfara State Ministry of Agriculture



Figure 36A and B: Training on the maintenance and operation of the sorghum grain thresher in the presence of the ICRISAT Director West and Central Africa

- iv. **Partnerships and collaboration with the private sector:** In line with the STVC objectives of linking processors with markets and to increase uptake of sorghum grains, the STVC linked a collaborating private sector partner, Dansa Holdings, with the World Food Program (WFP) to produce sorghum based high energy food for distribution to crisis-ridden parts of Sub-Saharan Africa. The STVC will also be working with Aba Malting Plant as 'Partners for Sorghum Transformation'. The main thrust of the relationship is the training and empowerment of seed companies to effectively engage in seed production and commercialization for our farmers.

STVC undertook an assessment visit to seed companies in Kaduna and Plateau State to inspect and confirm actual quantities of seeds processed and/or packaged by seed companies. This enabled the STVC to decide on distribution and final deployment of seed for GES 2013. These efforts ensured a seamless roll out exercise and came up with the adjustment that reduced the available seeds to 480 metric tons.

- v. **Promotion of nutrient dense food and strengthening of capacity:** STVC has a mandate of improving nourishment, and ensuring the food and nutritional security of consumers of sorghum in the north-west and north-east of Nigeria through processing of high energy foods to eliminate malnutrition, stunting and wastages. In pursuance of this, Training of Trainers (ToT) workshops on utilization of sorghum high energy food and other novel foods (e.g. sorghum bread and cakes) for improving nourishment in families and support of School Feeding Program was held in Kano and Bauchi, Zamfara and Gombe States, and FCT this year.
- vi. **Preparation of a business plan:** A commercial feasibility study (business plan) for establishment of sorghum high energy food plants in Nigeria was carried out. The final document was submitted during the 2013 year.
- vii. **A baseline survey and market analysis:** The STVC baseline survey and market analysis was carried out and a draft report has already been received.
- viii. **Agronomic practices rainings:** To ensure maximum productivity, training of sorghum farmers in the north-east states of Gombe, Yobe, and Bauchi on agronomic and management techniques for handling the improved high yielding varieties (OPV) of sorghum was given. The phase one agronomic training for the north-west states was held in Kano. A total of 150 farmers were trained from Kano, Kaduna, Jigawa and Katsina States on improved agronomic, harvesting and post-harvest management techniques of handling improved high yielding sorghum varieties (OPVs) for maximum productivity and quality grain uptake
- The second phase of the agronomic training for the northeEast states was on handling improved agronomic, harvesting and post-harvest management techniques of improved high yielding sorghum varieties (OPV's) for maximum productivity and quality grain uptake. It was conducted in Jalingo, Taraba State. 100 farmers from Borno, Taraba and Adamawa States were trained at the workshop.
- ix. **Partnerships:** In collaboration with ICRISAT, two innovation platform sessions involving all stakeholders were convened in Bebeji LGA, Kano and Zango Daura LG, Katsina State. This was to facilitate participation of all stakeholders in the decision making, planning and processes leading to increased seed production and productivity of sorghum.

- x. **The Sorghum Value Chain:** The value chain engaged with officials of TechnoServe leading to the modalities of establishing Sorghum Commodity Marketing Corporation.
- xi. **A proposal for the framework of the Nigeria Facility for Inclusive Markets (UNDP Project):** A certification project was submitted to UNDP. A pre-assessment visit to fish farms at Ijebu Eriwe for sensitization on certification was done.
- xii. **Brazil – Nigeria Action Plan:** Participated in a workshop on development of Guinea Savannah. We actively participated in the following sessions:
 - (a) Crops for Guinea Savanna
 - (b) School Feeding Program
- xiii. **Presentation on Nigeria School Feeding Program:** In collaboration with Partnership for Child Development (PCD), GAIN, UNICEF and Federal Ministry of Education, a presentation was made on the Nigeria School Feeding Program..
- xiv. **Introduction of improved technologies:** The STVC went into collaboration and signed an MOU with ICRISAT (FMARD and ICRISAT) in 2013. The goal is to boost the production, utilization, and commercialization of sorghum in Nigeria.



Figures 37A, B and C: Training of Trainers (TOT) Workshop on the utilization of sorghum fortified energy for improving nourishment and support to school facility programme in Kano, Bauchi and Gombe States.

- xv. **Increasing seed production and productivity of sorghum:** In collaboration with ICRISAT, two innovative platform sessions involving all stakeholders were carried out in Bebeji LGA, Kano State and Zangon Daura LGA in Katsina State. This was to facilitate participation of all stakeholders in the decision making, planning and processes leading to increased seed production and productivity of sorghum.
- xvi. **Demonstrations:** 447 field agronomic demonstrations were carried out, reaching over 9,000 farmers on an innovative platform. A minimum of 100 and a maximum of 250 participated from each local government. Each demonstration team was made up of 21 farmers from the north-west zone (Katsina and Kano State).



Figure 38A: Class room training for farmers in Bauchi State on Good Agricultural Practices (GAP) for high productivity of improved high yielding sorghum varieties (OPVs).
Figures 38B and C: Field practical session for the agronomic training in Bauchi State.



Figure 38D: Training on the maintenance and operation of sorghum grain thresher and milling machine in Taraba State.

Figure 38E: The STVC desk officer advising the farmers to adhere strictly to the instructions on the maintenance and operation of sorghum grain thresher in the presence of the ICRISAT Director for West and Central Africa in Kano.

Figure 38F: Field trip during agronomic training in Bauchi.

- xvii. **Linking processors with the market:** In line with its objective of linking processors with market, STVC linked Dansa Holdings, a collaborating private partner, with the World Food Program (WFP).
- xviii. **Preparation of a business plan:** A commercial feasibility study (Business Plan) for the establishment of sorghum high energy food plant in Nigeria has been carried out, to guide would be investors.

- xix. **Survey:** A baseline survey and market analysis for Sorghum Transformation Value Chain has also been carried out to direct the activities of STVC.
- xx. **Distribution of improved seeds:** For 2012 and 2013 cropping season, 980 metric tons improved sorghum high yielding seeds were distributed to 196,000 farmers through the GES e-wallet platform. Each farmer got 5 kilograms of seed and two bags of fertilizer to plant 1 hectare.



Figure 39: Commercial hybrid with uniformity of heads

- xxi. **Promotion of nutrient dense food and strengthening of capacity:** STVC has a mandate of improving nourishment and ensuring food and nutrition security of consumers of sorghum in the north-west and north-east. In pursuance of this, a Training of Trainers (TOT) workshop on utilization of sorghum fortified energy food for improving nourishment and for supporting the school feeding program was held in Kano, Bauchi, Zamfara, and Gombe State. It empowered over 250 women and school feeding coordinators who are to further step down the trainings in their different Local Government Areas (Figures 38A, B and C).
- xxii. **Agronomic Practices Trainings:** Over 500 farmers were trained in the north-east and north-west on good field agronomic harvesting and post-harvest management techniques (Global GAP) for handling improved high yielding sorghum varieties (OPVs) to maximize productivity and quality grain uptake. Farmers were exposed to on-farm harvesting, threshing and milling of ready to cook flour for instant tuwo and other preferred staples (Figures 38 A, B, C and D).

- xxiii. **Commodity Market Cooperation:** STVC engaged with Techno-serve (consultant) leading to the modalities of establishing Sorghum Commodity Market Cooperation
- xxiv. **Workshop for the Guinea Savannah:** STVC participated in the Brazil-Nigeria Action Plan Workshop for the Guinea Savannah in the areas of crops for Guinea Savannah and School Feeding Program.
- xxv. **Partnering:** STVC is partnering with the World Food Program (WFP) to produce sorghum high energy food for distribution to crisis ridden parts of sub-Saharan Africa.
- xxvi. **Extension of services to sorghum farmers:** In an effort to increase extension services to sorghum farmers, STVC in collaboration with ICRISAT, carried out a training session with extension officers in the north-west at Dutse, Jigawa State to ensure close touch with Good Agricultural Practices (GAP) and strengthened the extension officers.
- xxvii. **Introduction of high yielding sorghum hybrids:** Two sorghum hybrids were released in December 2012. Through the partnership of lead private sector Aba Malting Plant (AMP), the hybrids are being multiplied to produce certified seeds for our farmers (see picture below).
- xxviii. **Crop Processing Zones:** In collaboration with the infrastructure team, two Staple Crop Sorghum Processing Zones (SCSPZ) were established at Kadawa in Kano State and Biu in Borno State.



Figure 40: Promotional material for the use of sorghum in nutritious food

- xxix. **Sensitization:** The sorghum team engaged and sensitized some food manufacturers and malting companies through:
 - Malting Plant (AMP) Lagos and Kaduna for hybrid sorghum development, grain end use quality, seed issues on capacity building of seed companies;

- Life Care Ventures Ota for sorghum malt development and bulk grain haulage;
- Honeywell superfine foods Lagos for use of sorghum grain in noodles, macaroni, and super fine flour milling;
- Dala food Kano for sorghum use in food manufacturing and beverages;
- Derivatives limited for sorghum malting; and
- Dansa holdings (the Dangote groups) for high energy foods.

xxx. **School Feeding Program – Home Grown School Feeding:** To fast track the support for the School Feeding Program in Kano, it was introduced to Partnership for Child Development (PCD). They are now in discussions on how to improve the Kano program using the Home Grown School Feeding set-up. Since October 2013, PCD visited Kano twice. First, for a scoping visit and second for data collection, meeting the stakeholders and getting to know the terrain better. The Kano program will now continue until 2015 with funding from The Gates Foundation (Figure 41).



Figure 41: Dr. Ohiokpehai Team Leader of Sorghum Transformation Value Chain during one of her presentations on the school feeding and links to agricultural development

xxxi. **Presentation and proposal efforts of STVC**

- Presentations were made to possible investors, e.g. Honeywell, First Bank, Skye Bank and USAID markets and are yielding results.
- A national standards grading certification and traceability document was drafted to support quality seeds for ATA.
- A document for fortified cereal processing for school feeding to reduce malnutrition was drafted and submitted for financing.

- A facilitator manual for the Training of Trainers (TOT) was produced for the training of women and youth organized by gender units of FMARD.
- A proposal was presented to the World Bank and the African Development Bank .
- Healthy, collaborative discussions are on-going with WFP, The Gates Foundation and GAIN.

Equipment sourcing

- The STVC worked with INSTA-PRO, IOWA USA for the modification of maize extruder to process sorghum for quality sorghum flour and save cost for ATA.
- Two staple crop processing zones were identified for sorghum in Kadawa, Kano State and Biu, Borno State in collaboration with the infrastructure team.

Awareness creation

Engagement and sensitization of malting and food manufacturers such as, Lifecare Ventures Ltd and Derivatives Malting (malting Companies), Honeywell Superfine Foods Lagos (a fine foods manufacturing company including Noodles, Pasta and Meal), DALA Foods Kano (an indigenous food mix company); Honeywell Flour Mills (flour millers) and Dansa Holdings, for their collaboration in implementing value addition for sorghum-based foods to create bigger markets for sorghum in Kadawa SCPZ Kano and expanded market in the sub region and WFP.



Figure 42: New high yielding sorghum hybrids that are being multiplied to transform sorghum into a commercial crop

5. COCOA VALUE CHAIN

5.1 Nigeria's Cocoa Transformation Agenda

Cocoa is Nigeria's single largest non-oil foreign exchange earning commodity, contributing some 35% to the gross domestic product (GDP) and employs the largest number of people (22 million) in the agriculture sector. The cocoa transformation agenda seeks to:

- i. Double national cocoa output to 500,000 metric tons through increased farm-level productivity.
- ii. Improve family income and livelihood of 250,000 farm households through capacity building in good agricultural practices, invest-decision making and professionalization.
- iii. Create 390,000 new jobs along the value chain through increased production, processing, professionalization, value addition and marketing activities.
- iv. Increase value addition and local processing (grinding) to not less than 25% of national cocoa beans production.
- v. Raise local consumption to not less than 5% of annual production.
- vi. Build strong institutional governance structure for the Nigerian cocoa industry established on a sustainable public-private partnership platform.

5.2 Strategies for Achieving Targets

- i. **Maintenance:** In the maintenance strategy, farmers tending the 640,000 hectares active plantations will receive Growth Enhancement Support within budget limit in 2012.
- ii. **Rehabilitation:** In the rehabilitation strategy, some 246,000 hectares will be rehabilitated by 2015 in partnership with state governments and the private sector. However, in 2012, some 86,110 hectares are planned for rehabilitation nationwide.
- iii. **Expansion:** In the expansion strategy, a new 162,460 hectare plantation will be opened by 2015 in partnership with the states and the private sector. In 2012, a new 56,920 hectare plantation was proposed for establishment. These estimates for expansion and rehabilitation are based on the area under cultivation and potentially of available land in cocoa growing states.
- iv. **Planting materials:** To provide improved planting materials for the 86,110 hectares to be rehabilitated and 56,920 hectares to be opened up, provision is to be made for some 3.65 million seed pods. Technical planning has been made with the Cocoa Research Institute of Nigeria (CRIN), Tree Crops Unit of Ondo, and Osun and Ekiti States that have large holdings of seed garden to deliver the sum.

- v. **Capacity building:** To enhance increased productivity, ATAP will be involved in the capacity building of farmers in good agricultural practices (GAP) and also trained in entrepreneurial skills acquisition to see agriculture as a business. To this end, some 100,000 farmers will be reached through 2015 through the Farmer Field and Business Schools (FFBS). In 2012, 1,000 FFBS was organized to reach 35,000 farmers across all cocoa producing states. STCP/IITA, GIZ/CLP (German Development Organization), CRIN and States Extension outfits will be facilitating the capacity building effort.
- vi. **Farmer aggregation and certification platform:** As an export commodity, cocoa trade is subject to global market regulations. Obtaining cocoa products from sustainable and certified sources is the global trend.
- vii. **Demonstration plots:** To support farmers in the cocoa agribusiness in the rural setting, demonstration plots will be set up across all the local governments in the states. This will afford the farmers training in the use of fertilizers, agrochemicals, rehabilitation techniques, new farm establishment, good agricultural practices, etc. Some 162 demo plots will be established with the support of state governments and private investors.
- viii. **Community level seed and bud-wood garden:** To facilitate farmers' access to selected hybrids as planting materials and discourage use of poor planting materials often sourced from their own farms, 20 community based gardens were established in the major cocoa growing states in 2012. These gardens were 0.5 hectares and produced four hybrids and budwood gardens containing 15 clones.
- ix. **Graduate cocoa agribusiness scheme:** Each participant will have a 10 hectare farm on lands that will be provided by the state government. Training, seed and fertilizer support will be provided for each participant by ATAP. The land can be obtained on LGA basis and indigenes of the state will be engaged.
- x. **Local consumption promotion:** To promote local consumption of cocoa, a School and Hospital Cocoa drink programme will be facilitated with active involvement of the state governments. This scheme should be operational in at least ten locations in each state.
- xi. **Farmer database and baseline study:** Reliable statistics are imperative for strategic planning, progress monitoring and impact evaluation.

The target of Cocoa Value Chain is to:

- i. Release eight high yielding, fast maturing, cocoa hybrids
- ii. Achieve certification of 25% of annual cocoa products through good agricultural practices, and sound environmental and social considerations in production activities

- iii. Brand Nigerian cocoa by implementing quality control and traceability systems
- iv. Raise local processing, value addition, and consumption drive thereby creating market and jobs along the value chain
- v. Build farmers' capacity in good agricultural practices and business skills, strengthen formal groups, and professionalize producers for increased efficiency
- vi. Generate at least 390,000 jobs in the next four years
- vii. Raise income and livelihoods of 250,000 households through an efficient production system
- viii. Create an institutional framework to provide governance of the nation's cocoa sector in a private-sector led but public-sector enabled cocoa marketing and trade corporation

5.3 Cocoa 2013 GES

In 2013, 160,000+ cocoa farmers were registered and uploaded to the National Farmers Database Platform. A total of 23,392 cocoa farmers redeemed Cocoa-GES inputs from 103 redemption centers across 12 cocoa producing states; namely: Ondo, Ogun, Oyo, Osun, Cross River, Edo, Delta, Ekiti, Abia, Kogi, Kwara and Taraba. Total inputs redeemed include:

- 323,407 pods of improved hybrids (Figure 42), distributed free of charge to cocoa farmers for the 2013/2014 nursery season which commenced November 2013. The GES continues until March 2014 by which time some 600,000 pods should have been distributed.
- 2,468,402 sachets fungicides (Ridomil Gold, Funguran-OH, Champ DP and Ultimax),
- 394,815 sachets of insecticide (Actara)
- 23,781 (50 kilograms) bags TERACTION Cocoa Fertilizer
- 100 sachets of fungicides, 25 sachets of insecticides and two 50 kilograms bags of Cocoa Fertilizer (Teractive) (Figure 43).
- 12.5 million Polythene bags, distributed among 16 cocoa producing states, procurement and processing companies, farmer associations and cooperatives.
- 2,000 Solo pumps, 500 Knapsack sprayers, fermentation boxes, collapsible drying racks and hydrocarbon free jute bags, distributed at 50% subsidy.



Figure 43: New Cocoa hybrids having higher yields and fruit earlier compared to current varieties

- i. **Cocoa quality improvement:** 2,500 bales of hydrocarbon-free jute bags sufficient for 46,875 ton of dried cocoa beans being procured.
- ii. **Spraying pumps:** 4,000 pumps are being procured to support farmers' application of agro-chemicals.
- iii. **Advocacy with state governments and the private sector on backward integration:** Strong advocacy with cocoa-producing states and the private sector on the CocTA Plan and land acquisition for investors. Capa city building and Farmers Cooperatives Support for 100,000 farmers

5.4 Other Achievements of the Cocoa Transformation Agenda

- i. 10,800 cocoa farmers were trained in Farmer Field Schools across 270 communities in seven states, Abia, Cross River, Edo, Ekiti, Ondo, Osun and Ogun, within the FGN/World Cocoa Foundation signed partnership on capacity building.
- ii. Based upon interventions by ATA in 2012, cocoa production output increased to 350,000 metric tons from 300,000 metric tons in 2012 (Federal Produce Inspection Service, FMTI, 2013).
- iii. Training of trainers workshop on nursery management for Tree Crops Officers and Desk Officers from all cocoa producing states.

- iv. The establishment of a public sector-enabled but private sector-driven agricultural sector, major strategic pillar of the Agricultural Transformation Agenda. A 25 person college from all segments of the Cocoa Value Chain was constituted and inaugurated by the Honorable Minister on 17th October, 2013. The college worked with Technoserve in two sessions to develop the master plan for the Cocoa Corporation of Nigeria.
- v. Support of the Dutch Sustainable Trade Initiative (IDH) program on the Cocoa fertilizer Initiative targeted at Cote D'Ivoire and Nigeria, and introduced the OCP Morocco's TERACTION Cocoa Fertilizer, for the first time in Nigeria.
- vi. Facilitation of a partnership agreement by the cocoa value chain between the Government of Ondo State and premium chocolate brand SPAGNVOLA Chocolatiers, based in Maryland (Figure 45). The partnership agreement entails the establishment of a chocolate factory, chocolate academy, and CiBEXO circle of excellence with cocoa farmers as equity owners of a vertically integrated cocoa business.
- vii. Facilitation of Edo Integrated Limited's commitment to building a cocoa processing facility in Cross River State. Discussion in progress with Cross River state government.
- viii. Facilitation of Syngenta's investment option and consideration on Tissue Culture and Micropropagation System for multiplication of elite cocoa varieties.



Figure 44: Redemption of agrochemicals during the 2013 GES roll-out in Oyo State

- ix. Increase in the national output of Nigeria cocoa production from 300,000 metric tons in 2012 to 350,000 metric tons in 2013 as provided by Federal Produce Inspection Service of Federal Ministry of Trade and Investment.

- x. Registration of over 160,000 Cocoa farmers uploaded to the National Farmers Database Platform.
- xi. Commencement of Cocoa-GES implementation in 12 cocoa producing states namely: Ondo, Ogun, Oyo, Osun, Cross-River, Edo, Delta, Ekiti, Abia, Kogi, Kwara and Taraba.
- xii. Redemption of 23,392 cocoa famers redeemed Cocoa-GES inputs from 103 redemption centers across 12 cocoa producing states. A total of 2,468,402 sachets fungicides (Ridomil Gold, Funguran-OH, Champ Dp and Ultimax), 394,815 sachets of insecticide (Actara) and 23,781 (50 kilogram) bags TERACTION Cocoa Fertilizer by cocoa farmers during 2013 season. Each beneficiary obtained 100 sachets of fungicides and two 50 kilogram bags of cocoa fertilizer (Teractive).
- xiii. Distribution of 323,407 pods of improved hybrids so far, free of charge to cocoa famers this 2013/2014 nursery season which commenced November 2013. This continues until March 2014 by which time some 600,000 pods should have been distributed.
- xiv. 12.5 million Polythene bags procured and distributed among 16 cocoa producing states, procurement and processing companies, farmer associations and cooperatives.
- xv. 2,000 Solo pumps, 500 Knapsack sprayer, fermentation boxes, collapsible drying racks and hydrocarbon free jute bags procured and distributed at 50% subsidy.
- xvi. Training and kitting of 50 professional grafters based on rehabilitation skills acquired through the support of MARS Inc. recently approved and will be implemented in 2014.
- xvii. Procurement process initiated for establishment of cottage cocoa processing factories.
- xviii. Training of cocoa farmers' wives on farm-gate processing for good quality cocoa for premium price.
- xix. Mobilization of the Cocoa Association of Nigeria (CAN) and Cocoa Farmers Association of Nigeria (CFAN) discussion with Central Bank of Nigeria's NIRSAL on financing the Cocoa Value Chain.
- xx. Facilitation of linkage with World Bank's Rural Access Mobility Project for road construction to a predominantly cocoa growing community of Eti-Oni in Osun State.
- xxi. Facilitation of Hershey/IDH/Armajaro's NGN 3.2 billion (USD 20 million) investment to train 20,000 cocoa farmers over the next five years and uptake cocoa beans within the framework of their sustainability plan.

- xxii. Launched and commenced implementation of African Cocoa Initiative of the World Cocoa Foundation which entails institutional support for public-private partnership, extension delivery system, planting materials distribution system and farmer organization support.
- xxiii. Payment of dues to the Alliance of Cocoa Producing Countries (COPAL) and facilitation of headquarter movement from Lagos to Abuja within the framework of Nigerian government's signed headquarters agreement.
- xxiv. Conferment of awards on the Honourable Minister, Dr. Akinwumi A. Adesina, CON by the Cocoa Farmers Association of Nigeria (CFAN) in recognition of his transformation program for a rapid development of the Cocoa Value Chain in Nigeria (Figure 46).



Figure 45: The Cocoa Value Chain team leader, Dr. Peter Aikpokpodion, on a working visit to SPAGVOLA Chocolatiers facility, Gaithersburg, Maryland; the Governor of Ondo State, Dr Olusegun Mimiko was also on the visit.

- xxv. Three memoranda of understanding developed with:
 - a. World Cocoa Foundation (WCF)/Cocoa Livelihood Program
 - b. WCF/African Cocoa Initiative
 - c. German's GIZ on Farmer Business Schools
- xxvi. Promotion of Value addition:
 - a. Engagement with local processors on product development—Fraganda cocoa product, Oluji pure cocoa product.

- b. Training for youth and women in local processing and value addition in conjunction with MDG program

xxvii. Cocoa institutional framework:

- a. First draft document for the incorporation of the Cocoa Marketing and Trade Corporation (CMTC) developed and shared among stakeholders. A revised draft was due at the end of September.

xxviii. Private sector:

The Cocoa Value Chain has been liaising and partnering with the following private companies:

- a. Multitrex Integrated Foods Plc—backward integration investments in Oyo (5,000 hectares), Ogun (30,000 hectares), and Edo (5,000 hectares).
- b. Dangote Group—backward integration investments planned for Cross River State (50,000 hectares).
- c. MARS Inc.—technical training of personnel in rehabilitation.
- d. First Bank supporting Cocoa Value Chain Conference.

xxix. Associations:

- a. Cocoa Association of Nigeria
- b. Cocoa Processors Association of Nigeria



Figure 46: Conferment of the Merit Award on the Honorable Minister of Agriculture by the Cocoa Farmers Association of Nigerian (CFAN).

- xxx. Development partners:
 - a. USAID MARKETS II—Cocoa Value Chain
 - b. World Cocoa Foundation—African Cocoa Initiative
 - c. World Cocoa Foundation—Cocoa Livelihood Project Netherlands Sustainable Trade Initiative, IDH.
 - d. German’s GIZ on Farmers Business School
 - e. Penn State University

5.5 New Opportunities and Next Steps

I. Investment opportunities

Production:

- i. Land holding expansion—only 640,000 hectares cultivated out of 3.0 million hectares suitable for cocoa.
- ii. State governments willing to give land to investors—land banks in Edo, Oyo, Ekiti, Kogi, Cross River, and Rivers State Agricultural City project.
- iii. Rehabilitation of old plantations—techniques and excellent planting materials available.
- iv. Local production of hydrocarbon-free jute bags and labeling seals.
- v. Private sector input supply chain development for cocoa production.

II. Export:

- i. Market demand on the increase for cocoa beans due to growing consumption in emerging economies (Russia, India, China, Asia) and internal markets.
- ii. Projected global deficit of 1 million metric tons cocoa beans.
- iii. Local processing and value addition:
- iv. Local processing (grinding) facility establishment in the South-South.
- v. Increasing local demand for cocoa products due to health and nutritional benefits.
- vi. High returns on investment on value-added cocoa products.

III. Next Steps

- i. Development of Cocoa Development Centers at CRIN and 16 states in partnership with MARS Incorporated. Establishment of community level seed and budwood garden to facilitate farmers’ access to improved hybrids.
- ii. Farmers field and business schools to reach 100,000 farmers will commence once agreements are signed. Cocoa Tissue culture – Collaboration with Penn State University, US and private cocoa companies.
- iii. Soil fertility evaluation and region-specific cocoa fertilizer recommendations.
- iv. Strong public-private sector partnership engagements.
- v. Youth in Cocoa Agribusiness Scheme.
- vi. Incorporation of the Cocoa Marketing and Trade Corporation.
- vii. Study visits to countries with strong private sector involvement in cocoa sector institutions – Dominican Republic, Ecuador, and Malaysia.
- viii. Enhanced Cocoa-GES delivery through strong mobilization and registration of cocoa farmers.
- ix. Cocoa value chain analysis and database statistics.
- x. Professionalization of cocoa producers for efficiency and compliance with global standards.

6. COTTON VALUE CHAIN

6.1 The Cotton Transformation Value Chain for Wealth Creation

Cotton is an important cash crop that provides livelihoods to millions of Nigerians. Besides providing employment, cotton is used to provide food (edible oil), feed (cottonseed cake for the livestock industry), and apparel (African prints and clothing materials). In the 1970s, Cotton provided employment for about 1 million farmers and raw materials for 175 textile mills employing 700,000 textile workers in the 1970s. However, due to technical, economic and policy problems, the industry has suffered a steep decline, with only about 15 surviving mills as at 2009. Consequently, farmers lost interest in the crop due to a lack of ready markets. The abolition of the Cotton Board in 1986 was also a disincentive to production, as the commodity declined in quality and quantity. Nigeria’s prominence in West Africa as a major producer also dipped. Given the importance of cotton, there arose the need to revive, revitalize, and reposition the subsector.

The Cotton Transformation Value Chain (CotVC) Plan is focused on creating wealth and restoring cotton/textiles' lost glory. Activities oversee both the raw material supply chain (seeds and seed cotton/cotton lint production), apparel value chain (ginning, spinning, weaving and knitting, dyeing and finishing garment), as well as the resource recovery value chain (crop residue utilization and cotton seed oil extraction). These activities are classified into three distinct categories, viz, upstream, downstream, and overarching ,are implemented in the North West States that produce 80% of the seed cotton, North East States with 15% seed cotton production, and South West States with 5% long staple cotton production.

Complementary to the plan is the on-going India-Nigeria Technical Assistance Program, which focuses on capacity needs assessment of various stakeholders in the Cotton Value Chain. This intervention between 2012 and 2014 will enhance public sector emphasis on Cotton Value Chain development.

6.2 The Cotton Transformation Agenda

The overall objective of the Cotton Value Chain is to revitalize and grow the industry, and to increase the livelihoods of an estimated 17.2 million people dependent on the cotton/textile subsector for their livelihoods. It will also improve export to ECOWAS from 5% to 30%, protect current investment in the sector, estimated at NGN 325 million (USD 2 million), and to raise seed cotton production target from 100,000 tons (2011) to 240,000 tons in 2012. Other objectives include address cotton contamination through the replacement of polypropylene bags with cotton cloth sacks and introducing Bt cotton technology, farmers' output and income are expected to increase.

The Cotton Value Chain employs the following strategies:

- iv. Promote pure cottonseed multiplication to generate 4,000 tons (2013) and 10,000 tons (2015).
- v. Organize and register at least 100,000 farm families (2012) to cultivate 200,000 hectares of commercial cotton farms.
- vi. Support a minimum of 8 existing ginneries to organize production in cotton growing zones.
- vii. Distribute critical inputs through the Growth Enhancement Support (GES) scheme, viz., 10,000 tons of fertilizers, 40,000 liters of assorted pesticides/bio-stimulants to enhance yields.
- viii. Address cotton contamination with injection of a minimum of 800,000 units of cotton cloth sacks to replace the dominant use of polypropylene—the major source of contaminant in local seed cotton.
- ix. Bt cotton deployment - start Confined Field Trials (CFT) by IAR/ABU in collaboration with NABDA & Cotton Team.

- x. Conduct capacity building of multi-stakeholders using collaborating agencies (private and public) on good agricultural practices, etc.
- xi. Promote investment in the cotton subsector using the Bank of Industry's N100 billion Cotton/Textile/Garment (CTG) Scheme

The Cotton Plan adopts a ginnery-driven integrated cotton contract farming (ICCF) approach using recommended varieties (both medium & long staples) to organize and increase production, taking into consideration issues attending to (i) increasing productivity; (ii) improved marketing and (iii) increasing value-addition. The plan is to raise production of at least 200,000 hectares (2012) expandable to 500,000 hectares in 2015, with average yield of 1.2 tons per hectares from the current 0.6 tons per hectare. The approved local varieties are: Samcot-8 (North East-Medium Staple); Samcot-9 (North West-Medium Staple); Samcot-10 (North Central-Medium Staple); Samcot-11 (South West –Long Staple); Samcot-12 (North West-Long Staple + supplementary irrigation), and Samcot-13 (North East-Long Staple + supplementary irrigation).

6.3 Cotton GES in 2013

In 2013 GES, a total of:

- 2,779 metric tons of seeds of improved varieties, namely Samcot 8, Samcot 9, Samcot 10 and Samcot 11 (Figure 47) were distributed free of charge to 87,369 farmers in 2013 cultivating an estimated 75,320 hectares.
- 6177 metric tons of NPK and 5949 metric tons of urea was also redeemed by farmers at 50% cost
- 35083 liters of sharp shooter insecticide and 28211liters of MaxiCrop /Biostimulator at 50% cost
- 176221 Cotton sacks (12 pcs) were also distributed to farmers at 50% cost



Figure 47: Improved varieties of cotton being multiplied and distributed to farmers

6.4 Other Achievements of the Cotton Transformation

- I. **Cotton Seed Multiplication:** The FMARD entered into an agreement (MoU) with the West African Cotton Company Limited (WACOT) on 13 February, 2012 on the development of extensive production, processing and marketing of cotton in the country. For 2012, WACOT, in collaboration with the Cotton Value Chain Team, has covered about 13,000 hectares of the planned 15,625 hectares in Katsina, Zamfara, Borno, and Gombe States. Arewa Cotton and South West NACOTAN Ginnery have also grown an additional 300 hectares of Samcot-10 and Samcot-11. All plots are currently maintained to source improved cotton seed for 2013 planting.
- II. **Farmers' registration:** Out of a target of 100,000 farmers in the national database, an estimated 80,000 were captured across all 23 cotton-growing states + FCT. About 87,369 farmers benefitted from the Growth Enhancement Support Scheme of the FMARD. These include the distribution of free cottonseed, maxi crop biostimulant, insecticides, and fertilizers which were coordinated by WACOT.
- III. **Ginnery retooling and upgrading:** (iii) The Bank of Industry (BOI) has provided funding support to farmers, ginneries, and textile mills for their activities from the N100 billion cotton/textile/garment (CTG) Scheme Fund. Of the 15 ginneries that can be salvaged, Nine Ginneries participated in the BOI managed in the cotton/textile/garment (CTG) Scheme Fund (Table 5). A total of 27 textile companies have been fully revamped through lending. In summary, To date, the BOI has processed 59 applicants amounting to NGN 54.6 billion (USD 336 million), disaggregated as follows: cotton growing and ginning (12), textiles (27), garment (19), and CTG support services (1).
- IV. **Capacity Building/Training of Stakeholders/Institutions**
 - i. The India-Nigeria Technical Assistance Program (TAP) has supported 3 master trainers on extension methodology for cotton (10-24 September, 2012) and 5 additional master trainers on modern cotton production technology in India (19 October and 2 November 2012).
 - ii. A proposed one day cotton farmers training & sensitization of stakeholders on Cotton Transformation Plan by NACOTAN in collaboration with FMARD will be held on 26 September, 2012. It will attract about 200 farmers nationwide, 9 textile companies.
 - iii. Roving training of cotton farmers on good agricultural practices commenced with the North West Zone at Funtua on 9 August 2012. A total of 62 farmers participated. WACOT has continued the training at the district level in Katsina and Zamfara States. A proposed one day cotton farmers training & sensitization of stakeholders on Cotton Transformation Plan by NACOTAN in collaboration with FMARD will be held on 26 September, 2012. It will attract about 200 farmers nationwide, 9 textile companies.

V. *Liaison and Collaboration*

Partnership on Cotton Value Chain are as follows:

Private:

- i. National Cotton Association of Nigeria (NACOTAN) and its 11 state chapters in Katsina, Zamfara, Kano, Kaduna, Jigawa, Gombe, Adamawa, Borno, Niger, Ogun, and Oyo States – for cotton farmers.
- ii. Nigeria Textile Manufacturers Association/National Textile Garment and Tailoring Employees Association – all 9 of the 27 cotton-using textile mills in Nigeria.
- iii. Cotton Ginners Association of Nigeria/ NACOTAN – all ginning companies in Nigeria – WACOT, Arewa Cotton, SW NACOTAN Ginnery, CGC, Dangote, Makama, Olam, Dala Ginnery, etc.
- iv. African Cotton and Textile Industries Federation (ACTIF) – Regional Trade/ Enhance engagement with National Associations.
- v. FASTINS/Best of the World (Fashion outfits.)

Public:

- i. Institute for Agricultural Research, Ahmadu Bello University (IAR/ABU) – Cotton Research
- ii. National Agricultural Seeds Council-Cotton Seed Certification/Regulation
- iii. Federal Fertilizer Department/FMARD-Growth Enhancement Support
- iv. National Biotechnology Development Agency (NABDA)-Bt Cotton Deployment and Development
- v. Federal Ministry of Trade & Investment-Cotton Trade and Quality Control; Industrial Promotion
- vi. NAERLS/ABU – Extension Support
- vii. Indian Government - Technical Assistance Program
- viii. 11 targeted state Ministry of Agriculture/Governments (Katsina, Zamfara, Kano, Kaduna, Jigawa, Gombe, Adamawa, Borno, Niger, Ogun & Oyo States)

Table 5: Ginneries that participated in the cotton/textile/garment (CTG) Scheme Fund

S/N	GINNERY	LOCATION
1	WACOT	Funtua and Gombe
2	Inta – Ginnery	Tsafe
3	Cotton Ginning Company Limited	Kankara
4	Funtua Textile	Funtua
5	Olam Nigeria Limited	Zaria
6	Dangote Ginnery	Kankara
7	Makama Ginnery	Kano
8	Dala Ginnery	Kano
9	South West Ginnery	Ibara – Orite, Abeokuta

6.5 Goals for 2014

- Promote policies, human capacity, facilities and technology for successful revival of CTG industry in Nigeria.
- Ensure sustainable production of pure seeds (breeder, foundation and certified) for supply of cotton seed and lint.
- Raise production from 125,000 metric tons (2011) to 500,000 metric tons (2014).
- Raise yield from 0.6 tons per hectares (2011) to 1.2 tons per hectares (2014).
- Attain self sufficiency of 8,000 tons of certified seed by 2014.
- Expand and improve large scale farm production and provide required infrastructures to achieve food and fibre stability.
- Develop productive capacity of stakeholders in the value chain to revamp the sector.

7. OIL PALM VALUE CHAIN (OPTVC)

7.1 Regaining Nigeria's Glory in Oil Palm Production

The goal of the Oil Palm Transformation Value Chain (OPTVC) is to bridge the gap in national vegetable oil production, estimated at 350,000 metric tons per annum, through the establishment of an additional 240,000 hectares in the next 3 years by smallholder farmers and estates. In addition, OPTVC is improving the productivity of farmers by the application of appropriate fertility management practices and use of improved

planting materials, as well as enhancing the yields of Semi Wild Grove (SWG) by gradual replacement of old and unproductive wild palms with improved planting materials. Other interventions include support to upstream and downstream processors on production of quality crude palm oil and vegetable oil products, organizing the marketing system, and creation of employment for the youth and women along the entire Oil Palm Value Chain.

The implementation plan is being carried out in 24 oil palm producing states, namely: Abia, Akwa Ibom, Cross River, Rivers, Bayelsa, Imo, Anambra, Ebonyi, Enugu, Delta, Edo, Ondo, Ogun, Osun, Oyo, Ekiti, Benue, Kwara, Kogi, Nasarawa, Plateau, Taraba, Adamawa and Kaduna (Southern Kaduna).

An Oil Palm Transformation Value Chain Action Plan, designed to transform the ailing oil palm industry in Nigeria, was developed in 2012; specific objectives over the next 4 years (2012–2015) are:

- Increase vegetable oil production in order to achieve import substitution and bridge the deficit of 350,000 metric tons which annually is met through import..
- Increase the yield and productivity of both the unorganized and organized plantings.
- Arouse greater interest and concern for engagement in competitive market activities within the Oil Palm Value Chain.
- Create employment especially for youth and women and reduce poverty in affected States.

7.2 Oil Palm 2013 GES

In 2013, a Special Oil Palm GES was rolled out on a pilot scale in 11 states namely: Abia, Akwa Ibom, Anambra, Delta, Ebonyi, Edo, Enugu, Imo, Kogi, Osun, and Oyo; 10,798 farmers were targeted and 53.46% redemption was achieved. Each farmer received 50No. free improved tenera seedlings; 11/2bags of 12:12:17+2 (N:P:K+Mg) fertilizer; 2 litres of touchdown herbicide; and 50 pieces of wire collar (40x30cm). A total of 4,791 farmers redeemed their inputs in the pilot phase.

- A total of 153,776 sprouted nuts were distributed free of charge to farmers.
- 1358.2 wire collars and 6439 bags (50 kilograms) of NPK were given to farmers at 50% subsidy.
- 34 oil palm estate operators in 15 states namely, Edo, Delta, Cross River, Akwa Ibom, Bayelsa, Rivers, Enugu, Imo, Abia, Ondo, Ogun, Osun, Oyo, Kogi, and Kaduna received between 75,000 and 82,500 free improved tenera nuts to plant at least an additional 500 hectares totaling 22,633 hectares.

7.3 Other Oil Palm Value Chain Achievements in 2013

- i. Procured from NIFOR, 9 million improved tenera sprouted nuts which are being raised into mature seedlings by public and private nursery operators as well as some estate plantations and private Mega Seed Companies towards the establishment of 60,000 hectares of oil palm (Figure 48).
- ii. Eighteen oil palm estates spread across 11 states, that signed an agreement with the Ministry to raise 1,395,000 improved tenera nuts into mature seedlings, will plant a total of 9,300 hectares oil palm acreage (between 500 and 550 hectares per estate) in 2013. Each estate received between 75,000 and 82,500 nuts. They are from the following States, Kogi, Edo, Ondo, Delta, Cross River, Ogun, Akwa Ibom, Bayelsa, Abia, Osun, and Enugu States.
- iii. A total of 2,605,000 seedlings being raised by the 49 public and private nursery operators will be distributed free to 30,000 small holder farmers under the GES platform in July 2013.
- iv. Direct establishment of 26,666 hectares and indirect planting of 20,000 hectares through multiplier effect in 2013.
- v. Supported the rehabilitation of 36,589 hectares of oil palm estate in Enugu, Edo, Anambra, Benue, Cross River, Delta, Abia, Ogun, Kogi, Akwa Ibom, Kaduna, Nasarawa and Lagos State.
- vi. Promotion of Semi-Wild Grove (SWG) yield enhancement through a pilot scheme involving replacement of old unproductive wild palms with improved tenera oil palm seedlings (Figure 49).
- vii. Promotion of improved methods of bunch harvesting through the supply of 73 Motorized Harvesters capable of harvesting 500-900 ffb per day. The Motorized Harvesters increase fresh fruit bunch harvest by 30%.
- viii. Fabrication of 10 Medium Scale Processing Equipment (MSPE, 0.5ffb per hour) and five. Automated Nut Cracker Separators are currently in progress. The equipment will be available for distribution to farmers in the first quarter of 2014.
- ix. Conducted advocacy/capacity building for 90No. farmers/processors/marketers in nursery operations, field planting and maintenance and marketing
- x. Conducted Oil Palm Mill Refinery Audit in 24 No. producing states
- xi. Major support has been provided to Industrial Development Group, South Africa through completion of the signing of MOU and linkage to collaborating State Governments for various assistance and partnership.
- xii. Participated in the International Palm Produce Conference on “Investment in Oil Palm and Its Derivatives: A Panacea for African Economic Growth and Sustenance”.

- xiii. Partnership with RSPO-Nigeria in initiating the preparation of RSPO-Nigeria Principles and Criteria to enhance sustainable development of the oil palm industry.

7.4 Opportunities Investment Opportunities in Oil Palm Value Chain:

Opportunities abound for investments in the Oil Palm Value Chain, these include:

I. Upstream

- i. Seedling production (by Seed Companies)
- ii. Plantation development which creates employment for youth
- iii. Fresh fruit bunch collection system (from smallholder plantings and semi-wild grove)
- iv. Milling of CPO/PKO

I. Downstream

- i. Refining
- ii. Soap/detergent production
- iii. Marketing (crude palm oil, palm kernel oil, vegetable oil including export of palm kernel shell)
- iv. Use of palm oil mill effluents to produce electricity
- v. Fertilizer production from bunch refuse/other effluents

7.5 Liaison and Collaboration:

Partnership in OPTVC involves public and private organization/agencies and are as follows:

Private

- i. Plantation Owners Forum of Nigeria (POFON)
- ii. National Palm Produce Association of Nigeria (NPPAN)
- iii. Oil Palm Growers Association of Nigeria (OPGAN)
- iv. Vegetable/Edible Oil Producers Association of Nigeria (VEOPAN)
- v. Oil Palm Co-operatives Societies and Farmers' Groups in 24 producing states.
- vi. Roundtable on Sustainable Palm Oil (RSPO – Nigeria)
- vii. Seed Companies/Private nursery Operatives

Public

- i. Federal Ministry of Industry, Trade and Investment
- ii. Federal Ministry of Science and Technology – Raw Materials Research and Development Council (RMRDC)
- iii. Nigerian Institute for Oil Palm Research (NIFOR)
- iv. National Agricultural Seeds Council (NASC)
- v. Agricultural Research Council of Nigeria (ARCN)
- vi. Ministries of Agriculture in 24 oil palm producing States



Figure 48: Seedlings of high oil yield and early maturing tenera oil palm varieties from sprouted nuts at an oil palm estate



Figure 49: High oil yield and early maturing tenera oil palm varieties being used to replace old unproductive semi wild groves

7.6 Goals for 2014

Eighteen oil palm estates spread across 11 states, that signed agreement with the Ministry to raise 1,395,000 improved tenera nuts into mature seedlings, will plant a total of 9,300 Ha oil palm acreage (between 500 and 550 hectares per estate) in 2013. Each estate received between 75,000 and 82,500 nuts. They are from the following States, Kogi, Edo, Ondo, Delta, Cross River, Ogun, Akwa Ibom, Bayelsa, Abia, Osun, and Enugu States.

- i. Buy back of 1 million improved tenera oil palm seedlings from the 2013/2014 Mega Seed Company Nursery Operators.
- ii. Production and delivery of 975,000 improved tenera oil palm sprouted nuts to public and private nursery operators by NIFOR.
- iii. Raising of 975,000 improved tenera sprouted nuts into mature seedlings by public and private nursery operators.
- iv. GES support for provision of 3,500 bundles of wire collar for farmers for 2014/2015.
- v. GES support for provision of 10,000 litres of touchdown herbicide for farmers for 2014/2015.
- vi. Procurement of 10 No Motorized Harvesters for distribution to oil palm co-operatives/farmer groups to enhance ffb harvest.
- vii. Procurement of 3 No Medium Scale Processing Equipment (MSPE), for distribution to oil palm co-operatives/farmer groups.
- viii. Capacity Building/Training for 30 No farmers on nursery establishment, field development, maintenance, harvesting, processing and marketing.
- ix. Working/Study tour
- x. Collaboration with Federal Ministry of Industry, Trade and Investment in the preparation of Roadmap for the development of oil palm industry in Nigeria.
- xi. Support for the promotion of Roundtable on Sustainable Palm Oil-Nigeria.

8. HORTICULTURE VALUE CHAIN

8.1 Adding value to fruits and vegetables

The Horticulture Transformation Agenda (Tomato and Citrus Value Chains) strives to create wealth to improve the standard of living of farmers, earn and conserve foreign exchange, and launch the subsector into a major source of employment in the country.

This vision will be achieved through activities in the production of fresh fruits, processing for value addition, storage and marketing. Activities of the horticulture value chain are driven by the private sector, with stakeholders made up of producers, agro-input dealers/suppliers, processors, packers, marketers, and researchers in states with comparative advantages.

Among the fruits and vegetables, tomato has the highest priority with domestic demand of 2.3 million metric tons of fresh product annually, national production of 1.8 million metric tons, wastage of over 750,000 metric tons and import bill of NGN 16 billion (USD 98 million) to make-up for shortfall in local production. Citrus is second with national production of 3.48 million metric tons, contributing about 29.71% of the world's production, and 81.93% of Africa's total outputs. About 1.53 million metric tons of citrus produced is lost annually as waste while an annual import of 7,831.93 metric tons (concentrate and related products) valued at over NGN 717 million (USD 4.4 million) has been recorded. The horticulture subsector is faced with the problem of processing and poor postharvest handling.

The Horticulture Implementation Action Plan employs the processing approach to drive table and processable fruits production using recommended varieties and cluster of farmer groups with a view to increasing productivity, value-addition, and marketing. Emphasis is being placed on private sector investments to build juice and fruit processing plants (Figure 50). The plan also aims to raise production of fresh fruits through increased yield per unit area using recommended varieties; reduction in post-harvest losses from 45-51% to 5% by 2015 through efficient processing; rehabilitate existing citrus orchards; reduce importation of tomato paste and fruit juice concentrate to zero; and promote adoption of improved production technologies.

To take advantage of the high volume of trade in fresh fruits, for which Nigeria has comparative advantage, the Ministry is targeting NGN 3.2 billion (USD 20 million) fresh produce export by 2014. The products are targeted mainly to the EU market, where premium price can be obtained. An experienced project management team is required to ensure that set targets are realized and Global-GAP, traceability, food safety, and fair trade practices are observed. Factors that will ensure success in this sector include strong growth markets, good management, quality fruits, efficient operations, best trade practices that provide consumer assurance.



Figure 50: An orange juice processing facility

8.2 Horticulture GES in 2013

- Provision of 1.5 metric tons hybrid tomato seeds; 1.0 metric tons hybrid onion seed; 312 kilograms hybrid green pea seeds and 122,400nos seedlings of improved citrus to 12,000 farmers to establish 6,606 hectares of high value vegetables.
- A total of 32,000 suckers of plantain distributed to 16 cooperatives groups in 4 states.
- 225,000 meristem of a banana variety imported from Costa Rica were hardened and distributed to farmers.
- Provision of 6,000 kilograms inorganic and 500 kilograms organic fungicides; 10,000 litres inorganic and 500 litres organic insecticides; 20,000 litres inorganic and 500 litres organic herbicides and 1000nos knapsack sprayers to farmers.
- 2013 GES targeted 12,000 farm-families to create 720,000 jobs.

8.3 Achievements of the Horticultural Value Chain

- Study visit to Kenya on fresh produce production, market structure and marketing model studied for possible adoption.
- Organized a visit by Global G.A.P and Fresh Produce Marketing team from Kenya for evaluation of infrastructural facilities available for production and marketing of fresh produce of horticulture in Nigeria for a guide to feature in export of fresh produce.
- Five locations for citrus processing and associated clusters of producers identified.
- Six locations for tomato processing plants and clusters of out-growers identified.
- Citrus farmers and private nursery operators identified in 15 producing states (Figure 51).

- vi. Trained 20 fresh produce farmers, two subject matter specialists and two on-farm research scientists (Figure 52).



Figure 51: Private sector citrus fruit nursery

- vii. Study visit to Morocco on onion storage technology, marketing structure, and facilities.



Figure 52: Training of fresh produce farmers in simple processing methods

- viii. Production of 122, 400 improved citrus seedlings for distribution.
- ix. Procurement of 1nos 4 ton per day Alvan Blanch model mobile processor, 36nos 525 kilograms per week thermal batch drier, 111nos 50 kilograms per week small-scale fruit drying platform bench drier and 100nos hand-press citrus juice extractor (Figure 53).



Figure 53: Alvan Blanc model Mobile fruit processor

- x. A total of 125 farmers and Village Extension Agents trained on plantain/banana production for domestic consumption and export.
- xi. Eight clusters of 25 numbers cooperative group established for production of plantain/banana for local and export markets in four (4) states (Oyo, Delta, Abia and Cross River).
- xii. Materials and equipment to upgrade the tissue culture laboratory for plantain/ banana/ pineapple suckers multiplication procured and supplied to NIHORT through collaboration between FMA&RD and FAO. Official handover of the equipment and materials to the Honorable Minister will take place in Feb., 2013.
- xiii. Two million tons of Telfaria seeds distributed to 200 farmers in five states of Ogun, Abia, Imo, Cross Rivers and Delta.
- xiv. Workshop conducted for 152nos Programme Support officers, State Subject Matter Specialist and farmers at Federal College of Agricultural Produce Technology (FCAPT), Kano.
- xv. Received delivery of 275,000 hybrid banana tissue culture plantlets, presently being conditioned for distribution to farmers to replace local non-exportable varieties.
- xvi. 1no tissue culture laboratory for plantain/banana/pineapple suckers upgraded at NIHORT, Ibadan (Figure 54).



Figure 54: Tissue Citrus laboratory for plantain/banana/pineapple suckers at NIHORT, Ibadan.

- xvii. 225,000 banana suckers developed and are currently being distributed to farmers in 16nos Southern States.
- xviii. 8nos clusters of 25 members cooperative group established for production of plantain/banana for local and export markets in four (4) states.
- xix. 32,000 suckers of plantain distributed to 16nos cooperatives groups in 4 States.
- xx. 20nos plantain/banana demonstration nurseries established in 4 states (Figure 55 and 56).



Figure 55: Establishment of banana nursery

- xxi. 800nos farmers and Village Extension Agents trained on Plantain/Banana value chain aspects.

- xxii. 2 metric tons of hybrid tomato seeds distributed to 3,930 farmers in 11nos states.



Figure 56: Banana nursery establishment

- xxiii. 155nos Federal Programme Support Officers, Subject Matter Specialist and Farmers trained on Post-Harvest Techniques, Processing and Packaging for Value Addition in the Fruits Industry.
- xxiv. 80nos Programme Support Officers/ Subject Matter Specialists and Farmers trained on the use and management of bio-agrochemicals.
- xxv. 122,400nos improved citrus seedlings production on going at NIHORT, Ibadan and Akperan Orshi College of Agriculture, Yandev for 2014 cropping season.
- xxvi. 2.1 metric tons of hybrid pepper (Yolo Wonder and California Wonder) procured to establish 4000 hectares in 2014.
- xxvii. Procured 1no 4 ton per day Alvan Blanch modelled mobile tomato processor.
- xxviii. Production of 25,000 copies of technical manual for horticultural crops (tomato, onions, citrus, green beans and plantain/banana) on good agricultural practices.
- xxix. Establishment of Nigeria GAP.
- xxx. Support for investment in Agro-Processing Facilities; and provision of 40 units batch dryers.

8.4 Goals for 2014

- 1.5 metric ton Hybrid tomato seeds; 1.0 metric ton hybrid onion seed; 2.0 metric tons hybrid okra seeds; 27.5 metric tons improved telfairia seeds and 102,000nos seedlings citrus for 4,370 farmers to established 4,205 hectares; distribution of 122,400 improved citrus seedlings to establish 600 hectares.

- Provide 42.0 metric tons fungicides, 42,000 litres insecticides and 42,000 litres herbicides for pest and disease control on 29,400 hectares.
- Establish six plantain/banana seed gardens.
- Establishment of Nigeria GAP: To be enlisted on the world map and join the league of fresh produce and exporting chain countries and to continuously address issues of global food safety concerns the value would be working to ensure a fresh produce body is established as below; a competent authority for horticultural produce; food safety legislation assented to by President Jonathan; collaboration with European Union Group (COLEACP – PIP) for technical assistance in the horticultural industry.

9. MAIZE VALUE CHAIN

9.1 Doubling Maize Production in Nigeria

9.1.1 The Maize Value Chain aims at increasing maize production from 6 million metric tons to 12 million metric tons by 2015. The Maize Value Chain focuses on 15 states of Kaduna, Kano, Niger, Adamawa, Taraba, Plateau, Bauchi, Gombe, FCT, Nasarawa, Kwara, Oyo, Ondo, Katsina and Enugu. It is believed that the Katsina axis will extend to Gusau in Zamfara state to capture the high-yield potential of that zone while Gombe will also extend to Gombi and Biu in Southern Borno.

9.1.2 The approach to doubling maize production is through production system intensification that can double yields through access to improved seeds and agro-inputs. The value chain also seeks to enhance system competitiveness through a market driven approach. Strategic linkages with input-output markets will be strengthened and the commodity association, Maize Association of Nigeria, will be central to this.

9.2 Wet and Dry Season GES 2013

Achievements of the maize GES in the 2013 wet and dry season include:

- Deployment of 21, 356 tons of seed of improved maize (Figure 57) was distributed to 978,724 registered maize farmers as no cost during the wet season GES.
- Farmers redeemed 11, 516 metric tons of fertilizer.
- Deployment of Post-Harvest Technologies: 120, 000 hermetic bags were distributed to registered small scale maize farmers free in the target states and the FCT.
- Extension service delivery: 5, 000 knapsack sprayers were given to young maize farmers at no cost after training them on the effective use of the sprayers.

- For the dry-season GES, 480 metric tons of maize seed was distributed at no cost to 7, 091 maize farmers in 13 States and the FCT with a total of 7, 091 maize farmers; each farmer received 50 kilograms of seed.
- 3, 600 metric tons of NPK 27: 13: 13 Fertilizers was also redeemed by the farmers.



Figure 57: Cobs of improved maize varieties distributed to farmers

9.3 Achievements of the Maize Value Chain

- Production of Breeder seeds by the 3 Research Institutes(IAR/ABU, IAR&T and IITA).
- Procurement of 100 metric tons of Foundation seeds by Seed Companies through the NASC.
- Trained six staff on the use of GPS to survey and record actual crop area, an essential tool to determine actual area planted for seed increase.
- Six FMARD staff were trained on the use of GPS to survey and record actual crop area, an essential tool to determine actual area planted for seed increase. This is particularly important to determine area planted to soybean seed increase for inclusion in GES in 2013.
- A pre-season meeting of all stake holders in the value chain was held in Ilorin between 27 -28 May, 2013 to review the value chain's activities in 2012 and discuss the plans for 2013.
- The Value Chain undertook on-field capacity building training and field visits in 14 states and FCT in collaboration with NASC to ensure production of quality certified seeds of maize.
- Zonal workshops in the NE, NW, NC and SW zones on pre- and post-harvest handling of maize grains against mycotoxin and other contaminations.
- Training of young maize farmers on the use of the 5, 000(No) knapsack sprayers procured and distributed to them. This activity was handled by the Extension Department of the Ministry.

- ix. Interacted with major end-users of maize and soybeans (Nestle, Guinness, Animal Care and Obasanjo Holdings and several others) to gauge grain requirements, formed six production clusters per state to aid access to both input and out markets, and devised three innovation platforms (IP) to engage actors in the value-chain in profitable ventures.

9.4 Investments in the Maize Value Chain

- i. Pioneer Seeds, one of the largest seed companies in the world plans to establish a presence in Nigeria using maize hybrids including Imazapyl Resistant (IR) hybrids developed by IITA as platform.
- ii. SeedCo from Zimbabwe with substantial investment in South Africa has also established maize seed production for sale in Nigeria.
- iii. A starch mill owned by Obasanjo Holdings is interested in 150 metric tons of maize per day and will be interested to partner with the Maize Value Chain.
- iv. Cargill is also interested in the use of maize for starch and is looking to establish a maize starch mill in Nigeria as soon as possible.
- v. Rainbow Chicken, the largest chicken producers in Southern Africa intend to do business in Nigeria but for the negative mycotoxin alarm publications which the value chain is seriously addressing through a national mycotoxin survey.
- vi. SeedCo from Zimbabwe but with substantial investment South Africa has also established maize seed production and sales in Nigeria.
- vii. A maize mill owned by Obasanjo Holdings is interested in 150 metric tons of maize per day and will be interested to partner with the team.
- viii. Cargill is also interested in the use of maize for starch and is looking forward to establish a maize starch mill in Nigeria as soon as possible.
- ix. Rainbow Chicken producers in southern Africa intends to do business in Nigeria but for the negative mycotoxin alarm publications which the value chain is seriously addressing through a national mycotoxin survey and workshops on pre- and post-harvest handling of maize grains on zonal basis.

9.5 Goals for 2014

- i. Deployment of improved seeds: 27, 000 tons of certified seeds of maize to cultivate 1.3million hectares.
- ii. Distribution of 150, 000 tons of NPK 27: 13: 13 at 50% cost.
- iii. Distribution of 2.6 million liters of Nicolsulfuron (selective herbicide) at the rate of 2 litres per hectare.

- iv. Extension Service Delivery: Capacity building of the small scale maize farmers in the 27 project states and the FCT on modern production and post-harvest skills to sustain current production increase so as to enhance the competitiveness of their produce and thus ensure higher returns on farmers' produce.

10. SOYBEAN VALUE CHAIN

10.1 Doubling Soybean Production in Nigeria

The overall goal of the Soybean Transformation Agenda is to meet the local domestic soybean needs for food, feeds, and industrial uses, promote Nigerian soybean to a greater height in the sub-region and attain annual production target of one million metric tons by 2015. SVC will concentrate on 20 States of the Federation based on level of production of soybeans in those states, number of registered soybean farmers, and availability of industries. Twelve of these states will be chosen for the testing of the Brazilian soybean varieties based on ecology.

Technology generation, adoption, dissemination, transfer are to be part of the pivot point of the soybean agenda. Collaboration with the private and public sector is also an important feature of the TVC.

Specific objectives of SVC are:

- i. Increase the average yield of soybean via a focus on supply of improved seeds, fertilizer and agro-chemicals to farmers through the growth enhancement support scheme (GES) of the Federal Government.
- ii. Create a seed value chain by putting in place a system to produce the breeder, foundation and certified seeds of improved soybean varieties by NCRI, IITA, NSC and the reputed seed companies.
- iii. Improve the soybean value chain management by working with farmer groups, researchers, marketers and food processors, and soybean production clusters to be formed in at least twenty states of the Federation.
- iv. Increase the incomes of at least 200,000 farm families growing soybean by 2015 by linking them to markets and source of credit, such as NIRSAL and RUFIN, for farm inputs, equipment and machineries.
- v. Reduce cost and drudgery in production by encouraging government and private companies in the country to produce, sell and hire out appropriate machines for planting, threshing and other post harvest activities for higher efficiency.
- vi. Equip processors and millers with modern technologies through training and facilitating access to modern processing technology.
- vii. Improve soil fertility via the production and use of Rhizobia inoculums for soybean yield enhancement.

10.2 Achievements of the Soybean Transformation Value Chain

Soybean Transformation Value Chain (STVC) came on board in 2012 as an appendage of the Maize Value Chain. It was later created as a stand – alone value chain. The following successes were recorded:

- i. A total of 547 metric tons of improved soybean seeds were multiplied and planted in 2012 to produce second generation of certified soybean seeds to meet soybean GES requirement for 2013. This effort gave rise to over 2,000 metric tons available for distribution in 2013.
- ii. NCRI alone produced 9 and 20 metric tons of breeder and foundation soybean seeds respectively in 2012 for the TVC while IITA Ibadan produced 40 metric tons of foundation seeds in 2012 for production of certified seeds by reputable seed companies.
- iii. Sensitization/Advocacy visit to 7 states namely: Benue, Kaduna, Kano, Katsina, Niger, Plateau and FCT in 2012.
- iv. Visited some soybean end users: Nestle PLC, Obasanjo Holdings, Animal Care and several other soybean millers in Kaduna, Kano and Benue States for marketing enhancement strategy.
- v. 6 staff trained on the use of GPS to survey and record actual cropped area.
- vi. Soybean TVC sensitized farmers and government in 7 states of Nigeria in 2012 viz: Benue, Nasarawa, Enugu, Kaduna, Plateau, Katsina and Niger on the need to organize them into production clusters.
- vii. A total of 105,154 soybeans farmers were registered in 36 states of Federation and FCT in 2012. This was done through the collaborative efforts of the states' ministries of agriculture, state ADPs, the soybean farmers' association and coordinated by the resident Federal Director of each state. The registered farmers' were then uploaded by Cellulant while the Supply Chain Managers implemented. Over one hundred farmers were registered.
- viii. The STVC was successfully implemented in 20 states namely: Kaduna, Benue, Kano, Gombe, Bauchi, Taraba, Katsina, Kebbi, Kwara, Jigawa, Niger, Nasarawa, FCT, Oyo, Plateau, Cross – River, Zamfara, Ekiti, Kogi and Sokoto in 2013.
- ix. 70 metric tons of foundation seed and 5 metric tons of breeder seed is was multiplied by NCRI, Badeggi under MoU in 2013.
- x. The following inputs were packaged for the soybean farmers under the 2013 GES scheme:

- a. 2,000 metric tons of certified seeds distributed to about 40,000 farmers at 50 kilograms/farmer
- b. 80,000 bags of Single Superphosphate (SSP) fertilizer distributed to farmers at 2 bags per farmer
- c. 80,000 litres of herbicide at 2 litres per farmer and
- d. 400,000 sachets of seed – dressing fungicide at 10 sachets per farmer
- e. Each farmer was required to pay a token of NGN 6,800 for GES input package out of the total inputs cost of NGN 23,600 (USD 145.45) (the seed component was at no cost to the farmer)
- xi. Sensitization/advocacy meeting with Soybean Value Chain stakeholders in 15 soybean producing states in 2013.
- xii. Stakeholders' workshop on re-packaging the soybean transformation agenda as a stand- alone transformation value chain, with the objective of coming up with a list of priority interventions, budget and action plan held at IITA – Ibadan in 2013.
- xiii. Training workshop on improved agronomic practices for soybean production, farm gate processing and marketing to enhance productivity and production output of soybean held at Akperan Orshi College of Agriculture Yandev, Gboko – Benue State. Over 180 participants from eighteen states attended in 2013.

10.3 Soybean GES 2013

The following inputs were delivered to soybean farmers during the 2013 GES programme:

- 2,000 metric tons of certified seeds distributed to 25,519 soybean farmers in 21 states, with each farmer receiving 50 kilograms at no cost
- 2,541 metric tons of Single Superphosphate (SSP) fertilizer distributed to 25,519 farmers; each farmer was given 2 bags
- 80,000 litres of herbicide provided to farmers; each farmer received 2 litres
- 400,000 sachets of seed – dressing fungicide at 10 sachets per farmer
- Each farmer was required to pay a token of NGN 6,800 (USD 42.25) for the GES input package, a total cost of NGN 23,600 (USD145.45) (the seed component was at no cost to the farmer)
- A total of 105,154 soybeans farmers were registered in 36 States of the Federation and FCT in 2012

10.4 Other Achievements of the Soybean Transformation Value Chain:

- i. 70 metric tons of foundation seed and 5 metric tons of breeder seed was produced for the Ministry by NCRI, Badeggi.
- ii. Facilitated the identification of 547 tons of improved soybean seeds in 2012 which was used to produce over 2000 tons of certified seeds distributed to farmers under the 2013 GES exercise. NCRI alone produced 10 and 29 metric tons of breeder and foundation soybean seeds respectively in 2012 for the TVC while IITA Ibadan produced 40 metric tons in 2012 for production of certified seeds by reputable seed companies.
- iii. Sensitization/advocacy visit to five states namely Benue, Kaduna, Niger, Plateau and FCT Abuja in preparation for smooth take off in 2013. A soybean marketing survey was equally undertaken to some major industries to ascertain the level of demand and supply of soybean end-users; they include Obasanjo Farm Holdings Ogun State, Guinness Nig. Plc Lagos, Animal Care Konsult Oyo State, Nestle Nig Plc Lagos Falke Oil Mill Kaduna, Hule Oil Mill Benue and other small and medium scale oil and poultry feed mills in Kaduna and Kano State.
- iv. Procurement of 40 units of multipurpose grain threshers to reduce drudgery associated with grain threshing; there is also an ongoing collaboration with NCAM to produce 100 numbers multipurpose soybean threshing machines for farm-gate processing.
- v. Organized a Stakeholders' workshop on re-packaging the soybean transformation agenda as a stand- alone transformation value chain, with the objective of coming up with a list of priority interventions, budget and action plan; held at IITA – Ibadan, 18th to 19th October 2013.
- vi. Organized a training workshop for soybean farmers on improved agronomic practices for soybean production, farm gate processing and marketing to enhance productivity and production output of soybean held at Akperan Orshi College of Agriculture Yandev, Gboko – Benue State.
- vii. Partnered with NCRI on 'seed multiplication programme' to produce 70 tons of foundation seed and 5 tons for breeder seed. Also, collaborated with NCAM to produce 100 numbers multipurpose soybean threshing machines for farm-gate processing.
- viii. Trained six staff on the use of GPS to survey and record actual crop area, an essential tool to determine actual area planted for seed increase. Also relevant was the stakeholders' workshop held in the last quarter of 2013 for farmers and processors with focus of on youth and gender.

10.5 Goals for 2014

- i. Ensure sustainable production of breeder, foundation and certified seed for supply to the value chain.
- ii. Promote policies, human capacity building, facilities and technologies for successful revival of the soybean industry in Nigeria.
- iii. Develop capacity of stakeholders in the value chain to raise primary production and processing of soybean.

11. WHEAT VALUE CHAIN

The Federal Ministry of Agriculture and Rural Development commenced the Wheat Value Chain, consequent upon the development of an improved tropical wheat variety with increased productivity and good physical characteristics.

11.1 Wheat Dry Season GES

- Procurement of 25 metric tons Certified Seeds from Lake Chad Research Institute, Maiduguri and 200 metric tons Certified Seeds from Seed Companies and distribution to 75,000 farmers in 12 wheat producing states under the dry season GES. Each farmer received 3 kilograms of seeds.
- Distribution of 7,500 metric tons of fertilizer: NPK (15:15:15) to 75,000 farmers; each farmer received two bags of fertilizer at 50% subsidy.
- Publicity: Radio/TV documentary and production of 5,000 extension bulletins to popularize and increase awareness of wheat production in the country.

11.2 Achievements in 2013

- i. Production of 4 metric tons of breeders' seed and 8 metric tons of foundation seed of improved wheat varieties by the Lake Chad Research Institute (LCRI), Maiduguri, for distribution to seed companies and research institutes for production of foundation and certified seeds respectively.
- ii. Procurement of 1,500 nos. knapsack sprayer (CP15) for 7,500 clusters of 5 farmers at NGN 18,000 each (USD 110.93); procurement of 3,000 nos. water pumps for 15,000 clusters of 5 farmers at NGN 30,000 (USD 184.89); procurement of 4,000 sachets of fungicides at NGN 2,000 (USD 12.33) per sachet, 4,000 litres of post-emergence herbicides at NGN 2,000 (USD 12.33) per litre; and 8,000 litres of pre-emergence herbicides at NGN 2,000 (USD 12.33) per litre for distribution to 15,000 clusters of farmers. All these procurements are still ongoing.

- iii. Collaboration with ICARDA and CYM metric tons on the expansion of wheat production (Variety Development) in Nigeria.
- iv. Collaboration with SG2000 on Technology Transfer programme on wheat production.
- v. Feasibility study on rain fed wheat production in Cross River (Obudu); Plateau (Jos) and Taraba (Gembu Mambila Plateau) States respectively.
- vi. Conducted Wheat Farmers' Field Day in collaboration with representatives from FMARD, LCRI, ICARDA, SG2000, ARCN, and IAR/ABU Zaria at IAR substation, Kadawa in Kano on Monday, 11th of March 2013.
- vii. Mobilized/sensitized stakeholders through advocacy of State Governors on Wheat Value Chain under Federal Government Agric. Transformation Agenda; Wheat Advocacy/ Sensitization Visits to Wheat Growing States of Nigeria was conducted from 12th of July 2013 for 7days and took the team to 7 states of Nigeria.
- viii. Conducted one Day Innovation Platform Meeting of Stakeholders on the Implementation of Wheat Value Chain Transformation in Gombe State on the 10th of September 2013.
- ix. Conducted the pre-season training of farmers and youths on wheat production on the 19th to 21st December, 2013.
- x. Conducted Maize, Rice and Wheat Country Launch in collaboration with SARD-SC on the 20-23 of March 2013 in Abuja, Nigeria; a Training Workshop on Integrated Agric. Research for Devt. and Innovation Systems was also conducted in collaboration with SARD-SC IN 28th – 30th August, 2013 in Abuja.

11.3 Goals for 2014

The following activities are planned for 2014 will be implemented at both Federal and State Government levels :

- i. Procurement and distribution of inputs/seeds to the ultimate farmers.
- ii. Improvement of wheat GAP through mechanization.
- iii. Information dissemination to stakeholders in the wheat value chain on improved wheat management practices, marketing and utilization.
- iv. Support small scale processing by assisting with medium sized 500 kilograms per hour milling machines at subsidized rates.
- v. The release of two wheat varieties namely: Norman Borlaug & Reyna-28 by Lake Chad Research Institute, Maiduguri.

- vi. Supervision, Monitoring and Evaluation of project.
- vii. In order to achieve these goals, the under listed stakeholders are involved in the program execution:
 - CIMMYT/ICARDA for germplasm support and capacity building
 - Agric. Development Projects for farmers' mobilization, OFAR and Extension activities
 - National Agricultural Research Institutes and Universities for the conduct of Multi-locational and OFAR Trials
 - National Agric. Seed Council (NASC)
 - Private industries and seed companies

12.0 GROUNDNUT VALUE CHAIN

Groundnut remains a major source of livelihoods to many people including farmers, processors, marketers, and exporters among others in Nigeria. Groundnut products, including oil and cakes, accounted for 70% of total Nigeria export earnings before the petroleum oil boom. However, the combined effects of drought, increasing prevalence of diseases, especially rosette disease, resulted in decline of groundnut production and export. To increase production and bring back the old glory of groundnut production, the new Groundnut Value Chain Transformation programme has been embarked upon under the Agricultural Transformation Agenda of President Jonathan and its implementation by the Honourable Minister of Agriculture, Dr. Akinwumi Adesina, CON.

The Groundnut Value Chain transformation programme seeks to drive the development of groundnut subsector in conjunction with other stakeholders to raise productivity, increase processing and exports through a set of agreed strategies. The overarching strategies are to promote the use of improved varieties, support farmers with subsidized inputs, promote value-addition and processing, and provide farmers/processors with a production package to increase production.

12.1 2013 Groundnut wet and dry season GES

- In the wet season, 172 metric tons of Single Super Phosphate (SSP) fertilizer was distributed to 3497 farmers in Kano State. In addition, 3,443 liters of herbicide, 20,658 sachets of fungicide (50 grams each), and 5,164.5 liters of insecticide were distributed to farmers.
- The redemption of agro-inputs (SSP fertilizer, herbicide, fungicides and insecticides) for groundnut during the 2013 wet season production was carried out only in Kano State. A total of 98.48% redemption was obtained for inputs redeemed.

- The dry season GES distributed 1,688 metric tons of improved seeds, 135 metric tons of SSP, 2,205 liters of herbicide, 1,102 liters of insecticide, and 3,254 sachets of fungicide to 675 farmers in four States, namely Katsina, Bauchi, Jigawa and Kano States.

12.2 Achievements of the Groundnut Value Chain

- Organized stakeholders workshop between July 29th and 31st 2013 in Kano State on challenges and ways forward to promote the groundnut industry. A total of 79 participants that include farmers, researchers, marketers and processors were in attendance from the proposed participating states;
- Held sensitization and advocacy meeting in the five states of Kano, Kaduna, Katsina, Bauchi and Jigawa between August 21st and 22nd 2013 to keep stakeholders abreast of opportunities they will derive from the programme. The amount released for the programme was only NGN 962,800.
- Assembled lists of groundnut farmers through commodity associations and State Directors. In this regard, a total of 7,454 farmers were registered in four states of Kano, Kaduna, Bauch, Katsina for 2013 wet season groundnut production;
- Scheduled the rollout of GES inputs (Agro-chemicals and fertilizers) to farmers in the participating States starting 18th September, 2013;
- Participated in innovative platform organised by ICRISAT which brought farmers together to facilitate groundnut seed production, increase community seed production and create awareness of improved technologies;
- Trained 50 women on the use of groundnut oil processing machines in collaboration with ICRIAT in Kano State on July 8th, 2013. The women were assisted in purchasing the processing machines in order to increase groundnut processing, income generation by women and create employment.
- In collaboration with ICRISAT, organised large farmer field days in two local government areas of Bauchi and Ningi State on September 16th, and Ganjuwa State on September 17th, 2013;
- Participated in the series of training organized by the International Crop Research Institute for Semi-Arid Tropics (ICRISAT) on dry season groundnut seed production in four (4) states of Kano, Jigawa, Katsina and Bauchi from 19th-20th November, 2013. Participants came from the proposed LGAs selected for farming dry season groundnut. Over 160 people attended the training;
- Forwarded a total of 88, 166, 199, & 222 farmers for Katsina, Bauchi, Jigawa & Kano States respectively. The total famers uploaded to the Cellulant platform for dry season groundnut production was 675 farmers;

- Arrangement is being finalized by the all parties involved in the signing of the Memorandum of Understanding (MOA) between the Federal Ministry of Agriculture and Rural Development (FMARD), and International Crop Research Institute for Semi-Arid Tropics (ICRISAT) to partner with Groundnut Value Chain to implement the production and processing of groundnut in the proposed States:

Proposed a technical training workshop on processing and value addition on groundnut to women in selected local government areas of the participating five (5) States of Bauchi, Katsina, Jigawa, Kano and Kaduna. The amount captured is NGN 3,010,800.00 (USD 18,555.56) only. The activity is approved but fund yet to be released.

- Two officers attended a training organised by UNDP on Inclusive Market Development for Value Chain Desk officers in Lagos from 19th – 12th December 2013; and
- One officer attended a training organised by ICRISAT on Statistic Analysis System [SAS] in Kano State, from 16th-20th December 2013. A total number of 30 officers participated from various organisations.

12.3 Goals for 2014

- Need to ensure stakeholders in the states cooperate to ensure a comprehensive farmers list for groundnut is produced;
- Mobilization of seed companies to ensure that certified seed of groundnut is produced;
- Sensitization of seed companies on the need to work with NASC to producing acceptable quality of seeds of various classes;
- Exposure and training of personnel and officials in seed certification process with a view to monitor and guide the seed production process to success.

13. GINGER VALUE CHAIN ACHIEVEMENTS IN 2013

13.1 2013 Achievements

The Ginger Value Chain was launched in 2013 to promote the production and processing of ginger for local use and for export. Achievements in 2013 include:

- Conducted Stakeholders' meeting.
- Advocacy visit to five ginger producing states conducted.

- iii. Contract awarded to Messrs Sabiti Nig. Ltd for the supply of 10 Batch dryers.
- iv. Contract awarded to Messrs Prospera Investment Ltd for the supply of 10 Slicing machines.
- v. Award of contract to RTEP, Ijebu-Ife for the Production and distribution of 224 metric tons of certified planting materials.
- vi. Award of contract to FCPTTS, Ubiaja for the production and distribution of 72 metric tons certified planting material
- vii. Award of contract to NRCRI, Umudike for the production of 14 metric tons Breeder and 19 metric tons of Foundation seed
- viii. Award of contract to NRCRI for the establishment of one hectare each on-farm demonstration plots in 5 implementing states.
- ix. Award of contract to FCAPT, Kano for capacity building of 174 farmers and processors in processing, storage and marketing.
- x. Training of 225 farmers on Good Agricultural Practices (GAP) in collaboration with NRCRI, Umudike

13.2 Goals for 2014

- i. Production and distribution of 350 metric tons of certified seeds.
- ii. Research & Development for Breeder, Foundation seed and Field trials.
- iii. Procurement and distribution of 1,000 bags of NPK 15:15:17-2 and 1,000 bags urea.
- iv. Establishment of on-farm demonstration plots in 10 states.
- v. Procurement and distribution of 3,000 liters of Diupop and 3,000 liters Gramazone.
- vi. Procurement and distribution of 10 batch dryers and 10 slicing machines.
- vii. Procurement and distribution of 10 Hammer mills for cooperatives.
- viii. Capacity building of 100 farmers each in 10 states on various value addition activities
- ix. Local and international training of Value Chain Team members.
- x. Ginger Processors Audit.
- xi. Sensitization workshop to popularize health benefits of ginger products in 10 states.

14. CASHEW AND RUBBER VALUE CHAIN ACHIEVEMENTS IN 2013

14.1 2013 Achievements

- i. Procurement & distribution of 8,000 bags of fertilizer to farmers through GES
- ii. Procurement & distribution of 30,000 litres of Agro-Chemical (glyphosate) to farmers through GES
- iii. Award of contract to CRIN for the production of 10,000 kilograms Brazilian Jumbo cashew variety seeds through contract agreement.
- iv. Award of contract to CRIN for the establishment of 1 hectare bud-wood garden for production of grafted rubber seedlings through contract agreement.
- v. Award of contract to College of Agriculture Kabba, Kogi State to conduct capacity building on grafting; vegetative propagation of cashew seedlings; and nursery/ plantation development for 108 Ifarmers through contract agreement.
- vi. Award of contract to College of Agriculture Kabba, Kogi State to conduct National Workshop on quality standards and norms for competitiveness for 144 processors and farmers through contract agreement.
- vii. Conduct nation-wide mill audit of cashew processing and packaging plants.
- viii. Advocacy visit to 18 participating states.
- ix. Procure 200 bales of carbon free jute bags for raw cashew storage.
- x. Procurement of 4 cashew small scale processing equipment to be installed in 4 locations including Abia, Ogun, Kogi and Kwara States.

14.2 Goals for 2014

- i. Distribution of 10,000 kilograms Brazilian jumbo variety seeds produced through contract agreement with CRIN.
- ii. Research/development support for development of improved seedling through tissue culture technique.
- iii. Procurement of 10,000 bags of fertilizer.
- iv. Procurement of 30,000 litres of Agro-Chemical (Glyphosate).
- v. Procurement of 300 bales carbon free jute bags for raw cashew storage.
- vi. Procurement of 440 solo pump (England) sprayers for cashew farm rehabilitation.

- vii. Procurement of 6 cashew small scale processing equipment to be installed in 4 locations.
- viii. Development of investment plan for the production of 3 non-fruit products; namely wine, juice, jam etc.
- ix. Local and international workshop and conferences.

15. SUGARCANE VALUE CHAIN

15.1 Sugarcane Value Chain Project

The Sugarcane Value Chain is one of the new value chains in the Ministry. The main objective of Sugarcane Value Chain is to reduce the current 1.05 million metric tons of sugar importation annually. This will be accomplished by supporting 3,398 sugarcane farmers in 24 states and FCT around the existing sugar mills with 11,900 tons of improved seed cane varieties for planting of sugarcane which will translate to about 3,400 direct jobs and 17,000 indirect jobs nationwide.

The Project is being managed under two components which are:

- i. Seed cane production:* The programme aims at utilizing 80% of its resources to support industrial sugarcane farmers producing raw materials for the sugarcane mills. The remaining 20% of its resources will be utilized to support production of improved chewing cane for household consumption.
- ii. Processing Facilities Support:* The value chain is supporting farmers to establish three 100 TCD sugarcane processing mills through facility from Bank of Agriculture for efficient and profitable production of brown sugar and ethanol.

15.2 Achievements in 2013

- i. The Sugarcane Value Chain desk office met with National Sugar Development Council (NSDC) to harmonize positions and programmes; agreement was reached that sugarcane value chain should support sugarcane farmers around new and existing sugar mills in areas of supplying improved planting materials, contracting farmers groups formation and building capacity for the operators
- ii. Held stakeholders' workshop on 16th July 2013; the theme was "Rebuilding of Nigerian Sugar Industry through Sugarcane Value Chain" and 91 participants attended
- iii. The value chain rendered technical guidance to Honey Gold Global Resources Nig Ltd partnering with COSTA NEGOCIOIOS in Sao Paulo, Brazil; both have an intention to acquire 30,000 hectares to establish sugarcane estates, mills and refineries in 8 States of Nigeria. Currently, they have secured 120,000 hectares in Adamawa State and are seeking support of FMARD through the value chain to initiate the process of

securing farmland in Ogun, Oyo, Ondo, Kwara, Ekiti and Osun States and map out strategies to secure the buying-in of hosting communities and authorities in the States.

- iv. The value chain gave technical guidance to International Industrial Group (IDG) South Africa and their Nigerian Partners, on issues of farmland acquisition and buy-in of the hosting communities in Ogun, Kwara, Niger and Ekiti, and Osun States. However, the company has signed MoU with Osun State Government and has acquired up to 20,000 hectares. They are now awaiting issuance of the Certificate of Occupancy of the land from the State Government.
- v. v. Participated in joint team visits of Honourable Minister of Trade and Investment to Dangote, BUA and golden sugar refineries in Apapa Lagos on 2nd August, 2013; during this visit these companies discussed their plans on backward integration programmes to ensure sugar self-sufficiency in the Country.
- vi. Presented a position paper to the Sugar Road Map Implementation Committee (SURMIC) during their meeting held on 12th Sept. 2013 to solicit funding of sugarcane farmers through GES. The value chain advocated for the adoption of GES as a scheme for uplifting resources for poor farmers to the level they can practice commercial farming. The strategy calls for support to sugarcane value chain from the sugar levy fund to conduct GES for small farmers.

The Committee agreed with this position and has agreed to fund sugarcane GES from sugar levy. This involves supply of seedcane, Agro-chemicals, field establishment, maintenance and harvesting operations, provision of dams and irrigation equipment to farmers groups at a single digit interest rate loan that will be paid back within a specified period of time. In addition, the establishment of cottage sugarcane mills will be funded for farmers groups which they must pay 10% of the investment cost as a commitment fee. To facilitate the process there must be an agreement between farmers groups, off takers (sugarcane mills) and the Bank of Agriculture which will be documented in the form of MoU which the Sugarcane Value Chain Team is expected to facilitate.

- vii. Sugarcane Value Chain in collaboration with National Sugar Development Council (NSDC) supported Oyo State Sugarcane Farmers Association to establish 20 hectares of foundation farm per zone. This was done to expand Sugarcane Estate in the 5 zones of the State, where 100 TCD cottage mill will be installed in each zone, and the process of their procurement is on-going. When the estates and mills are in full operation, they will employ up to 1,500 employees.
- viii. In addition, the Value Chain and NSDC jointly supported Osun State Sugarcane Farmers Association, by initiating site selection in 4 zones of the State, they intend to establish 50 hectares of foundation farm to expand their Sugarcane Estates and install 10 TCD cottage mills each in the four zones, which will employ about 500 employees when operating in full capacity.

The Value Chain secured MTB approval for multiplication and distribution of 5,600 industrial seedcane to 3,398 sugarcane farmers in 10 States around sugarcane mills.

16. FISHERIES AND AQUACULTURE VALUE CHAIN

16.1 Increasing Fish Production for Employment Generation and Conservation of Foreign Exchange

The goal of the Fisheries and Aquaculture Value Chains (FAVC) is sustainable production of over 1 million metric tons of farmed table fish per annum for employment generation, with a focus on the youth and women, and the gradual reduction of fish imports to conserve foreign exchange earnings. The principal objectives of the Fisheries and Aquaculture Value Chains is to increase the annual production: of fingerlings by 1.25 billion, fish feed by an additional 400,000 metric tons, table fish production by 250,000 metric tons, and 100,000 metric tons of value-added fish and fisheries products. This is being achieved through:

- i. Broodstock Development and Hatchery Management for increased production of improved fish fingerlings;
- ii. Table Fish Production;
- iii. Fish Feed Development;
- iv. Fish Processing and Product Development;
- v. Fish Marketing.

16.2 Achievements of the Fisheries and Aquaculture Value Chain

I. Fish Seed Production:

- a. Thirteen Hatchery / Fingerling Production Centers have been established.
- b. Training of seventy two (72) farmers (2 trainees per State) on Hatchery Development/ Fish Fingerling Production in order to achieve the projected 1.25 billion high quality fingerlings required to produce the annual 1 million tons of fish per year.

II. Fish Feed Production:

- a. Establishment of two fish feed mills in Ibadan, Oyo State and Erinwe, Ogun State to promote local fish feed production.

III. Table Fish Production:

- a. Sixty two fish farmers / producers benefited from the Fish Farm Estate Development Programme.
- b. Over 500 fish farmers received technical assistance / capacity building in shrimp farming, fish diseases and modern tilapia culture technique.
- c. 3 youths (2 male and 1 female) were sponsored to attend Songhai Integrated Farm Training Center in Porto Novo, Benin Republic for training in Aquaculture entrepreneurship for 3 months from October 2012 to December 2012.

IV. Commercial Cage Fish Farming:

- a. Installation of fish cages at 21 strategic locations nationwide for commercial cage fish culture. Durante Fisheries Limited installed fish cages at Oyan Dam in Ogun State for commercial production of tilapia species, while Lagos State Government in collaboration with various communities established cages in several of its water bodies.
- b. Under the Flood Recovery Programme, support was given to some cage fish farmers in Bayelsa State due to the loss suffered during the 2012 flood disaster.

V. Fish Product Development:

- a. Two large scale fish processing plants were established at Jebba (Kwara State) and Baga (Borno State) in 2011, while six cottage fish processing centers were established in Borno, Kebbi, Lagos, Delta, Imo States and the F.C.T. in 2012 under a Public Private Partnership arrangement.

VI. Fish Markets:

- a. Three (3) model Fish Markets were established at Yauri (Kebbi State), Erinwe (Ogun State) and Atabong (Cross River State)
- b. Two new fish markets, namely Lokoja Model Fish Market and Onitsha Model Fish Markets, are currently under development.

VII. Fish / Shrimp Export:

- a. A total of 3,967.1705 metric tons of fish, shrimp and their products were exported in 2012 at a total value of NGN 7.5 billion (USD 45,990,640.85) to the E.U. and the U.S.A. Accordingly, the Federal Department of Fisheries issued a total of 196 Catch Certificates to the exporters.

VIII. Fisheries GES 2013

- a. A total of 2,909,000 juveniles were redeemed by 5,819 fish farmers in ten states, namely Kaduna, Ekiti, FCT, Kwara, Lagos, Ondo, Ogun, Oyo, Osun, and Plateau States. Each beneficiary farmer received 500 juveniles free
- b. 436.8 metric tons of fish feed was also redeemed by 5,819 farmers in ten states; each farmer received five bags of fish feed at 50% subsidy;
- c. Total number of registered farmers was 8,400 and redemption of inputs in 2013 was 69.27%.
- d. Under the Fisheries and Aquaculture GES in 2013, 8,400 fish farmers were targeted to redeem aquaculture inputs in 10 States of the Federation. At the close of 2013, 3,684,500 juveniles, 36,845 feeds, and 200 water testing kits were redeemed by 7,369 fish farmers across the 10 targeted states.

IX. Aquaculture

- a. 2 Fish Farm Estates Awarded
- b. Collaboration with FAO for Interventions for flood affected victims.
 - Nationwide assessment and profiling of fishermen and fish farms affected by the flood
 - Training for Aquaculture Technicians and SEMA Personnel at Shiroro Hotel Minna June
 - Distribution of input supplies to affected flood victims
- c. Implementation: UTF Sustainable Aquaculture Development Programme
 - Training of 45 fish farmers and 60 extension workers in Kogi and Ondo States under the UTF sustainable Aquaculture Development Programme on various topics under Best Management Practices (BMP) and aqua-business
 - Profiling of cluster farmers for biological, chemical, physical and economical parameters
 - Provision of technical services and on-farm practical demonstration to farmers under the clusters
 - Provision / transfer of NGN 60 million (USD 369,780) to assist in the expansion phase of the programme to four more States of the Federation as well as the implementation of the National Aquaculture Development

- d. Two Fingerling Production Centers are being established for improved fish seeds production; 12 were established last year on PPP basis.
- e. Visit by the USDA Experts to evaluate the Aquaculture Industry and Value Chain Development Programme.
- f. Six Hatchery / Fingerling Production Centers were established under the West Africa Agricultural Productivity Programme (WAAPP) Programme. Nigeria has the mandate to run the Aquaculture Research Project under WAAPP.
- g. Onida Development Company specializing in all male tilapia product with capacity of up to 2000 tons of tilapia annually with high level tilapia Technology and the vision to revolutionize the Nigerian aquaculture industry.

X. Artisanal

- i. Workshop at Enugu on sensitization on the expansion program of the ECOWAS project to the 36 States of the Federation.
- ii. Workshop on the registration of artisanal fishing crafts.

XI. Industrial/MCS

- i. Two day capacity building/training workshop on export of fishery products to the UK and EU for 225 fish farmers and the government official on fish processing.
- ii. Completed and fully furnished VMS center in Calabar and awaiting commissioning while the one in Lagos is being completed.
- iii. National Marine Fishery Stakeholders Conference on tackling trmed sea robbery.
- iv. TED inspection by U.S. official leading to recertification for export of Nigerian shrimp into the U.S. market.
- v. Approval for the implementation of the national industrial shrimp/fishery management plan.
- vi. Inspection of fish landing at different jetties.
- vii. Implementation of catch certification scheme.

XII. Staple Crops and Fishery Products Processing Zones:

- i. Establishment of the staple crops and fisheries products processing zones (Lagos, Kogi, Bayelsa and Rivers States) has been identified for the processing of staple crops, fish, shrimp and other fishery products.

XIII. Fish Processing & Marketing

- i. Two modern model fish markets are being established at Onitsha and Lokoja
- ii. Seven model cottage fish processing centers are being established nationwide across the six geopolitical zones.
- iii. Collaboration with NCAM for the fabrication and production of 200 units of fish smoking kilns for fisherfolks.

XIV. Fishery Technology and Support Services

- i. Strategic planning workshop.
- ii. National Fisheries Development Committee meeting leading to approval of all but one memo at the NCARD meeting.
- iii. Hosting of Annual Fisheries Statistics Review Meeting.
- iv. Resuscitation of the state agro-statistics coordinating committee at the states level throughout the Federation.
- v. Resuscitation of the state subcommittee on fishery statistics
- vi. Resuscitation of the fisheries data collection structure at the landing sites, jetties and fish farms to all the 36 states and FCT.
- vii. 6 zonal workshops and one national wrap-up and validation workshop on the review and update of the Nigeria fishery laws under the EU – ACP fish II programme.
- viii. Training on the use of Geographic Information System (GIS) in fishery data management and data collection.

XV. Implementation of the GES programme

- i. Stakeholders (directors of fisheries, fishery associations, input suppliers, fishing industry) interaction and sensitization on roll out programme.
- ii. Compilation of data on fish farmers and fishermen for the Growth Enhancement Scheme (GES) across the states.
- iii. Preparation of action plan and consultative meetings with input suppliers, supply chain managers, etc for the procurement and distribution of GES inputs to farmers.
- iv. Nigerian incentive based risk sharing agricultural lending (NIRSAL) interactive session/meeting at Central Bank of Nigeria (CBN) on August 1st 2013.

- v. Meeting with agro-dealers, supply chain managers (SCM), relevant stakeholders (AFFAN, NUFAS, CAFAN) for the implementation of various activities under the aquaculture value chain.
- vi. Federal Department of Fisheries senior management meeting. Principally GES and roll out day.
- vii. Interactive meeting of the fishery and aquaculture value chain with the consultant.
- viii. Request for fish fingerling producers under Nigerian women in agriculture research and development (NIWARD) to be included in the GES program.
- ix. Compilation list of applicant farmers interested in technical support, loan/grant for the upgrading of fish farms and for youth and other cooperative societies.
- x. Flag off of GES program for fisheries and aquaculture in Ekiti- 27th August, 2013.
- xi. Roll-out of GES in Kwara State on September 2, 2013 followed by Ondo State on September 12, 2013 while arrangements for all other aquaculture states continues.
- xii. Under the Growth Enhancement Support (GES) scheme, fishermen and fish farmers are being registered nationwide in order to benefit from the scheme. In addition, the Federal Department of Fisheries is collecting data and information through the various associations, and will also leverage on past programmes, especially the ECOWAS- Assisted Artisanal Fisheries Development Programme.

XVI. Broad –based stakeholder consultative workshop

- i. To brief and sensitize stakeholders of the Government's Agricultural Transformation Agenda (ATA) and the aquaculture value chain. Their contribution was reflected in Packaging the Action Plan.
- ii. The areas identified that offer comparative advantages to implement a quickwin plan are South-West, South-East and South-South zones. 70 per cent of the large scale producers and hatchery owners are from these zones. In comparison most of the large water bodies for commercial cage fish farming are in North Central, North West and North East zones. Fish feed ingredients such as grains are abundant in the northern zones. Implementation plans are in place to maximize and optimize existing potentials.

XVII. Fish Seed Production

- a. Collaboration with the Nigerian Institute of Oceanography and Marine Research (NIOMR) for tilapia and shrimp research, while the National Institute for Freshwater Fisheries Research (NIFFR) is undertaking research on fish biotechnology. This is critical to the achievement of the projected 1.25 billion high quality fingerlings required to produce the annual 1 million tons of fish food per year.

XVIII. Fish Feed Production

- a. Two fish feed mills were established in Ibadan, Oyo State and Erinwe, Ogun State to promote local feed production. The former has an installed capacity of 40 metric tons per day, while the latter has a capacity of 20 metric tons per day.

XIX. Table Fish Production

- a. 62 beneficiaries of the Fish Farm Estate Development Programme
- b. 500 fish farmers received technical assistance/capacity building from the Federal Department of Fisheries in collaboration with some non-governmental organizations.
- c. Expansion of the local market for fish and fishery products through consultations and collaboration with the Federal Ministry of Education by including fish and fishery products in the recommended menu of the primary and secondary school students under the School Feeding Programme. The Aqua value chain designed School Feeding Programme for students (12.5 million) feeding each child at 7gm each means over 7 million metric tons of fish will be required. This creates more opportunity for employment and investment in the subsector.
- d. The aquaculture value chain group will collaborate with the various states to train farmers and stakeholders in preparation of this noble task.

XX. Fish Product Development

- a. Two fish processing plants were established at Jebba (Kwara State) and Baga (Borno State).

XXI. Fish Market Development

- a. Three fish markets were established at Yauri (Kebbi State), Erinwe (Ogun State) and Atabong (Cross River State).

XXII. Fish / Shrimp Export

- a. 3,967.1705 metric tons of fish, shrimp and their products were exported in 2012 at a total value of NGN 7,402,324,295.83 (USD 45,990,640.85). The Federal Department of Fisheries issued a total of 196 catch certificates accordingly to the exporters.

XXIII. Baseline Studies of Farmers Nationwide

- a. Under the Growth Enhancement Support (GES) scheme, fishermen and fish farmers were registered nationwide in order to benefit from the scheme. In addition, the Federal Department of Fisheries is collecting data and information through the various associations, and will also leverage on past programmes especially the ECOWAS- Assisted Artisanal Fisheries Development Programme.

XXIV. Mobilization and Cluster Formation of Producer Groups

- i. States were mobilized to form clusters of fish farmers to facilitate easy access to assistance such as fingerlings, feed, and finance and capacity development.

XXV. Vessel Monitoring System

- i. The Federal Department of Fisheries has established the Fishing Vessel Monitoring System base stations in Lagos and Calabar.

XXVI. Commercial Tilapia and Cage Fish Farming:

- i. The Federal Department of Fisheries installed some fish cages at strategic locations nationwide. Private investors are being encouraged to go into commercial cage fish culture. Durante Fisheries Limited has installed fish cages at Oyan Dam in Ogun State and has commenced pilot production with promising results.
- ii. 21 fish cage culture project sites nationwide were established. The Department has commenced the process of new partnerships with selected private investors for efficient management.
- iii. The Federal Ministry of Agriculture and Rural Development provided assistance to some cage fish farmers in Bayelsa State whose fish cages were washed away recently by flood.
- iv. The Lagos State Government has established Cage Fish Culture sites all over the State (Epe, Badagry, etc.).
- v. Many investors have also been sensitized for increased local fish production. A few of them have commenced negotiations with their technical partners.

- vi. The Rivers State Government is developing 3 nos. commercial marine culture (cage fish culture) stations as a vehicle for food security, poverty alleviation, rural development and youth empowerment. The project is expected to contribute about 135,000 metric tons of fish per annum to national fish production the three proposed sites are to culture a wide variety of shell and finfish species on a commercial basis. Community-based fish farm clusters will also be developed along with the project, while the Federal Coastal Fisheries Terminal at Borokiri is being proposed as the service center for the project. This is in partnership with the Federal Ministry of Agriculture and Rural Development.

XXVII. Capacity Building/Training of Stakeholders/Institutions:

- i. In collaboration with Fisheries Society of Nigeria (FISON), the FAO and the Sustainable Environment and Fisheries Foundation (SEFFA) the team trained over 200 fish farmers, researchers, government extension workers, bankers and hatchery operators in aquaculture best management practices and the new all male tilapia technology which will increase the production of fish in Nigeria.
- ii. 3 youths (2 male and 1 female) were sponsored to Songhai Integrated Farm Training Center in Porto Novo, Benin Republic for training in aquaculture entrepreneurship for 3 months from October to December 2012. Thereafter they were empowered with a NGN 5 million (USD 30,815) grant to start their own fish farm estate.

XXVIII. Supply and Installation of Laboratory Equipment

- i. Laboratory equipment and consumables were procured for the National Fisheries Laboratory in Lagos and training of laboratory staff for analysis of fish and fish products.

XXIX. Fish Farm Establishments and Upgrading:

- i. The Federal Department of Fisheries is collaborating with the Bank of Agriculture to upgrade facilities of selected farmers.

XXX. Liaisons and Collaboration with other relevant agencies and stakeholders

- i. Nigeria successfully held the chairmanship of the Fisheries Committee for the West Central Gulf of Guinea (FCWC) for two years and handed over to Togo in December 2012 at an FCWC ministerial meeting at Lome which was chaired by the Honourable Minister of State for Agriculture and Rural Development, Alhaji Bukar Tijani.
- ii. Nigeria has fully paid her mandatory annual contribution to the following regional fisheries management organizations, viz. ATLAFCO, ICCAT, FCWC, and INFOPECHE.

- iii. Consultations and concept proposals of partnership with state governments and major stakeholders such as Lagos State, Ekiti State, Durante fish feed industry based in Ibadan are already being proposed for the consideration of the Honourable Minister of Agriculture and Rural Development.
- iv. Collaboration with WAAPP for aquaculture research.
- v. Stakeholder meetings with fish producer groups- CAFAN, AFFAN, NUFAS, etc.
- vi. Collaboration with the Interpol for the maintenance of effective security in Nigerian marine waters.
- vii. Collaboration with the Nigerian Export Promotion Council to effect the payment of the Export Expansion Grant to exporters of fish and shrimp (and their products).
- viii. Collaboration with the Bank of Agriculture (SMEs Development) for the upgrade of fish farms in 19 states of the federation to commence very soon.
- ix. Collaboration with the Nigerian Institute of Oceanography and Marine Research, Lagos and the National Institute of Freshwater Fisheries Research, New Bussa, for Research and Development (R&D) in Broodstock bank development and improved fingerlings production.
- x. Collaboration with National Institute for Fresh water Fisheries Research Institute (NIFFR) for diagnostic survey of fish hatcheries in all the 6 geopolitical zones in the country. This is with a view to taking inventory of the existing hatchery facilities as well as strengthening the data base of the value chain.
- xi. Intra-ministerial collaboration (Federal Department of Fisheries with the Federal Fertilizer Department for the GES Scheme; with the Federal Department of Rural Department for Registration of Fishermen and Fish Farmers and with the Department of Procurement).
- xii. Collaboration with youth and gender desk of the FMARD for the training of women and youth nationwide.
- xiii. Collaboration with the Federal Ministry of Environment (Climate Change).
- xiv. Environmental impact assessment and other aspects of Fisheries.
- xv. Collaboration with the Nigerian Customs Service in the implementation of the Single Window programme.
- xvi. Collaboration with the OIE and the standards organization in the implementation of the Codex Alimentarius standards.

- xvii. Collaboration with the Federal Ministry of Water Resources (Cage Culture).
Collaboration with the Bank of Industry / Bank of Agriculture.
- xviii. Collaboration with the Standards Organization of Nigeria.
- xix. Collaboration with NAFDAC to ensure fish quality assurance.
- xx. Collaboration with NAFDAC to ensure fish quality assurance.

XXXI. Identified Public-Private Sector Partnership Investment Opportunities:

- i. The lease and management of 3 fishing terminals (Ebughu in Cross River State, Igbokoda in Ondo State, and Kirikiri in Lagos State). The fourth, Borokiri Fishing Terminal, is being managed by Petroquip Limited, nominated and selected by the Rivers State Government.
- ii. Fibreglass tank production.
- iii. Production of Cassava concentrates for fish feed production.
- iv. Seven Aquaculture Technology Transfer Centers in Kuje (FCT), Tiga Fish Farm, Kano, Mando Fish Farm, Kaduna, Panyam Fish Farm, Plateau, Umunna Okigwe Fish Farms, Imo State and Wuya Fish Farm, Wuya (FCT).
- v. Fourteen fish seed multiplication entres/pilot fish farms.
- vi. One fish feed mill in Ibadan, Oyo State
- vii. Three shrimp culture development centers in Nasarawa, Oyo and Ekiti States.
- viii. Three ornamental fish development centers in Abeokuta (Ogun State), Umuna Okigwe and Calabar in Cross River State.
- ix. Collaboration with the Federal Public Administration Reform Programme (FEPAR) One Stop Shop initiative to establish fish markets, demonstration and production and hatchery units.
- x. Resuscitation of the States' Agricultural Statistics Committee (SASCO).

16.3 Goals for 2014

Establishment and implementation of value chains for all the cultivable fish species in Nigeria including the following;

- Aquaculture development value chain
- Artisanal fisheries development value chain
- Tilapia species development value chain

- Shrimp culture development value chain
- Lates species development value chain
- Carp species development value chain
- Ornamental fisheries development value chain
- i. Collaboration with WAAP and relevant agencies for the development of high quality Broodstock of cultivable fish species and improved quality of fish seeds.
- ii. Address inadequacies in supply of quality and quantity of locally produced fish seeds to meet the expected output of the value chain.
- iii. Encourage, support and collaborate with the private sector through various methods of PPP arrangements (promotion of fish production through fish farm estate development programme, Distribution of GES inputs to farmers and starter packs to trained youths, women and retirees to embark on fish farming business, promotion of commercial aquaculture through cage culture development and mariculture, etc),
- iv. Implementation of the GES programme to cover all the 36 states of the Federation.
- v. Standardization and certification of aquaculture products for local consumption export.
- vi. Collaboration with local and international investors for the export of catfish to EU countries.
- vii. Implementation strategies to address all the challenges affecting aquaculture development in Nigeria such as marketing, finance, high cost of fish feed especially fish meal.
- viii. Training of staff and stakeholders on modern aquaculture development and the establishment of GIS laboratory in the department.
- ix. Inventory of fish farms, fish feed mills, fish hatcheries etc.
- x. Collaboration with the FAO to implement the UTF-Sustainable Aquaculture Systems for Nigeria project, printing and circulation of the National Aquaculture Development Plan and the implementation of the 5-year National Aquaculture Development Plan (NADP).
- xi. Mass production of fiber glass tanks for increased fish production, job and wealth generation.
- xii. Promotion of shrimp culture development in Nigeria.
- xiii. Train fish farmers and stakeholders on BMPS and aqua business.

- xiv. Establish farmers in clusters for effective distribution of inputs.
- xv. Link producers to sources, channels of credit and inputs distribution.
- xvi. Stock assessment of water bodies for enhancement purposes.
- xvii. Establish and link producers to source of aquaculture marketing corporations for guaranteed price.
- xviii. Develop business plans to attract intending investors into aquaculture.
- xix. Establish links between producers and processors for value addition and marketing.
- xx. Identify water bodies suitable for cage culture development.
- xxi. Collaboration with the private sector for the management of the pilot cages.
- xxii. Enforcement of code of conduct for Responsible Fisheries and Aquaculture Development.
- xxiii. Evaluation and privatization of the existing government facilities.
- xxiv. Upgrading and up scaling of production facilities by producers.
- xxv. Monitoring, evaluation and coordination to ensure operational and financial compliance.

17. DAIRY VALUE CHAIN

17.1 Meeting domestic milk demand in Nigeria

Nigeria is estimated to have produced about 50% of its total domestic requirements for dairy products in the mid-1970s, but during the past three decades the quantity of imported dairy products has grown considerably as the gap between supply and demand has widened. Milk is a high value commodity that provides much-needed nutrition, especially to women and children. The bulk of local milk production in Nigeria is derived from low milk-producing indigenous breeds kept primarily by pastoralists. Milk production under modern intensive and semi-intensive systems (Figure 58) in Nigeria contributes only about 3% of the national output of milk and is mostly confined to a few private sector and institutional experimental farms estimated at 469,000 metric tons while the demand for milk is estimated at 1.1 million metric tons. As a consequence, Nigeria relies heavily on imported milk powder to satisfy the consumer demand for milk and milk products.



Figure 58: Milk processing factory in Kano

The major components of the dairy transformation agenda since its inception in 2012 include but are not limited to:

- i. strengthening of milk marketing and collection, and assured payment by commercial processors;
- ii. strengthening of productivity enhancing services, animal health and artificial insemination (AI) services;
- iii. capacity building of dairy farmers, milk collection center personnel and milk processors;
- iv. strengthening of extension delivery mechanisms, organization of field days and demonstration events;
- v. investment in infrastructure (water supply) and roads; and
- vi. the promotion of cross-breeding and growth enhancement schemes for provision of feeds and feed supplements.

17.2 Dairy 2013 GES

- The Dairy Value Chain (DVC) registered 9,199 pastoralists and peri-urban farmers in seven states and the FCT namely: Kwara, Oyo, FCT, Kano, Adamawa, Kaduna, Nasarawa, and Niger.
- 474 farmers redeemed their packages out of a target of 6,200 farmers in the selected states representing a 7.6% success rate. Each farmer was provided with 50 kilograms of supplementary feeds and one 5 kilogram block of salt lick under the GES scheme.

- 7,448 artificial inseminations (AI) were successfully carried out in the five targeted states of Adamawa, Niger, Nasarawa, Kaduna, Oyo and FCT by engaged service providers.
- The total package for each smallholder dairy farmer was NGN 26,913.32 (USD 165.87) which included AI at NGN 11,290.32 (USD 69.58) each, and feed and salt components NGN 15,623 (USD 96.28). Each farmer's contribution under the GES support was NGN 7,811.50 (USD 48.14). The cost of semen for AI was covered by the government.
- The reasons for the low success rate were: inadequate redemption centers which are located very far from dairy producer's clusters; short redemption span resulting in willing farmers not redeeming their allocation before closure; and inability of the supplier to meet the volume demanded by farmers resulting in stoppage of supplies shortly after roll out.



Figure 59A and B: Delivery of fresh milk to Oyo State collection center under the Dairy Value Chain intervention

- The dairy value continued to support the Oyo program under the Friesland Campina (WAMCO) Nigeria Plc partnership, MILCOPAL in Kaduna, and developed L&Z scheme in Kano State.
- The pastoral farmers in Oyo, Kano and Kaduna States generated over NGN265.7 million (USD 1.6 million) by supplying over 3,795 metric tons of milk at rate of NGN 70 (USD 0.43) per liter. Milk transporters in the Oyo supply chain continued to receive NGN 10 (USD 0.06) per liter for milk supplied on behalf of producers at milk collection centers. Milk transporters are new jobs created as a result of ATA intervention in the Dairy Value Chain. In addition, youth in Oyo were still paid NGN 20 (USD 0.12) per 40 liter milk can washed daily. The suppliers of the milk pay for the washing from the daily milk payments. This has created approximately 100 jobs for youth and 50 milk transporter jobs in Oyo State.
- Under the L&Z supply scheme, girls education is encouraged by providing branded exercise books to the daughters of milk suppliers. This stimulated the supply of milk and currently about 1,000 liters are supplied by the farmers around radius of the firm.

17.3 Farmer Registration: Target of 6,200 versus Actual of 9,199

The total number of farmers registered during the year under review was 9,199, representing 148% of set target, in Adamawa, Kano, Kaduna, Kwara, Nassarawa, Niger, Oyo States and FCT (Figure 60). They were subsequently provided packages of the Growth Enhancement Support Scheme (GESS) to raise milk productivity of their herds.

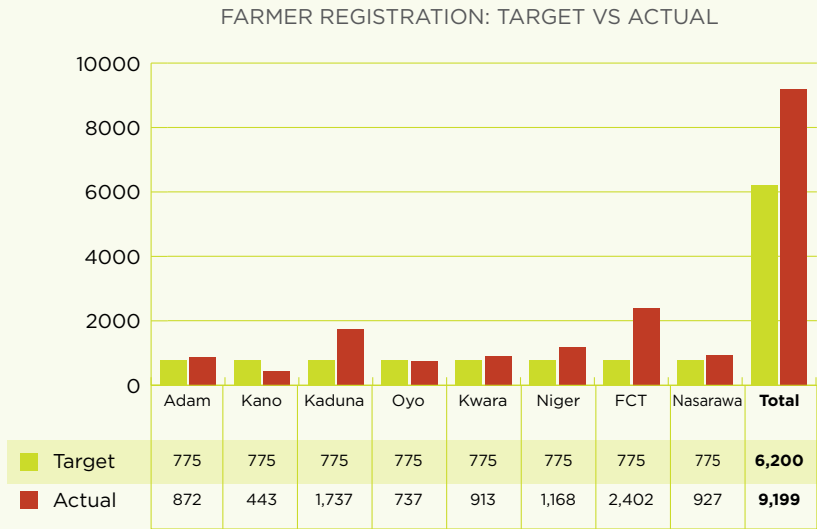


Figure 60: Number of farmers registered by state and total under the Dairy Value Chain

Artificial Insemination (AI) and Productivity Enhancement Plan

- Three indigenous breeds (Bunaji, Sokoto Gudali and Red Bororo) that were identified and promoted for breed improvement were selected for improved milk production.
- A total of 12,400 artificial inseminations (AI) were carried out in the seven states and FCT of which 7,448 were confirmed pregnant (Figure 61). This number represented 60% of the targeted cows. Pregnancy diagnosis is still continuing to ascertain the status of the other cattle that were bred late in the season.
- This effort will translate into FI crosses that will be used to systematically increase the low volume of the indigenous breeds and expected to translate to about a 20 fold increase over the average of 1-2 liters from the traditional pastoral herds.

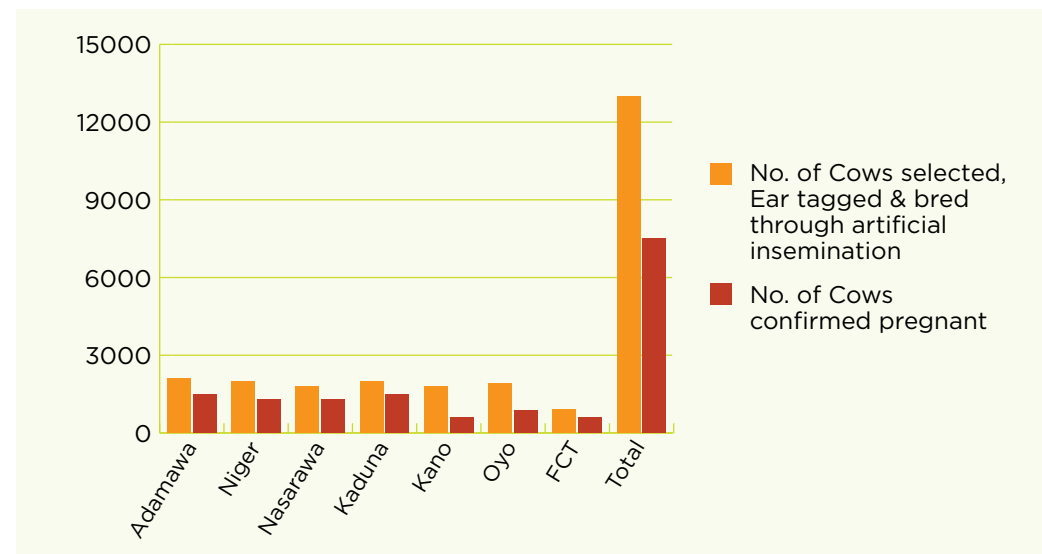


Figure 61: Number of cows inseminated and confirmed pregnant by state and overall

Capacity Building and Training

- As part of the efforts to improve and deepen the capacity of the AI program, 30 state officials, five per state and FCT, were trained on AI and AI related activities. The aim of the training was to develop a sustainable system that will continue to support the cattle upgrade at various state levels while at the same time, providing advisory services to dairy farmers.
- Two day training was conducted on August 26-27, 2013 among 200 dairy farmers in milk collection processes, rearing cattle for milk production business, forage conservation and hygienic milking techniques at Wasimi Grazing Reserve in Oyo State using a TOT model (Figure 62).
- The training was repeated for two days among 240 dairy farmers at Paikon Kore Grazing Reserve, FCT on September 5-6, 2013.
- The 440 pastoral farmers that were trained using TOT model are currently stepping down the training knowledge to other members of the groups at Oyo and FCT that were not privileged to attend the trainings.

Study Tour to Kenya

- Kenya has a long history of government support and investment in the dairy industry. A study tour of the Kenyan dairy industry was undertaken by two Dairy Value Chain members, a farmer/processor and a representative of Fulani group to understand their developmental stages to a commercially viable venture. Techniques included genetic improvement schemes, dairy production management techniques, bulking procedures, milk marketing and processing.

- Land is not a limiting factor as demonstrated by most families as long as right technologies are available.



Figure 62: Cross section of lead farmers during a Training of Trainers (TOT) workshop in FCT

- There were many support services and institutions for dairy, including animal breeding and research, modern genetic services, local production of vaccines, and a well-trained and experienced veterinary service.
- Milk market liberalization had quickly brought about a highly competitive dairy processing industry serving large urban markets.
- Many areas of the highlands offer favorable agro-climatic conditions for milk production in Kenya.
- Ownership of cows is an important tradition of the ethnic groups in the highlands, confers high status, and is an objective of every household.
- Highland farmers were very familiar with dairying and caring for dairy cows same as we have in the central and Northern parts of Nigeria.
- Smallholder farmers knew that an improved dairy cow is an important source of both income and nutrition for their household.
- There was a milk surplus even when milk marketing was in disarray.
- Farmers were prepared to increase production rapidly when they gained access to market.

17.4 Goals for 2014

The Dairy Value chain Activities in 2014

- Create awareness and promote pastoralists buy-in in the 11 states and FCT;
- Assist identified buyers per state and FCT in the selection of 500 farms and farmers;

- Increase milk production per lactation per cow from 1000 kilograms in small holder farms in 2013 to 1,500 kilograms in 2014 through feed supplementation, improved feeding and animal health practices;
- Assist in the selection of cluster sites and locations for cross breeding programs;
- Commence genetic improvement of 11,000 indigenous cows in target states through the artificial insemination of the two animals selected from farmers in targeted states;
- Audit and register the facilities of processors and animal health practitioners;
- Provide guidelines in the provision of extension supports and ear-tags for selected cows at rate of two cows per farmer in the targeted states and the FCT
- Broker the relationship between the private firms and the farmers to come up with a guaranteed farm gate price for raw milk;
- Facilitate the increase in domestic raw milk collection from milk collecting centers for processing in target states from 3,795 metric tons in 2013 to 16,500 metric tons to further boost rural household income;
- Provide capacity building and training on dairy production and management to stakeholders such as farmer groups, inseminators and extension agents;
- Provide quality parameters for supply of raw milk at the milk collection centers;
- Link farmers to the FGN's Growth Enhancement Scheme (GES) for provision of artificial insemination (AI) and feeding supplementation in the targeted states and FCT;
- Work with the private investors and Monitor Deloitte (USAID funded) in the provision of milk bulking and transportation equipment to processing factory in the target states;
- Register and deliver inputs of feed supplementation and salt licks to 11000 pastoralists and peri-urban farmers in seven states and the FCT under the GES platform;
- Number of artificial inseminations (AI) among targeted farmers is 11,000 in the seven targeted states and FCT

Private Sector Collaborators in 2014:

- Friesl and Campina WAMCO (FCW) Nigeria Plc as a major buyer for fresh milk from pastoral farmers
- Nasrun Nigeria Limited as a major partner in breed improvement efforts
- Maizube Farms Limited, Minna Niger State
- Gam'bara Nigeria Limited, Kubwa, FCT Abuja
- Niyya Farms Limited Kaduna

- Senbore Farm, Yola
- Integrated Dairy Farms Limited Jos
- L&Z Nigeria Limited Kano
- Danjuma Garko Integrated Dairy farm – a model farm for demonstrating cross breeding.

Expected Impact

- Target volume of milk from producers is 16,500 metric tons at average of 5 liters per farmer per day for 300 days; target producers income is NGN 1.155 billion (USD7.22 million) per annum at rate of NGN70 (USD 0.43) per liter.
- 10,000 new jobs to be created.

Marketing Support

- Generic campaign to promote consumption of milk and milk products in the country. This will include encouraging consumers to diversify their consumption to other value added products such as yoghurt.

Monitoring Progress against Target

- Milk yields survey monitoring and data validation to evaluate the performance of farmers during the season at the farm level. In this aspect, selected/sampled farmers are surveyed using a standard tool that captures the program activities at the farm level. The indicators to be captured during this survey include, milk yield per cow per day at the eight targeted states and FCT, number of milking cows per state, number of successful AIs as against target, and number of farmers adopting improved animal health and feeding practices and technologies among others.

Trainings Activities

- Training of milk collection operators using the TOT model: Target of 200 per state for a total of 2,200.
- Training of milk hygiene agents using the TOT model: Target of 10 per targeted state for a total of 110.
- Training of animal health assistants using the TOT model: Target of 10 per state for a total of –110.
- Capacity building of stakeholders: One field day per state for a total of 11.
- Field monitoring and backstopping of targeted states at rate of one visit per state per month.
- Workshop for the establishment of the Dairy Development Board.

18. BEEF VALUE CHAIN

18.1 Meeting domestic demand for beef

To provide adequate supply of quality meat in the domestic market and develop a potential towards export, the Beef Value Chain has the following objectives:

- i. Increase the amount of beef into the national meat market by 650,000 metric tons annually by 2015.
- ii. Raise the national average slaughter weight of cattle from 250 kilograms to 350 kilograms.
- iii. Increase the national herd growth rate from 1.4% to 3.3%
- iv. Provide a commercially viable partnership between livestock producers and markets along the value chain.
- v. Improve the production system along commercial and business operations.
- vi. Establish a national livestock breeding policy that promotes the adoption of technology for faster growth of the industry.
- vii. Establish a national meat development and marketing corporation for the long term sustainability and growth of the industry.

18.2 Achievements of the Beef Value Chain

- i. Diagnostic and strategic survey of Nigeria's beef industry under the beef transformation agenda was completed by McKinsey. The report is being circulated for comments.
- ii. A stakeholders meeting was held to launch 1600 SHFS and 500 Cow/Calf productions in the north-east, north-central and north-west.
- iii. Identification and migration of 1034 participating farmers in SHFS in Kaduna, Bauchi, Nasarawa, Kwara, Zamfara, Kano and FCT, and 367 farmers for cow/calf to the GES platform. Identification, verification and validation of 1600 Small Holder Fattening Scheme (SHFS) farmers was done.
- iv. GES support of 1600 SHFS farmers with inputs.
- v. Issuance of job order for the procurement of 550 units of semen for the insemination of 500 animals in the herd of the selected cow/calf farmers in Niger, Kaduna, Nasarawa and FCT is in progress.

- vi. Completed 35 TOT programs (17 SMS and 18 farmers) on crop residue conservation, processing, preservation and utilization.

18.3 Goal for 2014

- i. Fattening of 36,000 bulls in the 18 states where cattle has comparative advantage to make quality bulls available for Halal processor under SHFS program.
- ii. Upgrading of 18,000 cows through importation of 20,000 units of Brahma semen through artificial insemination.
- iii. On-farm Training of Trainers for 54 trainers on feed and cattle management in the 18 states where cattle has comparative advantage.
- iv. GES support for cattle fattening concentrates, salt block, de-wormer and acaricides.
- v. Sensitization and supervision of projects.
- vi. Provision of 18 zero fly screens to 18 states under coverage at 100% GES.

19. SHEEP AND GOAT VALUE CHAIN

19.1 Transforming the sheep and goats sector into a profitable business

Objectives of the Sheep and Goat Value Chain include:

- i. Improving household incomes and food security through improved performance and a paradigm shift of the sheep and goat sector in Nigeria from subsistence level production into viable and profitable commercial enterprise;
- ii. Increasing meat output from the current 440,109 metric tons to 585,785 metric tons and the population of animals by 30% from 92,043,900 to 119,657,070 through improved vaccination against PPR (which is responsible for 20-30% annual mortality in the national flock);
- iii. Generating over 450,000 new jobs in Nigeria;
- iv. Upgrading the genetic profile of sheep and goats for increased output in meat, milk and quality skins through open nucleus breeding system;
- v. Increased productivity of sheep and goats through private and public sector collaboration in animal health care services and input delivery to rural-based farmers;

- vi. Strengthening the capacity of sheep and goat farmers, producers, and processors through hand-on practical training on sound animal husbandry practices, standard operating procedures (SOPs) and good hygienic practices;
- vii. Linking sheep and goat farmers' cooperative associations with finance institutions to enhance their ability to obtain financing and expand business activities as well as establish disease-free export processing zones and abattoirs by 2015.

19.2 Achievements of the Sheep and Goat Value Chain

- i. Comprehensive breeding and fattening plans have been developed.
- ii. One thousand farmers have been selected for fattening of 10,000 rams for Sallah under Growth Enhancement Support Scheme (GES) in five states and FCT.
- iii. 30,000 farmers have also been selected for animal healthcare such as treatment of 300,000 sheep and goats against endo- and ecto-parasites in five states and FCT.
- iv. Over 1.9 million doses of Pestes des Petite Ruminante (PPR) vaccines were secured from Animal Health to vaccinate against PPR "Kata", an endemic killer disease in sheep and goats.
- v. A total 175,526 sheep and goat farmers were registered by June 2013.
- vi. Identification, verification and validation of 18,077 sheep and goat farmers who were registered and migrated to GES Platform/Databank.
- vii. Linkage of 18,077 farmers with input suppliers and cellulant for the roll out of inputs under GES.
- viii. Linkage of 1,000 farmers with input suppliers for the collection of 10,000 bags of finished feeds for ram fattening with a 50% subsidy under GES in five states and FCT.
- ix. Linkage of farmers with input suppliers for the collection of 6200 50 milliliter bottles and 3,100 1 litre bottles of acaricides and dewormers respectively with 100% subsidy under GES.
- x. 2.8 million PPR vaccines, syringes with needles and diluents were given to eight states.
- xi. Town hall meetings on the sensitization on sheep and goat VC, and GES Rollout in FCT, Gombe, Kaduna, Kano, Oyo and Lagos States held from 26th to 30th August, 2013. A total of 296 stakeholders participated in the sensitization exercise.
- xii. PPR vaccination commenced in Kano, Kaduna and Gombe States on 30 August and 2 September, 2013 respectively.

- xiii. Sheep and Goat Value Chain GES flagged off and rolled out in Gombe State on 17 September and in Kaduna and Kano on 26 September, 2013. A partial roll out in Lagos was on 24 September, 2013, and Oyo State and FCT were put on hold due to logistic reasons.
- xiv. Baseline study of stakeholders and existing sheep and goat infrastructures, farmers, marketers, and slaughter slabs.
- xv. Breed improvement through ppen nucleus breeding strategy in collaboration with NAPRI.
- xvi. Procurement of 260 grade bucks and rams to registered breeders.
- xvii. Promotion of small modern slaughter facilities and outlets under PPP initiative.
- xviii. Training of registered breeders and fatteners in 26 states.
- xix. GES support for salt lick, dewormers and commercial finished feeds with a 50% subsidy.
- xx. Monitoring and evaluation.
- xxi. Reduce the maturity of local sheep and goat birth from eight months to six months.

20. PIG VALUE CHAIN

20.1 Boosting domestic pig production

The Pig Value Chain which was the last to come on board among all the value chains is intervening only on pig fattening. It has the following objectives:

- i. To make pig production in the country a dynamic growing sub-sector of the livestock industry;
- ii. To boost domestic pig production and increase the current heads of pig in the country from 7 million to about 11 million heads in 2015;
- iii. To increase the amount of pork supplied into the national market by about 60% in 2015 i.e from 218,000 metric tons to 350,000 metric tons, and create a rising demand for pork and its value addition;
- iv. To raise the national average slaughter weight of pigs from 45 kilograms to about 90 kilograms in 2015 and therefore increase per capita consumption of pork and its products; and
- v. To finish the current implementation in include Ogun, Enugu, Benue and Kaduna States.

20.2 Achievements of the Pig Value Chain

- i. A concept note that shows a comprehensive plan for pig production, processing and marketing of pork and its products have been developed.
- ii. Pig farmers in the four states have been registered and migrated to the GES platform.
- iii. Logistics for implementing the Growth Enhancement Support (GES) to the farmers in the four states have been completed.
- iv. Sensitization exercise of pig farmers were conducted in four states of intervention, namely Ogun, Enugu, Kaduna and Benue, in readiness for Growth Enhancement Support (GES) package roll-out for farmers in line with the ATA agenda. The exercise took place between 5 and 6 September, 2013 and was jointly carried out with the state ATA offices and state Ministry of Agriculture. The budget expended for the exercise was only NGN 2,549,600 (USD 15,713.18).
- v. Also, a total of only NGN 1,777,000 (USD 10,951) was expended for the Pig Value Chain GES roll-out and monitoring exercise in four states of intervention.
- vi. Approved and expended also was the sum of only NGN 1,750,000 (USD 10,785) for the Pig Value Chain draft document.
- vii. Out of the NGN 27,000,000 (USD 166,401) approved for the supply of pig fattening feeds and disinfectants, only NGN 6,067,500 (USD 37,394) was expended for 809 farmers in the four states. The GES package to 3,600 pig farmers in four states was with a 50% subsidy, or NGN 7,500 (USD 46.22), per farmer.
- viii. A total of NGN 12,144,100 (USD 74,844) was expended for Pig Value Chain activities in 2013 out of the NGN 45 million (USD 277,335) appropriated for the year.

20.3 Goals for 2014

- i. To carry out a baseline study of stakeholders and existing pig infrastructures, i.e. farmers, marketers, butchers, slaughter slabs etc.
- ii. To improve the existing breeds of pigs in collaboration with NAPRI.
- iii. Training of registered breeders and fatteners in 10 states.
- iv. Increase the number of participating states from four to ten.
- v. To increase the number of pigs in the country from 8.5 million expected in 2013 to 10 million in 2014.

- vi. To increase the amount of pork supplied to the national market from 250,000 metric tons expected in 2013 to 300,000 metric tons in 2014.
- vii. To raise the national average slaughter weight of pig to 75 kilograms in 2014 and subsequently further increase the per capita consumption of pork and its products.
- viii. To increase the quantity of GES inputs being supplied to farmers particularly in feed, disinfectant, dewormers and additives for faster growth rate and improved performance.
- ix. To link farmers to markets.
- x. Procurement of project vehicle for implementation of Pig Value Chain programs.

21. POULTRY VALUE CHAIN

21.1 Transforming the Nigerian poultry industry

The Poultry Value Chain is aimed at facilitating the availability of breeder stock (grandparent stock and parent stock) and day old chicks (DOCs) to poultry breeders and farmers in the country at affordable prices. In addition, the value chain will also:

- i. Ensure that poultry farmers get good quality feed at affordable prices through the reduction in the cost of energy and protein ingredients for production of poultry feed.
- ii. Improve marketing and processing of poultry and poultry products.
- iii. Encourage poultry farmers to participate in poultry insurance programs.
- iv. Carry out training programme and capacity building for poultry farmers, sellers and other stakeholders.
- v. Provide guidelines for the standardization of the poultry industry to meet up with the minimum international standards.

21.2 Poultry GES 2013

- A total of 100,000 Shika Brown layer day old chicks (DOCs) were to be distributed to 1,000 poultry farmers in the ten states, namely Kaduna State, Kano, Plateau States, FCT, Oyo, Ogun, Lagos, Enugu, Imo and Akwa Ibom States. So far, only 285 poultry farmers received DOCs with 85 from Kaduna, 100 from Kano and 100 from Plateau, because of the challenge NAPRI had with producing the quantity of Shika Brown day old chicks required to drive the GES program as expected.
- 28,500 day old chicks valued at NGN 5,700,000.00 (USD 35,129.10); 1,425 bags (25 kilograms each) of chick mash valued at NGN 3,562,500.00 (USD 21,955.69); 114,000 doses of Newcastle Disease Vaccine valued at NGN 1,710,000.00

and 57,000 doses of vitalyte/coccidiostat valued at NGN 855,000.00 (USD5269) were given to poultry farmers who were mostly women and unemployed youth (Figure 64).



Figure 63A and B: Day-old Shika Brown chicks, chick mash, and drugs for distribution to farmers under the Poultry 2013 GES



Figure 64A and B: Chick mash being redeemed by poultry farmers; a number of the farmers were women

21.3 Achievements of Poultry Value Chain Team

- i. Under the programme, potential investors for the commercialization of the Shika Brown layer breed from NAPRI have been identified and discussion on the commercialization is ongoing.
- ii. Over 200 cassava farmers and processors have been trained nationwide in the production of Feed Grade Cassava Grits (FGCG) for the production of poultry feed in April 2012. LPOs for the supply of 1,120 metric tons of FGCG worth NGN34.0 million (USD 209,542) was issued out to cassava farmers/processors in May 2012 by Amo Byng Feed Mill.
- iii. Extensive consultation was carried out with governments, Poultry Association of Nigeria and other stakeholders in Enugu, Lagos, Ogun and Oyo States in June 2012 in order to address the problems affecting the industry such as egg glut and high cost of feed ingredients.

- iv. 960 Live Bird Market (LBM) operators have been trained while 3 LBMs at Dutse, Kano and Gusau were commissioned in July 2012.
- v. A poultry stakeholders' meeting was held in Abuja in May 2013 in which minimum poultry industrial standards in breeder farms, hatcheries, feed milling, poultry processing, vaccines and drugs were approved for implementation.

22. LEATHER VALUE CHAIN

22.1 Boosting production of hides and skins

The goal of the Leather Value Chain (LVC) is to increase production of hides and skins from the primary production as well as improving the quality of Nigerian tanned leather to reposition the industry in the global market. In addition, the LVC aims to improve the quality of Nigerian Finished Leather Goods (FLGs) and raise capacity to compete with imported goods in order to grow the sector for wealth creation and increased Job opportunity. Specific objectives of the Leather Value Chain are:

- i. The objective of the value chain is to develop efficient skin collection systems in the rural areas through the establishment of Skin Collection Centers (SCCs).
- ii. Enhancement of skin preservation through adoption of best practice at the collection, trading and transportation levels.

22.2 Leather 2013 GES

- The implementation of the Leather GESS was another key activity for the Leather Value Chain in 2013. The objective was to assist the skin buyers and collectors to effectively preserve the skins during transportation from abattoir and slaughter houses to the tanneries in order to ensure that good quality leather is produced. In order to effectively target beneficiaries for the Leather GESS, the skin buyers and collectors database was uploaded into the general GESS platform of the Ministry.
- A total of 1,764 skin buyers and collectors were supported with 10 bags of industrial salt each under the GESS platform. A total amount NGN 49,392,000 (USD 304,402) only, was committed to the scheme representing about 60% of the total budget allocation for LVC. The total package for each skin buyer and collector was NGN 17,200.00 (USD 106). The leather GESS recorded 100% redemption and the processes were smooth and successful.

22.3 Achievements of the Leather Value chain

Establishment of a skin collectors and skin buyers' database

- In 2013, a key activity for the Leather Value Chain was the establishment of a skin collectors and skin buyers' database. The Leather Value Chain registered through the Hides and Skins Associations in the implementing states. Over 3,000 hides and skins buyers in Jigawa, Kano, Sokoto, Zamfara, Katsina and Bauchi registered for skin collection and buying for purposes including Livestock GESS.

Capacity building for leather stakeholders:

- Training for 300 skin buyers and collectors (50 per state) on the use of industrial salt in effective preservation of hides and skins took place in each of the 6 implementing states during the year 2013.
- Capacity building for abattoir workers, flayers, traders and other stakeholders in the leather industry will also be implemented in these states as well as in Anambra, Abia, Lagos and Kaduna States before the end of the year.

Other achievements for the Leather Value Chain in 2013 include:

- Advocacy: In order to achieve synergy with other agencies, the Leather Value Chain team made several visits to some relevant institutions that included but not restricted to officials of Federal Ministry of Trade and Investment (FMTI), Youth and Gender Desk office of (FMARD), and SURE-P. The objective of the visits was to create awareness of the importance of the leather sector to the Nigerian economy, and to attract additional resources to the activities of LVC. The outcomes of these collaborative advocacy visits and meetings were highly encouraging and fruitful including:
- Training of over 250 youths in leather technology by the Youth and Gender Division of the FMARD,
- Develop and inclusion of the FMARD in the Leather Revolutionary Committee of FMTI, and
- Consideration and building of Skin Collection Centers (SCCs) by SURE-P.
- The LVC also provided written inputs from the leather industry into the preparation of a document on environmental challenges/problems affecting the agricultural sector;
- Collaborative Meetings were held at different times with IFDC, Supply Chain Managers (SCMs) and NIRSAL team on GESS implementation and the modalities of benefitting from NIRSAL facilities by agro-dealers;
- A meeting with LAPAN officials to review skin buyers list and preparation of the final list for inclusion into LVC GES for 2013 took place on 15th July 2013;

- The LVC Organized a one day sensitization workshop at Park View Hotels, on the 15th August 2013, on the objectives of Leather Value Chain, the roll out of the GES, the expected roles for Leather field and LAPAN officers, and the 2013 work plan for the 6 implementing states of Zamfara, Sokoto, Kano, Katsina, Jigawa and Bauchi with regional office representations;
- The LVC also participated at the Leather Industry Revival Initiative Summit (LIRIS) organized by ENABLE, DFID and LAPAN on leather held at the Transcorp Hilton, 16-17th September, 2013; and
- The LVC rolled out the Leather Value Chain GESS input (industrial salt) on 23rd September, 2013 and conducted the official flag off of the event in Kano State. During the event 10 skin buyers redeemed 10 bags of salt each.

22.4 Goal for 2014

Major goals for the 2014 financial year will include but not limited to the following:

- Continuation of registration of skin collectors, leather works and dealers in the six additional states;
- Up-scaling the provision of subsidized input to cover six additional states;
- Up-scaling capacity building to cover more stakeholders;
- Providing support for the establishment of skin collection centers in 2 locations;
- Mobilizing support for the establishment of CFCs with improved facilities;
- Providing support for the strengthening of the FLGs in the states;
- Sensitization, advocacy and mobilization of support towards popularization of made in Nigeria leather and finished goods;
- Support to LAPAN to facilitate standardization of traded products in the industry;
- Strengthening of the leather and finished leather goods associations under LAPAN; and
- Meetings with stakeholders, field visits and other operational activities.

23. ANIMAL HEALTH VALUE CHAIN

23.1 Building healthy herds and flocks

The Animal Health Value Chain is designed to ensure healthy national herds and flocks of livestock in order to provide adequate animal protein and improve our standard of living.

It plans to achieve this through the control of various animal diseases in cooperation with all the state governments and the Federal Capital Territory (FCT). The programme is being implemented in 36 states of the federation and the FCT.

23.2 Achievements of the Animal Health Value Chain

In the year under review the following are the outputs from the activities carried out:

- i. 5.30m doses of CBPP have been allocated to 5 states for the vaccination;
- ii. 3.55m doses of PPR were allocated to 9 states for vaccination;
- iii. 1,500 serum samples from poultry birds were collected in Osun State for testing for Newcastle Disease (NCD), while tests for Infectious Bursal Disease (IBD) were conducted on 1,500 poultry serum samples collected in Ogun State.
- iv. Test for African swine fever virus is ongoing on the 1,660 pig serum samples collected in Benue State at the National Veterinary Research Institute (NVRI), Vom.
- v. In addition to the quantity of CBPPV and PPRV to 5 states and 9 states respectively, 1.5m doses of CBPPV has been allocated to 9 states + 2.8m doses of PPRV to 11 states. The benefitting states are currently collecting their allocations with all state ATA offices informed of best practice for monitoring and ensuring utilization. Nigeria's international obligation for disease reporting to AU-IBAR and the OIE was accomplished.
- vi. Active surveillance for African Swine Fever (ASF) has commenced in 3 states (Adamawa, Benue and Plateau) in the NE and NC zones as a collaboration between the department and the NVRI. This study when completed will have also looked at other disease in addition to ASF.
- vii. A re-assessment of the wildlife disease network was carried out and 32 wildlife staff from states, zoos, and national parks/wetlands participated.
- viii. The ARIS 2 regional and national ToT had 4 administrators trained while 52 participants including staff of the FDL and Federal Department of Fisheries and the National Veterinary Research Institute (NVRI) participated in the cascaded training to levels 0 and 1. This is to improve data collection, submission and analysis.
- ix. The maiden issue of the NADIS quarterly e-newsletter was launched and it is to inform members of the veterinary services about national disease status and other relevant programs of the FDL.
- x. The VetGov project commenced with the appointment of the National Livestock Policy Focal Point.

- xi. There has also been a continued collaboration with other sectors in the spirit of 'One Health'.
- xii. Facilitated vaccination exercise for cattle, sheep and goat in Jigawa, Kwara, Delta, Benue, Katsina, Niger, Adamawa, Sokoto, Kaduna, Ogun States and the FCT with the 5.3 million doses of CBPP vaccines secured for cattle and the 3.55 million doses of PPR vaccines secured for sheep and goats, respectively.
- xiii. Also, 1.5 million doses of CBPP vaccines and 2.8 million doses of PPR vaccines were subsequently allocated to another set of nine states and 11 states, respectively.
- xiv. Conducted tests on 1,500 poultry serum samples for Newcastle Disease [NCD] in Osun State, 1,500 poultry serum samples for Infectious Bursal Disease [IBD] in Ogun State and 1660 pig serum samples for African swine fever virus in Benue State.

24. NATIONAL GRAZING RESERVE AND STOCK ROUTE DEVELOPMENT

24.1 Transforming nomadic livestock production

The main objective of the programme is to promote commercial livestock production through the development of the nation's grazing reserves and stock routes as well as promoting settling of pastoralists in and around the grazing reserves.

24.2 Achievements

- i. The development of infrastructure in 2 no. model grazing reserves in Damau, Kaduna State and Wasimi grazing reserves in Oyo State are on-going. These include pasture development (15 hectares in Damau & 20 hectares in Wasimi), construction of 3no. small earth dams and 8 no boreholes as well as 4 no access roads to 4 milk collection centers in Wasimi grazing reserve in Oyo State.
- ii. In addition, in order to avert farmers pastoralists conflicts, 1400 km of stock routes are being demarcated, monuments being constructed along the North East, North Central and Northwest axis. Two resting points are being constructed at Donga Taraba State and Kudang, Kaduna State by contractors. Watering points in the form of boreholes (44 no.) are also being provided along the stock routes.
- iii. Renovated 4 strategic veterinary quarantine stations/control posts, 5 veterinary teaching hospitals laboratories and installation of BSL3 laboratory in the National Veterinary Research Institute, Vom.
- iv. Completed 16 live bird markets located at Lagos-1, Kaduna-2, Kano-2, Jos-1, Kwara-1, Ogun-1, Oshun-1, Enugu-1, Yobe-1, Enugu-1 Akwa/Ibom-1, Rivers-1,

- Sokoto-1, Zamfara-1 and Jigawa-1.
- v. Commenced the development of infrastructure in 2 no. model grazing reserves in Damau [Kaduna] and Wasimi [Oyo] that include pasture development of 15 hectares in Damau and 20 hectares in Wasimi, construction of 3no. small earth dams and 8 no boreholes as well as 4 no access roads to 4 milk collection centers in Wasimi grazing reserve in Oyo State.
 - vi. Commenced the demarcation of 1400 km stock routes, the construction of monuments along the North East, North Central and Northwest axis, the construction of two resting points at Donga [Taraba] and Kudang [Kaduna] State as well as the provision of watering points in the form of boreholes (44 no.) along the stock routes.

24.3 National Transboundary Pest Control

The National Transboundary Pest Control programme was started to protect animals and crops as well as humans from the seasonal transboundary pest infestation, especially quela birds and tse fly in the Northern frontline states which in magnitude and economic importance, are beyond the control of individual farmers and small communities. Table 6 shows locations of transboundary border control sites.

Table 6: National transboundary control locations

STATE	LOCATIONS
Borno	Mafa, Konduga, Gambole, Maidumari, Wuda Taya, Wofio, Wurge, Afunori, Meleri, Maintari and Mallum Maja
Yobe	Ngeji, Gadana Tinja, Nguru, Baracks, Guri, Mainkongoli, Garin Wayo, Ngarda
Bauchi	Alkalerti, Kirli, Gobirawa, Yankari, Toro, Ningi, Wargi, Jama'are, Tafawa Balewa, Dass, Borogo and Gamawa
Gombe	Ngeji, Nafada, Dadin Kowa, Bajpga, Kwami, Yamaltu, Deba, Kaltungo, Biliri and Dukku
Adamawa	Gayuk, Kiri-Dam, Banjiram, Gywana, Mbekawo, Opalo, Suwa, Lamurde, Savannah Sugar Estate, Maini, and Lake Gerlo
Taraba	Bali-Forest, Karim Lamido, Kurmi Forest, Lau/Garim Dogo, Tau, Gassol, Donga, Ussa, Gongola River Bank System, Bali North, Dansadan Development Area, Jan Development Area
Jigawa	Auyo, Birinwa, Guri, Hadejia, Kirkasama, Kaugama, Rom Gwiwa, Yankwashi, Karaure and Miga
Kano	Dambatta, Makoda, Kura, Bebeji, Garun Malam, Minjibrin, Gagwal and Gwarzo
Katsina	Sandamu [Zugal, Gumzu], Zango [Garni, Kasuwaye, Magina & Zangowei] and Dambo Dam

Kebbi	Ngaski, Yauri, Shanga, Koko-Basse, Bagudo, Bunza, Argungu, Gwamba, Zaria-Kalakala, Sadai, Zenare, Wara, Dole Kaina and Banjama
Sokoto	Goronyo, Wurno, Falalia, Keta and Shineka
Zamfara	Natu, Shantan Whonka, Gamji, Adarawa, Yardalla, Yarkorrfuji, and Gundumi

25. AGRICULTURAL EXTENSION

25.1 Building a National Extension System

The Agricultural Extension Transformation Agenda (AETA) seeks to put in place a legislated, knowledge-based, demand-responsive, market-oriented, value-chain approached and ICT-drivenparticipatory extension and advisory service delivered both publically and privately. This body will be characterized by assured and regular sources of funding and run by well-trained, motivated staff to effectively drive the Agricultural Transformation Agenda (ATA).

The agricultural extension transformation agenda is in line with ongoing global reforms in extension and advisory services, with a gradual shift from the monopolistic national public extension system to a pluralistic system, with the private sector now playing a major role in services delivery along value chains.

25.2 Achievements of the Extension Value Chain

The Federal Department of Agricultural Extension (FDAE), headed by a new director,is expected to provide the critically needed leadership, policy direction, coordination and qualityneeded for an effective, efficient and dynamic national agricultural extension service. This will enable all value chain actors to meet current and future challenges, and also to take advantage of the opportunities offered by local, regional and international markets, thus making Nigeria a real competitor in the global food markets.

I. Policy Support:

The policy requirements to guide this agricultural extension and advisory service in line with best global practices have been articulated. These are expected to be incorporated into the national Agricultural Policy that will be submitted to the National Assembly to be legislated as an Act of Parliament.

II. Implementation Agreements with Participating States:

Sensitization visits to all 36 States and the FCT, designed to persuade critical Stakeholders to key into the Agricultural Transformation Agenda (ATA), have

been successfully completed, with all of the states expressing a clear interest in and commitment to ATA. To demonstrate commitment by all Stakeholders, the Agricultural Extension Transformation Agenda (AETA) Implementation Agreement, written by the Hon. Minister for Agriculture and Rural Development, has been signed and returned by 21 Executive Governors over the course of the year. This agreement specifies the roles and responsibilities of both the Federal and State governments, and those outstanding are expected to follow soon. Furthermore, the Agricultural Extension Development Committee, which is comprised of relevant public-private stakeholders also held its inaugural meeting.

III. Logistics Support to Agricultural Extension:

- i. Some 800 motorcycles were acquired for field extension workers in the 36 States and FCT, in order to significantly improve their mobility for better performance in extension services delivery.
- ii. Also, 5,000 knapsack sprayers, to be used for training of young agriculturists as Crop Protection Service Providers, were acquired and distributed under the Maize Value Chain, and will, in the future, provide those services to farmers in their various communities.

IV. Establishment of Farmers' Helpline Centers:

The North West Zonal Hub of the National Farmers' Helpline was created as part of the national platform to provide e-Extension support services to farmers and youths, in order to enable them acquire specific knowledge-related problems and solutions, and to make responsible choices regarding access to production-enhancing inputs. The platform also has the potential to provide web- and mobile-based extension support services for all value-chain actors.

V. National Audit of Extension Resources:

- i. An accurate audit of the extension field staff of the Agricultural Development Projects (ADPs) was successfully completed to determine the shortfalls in the extension agent/farm family ratio to achieve the recommended ratio of 1EA:800-1000FF. The critical number of field extension staff needed to effectively service Nigerian farmers and all other value-chain actors has thus been determined. This now forms the foundation of the Agricultural Extension Database.
- ii. Also, an assessment of the infrastructures and facilities of the agricultural extension in all ADPs was performed to determine gaps in the minimum requirements for effective delivery of extension services.

VI. Revitalization and Institutionalization of REFILS:

The Research Extension Farmer Inputs Linkage System (REFILS), which provides an important platform to bring together all the key stakeholders in the arenas of technology generation, adaptation, dissemination, and utilization for the effective management of research and extension has now been resuscitated and institutionalized. Funding support for key stakeholders in the Research (Research Institutes) and the Extension (ADPs) subsectors is now a priority.

VII. Capacity Building Support:

- i. i. Capacity building for both farmers and extension agents in all the Zones was carried out through Zonal Pre-Season In-service trainings, Zonal REFILS Workshops, Technical and Steering Committee meetings and specialized training along the targeted value chains. These included:
 - 180 farmers trained under the Livestock Value Chain at the National Livestock Training Center, Kachia;
 - 2500 cotton farmers on cotton agronomic and handling practices;
 - 6,060 rice farmers trained across the country (including 60 female rice farmers in the South south region);
 - 15,000 (out of 25,000) cocoa farmers trained in cocoa producing states under the Farmer Field Schools;
 - 5,000 maize farmers trained in different aspects of production techniques;
 - 250 sorghum frontline farmers trained for the value chain as master trainers;
 - 120 soybean farmers on improved agronomic practices on production, farm gate processing and marketing;
 - 67 Federal Department of Agricultural Extension and Regional/State Directors trained on basic principles in agricultural extension (conducted by NAERLS/ABU Zaria);
 - 130 management training plots established for training of farmers; and
 - 85 on-farm adaptive research centers established to serve as linkage between research institutes and farmers for adoption of new technologies.
- ii. Weekly radio and TV programs in English, pidgin English, and local languages (Hausa, Igbo and Yoruba) were aired in support of the Agricultural Transformation Agenda (ATA) in all the geo-political zones.

VIII. Partnerships and Collaboration

In line with the global practice of pluralism in extension services delivery, and in pursuit of the government's public-private-partnership (PPP) policy, the following partnerships were created in support of extension services delivery:

- Partnership with the Federal Ministry of Women Affairs on capacity building for women and unemployed youths;
- Federal Ministry of Education (Adult and Literacy Education);
- Partnership with the Shell Petroleum Development Company (SPDC) for the capacity building and empowerment of 60 female rice producers in Bayelsa State; and
- Partnership with the SAA/SG 2000 for extension support along selected value chains in 12 states (two per Zone).

IX. New Opportunities and Challenges:

Effective support to the states is required for the implementation of the farmer field school (FFS) extension approach, establishment of the Junior Farmer Field Schools and Young Farmers Clubs in selected Secondary Schools.

X. Recommendations, Next Steps and Activities:

- i. Mobility support to the states for the frontline Extension Agents (BESs, VEAs, and BEAs).
- ii. ICT support to the ADPs.
- iii. Support to the states for the implementation of the FFS, FBS, and JFFS & Young Farmers' Clubs in Secondary Schools, in each of the senatorial zones.
- iv. Support to the states for the effective implementation of REFILS activities.
- v. V. Support to the NARs zonal coordinating and commodity (collaborating) research institutes for the effective coordination and implementation of critical REFILS activities.

26. GENDER AND YOUTH

26.1 Standardizing Gender and Youth in Agricultural Development

The Gender and Youth Desk of the Ministry was established in May, 2012 to standardize gender and in particular the role of women and youth in agriculture in the various value chain processes. This would start from production through processing, preservation/

storage, marketing and utilization of the selected Agricultural Transformation Agenda (ATA) value chains, such as rice, sorghum, cassava, cotton, maize, cocoa, soybeans, oil palm horticulture, aquaculture, livestock and poultry.

The 2013 budgetary allocation provided a total sum of NGN 1.54 billion (USD 9.5 million) MDG funds for the Gender and Youth Desk to organize vocational training programmes for 5,000 youth and 3,000 women under a special intervention programme entitled the "Youth and Women in Agribusiness Investment Programme," with a view to equipping them with the necessary skills to undertake the enterprise of their choice from the selected value chains of the Agriculture Transformation Agenda (ATA).

The objective of the programme is to harness the potential of youth and improve the participation of women in agriculture in order to reduce unemployment among both categories, improve food security, create wealth and eradicate poverty.

26.2 Achievements of the Gender and Youth Program

Through the creation of the Gender and Youth Desk, so far the following has been achieved:

- Youth and Women in Agribusiness Investment Programme*** - 3,051 women and 2,274 youths have been empowered in 20 agricultural enterprises along ten value chains, including rice, cassava, horticulture (tomato production and processing, and orchard establishment and management), groundnut, hungry rice (accha/ fonio), sheep and goat production, beef (bull fattening, footwear manufacture and leather production and processing), poultry production, fish farming (breeding, table fish production, fish processing, fish feed production), agro-forestry (apiculture, snailry, and grass cutter farming), complimentary services (welding and fabrication, repair and maintenance of agricultural equipment and machinery) and nutrition and food fortification. (Summary is attached).
- Access to Credit*** - A credit arrangement for youth and women with the Bank of Agriculture and Bank of Industry has been established at a single-digit interest rate with insurance coverage to manage their risk and ensure a successful business. The FMARD Credit Fund will be matched by 100% by both banks.
- G-WIN Initiative*** - With the technical support of DFID, the Division is working with a consortium of MDAs on Growing Girls and Women in Nigeria (G-WIN), an initiative being supported by the Coordinating Minister of the Economy (CME) and the Hon. Minister of Finance to deliver key results for girls and women in 2013 budget. The MDAs involved are the Federal Ministries of Women Affairs and Social Development, Communications Technology, Water Resources, Works/FERMA and Health in addition to FMARD.
 - i. Based on the Division's performance, CME approved an additional allocation of NGN 651 million (USD 4 million) from an incentive fund of NGN 3

billion (USD 18.5 million) to upscale its programmes and reach 2000 more women. NGN 325.8 million (USD 2 million) has been disbursed already.

- ii. Accordingly, the Division has empowered 1000 girls and women from different cooperatives to engage in the rice, cassava, groundnut, hungry rice (accha/fonio), aquaculture and poultry value chains with skills and cottage-industry-level equipment.

iv. *Youth Employment in Agriculture Programme (YEAP)* - The Division designed a robust programme with technical assistance from FAO called the Youth Employment in Agriculture Programme (YEAP), which is expected to aggressively address the issue of unemployment among youth and assist in the achievement of other ATA outcomes on food and nutritional security, as well as rural income generation. YEAP will reach 758,500 youths over a period of 5 years, creating a subset of agricultural entrepreneurs termed the Nagropreneurs, a creative, innovative, ICT savvy group that would change the face of agriculture in Nigeria. The Programme, which has been approved by the NCA, has the highest political buy-in as evidenced by its launch in September by the President during the 2013 Nigerian Economic Summit.

v. *Collaboration with Other Stakeholders* - The Division is working with relevant stakeholders to properly highlight the concerns of youth and women in agricultural policy and maximize the impact of the Ministry's targeted programmes. Some of the organisations include:

- a. FAO* – Technical assistance in the designing of Youth in Agriculture Employment Programme (YEAP);
- b. Federal Ministry of Youth Development/NYSC* – Identifying and building capacity of beneficiaries. G&Y Division carried out sensitisation of the NYSC Members through our ATA Offices during orientation camp in all 36 States plus FCT, and has submitted proposal for reviving the NYSC Farm Settlements nationwide;
- c. Federal Ministry of Women Affairs and Social Development (FMWASD)* – Concerning empowerment of women, and orphans and vulnerable children;
- d. World Bank* – Concerning the area of development of disaggregated data through research to enable evidence-based programme design and pilot programmes to operationalize the MoU between the Ministry and Federal Ministry of Women Affairs and Social Development;
- e. FEPAR* – Conducting gender audit of seven value chains including rice, cassava, beef, soybean, fish, poultry, sheep and goat, as well as drafting guidelines and frameworks for standardizing gender into the ATA;

f. ECOWAS – Submitting a budget for NGN 3 million (USD 18,489) for empowerment of women in agriculture;

g. A.G. Leventis Foundation – Building capacities of target beneficiaries;

h. USAID – Collaborating on youth, women, and vulnerable groups;

i. JICA – Possible collaboration on youth and women empowerment;

j. MoU to be signed with private-sector organisations, federal colleges and institutions of agriculture to build capacity of the target beneficiaries;

k. NGOs and Cooperatives – Identifying and building capacity of their members in agricultural enterprises of their choice;

l. Rice Levy Programme – Developing a proposal for youth and women empowerment in various rice enterprises and some off-farm income generating activities to reduce unemployment and create wealth;

m. Working with FADAMA/CADP/World Bank and, based on our contribution, 50% of Additional Financing (AF) from World Bank to the Ministry will be targeted to youth and women empowerment programmes; and

n. The Federal Ministry of Communications Technology (FMCT) on Smart Woman Nigeria Project – Facilitating access to information, input and extension services through mobile phones for hard-to-reach girls and women. Arrangements are being worked out to deploy mobile network and provide infrastructure to that effect. The extension delivery will leverage the FADAMA Information and Knowledge Systems (FIKS) and the about-to-be-commissioned live information centers of the FMCT to reach the targets. The project is also collaborating with National Agricultural Questions and Answer Services (NAQAS) of NAERLS, to harmonise and coordinate the technical content for the platform.

vi. *Baseline Survey of Youth and Women Cooperatives in Agribusiness* - Commissioned the conduct of a baseline survey of youth and women cooperatives in agribusiness, in collaboration with NAERLS and the Federal Department of Cooperatives.

vii. *Promotion of Women-friendly Technologies* - We are also promoting simple, women-friendly technologies to reduce drudgery for female farmers and increase their income-generating ability. For instance, the Ministry facilitated the local fabrication of 10 hungry rice (accha/fonio) threshing machines to support accha women farmer groups in the production belt. Accha is a healthy crop with a huge domestic and international market potential.

- viii. **Registration of Women Farmers on e-wallet System** - Sensitized and trained women farmers have registered under the ongoing farmer registration exercise of the Ministry to improve their access to productive inputs. This led to the registration of 2.4 million female farmers in our database, who will be receiving subsidised inputs and information.
- ix. **Sensitization on Gender Equality in Agriculture** - Involvement of the state and regional ATA offices in the programme to drum up support and sensitize them to the importance of the pursuit of gender equality to the success of the ATA.
- x. **Gender Audit of selected Value Chains** - Conducted a gender audit of 8 value chains including rice, cassava, soybean, horticulture, leather, aquaculture, poultry, sheep and goat, as well as drafted guidelines and frameworks for standardizing gender in the ATA.

26.3 Challenges

- i. Inadequate and late release of funds
- ii. Bureaucratic bottlenecks
- iii. Although some funds for credit have been released to the Ministry, trainees have been unable to access the funds due to non-remittance to the banks
- iv. Dispersed and inadequate office space as well as inadequate facilities resulting in stressful working conditions and below-optimum productivity

26.4 Future Outlook For 2014

- i. On gender equality, we hope to finalise the gender audit and conduct another for the remaining value chains that were not surveyed in 2013;
- ii. Finalise and present gender standardization guidelines and framework for the ATA to the Minister;
- iii. Start implementation of YEAP;
- iv. Implement nutrition value chain;
- v. Conduct a needs assessment and develop a strategy for standardizing Vulnerable Groups in the ATA;
- vi. “Catch Them Young” sensitization campaign in collaboration with Federal Ministry of Education, designed to change the perception of youth on agriculture and gender equality;

- vii. Continue activities under the Youth and Women in Agribusiness Investment Programme;
- viii. Institute an awards system to reward and recognize excellence and innovation as post-training support for beneficiaries of the Division’s programme in 2012-2013;
- ix. G-WIN – continue up-scaling activities on Youth and Women in Agribusiness Investment Programme; and collaborations with other MDAs as follows:
 - a. **FMCT on Smart Woman Nigeria Project** by disseminating information on agriculture to hard-to-reach women.
 - b. **The Federal Ministry of Health** to facilitate rehabilitation for repaired VVF patients through capacity building in agricultural enterprises.
 - c. **The Federal Road Maintenance Agency (FERMA)** to provide:
 - i. Women Farmers Market on the Bwari-Jere Road corridor where the women farmers will double as information agents providing information on accidents, breakdowns, etc through a FERMA helpline. While FERMA will look at the possibility of road maintenance training for them and other trainings including off-farm income generating activities such as bread-making, agro-processing, nutrition, hygiene, etc. in collaboration with FMARD.

Vocational training for the beneficiaries of FERMA’s road maintenance programme after their disengagement.

27. AGRIBUSINESS & INVESTMENTS

27.1 Goals of Agribusiness and Investment Unit (A & 1 unit)

Agriculture is receiving a major boost in Nigeria as the Federal Government has put the private sector at the center of the Agricultural Transformation Agenda (ATA) President Goodluck Jonathan. With the smart leadership of Minister Akinwumi Adesina, of the Federal Ministry of Agriculture and Rural Development (FMARD) was established mid-year 2012. The A&I Unit was immediately staffed with a combination of professionals from the FMARD and private sector consultants with the following five goals:

- i. Build strategic relationships with the private sector and drive increased investments in Nigeria’s agricultural sector;
- ii. Work with relevant stakeholders to promote the attractiveness of agriculture as a lucrative business for private sector stakeholders;

- iii. Provide business, investment, and financing support services to the private sector and FMARD teams;
- iv. Support consumer market and new product development for market sustainability and engage in food science and technology transfers within agricultural value chains; and
- v. Support new institutions and policy reforms to ensure successful establishment of new agribusinesses, new markets, new products and new technologies in the manufacturing, packaging and distribution of food products.

27.2 To accomplish these goals, the A&I Unit has adopted the following approach:

- Extensively engaging domestic and international private sector stakeholders in all agricultural value chains to build relationships and ensure investment commitments;
- Building inclusive market linkages between producers (farmers and farmer organizations), suppliers (aggregators), processors, distributors and consumers;
- Leading the creation of institutional agribusiness framework and investment code to ensure sustainability and market growth of agricultural and food businesses;
- Integrating development finance institutions (DFIs) extensively in financing and technical partnerships to support the growth of the agricultural sector; and
- Building organized agribusiness stakeholder groups and marketing information systems for sustainability of federal policy reforms.

The A&I Unit's ultimate aim is to be a customer-oriented, one-stop business center of excellence, catering to the needs of the agribusiness private sector.

27.3 Highlight of 2013 Achievement

Through the A&I Unit, the Federal Government is driving an unprecedented private sector agenda in the agricultural sector. Since this administration came on board, the private sector has made extensive commitments to existing and planned investments in Nigeria's agriculture, agribusiness and food industries. This is because the government is now executing a 'government-enabled, private-sector-driven' transformation agenda that ensures that agriculture is being treated as a straight-line business, and not a development project. Indeed, the Government recognizes that there are financial returns to be made in the sector, while also ensuring job creation and economic sustainability.

As of end of year 2013, over NGN 649 billion (USD 4 billion) in executed Letter of Intent (LOI) from 30 private sector companies was attracted into the agricultural sector. These detail current and planned agricultural-related investment plans in Nigeria over the next 3 to 5 years. There has been a renewed interest and excitement among various stakeholders about the opportunities in investing in the sector, and these stakeholders have derived comfort in the fact that the Federal Government is a partner in this effort.

There is no doubt that the eyes of the investment world are focusing on the agricultural transformation agenda in Nigeria and the A & I Unit continues to actively engage in efforts to attract and sustain investments that will positively transform the face of agriculture in Nigeria. A summary of achievements is shown in Table 7.

Table 7: Summary of Achievements in 2013

A & I UNIT OBJECTIVES	ACTIVITIES	ACHIEVEMENT
1. Build strategic relationships with the private sector and drive increased investments in Nigeria's agricultural sector	i. Developed new and honed existing relationships with over 50 private sector manufacturers, distributors, retailers, and financiers (local and international) with interest and stakes in Nigerian agriculture. ii. Led the execution of the FMARDs hosting of a special session at the World Economic Forum, Davos (January 2013) where global leaders from the private sector and international community discussed Nigeria's ATA. iii. Led the planning and successful hosting of the launch event of the Staple Crop Processing Zones (SCPZ) with private sector participants at the World Economic Forum, Cape Town (May 2013). iv. Led the FMARDs participation in the 2013 Grow Africa Investment Forum. v. Led the FMARDs collaboration with the Nigerian Economic Summit Group (NESG) in the planning and execution of the 19th Nigeria Economic Summit (September 2013). vi. Supported the European Marketing Research Commission (EMRC) to deliver an outstanding Agribusiness Summit in Rwanda where further global alliances were made (October 2013).	i. Over NGN 640 billion (USD4 billion) of private-sector signed Letters of Intent (LOI) received from domestic and multinational agribusinesses, committing to investments in agribusinesses in Nigeria ii. Developed new strategic partnerships to drive agribusiness investments in the SCPZs, as well as drive financing for the development of the SCPZs. iii. The NESG Summit was hailed, nationwide, as the most successful Summit in its 20-year history. iv. Overall, activities have demonstrated government seriousness and increased the level of interest in agricultural investments in Nigeria.
2. Work with relevant stakeholders to promote the attractiveness of agriculture as a lucrative business for private sector stakeholders	i. Developed and produced professional standard investment cases for 5 priority value-chains that have been widely distributed to local and domestic private sector stakeholders. ii. Planned and conducted 3 high-level bi-national investment forums: Nigeria-South-Africa Investment Forum (April 2013), Nigeria-Kenya Investment Forum (September 2013), and Nigeria-Brazil Agribusiness Forum (November 2013). iii. Conducted a survey of 75 private sector companies to gain investor perspectives on Nigeria's agribusiness sector and key constraints facing the food industry. iv. Facilitated the launch of the Presidential Eminent Persons Group (EPG) on Agriculture and led in the convening of two EPG meetings in Geneva (January 2013) and New York (September 2013). v. Participated in the inter-Ministerial collaboration with the Federal Ministry of Land and Urban Development and Federal Ministry of Health and Donor Partners (DFID and USAID) in Nigeria's membership in the New Alliance for Food Security and Nutrition. vi. Collaborated with UNDP Facilities for Inclusive Markets in the implementation of Africa Supplier Development Program. Also engaged with local agribusinesses to define financing options for launching the program in Nigeria. Played a key role in leading the Nigeria delegation in a UNDP sponsored workshop in Nairobi, Kenya.	i. Raised the profile and awareness of Nigerian agribusiness opportunities among public and private sector stakeholders, particularly investors, worldwide. ii. All investments were hailed as successful and have raised the profile of Nigeria as an attractive agribusiness investment destination. They also fostered knowledge transfer in multiple value chains. iii. A survey conducted was instrumental in determining FMARDs interventions to create an enabling environment for the private sector to thrive. It also demonstrated to the private sector community FMARDs willingness to understand key constraints they faced, thereby fostering increased trust and belief in the ATA.

3. Provide business, investment, and financing support services to private sector and FMARD teams	PRIVATE SECTOR - Designed and established the Fund for Agricultural Financing in Nigeria (FAFIN) in collaboration with KfW within a 9 month period - Facilitated and hosted over 30 meetings of private sector with the HMA and FMARD staff in Abuja - Reviewed 24 business plans of private sector investors in agriculture and provided relevant guidance and recommendations to aid in successful business execution FMARD VALUE CHAINS & DEPARTMENTS iv. Cassava: - Supported in the assessment and request for FMARD intervention in land-clearing initiative - Prepared and participated in the HMA-led delegation to Afrieximbank to secure financing for dried chips initiative. Leading in ensuring this financing is unlocked for Nigerian dried chips exporters - Reviewed MoUs for BOI and BOA management of Cassava Development Fund - Introduced new investors and engaged with major agribusiness cassava investors e.g. Cargill, FMN, Crest Agro Products, etc. - Supported the Cassava Value Chain in efforts to secure financing of high-quality cassava flour processing mills from Chinaeximbank. This included re-writing the project feasibility study that was submitted in support of the FMARD application - Leading the marketing component of the Cassava Bread Initiative to reach 50% market penetration of Nigeria households by 2015 v. Strategic Grain Reserves: - Supported the deal between private firm Blumberg Grains and the FMARD to close a NGN 4.9 billion (USD 30 million) transaction for the establishment of modern storage vaults in Nigeria for sales and distribution to regional West African Markets. - Supported the SGR team in the assessment of the private sector company, Africa Exchange Holdings (AFEX) as a partner for managing 8 government warehouses for a period of 2 years iv. Youth: Played a key leadership role in the successful launch of the Youth Employment in Agricultural Program (YEAP) or NAGROPRENEURS (Nigerian Agricultural Entrepreneurs) by the President at the Nigeria Economic Summit 2013. Collaborated with United Nations Food and Agricultural Organization in the design and finalization of the strategy document for Presidential funding. vi. SCPZ: - Member of SCPZ Project Implementation Team with key responsibilities around private-sector investor engagement and sourcing of financing. - Leading in the development the strategic framework for rollout of SCPZ Roadshow to states for presentation of state-specific master plans and policy incentives, stakeholder roles and responsibilities, and validation of the policy framework for incentives. Secured funding from UNDP-BMGF for support of this Roadshow - Hosted stakeholder session in Cape Town, South Africa to get relevant feedback to progress SCPZ developments vii. Fisheries: - Supported the fisheries value chain in Q4 2013 in engaging with private-sector fisheries investors - Participated in visit to aquaculture project in Buguma, Rivers State with fisheries department v. Rice: - Attracted and supported the entry of private-sector firm Wright Brother Farms for commercial rice farming, including facilitating the selection of suitable sites in Delta and Kogi states - Supported the Rice Value Chain in efforts to secure financing of large scale integrated rice mills from Chinaeximbank.	- Successfully designed and managed the establishment process of FAFIN. Also initiated and facilitated the entry of the Nigerian Sovereign Investment Authority (NSIA) as a co-investor in FAFIN with a NGN 1.6 billion (USD 10 million) commitment - Meetings sometimes involved the HMA, which allowed for quick decision-making, and FMARD commitments, which benefited the private sector - Enhanced the credibility of the FMARD among private sector as a superior resource in agribusiness development - Blumberg Grain total investment is estimated at about NGN 40.6 billion (USD 250 million). The project is on fast track implementation timeframe. - Contributed to the first-ever piloting of an electronic warehouse receipt system with government assets, through a public-private partnership
4. Support consumer market and new product development for market sustainability and engage in food science and technology transfers within agricultural value chains	Collaboration with Morocco onion farmers in building capacities for production, storage and processing of fresh onions in Kebbi State. Also partnered with UNDP sponsored onion storage program that has led to extended shelf life of up to 8 months in Bukina Faso and Ghana.	Kebbi farmers experienced firsthand keys to extension of onion shelf life including varieties, harvesting method, storage conditions (temperature and humidity control) and packaging.
5. Support new institutions and policy reforms to ensure successful establishment of new agribusinesses, new markets, new products and new technologies in the manufacturing, packaging and distribution of food products	- Inauguration of the Nigeria Agribusiness Group (NABG) with active participation of leading CEOs and chairpersons of major agribusinesses in Nigeria. - Kick-off of private sector action plan initiative to identify opportunities for government intervention programs to remove constraints facing up to 20 priority agribusiness investors who have demonstrated financial commitments and support of the ATA	Convened stakeholders to successfully launch the NABG

Table 8: A & I Unit's Goals for 2014

A & I UNIT OBJECTIVES	GOALS
1. Build strategic relationships with the private sector and drive increased investments in Nigeria's agricultural sector	i. Host at least 2 major nationwide stakeholder agribusiness and investment for conferences, value chain-specific info-sessions, investment symposiums, etc. ii. Strengthen private-sector speed of project execution from project initiation phase to operations phase for new agribusinesses by facilitating strategic partnerships between the private sector and state governments
2. Work with relevant stakeholders to promote the attractiveness of agriculture as a lucrative business for private-sector stakeholders	i. Complete work that is underway to identify required recommendations to strengthen Nigeria's institutional framework for agricultural investment. In addition, A&I Unit is continuing work to ensure implementation of the private sector investment plans and to develop Nigeria's private sector investment plan under the Agricultural Investment Code of Nigeria. ii. Partner with USAID-sponsored Nigeria Expanded Trade and Transport (NEXTT) to promote agricultural investments in the LAKAJI corridor aimed at reducing cost of movement of goods from sea ports to inland ports. iii. Partner with UNDP Africa Supplier Development Program and Facilities for Inclusive Market Growth in the implementation of the strategic framework for practical results.
3. Provide business and financing support services to Private Sector investors and FMARD value chain teams	i. Unlock and secure government's shareholding in FAFIN during January 2014 ii. Ensure private-sector engagement in Blumberg Grains warehouse transaction by facilitating large private investor participation in public-private partnership arrangement iii. Leverage USAID-Markets NEXTT program's catalytic funds to support establishment of business development service centers by the private sector iv. Launch the Nagropreneurs program to effectively select, train, and set-up the new 'black-belt' agribusiness entrepreneurs of Nigeria
4. Support consumer market and new product development for market sustainability and engage in food science and technology transfers within agricultural value chains	i. Ensure market penetration of HQCF Bread through targeted marketing and advertisement campaigns to youth and children for early adoption of HQCF bread because of taste, eating enjoyment and superior nutrition. ii. Collaborate with cassava bread researchers to identify quick and easy scientific methods to qualitatively and quantitatively determine inclusion of HQCF in breads and to define standard of identity of HQCF bread and bread products. iii. Initiate R&D on formulation of savory snacks from staple crops including snack chips, cookies and crackers to drive consumer acceptability of home-grown food products iv. Identify appropriate energy technologies to leverage solar and biomass conversion for food processing and value addition to agricultural and food products. v. Support Kebbi state government to demonstrate extended shelf life of onions of up to 8 months by combining scientific learnings from Morocco, Kenya and Ghana in the establishment of local storage sheds for onions in Q1, 2014.
5. Support new institutions and policy reforms to ensure successful establishment of new agribusinesses, new markets, new products and new technologies in the manufacturing, packaging and distribution of food products	i. Oversee the formal establish the Nigeria Agribusiness Group ii. Explore feasibility of putting in place a nationwide Agriculture Investment iii. Provide technical support in the review and refinement of the SCPZ Authority establishment and the SCPZ policy document and validation of roles and responsibilities of stakeholders including federal, state, and local governments, community leaders, farmer organizations, aggregators, etc.

28. STAPLE CROP PROCESSING ZONE

To further ensure the consolidation of gains of increased farm productivity and the potential for added value in Nigeria’s farm produce, the FMARD, under the ATA, commenced a Programme geared towards improving the framework for agro-industrial investment: the Staple Crop Processing Zone Programme (SCPZ).

The SCPZ value chain is working to create delimited areas within major clusters of agricultural production that will be dedicated to driving the facilitation of modern processing capacity, and used to attract investments in production, processing and infrastructure into other such clusters under 3 prime principles:

- i. Strategic partnerships with the private sector, international development partners, state governments, local communities and ministries, and departments and agencies of the Federal Government of Nigeria.
- ii. An integrated ‘value chain approach’ giving due attention to critical upstream and downstream issues and facilitating desirable linkages.
- iii. private sector led and government supported approach to creating environments that ensure the efficiency and cost effectiveness required to guarantee competitive operations and ensure sustainability.

And, with 4 clear objectives:

- i. Boosting import substitution and improving the competitiveness of Nigeria’s agro-industrial production.
- ii. Creating wealth opportunities for farming communities by helping improve productivity, providing linkages to guaranteed markets and reducing post-harvest losses.
- iii. Creating sustainable employment in agricultural production, processing and related activities.
- iv. Driving rapid rural development.

28.1 Achievements of SCPZ in 2013

The Staple Crop Processing Zone (SCPZ) team worked with state governments to identify major production clusters across Nigeria for rice, sorghum, cassava, horticulture and fisheries, based primarily on criteria including:

- i. Cultivated area;
- ii. Production volume;

- iii. Surplus volume; and
- iv. Yield per hectare

These clusters were further evaluated on several variables, grouped under:

- a. Agricultural potentials;
- b. Existing clusters of agro-industrial activities;
- c. Competitiveness factor;
- d. Business environment; and
- e. Implementation support (state government buy-in)

leading us to the selection of 14 sites for development as model SCPZs.

Agbadu-Alape (Kogi)	Cassava
Adani-Omor (Enugu/Anambra)	Rice
Badeggi (Niger)	Rice
Bunkure-Kadawa (Kano)	Rice, Tomato, Sorghum
Ketu-Ereyun (Lagos)	Fisheries
Okorolo (Rivers)	Fisheries
Ambrussa/Binji (Kebbi/Sokoto)	Rice
Biu (Borno)	Sorghum
Ebedebiri (Bayelsa)	Fisheries
Gassol (Taraba)	Rice
Makurdi (Benue)	Citrus
Oban (Cross River)	Pineapple
Ososa (Ogun)	Cassava
Shao (Kwara)	Cassava

- i. We have developed a strategic framework for the development, management and operation of SCPZs across Nigeria
- ii. We have developed a policy framework to guide all stakeholders and the achievement of desired outcomes

- iii. Land has been provided for 6 out of the 13 selected model SCPZ sites and we have developed master plans to guide the development of those 6 sites.
- iv. State governments have demonstrated high levels of commitment to move the SCPZ programme forward.
- v. International development partners, including the WB, AfDB, DFID, USAID, and IFAD have demonstrated high levels of commitment to support the SCPZ programme.
- vi. The SCPZ programme has attracted international attention and interest, especially from successful outings, including Nigeria's premier events at the World Economic Forum in Davos and the World Economic Forum for Africa in Cape Town.
- vii. We have successfully enlisted the firm commitment of some notable international and national agribusinesses as anchor investors for some of the model SCPZ sites, including:
 - a. Cargill Inc., committed to processing cassava into sweetener in Agbadu-Alape from the end of 2014.
 - b. Dansa Foods, a member of the Dangote group, committed to processing rice, tomato and sorghum in Kadawa beginning in March 2014.
 - c. Nigerian Flour Mills, committed to processing cassava into starch and sweetener in Shao by the end of 2014.

28.2 Goals for 2014

- i. Complete all legal enablement activities to allow for the formal presentation of the programme to the public
- ii. Validate master plans with key stakeholders, through state level roadshows and a national workshop
- iii. Commence the development of the model sites of Agbadu-Alape (Kogi) and Bunkure-Kadawa in time to show case commitment on the SCPZ programme to the world during WEFA 2014 (May 2014)
- iv. Market SCPZ sites through an agribusiness forum to further obtain investor commitments to participate in the SCPZ programme, both in enhancing production activities, establishing processing activities, provision of infrastructures and in management of the SCPZ sites
- v. Obtain development financing support for the SCPZ and its investors.

28.3 Description of Activities for 2014

- i. **Legal Enablement for the SCPZ** – Completion of the development of a legal framework that will guide the development, management and operation of SCPZs across Nigeria and the following dependent activities:
 - a. Validation of the SCPZ policy document draft (to guide the development, operation and management of SCPZs pending the passing of the SCPZ Act) with stakeholders to produce a document for submission to the FEC
 - b. The discussion and submission of a memo to the Federal Ministry for Finance on the fiscal incentives proposed for SCPZs
 - c. HMA's presentation of the SCPZ programme to the National Economic Management Team
 - d. HMA's presentation of the SCPZ programme to the National Council of States (or SCPZ state governors)
 - e. HMA's presentation of the SCPZ programme and its submission to the Federal Executive Council (FEC) for approval
 - f. The preparation and submission of a SCPZ authority bill to the National Assembly for approval
- ii. **Carry out a Technical Review of the Master Plans** - A report on the technical soundness of the master plan, especially on suggested infrastructure options and costs, alignment with national agricultural and infrastructure policies and identifying areas for further studies
- iii. **SCPZ Site Profile-Raising & Master Plan Validation**
 - a. Solicitation on key infrastructure needs in master plans with MDAs
 - b. Solicitation on key infrastructure needs in master plans with development partners
 - c. Validation of the master plans with key stakeholders - state and local governments, local farming communities, and local private sector stakeholders
 - d. Validation of the master plans with known anchor investors
 - e. National and international publicity for the SCPZ, primarily to attract local and international investors to enhancing production activities, establishment of processing activities, investment in infrastructure and participation in site management

iv. Setting up Effective Organisational Structures for SCPZ Development

- a. Support to strengthen the SCPZ Team
- b. The setting up of the FMARD implementation committee
- c. The setting up of the SCPZ development steering committee
- d. The setting up of state SCPZ development committees

v. The Establishment of Organisational Structures for the Development of the Agbadu-Alape and Bunkure-Kadawa SCPZ Sites Pending the Forging of Necessary Partnerships – This will assure:

- On the site presence – covering the SCPZ core and catchment areas
- Coordination of all existing information and materials
- Coordination of all site activities – investor, development partner and government activities
- Liaison between the SCPZ team (Abuja based), the Kogi State Government (Lokoja based), development partners and investors

vi. Boosting Funding Support to SCPZ

- a. Prepare project appraisal documents – The preparation of the first phase of site development of the master plans into a bankable project, starting with Agbadu-Alape and Bunkure-Kadawa, in a format acceptable to the major international financing institutions to allow for funding/co-financing among those institutions.
- b. Convene a development finance conference to discuss highlights of the above project appraisal documents

vii. Preparation for the WEFA

- a. Land development – prepare grounds for the production of cassava in the Agbadu-Alape area, in volumes that will assure availability of feedstock for planned processing factories
- b. Commence the rehabilitation of the Kadawa irrigation canals
- c. Commence the creation of farm roads in the Agbadu-Alape and Bunkure-Kadawa areas
- d. Connection to a LV supply from 29 km away – provide initial connection of the SCPZ area to the national power grid to provide electricity during construction of factories

viii. Protection of Local Value-added Products Complementary to the Success of the SCPZ Programme

- a. Setting up mechanisms for ensuring production and processing environments meet best practices, devoid of cross contaminations, etc.
- b. Working towards some level of protection for locally processed food products to prevent ‘dumping’, possibly, a local content law

ix. Commence Development Work on Model SCPZ Sites, Starting with Agbadu-Alape and Bunkure-Kadawa

- a. Monitor progress on the on-going ESI assessments to completion, in line with best practices, to allow development activities to start
- b. Explore the options for the generation of electricity and process heat – a study on the potentials of generating electricity and processing heat from coal
- c. Explore the options for the supply of potable water to the SCPZ – a study on the potentials of pumping adequate volumes of water from the Ohin River, and the potentials of obtaining ground water on the SCPZ site
- d. Work with the LR Group and use available resources to develop fisheries facilities in the Agbadu-Alape ABIR.

29. MECHANIZATION VALUE CHAIN

29.1 Members of Value Chain

- i. A successful development and adoption of a Private Sector Driven Agricultural Mechanization Framework (PSDAMF) as a new mechanization policy of the Ministry.
- ii. Successful structuring of mechanization services to smallholder farmers for implementation in the 2014 farming season.
- iii. Ongoing implementation of the mechanization intervention programme, setting up 210 units of Agricultural Equipment Hiring Enterprise (AEHE) in 3 phases using 1050 tractors and 2400 harvest and post-harvest equipment.
- iv. Best smallholder inclusive value chain financing award recipient from AFRACA and CTA.
- v. General acceptability of the mechanization policy to stakeholders wooing over NGN15 billion (USD 92.4 million) investment pledge from First Bank, Fidelity Bank, Sterling Bank and Main Street Bank.
- vi. Ongoing land clearing/development intervention programme by the Ministry.

29.2 Achievements in 2013

i. The new mechanization policy. (award-winning scheme)

The huge government investment in tractors was not justified by the output from the farms, and farmers’ access to the 45% subsidized tractors was also very limited. The tractors ended up the in the hands of big farmers and are not reaching the smallholder farmers. In an effort to aggressively privatize the commercialization of agricultural machinery in Nigeria, a private sector driven agricultural mechanization framework has been developed and adopted as the new mechanization policy in the country. Table 8 summarizes the achievement of the mechanization value chain in 2013.

ii. Ongoing Agricultural Mechanization Intervention Programme

To commence the implementation of this scheme, the federal Ministry of Agriculture is investing NGN3.6 billion (USD 22.2 million) in a joint collaboration with Bank of Agriculture (BOA) and agro-machinery vendors through a pilot scheme and is bringing in:

- 1,050 tractors and power tillers each, and about 2,400 pieces of harvest and post-harvest equipment
- 210 Agricultural Equipment Hiring Enterprises (AEHEs) will be set up through the pilot.
- 6,500 direct and measurable jobs will be created for our youths
- about 800,000 hectares of land will be adequately mechanized through the intervention
- about 4 million metric tons of food will be added to national production
- agro-machinery vendors will be tied to their products via their 10% investment and after sales service agreement.

Table 9: Operation Summary of Activities for the Three (3) Phases of the Mechanization Project

S/ NO	ACTIVITY HEADINGS	PHASE 1	PHASE 2	PHASE 3	TOTAL
1.	Total number of tractors to be provided	400	400	250	1.050
2.	Total number of Power Tillers to be provided	500	500	250	1.250
3.	Total number of Agricultural Equipment Hiring Enterprises (AEHEs) to be set up	80	80	50	210 AEHEs
4.	Total land area to be mechanized by the 210 AEHEs	233,000Ha	233,000Ha	137,000Ha	603,500Ha
5.	Total direct jobs to be created	2,340 jobs	2,340 jobs	1,441 jobs	6,121 jobs
6.	Indirect jobs to be created	1,500 jobs	1,500 jobs	1,000 jobs	4,000 jobs
7.	Total estimated government funds to be used for direct loan	N1,169,999,250 (USD 7,210,705)	N1,169,999,250 (USD 7,210,705)	N669,000,000 (USD 4,123,047)	N3,039,437,362.5 (USD 18,732,052.47)
8.	Project implementation and logistics(5% maximum)				N180,000,000 (USD 1,109,340)
9.	Agro-machinery data tracking center	N100,000,000 (USD 616,300)			N100,000,000 (USD 616,300)
10.	Equipment buy back scheme			N280,526,637.5 (USD 1,728,885)	N280, 526,637.5 (USD 1,728,885)
	GRAND TOTAL				N3,600,000,000 (USD 22.2 million)

29.3 Approved Sum and Expenditure

NGN3.6 billion (USD 22.2 million) was approved for the MIP and has not been expended yet.

I. Continent Wide Best Smallholder-Inclusive Value Chain Finance Award

The African Rural and Agricultural Credit Association (AFRACA), with support from the Technical Center for Agricultural and Rural Cooperation (TCARC), instituted an award scheme to recognize innovation and creativity in reaching smallholder farmers among African banks, micro finance institutions and other service providers.

In an Agrifinance Conference in November in Dakar, Senegal; the Mechanization Project of the Ministry was selected among the winning case studies in Africa and was awarded one of the continent's best smallholder inclusive value chain finance services for deploying mechanization services to smallholder farmers.

II. Bush Clearing /Land Development Intervention Programme

To kickstart the implementation of the land development scheme action plan, in 2013 the Ministry commenced the process of clearing 6,400 hectares as an intervention under the New Farm Land Development Scheme in 19 states across the country.

III. Mechanization Support to Nigerian Farmers through Growth Enhancement (GES) Scheme

- The Growth Enhancement Support (GES) has been approved by the HMA to be expanded beyond seeds and fertilizers, to provide mechanization support to assist Nigerian farmers in accessing mechanization services from the Agricultural Equipment Hiring Enterprises.
- Farmers who are registered in the database of the Ministry will benefit from this subsidy.
- Farmers will receive their mechanization support as electronic vouchers on their mobile phones which they can use to pay for mechanized services at the registered Agricultural Equipment Hiring Centers.

IV. 2013 Growth Enhancement Support (GES) to Nigerian Farmers

Under a pilot scheme in 2014, the Ministry is providing 50% support as GES to farmers on 252,000 hectares of land to encourage farmers to mechanize their operations.

V. Mechanization Stakeholder Workshop

As part of the implementation process for the unveiling of the mechanization scheme, a regional stakeholders workshop has been proposed and approved by the HMA and Permanent Secretary. The stakeholder meeting is designed to engage off-takers in a

policy and project conversation to receive feedback that will ensure the successful implementation of the scheme. The stakeholders' workshop has been scheduled in Kaduna (15 January, 2014) and Enugu (22 January, 2014).The total amount approved for this programme is NGN4,600,000.00 (USD 28,349).

VI. The Ministry has Carried Out a Number of Training Programmes

Some of the training conducted in 2013 includes:

- Training of tractor operators for effective handling of agricultural machinery for sustainability of tractorization.
- Training of farmers and traders on effective handling of agricultural produce to prevent undue deterioration of fruits/ vegetables.
- Training of rural blacksmiths for effective production of improved small hand tools and repair of agricultural equipment.
- Identification, adoption and popularization of agro-processing machines.
- Provisions of loan to farmers through BOA for procurement of animal traction packages to supply farm power to small-scale farmers.
- Popularization of renewable energy among the farmers including training on the use of the bio-stove.

29.4 Goals for 2014

- i. Immediate implementation of the mechanization intervention programme to set up 2010 Agricultural Equipment Hiring Enterprises (AEHEs) using 1,050 tractors and other various harvest and post-harvest equipment.
- ii. To grant a minimum of 5 million farmers access to affordable mechanization services through a minimum of 300 AEHEs.
- iii. Creation of a minimum of 30,000 measurable jobs for unemployed Nigerian youths through the new mechanization scheme.
- iv. Provision of Growth Enhancement Support (GES) to a minimum 500,000 to smallholder farmers having between 1-4 hectares of farm land.
- v. Set up of agricultural equipment buy-back scheme to retrieve equipment from defaulters.
- vi. Establishment of agricultural equipment data tracking Center (Agro-Mach DTC) to keep track and record of all machinery to be deployed by the scheme to enable the country to determine its mechanization level in both intensity and density.

- vii. Continue implementation of land clearing/development scheme to promote commercially driven agriculture in Nigeria.
- viii. Partnership scheme with local and international organizations for further development and maintenance of sustainable agricultural mechanization.

30. ECONOMIC IMPACT OF ATA

30.1 Agricultural and Food Production Outlook

Due to a combination of putting additional hectares under production and providing farmers with improved high-yield varieties and fertilizers, the ATA had added 7.5 million metric tons of food to the national supply in its first year, which combined with food production in 2012 is 15.5 million metric tons or 77.5% of the 20 million metric tons of food that was targeted by 2015 (Table 9).

Table 10: 2013 Food Production Outlook in 2013

CROP	SEEDS/PLANTING MATERIALS DEVELOPED UNDER ATA	EXPECTED YIELD (METRIC TONS/ HECTARE)	PRODUCT UNDER ATA (METRIC TONS)
Rice – Dry Season (2012/13)	13,380 metric tons	4	1,070,3634
Rice – Wet Season	24,847 metric tons	3.5	1,739,322
Maize	21,356 metric tons	4	4,271,200
Cassava	704,400 bundles	25	293,200
Sorghum	480 metric tons	1.5	72,000
Soybeans	1295 metric tons	2	51,800
TOTAL			7,497,886

30.2 Food Production Impact and Employment Generation

Economic impact of the Agricultural Transformation Agenda (ATA), especially with respect to job creation on-farm and across the value added chain has been tremendous. During the 2012/2013 dry season and 2013 rainy seasons, ATA stimulated the creation of 1.4 million jobs in nine commodities (Table 10). This is largely as a result of the aggressive food production initiatives undertaken within ATA, along the priority crop value chains that included cassava, rice, maize, oil palm, cocoa, cotton, soybean and sorghum (Table 11). The jobs come from labour absorption from expanded cultivated areas, and agricultural intensification in general.

Table 11: 2013 Breakdown of Job Creation Along the Agricultural Value Chains

COMMODITY	FOOD PRODUCTION & JOB CREATION POLICY	OUTPUT (METRIC TONS)	JOBS CREATED
Cassava	Distributed 35 million stems of improved planting materials to farmers nationwide to cultivate 11,000 hectares of land. Expected to produce 293,200 tons of fresh roots of cassava at the yield of 25 tons per hectare. 170 man days per hectare are required to produce cassava. On an additional 10,000 hectares, 1.7 million man days are required. Assuming 300 man days are equivalent to a job, cassava production created 6,233 jobs in 2012.	293,000	6,233
Rice	13,380 metric tons of improved rice seed was deployed to farmers in the dry season and 24,847 metric tons of improved rice seed was deployed in the wet season with yields of 4 metric tons per hectare and 3 metric tons per hectare, respectively. It is assumed that these hectares were used for irrigated rice production and as a result were double-cropped. This brings total rice production to 2,809,686 metric tons. 200 man-days per hectare are required for rice production as 810,600 hectares cultivates 1.621 billion man days. Assuming 300 man days are equivalent to a job, rice production created 764, 540 new jobs	2,809,686	764,540
Sorghum	Distribution of 480 metric tons of four improved sorghum varieties (CSR-01, CSR-02, KSV 8, and SK5912) to 25,000 registered farmers in eight states of the north-east and north-west led to the cultivation of 48,000 hectares and yield of 72,000 metric tons at 1.5 metric tons per hectare. 88 man days per hectare are required to produce sorghum for an additional 48,000 hectares resulting in 4.22 million man days per hectare. Assuming 300 man days are equivalent to a job, sorghum production created 14,080 jobs in 2012.	72,000	14,080

Maize	21,356 metric tons of improved certified seed of maize, with a yield of 4 metric tons per hectare, distributed to farmers nationwide to plant 1.067 million hectares of land, led to an expected output of 4.27 million metric tons of maize grain. 150 man days per hectare are required to produce maize. The total additional 1.067 million hectares results in 160.17 million man days. Assuming 300 man days are equivalent to a job, maize production created 533,900 jobs.	4,271,200	533,900
Cotton	Approximately 240,000 tons of seed cotton was distributed to stimulate production on 75,000 hectares. With expected yields of 1.3 metric tons per hectare, this is expected to have provided 100,000 tons of cotton lint in 2012. 158 man days per hectare are required to produce cotton for an additional 75,000 hectares resulting in 11.85 million man days. Assuming 300 man days are equivalent to a job, cotton production created 39,500 jobs.	100,000	39,500
Oil (Palm)	4 million sprouted nuts distributed to farmers to plant 28,000 hectares. With a yield of 2.65 metric tons per hectare, this is expected to have produced 74,200 metric tons of oil palm. 130 man days per hectare are required to produce oil palm for an additional 28,000 hectares, resulting in 3.64 million man days. Assuming 300 man days are equivalent to a job, oil palm production created 12,133 jobs.	74,200	12,133
Cocoa	114 million improved seeds with a yield of 2 metric tons per hectare were distributed to farmers within the programme to plant 100,000 hectares of farmland. This is expected to have produced 200,000 metric tons of cocoa. 149 man days per hectare are required to produce cocoa for an additional 100,000 hectares, resulting in 149 million man-days. Assuming 300 man days are equivalent to a job, cocoa production created 49,733 jobs.	200,000	49,733
Soybean	1,295 metric tons of second generation certified seeds for GES that are sufficient to plant 25,900 hectares of land will be deployed to soybean farmers. This is expected to produce additional 77,700 metric tons of soybean grains in 2013.	51,800	12,950
Total		7,871,886	1,433,069

31 RESOURCE MOBILIZATION FOR ATA

31.1 Funding the Agricultural Transformation

The Resource Mobilization Unit (RMU) is focused on securing resources to provide complementary funding to the annual FMARD budget. The RMU works primarily with multilateral institutions, bilateral institutions, foundations, and corporate/individual investors to secure funding and ensure donor coordination. RMU focuses on support for value chain activities in Staple Crop Processing Zones, other agricultural opportunities, and for technical assistance to the Ministry in the form of advisor support.

The RMU also develops partnerships with other international agencies and NGOs engaged in agriculture and serves as lead coordinator for Nigeria's engagement with Grow Africa, and the G8's New Alliance for Food Security and Nutrition. In the absence of an investment advisor to work with international export banks (e.g., China Development Bank, Japan Bank for International Cooperation, and US Export Import Bank), the RMU is also working with the Senior Advisor for Agribusiness to help facilitate this process.

More than NGN 324.5 billion (USD 2 billion) in loans and grants has been received or were under negotiation in the past year.

31.2 Achievements of Resource Mobilization in 2012/2013

I. *Over NGN 649 (USD4 billion) of Private Investment Commitments Leveraged*

We are driving a never-before-seen private sector agenda in the agricultural sector. Since this administration came on board, the private sector has committed over NGN 1.3 trillion (USD8 billion) to existing and planned investments in Nigeria's agriculture, agribusiness and food industry (Figure 36). This is a result of the government now executing a 'government-enabled, private sector-driven' transformation agenda that ensures that agriculture is being treated as a straight-line business, and not a development project. The government recognizes that there are financial returns to be made in the sector, while also ensuring job creation and economic sustainability.

To this end, the private sector has been actively engaged every step of the way in delivering the Agricultural Transformation Agenda (ATA). In January 2013, we hosted the inaugural meeting of the President's Eminent Persons Group (EPG) on the ATA, a high-level advisory and advocacy group comprised of Bill Gates (Chairman, Microsoft and Bill & Melinda Gates Foundation), Kofi Annan (Former UN Secretary General), Dr. Kanyo Nwanze (President of International Fund for Agriculture Development), Dr. Donald Kaberuka (President of the African Development Bank) and Mr. Mohamad Abu-Ghazaleh (CEO, Delmonte

Fresh Produce). The EPG interacted with over two dozen corporate CEOs and business leaders from Nigerian-based and global corporations on ideas to boost policy reforms and attract further investments into the agricultural sector.

This paradigm shift in the government’s approach has been recognized by leading domestic and global investors, as interest in Nigeria’s agriculture sector continues to soar. Companies like Cargill, Dangote Group, SAB Miller, AGCO, Coca Cola, Syngenta, Nestlé and Flour Mills of Nigeria are making significant commitments to the sector.

Nigeria was also prominently featured at the 2013 World Economic Forum Annual Meeting in Davos where the Federal Ministry of Agriculture hosted a special session for the private sector to discuss issues around financing agriculture and the development of agro-processing clusters.

The federal government is able to facilitate these discussions actively with the establishment of a new agribusiness and investment unit, involved in engaging with potential investors and providing guidance and support as they make their investment considerations. With the support of institutions like the Tony Elumelu Foundation, the Bill and Melinda Gates Foundation and United Nations Development Programme, the Ministry is also being supported with private sector operators and investment expertise from senior consultants.

Local Agribusiness players	Over NGN 162.3 billion (USD1 billion) in ATA priority value chain production and processing including cassava starch and sweetener, cassava flour, fruit concentrate processing, sorghum, palm oil, and parboiled rice.	
Global players	Over NGN1.1 trillion (USD7 billion) in infrastructure development, mechanization and training, and processed products (cassava starch and sweeteners, ethanol, and parboiled rice)	
Global financial institutions / donors	Over NGN32 billion (USD2 billion) in investments for infrastructure and other value chain related programming	

The development partners have continued to show tremendous support to the ATA as presented below;

- I. World Bank:** NGN 81 billion (USD500 million) to FMARD and another NGN 81+ (USD500 million+) for rural roads, irrigation.
- II. IFAD:** NGN 12 billion (USD74 million) loan plus NGN 81 million (USD500,000) grant to support rice and Cassava Value Chain development in six states. IFAD board approved loan/grants of NGN 81 million (USD 85.5 million) in December 2013.
- III. african development bank:** NGN 81 billion (USD 500 million) with first tranche to start in January 2014. Working to secure NGN 162 million (USD 1 million) for transaction advisor to help with SCPZ financing (proposal submitted December 2013) and preparing Middle Income Country proposal to support infrastructure in SCPZ (amount to be determined).
- IV. USAID:** Beyond the established program of MARKETS II, funding secured includes Institutional Assessment of FMARD; Monitor/Deloitte engagement to assist with LOIs for New Alliance membership (June 2012); second Deloitte engagement to assist the private sector in completion of LOIs; and cost/benefit analysis of rice importation practices.
- V. DFID--UK AID:** Funding secured beyond established programs include Cassava Value Chain analysis (Technoserve); analysis of Kogi infrastructure needs (GEMS 3); analysis of GES rollout (PropCom) and current £2.35 million GES pilot study for FCT and Sokoto to address offline e-wallet options. In addition, secured funding for Martin Fregene to continue his advisory role for 1.5 years and funding for a nutrition/food security advisor for two years.
- VI. KFW:** Involved in early stages of Fund for Agricultural Finance in Nigeria (FAFIN) design, 27 million. Once the senior investment advisor was on board, efforts were turned over to her. Worked with fund manager to develop proposal for technical assistance for FAFIN to be submitted to donor agencies. Presentation tentatively scheduled for February 2014.
- VII. IDG:** Key facilitator resulting in their NGN 40.5 billion (USD250 million) investment in an oil palm and sugar cane production facility.
- VIII. New Alliance Membership:** Key driver in securing Nigeria’s membership in the G8 Food Security and Nutrition program, New Alliance. While the increased benefits of membership in New Alliance have yet to be fully seen, Nigeria’s inclusion was useful in helping secure private sector investment. Attached document provides multilateral and bilateral planned commitments as part of Nigeria’s inclusion.

- IX. *Grow Africa:*** Serve as key liaison with this WEF/AUC program. Private sector letters of intent (LOIs) total NGN 649 billion (USD4 billion). Monitor/Deloitte, through USAID funding, did much of the work in securing the LOIs. Grow Africa has offered to co-produce a video and manual for other countries to learn from and replicate Nigeria's GES scheme. If agreed upon, this will be available at the May 2014 Grow Africa Abuja meeting.
- X. *Bill & Melinda Gates Foundation:***
- Nigeria is a priority country and the Foundation is establishing a regional office in Nigeria.
 - Provision of short-term support for two advisors and UNDP providing funding for five advisors.
- XI. *Ford Foundation:*** Ford has provided NGN 121.7 million (USD750,000) to support technical assistance and a stakeholder's conference.
- XII. *Tony Elumelu Foundation:*** The foundation is supporting a senior technical advisor on investments.
- XIII. *Scaling Up Nutrition (Sun):***
- The RMU and sorghum value chain advisors are collaborating with the Ministry of Health.
 - The RMU has been connecting the DFID health advisors and the FMARD team regarding the development of a sorghum energy bar and is exploring collaboration with USAID and UNICEF.
- XIV. *Work With Other Bilateral And Multilateral Agencies:*** Regular engagement with JICA, European Union, GTZ, and Netherlands on their agricultural investments. Working on EU funding for horticulture and climate change initiatives. ECOWAS proposal of NGN 811 million (USD5 million) for rice production under review.
- XV. *Engagement Of Agriculture Donor Working Group (Adwg):*** Much of 2013 involved working with ADWG to develop a policy framework matrix as part of New Alliance membership and sensitization of G8 countries to Nigeria's bold reforms in agriculture. Now working to sensitize and secure support for staple crop processing zones (January 9 2013 meeting) and state-level Agriculture Transformation Activities (SATA) (January 2014 meeting to be scheduled). Other activities include developing a donor scorecard, with a target presentation by May 2014 WEF Africa meetings, and establishment of three donor taskforces to assist FMARD with GES scheme, policy reforms, and mainstreaming nutrition across the value chain.

- XVI. *Monitoring Of External Grants:*** Worked with Director of Policy, Research, and Statistics to begin the process for grant reporting. Permanent Secretary has now established a taskforce to review all donor support of which I am a member.
- XVII. *Global Visibility For Nigeria's Agriculture Transformation Agenda:*** Worked with FMARD to help recruit international public relations firm of Weber Shandwick and serve as key liaison with firm. Assisted Honourable Minister with numerous global events, including: Council on Corporations for Africa Nigeria Investment Forum (Washington, DC); High Level Investors Forum (London); Olympics Hunger Event (London); Clinton Global Initiative (New York); Africa Green Revolution Forum (Arusha); World Economic Forum (Davos); EU Agriculture Forum (Brussels); World Economic Forum Africa (Cape Town); Nutrition for Growth side event for G8 (London); AU, Lula Institute Food Security Forum (Addis); Rockefeller Summit on Agriculture (Abuja); Columbia University Inauguration of Agriculture Center (New York); World Food Prize (Des Moines); SAFE 20th Anniversary Symposium (Accra); and AU, Kofi Annan Foundation, BMGF Innovations in African Agriculture (Addis).
- XVIII. *Partnership With Brazil:*** Member of April 2013 learning mission to Brazil and became key facilitator in moving partnership forward. Organized a major conference in August 2013 to bring representatives from Brazil to Nigeria and develop action plans for Northern Guinea Savannah, reform of Agriculture Research Council of Nigeria (ARCN), and School Feeding Programs. Working with Martin Fregene to develop action plan for Northern Guinea Savannah. Dangote willing to become champion of NGS work.
- XIX. *State-Level Agriculture Transformation Actions (Sata):*** Serve as key liaison between Phillips Consulting/Synergos and the FMARD in developing and implementing this program. Organized two day workshop in Abuja between consultants and FMARD directors, and continue to assist with engagement. Presentation to Agriculture Donor Working Group tentatively scheduled for January 2014.
- XX. *Marketing Corporations:*** Helped facilitate search for and recruitment of agency (Technoserve) to design and implement marketing corporations for grains/ tubers, cotton, and cocoa. Scheduled to be completed in January 2014. Working with COLEACP and FMARD on possible engagement on horticulture.
- XXI. *Nutrition:*** Working to develop programs with Scaling Up Nutrition (SUN), GAIN, and to recruit an advisor.

XXII. *Children's Investment Fund (CIF)*

- a. i. The RMU met the founder of the CIF at the Olympics Food Security and Nutrition event.
- b. ii. The FMARD supports the CIF proposal under development to work with the Minister of Health on community management of acute malnutrition.

32. NUTRITION VALUE CHAIN

The federal Ministry of Agriculture and Rural Development aligned with the on-going Agricultural Transformation Agenda of the federal government of Nigeria (FGN), building on the current national policy on food and nutrition to establish a Nutrition Transformation Value Chain (NTVC) aimed at integrating nutrition along agricultural value chains. The goal is to ensure nutrition security.

The Ministry believes that the economic goal of any nation is to produce citizens who are mentally and physically fit to be productive and to participate in its national development. The NTVC is also promoting awareness on the importance of good nutrition in the first 1000 days of a child's life i.e. good nutrition for the mother and child. The FMARD has recognized the importance of nutritious food hence the mainstreaming of nutrition into the value chains.

The newly formed value chain is also geared towards the promotion of food-based interventions such as Pro-Vitamin A Cassava; therefore our mission and vision is as written below:

The mission and vision of the NTVC is to attain the Millennium Development Goals (MDG) through the eradication of extreme poverty and hunger; reduction of child mortality and improvement of maternal health.

32.1 Terms of Reference

- i. Provide technical advice and support that will enhance mainstreaming of nutrition into all agricultural value chains by incorporating nutritional concerns into the design and implementation of agricultural policies, projects and investments.
- ii. Facilitate information sharing among all stakeholders on the nutrition sensitive agriculture program by strengthening multi-sectorial coordination and partnership.
- iii. Facilitate the monitoring of the framework for nutrition sensitive agriculture along value chains.

- iv. Create an enabling environment for good nutrition through knowledge and incentives.
- v. Target nutritionally vulnerable groups (women, children and internally displaced persons)
- vi. Mobilize increased funding support for nutrition along agricultural value chains by leveraging resources from other sub sector allocations such as states and local government budgets, development partners, international funding agencies, NGOs and other stakeholders.

32.2 Achievements in 2013

Under the nutrition unit of the Federal Department of Agriculture, the following were achieved:

- i. Development of Training of Trainers Kit for capacity building of local government nutrition desk officers on processing of sorghum and soybean into high energy foods.
- ii. Development of an action plan for the proposed School Feeding Program in Nigeria in collaboration with Bill and Melinda Gates Foundation and the Brazilian Government.
- iii. Conducted Training of Trainers workshop on processing of fortified sorghum/maize and soybeans into novel foods to support School Feeding Program in Gombe, Kwara, Oyo, Ekiti, Osun, Ondo and Ogun States

National Policy on Food and Nutrition

Food security at the aggregate and household levels, and access to adequate basic health services are essential prerequisites for good nutrition. In turn, good nutrition is necessary to achieve a healthy and active life, optimize educational performance, and enhance productivity. The generally poor economic situation in Nigeria has aggravated the poor nutrition status of the citizenry.

The major nutritional problems in Nigeria are: a) protein-energy malnutrition; and b) micronutrient deficiencies. These scourges have been most devastating in the vulnerable groups of infants, young children, and pregnant and lactating women, particularly in the poorer segments of society. Malnutrition is a drain on the nation's human capital and a hindrance to development, with enormous costs in human, social, and economic terms.

The Government of Nigeria has formulated this national policy to deal with the multi-faceted problem of food and nutrition, using a multi-sectoral and multi-disciplinary program approach. The program to be derived from this policy is expected to reduce the prevalence of malnutrition by alleviating poverty through increased access to productive resources, increased incomes, and enhanced standards of living.

This food and nutrition policy document is intended to serve as a framework to guide the identification and development of intervention programmes. It is also aimed at addressing the problems of food and nutrition across different sectors and different levels of the Nigerian society, from the individual, household and communities to and including the national level.

Implementation of this policy involves sectoral ministries, institutions of higher learning, the private sector, individuals, families, communities, community-based organizations (CBOs), non-governmental organizations (NGOs) and the international agencies.

The Government of Nigeria, through the National Planning Commission, is currently working on the review of this policy with active participation of relevant ministries, department and agencies. The federal Ministry of Agriculture is playing a leading role in this

- iv. Conduct institution capacity assessment in collaboration with Save the Children international
- v. Establishment of the Nutrition Transformation Value Chain focused on mainstreaming nutrition into all agricultural value chains adopting a Nutrition Sensitive Agriculture approach.
- vi. Actively participated in the technical review of the National Policy on Food and Nutrition in Nigeria.
- vii. Successfully hosted the planning meeting for the launch of Scale Up Nutrition (SUN).
- viii. Promotion of Pro-Vitamin A cassava, orange fleshed sweet potatoes, maize and use of soybeans for complementary food to fight malnutrition in 24 states with special focus on the states of the Guinea Savanna.
- ix. Conduct Training of Trainers workshop in 24 states with special focus on the states of the Guinea Savanna
- x. Adoption of two public schools each in one state in the Guinea Savanna for the Home Grown School Feeding Program
- xi. Development of 120 new local recipes
- xii. Training of 500 new entrepreneurs on production, processing, distribution and marketing of high nutrients foods (Figure 65 and 66).
- xiii. Creation of 50,000 additional jobs through all the activities of the value chains.

What is Sun?

Scaling Up Nutrition, or SUN, is a unique movement founded on the principle that all people have a right to food and good nutrition. It unites people—from governments, civil society, the United Nations, donors, businesses and researchers—in a collective effort to improve nutrition.

Within the SUN movement, national leaders are prioritising efforts to address malnutrition. Countries are putting the right policies in place, collaborating with partners to implement programmes with shared nutrition goals, and mobilising resources to effectively scale up nutrition, with a core focus on empowering women.

With a shared understanding that many factors impact nutrition, each of us has a unique contribution to make. Together we are achieving what no one of us can do alone.

The SUN Approach

Nations, organisations and individuals working to scale up nutrition recognise that malnutrition has multiple causes. That is why it requires people to work together across issues and sectors to put nutrition into all development efforts.

The causes of malnutrition include both factors that most people would generally associate with nutrition, as well as factors that affect the broader context of life and health. Recognising this, the SUN Movement looks to implement both specific nutrition interventions and nutrition-sensitive approaches.

Specific Nutrition Interventions:

- Support for exclusive breastfeeding up to six months of age and continued breastfeeding, together with appropriate and nutritious food, up to 2 years of age;
- Fortification of foods;
- Micronutrient supplementation; and
- Treatment of severe malnutrition.



Figure 65: Nutrition Transformation Value Chain Desk Officer Mrs. Z.O Towobola delivering a lecture at the Training of Trainers workshop held at National Center for Agricultural Mechanisation, Ilorin, Kwara State



Figure 66A and B: Training of Trainers Workshop in Ilorin: Trainees during Practical session (A); Staff of the Nutrition Transformation Value Chain; registering trainees at a workshop (B)

32.3 Goals for 2014

- i. Provision of Funds to address all the fore mentioned challenges
- ii. Collaboration of the nutrition unit with Save the Children, Nigeria and others partner agencies
- iii. Integrate SFP into the national development
- iv. Legislation on the home grown School Feeding Program e.g. A legislation for a percentage of the oil revenue to establish a Trust Fund for home grown School Feeding Program
- v. Advocacy and sensitization of policy makers and political leaders for establishment of SFP in States with special needs (Conflict, Emergency etc);
- vi. Advocacy to the federal government and other line ministries to legislate and implement a national School Feeding Program

- vii. Maximizing opportunities of strengthening the role of FMA&RD in the implementation of School Feeding Programs
- viii. Support FMAR&D to strengthen the management of its Strategic Grain Reserves (SGRs) through linkages with School Feeding Programs.
- ix. Leverage investments from the federal Ministry of Agriculture and Rural Development to support HGSP by increasing access to inputs, storage, training, and financing (e.g. Osun, Kano, Gombe, Imo).

33. COMPLETION OF ONGOING AGRICULTURAL INFRASTRUCTURE PROJECTS

33.1 Completion of the Silo Complexes

The National Agricultural Storage Programme [NASP] was launched by the federal government in 1987 to reduce post-harvest losses, provide food relief in times of natural or man-made disasters and stabilize food prices at normal times. The Strategic Grains Reserves’ activities under the Agricultural Transformation Agenda entailed the procuring, storing and distribution of grains in case of disasters or unforeseen developments in the country.

Achievements in Strategic Grain Reserve

- Completed the construction of 13 silo complexes four of which with capacity of 100,00 tons each are located in Abuja (FCT), Maiduguri (Borno), Gusau (Zamfara) and Birnin- Kebbi (Kebbi), while another six with 25,000 tons each are located at Jalingo (Taraba), Ilesha (Osun), Uyo (Akwa –Ibom), Bauchi (Bauchi), Dutsin–Ma (Katsina) and Sokoto (Sokoto) (Table 12).
- Construction of (20) silo complexes nationwide under the Agricultural Transformation Agenda (ATA) to add 1,025,000 metric tons to the existing national capacity upon completion. Four of these silo complexes with a combined capacity of 175,000 metric tons are ready for commissioning; another seven (7) with a combined capacity of 400,000 metric tons were commissioned in May/June 2013, while the rest will be completed within the year.

Table 12: Silo Facilities across the Federation

SN	SILO LOCATION	CAPACITY (METRIC TONS)	STATUS
1.	Jahun, Jigawa State	25,000	Operational
2	Minna, Niger State	25,000	Operational
3	Ogoja, Cross River State	25,000	Operational

4	Makurdi, Benue State	25,000	Operational
5	Ilorin, Kwara State	25,000	Operational
6	Gombe, Gombe State	25,000	Operational
7	Kaduna, Kaduna State	25,000	Operational
8	Ibadan, Oyo State	25,000	Operational
9	Akure, Ondo State	25,000	Operational
10	Jos, Plateau State	25,000	Operational
11	Irrua, Edo State	25,000	Operational
12	Lafiagi, Kwara State	11,000	Operational
13	Sheda, FCT	100,000	Completed and ready for commissioning
14	Sokoto, Sokoto State	25,000	Completed and ready for commissioning
15	Ilesa, Osun State	25,000	Completed and ready for commissioning
16	Dutsin-ma Katsina State	25,000	Completed and ready for commissioning
17	Maiduguri, Borno State	100,000	Over 90% completed
18	Birnin- Kebbi, Kebbi State	100,000	Over 90% completed
19	Gusau, Zamfara State	100,000;	Over 90% completed
20	Gaya, Kano State	25,000	Over 90% completed
21	Yola, Adamawa State	25,000	Over 90% completed
22	Uyo, Akwa-Ibom	25,000	Over 90% completed
23	Bauchi, Bauchi State	25,000	Over 90% completed
24	Igbariam, Anambra State	25,000	Under construction
25	Lokoja, Kogi State	25,000	Under construction
26	Lafia, Nassarawa State	25,000	Under construction
27	Ikenne, Ogun State	25,000	Under construction
28	Jalingo, Taraba State	25,000	Under construction
29	Okigwe, Imo State	100,000	Under construction
30	Ado-Ekiti, Ekiti State	100,000	Under construction
31	Yenagoa, Bayelsa State	100,000	Under construction
32	Damaturu, Yobe State	25,000	Under construction
33	Ezillo, Ebonyi State	25,000	Undergoing rehabilitation

- Constructed 48 nos of Commodity Warehouses under the Millennium Development Goal (MDG) programme in various locations within the country to serve their communities in storing agro inputs and products.
- Facilitated the Guaranteed minimum price (GMP) Committee drawn from stakeholders in the value chain of commodities, research institutes and farmers groups to fix prices based on the cost of production and the marginal profit to arrive at purchase price in the interest of farmers.
- Secured approval for the sales of 30,000 tons of sorghum to the World Food Programme (WFP) from the Strategic Food Reserve for use as food relief in Sub-Saharan Africa, as well as the award of contract for the supply of 60,000 tons of assorted food commodities to replenish the strategic stock in the silo complex.
- Release of 40,000 metric tons of assorted food commodities in December/January 2013 from the Strategic Silo Complexes to assist the flood affected States across the country (Table 13). Also distributed grains to flood victims across the country as shown below:

Table 13: Release of food commodities from the National Strategic Grain Reserve

SN	SILO COMPLEX	TARGET # OF TRUCKS	# OF TRUCKS DELIVERED
1.	Ogoja silo	245	95
2	Gombe silo complex	187	145
3	Jos silo complex	139	89
4	Akure silo complex	34	24
5	Ibadan silo complex	351	137
6	Minna silo complex	158	141
7	Jahun silo complex	30	27
8	Ilorin silo complex	119	59
9	Makurdi silo complex	47	40
10	Irrua silo complex	23	9
Total		1328	746

33.2 Export Crops Handling, Preservation, and Conditioning Centers

Some of the 10 Export Crop Handling, Preservation and Conditioning Centers whose series of contract awards began in July 2009 are at various levels of completion (Table 14 and Figure 67). These facilities are meant to improve the quality and shelf life of perishables, and the proper handling, conditioning and packaging of fruits and vegetables for international and domestic markets, employment generation and wealth creation.

Table 14: Status of completion of Export Crop Handling, Preservation and Conditioning Centers

EXPORT CROP HANDLING, PRESERVATION AND CONDITIONING CENTERS			
1.	Edington Limited	Ambursa, Birnin Kebbi, Kebbi	on-going, 60 % completion
2	Seegnal Nigeria Ltd.	Emene, Enugu	on-going, 60 % completion
3	Trappco Ranch and Resort Ltd.	Gwarzaye, Kaduna	On-going
4	Mima-Global Services Nig. Limited	Gombe, Gombe	On-going
5	ILS Logistics Ltd.	Akamkpa, Cross River	Yet to take-off
6	Willbahi Engineering Ltd.	Nasarawa, Nasarawa	Yet to take-off
7	Lare Shagaya Holding/Unimex Eng.ltd	Ilorin	Project on-going (Civil works virtually completed awaiting off-shore equipment)
8		Katsina, Katsina	Yet to take-off
9		Ibadan, Oyo	Yet to take-off
10		Usi-Ekiti, Ekiti State	On-going



Figure 67: Export Crop Handling, Preservation and Conditioning Center, Ambursa, Kebbi State (Ongoing)

33.3 Rice Processing Complexes

- i. Integrated Large Scale Rice Mills
- ii. 17 nos integrated large scale rice mills were awarded in 2009 to 10 major private

sector investors under the PPP arrangement. Two of the mills located at Ebonyi and Anambra States had been completed and ready for commissioning, while two others located at Kebbi state were at advance level of completion.

- iii. Establishment of 100 Rice Processing Plants and 18 HQCF Plants
- iv. Preparatory works are in progress for the establishment of 100 Nos large scale rice processing plants and 18 Nos high qquality cassava flourplants nationwide. Contracts had been signed with two Chinese companies while all other procurement processes had been completed with anticipatory approval of President Jonathan.
- v. Other achievements recorded in Agricultural Processing Marketing were in the Foreign Donor Assisted Projects across the country basically centered in the reduction of the post-harvest losses of commodities over time. The foreign donor assisted projects include.
- vi. Rice Post-Harvest Processing and Marketing Pilot Project (RIPMAPP)-
- vii. This project is sponsored by Japan International Cooperation Agency (JICA).
- viii. The purpose of the project is to improve the quality of our domestic rice and decrease post-harvest losses in the targeted states. The project commenced in September 2011 and the following has been achieved:
- ix. 2 Nos rice processing and marketing centers are to be established at Lafia and Bida in Nasarawa and Niger States respectively.
- x. Market survey for creating rice grading and quality standard in Nigeria.
- xi. Rice market distribution survey.
- xii. Socio-economic survey.
- xiii. Importation and installation of laboratory equipment to test the quality of locally milled rice.
- xiv. Workshop for Agricultural Development Programme (ADP) counterpart personnel from Nasarawa and Niger States as well as APM counterpart funding was held in March, 2012 at Abuja.
- xv. Installation of rice processing machines in Nasarawa State is expected to commence in December, 2012 as some of the machines were cleared from the port.
- xvi. Training for ADP staff of Nasarawa State was conducted in May/June 2012 at Lafia.
- xvii. Rice Productivity Enhancement Research and Development

- xviii. Sponsored by Korea Africa Food and Agriculture Cooperation Initiative (KAFACI).
- xix. This project is sited in Pukafa in Kwali Area Council, FCT. The project is jointly supervised by APM and NCRI, Badeggi, Niger State.

33.4Farmers’ Market

Nine Farmers Markets were awarded for construction in May, 2011 (Table 15 and Figure 68). The on-going projects had reached over 50% completion level.

Table 15: Status of completion of Farmers’ Markets

SN	STATE	LOCATION	STATUS
1.	FCT	Giri	On-going
2	Kano	Kura	On-going
3	Adamawa	Yola	On-going
4	Niger	Bida	On-going
5	Oyo	Akinyele	On-going
6	Plateau	Jos	On-going
7	Delta	Agbor	On-going
8	Enugu	Agbogugu	On-going
9	Lagos	Epe	On-going



Figure 68: Farmers’ Markets, Kura, Kano (Ongoing)

33.5 Agro-Industrial Estate

Government has been promoting public-private-partnership initiative in the establishment of cottage industries, agro-industrial processing estates, integrated large scale rice processing plants, integrated livestock market, integrated fish estates, farmers markets, one stop shop agro input centers, and export crops handling and conditioning centers.

33.6 One Stop Shop Agro-inputs Centers:

The development of the centers was to provide facilities for fertilizers, seeds, and agro chemicals with a capacity of 2000 tons, enhance rural farmers’ access to quality and affordable agricultural inputs, and provide farm mechanization services (Figure 69-70). A total of 31 out of the 62 centers awarded in October 2010, were completed and awaiting commissioning and concessioning (Table 16). Two out of the 18 centers awarded in the second phase in December 2011 had also been completed. The remaining centers are at various stage of completion.

Table 16: One Stop Shop Agro-inputs Centers:

SN	STATE	LOCATION	STATUS
1	Zamfara	Galandi, Shinkafi LGA	Completed, December 2011
2	Sokoto	Fanare, Wamakko	Completed,
3	Sokoto	Kilgori, Yabo	Completed, August 2011
4	Cross/Rivers	Bendi, Obanliku	Completed, August 2011
5	Kogi	Osara, Adavi	Completed, July 2011
6	Kogi	Egume, Dekina	Ongoing
7	Gombe	Zaune, Dukku	Completed, June 2011
8	Gombe	Kembu, Akko	Completed,
9	Lagos	Maforija, Epe	Ongoing
10	Kano	Rogo, Rogo	Completed, September 2011
11	Kano	Kura, Kura	Completed, August 2011
12	Jigawa	Gwaram, Gwaram	Completed, August 2011
13	Jigawa	Hadin, Kaugama	Completed,
14	Borno	Bargu, Shani	On-going
15	Niger	Wushishi	Completed, July 2011
16	Oyo	Ago-Amodu, Saki-East	Completed
17	Adamawa	Boda, Jeda	Completed, August 2011
18	Delta	Obi-Obeti, Ukuani	Completed
19	Oyo	Iseyin/Otiri, Iseyin	Completed
20	Benue	Igoli, Otukpo	Completed
21	Osun	Adana, Iwo	Completed, December 2011

22	Rivers	Rumuodumaya	Completed, December 2011
23	Imo	Ekeala, Amuzi,Obowo	Completed, December 2011
24	FCT	Dafara, Kuje	Completed, August 2011
25	Taraba	Lau, Lau	Completed, October 2011
26	Taraba	Kente, Wukari	Completed, August 2011
27	Adamawa	Pariya, Forore	Completed, June 2011
28	Zamfara	Tsafe, Tsafe	Completed
29	Kebbi	Dakin-Gari	Completed
30	Enugu	Obolo Ori	Completed
31	Ebonyi	Amaozara-Oziza/Mkpoghor	Completed, December 2011
32	Ebonyi	Agbaja, Izzi	Completed
33	Akwa Ibom	Ikot Udo, Mbang, Okanofan	Completed
34	Cross/Rivers	Ofudua Adun, Oburbra	On-going
35	Enugu	Akpugo, Nkanu-West	On-going
36	Ogun	Ipokia	On-going
37	Ogun	Idi-Ori, Abeaukuta	On-going
38	Rivers	Akwa, Eteche	On-going
39	Nasarawa	Gitata, Karu	On-going
40	Nasarawa	Gbata, Wamba	On-going
41	Benue	Tordonga, Katsina Ala	Completed
42	Katsina	Ajiwa, Batagarawa	Completed, December 2011
43	Kebbi	Mayyama, Argungu	On-going
44	Adamawa	Mayo, Balwa	On-going
45	Borno	Ala Marte	On-going
46	Yobe	Mamodo, Potiskum	Completed, December 2011
47	Yobe	Boloram, Geidam	Completed, December 2011
48	Edo	Iguoriakhi, Ovia S/W	On-going
49	Ondo	Ikare, Akoko N/East	On-going
50	Delta	Jesse, Ethiopie West	On-going
51	Kaduna	Gadan Gaya	Completed, December 2011
52	Kaduna	Garu, Kurama	Completed, January 2011
53	Kwara	Oke-Ode	On-going
54	Kwara	Osi-Ekiti	Completed
55	Kwara	Iponriu-Ilorin East	On-going
56	Plateau	Garkawa, Mikang	On-going
57	Plateau	Mile 8 Panshin	On-going
58	Bayelsa	Bolau-Oruwa	Completed, December 2011
59	Bayelsa	Odi, Kolokuma/Opoku	On-going
60	Ekiti	Ogotun Ekiti	Completed

61	Ekiti	Efon Alaye	On-going
62	Ogun	Ijebu-Ode, Ijebu-Ode N/E	On-going
63	Katsina	Tafoki, Fasksri	Completed
64	Katsina	Mai-Adua, Mai-adua	On-going
65	Niger	Mokwa, Mokwa	On-going
66	Niger	Salka, Magama	On-going
67	Abia	Ngba/Ohia	On-going
68	Abia	Elugwuntaorim-Itsukwuato	On-going
69	Anambra	Ufuma, Orumba North	Completed, December 2011
70	Anambra	Otuocha-Anambra East	On-going
71	Osun	Idi-Iroko, Orolu	On-going
72	Osun	Ago-Owu,Ayedadelu	On-going
73	Imo	Ofodini Umunike-Isiala Mban	On-going
74	Akwa ibom	Ukana, Uwa-west	On-going
75	FCT	Kwali, Kwali	On-going
76	Edo	Warake	On-going
77	Ondo	Bolorunduro, Ondo East	On-going
78	Bauchi	Dass, Dass	Completed
79	Bauchi	Wabu, Gamawa	On-going
80	Oyo	Fasola, Oyo-West	Completed



Figure 69: One Stop Shop Agro-inputs Centers, Warehouse
Front View, Galadi, Shinkafi LGA, Zamfara State (Completed)



Figure 70: One Stop Shop Agro-inputs Centers, Warehouse Front View, Ala-Marte, Borno State (Ongoing)

Agro processing centers

Agro processing facilities were established to promote the production of high quality edible flour, animal and fish feeds, encourage private sector investment, convert stored products in the silos to value added products, interface research extension mechanization industry, farmers in the agricultural sector and enhanced farmers' income and meet consumers' expectations. Eight agro processing centers awarded in 2009 are currently being constructed at various locations (Gombe, Kwara, Benue, Oyo, Niger, Jigawa, Cross River and Ondo) in the country to process grains into livestock and fish feeds (Table 17). All the centers were at over 70% completion stage for eventual completion and commissioning.

Table 17: Status of Agro processing centers

SN	STATE	LOCATION	STATUS
1	Gombe	Gombe	On-going
2	Kwara	Ilorin	On-going
3	Benue	Makurdi	On-going
4	Oyo	Ibadan	On-going
5	Niger	Minna	On-going
6	Jigawa	Jahun	On-going
7	Cross River	Ogoja	On-going
8	Ondo	Akura	On-going

Agro industrial Estates

Eighteen agro industrial estates were awarded across the country in May 2011 with equal distribution of three per Geo Political Zone (Table 18). However due to non- performance of some contractors, eight non-performing contracts had been terminated.

Table 18: Location and status of completion of Agro-Industrial Estates

SN	STATE	LOCATION	STATUS
1	Akwa Ibom	Ukanafun, Ukanafun LGA	On-going
2	Anambra	Mgbakwu	On-going
3	Enugu	Enugu	On-going
4	Oyo	Ile Abu Oloye/Odo-Oba	On-going
5	Ogun	Iporo Oju-Ogun	On-going
6	Kwara	Iludun-Oro	On-going
7	Adamawa	Ngbamoto, Lamurde LGA	On-going
8	Benue	Zakibiam	On-going
9	Bayelsa	Ogbia-Yenegoa	On-going
10	Edo	Afuze	On-going
11	Bauchi	Misau	On-going
12	Abia	Olori-Oboro	On-going
13	Sokoto	Kalambaina, Wamakko LGA	On-going
14	Katsina	Katsina	On-going
15	Borno	No site at the moment	On-going
16	Niger	Minna	On-going
17	Osun	Ilerin-Ilesa	On-going
18	Jigawa	Kanaya-Dutse	On-going

34. AGRICULTURAL LAND AND RESOURCES

34.1 Soil survey for cost-effective management of soil fertility

A Soil survey study was embarked upon to generate useful soil data necessary to determine crop capacities and suitability, update the existing soil map of Nigeria, and provide reliable information to farmers/land users on the cost-effective use of agricultural inputs. Further, to (fertilizers, seeds, etc.) lead to increased productivity per unit area on a sustainable basis. The sum of NGN 3,800,000,000 (USD 23,419,400) was budgeted out of which NGN 1,400,000,000 (USD 8,628,200) has been released, leaving an outstanding balance of NGN 1,200,000,000 (USD 7,395,600)

34.2 Current status of the soil survey

A detailed soil survey at a scale of 1: 25,000 in priority clusters of the cocoa, rice, sorghum, cassava, maize, soybean, cotton, and palm oil chains is ongoing. In addition, 10 soil analytical labs were upgraded for use by the project at five National Agricultural

Research Institutes (NARIs), three Agricultural Land Resources (ALRs) stations, and two FECOLARTs. Lastly, renovation and equipping of the project head office at Wuse Zone 5, Abuja, FCT, has been completed.

34.3 Achievements in Agricultural Land Resource

- I. Facilitated contract awards and consultants mobilization to commence the projects on Soil Fertility Programme, the Evaluation of Problematic Soils and the National Soil Survey Programme. On the latter, stakeholders workshop reviewed and adopted project standardization and implementation.
- II. Conducted site specific nutrient omission test and trials and recommendation in 7 crop producing cluster zone .
- III. Conducted acidity assessment in producing cluster zones.
- IV. Acquired analogue data on soil existing in Nigeria since the 1945 for the phase II data capture, processing, harmonization and storage for easy retrieval by users.
- V. Conducted semi detailed soil survey of some selected areas along value chain crops.
- VI. Equipped five NARIS labs, 3 zonal labs and two FECOLART labs.
- VII. Procured, processed and geo-referenced raw satellite imagery.
- VIII. Produced Digital Elevation Model (DEM)
- IX. Completed TM and contours overlay on imagery and released it to consultants for field activities.
- X. Produced and printed field base maps & issued them to consultants.
- XI. Conceptualized some relevant initiatives on:
- XII. PROGIS/Land Use Management technology, aimed at establishing an agricultural Information platform that would serve as a vehicle for providing the ICT infrastructure for efficient and effective land use planning and management for increased productivity in line with ATA.
- XIII. AFSIS II Programme (Nigerian Soil Information System Component), aims at developing a practical, timely and cost effective soil health surveillance service to map soil condition, setting a baseline for monitoring changes and providing options for improved soil and land management in Nigeria, to attain food security and improve livelihood in the country;
- XIV. Climate change adaptation project, targeting the use of agricultural technologies in the area of efficient soil and water management and conservation technologies to cope with the dynamics of climate change in 11 frontline states. It also entails

the formulation and dissemination of ‘climate smart agricultural extension packages’ to farmers.

- XV. Decentralized soil testing facility (soil laboratory in-a-box), aims at using modern soil analytical equipment for quick and reliable on-farm soil analyses that would enable end-users make crop and soil specific nutrient choices.

35. AGRICULTURAL QUARANTINE SERVICE

Agricultural Quarantine Service is aimed at protecting the Nigerian agriculture from destructive foreign pests and disease by minimizing the risk associated with the importation of agricultural commodities, seeds, seedlings, vegetative plant materials, live animals, fingerlings and ornamental fishes.

35.1 Strategies

- Facilitating trade in agricultural commodities and exchange of germplasm or genetic materials agricultural improvement as safe and comply with international sanitary and phytosanitary standards in order to ensure and improve access to world markets and address the challenges a imposed by technical barrier on trade.
- Developing and enforcing quarantine regulations for the import and export of agricultural commodities and exchange of seeds, seedlings, animal and fishery propagules by means of pest risk analysis taking into consideration, species, strain, distribution and hosts and the host range of pests and diseases of quarantine or economic significance.
- Ensuring that Nigeria as a signatory to a number of multilateral environment agreements [MEAs] actively participate at meetings where crucial decisions on food safety, bio-safety and other SPS issues are taken. These bodies include the International Plant Protection Convention [IPPC], World Organization of Animal Health, Codex Alimentarius Commission, and the Sanitary and Phytosanitary [SPS] Agreements of the World Trade Organization.
- Conducting pest surveys and disease surveillance to determine the presence and distribution of pest of quarantine and economic importance as a basis for assessing and managing the risk associated with the movements of agricultural commodities and other regulated article into and out of the country.

35.2 Achievements of Agricultural Quarantine Service in 2013

- i. Conducted the inspection of the first batch of cassava chips export to China and ensured that the products were inspected, treated and covered with phytosanitary certificate before any shipment to China.

- ii. Installed an aflatoxin detection equipment in NAQS Laboratories at Kano, Ikeja, Abuja and Port Harcourt with a view of ensuring proper screening backup for all certificates issued at points of entry and exit.
- iii. Surveyed the incidence of fruit fly infestation in ten pilot States of the Federation and action were being taken on the matter.
- iv. Completed a live fish export facility located at NAHCO Shed of the Murtala Mohammed International Airport Lagos, as a conditioning center for improving export trade in Nigeria fingerlings or ornamentals brood stock.
- v. Sustained surveillance on the regulation of restricted export and import items in conjunction with the Nigeria Customs Service as regards agricultural commodities.
- vi. Inspected over 725,000 carriers and 160,000 baggages at border posts and interception of 140,817 assorted plant materials, 26,786 sheep and goats and 63,360 cattle.
- vii. Issued over 5,000 phytosanitary certificates to cover 4.55 million tons of plants and plant products, 646,987 live fish ornamentals and 250 tonnes of crushed cow horns and 62.5 tonnes of hides and skin were certified free from pests and approved for export.
- viii. Certified 1,650,000 sprouted and germinated oil palm seeds imported from Indonesia, Cote d'Ivoire and Malaysia as well as 40 tonnes of improved NERICA seeds (L19 and L34) from Togo.
- ix. Issued 459 plant import permits specifying conditions for safe importation from various countries of origin upon the conduct of pest risk analysis. Also confirmed the pest-free status of several agricultural commodities and germplasm including those meant for the ATA.

36. AGRICULTURAL RESEARCH & DEVELOPMENT

The Nigeria Agricultural Research System [NARS] is focused on technology-based and demand-driven research and development initiatives in line with national and international concepts for purposes of adaptation, adoption and commercialization.

36.1 Strategies

- Establishing broad-based and sustainable agricultural growth and development as well as improving agricultural productivity, competitiveness and market-share. All of this with a view to generating demand driven agricultural technologies, promoting their innovations, strengthening agricultural research, training and extension systems, and establishing agricultural knowledge and management systems.

- Developing improved and high yielding production materials such as seeds, seedlings and fingerlings, as well as appropriate technologies in the areas of land preparation, planting, harvesting, processing and storage of farm produce which are not only efficient and economical but also capable of reducing drudgery in farming.
- Developing appropriate technologies for the optimum utilization of farm input such as fertilizers, herbicides, and pesticides to increase production potentials without adverse effects on the environment.
- Ensuring that agricultural research and development institutions turn out technologies which are relevant to the needs of local farmers and ensure that the results of their research are passed on to the end-users.
- Facilitating adequate funding of research and development bodies over a sustained period to ensure the attainment of results. Research funding will be tied to specific projects with targeted and measurable goals.
- Strengthen the Agricultural Research Council of Nigeria [ARC�] to coordinate the National Agricultural Research System [NARS] in a streamlined manner that will ensure linkages, collaboration and interface among the agricultural research and development institutions on one hand as well as allow the exchange of ideas with research and development institutions in other sectors of the economy.
- Encouraging a close liaison between research institutes and extension agencies to ensure the dissemination of research findings to users through active collaboration with states and local governments.

36.2 Agricultural Research and Development

Achievements

- Facilitated access to improved genetic materials and adopted villages and schools to support the NARIs to disseminate technologies to farmers.
- Developed synergy with on-going projects (Fadama III Project and SPFS) on establishment of demonstration plots and training of farmers
- Established innovation platforms for the Research in Use (RIU) Programme to reach out to farmers and disseminated improved technologies to different categories of end-users for the actualization of priority commodity value chains.
- Developed high protein (60%) fish meal concentrate from low value Tilapia (LVT) for fish and poultry feed, which could cause 30% reduction in the production-cost of fish-feed in the country. The package could elicit acceptability when incorporated into sorghum and maize pap meal.

- Achieved 40% substitution of cassava chips for corn as energy source in the production of extruded cassava based floating fish feed achieved, an avenue for import substitution and foreign exchange savings.
- Developed fish smoking kilns with varying capacities of drying between 40 and 250 kilograms of fish in six hours.



Figure 71A, B, C and D: Improvement of post-harvest rice processing in Nigeria

- Established broodstock bank facilities for mass production of high quality fish fingerlings.
- Released, over an extended period, 62 improved rice varieties, which most farmers are using across the country enabling the farmers to increase their yields and income. As part of this, 10 metric tons of breeder seeds and 110 metric tons of foundation seeds of rice were produced in 2012 in support of ATA.
- Developed post-harvest rice technologies (Figure 71), reaching 60% completion in the development of mini combined harvesters and threshers. This was done in collaboration with Africa Rice Group to which private machine manufacturers are being trained on the replication of the machine (Figure 72).



Figure 72A and B: Mini combined rice harvester and thresher

- Developed 41 improved cassava varieties with high yielding and disease resistant characteristics, which include three Pro-vitamin A-rich varieties (with IITA). The technologies have been disseminated to farmers as well as recipes for value added cassava products. Flour, bread, chin-chin, cakes, biscuits, chips, etc. have been packaged for local consumption, export, economic empowerment of women and youth, and job creation (Figure 73).

- Developed improved DxP elite tenera variety with a yield of 20-25 tons FFB per hectare per year, an extraction rate of more than 20% and crude palm oil [CPO] yield of 3-5 tons per hectare. A planting material cloning initiative created a potential of increasing CPO output to 6 tons per hectare as well as proven technologies for oil palm processing equipment comprising of bunch strippers, palm fruit sterilizer, digester screw press and crude palm oil.
- Commissioned 200 proven agricultural mechanization technologies across the value chains for cassava, rice, maize, oil palm, rice, etc., which are ready for distribution to 18 states for field testing and subsequent commercialization under ATA. More of these are currently being fabricated for distribution to the remaining 18 states of the federation for further undertakings.



Figure 73A, B, C, D, E, and F: Cassava value added products produced by rural women at one of the NRCRI training sessions

- Facilitated Shika Brown® layer chicken with high livability, low mortality and high productivity in hot humid environment of Nigeria. Already, multiplication of Shika

brown is being promoted under a PPP arrangement. A related effort produced the Nigerian version of least cost feed ration formulation software.

- Facilitated the establishment of the Nigerian Medicinal Plants Development Company in 2012 to promote the cultivation and commercialization of artemisia and moringa oleifera plants for medicinal purposes. Products from the venture included artemisa tea, morigvite tea, morigvite powder and moringa oleifera supplement.



Figure 74: Shika Brown® layers and egg products

- Upgraded the milk productivity of indigenous cattle through crossbreeding with exotic cattle, to which the crossbreed has potentials for 70% to 100% higher milk yield than the indigenous breed.
- Facilitated economic empowerment in fish and poultry production and associated value chains. 732 participants were trained in fish production and associated value chains with the provision of start-up kits for each participant via a package of 500 juveniles, 14 bags of feed and cash for pond preparation and de-mudding. 840 participants were trained and empowered in poultry production with free start-up kits to each participant (Figure 75).
- Youth and women were also trained in post-harvest processing of fish (Figure 76).



Figures 75A, B, and C: Start-up kits comprising of fish feed, day old chicks distributed to participants for poultry production



Figure 76A, B, C and D: Training on fish production techniques in Bako Village, Kano

36.3 Agricultural Insurance

The introduction of the Agricultural Insurance Scheme in 1987 was to provide agricultural risk coverage to farmers in Nigeria. The Ministry is at the verge of liberalizing the Agricultural Insurance Market to enable farmers engage any insurance company to manage their agricultural risks.

Strategies

- Minimizing or eliminating the need for emergency assistance provided by government during agricultural disasters.
- Making loans available to farmers through the provision of adequate agricultural risk management services and improve loan recovery.
- Providing and sustaining premium subsidizes for agricultural insurance products to leverage its positive impact of enabling farmers to purchase agricultural insurance policies.

Achievements

- Undertook risk management and farm advisory services during the period of reporting which generated claims settled (Table 19).

Table 19: Number of claimants, amounts claimed, and claims paid out in 2013 by NAIC

YEAR	NO OF CLAIMANTS	AMOUNTS CLAIMED	% OF TOTAL PAID CLAIMS
2008	28	24,401,418.57	23.89
2009	26	13,392,841.76	10.50
2010	26	16,275,569.53	15.53
2011	32	8,912,212.83	8.67
2012	22	16,705,753.89	15.44

Note: As at March 2013, discharge vouchers for claims on flood, to the tune of NGN 113,232,172.12 (USD 697,849.88) were processed to compensate 1,157 clients that were affected by the flood incidence of 2012.

37. INSTITUTIONAL REFORMS

37.1 Decentralizing the Federal Ministry of Agriculture and Rural Development

To ensure the successful implementation of the Agricultural Transformation Agenda, a number of institutional arrangements were established.

37.2 Achievements of Institutional Reforms

- Establishment of regional and state offices: In order to ensure that federal government relates closely with the state government, since agriculture is not practiced at the federal level but at the state level, six regional offices and 36 state offices including FCT were established. These offices are being manned by regional and state directors appointed by the federal Ministry of Agriculture and Rural Development. It enables the federal Ministry of Agriculture to engage and relate better with the state governments on daily basis and makes the implementation supervision of agricultural programmes in states effective. Altogether, 2,818 staff of deferent cadres have been decentralised to various states across the nation.
- The Agricultural Transformation Implementation Council (ATIC) was also established by President Jonathan. The ATIC, which chaired by President Jonathan, performs the oversight role over the entire transformation agenda in agriculture.
- Another major institutional arrangement is the establishment of Eminent Persons Group (EPG), which provides advisory services to ATA. Some of the members are Bill Gates, Kofi Annan, and the presidents of IFAD and ADB. The EPG has been advising President Jonathan on agriculture and ways of diversifying the economy to raise investments to grow the sector.

38. COMMODITY MARKET AND TRADE CORPORATIONS FOR NIGERIA

38.1 Organizing Markets around small holder farmers

The dissolution of the old marketing boards, as part of the structural adjustment program of the 1980s, has left the country without marketing institutions to coordinate the marketing system for agricultural commodities. As a result, markets are poorly organized with high transaction costs, lack of price discovery mechanisms, and price violations with difficulty in enforcing grades and standards, making domestic markets inefficient and unable to assure stable prices for farmers and consumers.

To address the marketing challenge of the various commodities under ATA, the federal Ministry of Agriculture and Rural Development embarked on the establishment of the commodity market and trade corporations for root and tuber, cocoa, cotton, grains, horticulture, and fisheries under the Agricultural Transformation Agenda (ATA). The new market corporations will:

- Coordinate commodity value chains to ensure that farmers are able to secure profitable markets for their commodities and trade farm incomes.
- Organize farmers into production clusters for each of the commodity value chains and link them to processors.
- Put in place institutional arrangements to expand the access of farmers in the value chain to agricultural extension services and improved production methods (seeds, fertilizers, irrigation, and mechanization) to rapidly raise productivity of farms.
- Establish a decentralized modern price discovery system to ensure the flow of reliable, high quality and timely market information across the agricultural value chains, using mobile phones and other mass price transmission systems.
- Coordinate with Abuja Security and the Exchange Commission, and put in place a functional agricultural commodity exchange platform to improve marketing and pricing of agricultural produce.
- Establish, manage and promote private sector investments in commodity processing and value addition through commercial ventures.
- Ensure price stabilization through a mix of public and private sector instruments, including public intervention, to mop up surpluses, strategic grain reserves, link of farmers to off-takers, market hedging, and facilitation of export financing for farmers to export surpluses.

- viii. Develop the needed market infrastructure (warehouses, silos, cold storage, etc.) and transfer these to the private sector under lease arrangements to reduce post-harvest and marketing losses, and improve food safety.
- ix. Put in place grades and standards for the commodities to facilitate trade.
- x. Facilitate the establishment and functioning of staple crop processing zones.

38.2 Achievements of the Establishment of the Commodity Market and Trade Corporations

- i. TechnoServe was contracted to lead the process of a design of three of the four marketing corporations. The Technoserve team completed the process for cocoa, cassava, and sorghum on 8 November 2013. The fourth marketing corporation (grains) design was completed on 6 January 2014. This design has included unprecedented private sector engagement. Through the project, TechnoServe has engaged with 100 organizations (150 stakeholders) across the value chains, through both one-on-ones and eight stakeholder conferences. This has built high levels of private sector ownership in the design.
- ii. TechnoServe has supported the implementation of the marketing corporations across four key steps:
 - i. Incorporation:* Legal incorporation by a lawyer contracted by FMARD
 - ii. Management recruitment:* Identification of candidates by recruitment consultants contracted by FMARD
 - iii. Board nomination:* Once the above steps are underway, contacting identified potential board members to submit themselves for nomination and carry out selection process
 - iv. Y1 Funding:* Funding from FMARD to operate for at least Y1 of operations. For all four marketing corporations, this is estimated at NGN 1.3 billion (USD 8 million)
- iii. Table 20 summarizes the status of implementation of the establishment of the Marketing Corporations.

Table 20: Summary of next steps on the incorporation and take-off of the Market and Trade Corporations

IMPLEMENTATION	NEXT STEPS	TECHNOSERVE RESPONSIBILITY	FMARD RESPONSIBILITY
Incorporate Body	Solicited legal advice to design structure	Completed	
	Incorporation process defined	Completed	
	Lawyers retained by FMARD to incorporate		Completed last week
	FMARD stakeholders in place to sign/approve relevant documentation		In process
Recruit Management	Recruitment process defined	Completed	
	Job descriptions developed	Completed	
	Recruitment consultant retained by FMARD		In process
Put in Place Board	Documents prepared to be sent to Board once incorporation completed	Completed	
	Send to prospective Board members		Pending steps above
Secure Funding	Budgets submitted to CADP	Completed	
	Funding shortfall (i.e., staff that cannot be funded by CADP) estimated at 0.8B NGN	Completed	
	Identify sources of funding for Y1 0.8B NGN shortfall		In process

- iv. TechnoServe's engagement is scheduled to end on 31 January 2014. Discussions have been conducted about a new engagement for TechnoServe to conduct a project, holding a management role, to assist other parties in conducting the final steps so the marketing corporations can be operational. Given the current status of the key four steps, and the delays up to this point, TechnoServe recommends that re-engagement occur only if the following steps are in place:
 - contracting of lawyer completed;
 - contracting of recruitment consultant completed; and
 - the plan to address Y1 funding shortfall of NGN 0.8 billion (USD 4.9 million) in place (or decision taken to prioritize two marketing corporations in 2014 and smaller funding shortfall is addressed).
- v. Were these steps in place by the end of January, it would be viable for a formal signing event of the inaugural board members in May. It may be possible to accelerate the process for two marketing corporations to conduct inaugural board meetings in April.

Goals for 2014

- i. Approve design of marketing corporations
- ii. Create sufficient Ministerial momentum to complete the contracting process
- iii. Agree on likely potential sources to address funding shortfall and have staff make relevant approaches to secure them
- iv. Determine if there is need for TechnoServe to re-engage in the project management role
- v. Decide if phased approach is appropriate

39. RESPONSE TO THE 2012 FLOODS

39.1 National Food Production Rises and Predicted Food Crisis from Floods Averted

Nigeria experienced a major flood in September of 2012, the worst in several decades. The nation was rife with panic that there would be a food crisis. The Ministry was highly proactive in assessing the likely impacts of the flood on domestic food supply. Using the global expertise of the International Water Management Institute, we deployed satellite imagery and remote sensing tools to determine the extent of the inundation across the country. Our estimates showed that no more than 1.4 million hectares of land were inundated and only 467,000 hectares of land were expected to suffer crop loss. This represented only 1.17% of the total cultivated area in the country.

The Ministry boldly assured the country that there would be no food crisis. To mitigate the impacts of the flood, the president approved the implementation of the National Flood Recovery Production Initiative with the release of NGN 9.7 billion (USD 59.8 million). The goal was to ensure that the food security and vulnerability of flood affected areas were reduced, including accelerated flood recession agriculture as soon as the flood water receded. In addition, a total of 40,000 metric tons of assorted food items (maize, sorghum, millet and gari) were released and distributed to the flood affected states.

On the other hand, massive distribution of high quality seeds was done for farmers. For cocoa, a total of 3.6 million pods of hybrid cocoa are being distributed to farmers, free of charge, across all the cocoa growing states, to establish new plantations and rehabilitate old plantations. For cotton, interventions included the provision of 1,506 metric tons of high quality improved cotton seed, which was cultivated on 75,319 hectares by 35,000 farmers in the Northwest cotton growing zones covering Katsina, Kano, Jigawa, Kebbi, Zamfara, Sokoto and Kaduna States.

To improve the production of palm oil, over 9 million sprouted nuts of high yielding

improved tenera seedlings were distributed free of charge to smallholder farmers and private sector oil palm plantations. We secured 4 million improved tenera oil palm nuts from the Nigerian Institute for Oil Palm Research. They were distributed, free of charge to 70 public and private sector nursery operators to be raised into mature seedlings for distribution to farmers for the 2013 field planting. This will cover 26,666 hectares of oil-palm plantations. 17 oil palm estates in 11 states signed agreements with the Ministry to raise a total of 1,312,500 improved tenera nuts into mature seedlings to plant 8,750 hectares in their estates in 2013. The states involved are Kogi, Edo, Ondo, Delta, Cross River, Ogun, Akwa Ibom, Bayelsa, Abia, Osun and Enugu.

40. IMPACT OF THE FLOODS

40.1 National Flood Recovery Food Production Initiative

The Federal Emergency Flood Recovery and Food Production Initiative was conceived as a measure for mitigating the adverse effect of the nationwide flood incidence 2012 that ravaged several communities, drowned people, washed away farm lands, killed many animals and displaced farmers and other groups of people in 21 states of the federation. This development had called for urgent need to put in place measures to reduce the impact of the flood by launching an aggressive food production programme that addressed the immediate food security needs of the affected areas and step-up food production in non-affected areas, ensuring that the national food security is not jeopardized.

As part of measures for overcoming the losses of agricultural crops in the flood disaster, President Jonathan approved Special Intervention Funds in the sum of NGN 9.74 billion (USD 60 million) to the federal Ministry of Agriculture and Rural Development for the immediate release of grains from strategic reserves and the purchase of other food items to support affected population. A total of 10,000 metric tons of assorted fertilizers valued at NGN1,100,000,000 (USD 6,779,300) were provided free of charge to the affected farmers through the Growth Enhancement Support (GES) Scheme. Under the arrangement, a total of 100,000 identified farmers was targeted with the provision of 2 nos of 50 kilograms bags of fertilizers at the rate of NGN5,500 (USD 33.90) per bag amounting to NGN11,000 (USD67.79) per farmer to be fully paid for by the federal government. The affected states were Adamawa, Taraba, Benue, Kogi, Kwara, Niger, Edo, Delta, Anambra, Nasarawa, Kaduna, Bauchi, Gombe, Plateau, Rivers, Bayelsa, Jigawa, Ondo, Yobe, Borno and the FCT.

Strategies employed to address the matter involved ceding out to international research institutes in support of Nigeria with early maturing improved varieties of seeds. For example, International Rice Research Institute (IRRI) in the Philippines to provide access to flood tolerant varieties that can do well under flooded conditions or stay under water for as long two weeks without compromising yield, and the International Institute of Tropical Agriculture (IITA), for the supply of extra-early maturing varieties of maize that matures in 60 days, to allow farmers have a crop before the main season of 2013 as well as those from

Kenya (improved rice variety) and Burkina Faso (Rice Variety) to shore up local supply.

In order to reduce the impact of the flood on the food security of affected populations and states, a total of 40,000 tons of assorted food items including: maize, sorghum, millet and gari were released and distributed to affected states. A total of 1,248 trailers (target = 1,328) or 94% has been delivered as of 31st January, 2013. As many of the areas affected across the country had already harvested their crops, even before the flood, the silos were to be restocked. So far, no fewer than 8.1 million metric tons of food were added to the domestic food supply from the value chains under the Agricultural Transformation Agenda.

Arrangements were concluded to source and distribute seeds to farmers from various agencies namely:

- 3,719 tons of early maturing L19 rice seed from Burkina Faso;
- 1,000 tons of Sub-1 flood tolerant seed from IRRI, Philippines;
- 2,000 tons of rice seed from Dominion Farm, Kenya;
- 8,050 tons of improved rice seed from domestic supplies;
- 111 tons of extra early of 60 days maize varieties from IITA, Ibadan;
- 162,000 litres of pesticides; and
- 5,000 water pumps.

From this intervention, about 1,840,000 tons of food was added to the pool of stock in 2012, while the total food loss estimated and ascribed to floods was 1,200,000 tons. The contributions of various food crops promoted are disaggregated as follows:

- Rice – 1,320,000 tons
- Maize – 511,000 tons
- Cassava – 40,800 tons
- Yam – 1,260 tons
- Plantain – 600 tons

For other value chains including fisheries, sates that were hit are being supplied with fingerlings to re-establish their fish farmers under the aquaculture programme of the Agriculture Transformation Agenda.

41. CAPITAL PROJECTS EMBARKED UPON BY RURAL DEVELOPMENT DEPARTMENT FROM 2011 TO 2013

The projects that were embarked upon by the department on behalf of the Ministry for the federal government between 2011 and 2013 are:

- construction/Rehabilitation of rural feeder roads;
- provision of potable water to the rural communities;
- consolidation and expansion of enclave projects; and
- provision of homestead/backyard irrigated crop facilities.

Construction and Rehabilitation of rural feeder roads

The roads that have been provided fall under three categories:

1. Staple Crop Processing Zone Roads – A total of 59.6 kilometers of double coat surface dressed rural feeder roads were provided under the 2012 Capital Appropriation at the total contract sum of NGN 814,147,159.52 (USD 5,017,588).
2. Crop Production Cluster Roads – A total of 57 kilometers of double coat surface dressed rural feeder roads were provided under the 2012 Capital Appropriation at the total contract sum of NGN724,915,597.13 (USD 4,467,654.83).
3. Constituency Roads – In 2011, the total sum of NGN1,019,259,171.32 (USD 6,281,694.27) was utilized to provide 58.84 kilometers double coat surface dressed rural feeder roads.
4. In 2012 however, NGN1,814,756,013.12 (USD 11,184,341.31) was utilized in providing 99.5 kilometers double coat surface dressed rural feeder roads.
5. In 2013, NGN2,103,214,197.68 (USD12,962,109.10) was appropriated to provide a road length of 145.7 kilometers double coat surface dressed rural feeder roads.

Provision of potable water to the rural communities

Potable water has been provided under two categories:

1. *Hand Pump Equipped Borehole*

The Department provided a total of six hand pump equipped boreholes at NGN8,739,454.20 (USD 53,861.26) in 2011.

In 2012, a total of 12 hand pump equipped boreholes were provided at NGN82,462,500.00 (USD 508,216.39), while in 2013, NGN8,078,274.00 (USD 49786.40) was utilized in providing one borehole.

2. *Motorized Borehole*

In 2013, the Department provided two motorized boreholes at the total contract sum of NGN15,636,273.53 (USD 96,366.35).

Consolidation and expansion of enclave projects

At the enclave project sites, NGN58,953,126.95 (USD 363,328.12) was utilized to provide 1 No. drying slabs, 1 No. hand pump equipped borehole and 2 kilometer earth roads, which were at eight enclave project sites in 2012.

Provision of homestead/backyard irrigated crop facilities

Under the homestead/backyard irrigated facilities, the sum of NGN33,760,768.62 (USD 208,067.62) was utilized to provide four boreholes in 2013.

42. KEY PERFORMANCE INDICATORS (KPIs)

A major goal of the Agricultural Transformation Agenda is to increase national food production by an additional 20 million metric tons by 2015, which means adding 5 million metric tons of food annually. In 2013, about 7.5 million metric tons of additional food was added to the domestic food supply. Together with 2012, 15.5 million metric tons of food has been added to national food supply due to interventions of ATA. This is 77.5% towards the set target of 20 million metric tons for 2015.

The details of the KPIs showing the baseline, the actual performance in 2012 and 2013 and the expected target for 2014 are shown below in Annex 1.

ANNEXES
ANNEX 1: KEY PERFORMANCE INDICATORS OF
AGRICULTURAL TRANSFORMATION AGENDA

S/N	VALUE CHAIN	INDICATORS	KPI 2012	KPI 2013	ACHIEVEMENTS	NEXT STEPS/TIMELINE
1	Cassava	Production	38.5 million metric tons	55 million metric tons	42.5 million metric tons in 2012	Raise production of cassava by an additional 10 million metric tons to meet Industrial demand from HQCF, starch, dried chips, and ethanol via establishment of mechanized cassava farms and training of farmers in high gross margin farming by April 2014; improve dissemination of improved planting materials by holding field days for farmers at location of stem out growers by September 2013
		Productivity	16.3 metric tons per hectare	20 metric tons per hectare	18.8 metric tons per hectare	
		Post - Harvest Processing	i. 324,000 metric tons of HQCF ii. 140,000 of starch iii. 250,000 metric tons of dried chips	i. 324,000 metric tons of HQCF ii. 140,000 of starch iii. 500,000 metric tons of dried chips	i. 80,000 metric tons of HQCF ii. 30,000 metric tons of starch iii. 125,000 metric tons of chips iv. Establishment of six pilot dried chips facilities v. Completion of new flash dryers for 10 small HQCF plants	
		Adoption of Improved Varieties	30million stems of improved varieties	60million stems of improved varieties	24 million stems of improved varieties in 2012; 2.8million distributed to date in 2013	
		Extension Services	i. Training of 85 Master Bakers ii. Training of 140 dried chips producers	i. Training of 8,250 farmers ii. Training of 370 Bakers	i. A total of 455 Master Bakers have been trained ii. 140 dried chips producers trained	
		Job creation	200,000 direct jobs	300,000 direct jobs		

S/N	VALUE CHAIN	INDICATORS	KPI 2012	KPI 2013	ACHIEVEMENTS	NEXT STEPS/TIMELINE
2	Rice	Production	i. 5.5 million metric tons paddy ii. 3.58 million metric tons milled rice	i. 6.465 million metric tons paddy ii. 4.202 million metric tons milled rice	i. 5.59 million metric tons paddy ii. 3.64 million metric tons milled rice	To improve quality of paddy, more threshers, mechanical dryers, and rive harvesters will be deployed to rice growing regions in the 22 States by November 2013 for the dry season rice farming season
		Productivity	2.5 metric tons per hectare	3.5 metric tons per hectare	2.5 metric tons per hectare	
		Post-Harvest Processing:	37 destoner	100 destoner	50 destoner	
		i. Thresher (Nos)	100 threshers	111 threshers	111 threshers	
		ii. Mechanical Dryer (Nos)	10 mechanical dryer	74 mechanical dryer	37 mechanical dryer	
		iii. Rice Harvesters (Nos)	10 rice harvesters	300 Rice harvesters	37 Rice harvesters	
		Adoption of Improved Varieties	12,500 metric tons of improved seeds	12,500 metric tons of improved seeds	11,840 metric tons of improved seeds	
		Extention Services: Training of farmers	850 farmers	2400 farmers	2400 farmers	
		Production	850 farmers			
3	Maize	Production	10 million metric tons	12million metric tons	9million metric tons in 2012	i. Distribution of 120,000 hermitic storage bags and phostoxin to aid better storage at harvest in November/December 2013 ii. Sensitization and training on post-harvest handling of maize grain to reduce aflatoxin contamination in prone areas by December 2013 iii. Distribution of sprayers to 5000 youths after training for dry season (2013/14) maize production activities by December 2013
		Productivity	3.5 metric tons per hectare	3.5 metric tons per hectare	3.0 metric tons per hectare	
		Post-Harvest Processing	Training of 195,000 farmers on farmers on pre- and post-harvest handling of maize	Training of 700,000 farmers on farmers on pre- and post-harvest handling of maize	97,500 farmers trained on pre- and post-harvest handling	
		Adoption of Improved varieties	6,300 tons of certified seeds to 260,000 registered maize farmers	21,000 tons of certified seeds to 1.05 million registered maize farmers	2,520 metric tons of certified seeds distributed to 52,000 farmers	
		Extension services	Training of 65,000 farmers on Good Agricultural Practices (GAP)	Training of 175,000 farmers on Good Agricultural Practices (GAP)	39,000 maize farmers trained on Good Agricultural Practices (GAP)	
		Job creation	1.3 million farming jobs	3.5 million farming jobs	1.75 million farming jobs	

S/N	VALUE CHAIN	INDICATORS	KPI 2012	KPI 2013	ACHIEVEMENTS	NEXT STEPS/TIMELINE
4	Sorghum	Production	9.5 million metric tons	9.7million metric tons	9.57 million metric tons	i. To increase production of Sorghum by additional 130,000 hectares to be cultivated in 2013 in view of the 1000 metric tons of seed distributed to farmers to enhance production by October 2013 ii. To reach 200,000 farmers target with improved OPV's to increase productivity and overall production. By Dec 2013. iii. To increase sorghum processing capacity for fortified foods and Super Fine Sorghum Flour (SSF). By June 2014 iv. The processing mills has a capacity of milling 5 tons per day and in a year can attain 81,000 tons. By June 2014
		Productivity	1.0 metric tons per hectare	1.6 metric tons per hectare	1.5 metric tons per hectare	
		Post - Harvest Processing: i. Cottage Primary Sorghum processing		50 cottage primary processing plants		
		ii. Processing of fortified foods (capacity in metric tons)	30 million stems of improved varieties	81,000 metric tons	24 million stems of improved varieties in 2012; 2.8million distributed to date in 2013	
		Adoption of Improved varieties	515 metric tons of seeds of improved varieties	1,000 metric tons of seeds of improved varieties	515 metric tons of seeds of improved varieties	
		Extension Services				
		Job creation	60,000 direct jobs	100,000 direct jobs	12,000 jobs	
5	Cocoa	Production	300,0000 metric tons	400,000 metric tons	320,000 metric tons	i. Target setting for 16 cocoa producing States by December 2013 ii. Policy thrust and advocacy to support private sector investors
		Productivity	750 kilogram per hectare	850 kilogram per hectare	700kilogram per hectare	
		Post-Harvest Technologies	75,000 metric tons processed locally	90,000 metric tons processed locally	50,000 metric tons of cocoa processed locally	
		Adoption of Improved Varieties	14 million cocoa seedlings	126 million cocoa seedlings	14 million cocoa seedlings in 2012;	
		Extention Services	10,000 farmers trained	200,000 farmers trained	10,000 farmers trained	
		Rehabilitation of old plantations	50 profession grafters trained	100 professional grafters trained	37 Rice harvesters	
		Establishment of Cocoa Corporation of Nigeria (CCN)	Institutional set up process commenced	CCN establishment completed	CCN establishment in progress	
		Job creation	50,000 direct jobs	100,000 direct jobs	50,000 direct jobs	
6	Cotton	Production	64,000 metric tons lint	68,000 metric tons lint	54,000 metric tons lint	i. Address cotton contamination with injection of a minimum of 800,000 units of cotton cloth sacks to replace the dominant use of polypropylene—the major source of contaminant in local seed cotton by December 2013 ii. introducing Bt cotton technology, farmers' output and income are expected to increase
		Productivity	320 kilograms per hectare Lint	360 kilograms per hectare Lint	320 kilograms per hectare Lint	
		Deployment of Post-Harvest Technologies	Rehabilitation of nine existing ginneries	Rehabilitation of another eight existing ginnery	Nine ginneries rehabilitated and now functional	
		Adoption of Improved varieties	1,560 metric tons of improved seeds	3,264 metric tons of improved seeds	1,560 metric tons of improved seeds	
		Extension	Training of 38,000 farmers	Training of 40,000 farmers	Training of 38,000 farmers	
		Job creation	40,000 direct jobs	45,000 direct jobs	40,000 direct jobs	

S/N	VALUE CHAIN	INDICATORS	KPI 2012	KPI 2013	ACHIEVEMENTS	NEXT STEPS/TIMELINE
7	Oil Palm	Production	0.92 million metric tons of crude palm oil	1.006 million metric tons of crude palm oil	0.86 million metric tons of crude palm oil	i. Distribution of 9 million improved tenera seedlings is on-going in order to increase effective hectareage and crude palm oil production. ii. Other GES inputs including fertilizer, agrochemical and wire collar are being made available to farmers as part of technological package to raise productivity
		Productivity	8 metric tons of fresh fruit bunch per hectare (small holder)	10 metric tons of fresh fruit bunch per hectare (small holder)	6.5 metric tons of fresh fruit bunch per hectare (small holder)	
		Deployment of Post-Harvest Technologies		73 motorized harvesters distributed to small holders	73 motorized harvesters distributed to small holders	
		Adoption of Improved varieties	Distribution of 9 million sprouted nuts	Distribution of 9 million sprouted nuts	4 million sprouted nuts	
		Job creation	12,000 direct jobs	24,000 direct jobs	12,000 direct jobs	
8	Horticulture	Production (tomato)		3.9 million metric tons of fruit	Stakeholders of farmers, marketers ,processors and subject matter specialist trained in various aspect of tomato value chain	GES for improved tomato varieties
		Productivity (tomato)		25 metric tons of fruit per hectare		
		Production (bananas)		Introduction of exportable banana varieties	Introduction of 275,000 meristems of improved exportable banana variety (Williams) and development into suckers	Train 800farmers on banana and plantain for local and export markets.
		Processing (tomato)		Build capacity in tomato processing into paste	i. Provision of a mobile 4ton per day tomato semi product processing facility ii. Trained 300 women in alternative processing options for tomato	
9	Beef	Production	300,000 metric tons	400000 metric tons		i. Setting up of the Implementation Task force Management Office in Nigeria ii. EPC Contractors for 2 Halal meat processing and packaging centers in 2 Northern State iii. Awareness creation for Halal Meat Centers iv. Commissioning of FAMAG-JAL Nigeria Ltd
		Productivity	280 metric tons beef/animal average	280 metric tons beef/animal average		
		Establishment of Halal Meat Processing and Packing Centers	Study to provide strategy, guidelines and road map for implementation of transformation of the meat industry	i. Roll -out, compound ratio for SHS and supplementary feeds to 500 cow-calves fattening by 16th Sept, 2013 ii. Sensitization and Supervision of input roll out under GES	i. Study Report completed ii. Sensitization of Stakeholders on the study report iii. Completion of 1 Halal meat center at Abuja	
10	Dairy	Production	one million metric tons of milk	one million metric tons of milk	675,000 metric tons of milk	GES Roll-out for dairy farmers by 7th October, 2013; 6,200 farmers in the 8 implementing States; Nasarawa, FCT, Niger, Kaduna, Kano, Adamawa, Kwara and Oyo States will be provided with 5 Bags of supplementary feeds and 1 Block of Salt lick each.
		Productivity	3.7 kilograms per cow per day for 270 days of lactation per cow	3.7 kilograms per cow per day for 270 days of lactation per cow	2.5 kilograms per cow per day for 270 days of lactation per cow	
		Adoption of improved production technologies	Increase dairy production production by artificial Insemination of 12, 400 animals	ii) Increase dairy production production by artificial Insemination of 12, 400 animals	Artificial Insemination in 8 target States of Adamawa, Niger, Nasarawa, Kaduna, Oyo, & FCT by Service Provider: A total of 3,837 animals bred. 1774 confirmed pregnant .	
		Extension	Training of 100 lead farmers each in Oyo and FCT on Milk Collection processes	Training of 100 lead farmers each in Oyo and FCT on Milk Collection processes	i. 5,500litres per day of milk collected at Wasimi GR, Oyo State and 1,500 Litres per day collected in Kaduna State by MILCOPAL ii. Sensitization of Fulani Milk Producers at Maya/Eruwa, Alaga & Fashola in Oyo State and Paikon Kore, FCT	

S/N	VALUE CHAIN	INDICATORS	KPI 2012	KPI 2013	ACHIEVEMENTS	NEXT STEPS/TIMELINE
11	Poultry	Production	i. 390,000 metric tons of meat ii. 600,000 metric tons of eggs	i. 420,000 metric tons of meat ii. 635,000 metric tons of eggs	i. 703,000 metric tons of meat in 2012 ii. 580,000 metric tons of eggs	i. 100,000 Shika Brown Layers to be distributed September - December 2013 ii. Increase support to poultry farmers by provision of feeds, vaccines and drugs by September - December 2013
12	Sheep and Goat	Production	450,000 metric tons of meat	453,000 metric tons of meat	i. 450,000 metric tons in 2012 ii. 12,960 Farmers Registered and migrated to GES Platform/Databank iii. Massive awareness campaign and sensitization	i. Provision of 10,000 (50 kilograms) bags of Commercial Finished Concentrate Feeds, Dewormer and Acaricide for 1,000 farmers in 6 States- (September 17th,19th and 24th in FCT, Kano & Kaduna and Gombe, Lagos & Oyo respectively) ii. Provision of 300,000 doses of Dewormer and Acaricide for 30,000 sheep and goat farmers in 6 States (September 17th,19th and 24th in FCT, Kano & Kaduna and Gombe, Lagos & Oyo respectively)
		Productivity	Reduction in Mortality of Sheep and Goat by 30% in intervention areas	Reduction in Mortality of Sheep and Goat by 30% in intervention areas	Mobilization and Linkage of Agro-dealers to GES	
		Deployment of Post-Harvest Technologies				
		Extension Services		Training of 60 State Personnel and 300 farmers 3rd Quarter, 2013		
13	Leather	Production	32 million pieces of leather	32 million pieces of leather	iii. Sensitization of 50 State and Regional Officer to Leather Value Chain iv. Awareness creation amongst Skin Buyers Associations and Leather and Allied Workers Associated of Nigeria (LAPAN) v. Registration of 3000 Skin buyers in Katsina, Zamfara, Sokoto, Kano, Jigawa and Bauchi vi. Training of 60 skin buyers on effective use of industrial salts in preservation of skin for processing by tanneries	i. GES Roll -out scheduled for Sept. 23rd, 2013 where 17,200 bags of Industrial Salt worth N48, 160,000 to distributed to skin buyers under the GES platform. ii. Supervision and monitoring of roll-out process iii. Survey of the rate of slaughter of pregnant animals in five high producing and offtake states (Kano,Lagos, Ibadan, PH &FCT) - 4th Quarter, 2013 iv. Study Tour to South Africa or Morocco by TL, Desk Officers and five others - 4th Quarter, 2013

S/N	VALUE CHAIN	INDICATORS	KPI 2012	KPI 2013	ACHIEVEMENTS	NEXT STEPS/TIMELINE
14	Fishery/ Aquaculture	Production	1.45 million metric tons	1.9 million metric tons	1.45 million metric tons; Distribution of 4,200,000 Fish Juveniles free and 42,000 Fish Feed to Farmers under the GES scheme. 12 fish-farm estates established 2012 and 2 are being established. 6 cottage fish feed mills are being established.	i. Follow up on distributed inputs and data collection ii. Distribution of nets, floats, sinkers, insulated boxes and boats to fishermen under the Fisheries Artisanal GES scheme. iii. Review update of the Inland Fisheries Act. iv. Propagation of Cage Culture System (Mariculture) v. Diversification of cultivable fish species – Tilapia, Lates. vi. Production of 200 driers vii. Upgrade of Nigeria Fisheries Laboratory, Lagos for quality Assurance& certification viii. Development of Model/ Generic business plans on Fish processing and Fish transportation. ix. ix) Capacity building in seed production
		Productivity	3.5 metric tons per hectare	5.0 metric tons per hectare	3.5 metric tons per hectare; More fish were produced Awareness on value addition to earn more income Reduced Post Harvest loss More fish sold because of growing awareness of nutritional, medicinal and industrial value	
		Post-Harvest processing	Six Fish Processing Centers of 150,000M capacity each	Seven Fish Processing Centers of 150,000M capacity each	Six Fish Processing Centers of 150,000M capacity each established across the country	
		Adoption of improved technologies	Twelve fish fingerlings production centers for improved fish seeds	Two fish fingerlings production centers for improved fish seeds	Twelve fish fingerlings production center established to produce seven Million fingerlings	
		Extension	40 persons under the Training of Trainers program /Sustainable Aquaculture System; Training of 50 fish farmers and officials of State Emergency Management Agency on early warning signs; 40 persons under the Training of Trainers programme /Sustainable Aquaculture System.	Zonal Workshops on Certification& Standards.	Training of 225 fish farmers on Best Practices in Production and Processing	
		Job creation	670,000 jobs created	1,806,000 jobs expected to be created	670,000 jobs	
		Establishment of Fish Market	Establishment of 1 model fish market at Yauri, Kebbi.	Model fish markets is being established at Lokoja and Onitsha	Reduced post-harvest loss; More fish sold because of growing awareness of nutritional, medicinal and industrial value	
		Data collection	Resuscitation of Fisheries Data Collection Structure by Hosting of Annual Fisheries Statistics Review Meeting and collection at Landing Sites, Jetties and Fish Farms		Fishery data collection data collection structures resuciated by Fisheries Statistics Review Meeting at Makurdi in 19th -22nd June, 2013; and distributing Fisheries Data Collection Formats to all the 36 States and FCT 12th -16th August, 2013	
15	e-wallet	New Farmer Registrations	Generic GES 4.2 million	Generic GES 4.4 million	8.6 million Farmers registered under Generic GES	i. Improve quality of farmer data; ii. Deploy a mechanism for data self-correction/ update by farmers; iii. Work with FEPSAN to deploy POS devices for offline redemption purposes iv. Reduce HLS transactions on wallet by 70% and increase farmer share of transactions to 80%
			Value Chains 0.4 million	Value Chains 0.6 million	1.0 million farmers registered under specialized value chain GES	
			Total: 4.6 million	Total: 5.0 million	9.6 million farmers registered in total	
		Farmer Participation	4.6 million	8.6 million		
		Farmer Turnout	2.0 million	ongoing.	2.0 million farmers turned out to redeemed inputs in 2012	
		Redemptions	1.5M	3.5M	1.5 million farmers redeemed inputs in 2012	
		Transactions	7 million	17million		

S/N	VALUE CHAIN	INDICATORS	KPI 2012	KPI 2013	ACHIEVEMENTS	NEXT STEPS/TIMELINE
16	Fertilizer	Production	2.5million farmers redeem two bags of Fertilizer or 250,000 metric tons of fertilizer	5.0million farmers redeem two bags of Fertilizer or 500,000 metric tons	i. 180,000 metric tons of Fertilizer redeemed in 2012 ii. 324,000 metric tons redeemed in 2013 (till date)	i. Plan to roll out dry season farming programme is being put in place and is proposed to start by mid-October, 2013 ii. Eliminate problems of underweight fertilizer bags encountered with certain suppliers
17	Seed	Production	2.5million farmers redeem one 10 kilograms bag of seed or 25,000 metric tons of fertilizer	5.0million farmers redeem one 10 kilograms bag of seeds or 50,000 metric tons	i. 22,000 metric tons of seeds redeemed in 2012 ii. Redemption still ongoing	Improve supply situation for seeds in terms of quantity and time of delivery
18	Investment	Promote private sector-led, government enabled agricultural transformation		Inauguration of the Nigeria Agribusiness Group (NABG) and Community of Agricultural Stakeholders of Nigeria (CASON)	More than NGN 1.3 trillion (USD 8.0 billion) of private investment commitments leveraged.	Survey of 75 private sector companies in collaboration with Monitor-Deloitte (USAID sponsored) to gain perspectives on agribusiness sector and key constraints
		Policy reforms to grow agriculture as a business and diversify Nigeria's economy		Private sector-inspired policy reforms and advocacy	Over NGN 76 billion (USD 470 million) in G8 Members Country Investment Plans	Establishment of the institutional framework and investment code for sustaining the agricultural transformation agenda.
		Promotion of Staple Crops Processing Zones		Promotion of investment in Staple Crops Processing Zones	Concept of Staple Crop Processing Zones (SCPZ) developed and unveiled	Road shows to promote Staple Crops Processing Zones
		Increasing access to financing through innovative financing instruments		Establish Fund for Agricultural Financing (FAFIN) in collaboration with KfW and private sector management company	Implementation of FAFIN facility approval and disbursement.	Begin disbursement of funds in December
		Collaboration with other countries on value chain development		Collaboration with Morocco onion farmers on production, storage and processing of fresh onions in Kebbi State.	Visit to Morocco onion farmers to build capacities for production, storage and processing of fresh onions in Kebbi State.	Complete food science technology transfer from Morocco in the storage of onions to extend shelf life from 1-2 months to 5-6 months in Kebbi and other States.
		Collaboration with other MDAs		Collaboration with the FMITI on Abuja Commodity and Stock Exchange	Meetings with FMITI on Abuja Commodity and Stock Exchange.	
				Collaboration with FMITI on implementation of the Nigeria-Kenya agribusiness investment opportunities	Collaboration with FMITI in implementation of the Nigeria-Kenya agribusiness investment opportunities	
19	Nutrition	Food Diversification and Fortification		6 Sensitization workshops scheduled (one per geopolitical zone)	Sensitisation carried out Gombe and Kwara states	Promotion of Biofortified cassava, Potato maize and use of soybean for complementary feeding to fight stunting and wasting in 24 states with special focus on states of the guinea savanna (By 2014)
		Key Nutrition Messages		2 Training of Trainers workshops are scheduled per 6 geopolitical zones (12 in total)	2 training of trainers workshop conducted in Gombe and Kwara states	Conduct of Training of trainers workshop in 24 states with special focus on states in the Guinea savanna (By 2014)

S/N	VALUE CHAIN	INDICATORS	KPI 2012	KPI 2013	ACHIEVEMENTS	NEXT STEPS/TIMELINE
		Adoption of Home Grown School Feeding Programme:		Kano and Osun State adopted as pilot	Activities has commence after the	Adoption of 2 public schools each in 12 states in the Guinea savanna for the Home Grown School Feeding Programme (By 2014)
19	Nutrition	New recipes development and promotion		12 new food recipes for complementary feeding	30 new food recipes have been developed using sorghum, soybean, Cowpea, moringa and millet. These recipes are especially targeted for children in the North	50 new local recipes (By 2014)
20	SPZ		Development of concept note on staple crops that is capable of transforming agriculture in Nigeria	- Documentation of strategy framework and high level action plan design for SCPZ - Drafting of bill for the regulatory framework for SCPZ - Preparation of a comprehensive Impact assessment report for six SCPZ zones. Kadawa/Bunkure (Kano), Agbadu (Kogi), Badeggi (Niger), Ketu-Ereyun (Lagos), Okorolo/Andoni (Rivers), Omor/Adani (Anambra/Enugu) - Preparation of Master Plan Design for 6 sites of SCPZ (Kadawa/Bunkure (Kano), Agbadu (Kogi), Badeggi (Niger), Ketu-Ereyun (Lagos), Okorolo/Andoni (Rivers), Omor/Adani (Anambra/Enugu).	- Selection of sites for establishment of 16 Staple crops processing zones across the country based on the crops listed below: Rice: Badeggi (Niger), Kadawa/Bunkure (Kano), Adani/Omor (Enugu/Anambra), Gassol(Taraba), Ambursa/Sokoto corridor (Kebbi/Sokoto) Cassava: Agbadu (Kogi), Ososa (Ogun) Fisheries: Ketu Ereyun - Epe corridor (Lagos), Okorolo/Andoni (Rivers), Ebede biri (Bayelsa) Horticulture: Kadawa/Bunkure (Kano),Makurdi (Benue), Oban (Cross-river) Sorghum: Kadawa/Bunkure (Kano) - Completion of: - strategy plan for SCPZ - strategy framework and high level action plan design for SCPZ - Organisation of Sensitization/Validation Workshops for stakeholders on each of the first six (6) SCPZ sites for the development of Master Plan Design. - Enlisting of commitment of notable International Development Agencies like World Bank, The African Development Bank, IFAD, DFID, USAID as SCPZ Development Partners - Enlisting of firm commitment of some notable international and national Agribusinesses as Anchor Investors for some of the Model SCPZ sites: including: Biu (Borno).	- Construction Land clearing of the first six (6) sites (Nov-Dec) - Construction of Administrative offices for the first six (6) sites (Kadawa/Bunkure (Kano), Agbadu (Kogi), Badeggi (Niger), Ketu-Ereyun (Lagos), Okorolo/Andoni (Rivers), Omor/Adani (Anambra/Enugu). (Oct - Dec) - Pre-submission review of the Draft Master Plan for the first six (6) sites. (Sept) - Submission of Draft of Master Plans (September) - Distribution of Draft Master Plans to Development Partners (October) - State level Investment- Road shows (October) - Inter-Ministerial Briefing on SCPZ by HMA - Federal Executive Council (FEC) Briefing by HMA - National Council of States Briefing by HMA - National Economic Council (NEC) Briefing by HMA
21	Extension	Efficiency in agricultural extension delivery system	Ratio of Extension agents to farmers 1:3000	Ratio of Extension agents to farmers 1:2000	Ratio of Extension agents to farmers 1:2300	- Commence training of Extension Agents and farmers (by Value Chains) - Establish OFARs, MTPs/ Demonstrations along the various value chains - Purchase Extension Tools (Sprayers, etc) and motorcycles for distribution

S/N	VALUE CHAIN	INDICATORS	KPI 2012	KPI 2013	ACHIEVEMENTS	NEXT STEPS/TIMELINE
22	YEAP	Employment of 700,000 new generation farmers in the various value chains	Design a youth in agriculture programme	Seek approval from Presidency for the launch the YEAP and begin project execution	i. The design of the comprehensive Youth Employment in Agriculture Program achieved in September 2012 ii. Achieved in September 2013 through President Jonathan's approval and launch of the YEAP	i. Follow-up on request for transfer / draw-down of N37 billion approved for YEAP ii. Begin Program execution by Q2 of 2013

ANNEX 2: GES REDEMPTION DATA BY STATE IN 2012

SN	STATE	TOTAL NUMBER OF REGISTERED FARMERS	TOTAL NUMBER OF FARMERS REDEEMED	FARMER TURNOUT	NO OF ACTIVE REDEMPTION CENTERS	TOTAL REDEMPTION CENTERS	NO OF ACTIVE LGAS	TOTAL LGAS	TOTAL NO OF FERTILIZER REDEEMED (METRIC TONS)	TOTAL NO OF SEEDS REDEEMED (METRIC TONS)	NO OF MAIZE SEEDS (METRIC TONS)	NO OF RICE SEEDS (METRIC TONS)
NORTH CENTRAL												
1	BENUE	134,862	35,143	57,283	6	15	7	23	3,495.60	42.90	2.00	40.90
2	FCT	55,551	37,038	61,113	17	17	6	6	3,703.75	256.40	132.80	123.6
3	KOGI	96,051	29,400	47,922	31	38	21	21	2,823.45	432.10	285.20	146.90
4	KWARA	144,636	11,001	15,990	7	20	16	16	623.80	443.50	254.40	189.10
5	NASSARAWA	115,703	36,661	43,203	16	22	11	13	3,666.10	114.17	44.12	65.05
6	NIGER	90,762	31,849	52,232	25	32	25	25	3,074.50	325.30	135.30	190.00
7	PLATEAU	136,801	27,270	43,087	2	15	2	17	2,789.35	59.83	39.38	20.45
	Subtotal	774,366	197,656	320,830	104	159	88	121	20,176.55	1,674.20	893.20	776.00
NORTH EAST												
8	BAUCHI	321,605	70,515	112,824	34	42	18	20	5734.45	294	110	185
9	BORNO	147,880	18,623	28,866	27	27	27	27	683	-	-	0
10	GOMBE	157,942	101,200	112,756	15	19	11	11	7321.8	897	413.2	484.1
11	TARABA	229,648	27,270	42,269	29	33	16	16	2727	-	0	0
12	YOBE	82,538	17,213	26,164	2	4	3	17	6.2	-	0	0
	Subtotal	939,613	234,821	322,879	107	125	75	91	16472.45	1191.3	522.7	668.6
NORTH WEST												
13	JIGAWA	121292	100751	154149	9	40	23	28	4016.1	390	150	240
14	KADUNA	220806	120218	158344	13	20	15	23	10000	475.9	271	204.9
15	KANO	245170	189300	279787	21	21	44	44	18050.8	4466.07	983.33	3482.74
16	KATSINA	91988	62127	101888	10	33	10	33	49811	106.98	106.98	0

SN	STATE	TOTAL NUMBER OF REGISTERED FARMERS	TOTAL NUMBER OF FARMERS REDEEMED	FARMER TURNOUT	NO OF ACTIVE REDEMPTION CENTERS	TOTAL REDEMPTION CENTERS	NO OF ACTIVE LGAS	TOTAL LGAS	TOTAL NO OF FERTILIZER REDEEMED (METRIC TONS)	TOTAL NO OF SEEDS REDEEMED (METRIC TONS)	NO OF MAIZE SEEDS (METRIC TONS)	NO OF RICE SEEDS (METRIC TONS)
17	KEBBI	81168	12140	19545	1	4	5	21	858.75	450	120	330
18	SOKOTO	117749	65216	91200	5	35	18	23	6000	840.6	150	690.6
19	ZAMFARA	91601	11180	17664	2	4	3	14	146.25	159.3	0	159.3
	Subtotal	969,774	560,932	822,577	61	157	118	186	88,882.9	6888.85	1781.31	5107.54
SOUTH EAST												
20	ABIA	121602	6919	11555	8	10	8	17	691.9	50	21	29
21	ANAMBRA	106598	6034	10077	16	23	21	21	631.25	0.1	0	0.1
22	EBONYI	83036	5591	9784	13	20	13	13	552.75	0	0	0
23	ENUGU	60315	7524	12640	7	13	17	17	752.4	10	10	0
24	IMO	49316	5107	9090	12	18	13	27	503	7.7	5	3
	Subtotal	420867	31175	53146	56	84	72	95	3131.3	67.8	35.7	32.1
SOUTH SOUTH												
25	AKWA IBOM	155136	6751	11882	11882	31	15	31	675.1	9.75	5	4.75
26	BAYELSA	89572	2140	3617	3617	8	3	8	24.9	9.6	0	9.6
27	CROSS RIVER	82362	33777	59110	59110	37	18	18	3378	661.58	610.08	51.5
28	DELTA	69680	9422	16112	16112	17	14	25	942.2	70.33	41.08	29.25
29	EDO	35063	9046	12932	12932	14	10	18	904.6	65.7	40.9	24.8
30	RIVERS	38598	1177	2048	2048	6	6	23	123	19.14	19.14	0
	Subtotal	470411	62313	105701	105701	113	66	123	6047.8	836.10	716.2	119.9
SOUTH WEST												
31	EKITI	66179	7038	10088	17	19	16	16	620.3	56.52	17.52	39
32	LAGOS	20317	2717	4863	14	19	19	20	218	62.73	60	2.53
33	OGUN	40068	5087	9233	20	21	21	21	1757.05	102.44	87.44	15.00
34	ONDO	64036	2959	5089	8	10	9	18	292.25	30.55	30.32	0.23
35	OSUN	53595	2263	3802	26	30	28	30	281.15	13	9	4
36	OYO	88219	11006	19040	43	67	32	33	922.95	51.29	34.64	16.65
	Subtotal	332414	31070	52115	128	166	125	138	4091.7	316.53	239.12	77.41
	TOTAL	3907445	1,117,967	1,677,248	517	804	544	754	138802.7	10974.78	4188.23	6781.55

Note: (i) From field observations, it should be noted that for every three farmers that arrived at the redemption point, only two redeemed. The third farmer could not due to monetary reasons.
(ii) Adamawa State is excluded because the state did not participate in the GES in 2012.

ANNEX 3: KEY PERFORMANCE INDICATORS OF AGRICULTURAL TRANSFORMATION AGENDA

MANDATE								
REVIEW OF 2012 PERFORMANCE AND PLANNED TARGETS FOR 2013								
NAME OF OUTCOME KPIS		2012			2013			REMARKS
		PLANNED TARGET	ACHIEVEMENT	PERFORMANCE	BASE LINE (2012 ACHIEVEMENT)	PLANNED TARGET	ACHIEVEMENT	
Broad Outcome One (i)	Increasing Food and Nutritional Security							
Indicator 1	EFFICIENCY IN AGRICULTURAL PRODUCTION							
	(i) priority Crops production							
	Rice (paddy) in million metric tons	5.5	5.59	102%	5.59	6.465		
	Rice (milled (metric tons per hectare	3.3	3.64	110%	3.64	4.202		
	Cassava (tubers) in millions metric tons	38.5	42.5	110.40%	42.5	55		
	Sorghum (million metric tons)	9.5	9.57	100.70%	9.57	9.7		
	Cocoa beans (million metric tons)	0.32	0.3	96%	0.3	0.33		
	Cotton Lint ('000 metric tons)	64	54.4	85%	54.4	68.0		
	Oil palm (million metric tons)	0.92	0.86	93%	0.86	1.006		On-going
	(ii) Livestock production							
	Cattle (beef in million metric tons)	0.3	0.268	89.30%	0.268	0.4		Natural and Government intervention
	Poultry (million metric tons)	0.42	0.32	76%	0.32	0.42		
	Poultry egg ('000 metric tons)	635	580	91.3%	580	635		
	Milk (million metric tons)	1.0	0.675	67.5%	0.675	1.0		The planned target for 2012 is 1.0 instead of 0.2 which we noted from the submission and it's based on 24.7% projection of the baseline 2011
	Sheep and Goat meat ('000 metric tons)	470	452	96.2%	452	470		
	Leather (million pieces)	32	31	96.9%	31	32		
	(iii) Fish production							
	Fish production (million metric tons)	1.45	1.45	100%	1.45	1.9mt		
Indicator 2	AGRICULTURAL PRODUCTIVITY							
	(i) Priority Crops Productivity							
	Rice (metric per hectare)	2.5	2.2	88.8	2.2	2.4		
	Cassava (metric tons per hectare)	16.3	18.8	115%	18.8	20		
	Sorghum (metric tons per hectare)	1	1.6	160%	1.6	1.7		
	Cocoa (kilograms per hectare)	500	320	64%	320	450		
	Cotton (kilograms per hectare)	320	320	100%	320	360		
	Oil Palm (metric tons per hectare)- (Small Holder)	8	6.5	81.25%	6.5	10		On-going

MANDATE								
REVIEW OF 2012 PERFORMANCE AND PLANNED TARGETS FOR 2013								
NAME OF OUTCOME KPIS		2012			2013			REMARKS
		PLANNED TARGET	ACHIEVEMENT	PERFORMANCE	BASE LINE (2012 ACHIEVEMENT)	PLANNED TARGET	ACHIEVEMENT	
	(ii) Livestock productivity							
	Cattles (kilograms live wt)	280	252	90%	252	280		
	Poultry (kilograms dressed wt)	1.3	1.2	92.20%	1.2	1.3		
	Milk (kilograms per lactation per Cow)	1,000	675	67.5%	675	1,000		
	(iii) Fish productivity							
	Fish (metric tons per hectare)	3.5	3.5	100%	3.5	5.0mt/ha		
Indicator 3	Reduction in pre and post-harvest loss of agricultural productivity by an average of 50% in 2015 (%)	35	20%	57%	20	25		
Indicator 4	Efficiency in agricultural extension delivery system	Ratio 1:3000	1:2300	177%	1:2300	1:2000		
Indicator 5	Increase in agricultural production through environmental sustainable technology	10	7.6	76%	7.6	10		
Indicator 6	Achieve the adoption in new improved varieties of seeds and brood stock by 50% to the farmers by 2015	10						
Broad outcome two (II)	Increasing Rural Income Growth							
Indicator 1	Achieve the adoption in new improved varieties of seeds and brood stock by 50% to the farmers by 2015	10%						
Broad Outcome Three (III)	Improving Agricultural Export Earnings							
Indicator 1	Agricultural Export Commodity (metric tons)	364.308	821,588	226	821,588			
Indicator 2	Agricultural Export Earnings (Billion Naira)	128	759	592	759			
Broad outcome Four (IV)	Reduce food Import Dependency							
Indicator 1	Food Import per annum (billion naira)	350	857	245				
Broad outcome Five (V)	Employment and Job creation							
Indicator 1	Jobs created in agricultural (aggregated for all value chain commodities (million))	0.705	2067	293				
Broad outcome six (VI)	Provision of Policy Regulatory and Administrative Services							

MANDATE								
REVIEW OF 2012 PERFORMANCE AND PLANNED TARGETS FOR 2013								
NAME OF OUTCOME KPIS		2012			2013			REMARKS
		PLANNED TARGET	ACHIEVEMENT	PERFORMANCE	BASE LINE (2012 ACHIEVEMENT)	PLANNED TARGET	ACHIEVEMENT	
Indicator 1	Improved operational efficiency of management (reduction in time of completing an assigned task)	NA	50%	NA				

ANNEX 4: REPORT OF THE 2013 GROWTH ENHANCEMENT SUPPORT (GES) SCHEME

FEDERAL MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT REPORT OF THE 2012 GROWTH ENHANCEMENT SUPPORT SCHEME (GES)												
S/N	STATE	TOTAL NUMBER OF REGISTERED FARMERS	TOTAL NUMBER OF FARMERS REDEEMED	FARMER TURNOUT	NO OF ACTIVE REDEMPTION CENTERS	TOTAL REDEMPTION CENTERS	NO OF ACTIVE LGAS	TOTAL LGAS	TOTAL NO OF FERTILIZER REDEEMED (METRIC TONS)	TOTAL NO OF SEEDS REDEEMED (METRIC TONS)	NO OF MAIZE SEEDS (METRIC TONS)	NO OF RICE SEEDS (METRIC TONS)
NORTH CENTRAL												
1	BENUE	134,862	29,881	44,822	6	15	7	23	2,976	180	120	60
2	ECT	55,551	36,146	54,219	17	17	6	6	3,596	400	320	80
3	KOGI	90,015	14,204	21,306	31	38	21	21	1,422	275	190	85
4	KWARA	144,636	9,520	14,280	7	20	16	16	139	139	346	85
5	NASSARAWA	115,703	26,505	39,758	16	22	11	13	2,712	2,712	70	51
6	NIGER	90,762	29,892	44,838	25	32	25	25	2,852	2,852	52	168
7	PLATEAU	136,801	8,119	12,179	2	15	2	2	750	750	30	28
	Subtotal	774,366	154,267	231,402	104	159	88	121	14,447	1,688	1,129	558
NORTH EAST												
8	BAUCHI	321,605	53,203	79,806	34	42	18	5,734	7	3	3	5
9	BORNO	147,880	6,828	10,242	27	27	27	683	0	0	0	0
10	GOMBE	157,942	51,232	76,848	15	19	11	5,125	665	174	174	491
11	TARARA	229,648	7,503	11,255	29	33	16	1,816	0	0	0	0
12	TOBE	82,538	62	93	2	4	17	6	0	0	0	0
	Subtotal	939,613	118,828	178,244	107	125	91	13,363	672	177	177	496
NORTH WEST												
13	JIGAWA	121,292	100,513	150,770	9	40	23	28	9,991	85	37	48
14	KADUNA	220,806	81,000	121,500	13	20	15	23	8,100	1,189	792	397
15	KANO	245,170	125,291	187,937	21	21	44	44	12,529	5,928	3,000	2,928
16	KATSINA	91,988	50,856	76,284	10	33	10	33	49,811	107	107	0
17	KEBBI	81,168	8,588	12,882	1	4	5	21	859	173	173	0

FEDERAL MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT REPORT OF THE 2012 GROWTH ENHANCEMENT SUPPORT SCHEME (GES)												
S/N	STATE	TOTAL NUMBER OF REGISTERED FARMERS	TOTAL NUMBER OF FARMERS REDEEMED	FARMER TURNOUT	NO OF ACTIVE REDEMPTION CENTERS	TOTAL REDEMPTION CENTERS	NO OF ACTIVE LGAS	TOTAL LGAS	TOTAL NO OF FERTILIZER REDEEMED (METRIC TONS)	TOTAL NO OF SEEDS REDEEMED (METRIC TONS)	NO OF MAIZE SEEDS (METRIC TONS)	NO OF RICE SEEDS (METRIC TONS)
18	SOKOTO		18,041	27,062	5	35	18	23	1,786	0	0	0
19	ZAMFARA	91,601	1,550	2,325	2	4	3	14	146	0	0	0
	Subtotal	852,025	385,839	578,839	61	157	118	186	83,223	7,481	4,109	3,372
SOUTH EAST												
20	ABIA	121,602	5,413	8,120	8	10	8	17	514	42	24	18
21	ANAMBRA	106,598	6,034	9,051	16	23	21	21	631	11	10	1
22	EBONYI	83,036	5,591	8,387	13	20	13	13	553	0	0	0
23	ENUGU	60,315	1,636	2,454	7	13	17	17	132	10	10	0
24	IMO	49,306	5,107	7,661	12	18	13	27	503	8	5	3
	Subtotal	420,867	23,781	35,673	56	84	72	95	2,334	2,334	49	22
SOUTH SOUTH												
25	AKWA IBOM	155,136	100	150	15	31	15	31	10	1	1	0
26	BAYELSA	89,572	192	288	3	8	3	8	15	10	0	10
27	CROSS RIVER	82,362	15,866	23,799	14	37	18	18	1,513	1	1	0
28	DELTA	69,680	2,815	4,223	17	17	14	25	397	35	21	15
29	EDO	35,063	2,433	3,650	9	14	10	18	161	63	45	18
30	RIVERS	38,598	1,177	1,766	3	6	6	23	123	26	26	0
	Subtotal	470,411	22,583	33,876	61	113	66	123	2,219	135	93	42
SOUTH WEST												
31	EKITI	66,179	3,115	4,673	17	19	16	16	568	7	7	0
32	LAGOS	20,317	2,179	3,269	14	19	19	20	218	60	59	2
33	OGUN	40,068	3,048	4,572	20	21	21	21	294	57	51	6
34	ONDO	64,036	1,858	2,787	8	10	9	18	184	28	28	0
35	OSUN	53,595	2,232	3,348	26	30	28	30	281	20	14	6
36	OYO	88,219	11,006	16,509	43	67	32	33	923	51	35	17
	Subtotal	332,414	23,438	35,158	128	166	125	138	2,468	224	193	31
	TOTAL	3,789,696	728,736	1,093,113	517	804	544	754	118,054	10,271	5,749	4,522

ANNEX 5: GES REDEMPTION DATA BY STATE IN 2012

S/N	STATE	TOTAL NUMBER OF REGISTERED FARMERS	TOTAL NUMBER OF FARMERS REDEEMED	FARMER TURNOUT	NO OF ACTIVE REDEMPTION CENTERS	TOTAL RE-DEMPTION CENTERS	NO OF ACTIVE LGAS	TOTAL LGAS	TOTAL NO OF FERTILIZER REDEEMED (METRIC TONS)	TOTAL NO OF SEEDS RE-DEEMED (METRIC TONS)	NO OF MAIZE SEEDS (METRIC TONS)	NO OF RICE SEEDS (METRIC TONS)
NORTH CENTRAL												
1	BENUE	134862	35143	57283	6	15	7	23	3,495.60	42.90	2.00	40.90
2	FCT	55551	37038	61113	17	17	6	6	3,703.75	256.40	132.80	123.60
3	KOGI	96051	29400	47922	31	38	21	21	2,823.45	432.10	285.20	146.90
4	KWARA	144636	11001	15990	7	20	16	16	623.80	443.50	254.40	189.10
5	NASSARAWA	115703	36661	43203	16	22	11	13	3,666.10	114.17	44.12	65.05
6	NIGER	90762	31849	52232	25	32	25	25	3,074.50	325.30	135.30	190.00
7	PLATEAU	136801	27270	43087	2	15	2	17	2,789.35	59.83	39.38	20.45
	Subtotal	774366	197656	320830	104	159	88	121	20,176.55	1,674.20	893.20	776.00
NORTH EAST												
8	BAUCHI	321605	70515	70515	34	42	18	20	5734.45	294	110	185
9	BORNO	147880	18623	18623	27	27	27	27	683	-	-	0
10	GOMBE	157942	101,200	101,200	15	19	11	11	7321.8	897	413.2	484.1
11	TARABA	229648	27270	27270	29	33	16	16	2727	-	0	0
12	YOBE	82538	17213	26164	2	4	3	17	6.2	-	0	0
	Subtotal	939613	234821	322879	107	125	75	91	16472.45	1191.3	522.7	668.6
NORTH WEST												
13	JIGAWA	121292	100751	154149	9	40	23	28	4016.1	390	150	240
14	KADUNA	220806	120218	158344	13	20	15	23	10000	475.9	271	204.9
15	KANO	245170	189300	279787	21	21	44	44	18050.8	4466.07	983.33	3482.74
16	KATSINA	91988	62127	101888	10	33	10	33	49811	106.98	106.98	0
17	KEBBI	81168	12140	19545	1	4	5	21	858.75	450	120	330
18	SOKOTO	117749	65216	91200	5	35	18	23	6000	840.6	150	690.6
19	ZAMFARA	91601	11180	17664	2	4	3	14	146.25	159.3	0	159.3
	Subtotal	969774	560932	822577	61	157	118	186	88882.9	6888.85	1781.31	5107.54
SOUTH EAST												
20	ABIA	121602	6919	11555	8	10	8	17	691.9	50	21	29
21	ANAMBRA	106598	6034	10077	16	23	21	21	631.25	0.1	0	0.1
22	EBONYI	83036	5591	9784	13	20	13	13	552.75	0	0	0
23	ENUGU	60315	7524	12640	7	13	17	17	752.4	10	10	0
24	IMO	49316	5107	9090	12	18	13	27	503	7.7	5	3
	Subtotal	420867	31175	53146	56	84	72	95	3131.3	67.8	35.7	32.1

S/N	STATE	TOTAL NUMBER OF REGISTERED FARMERS	TOTAL NUMBER OF FARMERS REDEEMED	FARMER TURNOUT	NO OF ACTIVE REDEMPTION CENTERS	TOTAL RE- DEMPTION CENTERS	NO OF ACTIVE LGAS	TOTAL LGAS	TOTAL NO OF FERTILIZER REDEEMED (METRIC TONS)	TOTAL NO OF SEEDS RE- DEEMED (MET- RIC TONS)	NO OF MAIZE SEEDS (MET- RIC TONS)	NO OF RICE SEEDS (METRIC TONS)
SOUTH SOUTH												
25	AKWA IBOM	155136	6751	11882	15	31	15	31	675.1	9.75	5	4.75
26	BAYELSA	89572	2140	3617	3	8	3	8	24.9	9.6	0	9.6
27	CROSS RIVER	82362	33777	59110	14	37	18	18	3378	661.58	610.08	51.5
28	DELTA	69680	9422	16112	17	17	14	25	942.2	70.33	41.08	29.25
29	EDO	35063	9046	12932	9	14	10	18	904.6	65.7	40.9	24.8
30	RIVERS	38598	1177	2048	3	6	6	23	123	19.14	19.14	0
	Subtotal	470411	62313	105701	61	113	66	123	6047.8	836.10	716.2	119.9
SOUTH WEST												
31	EKITI	66179	7038	10088	17	19	16	16	620.3	56.52	17.52	39
32	LAGOS	20317	2717	4863	14	19	19	20	218	62.73	60	2.53
33	OGUN	40068	5087	9233	20	21	21	21	1757.05	102.44	87.44	15.00
34	ONDO	64036	2959	5089	8	10	9	18	292.25	30.55	30.32	0.23
35	OSUN	53595	2263	3802	26	30	28	30	281.15	13	9	4
36	OYO	88219	11006	19040	43	67	32	33	922.95	51.29	34.64	16.65
	Subtotal	332414	31070	52115	128	166	125	138	4091.7	316.53	239.12	77.41
	TOTAL	3907445	1,117,967	1,677,248	517	804	544	754	138802.7	10974.78	4188.23	6781.55

Note: (i) From field observations, it should be noted that for every three farmers that arrived at the redemption point, only two redeemed. The third farmer could not due to monetary reasons.
(ii) Adamawa State is excluded because the state did not participate in the GES in 2012.



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