

Nigeria's Agriculture through Cocoa Rebirth

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Nothing excellent is a surprise—a wise saying.

Introduction

Transform is to change completely or suddenly so as make much better or more attractive. Reposition is to try to interest more or different people in it. In all, the emphasis is to focus work for greater effect on the subject space or community of items. Nigeria population is 169 million in 2012. Most Nigerians are engaged in agriculture. Cocoa employs many farm families across 14 states but most of Nigeria's wealth from foreign exchange earnings comes from the sale of crude petroleum oil and gas. These only provide much of the export revenue for Nigeria. Non-petroleum exports add up to just 5% of all export earnings. Income generation and employment are important aspects of the Transformation Agenda of the President Jonathan Administration. In the 2011/2012 season, agriculture accounted for 42% of Nigeria's gross domestic product. What is most interesting is that the population is employed up to 70% by agro-allied crop and livestock value chains which are far from just 40,000 jobs in the petroleum sector of the Nigerian economy. Cocoa rebirth would touch directly the lives of over 75 million Nigerians in all the states as producers, consumers or traders.

According to Ogunlade (2012), the total value of the top 20 agricultural export for the year 2009 was US\$965 million. The unprocessed cocoa beans exported in 2009 was 247,000 tonnes; while the quantity of graded cocoa beans in Ondo State for the same year was 76,399 tonnes valued at US\$185.3 million (N27.8 billion). He noted that in 2009, cocoa was the most important agricultural export in Nigeria valued at US\$664.8 million; comprising: bean was US\$599 million, cocoa butter was US\$57.4 million, cocoa powder and cake added to US\$8.4 million

In 2010, the exports of cocoa products were valued at \$822.8 million being 35 % of the \$2.32 billion earned from *non-oil* exports for Nigeria (Majebi 2012). GIS studies show that 22 of the 36 states of Nigeria can produce cocoa. The only flaw is the low promotion and emphasis on full scale scientific approach to money making through deliberate moves over a long term. Short term measures are most unlikely to make any sustained impact. Political office terms of 4 years are not relevant to agricultural planning. State agricultural plans are to be long range and implemented in sections annually. The wall of China was build over the reign of many emperors using the same plan. We must do same in Nigeria.

As some states do not produce petroleum, their emphasis on non-petroleum activities becomes more important. Cocoa is the chief crop after oil in many of the states of south west and especially Osun State. However, the support to the cocoa crop is still feeble and not strong enough to produce the shine it can give to the livelihoods of many rural dwellers that form the majority of the populace.

CRIN as a Research and Development Institute

History and mandates of CRIN. The Cocoa Research Institute of Nigeria (CRIN) began in Ibadan in 1947 as a sub-station of the erstwhile West African Cocoa Research Institute (WACRI) founded in 1938. But the Nigerian sub-station was only established by virtue of the West African Cocoa Research Institute act of 1950. Following the independence of Nigeria in 1960, the substation became an autonomous Nigeria Research Agency by virtue of Nigeria Research Institutes Act No 33 of 1964 which widened the scope of CRIN to include Research on kola and coffee in addition to cocoa. However by 1971, the scope of CRIN research activities was further widened to include cashew and tea, which was formalised in the Agricultural Research Institutes order (Legal notice No 107) of 1975 according to the Agricultural Research Institutes Decree no. 35 of 1973. The CRIN mandate was further widened in 1980 and 1987 by virtue of the National Science and Technology act 1980 and 1987 legal

notice, respectively, to include development of simple machinery and tools relevant to the cultivation, harvest, storage, preservation and processing of the CRIN mandate crops. Consequently, CRIN now has mandate to conduct research on five crops namely: cocoa, kola, coffee, cashew and tea throughout the country.

The objectives of CRIN mandate crops include, among other things, improvement of the genetic, agronomic and husbandry practices, identification of the ecology and control methods of diseases and pests, transfer of research result to potential users, investigating the effective utilization of the crops and their by products and development of simple machinery and tools relevant to the cultivation, harvest, utilization of the said crops.

The West African Cocoa Research Institute established in Akim-Tafo in the Eastern Region of Ghana was a British Colonial set up for research with an experimental substation in Onigambari, near Ibadan. Though the initial offices were at the Moor Plantation, the move to the permanent site at Idi-Ayunre took place after constructions. It was in December 1964, the federal government of Nigeria by an Act of Parliament established the Cocoa Research Institute of Nigeria to undertake research on cocoa and other tree crops. By 2014, CRIN will be 50 years old. Over the years, CRIN has demonstrated its research findings on cocoa, cashew, tea, coffee, and kola. New superior varieties have been offered to farmers together with better field practices touching on stand spacing, appropriate crop protection chemicals, fertilizers selected for their efficacy and suitability for sustaining long term productivity of trees on farmers' farms. Trainings of varied stakeholders have taken place and the documentation of all such experience and expertise has been made. Through its six substations at Owena, Ibeku, Ochaja, Uhomora, Mambila, and Ajassor, these technologies are being disseminated as funds and demands allow. Today, her 70 research officers tackle arising challenges of pest and pathogens and developmental demands of the Agricultural Transformation Agenda of the FGN. The funds from the FGN are less than the duties imposed by her mandate but new partnerships are being formed to widen our base of collaboration and cooperation for joint projects and work.

Cocoa breeding research at CRIN. The first cocoa varieties initially introduced to the coast of West Africa and Nigeria were of the Amelonado type. Its popularity and significance in the global cocoa industry earned it the name “*West African Amelonado*” over time. Its significant chocolate flavour remains a unique benchmark in the global cocoa industry.

The Amelonado group has high genetic uniformity. *Phytophthora* pod rot, mirid attack, Swollen Shoot Virus extensively plagued this variety in the 1930s and 1940s, such that its ability to sustain production in West Africa for a global cocoa industry, became a major problem. To rescue the West African Cocoa industry from collapse, a new type of cocoa varieties of the synthetic F₃ Amazon (which were open-pollinated genetic material) from the Upper Amazon Forastero and Trinitario hybrid population were developed and released to the farmers in 1954.

In late 1960s to early 1970s, selection of high performing materials was done. The outcome was the release of WACRI series I and II. In 1972, CRIN elite varieties were introduced. Subsequently, many breeding attempts were made to improve the existing varieties. The outcome of the breeding research result (in part), led to the flag off of the National Cocoa Seed Garden Project (NCSG) of 2007, where selected parental stocks of cocoa were established. Hybrid pods were also generated within the plot through pair-wise controlled hand pollination. The 14 cocoa growing states of Nigeria were targeted—Ondo, Ogun, Oyo, Osun, Kwara, Kogi, Edo, Delta, Akwa Ibom, Cross River, Taraba, Adamawa, Abia and Ekiti states.

Another project was funded by CFC/ICCO in 1999, which led to the release of new eight cocoa varieties (Tc-1 – Tc-8) in 2011. The eight (8) cocoa varieties released to Nigerian farmers in 2011 have the following general characteristics:

High yielding and productivity per tree
Attaining first pod production within 24 months of field establishment
Resistant/tolerant to *Phytophthora* pod rot

Resistant/ tolerant to mirids
 Higher butter content ($\geq 55\%$)
 Higher individual bean weight ($> 1.0\text{g}$)

During evaluation of these hybrids, precocity (early pod bearing) was the first identified genetic characteristics on-station and on-farm. Yield (pod and bean) and other vast genetic-economic characteristics were evaluated. Having discovered the outstanding qualities of these varieties above the ones presently in the hands of Nigerian farmers, getting them to the users (i.e. the farmers) became the paramount issue.

Table 1 provides the characteristics of the best productive cocoa varieties released to farmers in 2010/2011 cocoa season.

Table 1: Characteristics of CRIN Tc-1 to 8 cocoa varieties released in 2011 to farmers

Variety name	Pedigree	Genetic origin	Outstanding qualities
CRIN Tc-1	T65/7 x N38	Amazon (PA/IMC) x Amelonado	Y=2.04 t/ha, PPR=MR, Early fruiting, 55.2% butterfat
CRIN Tc-2	T101/15 x N38	Amazon (IMC/NA) x Amelonado	Y=2.12t/ha, PPR=MR, Early fruiting, 57.4% butterfat
CRIN Tc-3	P7 X PA150	Amazon hybrids	Y=1.85 t/ha, PPR=HR, M=HR, Early fruiting, 56.6% butterfat Especially suited to high rain forest
CRIN Tc-4	T65/7 x T57/22	Amazon (PA/IMC) x Trinitario	Y=1.6t/ha, PPR=MR, M=MR, Early fruiting, 54.9% butterfat
CRIN Tc-5	T82/27 X T12/11	Amazon (NA/PA/SCA) hybrid	Y=1.7 t/ha, M=R, WB=R, Early fruiting, 56.7% butterfat Adaptation to drier areas
CRIN Tc-6	PA150 X T60/887	Amazon (PA/NA) hybrid	Y=1.50 t/ha, PPR=HR, Early fruiting; 56.8% butterfat
CRIN Tc-7	T82/27 X T16/17	Amazon (NA/PA/IMC) hybrid	Y=1.73 t/ha, PPR=MR, M=HR, Early fruiting, 57.3% butterfat
CRIN Tc-8	T65/7 X T9/15	Amazon x Trinitario	Y=1.34 t/ha, PPR=R, M=R Early fruiting, 54.72% butterfat

Note: Y: actual dry bean yield; PPR: *Phytophthora* pod rot; M: mirid; WB: witches broom; HR: highly resistant; R: resistant; MR: moderately resistant

Cocoa Statistics:

Cocoa is still largely cultivated and managed in Nigeria using richly traditional methods and genetic materials that do not yet fully attain to the global quality standards or processing practices. Data on all aspects of the cocoa value chain are lacking for each state. Until we seek to collect, collate, analyse, and interpret the data relating to the cocoa value chain; we shall not fully take advantage of the opportunities and master the management of the threats to the cocoa industry locally and internationally. Efforts to document and gather data is the duty of each cocoa producing state in Nigeria. However, the CRIN is poised to standby and assist in many ways if called upon.

Produce inspectors, licensed buying agencies (LBAs) and others all have data and statistics that need to be collated and published if we are to fully understand the cocoa industry with all its complexities.

Adopted Cocoa Development Villages:

The need to use actual villages to demonstrate the best technologies remains a good step. It was to be about 20 km from the research institutes. What was learned from this exercise was that the farmers need of guidance was important if timely, and not top-down in administration. Farmers worked with research-extension to do field

activities and to share knowledge. The scaling out of this programme of adopted villages is not easy as the researcher to village ratio was too small. The way out was to train the trainers (TOT). CRIN from February next year would commence a long series of trainings to cover the gap through know-how and skills acquisition to further the gains of the Cocoa Transformation Agenda under the foresight of Dr Goodluck Jonathan and his most able Minister of Agriculture: Dr Akinwunmi Adesina. Only states that share this foresight can add to what is being done at least in their own cocoa villages to more abundantly reap the dividends of the cocoa rebirth that has begun. More villages would be touched after the TOT at CRIN in 2013.

Cocoa Production Survey [Sept 2005-May 2007]

In the history of cocoa in Nigeria, one large scale technical survey was conducted over 21 months at a cost of ₦20.0 million from the NCDC executed by CRIN and others. The report was published in October 2012 in a booklet of 84 pages [ISBN 978-978-50656-6-4]. Some highlights include:

Number of cocoa producers around 250,000

Average output of 1.5 tonnes per household

Field estimates: about 634,000 ha of cocoa

Total national annual production:

251,263 tonnes in 2001/02

327,345 tonnes in 2003/04

321,592 tonnes in 2004/05

Bean yield range: 150-1,200 kg/ha

Annual mean [dry bean] yield:

393 kg/ha in 2001/02

503 kg/ha in 2004/05

Nigeria national average 462 kg/ha.

FOS (2002) puts the total cocoa area at 780,000 ha but the more recent 2005-2007 survey estimated 634,000 ha (CRIN 2012). Just how were these figures generated? Could the changes in area within an interval of a few years be so great? Were the trees cut down or did they stop bearing pods? These discrepancies are not easy to gloss over. We need better reasons to understand these dynamics.

Cocoa Tree Farms

Cocoa trees occupy hectares and fractions of hectares across the Nigerian landscape from latitude 7°N and 9°N best with 1200-1600 mm of annual rainfall. A cocoa farm is not essentially in terms of hectares but is to be in the number of surviving trees that are able to produce mature pods in each cocoa season of 12 months. The main and light seasons add up to the annual crop which should attain to the potential of 6 t/ha of dry beans *ceteris paribus*. Our current 0.5 t/ha tells a bad story of how we perform our cocoa farm tasks. Never in the history of cocoa has farmers' fully applied all the known care and nurture to the crop. Today, we know far more now about the crop. But the socio-economics of the cocoa chain have not progressed far so that we still wallow in poverty of practices. Prices *free on board (fob)* are low and the portion of the *fob* paid to the farmer is not attractive for modern youths to be attracted to field production rather than cocoa trade and marketing and export. Youth who has gone to school would do better than the older generation and thus achieve far higher level of living. Surely, the numbering of each cocoa tree to know which is doing poorly and which tree needs to be cut or grafted or budded is a major shift in our thoroughness in our management of the crop.

Cocoa Pod Production

Well-pruned trees on fertile soils with enough shade and rains that are healthy and free of pest and diseases produce high number of flowers and if pollinated optimally can produce higher number of pods. The usual about 10 pods on old trees can be raised up to 60 or more. The average can be raised with fertiliser, watering especially in areas with other crops that deplete soil water faster than the use by cocoa. The management of shade is essential and these practices should be facilitated by dedicated agreements between governments at the state and LGA level to aid income generation but far more interesting is the hope for job creation for the state.

Cocoa bean fermentation and drying

These two steps in dry bean production are as weak in the cocoa value chain as can be. Timing of work, appropriateness of the tools, traditional skills learned by observation have dominated the work to date. Beans are dried in many ways to yield poor quality beans that end up as rejects or of low cash value. The general difficulty of haulage of pods constrains each cocoa farmer to partially process their own pods after harvest on-farm. Not all farmers properly process their pods into dry bean. In all, the state-wide yield of quality bean is reduced. Training and demonstration of better techniques offer a way out of this problem. Road-side, road and metal-base drying of bean is common and the top of the rock drying. These provoke and numerous pilfering events. This has made the shift of bean drying methods imperative. Raised platforms would help better bean drying as is done in Ghana but Nigerians are yet to generally adopt this method. Two sided air flows of raised platform drying makes for more uniform dehydration and quicker drying. The incidence of rot and mouldiness is greatly reduced to a minimum as the beans are easier to cover on raised platforms. Platform drying avoids ground moisture returning to the bean. Many small changes along the steps of the cocoa value chain would raise Nigerian cocoa beans to an enviable level that the brand name would command higher prices than what it is today. Quality sells higher always.

Managing Cocoa Farms

A cocoa farm may be a sole or mixed crop species plot. At different ages of the cocoa crop, different types of shade plants are required for the best yields from cocoa. As the plant grows, plantain and banana can no more serve adequately because the cocoa height is just at the same level. Then oil palm can give better shade. It is well proven that a cocoa-oil palm intercrop is profitable and productive. The best productive life of cocoa is not much more than 24 years. After that age, yields decline and much more effort to sustain yield at good level become a requirement. However, good agricultural practices would greatly prolong the productive life of cocoa trees. It is sure that the profits of such old farms are low and unattractive to youths. Thus, to bequeath an old cocoa farm to any youth is a not enviable and will never hold such a Nigerian youth. CRIN is developing new ways to grow cocoa sustainable using a holistic consideration of factors over the full lifespan of the crop.

Yield estimation and the factors determining cocoa bean yield

Most of the literature on cocoa gives insufficient details on how bean yields are obtained. The variables in cocoa bean yield determination would include: number of pod producing trees of cacao in the farm [per hectare], mean number of pods per tree, weight or number of beans per pod, the weight of bean after proper 6-day fermentation, and the weight of bean after complete sun-drying to 8% moisture content. Any losses along the sequence so described are assumed to be zero in efficient operations. However, among local farmers, varied levels of loss and rot are observed. Every good agricultural practice that is taken on the trees affects one or more of these variables positively. This mainly relates to the cocoa variety planted, tree spacing adopted, shade species and effective intensity at different ages of the surviving plants, disease and pest management, precipitation and evapo-transpiration regimes throughout the season, weed management and soil nutrient status, yield extraction levels balanced with the fertiliser type, amount and mode of application. The bean yield is also affected by the efficiency of insect pollination as well as the condition prevailing during pod growth and maturation. Besides, the effectiveness of pod harvest and their evacuation before spoilage after maturity contribute to help determine yield of beans. On this ground, fertility of soils and adequacy of rainfall and the degree of control of pests and diseases throughout the season greatly determine the yield level.

In many cases, the count of trees per plot or hectare is not known. It is an error to use unequal density of cocoa trees for estimating productivity of cocoa fields. This is evidently because the combination of different species of tree crops on the same hectare would never give a fair estimate. Such a procedure would give the output per farmer but not per hectare. This difference must be identified whenever we consider cocoa farm productivity. The history and habit of guesswork has become ingrained in the agriculture of cocoa culture and many other crops. Only clear accurate estimates tell us how we perform in our efforts to revamp and advance the cocoa sector in Nigeria.

Cocoa Value Chain and People Employment

It is recorded that some 250,000 people are engaged in farming of cocoa in 2007 in Nigeria. This excludes other stakeholders of the cocoa value chain in Nigeria. Field activities that create work for people include: land clearing, bush slashing, fertiliser application, agro-chemical application, pod harvest, pod assemblage, pod breakage, bean removal, bean fermentation, and bean drying. Bean bagging and sale at home or at storage warehouses create more jobs. The transport of larger volumes adds more work also. Private and public officers that grade beans, gather and bulk the bean into larger commercial standard bags of 64kg weight and labelled as to source and origin. These are hauled to the wharf and loaded onto the ship at the port and further paper work is done before they are put on board.

Best seeds of the best varieties

In Nigeria, there are many cocoa varieties in farmers' field plots and the buyers in the local market are also not discriminative as yet. Farmers habitually plant seeds from their own trees that are likely to be some form of hybrid without knowledge of the genetic composition. Consequently, farmers mix beans from a varied array of genotypes so that the unique flavours are developed. It is not easy to replicate across the cocoa states. The flavour-based selection of varieties according to consumer preferences is not yet an evident practice. This trend will happen and the segregation of varieties according to niche markets will grow. Most essential today is the issue of planting materials. But the process of rapid increase in the planting materials for farmers has brought in a new wave of deliberate search for the best seeds of the best varieties. Good pods or grafts or seedlings of the most pest and disease tolerant and high yield varieties with good flavour as measured by sensory and organoleptic assessments.

Processing Quality Cocoa Beans

Processors of cocoa bean sell cocoa dry powder at about N425 per kg but buys cocoa bean at N230 per kg. Yet the dry beans contain around 55% oil called cocoa butter. Price gradients for the different grades are as follows: 100 % for good fermented, 83.1% for fair fermented, 46.0% for unfermented, and 95.9% for no grade beans (CRIN 2008).

In CRIN (2012), a pod harvest from different fields totalling 7232 pods were obtained that provided 124.3 kg of dry beans. This implies 58.2 pods yield 1 kg of dry bean. This ratio indicates one or a combination of the following factors: low yielding varieties, poor field care as well as old age of the trees that were over 30 years. Normally, about 28 pods would give 1 kg of dry beans in Ghana (Dr Francis Padi, 2012 *personal communication*). We need, therefore, to pursue the higher productivity concept being promoted in the COcTA of the ATA of the present government administration.

From April 2008 to March 2009, in research and production field plots at CRIG, Tafo Ghana, 538712 pods were harvested, of these 150497 pods were discarded containing 2196 kg of beans. The 388212 usable pods were processed in 48 batches to give 35,337 kg of wet bean that were fermented and dried into 194 bags of beans that weighed a total of 12,125 kg. On average, 11 pods gave 1 kg of wet beans and 32 pods gave 1 kg of dried beans (CRIG 2009).

Local and international Prices

What is the price at which farmers break even locally? What is the interest rate that is locally charged in the local sources of credit to farmers? Cheating of farmers is rampant. This is a bane of the LBA using imprecise scales, and faulty grading of beans when dealing with poor illiterate farmers in remote villages. Fair prices that will keep farmers as cocoa bean producers and remain happy and satisfied is important for maintaining the cocoa value chain in the world market.

Cocoa Usage in Nigeria

If most of the cocoa we produce is chiefly for export in the raw bean form, then the current prices for bean will not encourage new entrants, especially so, the youth. The new call and efforts to ensure that a largest proportion of the cocoa crop is locally processed into various intermediate and final products is a good step in the right

direction. Support to industries to do this is urgent if the companies are to break even and make gains and remain in processing sustainably. School programs to give some cocoa drink to primary and secondary school pupils will have a future effect of bringing up a cocoa-loving generation that will sustain the nations cocoa industry as producers and as consumers.

Cocoa Forests

Sole cocoa tree plots are going to become rarer in Nigeria because of the changing agro-ecological settings and the need for stabilisation of farm family income generation. A cocoa forest contains kola, coffee, citrus species especially orange, and a sprinkle of trees of timber species. The increasing shortage of land area per rural household and the need to provide food and cash crops has called for a smaller share of the resources available to each farm household. Cocoa farming as the first step in the value chain seems to be far less inviting to investors than the other aspects of bean trading, processing and export. If the Dominican Republic farmers do no more than 600 cocoa trees per hectare so as to assure an all-year-round supply of funds and home products, there must be a reason to consider these intercrops with cocoa (Martinez 2012). Local research has shown that where cocoa grows, oil palm would also do well. This cocoa-oil palm tree intercrop greatly favours the cocoa with shade and a good reason to fertilise in the hope that both crops would benefit and lead to higher productivity of products and cash income. While the productivity of the land is of great importance, Nigeria's cocoa output can rise if—as CocTA is promoting we do faithfully implement:

- a. The adoption and use of new varieties by planting, budding or grafting onto old tree stocks;
- b. Fields are maintained using good agricultural practices (GAP), especially where every space in the land scarce farms are replaced once they reach the end of a good pod bearing age, adequately and rightly fertilised and properly protected against all major diseases and pests;
- c. Planting of new trees across new lands or intensification of the same old plots by replacing all missing plant stands of cocoa with new early bearing varieties.

Challenges Ahead

There are 22 potential states that can produce cocoa in Nigeria, albeit to different levels of intensity and expertise and yields potentials. The production of good quality beans should be the main thrust. Dry beans account for just a part of the weight of a pod implies that the sale of dry beans must be assisted by construction of roads. This will ease the handling of evacuation of beans and the movement from over local areas to collecting centres. There is no need for unnecessary involvement of large number of local buyers. There must be a regulation by the farmer unions that there should be a reasonable number of people in the chain at each point. A farmer to buyer number ratio should be fixed. There is need to know who sells to which buyer. There should be an established difficulty of switching buyers among sellers so that traceability of batches is possible.

World Cocoa Wars.

The world cocoa economy is not at peace. Buyers and sellers are not happy with each other. In 2010 season, the price fell from \$3000 per tonne of dry cocoa beans to \$2100 in one single cocoa year when Ghana attained a million tonne production level. Countries in association in Africa are not as fully organised as they should be. World Cocoa Foundation (a private association) has many activities and programmes to ensure that increased cocoa production is sustained. The most critical issue continues to relate to how to determine a fair price for cocoa beans in the world market that would keep the producing farmer to remain on his field from year to year. If greater profits accrue to only non-farmers (different types of traders) and then the cocoa war would remain and cocoa farming continue to be unattractive to younger farmers. As the age of cocoa farmers advance, the fear of new entrants has remained a great issue of debate among cocoa nations. But new strategies are being worked out to contain these challenges. These include: a) diversified markets; b) more productive tree and varieties; b) numbering of trees and engaging in canopy change for the less productive trees; c) greater appreciation of the medico-nutritional uses of cocoa among Africans and other producing nations; d) stock piling processed cocoa products to foster longer distance trade among African nations; e) cocoa census, and cocoa statistics and data management; f) local support to cocoa research and cocoa farmers; g) organised input supply arrangements, as in GES; h) skill update among farmers through refined training techniques; i) and quantified management of the

cocoa chain; reduced cheating of farmers by LBAs through discouraging of the use of faulty weighing scales and balances; j) increase advocacy for greater local consumption of cocoa products.

Emerging Outlook

The recent thrust in Agricultural Transformation Agenda (ATA) of the Jonathan Administration and especially the Cocoa Transformation Agenda (CocTA) is hoped to bring changes in productivity with the goal of attaining 1 million metric tonnes by the year 2015. This is to be achieved through three approaches: a) grow cocoa on more hectares using better varieties; b) raise the productivity from 250 to 500 kg/ha of cocoa through better agricultural practices by increased use of fertiliser and cocoa plant protection to manage stress from pests and diseases by agro-chemical usage. The use of better varieties is been enabled by the Growth Enhancement Scheme (GES) that seeks to distribution of high quality planting materials [WACRI series, CRIN TC 1-8 series, and the F3 Amazon pods to the Nigerian farmers in 2012/2013; as well as, c) rehabilitation of old cocoa farms thorough pruning, budding, grafting and canopy exchange techniques.

Cocoa in Osun State

Osun state is the third cocoa producing state among the 14 producing states. Based on the 2007 cocoa survey, 17 LGAs on the northern and western borders of the state do not produce much cocoa. The other 28 LGAs produced about 54,000 tonnes in 2004/2005 season. It is arguably the greatest employer of labour in the state. As at 2007, the suitable hectares are some 161000 ha equivalent to 5% of total suitable land area in Nigeria; whereas the current hectares were 106111 ha that is just 16.6% of cocoa land in Nigeria, though equivalent to 65.9% of suitable cocoa land in Osun State. At average of about 503 kg of dry cocoa beans per hectare, there remains a much greater productivity gap to fill. Using canopy change techniques, yields could triple. The steps to such solutions are within the reach of the government and the farmers if genuine collaboration of partners and stakeholders can take place. General talk is to be shunned. Actual action in planned ways will make for progressive increases to cocoa economy of Osun State. Across Nigeria, cocoa hectares average yield is 462 kg/ha and where about 1500 kg of dry cocoa beans is produced per household. This implies that Osun State has about 33,000 cocoa families farming the crop or nearly 170,000 Osun people.

The level of employment is surely higher when other families along the cocoa value chain are added from families that supply inputs and services: agro-chemicals, bags, paint for labels, carpenters for making pallets, sheds, sort trays, sieves, processors, tractor haulers, transporters, scales, etc. The inspectors, graders of beans, exporters, local buying agents, local non-bank finance providers to the chain, sellers of cocoa products, makers of cocoa products, consumers of cocoa products all have a say on how the cocoa economy unfolds in Osun State.

The more of local cocoa usage the higher is the contribution of cocoa to the life of the state. In the absence of crude petroleum, and given the agro-ecology of the state, it would be wise to finely focus on cocoa rebirth and sustain the whole chain. Cocoa use in Osun state through school programmes is a must to instill the love for cocoa from childhood to adulthood. Cocoa products of diverse types need to be promoted.

Cocoa Research in Osun State

On 6 November 2012, the project manager of the Tree Crops Unit of Osun State [Mrs F.T. Jimibada] presented a formal request to CRIN management to consider the siting of a cocoa research substation of the CRIN in Osun State. That request was a dream we at CRIN had cherished that each cocoa state should have a substation. A substation is a cell of operations where the concerns of the any crop is taken with care and seriousness for the good of the farmers and other stakeholders more locally. Even if it is just one staff in one room, such a contact point will eventually grow over time and then cater for the many requests of the cocoa stakeholders of the state. This will greatly consolidate the collection of statistics and help better plan and grow the cocoa economy of the state. I fully support that move and CRIN is fully ready to begin discussion on this with the Osun State authorities.

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Professor Malachy Oghenovo Akoroda has PhD in crop breeding with over 200 scientific publications; supervised 160 student research projects. A world class numerical agronomist; lectured at the University of Ibadan while designing value chain strategies for 36 species especially root and tuber crops in 40 countries; okra and corchorus breeder and seed technologist at National Horticultural Research Institute, Ibadan; yam breeder at International Institute of Tropical Agriculture (IITA), Ibadan; cassava breeder/agronomist in Gatsby Foundation of London Project at Institut des Recherches Agronomiques at Ngaoundere Cameroon, and a tree crops demonstrator since 1976. Served as officer-in-charge of IITA High Rainfall Station at Onne, Nigeria where he helped the Presidential Initiative release nine cassava varieties; was president of International Society for Tropical Root Crops-Africa Branch; scientific advisor to Sweetpotato Promotion Group, Nigeria; agricultural consultant to many agencies including FAO, IFAD, IFC of World Bank, Japan, Catholic Relief Services, USAID and African governments and Nigeria. He was advisor on vegetative seed systems to Bill and Melinda Gates Foundation, Seattle, USA; IITA Yam Seed Systems Specialist in June 2012 before July 2012 when President Goodluck Ebele Jonathan of Nigeria approved his appointment as Executive Director, Cocoa Research Institute of Nigeria with mandate for cocoa, cashew, coffee, kola and tea.