A BRIEF ACCOUNT OF COFFEE PRODUCTION IN ANGOLA: A QUICK ASSESSMENT REPORT

BY

BAYETTA BELLACHEW¹

JUNE 2015

¹ Director of Research and Development, African Coffee Research Network (ACRN) Coordinator, E-mail: bbellachew@yahoo.com, bbayetta@iaco-oiac.org
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1. Introduction

The production of coffee in Angola was started in the 1830s by the Portuguese colonial power. It later became an important cash crop of the country being grown on approximately 596,000 hectares comprising 2,500 commercial farms/plantations owned mostly by the Portuguese and 250,000 peasant holdings of small scale coffee farms\(^1\,2,7\). In the 1960s (1963/64 – 1968/69) and early 1970s (1970/71 – 1975/76), Angola was one of the largest African coffee producers and exporters ranking second after Cote d’Ivoire and even ranking first in some of the years. During those days, coffee was one of the largest agricultural products and major sources of foreign exchange earners for the country.

According to ICO statistics\(^6\), Angola’s coffee production was once (in 1972/73) as high as 241,860 tons, the highest in Africa at that time. An abrupt reduction in the production and export was evident since 1976/77 as a consequence of two major events: (1) the Angolan war for independence (1961 – 1974) that resulted in the exodus of skilled Portuguese commercial farmers after independence in 1975 which left the coffee plantations unattended and becoming wild bushes\(^5\); and (2) the long civil war that broke out just after the country declared independence and that lasted for about 27 years (1975 – 2002) further exacerbated the devastation of coffee plantations and small coffee farms because of displacement of coffee producers, as well as insecurity and other related factors that deprived coffee farms of their management.

According to various reports, after the end of the civil war in 2002, rehabilitation of the plantations has been ongoing, but not much progress has been registered in boosting production and export volume (Table 1). Therefore, it is of paramount importance to understand the real constrains to this recovery effort and to come up with some possible measures in order to revamp the country’s coffee industry. As a contribution towards this effort, a quick reconnaissance survey was conducted from 5 – 8 May 2015 through discussion with relevant government bodies (INCA, Research, and farmers’ cooperative), field visit and discussion with coffee farm owners, and review of available reports. The main objectives of the mission were to:
1. understand the status of coffee production and marketing system in the country and to identify key constraints along the value chain,
2. lay down a base for the development of a National Coffee Sector Development Strategy for Angola, and
3. Suggest possible measures to address the constraints and revamp the coffee industry once again in order to maximize its contribution to the national economy and to improve the livelihoods of the smallholder coffee producing families of Angola.

During the Mission, the Secretary General of IACO was also in Angola, on invitation of the Government of Angola, and he held high level discussions with H.E. the Vice President of the Republic of Angola, and the Ministries of Agriculture and Foreign Affairs. The high level visit and discussions, though pivoted on the preparations for IACO’s 55th Annual General Assembly, to be hosted by the Government of Angola in November 2015, also focused on strategic issues of how Angola could regain its leadership position in the African coffee industry. It is hoped, therefore, that high-level attention will be paid to the issues raised during the mission and articulated in this Mission Report.

2. Coffee Production and Export Status

In 11 of its 18 administrative provinces, Angola produces two types of coffee species, *Coffea canephora* commercially called Robusta and *Coffea Arabica* commercially called Arabica. Robusta is predominantly produced in the provinces of Cuanza Sul, Uige, Cuanza Norte, Bengo, Malanje, Zaire, and Cabinda, the first three being the largest producers, in that order. On the other hand, Arabica coffee is produced in the provinces of Bie, Huambo and Benguela with a new introduction to Huila province in the recent past. These provinces possess sizeable areas of fertile land suitable for the production of high quality Robusta as well as Arabica coffees. The Robusta coffee from these areas is reportedly unique in its taste and is reportedly the best in quality compared to that of other countries\(^2\). This is probably due to the conventional practice of growing coffee under shade, the high altitude which is mostly about 1,100 m.a.s.l and above, the soil type and other factors, all contributing as the main reasons for the unique quality flavor of Angolan Robusta coffee.

According to ICO statistics (Table 1), the average annual production in the 1960s (1963/64 – 1969/70) was 198,319 tons with a range of 152,580 - 203,700 tons between years. During the early 1970s (1970/71 – 1975/76) i.e. before independence in 1975, the average annual production still stood at 192, 240 tons. During these periods, Angola was the second largest producer after Cote d’Ivoire in Africa. Angola’s production had touched once a peak of 241,860 tons in 1972/73 crop season and was the first in Africa surpassing Cote d’Ivoire at that time.
Table 1. Summary of past and present coffee production and export of Angola

<table>
<thead>
<tr>
<th>Crop year</th>
<th>Production (tons)</th>
<th>Export (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average</td>
<td>Range</td>
</tr>
<tr>
<td>1990/91 – 1999/00</td>
<td>3,924</td>
<td>3,300 – 4,740</td>
</tr>
<tr>
<td>2000/01 – 2009/10</td>
<td>1,968</td>
<td>780 – 3,420</td>
</tr>
<tr>
<td>2010/11</td>
<td>2,100</td>
<td>-</td>
</tr>
<tr>
<td>2011/12</td>
<td>1,740</td>
<td>-</td>
</tr>
<tr>
<td>2012/13</td>
<td>3,000</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Extracted from ICO coffee statistics (www.ico.org)

Immediately after independence, this figure dramatically dropped down to 57,480 tons in 1976/77 crop season. With steady decline since then, the production has gone down as low as 780 tons in 2009/10. Since the recent past, however, the production has started showing some sign of recovery even if it is not significant. During 2010/11, 2011/12, and 2012/13, the annual production was recorded at 2,100 tons, 1,740 tons and 3,000 tons, respectively.

The decline in production and lagging recovery could be attributed to a number of factors including both political and socio-economic. As a result of the war for independence and the civil strife afterwards, the production system has shifted from a predominantly commercial plantation to smallholder coffee farming practices. During the 1960s and 1970s, 70% of the production was reportedly contributed by commercial plantations and small farmers only accounted for the remaining 30%. Reversely, today the bulk of the production (90%) comes from smallholder farmers and commercial plantations contribute only about 10% of the total harvest. The cultivated area had decreased from 596,000 ha in the early days to less than 100,000 ha today. Similarly, productivity (yield/ha) has reduced from about 520 kg of clean coffee per hectare to less than 200 kg of clean coffee per hectare at present, owing to various constraints such as old age of coffee trees, poor management practices owing to limited knowledge and financial capacity of the smallholder farmers, limited extension services, and other factors.

The decline in coffee production had obviously affected the export volume and the revenue generated from coffee. The annual average export volume was 171,360 tons in the 1960s and 180,866 tons in the early 1970s. On the other hand, the exports for the harvest seasons of 2010/11 and 2011/12 were 457 tons and 487 tons, respectively (Table 1). This is sharp contract...
to the Country’s previous export volume which had reached a peak of 240, 256 tons in 1973/74 generating US$262.39 million revenue for the nation\textsuperscript{6}. In contrast, the foreign exchange earnings of Angola from coffee for the periods 2010/11 and 2011/12 were US$930,000 and US$1,020,000, respectively, indicating the severity of the damage inflicted by the civil war on the country’s coffee economy. This tangible evidence clearly justifies why Angola should invest in the rehabilitation program to bring the coffee economy back on track. In fact, apart from its economic significance, coffee plays significant role in rural poverty reduction, providing employment opportunities for women and youth as coffee management (weeding, harvesting, processing, etc.) is labor intensive, mitigating the effects of climate change because of the ability of the coffee plant and its shade trees to sequestrate Carbon di oxide (CO\textsubscript{2}) and in general accommodating hundreds of millions of coffee producers and traders around the world.

3. Coffee Research

3.1 General Remark
The Angolan National Coffee Institute (INCA) is a governmental body responsible for all matters related to coffee including research, development and marketing. It runs three well established regional coffee research stations that are located in different provinces representing different agro-ecological zones under which coffee grows in the country. These stations include Amboin, Uige and Ganda located in Cuanza Sul, Uige and Benguela provinces, respectively. The first two stations are dedicated to Robusta coffee research, the species which is responsible for 98% of the country’s coffee production, while the latter station is responsible for arabica coffee research. Each of the research stations reportedly covers over 1,000 ha of land holdings, Uige being the largest in size and building infrastructure. All the stations have well designed farm roads that can facilitate frequent supervision of experimental plots and coffee farms. All the stations also possess adequate facilities which include a number of high standard building infrastructure useable for office, laboratory, conference room, staff residences, guest houses, community schools, and all other auxiliary facilities. The building infrastructure and set up of these stations is the best compared to many coffee research stations/centers or institutes in other coffee producing countries of Africa.

Unfortunately, because of time limitations, the field visit was restricted only to Amboim Research Station, but it was possible to collect some information about the other two stations. Amboim Research Station is located in Gabela district, Cuanza Sul province approximately 420 km South-east of Luanda. It was established in 1952 by the Portuguese colonial power with well
built farm roads and building infrastructures. It covers about 1,200 ha of land of which 80 ha is covered with a commercial coffee farm and 40 ha with experimental plots. Obviously, as a result of the departure of the Portuguese scientists following independence and the long civil war, the research system has been severely affected. The carry-over effect appeared to have been continued today as clearly reflected on the current on-going research programs, limited skilled human resource as well inadequate support facilities and budget allocation. From the information obtained, it was also evident that the same situation holds true for Uige and Ganda research stations.

3.2. On-going Experiments at Amboim Research Station

In general, INCA is reportedly running research in three major areas:
- **Productivity Improvement** – This program was intended to mainly deal with phyto-sanitary measures or disease and insect pest control and improvement of cultural practices;
- **Genetic improvement** – This program was aimed at dealing mainly with the development of varieties through breeding and genetic studies. The program is not, however, currently running at all the three Regional Research Stations due to lack of skilled personnel, coffee breeder, in the area;
- **Research and Extension System** – This program was designed to largely focus on training and organizing farmers, providing technical backstopping, and all other extension services.

At Amboim Research Station, the following on-going experiments were visited under field condition:

1. **Observation trial on close spacing without shade** – This single treatment (i.e. 2m x 1.5m spacing) observation trial is established on a large plot without shade. The aim is to see the effect of close spacing (2m x 1.5m) on yield per hectare. The plot is well managed and said to be applied with NPK fertilizer at the rate of 500 kg/ha (300 kg/ha N + 150 kg/ha P + 150 kg/ha K) and traditional irrigation (manual watering) during dry spell (Fig. 1). Because of the close spacing, the plants have almost come in contact and closing the interspaces at their first bearing stage. Yield record has not yet started but the first two years crop is expected to be good even though there will be problems of harvesting and yield reduction afterwards.
2. Observation trial on the effects of number of verticals on yield – This observation trial was superimposed on coffee farm rejuvenated through stumping. The idea is to identify trees with one, two, three, four, etc. orthotropic stems among the coffee plant population in the farm and compare the yield of these individual trees to see the effect of vertical number or number of stems on yield per tree.

3. Observation trial on the effects of cover crop on weed suppression – This is a single treatment non replicated observation trial established on small plot using haricot bean as cover crop. The aim was to see the efficiency of intercropping coffee with beans as cover crop in controlling weeds. Weed is the major problem in the area and there are a number of noxious weed species that may require over six rounds of weeding per annum to keep the coffee farms weed-free. It is one of the practical areas to be focused on.

4. Robusta coffee spacing trial – This is a planned experiment with three spacing treatments (2m x 3m, 2m x 2m and 2m x 1.5m) planted in Randomized Complete Block Design (RCBD) with three replications and about 20 trees per plot. The aim is to compare the three spacing treatments and identify the best spacing that gives the highest yield per hectare.

5. Vegetative propagation through rooting of cuttings – This is a kind of experiment aimed at learning the best procedure for producing seedlings through rooting of cuttings and finally produce true-to-type Robusta seedlings for distribution to farmers. This is a very practical and useful idea to assist the farmers but the available ‘Clonal Garden’ or ‘Mother Garden’ for harvesting of cutting materials is very small and the propagator for conducting the different trials is too small and requires renovation.

A detailed discussion has been made on the technical quality of each of these trials right on spot and advices have been given on the way forward. In general, the above preliminary observation trials would be very useful to collect and summarize information that would serve as a base to develop more advanced and well designed replicated experiments.
3.3 Varieties Currently Under Production

It was not possible to gather enough information in this regard but it was said that there are three traditional cultivars (Cvs) of Robusta known with vernacular names designated based on the regions they come from. These are Cv. Ambiom, Cv. Kazengo and Cv. Ambriz, which originated from different regions. About 14 arabica varieties introduced from Brazil were also noticed in the nursery at Amboim Research Station but information on the level or extent of their cultivation is not available. In order to increase production, productivity and quality, the availability of improved varieties which are high yielding, disease-and-pest-resistant and adaptable to each ecological region, is fundamental. Indeed, top priority should be given to designing a sound breeding program so as to develop improved varieties in the shortest time possible.

3.4 Human power, Facilities and Budget

*Human Resources* - In general, research is understaffed and shortage of skilled human resource is the major problem at all Regional Research Stations. Currently, there are 4 researchers at Amboim (all of them agronomic engineers), 1 researcher at Uige and 2 researchers at Ganda. Researchers in different fields of specializations like breeding, pathology, entomology, soil science, etc. necessary for conducting multidisciplinary research and producing comprehensive package recommendations are lacking. Shortage of labor for the management of field experiments and the research station is another human power problem. At Amboim Research Station, there are only 5 casual laborers to manage more than 120 ha of land covered with commercial coffee farms and experimental plots.

*Facilities* – At Amboim Research Station, the building infrastructure is there but the lack of a functional laboratory, internet system, library and other related facilities necessary for proper functioning of research are key limitations. The propagator which is very essential to optimize protocol for vegetative propagation through rooting of cuttings and multiplication of seedlings for distribution to farmers is small and requires renovation and expansion. On the other hand, there are enough vehicles allocated, and transportation is not a problem at all.

*Budget* – Inadequate budget is a critical problem responsible for underperformance of the research system. The available researchers are performing below their capacity because of lack of budget for labor and other expenses.
4. Key Constraints:

Obviously, the residual effects of the two long wars—Angolan war for independence and the subsequent civil war—are the primary causes for the decline of Angolan coffee production and export, and still vividly reflecting on the need for rehabilitation efforts:

- The Angolan war for independence (1963 – 1975) had resulted in the migration of colonial agronomists and plantation owners and consequently abandonment of commercial coffee farms that reportedly accounted for 70% of the production;
- The civil war that broke out immediately after independence and lasted for about 27 years (1975 – 2002) had exacerbated the situation resulting in displacement of coffee families turning the coffee plantations and small coffee farms into forest bushes and virgin land (Fig. 2).

As indicated in Table 1 above, even after the end of the civil war in 2002, the production did not show significant recovery over a decade because of numerous constraints, some of which were noticeable during the short survey as bottlenecks to coffee rehabilitation effort in Angola, as indicated below.

1. Lack of access to finance and other incentives – The commercial plantations and small coffee farms that have been neglected for more than 4 decades have been changed to bushes and fallow lands (Fig. 2). Rehabilitation of such farms requires land clearing, uprooting the old coffee plants and shade trees and ploughing the land before replanting. These activities require high capital investment which is not affordable by the small scale farmers and medium scale plantation owners. They all express their great enthusiasm to improve their coffee farms but complain about lack of access to credit services, supply of farm tools and agricultural inputs, and other incentive mechanisms as the major impediment.

2. Low coffee price, high management cost and shortage of labor – Farm gate coffee prices in Angola are very low as compared to other countries, despite high management cost and the high cost of living. The price also greatly varies from region to region because of differences in quality. In Cuanza Sul, the farm gate price for Amboim coffee is quoted at about 100 kuanza (roughly US$1.00)/Kg of green coffee and 70 Kuanza (≈ US$0.70)/Kg of dried cherries. There is no floor price or minimum reference prices fixed by the government for the purchase of coffee at farm gate level. Price is the goodwill of the intermediary traders who
collect from the farmers and supply to exporters. Besides, since there are no adequate hulling machines, the farmers are forced to sell their coffee only in the form of dried cherries at relatively low prices.

On the other hand, labor cost is very high, the minimum wage being 500 kuanza per day for weeding and 800 – 900 Kuanza for harvesting, as quoted by one of the farmers in Gabela. Similar to coffee price, the daily wage rate also varies depending on region and the type of activity. The high labor cost is mainly due to shortage of labor owing to aging of the coffee farmers and the migration of the youth as well as coffee families to urban areas during the war for security reasons. Notably, after the end of the civil war the youth did not go back, and neither do they show or express any more interest in agriculture-related business. This situation has created serious shortage of agricultural work force, and high labor cost if

Fig.2. Some of the various scenarios of abandoned previous coffee plantations originally planted under *Gravilia robusta* shade tree.
available. These problems combined with low prices have caused some farmers to lose interest in coffee and shift to other crops such as maize which is easy to cultivate and quick to harvest for sale or consumption.

3. **Low productivity associated with old age of the coffee farms, use of traditional varieties, poor agronomic practices, and other related limiting factors** – National average yield per hectare in Angola is exceptionally low compared to other countries. According to reports and personal consultations, the average yield ranges between 80 kg and 250 kg per hectare. Among other factors, old age of the coffee trees, use of traditional varieties, poor agronomic practices owing to lack of knowledge and financial capacity, abandonment of the coffee farms for decades which requires complete rehabilitation, and lack of input supply (farm tools, fertilizer and planting materials) are the primary causes for the low yield.

![Image of coffee farm under well established shade trees](image)

Fig. 3. One of the smallholder’s farm planted under well established shade trees.

In Maria Ganza Farmers’ association, Gabela region, because of better organization of the farmers into associations and cooperatives and better training services, good smallholder farms with well established shade trees were observed (Fig. 3). However, because of lack of regular weeding, pruning, fertilization and other improved management practices owing to financial problems, yield per hectare still stands between 200 – 250 kg, as indicated by the farmers themselves.
4. **Inadequate extension services** – INCA has established an extension service structure throughout the coffee growing areas in the country that stretches from provincial level down up to the villages. Within this structure, what they call ‘Technical Brigades’ have been assigned in each region or province. These Technical Brigades are responsible for the provision of all the required extension services including organizing farmers into associations and cooperatives, training on good agricultural practices, facilitating supply of farm tools and agricultural inputs and providing technical backstopping to the farmers on a regular basis. However, due to the limited number of these Technical Brigades and shortage of budget, it has not been possible to effectively cover all the regions and provide the required extension services to the producers as originally planned. All the medium and small scale coffee farmers are demanding for technical assistance and consider it as one of the key obstacles to coffee rehabilitation program in Angola.

5. **Limited Coffee Research Capacity** – To enhance coffee production, productivity and quality, research is mandatory. Research is necessary to develop improved new varieties and agronomic practices, multiplication and distribution of improved planting materials, adoption and testing of introduced technologies, carrying out basic agronomic trials that could solve immediate problems of the farmers, training subject matter specialists or Technical Brigades and providing technical backstopping to the relevant stakeholders among others. Hence, research could play a vital role in the successful rehabilitation and sustainable development of the Angolan coffee sector. However, coffee research capacity in Angola is greatly constrained by the limited skilled human resource, facilities, and budget as described in detail in section III above, and thus unable to accomplish its mandates and provide the required services.

6. **Poor Infrastructure** – Infrastructure development in the rural areas especially feeder roads linking farmers to towns for access to market is reportedly either poor or not yet constructed. It is one of the major impediments to coffee sector development making supply of planting materials and agricultural inputs difficult. It is also the primary cause for high charges for collection of coffee from farm gates and transportation to the central market with a trickle-down effect on farm gate price.

7. **Lack or inadequate processing facilities** - During the colonial times, the Angolan coffee industry was dominated by large plantations owned by Portuguese settlers, which accounted for 70% of the annual coffee supply. These plantations had their own sophisticated processing facilities and well designed farm roads. After independence, the
plantations were subdivided among local farmers but because of lack of management skills and financial capacity, the coffee farms and processing facilities were destroyed. Through long time experience, some of the farmers were able to achieve better yield but lack of processing facilities had restricted them to sell their coffees in the form of dried cherries at lower price as indicated earlier in No 2 above under this section.

8. **Inadequate Government Support** – Various reports and personal consultation indicate that the government is aware of the factors limiting coffee sector development and is keen to relaunch the coffee rehabilitation program but much progress has not been made. Almost all the prevailing constraints mentioned above in one way or another require government support to tackle them and reverse the present scenario in the coffee sector.

5. **Opportunities Available to Revamp Coffee Production**

There are several opportunities to focusing on the recovery of coffee production in Angola:

- **Coffee is a sub-sector where Angola can compete in the global market** – According to various reports, Angola Robusta coffee was one of the excellent qualities and the representation of Angola coffee in London was always a big fight to negotiate the best rates and export quotas in the past. In addition, coffee was one of Angola’s largest agricultural export commodities.

- **Angola has long years of experience in the production of coffee and the producers have still keen interest to engage in coffee production if not limited by the key constraints mentioned above in section IV.**

- **Angola has a vast area of fertile land and highly suitable ecological conditions that provides immense opportunities for the cultivation and expansion of both Robusta and Arabica coffee at small-medium and large-scale levels.**

- **Angola has the capacity to allocate the required initial capital investment for the rehabilitation of coffee farms.** Once established, coffee can support not only its self but also other sectors such as health, education, poverty reduction in the rural areas, etc., as this was the case in the past.

- **Policy support** - The government of Angola has keen interest in coffee sector and enthusiastic to revamp coffee farming and regain its lost position in Africa and the world markets. In this regard, the establishment of Angolan National Coffee Institute (INCA) as a responsible government body for coffee sector development, the effort which is underway to attract private investors for public-private partnership (PPP) and the establishment of ‘coffee fund’ are some of the tangible evidences.
o Presence of functional structures – The presence of basic coffee development structures such as National Coffee Institute (INCA), Coffee Research Stations in representative provinces, farmers associations and cooperatives, and Technical Brigades (TB) that provides assistance to the farmers to the village level, are great opportunities to facilitate the implementation of any coffee recovery program.

o The suitability of the agro-ecological condition of the country for Arabica coffee production is a unique opportunity for the country to fetch premium prices and maximize the revenue from coffee because of its excellent quality and higher prices as compared to Robusta coffee.

o The agro-ecological diversity under which coffee grows also provides unique opportunities for Angola to promote specialty coffee production and become more competitive in the world market.

6. Suggested Measures to Revamp Coffee Sector Development

According to various reports, Angola is one of the countries that are heavily dependent on oil revenue. On the other hand, oil is one of those commodities highly vulnerable to price volatility. The current global oil price crisis is tangible evidence and in the very long run, the worst could even occur as the Renewable Energy initiatives gain momentum and more attention because of the climate change debate. Therefore, one can easily understand that such heavy mono-commodity dependence is very risky to the national economy.

The above situation is indeed frustrating and requires practical solutions. To prevent the risk of mono-cropping or mono-commodity dependence, increase national revenue, and in order to build a sustainable national economy, diversification of income sources is an indispensable strategy. Angola has immense opportunities in various sectors including agriculture, mining, industry and others to diversify its income sources. Among agricultural sector, the coffee sub-sector is one of the most proven, dependable and feasible strategic commodity crops for income diversification and poverty reduction in the rural areas of the country. As already indicated in the aforementioned section (section V), the country has the potential, the opportunities and the financial capacity to reverse the current scenario of coffee production status and regain its previous position in the world market. Therefore, to address key constraints currently prevailing and in order to revamp the coffee industry, the following measures have been suggested for direct intervention. These measures by no means exhaustive, but could serve as a template to prepare a comprehensive coffee sector development strategy for Angola.
6.1 Financing

The lack of financial support is one of the primary factors hindering the coffee rehabilitation program in Angola. Many coffee farms have been neglected for decades and require high capital investment in order to rehabilitate them or carry out new planting programs which is unaffordable to both medium- and small-scale resource poor coffee farmers. All the producers communicated to during the visit raised the issue of lack of financial support in the form of credit as a fundamental obstacle to coffee rehabilitation endeavors. According to some reports, investment required to rehabilitate or replace old unproductive coffee farms in Angola was estimated to be US$230 – 250 million\textsuperscript{2,4}. This capital investment is almost equivalent to what Angola had simply generated from coffee export in 1973/74 crop season alone. Coffee is a lucrative commodity and once established, it can support not only itself but other sectors such as education, health, infrastructure development, etc.

The financing of the coffee sector may require two forms of assistance: (1) Annual budget - to be used by INCA staff including researchers and Technical brigades to provide the required services to the coffee development program on a sustainable basis, and (2) Credit services – to be provided to private investors and small scale coffee farmers through their associations and cooperatives to effectively run their own coffee rehabilitation, replanting, management and other activities. The credit service would need to take in to account the perennial nature of coffee and be able to allow a grace period that lasts up to when the new plantation comes to the first harvest, which is about three years.

6.2 Rehabilitation of old and neglected coffee farms and new planting

As indicated earlier, the coffee farms had been neglected for decades and the trees are old. The current low yield and total production in Angola is the direct result of these factors. Therefore, in order to revamp coffee production and productivity, one of the most important actions is to launch an aggressive campaign focusing on the rehabilitation of these neglected coffee farms so as to bring them back to a productive state. In this regard, a pilot coffee rehabilitation project financed by Common Fund for Commodities (CFC) had been already conducted and good results and experiences have been gained. Based on the experience gained from this pilot project, a comprehensive National Coffee Rehabilitation Project or Program has to be launched as a matter of top urgency to bring a significant impact to coffee sector development. \textit{In this regard, technical assistance may be required to conduct a comprehensive survey of the previous coffee farms and develop the program with detailed budgets and action plans.}
The National Rehabilitation program may be executed in two ways depending on the state of the trees:

(a) **Rejuvenation** - If the trees are in the productive stage and the problem is management, it is easier and cheaper to simply rejuvenate the trees through stumping and then applying proper agronomic practices (Fig. 4).

Fig.4. Old coffee farm rejuvenated through stumping at Amboim Research Station.

(b) **New planting** - On the other hand, if the trees are too old to produce economic yield and more than 50% of the tree in the farm have died, new planting is necessary. New planting is also necessary to carry out an expansion program since the original total cultivated area in the 1960s and 1970s had already shrank as mentioned in section II.

### 6.3 Strengthening extension services

In order to implement an effective National Coffee Rehabilitation program as proposed above and to boost coffee production productivity and quality, a strong extension system must be in place that provides basic extension services to the farmers. In this regard, INCA has already established excellent extension structure that stretches from National down to village levels, and assigned Technical Brigades at all levels along the ladder. However, due to the limited number of extension staff and budget, the extension services are not effective in delivering the required services to the coffee producers in the country. Therefore, it is of paramount importance to revise the existing extension system, hire an adequate number of extension workers, and allocate an adequate annual budget in order to strengthen the existing extension system and facilitate proper implementation of the coffee rehabilitation program in Angola.
The presence of a strong extension system is an important component of an agricultural development program that provides vital services to the producers. Among others, the most important components of extension services include training of farmers on good agricultural practices on all aspects of coffee husbandry including production (nursery and field management), harvesting and processing, storage and marketing; organizing farmers into associations and cooperatives; facilitating supply of agricultural inputs (farm tools, fertilizer, chemicals, etc.) and credit services to the farmers; and multiplication and distribution of planting materials. These are fundamental activities in a rehabilitation program and that is why the extension system should be strengthened.

6.4 Strengthening Coffee Research

Research is fundamental for any development endeavor. It is the research institute that provides improved varieties and agronomic practices, provides training to subject matter specialists (SMS) and development agents (DAs) as the extension staff, produce production manuals and seed or vegetative propagation manuals or protocols, testing and adoption of introduced technologies and in general providing technical backstopping to stakeholders at all levels. Therefore, research is the backbone of successful implementation of the recommended national coffee rehabilitation program in order to guarantee improved production, productivity and quality. However, as already discussed earlier in Section III and IV, coffee research is not in a position to provide these services given its present state. Therefore, it is indispensable to strengthen coffee research vis-à-vis skilled human resource, research facilities, budget and restructuring the research system.

a. Skilled human power development – From what has been noticed, two major actions are needed to improve human resource capacity of the research stations--recruitment and Training.

Recruitment – At present the number of on-station researchers working at the three research stations is not more than seven. This is too small to conduct meaningful research activity. Therefore, it is necessary to carry out a human resource need assessment and to recruit enough researchers to fill all the gaps.

On-job Training – The available researchers need on-job training somewhere abroad in their areas of specialization so as to acquire more knowledge, share experience and upgrade their research skills. The areas of training may include research proposal development, experimental design and data analysis, and so forth, but details of the types of training or training needed, the duration, place, and budget should be worked out.
b. **Building Research Facilities** – As already indicated in section III, basic research facilities are lacking and need to be rebuilt for proper functioning of the research system. Some of the basic facilities required include well equipped coffee processing, protection and soil laboratories; internet system; library, dependable electricity and water supply, etc.

The other very important facility required is a sizeable and well designed propagator, which is urgently needed in order to optimize protocol for vegetative propagation through rooting of cuttings and so as to enable the massive multiplication of seedlings for distribution to farmers. To this effect, the researcher dealing with this activity must get a short-term training in Ghana or Tanzania, where these practices are currently successfully implemented. These countries have long years of experience in vegetative propagation and have perfected the efficiency.

c. **Allocating Adequate Budget** – As discussed earlier in section III and IV, inadequate budget is the major bottle neck limiting research activities. Therefore, allocation of adequate annual research budget is necessary to materialize the recommendations given above. This would ensure that well funded and well-run research programs can render the desired services.

d. **Establishing a viable Research system** – In order to run a well coordinated research program and deliver demand-driven improved technologies (varieties, agronomic practices, etc.) that can effectively assist the Nation Coffee Rehabilitation Initiative, there must exist a well organized and well coordinated research system under the auspices of INCA that comprises governance structure and the various research disciplines. At present, only agronomic engineers are available and breeders responsible for variety development, crop protectionists responsible for disease, insect pests and weed control, as well as soil scientists, etc, are lacking. *The implementation of the above research recommendations requires Technical Assistance in the form of a senior expert, preferably a breeder/agronomist with proven research background and rich experience.* The technical assistance shall be responsible, but not limited to:

- Develop governance structure for research under the auspices of INCA with detailed function of each organ;
- Establish basic research disciplines with detailed functions that are necessary for a multidisciplinary approach to tackle coffee production problems in all angles across the value chain and produce package recommendations for the producers;
- Guide the research staff in problem identification, prioritization and development of research proposals to address the problems;
o Develop a short-term breeding program to come up with elite materials in the shortest time possible. At present, there is no skilled personnel in this area and hence no research activity.

o Identify staff trainings needed and training institutions, develop training proposals and organize or coordinate the implementation of the training;

o Coordinate national research programs, guide local research staff and evaluate proper implementation of experiments.

6.5 Establishment of viable marketing structure

The low coffee price is demotivating to the farmers. Farmers have no negotiation power on farm gate price and good access to market information. Farmers do not also have direct linkage with the exporters and are forced to sell their coffee to intermediary traders who collect from the farm gate. Therefore, it is of paramount importance to review the existing system and establish a viable coffee marketing structure under the auspices of INCA. Among other activities, this marketing unit is responsible for: (a) disseminating up-to-date market information to the grassroots smallholder coffee farmers, (b) facilitate policy support for farmers’ negotiation power on farm gate price, (c) advise the government in fixing floor price or minimum reference price at farm gate level, and (d) carry out market promotion at national and international level, and (e) promote domestic consumption to increase domestic demand and encourage local processors.

6.6 Government Support

Although the government is highly enthusiastic to revamp the coffee sector and regain its previous position in the world market, probably due to the liberalization policy and the carry-over effects of the civil war in many ways, its involvement in coffee sector development is still minimal. This has been a discouraging scenario for both small- and medium-scale coffee producers who are keen to engage in coffee business. In addition, without government policy as well as financial support, it is practically impossible to realize the above recommendations and revamp the Angolan coffee industry. The small scale coffee farmers who today account for 90% of the production and the private sector themselves are financially too weak to undertake the rehabilitation program on their own. On the other hand, even if it is assumed that the private sector is strong, there are areas where the private sector does not want to commit itself to invest in the initial stages. These mainly include research, extension service, designing and implementing national coffee sector development strategy, infrastructure development in
major coffee producing areas, and so forth. The fact is that government intervention and support is indispensable even in the implementation of a liberalization policy so as to keep any development program on track. Therefore, to revamp the national coffee industry, government support is certainly needed in many ways. Probably, the following are some of the most important areas for government intervention:

a. Implementation of the recommendations given above under this section (No 1 – 5) – the recommendations given above require significant financial and policy support to create an enabling environment and guarantee the accomplishment of the recommended actions by the relevant authorities.

b. Allocation of adequate annual budget for regular coffee development activities and other investments required until the sector is able to stand on its own, which without doubt would later on support other sectors like it does in many other countries.

c. Formulating a National Coffee Sector Development Strategy with an articulated vision. This strategy is important to serve as the government policy directive to drive an aggressive campaign of coffee sector rehabilitation and development activities on a sustainable basis. The strategy most importantly identifies key intervention areas and expected outcomes within a specified period of time in terms of production volume, increasing productivity and quality improvement, and so forth.

d. Infrastructure development, specifically feeder-roads and transport facility to facilitate extension services, ease of access to market and collection of harvested coffee from farm gates to central markets.

e. Incentives to both farmers and private investors – Currently smallholder coffee producers account for about 90% of the country’s total production and private owners account for the remaining 10%. Even in global coffee production, smallholder coffee growers are the main engine accounting for about 80% of the total production. Therefore, it is highly strategic to provide different types of incentives to the small- and medium-scale coffee producers. These incentives may include supply of farm tools, access to credit, access to agricultural inputs, regular technical assistance, price control in favor of the producers and others related. It is also important to encourage private-public partnerships and attract large scale private coffee producers, traders and processors and others involved along the value chain.
7. Conclusions

Diversification is one of the most strategic approaches in avoiding the risk of mono-commodity dependence and ensuring a sustainable national economy. Coffee is one of the most proven, strategic and dependable agricultural commodity crops in national income diversification and rural poverty reduction. Angola has proven potential and immense opportunities to even become the largest African coffee producer. In this regard, government determination to invest in coffee sector development and create favorable policy for public-private partnership is crucial in order to bring coffee production back on track. Once recovered, coffee can greatly support not only itself but the national economy and the development of other sectors. In addition, the required initial investment may not exceed what Angola used to earn from one crop year coffee harvest in the past. The realization of this recovery program further requires human resource and infrastructure development, strengthening coffee research and extension services, a sound rehabilitation strategy/program and competent coordination for its implementation.

Acknowledgements

First of all, I would like to thank Angolan National Coffee Institute (INCA) administration specifically the Director General, Mr. J.F Costa Neto, for supporting and organizing this visit program. Mme Josefa Sacko has also played a role in the arrangement of this visit program. The hospitality rendered to me and the fruitful discussions we had with INCA staff in Luanda under the chairmanship of Mr. Casimiro Cardoso, Deputy Director General of INCA, was great and highly valuable.

This visit would not have been successful without the kind assistance of Mr. J.S. Donga who accompanied me throughout my stay and facilitated fruitful discussions with all the stakeholders I met regardless of language barrier. I am also deeply indebted to Dr. D. Barata, Amboim Research Station Director, for arranging exciting discussions and experimental field visits with all research staff, which was highly valuable and informative. I am very grateful to the Director and all the research staff for the wonderful hospitality rendered to me and for the accommodation service during my three days stay at the research station.

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