A QUICK ASSESSMENT OF COFFEE PRODUCTION STATUS IN CAMEROON: A BRIEF REPORT

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A young coffee trial plot intercropped with beans at Foumbot IRAD Station (Cameroon)

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I. Introduction:

Cameroon was once reportedly the second leading coffee producer and exporter in Africa with annual production of as high as 132,000 tons in 1986. Since then, the production has been steadily declining with swinging annual production that went down as low as 36,000 tons in 2010. According to ICO statistics, the production over the last 12 years (2000 – 2011) ranged between 66,780 in 2000 and 36,480 in 2010 with an annual average of 49,505 tons indicating a trend of stagnation. The productivity is also very low, about 204 kg/ha for Arabica and 340 kg/ha for Robusta according to early reports. However, data collected from the farmers and divisional ministry of Agriculture Office shows lower figures, 100 kg/ha for Arabica and 300 kg/ha for Robusta. According to earlier reports (Amadou, 2007), not only annual production but the cultivated area has also declined. On the average, the cultivated coffee area was about 280,606 ha between 1969 – and 1973 but this has dwindled to 187,119 ha between 1999 and 2003. It appeared that Cameroon had encountered similar problem that experienced in most of the African coffee producing countries that resulted in dramatic reduction of African export share in the world market. Africa’s global export share was about 30% in the 1970s and 80s but it is only between 11 – 12% at present.

In view of the economic importance of coffee to Cameroon and the potential of the nation to boost coffee production, it is of paramount importance to identify key constraints that contributed to decline in cultivated area and annual production, low productivity and the stagnation of production in order to launch viable development program to address the problems and thereby revamp coffee production and export in the country.

A quick reconnaissance survey of coffee sector in Cameroon was conducted from 22 – 24 October 2012. The overall intention was to obtain an overview of the state of coffee production and trade in the country with the following specific objectives:

1. To assess the status of coffee production and the system of production in Cameroon,

2. To identify major constraints of coffee production and measures to be taken to address the constraints, and

3. To understand the agro-ecological diversity of the coffee growing areas in Cameroon for consideration by ACRN/IACO in quality profile study and promotion of specialty coffee.

To achieve these objectives: (a) discussions were held with relevant authorities in the coffee sector and (2) field visits were made to discuss with the farmers to observe the realities on the ground under farm conditions and collect first hand information.
II. Coffee Stakeholders Visited:

1. National Cocoa and Coffee Board (NCCB or ONCC)
2. National Cocoa and Coffee Board Quality Control Laboratory
3. Farmers around Bakwat village in konsamba Division of Litoral Province
4. Ministry of Agriculture office in Konsamba
5. Sococam Coffee and Cocoa Farmers’ Cooperative
6. Union Trade international (UTI) Santcho Branch – Coffee buyer and washed coffee processor
7. West Hill Coffee Company - Coffee buyer and washed coffee processor
8. Institute of Agricultural Research for Development (IRAD), Foumbot Agricultural Research Station

III. Coffee Production Status:

Cameroon produces two types of coffee, Arabica in the West and Northwest Regions and Robusta predominantly in Littoral province but to some extent in South West, West, Adamoua and East provinces. According to Amadou Nchare (2007) and ICO production statistics, both production and cultivated area of coffee in Cameroon has been declining since 1970s. The average cultivated area of 1969 – 1973 which was estimated at 280,606 ha (A=92,640 ha and R=187,966 ha) had declined to an average of 187,119 ha during 1999 - 2003. During the same years, the annual production has also declined from 92,337 tons to 57,904 tons, which is about 37% reduction. Looking at recent ICO statistics, the production over the last 12 years (2000 – 2011) swings between 66,780 tons (2000) and 36,480 tons (2011), indicating stagnation of production.

One of the major reasons for declining production is low productivity. According to previous reports, yield per hectare is approximately 200 kg/ha for Arabica and 340 kg/ha for Robusta (Amadou, 2007). But current records by regional Ministry of Agriculture and some intelligent farmers who keep their own records, however, shows yield ranges of 100 – 300 kg/ha. The overall indication is that coffee yield in Cameroon is low compared to other countries. Based on the discussions held with various stakeholders, there are several reasons for low productivity including poor and traditional management practices, old age of coffee trees, lack of improved planting materials, lack of adequate supply of fertilizer and other necessary inputs, poor soil fertility, etc. These constraints have been discussed in detail in section III.
III. Major Constraints:

1. **Impact of international coffee price crisis of the past** – The current price of coffee is fair even though the farmers complain that it is not proportional to production cost. It is about 1500 CFA/kg (≈US$3.00/kg) at farm gate and 1690 CFA/kg (≈US$3.38/kg) at export levels for Arabica and 700 CFA/kg (≈US$1.40/kg) at farm gate and 946 CFA (≈US$1.89/kg) at export level for Robusta. However, during international coffee prices of 1999 that extended up to 2004, the price of coffee had said to gone down as low as 200 CFA/kg (≈US$0.40/kg). This crisis has taken its toll on coffee production leading to abandoning of the coffee farms by the farmers and shifting to other alternative crops. The farmers have developed negative image and still questioning after improvement in the price of coffee.

2. **Old age of coffee trees and use of traditional management practices** – Most coffee farms are extremely old and produces only few fruits on limited branches (Fig.1). A coffee farmer in Bakwat Village who owned 8 ha of coffee farm witnessed that when he came to that village in 1960, there were coffee farms that were already under production and these farms are still maintained. Many farmers witnessed that most coffee farms in Cameroon are more than 60 years old. On the other hand, farmers’ knowledge about good agronomic practices (GAP) is highly limited and still follows the traditional way of husbandry practices.

![Image of old coffee tree/farm](image-url)
3. **High management Cost, old age of coffee farmers and labor shortage** – coffee management is labor intensive and requires continuous follow up during both pre- and post- harvest management compared to some other crops such as cocoa, rubber, oil palm and some other crops. The coffee farmers are getting old and resource poor. The young generation who went to school is not any more willing to go back to village and engage in farm activities like their parents. These problems have created shortage of labor and high labor cost that is not affordable by the old coffee farmer who needs to hire labor for the management of their farms.

4. **Fragmented farming system and weak farmers’ organization** – during the colonial era, there were a number of large estate coffee farms mostly owned by foreigners. These farms were completely abandoned and no more productive. Currently, almost all the coffee produced in Cameroon comes from smallholder coffee farmers who owns small plots of unproductive and poorly managed old coffee farms. Provision of extension services such as credit, training and supply of inputs and planting material to smallholders who own such fragmented pieces of farm is quite difficult. This could have been easier if farmers were organized in to groups, associations or cooperatives. However, the cooperatives currently available are not many to cover all farmers and are reportedly weak due to various reasons.

5. **Liberalization of the coffee sector** – It was noted that before liberalization of the sector in early 1990s, the government provides technical support, agricultural inputs such as fertilizer, chemicals (insecticides, fungicides and herbicides), planting material and all other extension services to the coffee farmers. To that extent, the government used to provide prepayment before coffee harvest to encourage and enable resource poor smallholder farmers to send their children to school and buy food items. The farmers hail this period as “the good period of the coffee farmers”. After liberalization, all these services were stopped as the private sector was not strong enough to cover the gap and the farmers could not adapt to the new system. Consequently, the farmers neglected, abandoned and largely shifted to other crops such as beans, maize, cassava, cocoa, oil palm, etc. (Fig. 2). At present, the government has realized the problems and started to provide the required extension services to the farmers particularly since 2003 through various forms of development projects.
6. **In adequate supply of fertilizer and Low productivity** – The fertility of the soil has significantly depleted and no good coffee yield is expected without adequate application of fertilizer. The record provided by the farmers during interview quoted yields of approximately 100 kg/ha without fertilizer application suggesting the crucial impact of fertilizer. Despite indispensable need for fertilizer, the supply is not adequate even though the government is doing the best possible through the Ministry of Agriculture.

7. **Limited knowledge of the farmers** – Farmers’ knowledge about good agricultural practices (GAP) in general is highly limited. Coffee is intercropped with any kind of crop like maize, beans (soybean, haricot bean), cocoa, oil palm, casa, etc. without any consideration about its compatibility, proportion (intercropping ratio) and damage to the root systems particularly to the feeder roots (Fig.2). The pruning practice is unique where the main stem is cut back at about 1.5m maintaining very few primaries at around the top portion of the main stem that formed an umbrella shape, the system being both single and multiple stem system in the same plot of land. Multiplication of planting material from cutting was
observed being practiced without using rooting propagator (hot-bed) resulting in very low (less than 50%) establishment rate. The multiplication technology is surely available at research level as noted from Foumbot Research Station of IRAD but did not effectively transferred to the grass roots coffee growers.

8. High cost of agricultural inputs and lack of credit services – The price of agricultural inputs specifically fertilizer and chemicals such as insecticides, herbicides and fungicides are high and unaffordable by the resource poor smallholder coffee producers. There are no credit services to fill this gap and capacitate the farmers to apply all the recommended pest control measures and agronomic practices to boost production. The government is trying to fill the gap by free supply of these inputs through different development projects but the quantity is very limited to satisfy the demand.

9. Coffee price fluctuation – The farmers are seriously complaining that price of coffee is uncertain fluctuating ups and downs. This phenomenon has disabled them to make a projection on the revenue they expect from their farm at the end of the year and accordingly invest on the management.

10. Challenges in coffee processing and quality – High moisture level due to poor dry processing and admixtures are reportedly the major problems among others in good quality coffee supply. These problems occur at the farm gate level due to limited knowledge of the farmers in coffee processing and at collection level due to lack of respect by intermediate traders for quality norms introduced by the National Coffee and Cocoa Board. These problems are posing considerable challenges to the exporters to re-dry and sort out admixtures before they apply for certification for export.

11. Lack of binding instrument between coffee buyers and producers – Discussion was held with two exporting firms. The exporters are keen to provide incentives such as offering mobile phones for free for ease of communication, paying better price, pulping fresh cherries for free and also providing advance payment to farmers to produce good quantity and quality coffee and finally sell to them. However, there is no guarantee that the farmers who received these services could sell their produce to the buyer or not largely because of the meddling by the intermediate traders or brokers. Probably, the cooperatives and the Ministry of Agriculture could play a great role in this public-private partnership but there is no such system in place at the moment.

12. Inadequate resource for coffee research – there are several research challenges such as low productivity mainly owing to lack of improved varieties and poor agronomic practices, poor soil fertility, diseases and insect pests, etc. that need to be urgently addressed in order
to revamp coffee production in Cameroon. However, coffee research lacks resources vis-à-vis skilled human power, facilities, budget and other logistics to address these challenges. There are only two fully fledged researchers on coffee at the moment, a pathologist and an agronomist. Consequently, the number of on-going activities at Foumbot Agricultural Research Station, the research station where research on Arabica coffee is mainly conducted, is limited. The Robuta research activity which is mainly conducted at Nkoewon and Barombikang Agricultural Research Stations is reportedly in similar situation.

IV. Suggested Measures to Revamp Coffee Sector:

1. **Intensive sensitization, training and organizing of farmers** – It is necessary to launch an intensive sensitization program to reverse the negative image that the farmers have developed after the past coffee price crisis and liberalization of the coffee sector. The sensitization program need to be followed by: (a) intensive training on good agricultural practices (GAP) to change the traditional way of coffee management practices and (b) organization of the farmers in to Farmers’ groups, associations, cooperatives and Unions to facilitate training, credit services and supply of agricultural inputs.

2. **Rehabilitation of old coffee farms and expansion of new planting (National Coffee rehabilitation Program)** – As indicated in section III above, the total cultivated and annual production has gone down. The productivity is also far below standard. Obviously, such a low yield and reduction in annual production were attributed to reduction in cultivated area, old age of the coffee trees, long years of neglect/abandoning, and poor management necessitating an aggressive rehabilitation and new planting and /or expansion program. In effect, development of a comprehensive **National Coffee Rehabilitation Project** proposal by local experts and looking for fund is necessary on top of government support for large part of the project activities. This project must aim at revamping the whole value chain activities of the entire sector.

3. **Strengthening Extension System** – The Ministry of Agriculture has a well established extension service structure that stretches from National level down to Poste Agricole (village) level that directly works with the farmer on daily basis. It is crucial to strengthen the system in order to provide effective extension services to the farmers in order to materialize effective revitalization of the sector and increase production, productivity and quality of coffee produced. Extension service includes sensitization and training of farmers, multiplication and distribution of improved planting materials, supply of agricultural inputs, organizing of farmers in to associations, facilitating of credit services to the farmers, etc.
4. **Strengthening Coffee Research** – research is crucial for any development endeavor. It is research that provides improved varieties and agronomic practices, training to subject matter specialists (SMS) and development agents (DAs) who would then train farmers, production manuals, and in general technical backstopping at all levels that is necessary for improved production, productivity and quality. As already discussed earlier in Section III, coffee research is not in a position to provide these services at its present capacity. Therefore, it is indispensable to strengthen coffee research vis-à-vis skilled human power, research facilities and budget to design and implement applicable and demand driven research programs that contribute to revitalization of coffee production and trade in Cameroon. From quick field observations and my long years of experience in coffee research, the following are presumed top priority research areas that needs urgent action, but not limited to:

a. **Variety Development** – Despite the very diverse agro-ecology under which coffee grows in Cameroon, the available varieties are reportedly very limited. For example, in the case of Arabica, it is only one variety called ‘Java’ that is largely available and distributed all over the Arabica areas, West and North West regions. This variety is said to be susceptible to coffee berry disease (CBD), root diseases and others. Not only is this but dependence on such limited variety very risk to the industry in cases of the outbreak of new disease or insect pest. There are 275 international Arabica collections maintained at Foumbot Research Station. It is necessary to develop a crash program and carry out evaluation and selection to come up with better performing lines in the shortest time possible. Similar approach applies for Robusta.

b. **Intercropping Trials** - It has been noted that coffee is intercropped with any kind of crop like maize, beans (soybean, haricot bean), cocoa, oil palm, banana, etc. without any consideration about its compatibility, proportion (intercropping ratio) and damage to the root systems particularly the feeder roots. It is necessary to design various intercropping trials and identify suitable crops that are compatible with coffee and determine suitable ratio of coffee to other crops in order to maximize the return from a unit area of land.

c. **Pruning Trials** – The pruning practice in Cameroon is quite different from other countries. The main stem is capped at about 1.5m maintaining limited number of primaries at the top portion of the main stem that subsequently forms spreading branches with umbrella shape. It is of paramount importance to visit some other countries like Ghana and Uganda for Robusta and Ethiopia and Kenya for Arabica
and conduct some pruning trials to determine pruning practices that best fit to Cameroon condition in order to increase productivity.

d. **Intercropping of coffee with black pepper** – Black pepper (*Piper nigrum*) is one of the most expensive spices widely grown in India, Indonesia, Brazil and Madagascar. In Cameroon, the price is quoted at 7000 CFA per kg. It is highly compatible for intercropping with coffee that is commonly practiced in India and to some extent in Ethiopia. The adaptability and profitability of this spice is well recognized from the spice farm visited in Penja area which was said to be originally owned by government and latter sold to private owners after liberalization (Fig.5). It is a great opportunity to introduce the intercropping of the spice with coffee to maximize the income of the coffee farmers per unit area. In effect, a simple trial is necessary to learn more about the practice and demonstrate the advantage to the farmers. It is luckily that the support plant is already identified, the Indian bamboo tree, which can simultaneous be used as shade tree for coffee.

![Fig.5 Performance of black pepper under sole cropping system in Penja area](image)

5. **Development of Incentive mechanisms to encourage the farmers and the youth to produce more coffee** – at present, farmers are reluctant in producing coffee for obvious reasons: (a) farmers are cost sensitive and the return from coffee is not attractive to the resource poor smallholder coffee producers, (b) coffee maintenance, harvesting and processing is said to be labor intensive and lower output compared to maize, beans, and others, (c) there is shortage of family labor and farmers do not afford to hire daily laborers for proper management and harvesting, and (d) inadequate government support compared to pre-liberalization. Therefore, incentives in the form of (a) credit services with reasonable
grace period, (b) subsidies and reduced income tax on agricultural inputs and farm tools or machineries and (c) guarantee for stable and fair price, and similar other incentive mechanisms are very important to salvage the coffee production scenario and withstand the severe competition from other cash crops.

The shortage of labor is mainly due to diminishing interest of the youth to engage in coffee farming. Without the involvement of the youth in coffee business, the sustainability of coffee production over generation could be a serious problem as aging of coffee farmers is one of the major problems. Various mechanisms of benefiting young coffee farmers need to be devised by the government to reverse their attitude and encourage them to engage in coffee farming and marketing.

6. **Arabica coffee production** – The current price of Arabica coffee is double of that of Robusta. It is about 1500 CFA at farm gate and 1690 CFA at export levels for Arabica and 700 CFA at farm gate and 946 CFA at export level for Robusta. Despite this advantage, its coverage in the two main growing regions, West and North West, has declined from 92,640 ha in 1973 to 42,112 ha in 2003. The productivity has also reduced from 335 kg/ha to 204 kg/ha during the same years. Currently, the yield per hectare is even quoted at 100 kg/ha which is 10 times or more low compared to some other countries. Consequently, its contribution to coffee revenue is estimated at less than 15%. It has been also noted that in the West Region where Arabica grows, farmers also grow Robusta in some parts and this is a great loss for the farmers and the nation. The overall implication is that the available potential that the country own in Arabica coffee production is not fully and properly exploited.

There is an immense potential to maximize arabica coffee production and this is a unique opportunity for Cameroon. Hence, special emphasis should be given to effectively exploit the available potential, boost arabica production and thereby increase the national revenue generated from coffee and improve the livelihoods of the arabica coffee producers. Particularly, in areas where arabica can grow, it is necessary to strongly aware the farmers not to produce Robusta as it considerably reduce their coffee revenue.

7. **Promotion of value addition** - One way of maximizing income from coffee and encouraging farmers to grow more coffee is through strategic planning and effective implementation of value addition. There are various ways of value addition. The following could be realistic to add value to coffee produce in Cameroon:

   a. **Primary and secondary processing** – selective harvesting, proper drying to the standard moisture level on clean drying area (raised bed, cemented floor, etc.), washed coffee
processing and proper storage as primary processing can immensely increase the quality of coffee that could fetch premium price. It is an opportunity that certain coffee buyers have already installed modern machines for wet processing of arabica coffee and system should be established as to efficiently utilize them. On the other hand, in the medium-term, it is also wise to plan for secondary processing such as roasting, grinding and instant coffee trading instead of green bean.

b. **Promotion of specialty coffee** – Cameroon is endowed with high ecological diversities under which both *C. arabica* and *C. canephora* coffee species grow. There is considerable variation in rainfall pattern including modal and bimodal, soil characteristics, altitude, vegetation cover, temperature, etc. Such variations are precursors for the existence of variations in coffee quality flavor profile. At present the world coffee market is growing in favor of specialty coffee consumption and the demand is increasing specially in the matured market. Therefore, Cameroon should target on the production of specialty coffees of different geographical origin. In this regard, IACO will consider Cameroon as one of the beneficiaries in Coffee quality profile mapping project to be developed by African Coffee Research Network (ACRN) to assist the country in producing origin based specialty coffees.

8. **Government support** - Coffee production in Cameroon appeared at risk mainly because of unproductive and old age of the coffee trees/farms, high management cost, competition by other crops such as beans, maize, cocoa palm oil and others, luck of incentives and inadequate extension services as indicated under section (III) above. At present many coffee farms in the areas visited have lost proper attention and farmers are quite reluctant to produce coffee and are shifting to other cash and food crops even though the interest is still there if supported by the government as it used to be in the pre-liberalization period as the farmers clearly indicated. Therefore, government intervention and fully fledged support to the sector in general is vital. Government support is mainly needed in:

a. Implementation of the recommendations given above under section IV (No 1 – 7) – the recommendations given above requires strong policy support and budget for implementation by the relevant bodies.

b. Allocation of adequate annual budget regularly for relevant bodies affiliated in regular coffee development activities
c. Putting in place National Coffee Development plan/Strategy with articulated vision that would assist as government directive for implementing agencies to aggressively campaign on coffee development activities on a sustainable basis.

d. Infrastructure development specifically feeder-roads and transport facility to facilitate ease of access and collection of harvested coffee from farm gates, the critical problem at the moment as explained by coffee stakeholders.

V. The National Cocoa and Coffee Board Central Analytical Laboratory

As the name indicates, the laboratory provides quality testing and control services to both coffee and cocoa at national and regional level for the former and national level for the later commodity. It is managed by the National Cocoa and Coffee Board (NCCB) of Cameroon. The major services that the laboratory provides among others include:

- testing and controlling of coffee and cocoa products for export,
- commercializing and promoting coffee and cocoa marketing and consumption
- providing feedback on the price to the producers on daily basis
- training producers, buyers and extension agents on best practices of processing and quality control, and
- implementing national and international quality norms

The laboratory is well organized and equipped in skilled manpower and facilities to provide these services. The quality taste testing activity which includes physical-, organoleptic or sensory- and chemical- analysis is conducted in separate rooms. All the rooms are wide enough for ease of movement and arrangement of equipments in proper order. The laboratory equipments provided by the Inter African Coffee Organization (IACO) for both national and regional service have been properly utilized and considerably contributed towards equipping the laboratory on top of several other equipments that the NCCB introduced particularly for chemical analysis. There are 9 skilled staff members to carry out the analysis, a good panel of judges to make accurate decisions while testing for cup quality.

It is planned to extend the services of the laboratory and conduct analysis for pesticide residue, heavy metals and polycyclic aromatic carbon as explained by Mr. Maioulou Daniel, head of the laboratory and Mr. Ndive Ngoni Charles, Chief of Services chemical and organoleptic analysis. Information on these chemicals is very important as most international buyers are currently demanding for these data particularly Japan is very strict in this regard. Therefore, it is very useful to provide further on-job training to the staff to build local capacity and conduct reliable
analysis that best meet with the international standard. For sustainable supply of these analytical services, it is also advisable to facilitate adequate supply of reagents and hire permanent technician for continuous maintenance of laboratory equipments.

VI. Conclusion

Coffee production and trade in Cameroon is currently facing several challenges and requires strong government intervention to address the challenges and revamp the sector. In effect, there are several opportunities. There is favorable climate and vast area of land conducive for both Arabica and Robusta coffees production. Research and extension service structures, policy support, coffee development strategy that can serve as a directives for implementing bodies, responsible organization (National Cocoa and Coffee Board), farmers cooperatives, quality control unit, and interested companies in coffee processing and marketing are all in place. If all these are well coordinated and strengthened for a concerted effort, significant change can be registered in the shortest period in revamping coffee sector in Cameroon.

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Reference