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The Concept of Innovation Funds for Agricultural Transformation (IFAT)

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Abstract: The Innovation Fund for Agricultural Transformation (IFAT) is a proposed in-country agricultural funding initiative to support the transformation of the agriculture sector in the developing countries in Africa, through the Integrated Agricultural Research for Development (IAR4D) concept. The IAR4D concept fosters the generation of innovations, sustainability of smallholder farmer's livelihood, increase food security, promotion of sustainable natural resource management and rapid reduction in rural poverty by changing the way agricultural research and development activities are conducted. The IAR4D concept has been demonstrated to yield high returns to investment in agricultural research for development by ensuring high adoption of superior technologies leading to increased productivity of farms in combination with sustainable use of natural resources. This is followed by increased income for the farmers and other stakeholders along the value chain which in turn leads to rapid reduction in poverty. The use of the IAR4D concept as a framework for agricultural Research and Development (ARD) activities in the different countries of will, however, require a different financing arrangement from the current scenario in most Africa countries. Capital for an agricultural endeavour will necessarily need to be at a much lower interest rate compare to the current bank rate which ranged from 18% to 32% across the countries in sub-Saharan Africa. Agricultural capitals with lower interest rate will have a direct positive impact on the competitiveness of commodities produced in the Africa counties compared to commodities from other countries in the West and Asia where the interest rate on agricultural capital is in the single digit range. Such loan may not be too profitable for the financial institutions; as such it requires special institutional arrangements for its sourcing and sustainable management. This paper proposes that IFAT should be drawn from alternative sources such as the mandatory social responsibility contribution from large private sector establishments. It could also pool fund from somewhat redundant pension funds available in some countries, from grants from development partners and government fund. The management of the IFAT fund could be handled by a national innovation platform which will carry out the overall governance of the fund through a Steering Committee that will be charged with the responsibility to direct the use and application of the funds through selected commercial banks. This will enable the fund to deliver its objective of developing structures that would ensure sustained access to innovative agribusiness financing by entrepreneurs and farmers to promote and improve agribusiness investment to enhance food security goals, create jobs and reduce poverty.

Key words: IAR4D · IFAT · Innovation system approach · Competitiveness of agricultural commodities · Agricultural Funding

INTRODUCTION

The need for a different funding mechanism for agricultural development in Africa countries is long overdue. The lack of admittance of this reality has hindered the region from realizing the green revolution and its associated development impact. Africa is unimpressively lagging behind the other region in the world in terms of food and nutrition security and other human welfare indicators. The region's per-capita food production has declined consistently over the last three decades, yielding a negative food balance for its teeming population. The factors that have contributed to this trend include HIV/AIDS, civil conflicts, poor governance,

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drought, erratic weather, low and inappropriate technology use, etc. The yields of cereals, tubers, vegetables and legumes in SSA remain a quarter of global averages suggesting low productivity of the current system of production. In spite of this situation throughout the continent, agriculture remains the most important economic activity, providing employment and livelihoods for the majority of the population and serving as the basis for many industries. About 203 million people, 56.6 percent of the total labour force, were engaged in agriculture in Africa. Agriculture also supports the survival and well-being about 70 percent of the population [1]. Thus, hundreds of millions of livelihoods are directly affected by any change that impacts agricultural productivity. Agricultural development is essential for the reduction of poverty and food insecurity in SSA. The slow economic growth experienced by SSA is to a large extent traceable to the low performance of the agricultural sector. For example, Thirtle *et al*. [2] estimated that a 1 percent increase in crop yield will reduce the number of poor people by 0.72 percent in Africa (approximately 2 million people). This estimate revealed that the impact of agricultural growth on poverty reduction due to increases in crop yield is greatest in Africa. Further analysis by Sachs (2005) [3] showed a positive correlation between cereal yields in poor countries and average yearly growth of GDP per capita from 1980 to 2000.

It is evident that strong growth in the agricultural sector is critical for fostering overall economic growth. The large gap between the shares of agriculture in employment and GDP suggests that poverty is concentrated in agriculture and in rural areas and as non-agricultural growth increases many of the rural poor remains poor.

Considerable efforts have gone into the agricultural development continuum in recent years, with the initiation of continental programs, such as, the Comprehensive Africa Agricultural Development Program (CAADP) which establishes a framework to foster continental agricultural development. The CAADP process requires that the different countries will sign a compact which consist of set of guidelines that should foster agricultural development at the countries level. The countries are expected to develop investment plan and source funds to implement it to attain the specific national agricultural development goals. The aim of CAADP is to encourage increased national budgetary allocation to agriculture and ensure that such budgetary allocation is spent on critical areas that yield improvement in the livelihood of the smallholder farmers. The proposed budgetary allocation should be a minimum of 10% ; this should be structured to yield at least 6% annual growth in the sector. The CAADP program is advancing unabated in Africa with over 30 countries at the different stages of the implementation of the CAADP agenda; however, a number of challenges still remain to be overcome at the country level.

An important limitation to leveraging the growth in agriculture for poverty reduction and livelihood improvement of the smallholders is the price competitiveness of the agricultural commodities produced in Africa, compared with those produced in counterpart nations around the world, especially in the west and Asia. To address this issue, there is the need to devise a different financing mechanism to drive agricultural production in Africa; such system should be characterized with affordable interest rate that will ensure profitability of the smallholder production system.

This paper gives an analysis of the Africa agricultural development system with a special focus on the financial competitiveness of commodities produced in Africa countries compared with those produced in Asian and the West where most agricultural commodities are imported to African countries. The paper recommended the Innovation Fund for Agricultural Transformation (IFAT) as an affordable financing mechanism for generation of agricultural innovation in Africa.

Agricultural Growth and Development in Africa Countries: In the recent past, the development of agriculture in Africa has followed an undefined pattern with differing trajectory differentiated by regions and commodities. But a common trend across-board is the increase in production of the different commodities due to increased in cultivated land area. The increase in production would have been more amenable if it is derived from the increase in productivity of the existing land area under cultivation. This situation gave Africa, especially the Sub-Saharan Africa (SSA) an unimpressive outlook for food and nutrition security and other human welfare indicators among the regions in the world. The regions per capita- food production is still yielding a negative food balance for the teeming population, with little difference from the negative trend that was prevalent in the last two decades. Many factors have contributed to this trend and importantly, the prevalence of HIV/AIDS, civil war, poor governance, drought, dependency of the

production system on weather conditions, low use of technologies etc. The yield of major cereals in the region remains a quarter of the global average; while the yield of tubers, vegetables and legumes suffers the same fate. Considering agriculture as an important economic activity; providing employment and livelihoods for many and serving as the basis for many industries. About 203 million people, or 56.6 percent of the total labor force, were engaged in agricultural in 2002 [4] Agriculture also supports the survival and well-being of up to 70 percent of the population [1]. Thus, for many, their livelihoods are directly affected by any change that may influence agricultural productivity. This further explains the observed poverty trend in SSA and suggests a pathway to the sustainable solution.

An estimated 40 percent of the people in SSA live below the poverty line and both income and human poverty are reported to be increasing [5]. Using the Human Development Index (HDI) as a measure of the quality of life, a number of countries were in the medium HDI group, while the majorities were ranked in the low HDI group. Forecasts indicated that human vulnerability in Africa is set to worsen in the future. This could lead to increasing poverty; less attention to the environment, intensive migration, brain-drain and overexploitation of the environment.

It is well known that the development of agriculture is essential for reduction of poverty and food security in SSA. Indeed, the slow economic growth in SSA is to a large extent traceable to the low performance of the agricultural sector. An estimate of the extent to which poverty falls as agricultural productivity rises are generally high. This trend has not changed much and it is a pointer to the need for development of agriculture to foster a change in national economy. The large share of agriculture in Africa economies suggests that strong growth in this sector is critical for fostering overall economic growth. The large gap between the shares of agriculture in employment and GDP also suggests that poverty is concentrated in agriculture and in rural areas and that as non-agricultural growth accelerates; many of the rural poor remain poor. African agriculture faces numerous challenges that diminish its capacity to catalyze economic growth. These include: low internal and effective demand due to poverty; unfavorable external markets due to subsidized farm products from the industrialized countries; climatic risks; limited access to technology and low human capacity to adopt knowledge-intensive skills; poor rural infrastructure which increases transaction costs and reduces competitiveness of products; institutional weaknesses for the service provision to the agricultural value chain from pre-production to consumption; and weak policy and regulatory mechanisms that do not adequately support participation of local communities and private sector in decision making concerning the agricultural sector [6]. The challenges above highlight some of the areas that need to be prioritized for attention in order to make agriculture realize its potential growth. Further to the above are the need to create biological safety net to system resilience and sustainability.

Competitiveness of Agricultural Commodities Produced in Africa: The competitiveness of agricultural commodities is a major determinant of the profitability and sustainability of the enterprises surrounding such commodity in a specific location. Competitiveness of an agricultural commodity will not only affect the proportion of the commodity that gets to the global market but also affects its continued production in the long run especially in the wake of agricultural trade liberalization.

Competitiveness measures the ability of a commodity produced in certain country to compete with the same commodity of comparable quality produced in another country, giving the costs incurred in the production process. A competitive commodity can co-exist with imports of the same commodity where domestic production cannot satisfy the domestic market and the surplus can be exported and sold at a profit. When a commodity is not competitive, the commodity will often require protection to shield it from being outcompeted in its domain of production by cheaper imports from foreign markets. Most agricultural commodities in Africa fall into the uncompetitive categories as such they require protection to ensure continuous production and maintenance of the smallholder livelihood.

The competitiveness of agricultural commodities is defined by a number of variables that are intertwined and related to one another in a specific fashion. There are endogenous variables that affect the value chain of the commodity, right from the pre-production stages to consumption. There are other variables that also influence the commodity from outside the value chain. The bottom-line to competitiveness of agricultural commodity is the price at which the commodity gets into the hand of the end user in a local or foreign market. The comparison with foreign prices and how cheaply goods can be brought in from foreign markets and within

Table 1: Sub-regional yields (t ha^{-1}) and gross income (US $ ha^{-1} expressed in world trade unit value, average 1996-2000.

	Rice		Fruits		vegetables		Cassava		Groundnut	
Region	Mt/ha	US$/ha	Mt/ha	US$/ha	Mt/ha	US$/ha	Mt/ha	US$/ha	Mt/ha	US$/ha
Asia	2.5[c]	556	-	-	-	-	15.2[c]	1,447	1.0[f]	734
Africa	2.1[e]	227	5.3[a]	2,849	5.5[a]	3,402	10.3[a]	978	0.8[e]	720
The West	6.7[d]	1,518	23.6	12,686	26.8[d]	16,647	12.8[b]	1,212	2.9[d]	2,093
World	3.9	873	9.4	5,039	16.1	10,005	10.1	959	1.4	1,002

Note: Alphabets in superscript indicate the actual source of the data; a= Coastal West Africa; b=Brazil; c= Thailand; d=USA; e= Sahel West Africa; f= IndianSource: FAOSTAT (2002).

the country is intrinsically intertwined with the notion of competitiveness. As such, consideration should be given to production relations that affect international comparisons, on exports and imports.

The state of competitiveness of agricultural commodities in Africa compared to other regions of the world is shown in Table 1, in terms of the average yield per hectare and gross income derived from the different commodities. The average yield for all commodities featured is lowest for Africa compared with other regions and in all cases lower than the average global yield. This scenario clearly showed that the productivity of the Africa system is low and require attention for commodities produced on the continent to be competitive. Factors responsible for this observation include the low use of inputs occasioned by lack of access and the financial resources; low adoption of technologies, including seeds, modern production techniques, lack of access to infrastructure such as irrigation facilities, etc. Table 1 further showed that the gross returns per hectare for the commodities were lowest in Africa, this suggests that the high cost of production has swallowed up the benefits and consequently, reduced the returns on investment. A comparative assessment of the production system in Africa compared to other parts of the world suggest that the West do benefit immensely from the economy of scale and the use of machinery, this is known to reduce the production cost. Africa production system in turn, consists of many smallholders with limited land size that could hardly support mechanization or any economy of scale. The Africa traditional production system consists of multiple cropping with little or no external input. The system has evolved over time to adjust to external constraint such as land inheritance systems, need for safety net as a cushion for crop failure and food security and control for pest and disease pressure including soil fertility maintenance. Although the system pride itself in some of the advantages but it essentially stifles the potential for high productivity and generation of the needed income to reduce poverty. The African production system requires considerable reforms that recognizes the diferent dimensions of challenges facing the continents agriculture especially in the wake of trade liberalization, globalization etc.

The agricultural trade liberalization has been enacted and embraced by the third-world countries, with the conception that it will be leveraged market openings for commodities that are produced in Africa without restrictions. However, the rich countries are currently the main beneficiaries of the arrangement, gaining markets in the global North and South, with a limited number of developing countries, e.g., Argentina and Brazil striving to compete effectively in global markets. Most developing countries are left out of the export boom but suffer the negative effects of rising imports from developed countries, as they reduce their own tariffs and farm supports. Meanwhile, farm prices do not remain high for long after liberalization, as supplies, fed by rising yields and new land under cultivation, catch up to rising demand. While the current commodity boom, fueled in part by the demand for bio-fuels, may keep prices elevated for a few years, it is unlikely to fundamentally alter the structure of global agriculture and the long-term trends toward lower prices [7].

The low benefits of Africa agriculture in this regard can be attributed to the low competitiveness of its production system and commodities produced.

The need to reform Africa agriculture for it to deliver sustainable livelihood, reduce rural poverty and contribute meaningfully to national development has gained good attention of the policy makers and the development partners lately. It is however essential, to foster the competitiveness of commodities from Africa agriculture, there is the need to implement programs that will (1). Reduce the production cost at the farm gate, (2). Reduce the transaction cost for the commodities and (3). Facilitate effective access to market for the commodities.

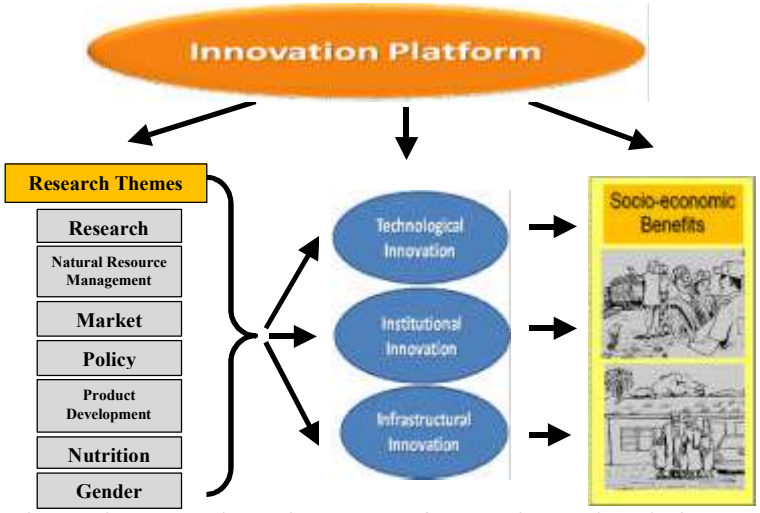

Fig. 1: Research themes, innovation categories and outcomes of IAR4D innovation platforms

To actualize these important options, the African agricultural stakeholders have developed the IAR4D concept that combines these effects and other productivity enhancing options to ensure the delivery of innovations from agricultural research and development efforts.

The IAR4D Concept as an Innovation System Approach to Agricultural Development: The growth in the agricultural sector can be accelerated by ensuring that agricultural research and development efforts are properly organized to yield innovations rather than only technologies and inventions. This will require a new approach that is all-encompassing and considers the sector as a system, with many sub-systems that must work together in a coherent manner. A good fit for the needed change in Africa agriculture is the use of innovation system approach that embraces the engagement of all stakeholders to function in the development of the sector. This approach has successfully been used in the industrial development era of the West; however, its use in agriculture is fairly new and the know-how to implement it was lacking until lately, although many variants of innovation system approach exist as mere theoretical description. Early in the decade, the Forum for Agricultural research in Africa (FARA) developed the IAR4D concept to implement the innovation system approach in agriculture. The IAR4D concept represents a paradigm change in the way agricultural research and development activities are carried out. It actually fosters a change from the linear approach to a more cyclic and multi-stakeholders mode that aims at innovation as the outcome rather than knowledge, technology and or inventions. The IAR4D concept embraced a multi-stakeholders, multi-institutional approach and uses both soft and hard sciences to provide solutions to identified problems [8].

The IAR4D concept sets up the Innovation Platform (IP) as its operational instrument. The IP is a forum for a group of relevant actors selected along the value chain of a specific commodity or system of production to interact. The actors include farmers, researchers, extension agents, traders, processors, financial institutions, policy makers, regulators, output market operators, consumers and others. They interact to jointly identify problems and devise solutions that lead to the generation of innovations. The impact of the IAR4D concept is considerable because it employs the complementary effect of all the different competencies of the actors on the IP to identify the problem and device solution. Research activities on an IP are also all-encompassing, covering natural resource management, productivity, market, policy, product development, nutrition and gender. These activities will often yield technological, institutional and infrastructural innovations leading directly to socio-economic benefits (Fig. 1). The system for the establishment of an IP has been reported elsewhere by Adekunle *et al*. 92010) [9].

The IAR4D concept embraces the participation of the non-traditional stakeholders in agricultural research and development agenda, mostly stakeholders belonging to the private sector. These stakeholders have a different expectation and it mainly revolves around the need to generate profit from their endeavors. The expectation of the public sector practitioners is a bit different and it centers on generating public goods, either international

or national public goods. Thus, the IP ensures a blend in these expectations and project agriculture as a business and not a mere subsistence endeavor.

The implementation of the innovation system approach to development of agriculture vis-a-vis improvement of the contribution of the sector to national economic development, reduction in rural poverty, sustainability of the smallholder's production system and livelihood, provision of employment for the youth etc. will require systemic implementation of the IAR4D concept. Adekunle *et al*., [9] described two distinct forms of IAR4D innovation platforms, the Strategic Innovation Platform and the operational innovation platform. The strategic platforms are set up at the higher level of governance and management hierarchies where strategies are determined for the development of agriculture in the domain of coverage. As such strategic platforms could be set up at national level and sub-national levels covering district region, state or local government as the case may be. The role of the strategic innovation platform is to design the strategy for agricultural development of the country to promote innovation along targeted commodity or system of production. The constituents of the strategic platform are the chief executive of different stakeholders organization viz., the research institutions, extension system, input agencies, agricultural financing agencies, processing firms, transporting agencies, farmers association, end user of commodities, policy makers, etc. Members work to foster innovation in the agricultural sector of the country, region, state or district. They meet and strategically determine the agricultural development agenda, the location of activities or even commodities as determined by national or regional priorities.

The second forms of IPs are the operational platforms that are often set up at the grassroots level, but with a different focus. They source membership from similar organizations as the strategic platform, but they target frontline staff from that organization that facilitates operations. These staffs are not usually the chief executives, but they have the mandate of the chief executive to participate in the activities of the platform because of the relevance of their expertise to issues and questions on the platform. The operational platforms are hands-on in implementation of activities to generate innovation that benefits all stakeholders on the platform.

The Concept of Innovation Fund for Agricultural Transformation: Sustainable agricultural production and complementary development outcomes using the IAR4D concept will necessarily need to effectively engage the private sector for the development of the different value chain. Research activities to develop new products are also important to cater for excess production beyond the immediate market demands. This has been a major shortcoming of the previous ARD systems where technologies that foster high yields were introduced, but the socioeconomic benefits are cut-short due to unavailability of market for the commodities. In order to foster sustainable development of the smallholder system and its transformation to commercial enterprises, the advancement of the value chain is vital.

The proposition of the Innovative Fund for Agricultural Transformation (IFAT) is driven by the fact that the transformation of agriculture relies on the empowerment of the private sector practitioner that are involved in the agricultural value chain. This also includes the farmers who have erstwhile been the only focus of empowerment initiatives. A key incentive for the functioning of the private sector practitioners in agriculture is the provision of affordable financing for the activities of the sector in agriculture. Such financing system should be different from the financial services provided by the commercial bank with high interest rate and repayment regimes that are not compatible with agriculture cycles. The financing system needs to entail technical, policy and infrastructural backstopping to ensure the success of agricultural endeavours. It is imperative to take a clue from the agricultural financing scheme in the agriculturally advanced nations of the West and Asia where agricultural financing schemes with low interest rates are in place. For instance, in the USA interest rates on agricultural loan ranged between 1.4%- 5% depending on the category of loan required by the farmers [10], in Brazil agricultural loan ranged between 6.75% - 8.63%, in India 4% - 7%, [11].

The need for specialized financing with a low interest rates for agriculture in Africa is much needed; the current bank rate ranges between 18% - 33% and often not accessible by the smallholder farmers due to other requirements such as, collateral need and agricultural incompatible repayment system. The commercial bank system still consider lending out for agricultural purposes as highly risky, in the wake of unavailability of the required infrastructure for the system, dependency on rainfall, vagaries of commodity's market and unstable policy environment. Thus, there is the need for innovation funding; Innovation funding in this regards encompasses the sourcing, management and utilization of financial resources derived from various sources. This is expected to support the process of generating agricultural

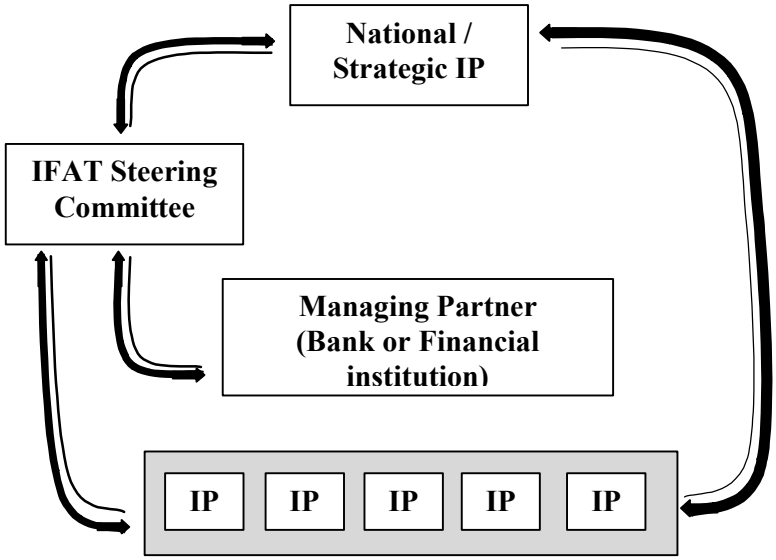

Fig. 2: Caption Missing

innovation and enhancement of the private sector practitioners for economic development through commercialization of the agrarian system.

The IFAT is organic in nature and embraces a system configuration that enables agricultural financing at a single-digit interest rate. This will finance the complete commodity value chain in order to meet the demand of an assured market with good policy and infrastructural support. An important componenet of the IFAT frame is its single-digit interest rate, which will enhance price competitiveness for agricultural commodities produced in countries at least on regional basis. The international competitiveness could be achieved as the funding progresses and capacity of the ARD stakeholders' increases to maximise economy of scale in production. The IFAT fund is premised on the understanding that the market for innovative instruments within agriculture could be a catalyst to unlock the full capacity of producers and transform market dynamics.

Error! Reference Source Not Found: The needed fund to establish IFAT could be obtained from a variety of sources to foster its sustainability. Such sources include grant from the government, grant from development partners and donors, contributions from large private sectors (mining companies, telecommunication companies, big manufacturers, etc.) as part of their socio corporate responsibility.

The fund will require a distinct form of management that is different from traditional commercial bank style with all its intricacies.

Ifat Governance and Management Framework: The governance and management structure for IFAT could follow the basic pattern illustrated in Fig 2. Essentially it needs to be entrenched within the innovation system approach for agricultural development at the country level. It is essential to establish the national innovation platform otherwise known as the strategic innovation platform that comprises of the chief executives of major ARD stakeholders institutions including the private sector's practitioners and farmers organization. The strategic innovation platform meets together to study and determine the agricultural development agenda for the country. This role may include decision on the commodities to be supported and the location of activities for citing infrastructural developments. The national strategic IP maintains links with the operational platforms to monitor the progress of the national strategy. With regards to the IFAT, national strategic IP also has the responsibility to lobby political will and fund-raising for the IFAT from the prospective development partners and the large private sector establishment.

The governance of IFAT will best be handled by a steering committee which comprises of selected stakeholders from the national agricultural sphere. The stakeholders include representative of the; national ministry of agriculture, financial institution, private sector in agriculture, farmers organization and the research and extension institutions. The steering committee will participate in the review of a loan proposal to validate the technical and financial viability and recommend good proposals to the financial managing partner for

consideration. In addition, the committee will receive technical and progress report from the supported innovation platforms.

The managing partner could either be a bank or a private finance organization with skills to carry out the day-to-day management of the IFAT fund. The partner will be saddled with the final stage of the proposal evaluation and approval. The IFAT managing partner will also play a major role in ensuring that the fund is disbursed as needed and used for the right purpose on the IP.

The operational IP is the last player in the IFAT governance and management circle, the procedure to set up and manage an IP has been reported elsewhere by Adekunle *et al*., (2010) [9] However, the strategic IP consists of the stakeholders (private and public sector) drawn along the value chain and innovation sphere of the commodity of mutual interest. Every stakeholder on the IP plays its role to facilitate the generation of innovation, while the IFAT provides financial support for the innovation cycle.

The IFAT framework recognizes the fact that inflation is a big challenge to agricultural lending. This is predominantly troublesome in developing countries where the economies are not stable. Somebody has to bear the burden of inflation in lending. Traditionally, the burden has been passed to the farmers or borrower. In IFAT we try to reduce the impact of this in a number of ways, which include:

Avoidance of the Vagaries of Inflationary Through Short Term Lending: Lending for a season for seasonal crops makes the money come back and reconverted if necessary as a way of avoiding inflationary plunge. The question then is what happens to tree crops. Tree crop farmers can also benefit especially when the trees are already in production. This falls into a short cycle of operation and makes it possible for the money to come and get reconverted. The bottleneck is when the tree crop is to be established. This calls for a longer term loan and may be difficult to manage under this arrangement.

Passing the Buck: This approach ensures that whatever inflation is observed is reported and passed not to the farmers but to the FUND bearing in mind that the capitalization had been through deposits made by private sector using social corporate responsibility, philanthropism etc. The approach here simply captures, reports and swallows the dent from inflation leaving the farmers unburdened

Absorption: The negative effect of inflation could be absorbed by the FUND. In this case, the farmer does not bear the burden in terms of increased interest rate but in form of reduced services by service providers-Farmers Organizations, Extension, Research, All of who benefit from the fund.

In all IFAT has proposed innovative ways to reduce the effect of inflation in agricultural lending.

CONCLUSION

The concept of Innovation funding has the potential to rapidly transform the economy of the Africa countries through agriculture. This would be achieved through the transformation of the agrarian livelihood by changing the way agricultural research and development activities are carried out. The change needs to ensure the delivery of innovations rather than mere knowledge, technologies and inventions that has erstwhile been delivered with little impact on the sector. The IAR4D concept has been developed and tested in eight countries of Africa to foster the paradigm change in ARD methods and ensure the development of rapid innovations. The IAR4D concept relies on the innovation system approach and engaged all the necessary stakeholders along the value chain of the commodity of interest and system of production. The systemic for the delivery of rapid outcomes viz., higher yield, increased income and reduction of poverty using IAR4D lies in the gainful interaction that ensued on its innovation platform among all the stakeholders. The interaction ensured that market is assured for the commodity to be produced; the needed inputs are supplied by dealers on the platform; the finance is provided by the financial institution; technology by researchers and extension services by the extension officers on the platform. The model ensured a good integration of the private and the public sector partnership on the innovation platform, such that innovation generated benefits all stakeholders.

The need to scale-up the benefits of the IAR4D model at the national level require the development of a sound national strategy with a good growth trajectory along the country development interest and on commodities which the country have a comparative advantage in production and marketing. Integrating a national strategy will require further development of the private sector in agriculture and transformation of the smallholders to small and medium-scale enterprise. A major step to achieve this is the provision of a different kind of financing to support their activities. This is more

important, following the argument that the subsidy system for agricultural production may not be sustainable the way it has been practiced in many Africa countries. To achieve competitiveness in price for commodities produced in Africa, compared with the same commodity imported from the West and Asia, a different agricultural financing scheme with reduced interest rates comparable to what obtains in the West in necessary. The IFAT is proposed with the required characteristics which include the low interest rate not more than a single digit. The fund will support the development of the private sector enterprises along the value chain of the different commodities of interest and the production of the farmers. The IFAT fund should be derived from various sources as grants but much more from the corporate social responsibility fund of the large private sectors, e.g. the mining company, the oil industry, the telecommunication industries, large-scale manufacturers, etc. Owing on the sources of the fund in IFAT, the management should not be tied to the governmental system in order to protect it from political and state influence. Rather the role of the state will be that of legitimizing the concept and provision of the needed policy and infrastructural environment for its success. The release and management of the IFAT should be through an innovation platform ensure its sustainability, security and purposefulness.

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