FARA
Forum for Agricultural Research in Africa

Quarterly Newsletter

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First Edition

Message from the Executive Director:

The Year 2014 is special to Africa's agriculture. For one, in January 2014, the African Heads of States and Governments declared it Africa's Year of Agriculture, Food and Nutrition Security. Further, the recommitments by the Heads of States and Governments in Malabo, Equatorial Guinea, in June 2014 have served to re-invigorate the resolve for an agriculture-led economic development of Africa even as the Comprehensive Africa Agriculture Development Program (CAADP) moves into the next decade.

Having successfully spearheaded implementation of Pillar 4 of the CAADP over the last 10 years, FARA is repositioning itself to best execute the emerging roles in the next CAADP dispensationthat are consonant with its mandate. In this regard, the FARA Secretariat and the Greater FARA Forum will be holding the 'Celebrating FARA' events in Johannesburg, South Africa, in November 2014. These events will help to reflect on how FARA has evolved over the years and its contribution towards shaping and advancing a transformative agenda for African agriculture. The retrospective self-evaluation will help redefine future strategic orientation, taking cognizance of the changing drivers of Africa's agricultural transformation.

As part of these celebrations, the Secretariat has launched this maiden edition of FARA Quarterly Newsletter as a platform for public engagement and advocacy of FARA's mandate. We hope you will enjoy reading the captivating engagement reports and anecdotes from beneficiaries of FARA and other stakeholder actions.

Dr. Yemi Akinbamijo

Dr. Yemi Akinbamijo, Executive Director, FARA

FARA and Cuba: Fostering Scientific Collaboration for Enhanced Food Security in Africa

Havana, the capital city of Cuba, was once described in the 1950s by an American tourist newspaper as "a mistress of pleasure, the lush and opulent goddess of delights." Within easy reach of profligate American celebrities and mobsters, Cuba in these times increasingly bore the unenviable epithet of "the whorehouse of the Caribbean" and gained reputation as the "capital of American vice." However, the social, political and economic fortunes of Cuba had to take on a different dimension when Fidel Castro's 26th of July Movement gained power on 1 January 1959. Since then, Castro had been at the helm, only relinquishing power in 2006 to his younger brother and comrade-in-arms, Raul Castro, on grounds of ill health.

Taking cues from post-Cold War economic milestones achieved by China, Russia and Vietnam, Raul Castro publicly declared to Cubans in 2010: "we reform, or we sink." This gave impetus to agricultural reform, the formalization of a progressive tax code, and public policy changes favoring free enterprise. Cuba has cumulatively progressed in improving the well-being of its people through science and innovation. Huge research investments in the areas of human and animal health as well as agriculture have resulted in a string of successes. Dedicated efforts in genetic engineering and

An example of infrastructural progress in Cuba

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biotechnology have enabled the country to build a professional and institutional foundation for success in pharmaceutical, agricultural and other scientific areas. Today, Cuba exports a range of new medical and agricultural technologies and services to several countries including those in Africa.

Several African countries and the Republic of Cuba share the common characteristics of developing countries. However, African countries have a lot to learn and benefit from Cuba's scientific community. There are several best practices and 'ready-to-adapt' technologies that could quickly enhance the health, food and nutrition security of African people. To help facilitate this, the Forum for Agricultural Research in Africa (FARA) led a delegation of stakeholders in agricultural research and development (AR&D) to the Republic of Cuba from 22 – 26 September 2014 to meet with Cuban authorities and discuss avenues for collaboration between African and Cuban AR&D institutions and agribusiness enterprises. The mission responds to FARA's strategic functions of facilitating collective action around the promotion of technologies, strengthening capacity to enhance the functionality of agricultural technologies, and building partnerships to enhance broad-based agricultural productivity and competitiveness, particularly in the context of South-South collaboration.

The Executive Director of FARA, Dr. Yemi Akinbamijo, led the delegation. He was accompanied by Dr. Emmanuel Tambi (FARA's Head of Policy and Advocacy); Dr. Emmanuel Okogbenin (Director of Research and Technology of the African Agricultural Technology Foundation - AATF, Nairobi, Kenya); Prof. Timothy Simalenga (Executive Director of the Center for the Coordination of Agricultural Research and Development in Southern Africa - CCARDESA, Gaborone, Botswana); Mr. Brian Mwanamambo (Head of Agribusiness Incubation Trust Limited - AgBiT, Lusaka, Zambia); and Ms. Marie NkomTamoifo, *Head of Association JeunesseVerte du Cameroun*, Yaounde, Cameroon.

Participation in the LABIOFAM 2014 International Congress

In addition to meeting with staff of the Cuban Ministry of Agriculture, the FARA Delegation participated in the LABIOFAM 2014 International Congress held at the Havana International Conference Center from 22nd to 25th September, 2014, and co-organized by the entrepreneurial group LABIOFAM, Pan-American Health Organization, Cuban Ministry of Agriculture (MINAGRI), and the United Nations Development Programme (UNDP). Organized under the theme of *Natural Products in Cancer Therapy*, the International Congress addressed issues of biopesticides, biofertilizers and biostimulants for agriculture. Scientists and professionals from more than 20 countries attended the four-day congress where more than 150 scientific papers were presented and discussed.

Members of the delegation meeting with staff of the Cuban MINAGRI

Welcoming the 500 plus participants to Havana, the President of LABIOFAM Dr. Jose Antonio Fraga Castro stated that LABIOFAM grew from 6 professionals in 1960 when it was established to more than 2,000 professional staff today. Now LABIOFAM produces medicines, vaccines and bio-products that help to prevent, control and treat major human and animal diseases in developed and developing countries. Dr. Castro underscored the strategic role of LABIOFAM in the development and transfer of new technologies and innovations as well as the relevance of its bio-products in the fields of human and animal health, agriculture, food and nutrition.

Display of some Cuban bioproducts

Meeting with the FARA Delegation, the Deputy Director of LABIOFAM, Dr. Isbel Gonzalez Marrero, and Director of Exports, Dr. Alfredo Vera Estrada, both explained how LABIOFAM has and continues to develop, register and commercialize several biological products across the globe. Adding that LABIOFAM is in the process of establishing production units in Tanzania, Angola and Ghana for the manufacture of biological products to tackle pests and diseases, Dr. Estrada called on FARA to facilitate the identification of agri-business partners in Africa to invest in this sector.

Dr. Yemi addressing the LABIOFAM International Conference

Addressing the more than 500 participants including

Ministers from Bolivia, Cuba, Ecuador, Gabon, Ghana and Zimbabwe at the closing ceremony of the Congress, Dr. Yemi paid tribute to Cuba for the humanitarian assistance it has provided and continues to provide to Africa. He also noted that Africa and Cuba have a lot in common and to share in the fields of health, food and nutrition security and expressed Africa's gratitude to Cuba for the recent technical support to combat the Ebola disease in West Africa. Noting the positive economic growth trajectory for Africa, Dr. Yemi underscored that Cuban interest in Africa is timely to take advantage of this market of the future. "LABIOFAM's collaboration and partnership with FARA and its constituent stakeholders", he said, "will enable greater visibility in Africa and linkages to agri-business partners in Africa."

Responding on the part of the AATF, Dr. Okogbenin expressed the need to address the 'access to technology' gap, particularly through the facilitation of public private partnerships (PPP) between African and Cuban entities to promote the uptake of technologies and products. On her part and representing youths in Central Africa, Ms. Marie Nkom stated that youths in Africa could benefit from Cuban know-how in agriculture. She expressed the need for a Youth in Agriculture Exchange Program between Africa and Cuba to encourage young Africans to set up small agri-businesses.

FARA and LABIOFAM sign a Memorandum of Understanding

On the margins of the International Congress LABIOFAM 2014 and the 3rd International Symposium on Products for Cancer Therapy, LABIOFAM and FARA signed a Memorandum of Understanding (MoU) to establish a strategic partnership between the two organizations in areas of bio-products, agricultural research, technology dissemination and adaptation, science and technology.

The MoU is underpinned by the fact that the corporate missions of FARA and LABIOFAM both seek to increase agricultural productivity in order to enhance food and nutrition security, human well being and poverty reduction in Africa and Cuba, respectively. The MoU is premised on technological advances achieved by Cuba in the fields of agriculture and human health, and how this can be of benefit to the African continent.

FARA and LABIOFAM signing and exchanging an MoU

In signing the MoU, LABIOFAM and FARA agreed to: 1) exchange information, new technologies and innovations in the agriculture and agri-business sector; 2) collaborate in the promotion of products and services of each other in the areas of bio-products technologies and business; 3) organize business meetings for businessmen from Africa and Cuba aimed at fostering commercial relationships in the field of agriculture and agri-business; 4) facilitate the exchange of business delegations through business fairs, exhibitions and seminars or any other activity developed between Cuba and Africa to promote commercial activities in agriculture and agri-business; and 5) maintain expeditious communication and exchange of information between the two organizations. The MoU opens an important door for Africa's AR&D stakeholders and agri-business entities to collaborate with their counterparts in Cuba for mutual benefits by both sides.

This article was contributed by Yemi Akinbamijo, Emmanuel Tambi, Alex Ariho and Nelson Ojijo

Biosciences as a Game Changer for Realizing Africa's Transformation Agenda

Over time, Africa has increasingly recognized the need to accelerate the adoption and application of advanced tools in biosciences to support the region's agricultural transformation. The effective and efficient application of such tools and products holds significant promise for increased agricultural productivity, food and nutrition security, and improved livelihoods in Africa.

In line with Agenda 2063 of the African Union Commission (AUC), the African Biosciences Initiative (ABI) was formed by the NEPAD Planning and Coordinating Agency (NPCA) to use new developments in biosciences to address African socio-economic development challenges. The ABI advocates for the crucial role of bioscience in reaching the UN Millennium Development Goals (MDGs) as well as the post-2015 Sustainable Development Goals (SDGs). The Inititaive strategically aims to harness biodiversity science and technology, biotechnology, indigenous knowledge systems, and biological sciences in the fields of agriculture, health, environment and mining.

The strategic directions for the period 2012 – 2017 has focused on practical, development-oriented research; strengthening networks; boosting Africa's bioscience research capacity; demonstrating results and impacts; and pursuing sustainable programme support. Some major research initiatives already undertaken by the ABI include: 1) development of stress-tolerant wheat varieties for northern Africa; 2) integrated biotechnical approaches for conservation and improvement of date palm in northern Africa; 3) development of small-scale

mushroom growing in Malawi; 4) small-scale aquaculture productivity increases through innovative pond management systems; and 5) scientific assessment of traditional remedies to combat the HIV-1 sub-type C virus.

The ABI has established the following regional centres of excellence to implement its programmes and activities: Biosciences eastern and central Africa Network (BecANet); Southern African Network of Biosciences (SANBio); West African Biosciences Network (WABNet); and North African Biosciences Network (NABNet). In addition, the African Bio-safety Network of Expertise was established as an engagement platform for Africans on issues to do with bio-safety systems, food safety, environmental safety, socio-economic impacts, intellectual property rights and other legal issues.

An increasing number of African countries are being encouraged by AUC and other multilateral bodies to regard biosciences as one of the most effective pathways through which innovative and entrepreneurial talents could be exploited to transform Africa. However, this requires increased investments in research and development in biosciences, including the instruments, tools, and infrastructure that will create an enabling environment for implementation of national and regional bioscience initiatives.

Nairobi BILSV Workshop Participants

In an attempt to gain a deeper understanding of the current biosciences capacity landscape in (West) Africa, the Bill and Melinda Gates Foundation commissioned a survey which was aimed at assessing the current biosciences research and development capabilities and gaps (both human and infrastructure) for application in crop and livestock improvement and utilization programs over the entire agricultural value chain. The outcome of the survey was further discussed during the Biosciences Institutional Landscape Survey Validation Workshop that was held 15 – 17 September 2014 in Nairobi, Kenya. In addition to documenting background data and an assessment of the needs and opportunities for establishing a biosciences hub in West Africa, the workshop contributed to identifying additional priority gaps, challenges and opportunities that will inform possible investments in a workable institutional arrangement for biosciences hub in the region. Some of the major outcomes of the workshop include:

a) Big picture perspectives and reflections obtained on the feasibility or operationalizing and implementing the West African Bioscience Initiative (WABI).
b) Gaps [in tools, products, institutions and partnerships, resources, and human & physical capacity] for biosciences in West Africa identified.
c) Feedback obtained from participants on recommendations (at big picture level) of the areas that the West Africa biosciences hub should cover
d) Mechanisms/architecture was agreed upon on the definition and outline of basic institutional arrangements for the WABI.

As African policymakers and other regional decision makers are concerned about using biosciences tools to up the food security game over the next decades, there is need to religiously implement existing biosciences programmes and ensure that the programmes are financed from sources within Africa – especially in the face of declining trends in overseas development assistance.

This article was contributed by Gbadebo Odularu, Program Officer, Policy and Advocacy, FARA

Filling Tummies and Pockets of Smallholder Farmers through Innovation Platforms

Eveline Kwarikunda (pictured) is a farmer in Bubaare Sub-County in Kabale District of south-western Uganda. Eveline is one of more than 500 farmers contributing about 370,000 metric tonnes of sorghum harvested in Uganda annually. Sorghum, the third most important cereal in Uganda, has been grown in the Kabale highlands for generations as a key food security crop. Now it is a source of financial security for farmers like Eveline.

Like all her neighbours, Eveline had previously used

traditional sorghum cultivation practices like seed broadcasting. But this has since changed. Now she plants improved sorghum seeds in lines at recommended spacing, weeds it frequently and her yields have tripled. The change in farming method did not happen overnight. It was the result of collective learning and awareness-raising after Eveline joined the Bubaare Innovation Platform (IP). The IP forum allowed Eveline to interact with other farmers, extension service providers, researchers and other stakeholders in the value chain to learn and share knowledge on better ways to grow,add value and market sorghum products.

Sorghum production has benefited from focused research, roll out of improved seed varieties, aggressive marketing and competitive value addition. Adopting simple and inexpensive innovations through farmer-researcher collaboration is changing food and financial fortunes of farmers in communities such as Uganda's Kabale District. Concerned about the linear agricultural technology transfer mode in Africa and the limited participation of value chain actors, the Forum for Agricultural Research in Africa (FARA) developed the concept of Integrated Agricultural Research for Development (IAR4D). The IAR4D concept is actualized through IPs that bring together relevant stakeholders to co-generate innovative solutions. The actors are configured along the value chain of a specific commodity or system of production and may include farmers, researchers, extension agents, traders, processors, financial institutions, policy makers, regulators, and consumers. They interact to jointly identify problems, investigate solutions, implement the solutions and learn lessons to foster innovations that generate socio-economic benefits.

"I get 30 bags of sorghum now; but before I joined the IP, I used to harvest only 10 bags because I did not know much about farming sorghum better," says Eveline. "As I practise what I have learnt, I know I will get more yields and that means more money for my family", she adds. The income from selling her sorghum crop keeps bills paid, children in school and her family fed.

This article was contributed by Fatunbi Oluwole, Program Officer, FARA

The Policy Input: Can it make a Difference in Africa's Food and Agricultural Transformation?

Introduction

Starting from a very low base, the African continent is witnessing a positive transformation as many countries are now reporting real Gross Domestic Product (GDP) growth rates in excess of 5%. With agriculture as the dominant economic sector of many African economies, it is unfortunate that most of the growth is not coming from agriculture. In the past four decades, growth in agriculture, measured in terms of total factor productivity, has hovered around 1% per annum on average; far below the average population growth rate of 2.3%. This has made it difficult for Africa to sustainably feed its people.

Several factors account for Africa's low agricultural productivity growth and public policy failure is an importanct one. For many African countries, agricultural policies have been less successful in achieving their intended objectives, mainly because they are not based on evidence. Evidence-based policies are public policies informed by rigorously established objective evidence. They are designed using hard facts rather than proposed theory. Most often, they have a lower risk of failure. Food and agricultural policies that are less likely to fail are those that are designed to deal with real problems, tackle causes rather than symptoms and draw lessons from pre-existing policy outcomes. Food and agricultural policies that make a difference therefore, are those that are guided by empirical evidence.

Why is the policy input not often felt in Africa?

The efficacy and impacts of policy is contingent on a number of elements. These include, but not limited to, policy goals and objectives, means and measures, policy actors and above all, policy 'content' and process. If policy goals are not properly articulated by policy actors, adequate resources are not availed by policy makers and an inclusive and consultative process is not followed in its design, it is highly likely that its impacts will not be felt. The transformation of American food and agriculture in the 20th century has largely been due to farm policy correctness. Appropriate farm and market policy content and design has driven the transformation of the food and agriculture sector with fact-based policies shaping the forces of agricultural productivity growth, national and global markets and the role of consumerism on food and agricultural production.

Food and agriculture policy in Africa is diminutive of 'content' and 'process', making it difficult for the impact of the policy input to be felt. There are a couple of

AFAPP Establishment Workshop Participants

reasons for this. First, for many senior policy makers and practitioners in the ministries of agriculture, economic planning and finance, knowing what the outcomes of a given policy would be, whether the policy will be effective, what benefits it would bring to stakeholders and what impact it would have on the wider economy remains a major challenge. They do not have adequate capacity to design policies that incorporate empirical evidence. The policies that they design often do not achieve their intended outcomes, resulting in the poor performance of the food and agriculture sector. Second, even when policies with good 'content' and 'process' are designed, the means and measures to implement them are often not adequate and the process is often devoid of inclusiveness and consultation.

Third, in spite of a wide spectrum of national and regional policy research institutions in Africa, policy makers still do not have adequate access to the policy research results needed to inform and influence public policy. Furthermore, economic policy research institutions are not adequately equipped to generate and disseminate the empirical evidence needed to inform policy design. Even when the evidence is available, it does not sufficiently feed into policy and decision-making processes because of the limited capacity of most research institutions to transmit the results, and the policy process to take up and utilize the information.

A forth reason why the policy inputs is often not felt is insufficient communication among African policy research institutions, and a general disconnect between them and policy-makers. They compete rather than complement each other's work, leading to duplication and, quite possibly, a waste of resources. As a result, these institutions are less effective in generating the evidence needed to support policy and decision-making processes; in effect, inhibiting Africa's ability to respond to key challenges facing the continent's food and agriculture sector.

What creates the policy input difference

Making the policy input count in Africa's food and agricultural transformation calls for concerted efforts to build the capacity of policy-makers and practitioners in evidence-based policy design and implementation. This requires deepening and broadening knowledge and understanding of the basic concepts, tools and core elements of agricultural policy and fundamental policy processes; improving strategic thinking ability and analytical skills in evidence generation; and promoting dialogue, experience and lesson learning and sharing among policy-makers.

Three core elements stand at the pivot of this: catalyzing economic policy research to generate evidence for informed policy and decision making; connecting policy-makers and the science and development community to policy research results; and communicating policy research results to policy makers and other end users through workshops, seminars and conferences.

How is FARA helping to make the policy input difference?

In 2012, FARA established the Food and Agricultural Policy Platform to enhance the effectiveness of evidence-based policy support to food and agricultural transformation in Africa. The platform supports the development of a robust economic policy research community in Africa; facilitates the engagement of

the policy research community with policy-makers over economic issues affecting food and agricultural development in Africa; and promotes networking among African policy research institutions. FARA has initiated a Policy Seminar Series within AFAPP to provide African countries with the opportunity to build their capacity for developing evidence-based agricultural policies that have a higher probability of success in transforming their economies.

AFAPP - PAKS Policy and CAADP Country Porcesses Steering Committee Meeting

The one week seminars will begin in 2015 and will consist of different modules designed to address the relevant components of policy and the policy-making process. The seminars will include: (i) lectures that focus on theory, concepts, tools and instruments for policy analysis delivered by experienced policy professionals; (ii) interactive sessions with structured discussions and case work; (iii) analysis of case studies of specific policies and approaches to evidence-based policy design; (iv) review and analysis of key issues, challenges and leading factors that guide and shape policy and policy-making processes; and (v) monitoring and evaluation of specific policies. Potential participants relate elements of each module to their individual country policy making processes.

Conclusion

If the policy input is to make a significant difference in Africa's food and agriculture transformation, African countries and regional organizations need to build the capacities of national and regional economic policy research institutions to enable them produce and disseminate the evidence needed to inform and influence public policy. Equally important is the need to enhance the skills and capacities of African policy-makers to take up and convert the evidence into appropriate policies. In addition, linkages among African economic policy research institutions on the one hand, and between these institutions and policy-makers on the other, need to be strengthened to take advantage of their relative strengths and skills to produce, disseminate and utilize empirical evidence that can inform and influence public policy.

This article was contributed by Emmanuel Tambi, Head, Advocacy and Policy Division, FARA.

Africa Human Capital In Science, Technology & Agripreneurship For Food Security Framework (AHC-STAFF)

Implementing the CAADP: A human capital perspective

The Comprehensive Africa Agriculture Development program (CAADP) remains the undisputed mechanism for agriculture-led economic development in Africa. The next ten years of the CAADP focuses on sustaining the momentum gained over the last decade and delivery of the following key results:

- Increased agricultural production and productivity
- Better functioning national agriculture and food markets and increased intra- and inter-regional trade
- Expanded local agro-industry and value addition
- Improved management and governance of natural resources for sustainable agricultural production

The Sustaining the CAADP Momentum Results Framework (NPCA, 2014) asserts that to deliver on the above results, increased human skills development and purpose-built capacity (quality and quality) for innovation, science and technology would be imperative. Skills shortages can affect growth through their adverse effects on labor productivity (and poor structural transformation). Experiences over the last 10 years indicate that actors implementing the CAADP at country levels have suffered from lack of qualified technical staff and this could compromise potential gains in the CAADP engagement over the next ten years.

The concept of human capital emanates from the demonstrable fact that farmers could greatly increase output with less land, labor, andcapital mainly by working smarter. Returns to investments in human capital have been shown to be higher than the returns to physical capital.

What the AHC-STAFF will do

The AHC-STAFF proposes a systems-based and forecasted technology capital and value chain approach to elucidating requisite capacity for technical change needed to uplift Africa's agriculture. The three capacity components implicit in this chain include knowledge/technology generation capacity, knowledge/technology diffusion capacity, and knowledge/technology adoption and utilization capacity. An assessment of the overall

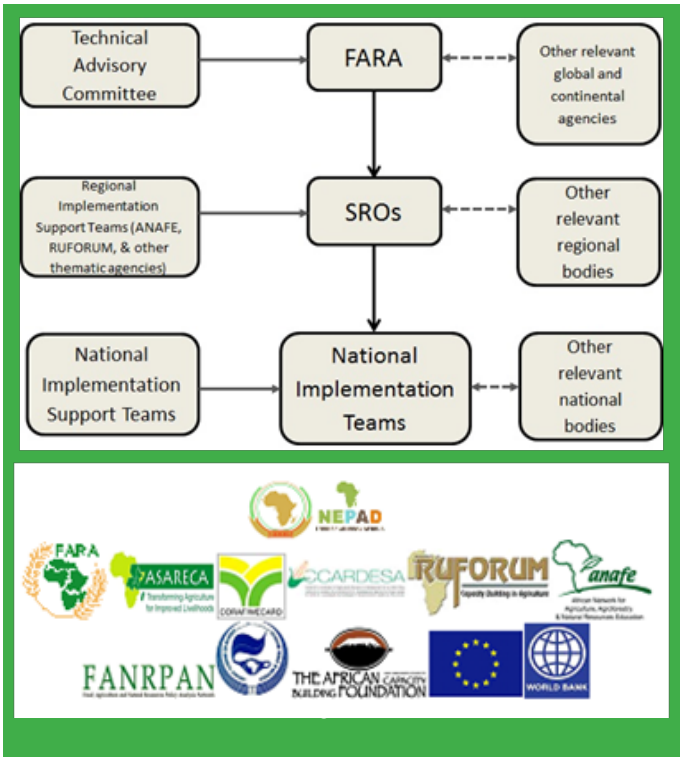
needs for each of these capacity components in priority program areas of the National Agriculture and Food Security Investment Plans (NAFSIPs) and the wider national food and nutrition security strategies, both now and in the future, will furnish credible grounding for human capital formation and institutional strengthening.

Expected results of AHC-STAFF

The purpose of AHC-STAFF is to develop and validate a framework for demand-led and holistic human capital development in Africa that will contribute to the successful implementation of the CAADP.

The expected results are:

1) Key skills and competencies required to implement the NAFSIPs and Science Agenda for Agriculture in Africa (S3A) assessed.
2) Human resource pools for the targeted countries mapped for suitability to address current and future market demands and to implement the R&D programs forthe Science Agenda, NAFSIPs, and other sector strategies.
3) A framework and strategies for human capital formation developed and validated.



Implementing structure and partners

As shown in Figure 1, the key AHC-STAFF implementing partners include FARA (at continental level), SROs and tertiary agricultural education networks (at sub-regional level) and national implementation teams (at country level). Specially constituted technical advisory teams at the respective levels will support the key implementing partners.

Linkages with parallel continental initiatives

Knowledge and Knowledge Support (KKS) is one of three strategic thrusts under the Sustaining the CAADP Momentum agenda. The KKS thrust focuses on four key areas including the S3A; Agriculture Education and Training (AET); Knowledge, Information and Skills (KIS); and ICT in Agricultural Transformation (ICTAT).

Overall, it is in the purview of AHC-STAFF to develop the global capacity for Knowledge and Knowledge Support thrust of the Sustaining the CAADP Momentum agenda. However, particular focus will initially be in regard to S3A and AET. The S3A stipulates the overriding areas of focus on science to drive Africa's agriculture and requirements for a basic science capacity for its implementation, while the AET seeks to strengthen the capacity of tertiary and vocational institutions to produce quality agricultural graduates and technicians.

The AHC-STAFF will identify existent, projected future needs, and associated capacity gaps of the key areas of the S3A. Similarly, for AET, the AHC-STAFF will seek to forge synergies with the emerging Agricultural Education and Skills Improvement Framework (AESIF) being formulated by NEPAD Agency as well as existing country initiatives of a similar nature. AHC-STAFF will also collaborate with the Tropical Agriculture Platform (TAP), a G20 initiative being supported by the FAO, to elaborate a capacity development framework for agricultural innovation systems.

Funding

The AHC-STAFF is funded under a special EU support provision within the FARA Multi-donor Trust Fund to the tune of Euros 4 million over three years.

Further information

For more information, please contact Dr. Yemi Akinbamijo (edu@fara-africa.org) or Dr. Irene Annor-Frempong (ifrempong@fara-africa.org).

Promoting Gainful Agribusiness in Zambia through Incubation

The Agribusiness Incubation Trust (AgBIT) is one of six incubators currently supported under FARA's Universities, Business and Research in Agricultural Innovation (UniBRAIN) programme. Located in Zambia, AgBIT is a pioneer agribusiness incubator that opened its doors to the country's agribusiness community in 2013 and is already scoring impressive successes in helping entrepreneurs and smallholder farmers around

the country get their businesses off the ground. The incubator provides opportunities for business skills development, technology access, linkages to market opportunities, and access to finance and investment options.

Charles Mweene is an enterprising farmer in Zambia who admits that he had underestimated the amount of income he could garner from farming horticultural crops. Since enrolling in AgBIT's Horticulture Cluster Scheme program, he has earned the envy of others as his income has dramatically increased. He narrates that from AgBIT's intervention, he had acquired skills ranging from greenhouse and drip irrigation technologies to customer relationship management.

Charle's Greenhouse tunnel at AgBIT

Charles attributes his success to AgBIT's business incubation program and avers that AgBIT has made him an all-round horticulture farmer and business man thereby assuaging his skepticism towards horticulture farming. "I have seen amazing yields through greenhouse production incorporating drip technology where I am able to produce 3.7 tons of tomato from a greenhouse of 0.025 hectare, while before I could barely manage a ton on an open area of 0.5 hectare," he eagerly explains.

Charles is keen on replicating the model at his own farm after seeing the success of greenhouse technology as an incubatee smallholder farmer with AgBIT. During this time he also generated a lot of incomes for himself while receiving training. He says AgBIT's technical support and financial linkages to set up his own complete greenhouse production will improve his farm productivity and result in improved livelihood for his family.

Charles Mweene says he has acquired the following skills

- Greenhouse and drip technology production
- Marketing skills to be able relate with both open markets and formal market s like the major retail chains that AgBIT has linked smallholder farmers to
- Knowledge on pest and disease management
- Spraying techniques
- Fertigation and nutrition requirement for different horticultural crops
- Good record keeping
- Post-harvest techniques and on-farm processing
- Improved entrepreneurship ability
- Required produce standards by major retail chains
- Above all double his income by 20%
- Employs more than 10 people

The AgBIT horticulture cluster program focuses on skills and technology transfer to farmers, building their capacity to manage continuous horticulture production, strengthening supply chain management, reducing post-harvest losses, ensuring quality products, increasing volumes produced and raising overall supply chain reliability among smallholder fruit and vegetable producer clusters. The program identifies and incubates budding entrepreneurs along the supply chain. The horticulture cluster scheme is also designed to help agro-processing entrepreneurs have access to improved quality and increased quantity of raw agriculture materials for their processing.

AgBIT has established a technology demonstration unit at the AgBIT Center in Lusaka. Entrepreneurs

Before –Agribusiness skills training

After-Agribusiness skills development

Un-organized informal markets

Organized formal markets better prices

like Charles come to the centre for an intensive six months incubation program to acquire practical hands-on skills in horticulture production, good agricultural practices, farm record keeping, quality management, entrepreneurship skills and one-on-one business mentorship, and earn a handsome income during the training phase. They then go on to replicate or expand production in their own fields with the incubator's support.

Lead farmers like Charles acquire the necessary skills and knowledge for them to replicate the model; they become model farmers, and act as change agents in their own communities. They are also creating employment in local communities.

FARA MSc Degree Fellowships Boosting Research Capacity in National Agricultural Research Institutes

The Forum for Agricultural Research in Africa (FARA), as the apex organisation for coordination and advocacy in agricultural research and development on the continent, seeks to reinforce the capacity of Africa to improve its agricultural science and innovation for food and nutrition security as well as poverty reduction. Science and innovation is possible where there is, amongst other requirements, strong human capacity to translate ideas into practice. The dearth of qualified young scientists in the national agricultural research systems, imply limited and unsustainable generation of technologies and innovations to drive Africa's agriculture.

To partly address this challenge, FARA, in partnership with the African Development Bank (AfDB), has provided fellowship opportunities to 40 young scientists to train for MSc degrees in various fields of agriculture under the *Promotion of Science and Technology for Agricultural Development in Africa* (PSTAD) project. The PSTAD project is a multinational agriculture development project designed to build the research management capacity of national agricultural research systems (NARS) and facilitate adoption and dissemination of proven agricultural technologies. It is executed by FARA, managed by the SROs and implemented based on the principle of subsidiarity by the NARS in 34 low income countries in Africa.

The project has two technical components: i) knowledge and information management (which is also known as RAILS) and technology transfer and good agricultural practices (also known as DONATA). The third component is on project management and coordination. The MSc fellowship was executed under the DONATA component.

Mrs. Evelyn Serwah AYEH,
PSTAD MSc degree fellowship beneficiary

Mrs. Evelyn Ayeh (pictured), an employee of the Ghana Food Research Institute, is one of the beneficiaries of

Mr. Jobson Momo at his experimental plot

the fellowship. Mrs. Ayeh studied for an MSc degree in Food Science and Technology at the Kwame Nkrumah University of Science and Technology, Kumasi, Ghana. Her research thesis was entitled "Development and Quality Characteristics of Yam Bean *(Pachyrhizuserosus)* Flour and its Performance in Bread." The study established procedures for substituting wheat flour with yam flour in bread making. Ghana spent a total of US$1.5 billion on the importation of consumables in 2013 of which wheat imports accounted for nearly 15%. Thus, composite flour technologies such as the one pursued by Mrs. Ayeh hold the promise for significant savings in foreign exchange.

According to Mrs. Ayeh, like many of her peers who greatly appreciate the opportunity provided her by the fellowship, "the PSTAD project has enabled me to acquire skills and competencies in wide-ranging topics such as food science, post-harvest processing, research planning, organising and implementing extensive scientific experiments as well as capacity to use analytical equipment and laboratory tools and development of product and writing research proposal".

Another beneficiary of the fellowship, Mr. Jobson Momo of the Central Agricultural Research Institute of Liberia, expressed similar accolades for the fellowship. Mr. Momo studied agronomy at the Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya. His research was on the "Effect of Withholding Irrigation Water after Complete Heading on Rice Yield and Seed Quality in Mwea, Kirinyaga County-Kenya".

The study area was linked with his area of research activities back in Liberia. The findings of the study indicated that there were no significant differences in the yield when irrigation water was withheld, although differences were observed in terms of morphological characters of varieties. Overall, the results showed that water could be economized without adversely affecting productivity and seed quality below some threshold level. This has important implications on irrigation efficiency in a world increasingly faced with dwindling water resources and the repercussions of climate-change.

The PSTAD fellowship beneficiaries are grateful to FARA and the AfDB as well as the managers of the project for the opportunity given to them to enhance their capacities. Not only are these post graduates better equipped intellectually to address the technical challenges facing Africa's agriculture, some have already assumed higher managerial responsibilities in their institutions and yet others have proceeded for their PhD studies.

This article was contributed by: Ifidon Ohiomoba, PSTAD Manager, FARA

Seed analysis

UPCOMING MEETINGS

	Title of meeting	Organizer(s)	Purpose	Venue	Date	Contact information for the meeting
1	Capacity building workshop	RUFORUM, FARA	To build the capacity of the 19 consortia	TBD	Nov. 2014	p.nampala@ruforum.org
2	Planning, Financial retreat and Management Team Meeting	FARA	To plan and discuss the management issues	Johannesburg	23-28 Nov 2014	jmugabe@fara-africa.org
3	Inception workshop on setting up 3 consortia working on the Adding value to mango non food	COLEACP	To launch the 3 consortia working on the mango waste	Ouagadougou	TBD	Denis.felicitezulma@coleacp.org
4	Second Dialogue between Farmer organizations and Researchers	ROPPA, FARA	To discuss on the best way of working together (researchers and non-researchers)	Benin	December, 2014	Atioro@yahoo.fr
5	CSA programming for NARIs and policy Makers	FARA	To create a platform for dialogue between Researchers, policy makers and end-users on evidence-based planning on CSA issues.	Johannesburg	24 – 29 November 2014	Dr Emmanuel Tambi (etambi@fara-africa.org)

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FARA
Forum for Agricultural Research in Africa

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