

**Keynote Address: Agricultural Growth, Poverty Reduction and MDG in Africa Squaring the African Circle:
Enabling Development that is Real, Equitable and Sustainable**

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Abstract

African agricultural producers have sophisticated production and coping mechanisms but they are challenged by increasing population, competition from other uses for finite natural resources and, risks and uncertainties caused by globalisation and climate change. To make progress in the face of such challenges African leaders have endorsed the Comprehensive Africa Agriculture Development Programme (CAADP) which underpins agricultural research executed in compliance with the principles of the Framework for African Agricultural Productivity (FAAP). FARA in turn as the lead institution to implement CAADP pillar 4 and FAAP revised its Strategic Plan. FARA will achieve the Specific Objective of its new strategic plan by catalyzing, facilitating action by its stakeholders through five complementary Networking Support Functions: 1. Advocacy and resource mobilisation; 2. Access to knowledge and technologies; 3. Regional policies and markets; 4. Capacity strengthening; and 5. Partnerships and strategic alliances. To have more impact in agricultural development the traditional linear research-extension-end user service delivery approach must change to a more inclusive approach that can harness the indigenous knowledge of the farmers and the knowledge of extension and other change agents through joint learning. This requires engaging the biophysical and social scientists, development agents, suppliers and marketers, and policy and decision makers from public, private, and community institutions. In this diverse and dynamic approach social scientists, in particular, agricultural economists, have crucial roles in building capacity for innovation. Economists should be in the best position to understand what is required to turn “disciplinary experts” in to “change makers”. They ought to be at the forefront of systemic thinking that allows broader integration of disciplines and knowledge systems, leading the change of mind sets and building values that support the new ways of thinking and learning. They should contribute to the development of new development paradigms, identifying the new competencies that will be required by the new generation of African agricultural professionals, scientists, lecturers and graduates.

Introduction

So many past conferences have been heralded as presaging new and better ways forward for African agriculture; ways that will enable development that is real, equitable and sustainable. Yet the almost invariable outcome has been no more than expressions of the development fashion of the moment. These have come and gone leaving the quality of the lives of the majority of Africans as hard and insecure as ever. This is not what is expected, indeed demanded, from a gathering of African agricultural economists because they are best placed to understand the urgency should have the insight and tools to identify what should be done to accelerate agricultural development that is real, equitable and sustainable.

The imperative for change in African agriculture

The economics of smallholder farmer and pastoral social and production systems reveals sophisticated production and coping mechanisms which have stood the test of time. However, these systems are severely challenged by increasing populations and alternative uses competing for finite natural resources, and the risks and uncertainties caused by globalisation, and climate change. The urgency and complexity of agricultural development are increased by the deteriorating livelihoods of the African majority. A change in approaches to development is needed to address: the loss of natural resources on which agriculture depends; the increasing competition for water which is compounded by the encroachment on fresh water catchments; and the loss of biomass and biodiversity which is vital for the health of the world as a whole. Change is inevitable but African leaders have the responsibility to ensure that it is change for the better that it will bring about real, equitable and sustainable improvements in livelihoods of the majority. To make the right choices they have to be informed about the available technical and scientific options based on sound analyses of the social and economic consequences of different policies. There have been notable successes in African agricultural development but overall the returns to substantial investment have been much less than promised and economists have the responsibility to give reliable and evidence-based advice to policy makers. Advice based on economic research conducted in Africa.

The role of science in sustainable development

To obtain sound economic evidence for technical, market and policy advice economists have to be embedded in the whole value chain. The greatest knowledge of African social and production systems resides with the hundreds of millions of practitioners. African ethno science has proven to be remarkably resilient as shown by the ability of communities to survive and recover from increasingly frequent and severe droughts, floods, plagues and wars. Smallholders and pastoralists have also proven to be ready to adopt worthwhile innovations. Examples include smallholder horticulture, the adoption of hybrid maize, and the use of zai pits for rehabilitating degraded drylands. These good technologies have jumped off the shelves despite the much quoted inadequacies in extension. Indeed in some instances, such as smallholder tea and dairying with high-grade cows, they were adopted in spite of active discouragement by the authorities and extension services.

Despite this evidence, African economists have colluded in sustaining the myth that there are many good technologies on the shelf due to poor extension services thereby providing a sadly resilient alibi for weak science. The same energy that has been applied to expounding the failures of colonial policies has not been devoted to identifying what is wrong with the present systems and the changes that are needed to make African agricultural innovation systems more effective. Ironically some of the colonial agricultural policies, such as for the production of cotton in Uganda, provide excellent examples of effective innovation systems that extended from factory to farmer. African leaders have found the slow progress in African agricultural development to be absolutely unacceptable. Drawing on lessons from other regions, they have developed a comprehensive approach to agricultural development. This is stated in the four pillars of the African Union's New Partnership for Africa's Development's (NEPAD) Comprehensive Africa Agriculture Development Programme (CAADP), i.e., 1 – Land and Water Management; 2 – Rural Infrastructure and Trade Related Capacities for Market Access; 3 – Increasing Food Supply and Reducing Hunger; and 4 – Agricultural Research and Technology Development and Dissemination.

Recognising that development must be underwritten by scientific research CAADP's fourth pillar pays particular attention to research on; integrated natural resource management; adoptive management of appropriate germplasm; development of sustainable market chains; and policies for sustainable agriculture. The heads of state and government have recognised that cutting-edge science is needed to solve technical, organisational and process constraints including; the use of inappropriate genetic materials and management practices; biotic and abiotic stresses and degradation of natural resource; poor value addition and poor access to input and output markets; ineffective standards and regulations; and inadequate human and institutional capacities, including for research, extension and policy institutions.

There is increasing understanding that for research to be fully effective it should be: adequately funded and implemented with a commodity chain and market orientation applied through an innovation systems approach. Research should promote capacity building at all levels using conventional and non-conventional techniques. It must be planned and implemented from the outset to ensure out-scaling and up-scaling and with strong links between the clients and technology generation. These principles are elaborated in the Framework for African Agricultural Productivity (FAAP).

The Forum for Agricultural Research in Africa (FARA) was established to harness collaboration across the continent as added value to the work of the Sub Regional Organisations (SROs) in supporting the National Agricultural Research Systems (NARS). Since FARA was inaugurated in 2002 there have been many changes in the organization of African agricultural research including the strengthening of the SROs and the links with the Regional Economic Communities (RECs) and NEPAD. FARA has had a hand in some of these such as the development of CAADP and FAAP and the commitment of African governments to investing 10% of their budgets in agriculture. In turn, these changes have required adjustments by the Forum itself and a new Strategic Plan was approved at the 4th FARA General Assembly in Johannesburg in June 2007.

FARA's new Strategic Plan

FARA's 2007 – 2016 Strategic Plan was developed through comprehensive stakeholder consultations about where and how FARA could make a significant contribution. The process involved determining FARA's general objective; what it will have to achieve as its specific objective; the results that will be required to reach its objective; and the activities that will be undertaken to produce the results. FARA's General Objective is *high broad-based*

agricultural growth sustainably established in Africa and its Specific Objective is *broad-based agricultural productivity, competitiveness and markets sustainably improved in Africa*. This is a complex statement but in essence:

- Broad-based = inclusive of many stakeholders (poor farmers and pastoralists, agricultural labour force, poor consumers, entrepreneurs)
- Improved agricultural productivity (not just production) = uptake of research and technologies that increase production efficiency
- Improved agricultural competitiveness = increased abilities of farmers and other stakeholders to compete in the market on price, quality, and standards
- Improved markets = infrastructure, prices, information all enhanced
- Sustainable improvements = in environmental, social, economic, political and institutional terms

The results which FARA has to produce to reach its objective are:

1. Appropriate institutional and organisational arrangements for regional agricultural research established
2. Broad-based stakeholders have access to the knowledge and technology necessary for innovation
3. Strategic decision making options for policy, institutions and markets developed
4. Human and institutional capacity for innovation developed
5. Platforms for agricultural innovation supported

These results will be the outcomes of focused action in; advocacy and resource mobilization; access to knowledge and technologies; regional policies and markets; capacity strengthening; and by promoting partnerships and strategic alliances. During the Strategic Planning exercise there was a careful analysis of the assumptions that must hold for FARA to achieve its objective. Amongst the assumptions is that there will be correct and timely policy diagnosis and prognosis, which is a principle responsibility of economists. In keeping with its nature as a forum of all the actors in African agricultural research and development the activities will be implemented by complementary Networking Support Functions encompassing: 1. Advocacy and resource mobilisation; 2. Access to knowledge and technologies; 3. Regional policies and markets; 4. Capacity strengthening; and 5. Partnerships and strategic alliances. These Functions interact and support each other and collectively will ensure delivery of the Results that the Forum aims to achieve.

Not surprisingly, since they were also designed to respond to stakeholder demands, the FARA projects that were underway in 2007 fitted well within the scope of the Networking Support Functions and they are contributing to the Strategic Results. However, the Functions will require further initiatives and projects and additional investments to achieve the results expected of them. The Strategic Plan relates to FARA as a continental forum and is designed to reinforce the SROs' ability to support the NARS capacity to improve the livelihoods of smallholder farmers and pastoralists. These interactions are depicted in Figure 1. The current activities are accommodated in the Networking Support Functions as shown in Table 1.

African Agricultural Economists Retooling African Science

A fundamental commitment in FARA's Strategic Plan is to support the retooling of African agricultural science to enable it to be more effective and have more impact. As pointed out by Paul Kibwika, in a seminal paper that he delivered at the FARA General Assembly in June 2007, African agriculture has many complex problems with multiple causation and feedback loops. To address these problems the agricultural development community must apply more than disciplinary expertise but present graduates are not prepared for this and their ability to influence change in communities is contested because even though Africa is producing many more agricultural graduates it is still enduring increasing levels of rural poverty and environmental degradation.

The required re-tooling applies as much to economists as to any other discipline and they must retool themselves before they can lead the retooling of other disciplines to be effective in modern innovation systems. The discipline of economics used to be called 'political economy', i.e., it looked at the state of nations. No other discipline is as well positioned to take a holistic view of what is needed for Africans to drive the African agricultural research and development agenda. This is key to developing successful agricultural innovation systems.

The innovation systems approach aims to catalyze internal and external actions and actors, as well as processes and mechanisms in African agriculture to break away from the linear research-extension-end user service delivery

approach which relied on scientists to produce the answers and failed to harness the genius of the farmers and the knowledge of extension and other change agents in jointly learning how to seize opportunities and overcome constraints. This requires engaging the biophysical and social scientists, development agents, end users of research outputs and outcomes, and policy and decision makers from both public, private, and community institutions. Thus, the role of social scientists in particular, agricultural economists and anthropologist, is crucial to building capacity for innovation.

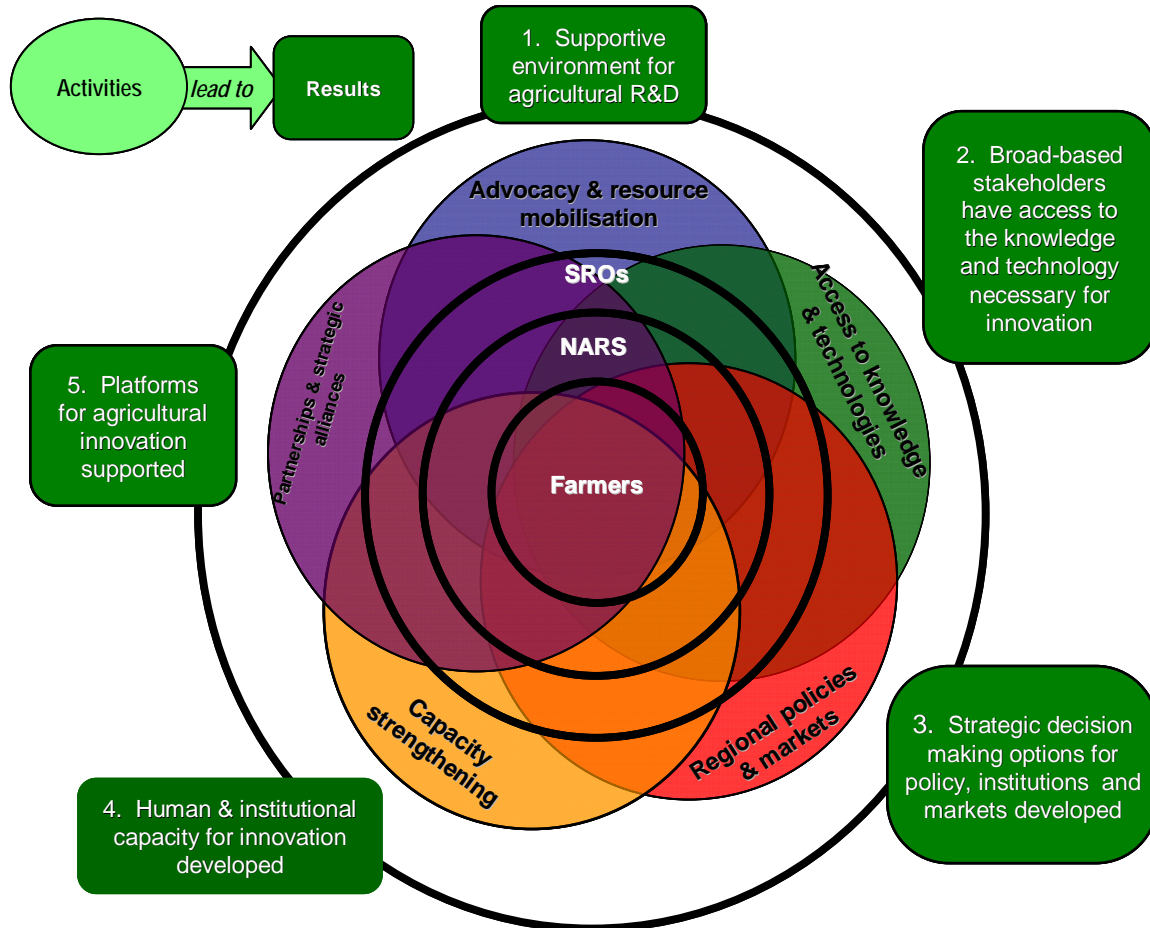


Figure 1 FARA’s Networking Support Functions relationships to each other and to the farmers

The capacity and competence of professionals from different disciplines to be effective actors in modern innovation systems has to be learnt and should be instilled in graduate and postgraduate training. Each collaborator must have the skill to be able to assess when and how they can or cannot contribute to the overall process of innovating and to be able to negotiate their roles and access to resources as members of disciplinary, institutionally and culturally diverse teams. They must also be able to get their messages across at one moment to farmers who have great knowledge but little formal training, at another to their scientific peers and then to professionals and decision makers who control the resources they need but are not familiar with disciplinary jargon. The fact that agricultural research has proven to be one of the best investments for development but continues to be under-funded is, at least in part, an outcome of scientists’ inability to communicate effectively out of their own communities.

Some take-home messages

- The key message to this August conference is that economists should be at the forefront of systemic thinking that allows broader integration of disciplines and knowledge system. They should be leading the change of mind sets and building values that support the new ways of thinking and learning.
- Like Banji Oyeyinka and too few others, they should be developing, not following, new economic development paradigms and identifying the new competence that will be required and setting the example amongst the new generation of lecturers and graduates of African universities.
- Economists should be in the best position to understand what is required to turn “disciplinary experts” in to “change makers”. In short, it is time for African economists to assert their interest in and capacity for innovation. If they do not take up this challenge Africa will continue recycling externally promulgated development paradigms which have left us far behind other developing regions with development that is ephemeral, inequitable and unsustainable.

Table 1 FARA’s Networking Support Functions and projects underway or being developed in 2007

FARA Networking Support Function Projects	Corresponding FARA initiative
A framework for reform and investment in agricultural research, and harmonization of actions and actors of ARD in Africa	Increasing awareness and internalising the Framework for African Agricultural Productivity (FAAP)
A new innovation systems approach to agricultural research for development	Sub Saharan Africa Challenge Programme (SSA CP)
Address the priority weaknesses in capacity building that constrain the effectiveness of Sub Saharan Africa NARS	Strengthening Capacity for Agricultural Research and Development in Africa (SCARDA) Building Africa’s Scientific and Institutional Capacity (BASIC)
Immediate applications of proven technologies that can make a difference and restore credibility in agricultural development	Dissemination of New Agricultural Technologies in Africa (DONATA)
African stakeholders better able to learn and contribute to global knowledge exchange on agricultural science and development	Regional Agricultural Information and Learning Systems (RAILS)
Develop agricultural policies on new emerging technologies	African Biosciences and Biosafety Initiative (ABBI)
Promote inter-regional collaboration (i.e. Europe – Africa partnership)	Building Platform for African – European Partnership on agricultural research and development (PAEPARD)