

Research Application Summary

Developing a regional agricultural and rural innovations PhD training program in eastern africa: The Egerton University experience

Amudavi, D.M.¹, Onyango, C.A.¹ & Ombati, J.M.¹

¹Department of Agricultural Education & Extension, Faculty of Education and Community Studies, Egerton University, P.O. Box 536-20115, Egerton, Kenya
Corresponding author: damudavi@africaonline.co.ke

Abstract

Although agricultural and rural sectors have a substantial economic share in Africa, their performance have remained sub-optimal due to many challenges including limited supply of high level professionals in agricultural and rural innovations to spearhead the facilitation of the interfaces of social, cultural, political and economic aspects. This paper provides insight into experiences and lessons learned in developing a regional PhD programme in Agriculture and Rural Innovation Studies (ARIS) to address the complex and multi-dimensional problems of agriculture and rural development. The paper presents the process, lessons and issues for further consideration in the full implementation of the programme. The paper asserts that, among other institutional issues, the structures and processes for approving new programs should be clearly understood by all concerned to fast-track approval and deal with uncertainty. By understanding changes in the development goals and by adapting training programs to prepare innovative students, universities will have more opportunities to sustain community-based development programs. The impending implementation stages including staff-retooling, marketing, completion of modules and resource mobilization are urgent.

Keywords: Agriculture and rural innovations, Egerton University, Regional PhD

Résumé

Bien que les secteurs agricole et rural ont une part substantielle économique en Afrique, leurs performances sont restées sous-optimale en raison de nombreux défis, notamment l'approvisionnement limité de professionnels de haut niveau dans les innovations agricoles et rurales, fer de lance de la facilitation des interfaces sociales, culturelles, politiques et des aspects économiques. Le présent document donne un aperçu des expériences et des leçons apprises dans l'élaboration d'un programme régional de doctorat dans l'agriculture et études d'innovations rurales (ARIS) pour résoudre les problèmes complexes et multidimensionnels de l'agriculture et du

développement rural. Le document présente le processus, les leçons et les questions à approfondir pour la mise en œuvre complète du programme. Le document affirme qu'entre autres, les questions institutionnelles, les structures et les processus d'approbation des nouveaux programmes doivent être clairement comprises par toutes les parties concernées par l'approbation accélérée et face à l'incertitude. Par la compréhension des changements dans les objectifs de développement et l'adaptation des programmes de formation pour préparer les étudiants innovateurs, les universités auront davantage de possibilités pour soutenir les programmes de développement communautaire. Les étapes de mise en œuvre imminente y compris l'organisation du personnel, le marketing, la réalisation de modules et la mobilisation des ressources sont urgents.

Mots clés: L'agriculture et innovations en milieu rural, l'Université d'Egerton, doctorat régional

Background

Agricultural and rural sectors have a substantial economic share and performance in Africa. The majority of Africa's 700 million people (70%) and roughly 80% of the continent's poor live in rural areas and depend mainly on agriculture for their livelihood. The sector accounts for about 20% of Africa's GDP (ECA, 2007; APP, 2009), 60% of its labour force and 20% of the total merchandise exports (CAADP, 2009). Agriculture represents a great part of the Africa's share in world trade. On the list of 20 top agricultural and food commodity importers in 2007, 60% are from SSA. African countries represent also 50% of top 20 countries, in terms of the share of total agriculture/ total exported merchandise in the world (AfDB, 2009). However, agriculture and rural development (ARD) continue to face insurmountable challenges including increasing poverty and food insecurity, environmental degradation, climate change, and erosion of human values due to poor governance (CAADP, 2009). The performance of the sector has in fact been suboptimal. There is a critical shortage of professionals with interdisciplinary orientation to influence development and uptake of relevant agricultural technologies in Sub-Saharan Africa. The linear disciplinary training of scientists has not developed competences for dealing with multi-faceted challenges such as poverty. Weak institutional arrangements and support including ineffective policy frameworks aggravate the problem and hamper innovations for sustainable agricultural and rural development in the ECSA region (ECA, 2007). Innovation systems approaches that take into

account the interplay between social, political and technical aspects may be more promising in this context, but the mechanics of such systems have to be well understood. For this, high level professionals in agricultural and rural innovations are needed to study the interfaces of social, cultural, political and economic aspects while engaging with multiple actors to make science and technology drive agricultural and rural development. Ideally, this is the domain of universities but to do so, they need to build their own capacity starting with the human resource capacity. Relevant human resources need to have a multi-disciplinary orientation, high level analytical capabilities and ability to integrate social, technical and professional skills (World Bank, 2007). The capacity for individual universities in the region to pursue this challenge which also requires new thinking is limited. Through the funding from the ACP-EDULINK of the European Union, under the overall coordination by Makerere University, a regional PhD programme in Agriculture and Rural Innovation Studies (ARIS) has been developed. The ARIS programme aims to develop innovative and analytical professionals capable of influencing policy, planning and implementation of ARD initiatives based on contextual and scientific evidence. Given the limited capacities (e.g. financial, human, infrastructure) within the African universities, creating such professionals requires collaboration. ARIS is a joint programme between the consortium of three East African universities; Egerton University (Kenya), Makerere University (Uganda) and Sokoine University of Agriculture (Tanzania). The programme has been supported by two European partner universities (Wageningen University in The Netherlands and Montpellier SupAgro in France) and ARD practitioners in the region based on the rationale of sharing essential capacities for a quality PhD programme. This paper provides insight into experiences and lessons learned in developing ARIS to address the complex and multi-dimensional problems of ARD.

Process Methodology

Development of the ARIS programme began with a RUFORUM supported Regional Steering Committee (RSC) holding separately three National stakeholders workshops in Uganda, Kenya and Tanzania to create awareness and to consult on the relevance and development of the programme. The workshops also examined three key issues: (i) the major constraints to agricultural and rural development in the respective countries, (ii) root causes of the constraints, and (iii) potential contribution of the proposed programme in overcoming the constraints.

These workshops were followed by a Regional stakeholders' workshop.

The key outputs of the regional workshop included: clarification of the need and justification for the ARIS programme; consensus on thematic focus of the programme and recommended courses, content, programme design and structure including procedures for quality assurance, M&E and learning mechanisms; the profile of the ARIS graduates; resource mobilization and the roadmap for course development, approval and implementation by the partner institutions (ARIS Secretariat, 2009). A seven-member regional task force organized a retreat to fine-tune the structure of the course, the course descriptions for the recommended courses, and devised a roadmap for university senate approval and subsequent implementation. Individual University departments responsible for hosting the ARIS programme were mandated with the task of reviewing and taking the programme through the approval processes of each University.

**The ARIS
Programme and
Institutional
Approval Process at
Egerton University**

The ARIS programme is designed to be offered by course work, research and thesis. The research component will be primarily development-oriented; seeking to solve problems while fulfilling the traditional academic requirements. The coursework will comprise of eight taught core courses offered in the first year and three modular-based seminars offered during the first and second years. The courses are: 1) Agriculture and Rural Development in Africa, 2) Innovations for Agricultural and Rural Development, 3) Agricultural Services Delivery and Entrepreneurship, 4) Participatory Methods and Action Research for Innovation in Livelihoods and Agricultural Systems, 5) Quantitative Research and Statistical Applications, 6) Organisational and Institutional Development for Rural Transformation, 7) Knowledge Management and Communication, 8) Application of Innovation Systems in Agricultural and Rural Development, and 9) Seminars on: Personal Mastery and Soft Skills, Scientific Writing and Publishing, & Peer Learning and Research Mentorship. The courses will be facilitated through enhanced learning (e-learning strategies). The first year coursework will also include research proposal development focusing on issues of poverty reduction, food security and improved rural livelihoods. The ten months of first year will be structured into four months of coursework at a common site, three months of proposal development in students' home countries and another three months of

coursework at a common site. This structure is flexible to allow students to situate their research within the national development needs of their respective countries. The Approval process of the ARIS programme in Egerton University was started by the Department of Agricultural Education and Extension initially through a committee to organize a National Stakeholders' workshop in July 2009 to solicit, consolidate and crystallize perspectives on what to incorporate in the programme. The committee sensitized the Department, the Faculty of Education and Community Studies, the University Management and other stakeholders through a two-day National Stakeholders' workshop. An institutional buy-in into the programme was achieved with the University Management's participating including the University's Vice-Chancellor presenting a paper on the role of the university in ARD. A report of the workshop outputs was presented at the Regional workshop held in Entebbe in 2009. A programme draft prepared by the small taskforce using outputs of the Regional workshop was reviewed in the Department and later submitted to the Faculty Board. The Faculty Board's suggestions were incorporated and the document submitted to the Board of Postgraduate Studies (BPGS). The programme was further revised following comments by the BPGS and presented to the University Senate. In principle, the document was approved subject to revisions in terms of structure, course coding and loading, admission requirements, enhancing uniqueness and broadening the cross-cutting nature of the programme. The programme finally got the Senate's approval in August 2010.

Lessons and Opportunities in the Preparation

Several lessons have been learnt during the development of ARIS programme. First ARIS, being a regional programme, there was need for a careful understanding of the approval processes and protocols within individual universities to enable fast-tracking of the process. It was assumed that the programme was novel and would easily be approved, which was not the case. Second, the RSC needed to remain focused on the management and coordination of the processes leading to successful approval of ARIS. The curriculum development process started regionally but the adaptation and approval processes proceeded largely institutionally. Third, wide stakeholder involvement in the development of the programme enhanced the value of and demand for the programme. Frequent inquiries have been made by some of the institutional partners from research and extension sectors regarding when the programme would be launched. Fourth, a strong partnership

between RUFORUM and the RSC was critical to maintaining transparency and mutual working and achievement of milestones. Finally, an understanding of institutional dynamics that prevent or lead to the approval and long-term sustainability of the programme is imperative. Hence structures and processes for approving new programs should be clearly understood by all the concerned University staff to fast-track approval and avoid creating uncertainty in the relevance of the programme. Getting strategic buy-in by University Management is a critical additional ingredient. Currently, ARIS has a staff re-tooling component that will prepare an interdisciplinary team of faculty to develop community research projects that link teams of students with community partners engaged in ARD. The programme will also provide innovative opportunity to foster collaboration among the traditionally separate realms of social and natural sciences. Therefore universities must develop new community and academic partnerships that redirect resources to create an environment that supports rural communities to adapt to change and innovate in the use of technologies, management systems, organizational arrangements, institutions, and environmental resources. The programme will provide community-based experiences and broader cross-cutting competences to influence change in communities under different farming systems, technological and socio-political landscapes. The expansion and effectiveness of these efforts will hinge on universities supporting integration of theory and practice through changes in the education of professionals. The authors conclude that by understanding changes in the ARD goals and by adapting training programs to prepare innovative students to tackle challenges facing attainment of ARD goals, universities will have more opportunities to sustain community-based development programs.

Recommendation

The way forward for Egerton University. Egerton University is moving with speed to engage in: a) retooling of the staff as per the programme's requirement, b) marketing of the new programme; c) recruitment of appropriate students; d) exploring mechanisms of creating opportunities for fellowships and scholarships to support a critical mass of students, e) exploring how to maintain interest in the programme and sustain enrolment, f) explore how to bolster students' experience of partnering with communities to build collaborative partnerships in all phases of ARD projects; and g) how to create and maintain interdisciplinary teams to work in collaboration with others who

have different expertise and perspectives in solving complex problems at different scales.

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