

Research Application Summary

Developing an outreach framework for strengthening university-farming community engagement for improved and sustainable livelihoods (SUFACE)

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Abstract

This project seeks to develop an operation framework where universities can work with rural farming communities to enhance productivity and competitiveness of smallholder agriculture, as well as responsiveness and impact of universities in agricultural development. The premise of the project is a paucity of information access and flow, and weak linkages between the university - farming community and other actors in agricultural development. The project will be create knowledge and information centres so that the University can proactively intensify its engagement with rural communities and will employ information communication technologies (ICTs) based mechanisms to enhance access and sharing of information. The appropriateness of this model will be tested within an action research framework to strengthen functionality of multi-commodity value chains of cowpeas, soyabean and rice, and will also entail building of strong partnerships along the research to development continuum and the capacity of rural communities to utilise access, utilise and intensify the use on technologies. Experiential learning approaches for University students and staff, and review the Faculty of Agriculture curricula for potential inclusion of experiential learning modules will also be undertaken to reorient the University to actively engage with rural farming communities. The project outputs will include; 1 PhD and 3 MScs students trained, 30 farmers trained on the use of ICTs for outreach, 2 information centres established, and 3 ICT based approaches for technology dissemination developed. The outcome of the project will be a

responsive university research, training and outreach programme piloted and packaged for dissemination.

Key words: Community engagement, experiential learning, ICTs, Makerere University Outreach

Résumé

Ce projet vise à élaborer un cadre d'opération où les universités peuvent travailler avec les collectivités rurales agricoles pour améliorer la productivité et la compétitivité des petites exploitations agricoles, ainsi que la réactivité et l'impact des universités dans le développement agricole. La prémisse du projet est la rareté d'accès à l'information et des flux, la faiblesse des liens entre l'université - communauté agricole et les autres acteurs dans le développement agricole. Le projet sera de créer des connaissances et des centres d'information afin que l'université puisse intensifier son engagement de façon proactive avec les collectivités rurales et utiliser des technologies de communication et de l'information (TIC) en fonction des mécanismes pour améliorer l'accès et le partage de l'information. La pertinence de ce modèle sera testée dans un cadre de recherche-action visant à renforcer la fonctionnalité des chaînes de valeurs multi-produits de niébé, de soja et du riz, et impliquer également l'établissement de partenariats solides le long de la recherche pour le développement continu et la capacité des communautés rurales à utiliser l'accès, à utiliser et intensifier l'utilisation des technologies. Les approches d'apprentissage expérimental pour les étudiants et le personnel de l'université, et l'examen des programmes de la Faculté agronomique pour une inclusion éventuelle de modules d'apprentissage par l'expérience seront également entreprises pour réorienter l'Université à s'engager activement avec les collectivités rurales. Les résultats du projet comprennent: 1 doctorat et 3 étudiants de M.Sc formés, 30 agriculteurs formés à l'utilisation des TIC pour la sensibilisation, 2 centres d'information mis en place, et 3 ICT basé sur les approches de la diffusion des technologies développées. Le résultat du projet sera une recherche universitaire adapté, formation et programme de sensibilisation mis à l'essai et fait pour la diffusion.

Mots clés: l'engagement communautaire, l'apprentissage expérimental, les TIC, Programme de sensibilisation de l'université Makerere

Background

Uganda's 2010 newly launched National Development Strategy has prioritised smallholder agriculture as an area for strategic

investment to create wealth, support economic growth and fight food and nutrition insecurity (GOU, 2008; Anon, 2008; GOU, 2010). The smallholder agriculture is the pillar for livelihood strategies for > 70% of Uganda's population. However, it is characterised by low productivity (about < US\$ 200 per year per *capita*) and declining per capita food production from 170 kg to 93kg (FAO, 2006). Reduction in agricultural productivity can be attributed to several factors including the inappropriateness of technologies in the diverse and heterogeneous smallholder farming systems, lack of access to input and output markets, and lack of supportive extension advice (Bellon *et al.*, 2002). The combined effects of these constraints inadvertently affect generation, dissemination, adoption and use of improved technology.

Makerere University with support from the Rockefeller Foundation's Forum for Agricultural Resource Husbandry (FORUM) and the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) has progressively engaged in Agricultural Research and Development (ARD) and developed and released improved varieties of cowpea and soyabean, and implemented farmer field schools to improve the "reach" of ARD as well as student internship programmes at farm level. This was done to promote technology development and dissemination through short-term projects. The University has also piloted the development of soft skills and competencies for engagement with communities as a means to improve interactions, action research and feedback to researchers and lecturers. Lessons have been learnt and best practices accumulated that now require scaling up and out for wider impact. However, a system for University engagement with rural communities and other stakeholders to bolster access to knowledge and information by rural communities, and link them to markets is generally lacking or weak in Uganda and in several other African countries. This project aims at piloting a university outreach system built on strong university-community engagement, and harnessing experiences and reach of other community-based action actors. In this particular case, Makerere University will link with the Uganda National Agricultural Advisory Services (NAADS), which has been engaged in mobilising farmer groups to form enterprise groups. The project also links with Women of Uganda Network (WOUGNET) that is promoting use of Agricultural Information Technologies (ICTs) by rural women farmers in the target study area. Harnessing of these opportunities will support the diffusion

and uptake of technologies and best practices developed by universities and other research institutions and will provide opportunities for generation of new knowledge and information sharing, and also identification of areas for graduate training and curricula reforms to ensure relevant skills are imparted to the students as well as instil learning experiences for the academic staff, communities themselves and other actors engaged in the project.

Literature Summary

Decline in agricultural productivity can be attributed to several factors including; inappropriateness of technologies in the diverse and heterogeneous smallholder farming systems (Giller *et al.*, 2006), lack of access to input and output markets, and lack of supportive extension advise (Bellon *et al.*, 2002). The combined effects of these constraints inadvertently affect improved technology adoption and use. Thus, addressing these development imperatives within the context of sustainability is important. Effective partnership of critical elements of agricultural research and development are needed to overcome such diverse challenges that smallholder farmers' face. The University can play a critical role in mobilizing its agricultural science and technology to contribute to poverty eradication. This has to be paralleled with supporting rural farming communities to transform to competitive business farming by re-orientation from subsistence farming to market led types through supportive policy instruments, skills development and information access.

The value chain approach has been heralded as successful in the agricultural growth of Brazil, Argentina and China over the last 20 years because it is (i) holistic, (ii) supports institutions and facilitates a coordinated resource management by various actors at a low cost, and (iii) it builds lesson learning for refinement of future interventions (Dorward *et al.*, 2009). Omamo (2003) proposes a pragmatic approach of stimulating agricultural productivity at smallholder level by focussing on investments that will enhance the "how" component of engaging with communities rather than the past experience focussing on the "what and why" through action research involving multi-institutions and directly engaging with communities. Focussing on the "how" is innovation, which is not merely conceptual, but rather the result of an iterative process of design, field testing, refinement and promotion. Since value chain approaches have been embraced in Uganda their strengthening is important (Chemonics International, 2008; Mutabwire, 2008). The capacity

Study Description

of the university to engage the rural farming communities requires building staff and students skills in experiential learning to facilitate constructive engagement with rural communities (Kibwika, 2006). Importantly, information generated and knowledge gained should be used to design or strengthen university training and outreach programmes.

The project will be conducted in Pallisa district in Eastern Uganda and Apac district in Northern Uganda. These areas have high poverty levels (Kidd, 2004; PEAP, 2004) but are known for cowpea, soybean and rice production. The project team will work with organised farmer groups and associations dealing with these crops. Organised farmer communities which the University worked with before in Pallisa still exist and in Apac, there are women farmer groups that are already engaged in use of ICTs to access information from Kubere Information Centre (KIC). The University will set up knowledge and information nodes at Makerere University Centre for Continuing Agricultural education (CAEC) and partner with KIC in piloting agricultural information access and sharing with farming communities before establishing another in eastern Uganda.

Community action research will be the main approach used in the project and will allow for full participation of the communities in identification and design of interventions to overcome constraints to agricultural productivity through learning cycles facilitated by the university. The value chains of soybean, cowpea and upland rice are the entry commodities for action research. The process will involve: (i) a baseline survey to benchmark the extent of uptake and levels of production of the commodity crops, their processing and trade levels and actors along the value chain, (ii) a gap analysis to identify paucity in farming community capacities in production, business skills and access to and use of information and knowledge along the value chain segments of these commodities, and linkages with the various actors, and identification of issues to be fed back to the faculty curriculum review process, (iii) prioritisation of interventions for action research in the value chains, and (iv) developing and implementing action learning cycles.

Graduate student training will be the main conduit through which the project will be implemented to achieve its goal of a developing a framework for long-term engagement of University with farming communities. One PhD Student will study the processes of engagement and assess how community

action research can stimulate partnerships and linkages to use agricultural knowledge and information for innovations in the legume-cereal value chains and how the various processes can create a continuous demand of knowledge and information, including training of skilled students from the university. The PhD student will be supported by 3 MSc level researches, two of whom will study the impact of engagement on the uptake and access to dual value chains of cowpea-rice and soyabean-rice by farmer communities, and the cost-effectiveness of the engagement mechanisms. The third MSc student will evaluate the effectiveness of the different ICT tools and develop and operationalise a business model for enhancing information access and use along the value chains. A series of activities will be undertaken to build and strengthen community participation including the training of 30 representatives of farmer associations in use of ICTS for accessing and disseminating information for their communities.

Expected Outputs

By the end of 2013, two knowledge and information centres will be established in rural communities in Uganda, and strategies for strengthening university-community engagement analysed and refined for scaling up and out.

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References

- Anonymous, 2008. Independent evaluation of Uganda's poverty eradication action plan. Executive summary of a consultancy report. Uganda Ministry of Finance and Economic Development.
- Bellon, M.R. 2002. Crop research to benefit poor farmers in marginal areas of the developing world: a review of technical challenges and tools. *Perspectives in Agriculture, Veterinary Science, Nutrition and Natural Resources* 1:1 - 11
- Chemonics International, 2008. Moving from subsistence to commercial farming in Uganda. APEP, Final Report, USAID, Kampala, Uganda.
- Food and Agriculture Organisation, 2006. FAO statistics database.
- Giller, K.E., Rowe, E.C., Ridder, N. de. and Keulen van, H. 2006. Resource use dynamics and interactions in the tropics: Scaling up in space and time. *Agricultural Systems* 88:8-27.

- Government of Uganda, 2008. Vision 2030. Uganda Planning Authority.
- Government of Uganda 2010. National Development Plan, 2010-2015.
- Kibwika, P. 2006. Learning to make change-developing innovative competence for recreating the African University of the 21st Century. Wageningen Academic Publishers. 207pp.
- Kidd, A.D. 2004. Extension, poverty and vulnerability in Uganda. In: Christopholos, I. and Farrington, J. (Eds.). Poverty, Vulnerability and Agricultural Extension: Policy Reforms in a Globalizing World. Oxford University Press, New Delhi, India. pp. 124-170.
- Mutabwire, P.K. 2008. Resource mobilisation for implementing decentralisation and wealth creation at local level: Uganda's experience. A paper presented at all Africa Ministerial Conference on decentralisation local development, governance and poverty reduction in Africa. Yaoundé, Cameroon.
- Omamo, S.W. 2003. Policy research on African agriculture: Trends, gaps and challenges. ISNAR report 21. The Hague, The Netherlands.
- PEAP, 2004. Poverty Eradication Action Plan 2004/5-2007/8. Ministry of Finance, Planning & Economic Development. Kampala, Uganda. pp. 260.