

Research Application Summary

Synergizing research, development and training in the agricultural sector for food security for the rural masses of Africa: The case of Agricultural Research and Development Programme (ARDEP) in Malawi

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Abstract

This paper highlights major findings/results of how synergizing agricultural science and technology (research), development and training using the Agricultural Research and Development Programme (ARDEP) in Malawi as a case study can benefit the rural masses in Africa. Within the 3-5 years of implementation, ARDEP has registered 16 technologies whose uptake has increased by more than 75%, contributing to increased income by over 20%, livestock units by more than 400% and land under irrigation by more than 200%, reaching 32-56% women farmers, 15% of which are affected by HIV/AIDS. Over 66 organizations collaborate in the micro-projects which also support 18 MSc and 4 PhD students.

Key words: ARDEP, food security, Malawi, research, training

Résumé

Programme » (ARDEP) au Malawi, come un une étude de cas, peut bénéficier les masses rurales en Afrique. Dans les 3-5 années de mise en œuvre, ARDEP a enregistré 16 technologies dont la diffusion a augmenté de plus de 75%, contribuant à l'augmentation des revenus de plus de 20%, unités de gros bétail de plus de 400% et les terres sous irrigation de plus de 200%, atteindre 32-56% des femmes agriculteurs, dont 15% sont touchés par le VIH / SIDA. Plus de 66 organisations collaborent dans les micro-projets qui a également supporté 18 maîtrise et 4 étudiants de Troisième Cycle (doctorat).

Mots clés: ARDEP, la sécurité alimentaire, le Malawi, la recherche, la formation

Background

The Government of Malawi and its development partners has made efforts to provide assistance and technologies to the agricultural sector through a number of programmes to improve production and solve the many constraints recognized by different policy and technical fora. Despite the initiatives,

agricultural productivity is still variable thereby affecting the contribution of these initiatives to food security, livelihoods and poverty reduction. Hence Bunda College, Norwegian partners and national stakeholder institutions developed the Agricultural Research and Development Programme (ARDEP) which combines research (science and technology), development and training that would effectively contribute to addressing the food and livelihood insecurity and hence poverty associated with smallholder farmers in the rural areas of Malawi.

The objective of this paper is to highlight major findings and results of how synergizing agricultural S&T (research), development and training in the Agricultural Research and Development Programme (ARDEP) in Malawi as a case of applying S&T, development (outreach) and training can benefit the rural masses in an African setting.

Literature Summary

Research and development (R&D) or the integration of these is facing a challenge to turn available and new knowledge into actions to improve food security and rural livelihoods. Shetto *et al.* (2007) reported that barriers to uptake, promotion and scaling-up of new research products were due to: inadequate skills among researchers to promote findings to key stakeholders, poor targeting and packaging of information, inadequate allocation of resources for promotional activities due to lack of communication strategies in research designs, and mindset that researcher's role is to generate technologies and pass-on to extension for dissemination (Oryokot, 2007; Shetto *et al.*, 2007).

The interface between research and technological development, on the one hand, and outreach and application for development, food security and poverty reduction, on the other, is a complex one. These divergent activities tend to be compartmentalized and tend to meet only occasionally. Bridging the gap between these endeavors is therefore, very challenging.

Where resources are available, agricultural research as a form of science and technology has resulted in tangible benefits for the smallholder farmers if combined with training, extension/outreach (development), the farming community and other stakeholders, the benefits translating into sustainable livelihood mechanisms for many in rural areas. ARDEP which is a 5-year national programme in Malawi, funded by the Governments of Malawi and Norway and coordinated by the University of Malawi (Bunda College) is one of the mechanisms of integrating science, technology and training.

Study Description

The overriding objective of ARDEP is to contribute to enhanced productivity in Malawi's agricultural sector with a view to "*contributing towards the improvement of the quality of life and social well-being of Malawians through a powerful, effective, and efficient national research and outreach system*". The specific objectives are: a) to increase agricultural production and productivity, the utilization of, and access to food as well as better natural resources management through 18 high-quality, demand-driven agricultural research and outreach competitive micro-projects; b) to facilitate and promote widespread uptake of relevant and appropriate interventions through a pluralistic and demand-driven outreach system, especially in women-headed and HIV/AIDS-affected households, and; c) to enhance the capacity of Malawians to coordinate, manage and implement agricultural research and outreach programmes collaboratively. The novelty of ARDEP is its mode of operation from an academic model to one that combines science and technology (research) with application (development) and training among communities. ARDEP has supported MSc and PhD students to conduct action research with smallholder farming communities with eventual outputs of generating technical and policy information to be disseminated to farmers for experiential and lesson learning.

Major Findings

ARDEP has registered at least 16 technologies within 3 years of implementation. The uptake of research knowledge and technologies has increased by more 75% in the pilot sites, thereby contributing to increased income levels by over 20%, livestock units by more than 400% and land under irrigation by more than 200%. The projects have increased women participation (32 - 56%) and at least 15% of the households who are vulnerable or affected by HIV and AIDS have participated in the project activities. Over 60% of the vulnerable are women. All projects are being carried out collaboratively involving Government (28%), University of Malawi (19%), NGOs (15%) and private sector (11%) together with farmers and partners in Norway in planning, implementation, monitoring and evaluation as a way of solving the food insecurity and natural resources management problems in Malawi. In addition, ARDEP awarded research grants to 18 MSc and 4 PhD students both partially and full time. The programme further initiated and formalized synergies with other agricultural initiatives and institutions such as the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM), Research Into Use (RIU), Ministry of

Agriculture and other Norwegian funded initiatives for experiential learning processes.

Research Application

ARDEP is a workable model that should be emulated for merging existing and new technologies with participatory research, development and capacity building in order to promote agricultural production and food security. It is expected that the 18 graduates from the programme will be deployed in the National Agricultural Research and Extension System (NARES) and private sector. This will contribute significantly to the critical mass of skilled and competent scientists to develop and disseminate improved technologies and innovations to the smallholder farmers in Malawi and the region in line with collective action to build S&T capacity to speed Africa's development as enshrined by RUFORUM.

Recommendation

Synergising education and training of scientists with research and development in a collaborative manner with different stakeholder organisations is required with continued support to cater for the application of improved agricultural technologies and innovations for improved food security and livelihoods of the smallholder masses in rural areas.

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