

Research Application Summary

Breaking out of poverty through enhanced scientific networking in Africa: The Regional Universities Forum for Capacity Building in Agriculture

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Abstract

This paper considers the issue of the need for cohesion between research and policy to achieve development impact. It draws heavily on practical experience. The programme has evolved from an earlier Rockefeller Foundation university development effort into an African owned and managed initiative to feed high quality research directly into the development process. The outputs are not only better options for poor farmers in Africa but also well trained specialists in a variety of disciplines who are able to work directly and effectively with smallholders and to lead demand led development initiatives. This programme can assist the achievement of a technical – social empowerment balance in research efforts. Lessons are pulled out to provide recommendations for positive sustainable development impact through both research and the involvement of research in policy.

Key words: Coalition, communication, farmer empowerment, networks, policy, poverty, research, RUFORUM, technical solutions

Résumé

Ce document examine la question de la nécessité de la cohésion entre recherche et politique pour avoir un impact sur le développement. Il s'inspire beaucoup de l'expérience pratique. Le programme a évolué à partir d'un effort précédent de développement des universités de la Fondation Rockefeller à travers une initiative africaine de possession et de gestion pour nourrir la recherche de haute qualité directement dans le processus de développement. Les sorties ne sont pas seulement de meilleures options pour les agriculteurs pauvres en Afrique, mais aussi des spécialistes bien formés dans une variété de disciplines qui sont en mesure de travailler directement et efficacement avec les petits exploitants et de mener la demande qui conduit aux initiatives de développement. Ce programme peut aider à la réalisation d'une technique - l'équilibre social dans l'autonomisation des efforts de recherche. Les leçons sont

retirées pour fournir des recommandations pour un impact positif du développement durable à travers la recherche et l'implication de la recherche en matière de politique.

Mots clés: Coalition, la communication, l'autonomisation des agriculteurs, les réseaux, la politique, la pauvreté, la recherche, RUFORUM, solutions techniques

Background: RUFORUM

Despite billions of pounds of development assistance, the numbers of Africans living in absolute poverty continue to increase. Whether or not you subscribe to the argument that national development depends upon agricultural development, for the majority of Africa's population agriculture is the most important livelihood activity and agricultural constraints are immediate and critical. Transforming agriculture must be at least a significant part of the solution to African poverty. That transformation will come, as elsewhere, from the development, and subsequent adoption, of productive and profitable new technologies. Technology adoption requires the empowerment of farmers to make better and informed decisions.

The Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) is an association of 25 universities engaging in agriculture and natural resource management in Eastern, central and Southern Africa that recognises the important and largely unfulfilled position that universities occupy in contributing to the wellbeing of small-scale farmers throughout the sub-region. RUFORUM is established because the university research mission has changed, and universities need explicitly to become integrated into the national and regional research and development communities. It is an interactive and diversified mechanism to assist universities adjust to their changing and more appropriate roles within African society. Fundamental to success is a *well focused, prioritised, and efficiently implemented research and outreach agenda*. RUFORUM is working with participating universities and their partners to implement swiftly and effectively a new research and outreach paradigm which includes:

- *a research and outreach funding mechanism* owned by the participating universities,
- *a complementary human resource development strategy*, based around MSc training, but importantly building other

opportunities such as postdoctoral fellowships and PhD scholarships, and,

- *building physical capacity* (and restoring and enhancing existing capacities) at participating institutions

The key driver that RUFORUM has for creating change is its research and outreach funding mechanisms – ‘*business unusual*’. At the core of the ‘business unusual’ strategy is a substantial and influential source of funding for research and outreach activities that works under radically different rules from those of the past. The focus is on quality and impact. The emphasis is on inclusion and openness – making the best use of talent and resources for the benefit of improving the livelihoods of poor rural communities.

RUFORUM aims to create the basis for agricultural research and outreach systems that address quickly and effectively the needs of these communities and open new opportunities to them. These objectives need to be facilitated through enhanced networking and coordination among the NARS organisations, with sector stakeholders, and with international organisations. This is achieved through a clear policy of research and outreach funds being linked clearly and effectively to the quality of outputs – “*funds follow quality*”. RUFORUM exploits the skills and competences of the universities to bring about significant change in services to poor farmers in the region. The cost, as outlined in following sections, is modest – the benefits from a skilfully executed programme are substantial.

Building on experience. The Rockefeller Foundation set up its field programmes in southern and eastern Africa in 1988 with the appointment of field staff to the Foundation offices in Lilongwe and Nairobi. As implementation of Foundation programmes got underway, it quickly became apparent that there were significant shortages of appropriately trained development specialists (particularly at the MSc level) and that the universities of the region had useful (but underexploited) research and training skills. University professors had heavy teaching and administrative responsibilities which made field research almost impossible to undertake meaningfully. Most university research was, therefore, confined to on-station laboratories and field stations, and there was little direct interaction with farmers. Furthermore, most graduate training opportunities relied on overseas universities and the limited

number of scholarships available to national universities rarely provided more than student tuition and living costs. In the absence of research grants, it was difficult to involve students in on farm studies.

In the light of this, the Foundation set up a competitive grant scheme for faculties of agriculture in the countries in which it had programmes - Kenya, Malawi, Mozambique, Uganda, and Zimbabwe (Patel and Woomer, 2000). The objective was to provide fully funded (tuition, research, and living costs) scholarships to MSc students studying in faculties of agriculture and natural resource management in the target countries. The focus of the grants were to be on improving the productivity of the main national food staple (typically maize) which was the overall thrust of the Foundation's Agricultural Sciences (now Food Security) Programme at the time.

The review process through which the grants were put was challenging and each application had to have a credible outside partner (based in an institution or organisation that was not affiliated to the university). This was introduced to establish demand for the research, and to help in the development of uptake pathways. The Foundation had a policy of nurturing all potentially promising initiatives, and provided help and advice both in the initial development of proposals and in the revision of those which the review process indicated needed additional work. Modest, quickly disbursed, preparation grants were made available to help university researchers develop their ideas in consultation with target farmers, potential partners, and other interested individuals and institutions. Foundation staff, as well as existing grantees, advised new grantees on the process of developing proposals which met the needed criteria. This helped build both a sense of ownership of the programme and also a balance between those faculties who had the capacity to develop quality proposals, and those further down the learning curve.

The response of the universities, once researchers understood the new "rules of the game", exceeded all expectations. The quality of proposals rapidly improved and some departments succeeded in attracting substantial numbers of graduate students. *The commitment of both staff and students to achieving research objectives and outputs was high. The quality of the work reported was of international standard* (as indicated by publications and conference proceedings), and overall the students were supervised well. After nine years of operations,

the Foundation compiled and published a Working Document of 111 citations and abstracts from refereed scientific journals that had resulted from its grants (today there are some 250 reviewed publications). Graduating students have been well received by employers and are employed in a diversity of sectors, a testimony to their broad-based training; many have gone on to further advanced training (Fig. 1).

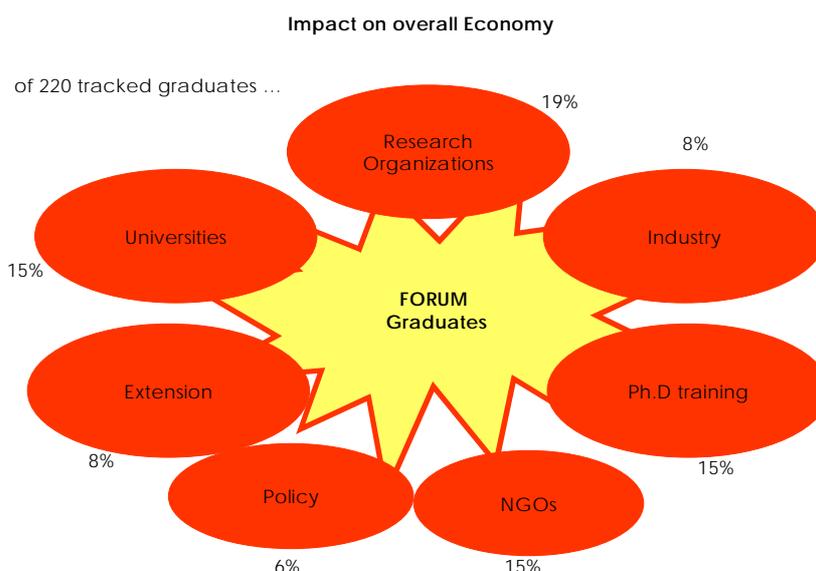


Figure 1. Strategic sustained investment and networking can spur and enhance contribution of universities to national and regional development as shown by the contribution of RUFORUM/FORUM above.

Through participating in the programme, university professors built up the capacity of their departments. Each grant brought with it the opportunity to acquire new equipment and other resources that enhanced the department's capacity to do future research. Thus *each successful graduating student left a significant 'footprint' in the department which served to build capacity in physical as well as human terms. Innovations such as report writing courses, internal meetings for mutual review of progress, and other quality enhancing efforts were introduced. This also served to create a strong sense of ownership amongst all participants – from Foundation staff, to students, and to farmers and other collaborators. Universities became active partners in the creation of new opportunities for poor smallholders in the region through:*

- Empowering academic staff to work on needed solutions to smallholders' problems

- Better preparing MSc graduates for tasks within the rural development community
- Greatly improving access of both staff and students to the body of scientific literature, as well as enhancing the capacity of participating departments through the acquisition of needed research equipment and supplies.

There were shortcomings. The Rockefeller Foundation effort was a “single donor” programme, limited in its resources, and only supporting research within narrow geographic and thematic boundaries. Although crops, soils, and social science departments found plenty of opportunities for developing grants, few other departments were able to participate effectively. So, while several departments within a faculty were revitalised through these grants, *the effect on the faculty overall was limited*. While the outside partnership component of the programme was valuable in bringing the universities into the mainstream of the development process (see the preceding review of competencies), it was *less successful in creating the needed uptake pathways*. Both staff and students felt that the outputs of their research did not adequately reach their target communities and that more resources needed to be devoted to ensuring that uptake pathways could be created and sustained. But, overall, the programme succeeded well in changing the way research was conducted in participating departments. Both staff and students learned to work directly with farmers, the status and training of MSc students were improved, and participating faculties were engaged as active participants in key national policy initiatives.

**Scaling out Success:
RUFORUM**

In reviewing options for taking the programme forward it was evident that the universities themselves had to lead the effort. The Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) was established to undertake this task, with a small secretariat based at Makerere University in Uganda. RUFORUM will continue and extend the policy of *building a ‘footprint’ in participating departments* (in terms of new equipment and other resources). This will be achieved through building research ‘stables’ of active, productive, and focused researchers within the leading departments - for example by helping fund post-doctorate fellowships, as well as helping build strong and lasting connections to outreach programmes. There will be a strong emphasis on *formalising*

outreach activities through creating a second ‘footprint’ of available and adopted improve livelihoods amongst the rural poor.

RUFORUM, therefore, has adopted an explicit policy of emphasising quality, focusing on the needs of the rural poor, building ownership and ensuring all grants leave an adequate ‘footprints’ (at both the university and the community level), and developing an uptake pathway strategy. Universities will become integrated into the national and regional research and development communities, and explicit cognisance taken of altered development agendas - agriculture now shares high priority with other development objectives (for example; HIV/AIDS, good governance, trade liberalisation).

Significant benefits to the livelihoods of poor farmers can be created through the explicit incorporation of research outputs (including research into farmer adoption of technology) into development projects, programmes and policies. This is achieved through RUFORUM’s skilful networking of the best available talent (nationally and internationally) in a focused, problem-orientated mode to integrate high quality technology into the development process. This is a model easily replicable across many African countries and regions at modest cost. It will reduce suffering through lifting people quickly out of poverty, with sustainable benefits.

RUFORUM is working with participating universities and their partners to implement swiftly and effectively a new research and outreach paradigm which includes:

The universities mainstreamed within the NARS. Farmers want answers to problems and an efficient and effective process for reaching those answers. Universities and their partners will need to become *development* as well as *research* agencies.

Substantial farmer involvement in research. The universities can provide significant leadership and expertise in capitalising on opportunities to expand, improve, and institutionalise the start already made in using participatory methods, and in prioritising outreach and scaling up issues.

Innovation to be welcomed. New ideas, new people, and partnerships with new institutions are explicitly encouraged by RUFORUM. This includes thorough use of the scientific

literature, web-based sources or the private sector, field visits in and out of the country, and especially networking between kindred interests.

A research agenda which moves beyond technology. The problems faced by farmers are not simply those of low productivity, but of access to markets for inputs and outputs, commercialisation of technologies, and of constraints (such as HIV/AIDS and gender inequalities) which cannot be addressed through technological change alone.

The quality focus remains essential. The new blood injected by graduate students and postdoctoral fellows provides an excellent way of stimulating new ideas, enthusiasm, and different ways of doing business within the university, as well providing the broad-based learning and ‘settling in’ opportunities so needed in Africa. New graduates do not return to empty laboratories and absent resources – they come into a vibrant working atmosphere where they use their improved skills and knowledge to create change.

The task facing the RUFORUM management in meeting these challenges is considerable but not impossible. Strategic themes have been developed from consultative stakeholders’ meetings in the participating countries. Some examples follow below. These are not exhaustive but give a sense of the major areas in RUFORUM coordinating unit - the Secretariat is moving the programme forward. The output from implementation of these strategic themes will be high quality demand-driven research and outreach activities implemented to facilitate the widespread uptake of interventions and technologies that increase sustainable production, utilisation of, and access, to food as well as natural resources management in eastern and southern Africa.

Potential strategic themes include:

Increasing the Diversity and Roles of Legumes within Smallholder Farming Systems. The major cropping enterprises and food production systems among small-scale farmers across Eastern, Central and Southern Africa are cereal-based. A key to improving cereal-based systems is increasing the role and productivity of intercropped legumes because of their multiple benefits including soil protection, biological nitrogen-fixation, drought tolerance, greater nutritional value and higher market prices. Work supported under this theme will involve

adaptive, on-farm research in legume germplasm, improvement and seed systems; integrated soil fertility and pest management; symbiotic biological nitrogen fixation; pulse quality control and marketing; and value-added legume processing and human nutrition. Much of the initial gains from this approach will result from the transfer of recently developed legume varieties and technologies from one grantee, university and country to another. Improved legumes will become more available and better integrated into small-scale farming systems in semi-arid and sub-humid agro-ecosystems of Eastern, Central and Southern Africa accompanied by the technologies necessary to consume, process and market them. This process will also develop technologies and information tools for further use by rural development specialists and agricultural extension agents that will amplify the beneficial impacts of the activity.

Understanding farmer organisations and expanding their capacities for service provision. Farmer empowerment through the development of effective community based organisations is a central component of major development initiatives throughout the region. Most farmers, however, lack experience in forming self-help groups, particularly with the steps necessary to formalise and manage their new organisations. Furthermore, much of the difficulties in scaling-up important new agricultural technologies, purchasing and distributing discount inputs and improving market access and prices result from the lack of farmer umbrella organisations to undertake such tasks. There is much that remains to be understood as to how empowering farmer organisations can be fostered and enhanced. Work will be supported to identify, test and popularise mechanisms that will enable the development of viable and stable farmer associations. It will involve participatory monitoring and evaluation exercises to identify entry points for supporting and backstopping farmer associations, as well as developing training interventions in group dynamics, transparency, civics, leadership, financial management, and sales and marketing

Re-vitalising African traditional crops and fruits, and exploring their roles in contemporary diets. Most of the food crops grown by Eastern, Central and Southern Africa's small-scale farmers did not originate from Africa. For example, maize, beans, groundnuts, sweet potato and cassava are all exotics from Tropical America and have largely displaced the sorghum, millets, cowpea and jams produced by yesteryear's

traditional farmers. Marginalising African crops has resulted in collapsed traditional seed systems, reduced farm biodiversity, poorer diets, decreased food security, and declining cultural tradition. Ironically, demand for traditional foods by urban consumers is increasing because indigenous small grains, pulses, fruits and leafy green vegetables are both tasty and nutritious - but often these foods are not readily available. In addition, in times of food scarcity, these traditional crops and fruits play a valuable role in supporting household food security. This role could be significantly enhanced if improved varieties and production, harvesting, and storage techniques could be made available to the rural poor. Research groups will embark upon a series of investigations designed to identify which traditional crops and fruits are becoming marginalised, how much diversity occurs within them, their productive and genetic potentials, post-harvest requirements and their processing and marketing potentials. These efforts will involve plant taxonomists, ethnobotanists, crop breeders, crop scientists, food scientists, agricultural engineers, human nutritionists and economists and will be conducted in conjunction with farmer associations and commercial establishments.

The sustainable management and conservation of fragile rangeland and cultivated drylands through focused research and community based interventions to enhance the quality of life of the rural poor. The vast majority of farms in Eastern, Central and Southern Africa rely upon seasonal rainfall and are unlikely to benefit from irrigation within the foreseeable future. The encroachment of agriculture into traditional grazing areas leads to conflict and to the reduction of production options to traditional livestock owners. Water harvesting is a recent concept that stresses the capture and protection of incoming precipitation. Rather than merely slowing runoff, water harvesting techniques redirects the moisture into the soil through short-term ponding and deeper penetration into soil. Farmers most in need of these techniques remain unaware of their options and even farmers in relatively well watered areas stand to benefit from improved water harvesting field practices as a precaution to early drought. A focus on improving both water and livestock management will facilitate the needed institution building and capacity building at community level. Improved sustainability of rangeland resources through new improved livestock management options is desperately needed. A network for information sharing and research on improved water management will be established, and the existing livestock

based networks enhanced. The efficiencies and labour requirements of alternative water harvesting practices will be documented and described in a series of site-specific water management guidelines that are formalised into extension manuals. A conceptual and structural framework for the exchange of technological information and local knowledge will be established between traditional livestock owners, agriculturalists, and participating institutions.

In all the above themes, there are several crosscutting issues which need to be properly incorporated as the themes are developed into programmes. These are critical areas which are common to most of the proposed endeavours and which have implications beyond the normal focus of many agricultural programmes.

Adding value and commercialisation. A major emphasis in almost all national development strategies has to help the poor 'add value' to the commodities which they have for sale. Value can be added in a number of ways. The product may be transformed into an item which can then be sold at a higher price. This is what is typically meant by 'adding value' and will usually involve some kind of processing. The producer may recover a higher proportion of the sale price through participating in an improved market system. Or losses may be reduced, which allows the farmer to gain greater food security, or higher incomes, from each harvest.

HIV/AIDS. The HIV/AIDS pandemic adds a particular challenge to agricultural development in the region. It impacts on agriculture in many ways. Food security falls as adults fall ill. Some, who were sending remittances to rural households, return home sick and unable to work. Even when they can receive suitable treatment, their nutrition needs are difficult to meet in poor households and the drugs may prove ineffective. Without adults to work the land, productivity falls, and investment in the new essential technologies to break out of poverty slips beyond reach. Family members seek work on other's farms, leaving their own untended until later in the season – and with consequently lower yields. Funerals and hospital visits mean less time working with crops and animals. RUFORUM plans to link public health and agriculture as an essential crosscutting issue to run through all strategic themes.

Strategic Theme Implementation

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Gender. A better integration of gender is needed to guide R&D activities. This is particularly important for agricultural sector in Africa, where women provide over 60% of the labour force but their concerns are often not well integrated in R&D activities. Moreover, there is a critical need to increase not only effective participation of women in R&D but also increase the number of women enrolment in higher education institution. There is also need to attract young professionals to agriculture profession. RUFORUM is committed to strengthening engagement of women in agricultural activities and to promote training of women and post-graduate level.

RUFORUM will rely upon electronic communications and E-conferencing for programme development activities. The RUFORUM website will assist by posting information on the development and progress of various programmes and acknowledging outstanding contributions to them. The process of developing a strategic initiative will go through several phases. Most strategic initiatives will go through most of these steps, but there will be cases where groups already have done much of the initial work and, where this is the case, it should be built upon.

Inception. the RUFORUM Secretariat will issue a 'calls' for *Thematic Concept Notes*. The calls will be based around the information provided from the stakeholder consultations outlined in the preceding sections. In particular, where there is known expertise in the strategic theme area, potential interested parties will be contacted and encouraged to develop strong, team-based proposals.

Once the Secretariat receives suitable responses to the call, it will work with either individual teams or encourage merged teams to produce an overall concept document. Regional and international expertise, using staff of the IARCs, overseas universities, and international and regional institutes, will be solicited both by the Secretariat and the concept note development teams. Potential donors will be involved and informed throughout the process so that their concerns and priorities can be addressed, without distorting the overall thrust of local and international expertise.

Once there is a serious indication of possible support from a potential donor, the concept development team will be tasked to develop the note into a fully costed and justified programme

proposal. This proposal will incorporate a number of possible individual projects which can be funded through the overall programme. At this stage it may be necessary to call a small workshop to work together intensively (possibly together with donor representatives) to fashion the detailed proposal.

Implementation. The programme is then funded by one or more donors. The RUFORUM Secretariat will manage the resources on behalf of the donor. Members of RUFORUM then put together project proposals (involving graduate students and other training activities) which RUFORUM puts through its proven review process. Once the projects meet the required criteria, funds are released to individual projects for undertaking the agreed workplans. Grantees will then recruit students and initiate research.

Monitoring and evaluation. The RUFORUM Secretariat will monitor the various research projects based on its established procedures (which will be continually reviewed and updated in the light of ongoing experience). It will require the normal periodic reports from grantees and assemble these into appropriate format for reporting to stakeholders and the donors involved.

The obvious question at this point is that, if the universities are indeed raising their own funds, what is the advantage of then putting these funds through RUFORUM and paying an overhead for the privilege? Many departments and faculties already have good ongoing relationships with donors. RUFORUM is specifically intended neither to downgrade these, nor to become an unnecessary 'middleman' in the process. However, RUFORUM brings the following important strengths to university research funding applications:

- Access to a wider potential range of donors since these are able to invest in specific goals across a range of institutions
- The thematic programme approach lends itself to the potential of supporting more institutions at higher levels of funding
- RUFORUM has established well proven quality control mechanisms which can be applied across the diverse range of collaborators, thus enhancing the chance of overall success

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- Ownership and leadership is strongly developed at several levels. Farmers, directly involved in proposal and project development not only benefit from the work but contribute to it; students gain experience and confidence from ‘hands on’ field work; academic staff are able to enhance their teaching programmes with ‘real world’ examples, while developing their departmental capacity to undertake research; universities become actively engaged as development partners with both donors and rural communities.

Concluding Comments

The Asian Green Revolution led to the creation of the system of International Agricultural Research Centres (IARCs) which still play a major role in development science today. The fundamental hypothesis was then that by assembling the best expertise in an area and providing good, consistent funding, rapid progress could be made in addressing tough technical problems. The model, unquestionably, has worked, albeit with evident problems and limitations. The most important lesson, however, is typically ignored – researchers do not have to accept existing funding mechanisms if these are not suitable for the problems at hand – they can work directly with funding agencies to help establish the effective research funding mechanisms needed to address the poverty agenda. This is not just a question of asking for more funds – the IARC model (on its own) is not providing the answers so desperately needed by the poor. What RUFORUM is developing is a mechanism for the scientific community to play the leading role in developing substantial and influential sources of funding for research and outreach activities that work under radically different rules from those of the past.

RUFORUM aims to ensure that, through both quality control and enhanced networking, the poor benefit directly and quickly from work supported by the programme. While research from the natural and social sciences has the potential to address the pervasive poverty of Africa, this potential has not been successfully incorporated into development strategies. With strong leadership especially from the research community itself and supportive guiding policies, this dismal picture can be altered at modest cost with substantial benefits to the livelihoods of poor farmers as research outputs are incorporated into development projects, programmes and policies. This is achieved through skilful networking of the best available talent (nationally and internationally) in a focused, problem orientated mode to integrate high quality technology into the development process.

Research for development: Projects supported by the original Rockefeller Foundation programme (for example, both the MBILI legume production system and the use of rock phosphate at Moi University, the soyabean development project at the University of Zimbabwe, and both the cowpea integrated pest management effort and the water hyacinth management project at Makerere University) have had significant impacts in creating change. ***The lesson is that well verified science, introduced with strong and consistent leadership from the research community, can make a real contribution to development and the reduction of poverty.***

Policy linkages and networks: A common problem throughout Sub-Saharan Africa is the poor linkages among farmers, NGOs, extension services, policy makers, and the private sector. RUFORUM has the capacity to create multi-agency, multi-disciplinary teams that work systematically and with strong local leadership to develop solutions to pressing national and regional problems. It provides a model through which a coordinated, cost effective, and efficient technology transfer process can evolve, using the best of national and international expertise in a focused, problem solving effort. The best of local knowledge and expertise, both at farmer and researcher/policy maker level, can be used to develop a practical example of how to link research, extension and national policy to improve living standards for rural people reliant on agriculture. ***The lesson is that science for development requires effective networking amongst several key parties. This is entirely possible but needs facilitation and encouragement.***

Explicit consideration of scale: As RUFORUM has emerged from the earlier Rockefeller Foundation programme, existing grantees and others have noted the need to build in stronger long term collaborations to ensure the widespread uptake of 'best bet' options. It is entirely possible, with thoughtful integration of policy and research, to make a rapid impact on poverty. But researchers need to reach beyond the boundaries of their own disciplines and to start to engage directly with the poor. Much has been achieved in this direction but much more is needed. In particular, from the outset, researchers need to understand the dimensions of poverty. ***The lesson is that researchers also need to be innovative and active in developing partnerships and networks that can carry the best of their outputs quickly and efficiently into the hands of the poor.***

RUFORUM is a unique effort by Africans to create change in Africa. Despite a widespread perception of Africa as “the hopeless continent” (as in a recent leader article in The Economist), African farmers have shown themselves to be innovative and able quickly to adapt to new circumstances. As a result of increased access to new crops and outside markets, agricultural production from African smallholders boomed in the early part of the twentieth century. Cocoa, coffee, cotton, and groundnuts became major smallholder export crops. Agricultural change and experimentation blossomed. Farmers diversified into new crops, and new varieties were readily accepted and tested.

Agricultural researchers have played a somewhat underappreciated role in promoting, and assisting these changes, and in addressing problems faced by, and opening new opportunities to, African farmers. RUFORUM builds on this record through facilitating the best expertise in Africa to become engaged in high quality research thrusts along thematic lines. Membership of RUFORUM is, therefore, open to all who can offer solutions to the pressing problems of rural poverty, within the constraints of the agreed thematic options. As new themes emerge, these can be validated through participatory discussions amongst RUFORUM participants and informed outsiders and developed as needed. This expands further the opportunities for interdisciplinary research and outreach.

RUFORUM thus offers a new and robust opportunity for engaging universities in development agenda and for empowering African institutions to more effectively respond to National and regional development needs. It is not simply about today, but investing in Africa’s future, hence the focus on graduate training. Graduate training will remain at the core of the programme to create the next generation of African scientists, change agents and leaders. The establishment of post-doctorate opportunities in leading RUFORUM institutes adds strength and depth to this (deep footprints). RUFORUM activities will also necessarily involve training of, and learning to work with, communities as essential component of moving research swiftly and efficiently from the laboratory to farmers’ fields on a broad scale. A major focus of RUFORUM will be electronic networking – to develop thematic thrusts, to put together programmes to address the defined problem areas in these thrusts, and to promote the best outcomes consequent on the programme implementation. These networks will be used to enhance quality, to introduce new ideas,

and to bring to scale the best of the new opportunities which are developed. Finally, through the networking opportunities created by RUFORUM, universities in countries where political or economic conditions are unfavourable can be kept operating at the highest possible standard. These institutions will be ready for action once the situation returns to normality and will quickly be able to play their role in national recovery exercises.

Acknowledgement

We sincerely thank all persons whose efforts are directed at enabling mankind better itself, building esteem and allowing individuals explore opportunities to live and leave a better life. We are inspired by the contributions of many, especially Joyce Mook, John Lynam and Bharati Patel, all formerly of the Rockefeller Foundation, and the many young people and faculty who have taken up the challenge and continue to dream that Africa will one day, sooner than later, feed itself, and live a prosperous life.

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