Perspectives on Strengthening Science Technology and Innovation Capacity for Transforming Agricultural Development in Africa

The Regional Universities Forum for Capacity Building in Agriculture

Presentation at the Meeting in Support of Scientific and Technical Partnerships in Africa IFPRI- 29&30 September, 2014
Context

• Creative, problem-solving human capital is fundamental to any agricultural development strategy in Africa

• Urgent need for skills to meet CAADP goals and Agenda 2063 (S3A/ FARA, 2014)

“... African countries starting from a lower base, lacking the critical mass of experts that developed countries have, (and) each person trained is likely to advance to a managerial role very rapidly” ‘Dirty Hands, Fine Minds’, 2012.

‘.....The primary force for broad based transformation and change is in people and their capacity to change their situation’ S3A, FARA, 2014.
• High performing African universities that strive to produce skilled, proactive graduates, demand driven research output and innovation in response to regional and national agricultural development priorities.

• Greater uptake of RUFORUM facilitated research by small-holder farmers

Foster much closer links between university faculty students and research, with smallholder farmers

Better integration of African Universities into the national agricultural innovation systems

Rationalize resource use and enhance economies of scale and scope
**RUFORUM Program Structure**

**Demand driven agricultural research capacity by:**
- Competitive Grants Scheme:
  - Graduate Research Grants
  - Community Action Research Program
  - Field attachments, Gender
  - Institution Strengthening Grants
- Mounting courses on emerging issues (e.g. climate change)
- Feeding research results into curriculum
- Regional MSc programs
- Regional course-based PhDs

**Advocacy: Turning research into action**
- Farmer outreach
- Policy outreach
- University outreach

**Professional community building**
- Peer review
- Intergenerational mentoring
- Biennial network assemblies
- National Forums

**ICT Support for Research, Professional Communities, M&E, Dissemination & Advocacy**

**Governance & Management for Quality, Transparency, and Performance**

**Agricultural Innovation**

**Employment**

**Policy & Practice Reform**

**M&E Learning**
- RUFORUM M&E of programs on an on-going basis
- Methodology
- Data and knowledge sharing
- Capacity
- External evaluation
Examples: Technologies from the GRGs

• Sorghum and soya bean varieties released and adopted throughout Eastern & Southern Africa
• Micro-propagation of bananas – 5 countries
• Passion fruit disease control – 3 countries
• Artificial insemination of pigs – 2 countries
• Tomato curly virus control – 2 countries
• Beneficial mycorrhiza in sugarcane – 2 countries
• Bio-fortified foods – 6 countries
• Sustainable intensification technologies (soil fertility, mbilli intercropping, etc)

Total direct beneficiaries: > 1,000,000
Example – Regional MSc Programs

- A regional graduate training program in Research Methodology:
  - Strategy to train research methods specialists in the region to support NARS across Africa
  - +80 graduates within five years
CARP: Enhancing Agricultural Value Chains

- Increasing Tilapia productivity, access to markets and nutrition of rural poor in Malawi
- Enhancing legume-cereal integration and marketing through support to farmer associations in Western Kenya
- Increasing soybean yields through improved management of production technologies in smallholder maize-based crop and marketing systems in Uganda

ICTs, Earth University and other partners
Building research and training capacity for the next generation – **1197 Graduates since 1992**

Post-Graduate Student numbers

- 2004-2007: 211
- 2008-2014: 608 (Regional MSc & CGS)
- PhD: 192

(Regional MSc & CGS)
Key lessons learnt

• GRGs – a major tool for training next generation of scientists.
• Focus investments in strategic areas within crop-livestock-nutrition nexus.
• Innovative deployment of ICT to support teaching and learning as well as research will enhance outcomes.
• The scope and scale of impacts require deeper and / or wider partnerships i.e. CGIAR.
• Networking allows for piloting and spill-over -19 countries / 42 universities.
• CARPs – a powerful mechanism for deepening the role of universities and allied partners in community transformation.
Looking forward: Key areas

1. Using CARPs to deepen engagement of universities with small-holder farmers and other actors;

2. Piloting a RUFORUM MOOC for improving delivery to wider audiences/ focus on emerging issues;

3. Strengthening M&E practice at the universities and Secretariat for evidence to support policy, and;

4. Fortifying convening power.
Perspectives Implementation of ‘S3A’

• Producing future leaders, post-graduates required for implementation of the S3A;
• Supporting skills enhancement in specific areas such as research methods, climate change etc through caravan approach and centers of leadership;
• Linking university research to NARIs and SROs; and
• Linking university post-graduate programs to the CG Centers and Consortium/CRPs and upstream research in Australia, Europe (AgriNatura) and North America (APLU), Diaspora;
  – how can RUFORUM creatively support FtF programs and use platform for sharing of lessons
  – Innovation laboratories, and using lessons for curriculum update
• Core is platform of 42 Vice Chancellors – mainly non-agriculturalists

• Ability to mobilize universities across Africa to engage with reform processes

• RUFORUM MoU with AU HRST to implement priority area 1 of STISA 2024
  – priority areas are: Eradication of Hunger and Achieving Food Security; Prevention and Control of Diseases; Communication (Physical and Intellectual Mobility); Protection of our Space; Live Together- Build the Society; and Wealth Creation.

• Session on higher education, science, technology and innovation at Heads of State Summit in 2015
Summary

RUFORUM aims not only to strengthen African universities but to enhance their contribution to the production of African agricultural scientists able to bring about equitable economic development on the continent for years to come.

‘The S3A is premised on the belief that people primarily drive change’
Thank you

For more information, visit:
www.ruforum.org

RUFORUM Celebrating 10 years as a Network and 22 years supporting Agricultural Higher Education