

Research Application Summary

The role of universities in agribusiness innovation and incubation development

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Abstract

Incubators play a significant role in the development of Africa's agriculture sector. To advance that process, African incubation initiatives must be revived, and research programmes must investigate innovation systems in order to precisely locate incubators among the agricultural stakeholders. The proposed agribusiness incubation hubs under the 2017/2018 RUFORUM Entrepreneurship Challenge Programme call seek to harness knowledge and information infrastructures as underlying mechanisms to encourage demand-driven research and for-profit entrepreneurship in Africa's agricultural sector. The philosophy behind agribusiness incubation is that, through orchestrating and deliberating linkages among a range of agricultural-associated sectors, African agriculture will benefit from a gush of creative and entrepreneurial energies. Incubators are expected to increase the wealth of their community, by serving businesses and small to medium enterprises to become more competitive in economies. A total of 22 proposals were received under the 2017/2018 RECAP call through the RUFORUM Information Management System (RIMS), all proposals complied with the application guidelines. Nonetheless, four proposals were submitted via email and these were not compliant with the call guidelines. In this call, 64% of the proposals submitted were related to cross-cutting thematic areas, 13.6% on crop production, 13.6 % on farm management and agriculture/natural resource economics and 9.1% on animal production. Most proposed incubation hubs to be developed by universities are focusing on commercial crops. Commercial crop production is a lucrative undertaking. With tremendous rise in urban populations across Africa, the need for fresh foods to cater these people is great. It is, therefore, a good sector for one to make profit, while at the same time contributing to the continent population's food supply. In addition, commercial crops offer income and employment opportunities to the rural economy.

Key words: Agri-Enterprise Innovation Hubs, cross-cutting thematic areas, RECAP, RUFORUM

Résumé

Les incubateurs jouent un rôle important dans le développement du secteur agricole en Afrique. Les initiatives africaines d'incubation doivent être relancées et les programmes de recherche doivent étudier les systèmes d'innovation afin d'identifier les incubateurs parmi les acteurs agricoles. Les centres d'incubation d'agrobusiness proposés dans le

cadre du programme de Challenge d'Entrepreneuriat de RUFORUM 2017/2018 visent à exploiter les connaissances et infrastructures d'information en tant que mécanismes de base pour encourager la recherche et l'entrepreneuriat à but lucratif dans le secteur agricole en Afrique. La philosophie de l'incubation d'agrobusiness est que l'agriculture en Afrique bénéficiera d'un regain d'énergie créative et entrepreneuriale à travers les liens entre acteurs agricoles. Les incubateurs devraient contribuer à améliorer la prospérité dans leur communauté en amenant les petites et moyennes entreprises à devenir plus compétitives. En tout, 22 propositions ont été reçues dans le cadre de l'appel à propositions des projets RECAP 2017/2018, toutes ces propositions étant conformes aux conditions d'éligibilité. Toutefois, quatre propositions ont été soumises par courrier électronique et n'étaient pas conformes aux directives de l'appel. Des 22 propositions évaluées, 64% concernaient des thématiques transversales, 13,6% la production agricole, 13,6% la gestion des exploitations agricoles et l'économie des ressources naturelles et 9,1% la production animale. La plupart des centres d'incubation proposés dans les universités était sur les cultures commerciales. La production de cultures commerciales reste une entreprise lucrative. Avec l'augmentation considérable des populations urbaines, le besoin d'aliments frais se fait sentir. C'est donc un secteur profitable qui contribue à l'approvisionnement alimentaire. De plus, les cultures commerciales offrent des revenus et des opportunités d'emploi à l'économie rurale.

Mots clés: Pôles d'innovation agro-entreprise, thématiques transversales, RECAP, RUFORUM

Introduction

The economic crisis coupled with increases in food prices and the looming impacts of climate change have necessitated that Africa ought to urgently rise up to these challenges and opportunities by promoting growth, food security, employment, poverty reduction and environmental sustainability (Ozor, 2013). A sole strategy for realizing Africa's potentials for development in the wake of these challenges is via agribusiness innovation incubation. The need for agribusiness development in Africa is undisputable, especially for its largely young and rural population. Africa is a youthful continent, half of the population is currently under the age of 18, and those in the age group 15–25 make up almost 30% of the population today (Fox, 2016). The estimated youth unemployment rate in Sub-Saharan Africa is one of the highest in the world at 40 % (ILO, 2014). Majority of the youth live beyond the poverty datum line. A capital intensive agribusiness development path that invests in or targets youth can provide them with employment opportunities, investing in both the future of agribusiness of the continent at large.

Young African business innovators and enterprise developers require strong support and networks to support their growth and profitability. Networks that support skills enterprise skills development and relevant linkages are one means of supporting small entrepreneurs to grow. African universities are well placed to sustainably support growth of enterprises particular when linked to skills development and generation of new knowledge for development. Universities are well placed to link the training of youth with forward-thinking environments that exposes them to new advances in technologies and systems e.g. ICT, CD printing, reorganized resource sharing systems, such as Hello Tractor. However,

systemic disconnects between entrepreneurship and university endure, must strive to encourage functionality. That means aligning the university curriculum with the demands and priorities of entrepreneurship, as well as encouraging uptake of university research by the small to medium business enterprises. Universities are generally not equipped to respond to the demands of agribusiness and agro-industry in Africa (Ozor, 2013). In addition, the cost of research collaboration is exorbitantly high, and also few innovations are diffused from universities to enterprise development.

RUFORUM Intervention

The Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) recognizes the need for greater youth participation in enterprise development and business incubation and through its member universities and partners has supported training and skills development in this respect. It has also supported start-ups through innovative financing mechanism of the revolving fund implemented in some member universities. RUFORUM believes in youth entrepreneurship as the game changer in ensuring greater youth participation and integration into the economic growth at national and regional levels and for youth employment. Consequently, RUFORUM in partnership with the mastercard foundation is implementing an eight year programme “*Transforming African Agricultural Universities to meaningfully contribute to Africa’s growth and development (TAGDev)*”. The TAGDev Programme seeks to transform African agricultural universities and their graduates to better respond to developmental challenges through enhanced application of science, technology, business and innovation for rural agricultural transformation. Under the TAGDev, a focus towards developing a critical mass of young business leaders by providing a supporting environment where startups, innovations and disruptive ideas from universities are fast tracked to service communities and nurture enterprises driven and led by youth in Africa has been envisioned.

RUFORUM Entrepreneurship Challenge Programme (RECAP)

RUFORUM, based on lessons from entrepreneurial successful models in universities, has resolved to fast track the establishment of incubation hubs as part of increasing the vibrancy of entrepreneurship in member universities. The organization has launched a RUFORUM Agricultural Enterprises Challenge Program (RECAP) call. The RECAP was built around three specific objectives which are to: i) Provide RUFORUM network universities with opportunity to develop and or strengthen agri-incubation hubs and support agri-enterprise development in Africa by providing relevant skills development for entrepreneurs and linkages with key stakeholders; ii) Provide universities with the opportunity to create an enabling environment through which students and university academics and private sector work together to support students design, develop and validate their business ideas, models and products and translate them into meaningful and viable enterprises and iii) Support universities to develop an innovation ecosystem; social, technological and business innovation that supports students’ mentorship in entrepreneurship and enterprise development. The RECAP was designed to strengthen university entrepreneurship education and impact by supporting the development/ strengthening of Agri-Enterprise Innovation Hubs (AIHs) at universities that will support development of agricultural enterprises through entrepreneurial skills development. The AIHs are expected to nurture innovative start-up businesses and support the exploration of establishing based on innovative ideas

among university students within Africa.

This 2017/2018 RECAP call for proposals requested interested RUFORUM member universities to submit proposals to RUFORUM Secretariat to support up to four AIHs with maximum grants of up to \$50,000 each. The proposals were expected to be broad or relate to any particular topical agri-systems area, provided it responded to identified need and was supported by relevant interest and expertise of the faculty in that area. The hubs could focus on areas like youth business incubation, agro-processing business incubation, seed business incubation, livestock business incubation, agri-services and extension incubation, ag-technologies incubation, agribusiness financing and financial inclusion incubation. The applicants were expected to show how funds will be used to develop platforms and processes that will enhance innovation and the development of small agri-businesses that take advantage of available technologies, and link them and the university more closely with the private sector.

The call for proposals was a competitive call that was open to RUFORUM member universities. The projects are expected to run for a maximum period of 24 months. The proposals were submitted via an automated electronic proposal submission process using the RUFORUM Information Management System (RIMS). In the RIMS, principal investigators were required to specify the focus area, proposal theme and sub-theme.

Characterization of submitted proposals

A total of 22 proposals were compliant, nine of which were submitted by principal investigators who have MScs as the highest level of qualification. Submissions were from nine countries (Fig. 1) in 19 RUFORUM member universities (Fig. 2). Applicants from member universities in Uganda and Zimbabwe submitted 31.8% and 18.2% of the proposals respectively making the largest number of overall submissions (Fig. 1).

A total of six female principal investigators responded to the call, representing 27% of the total applications received (Fig. 3).

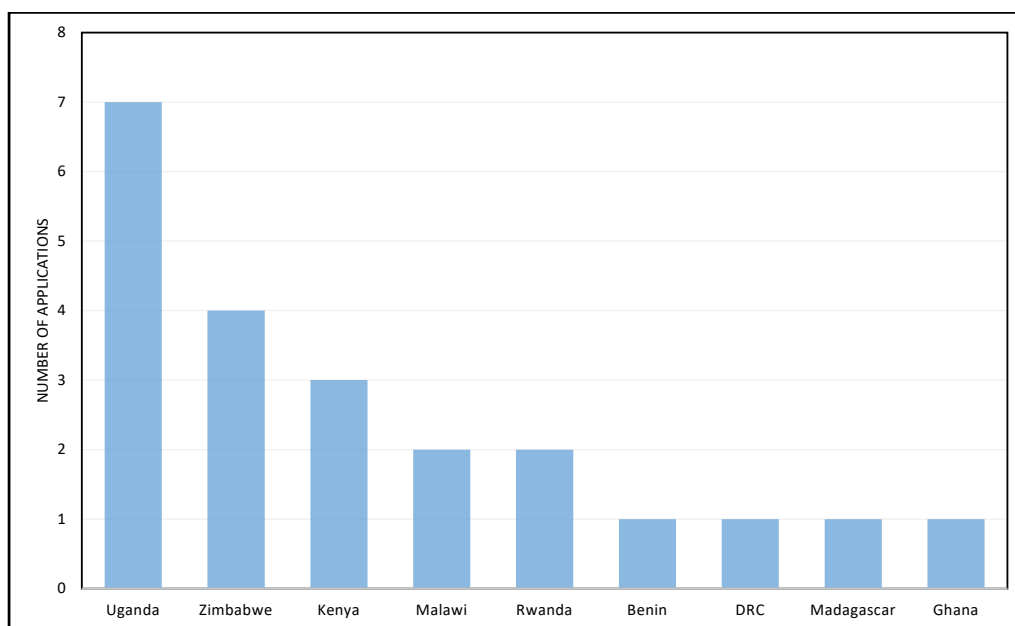


Figure 1. Number of applications by country

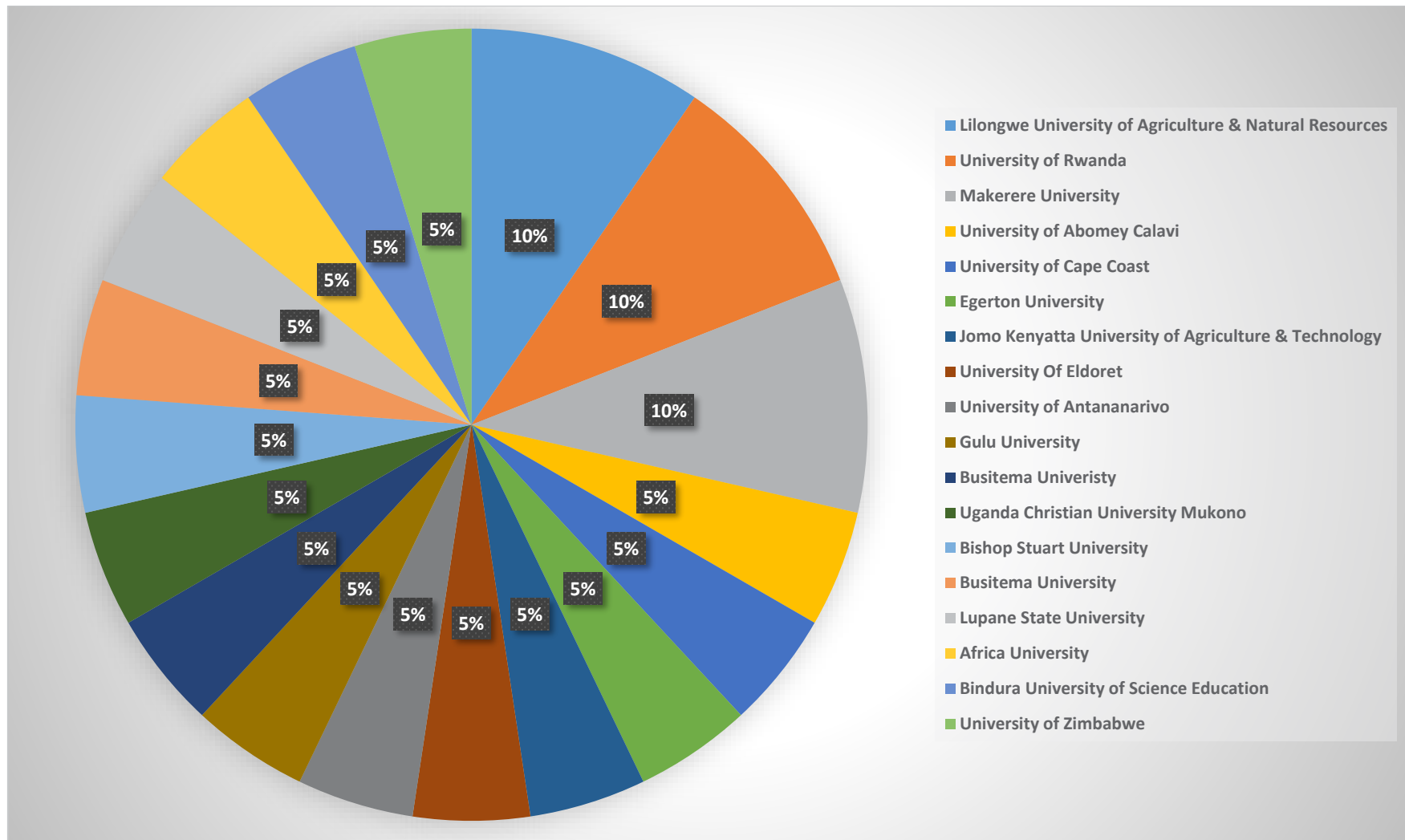


Figure 2. Proposals submitted by member universities

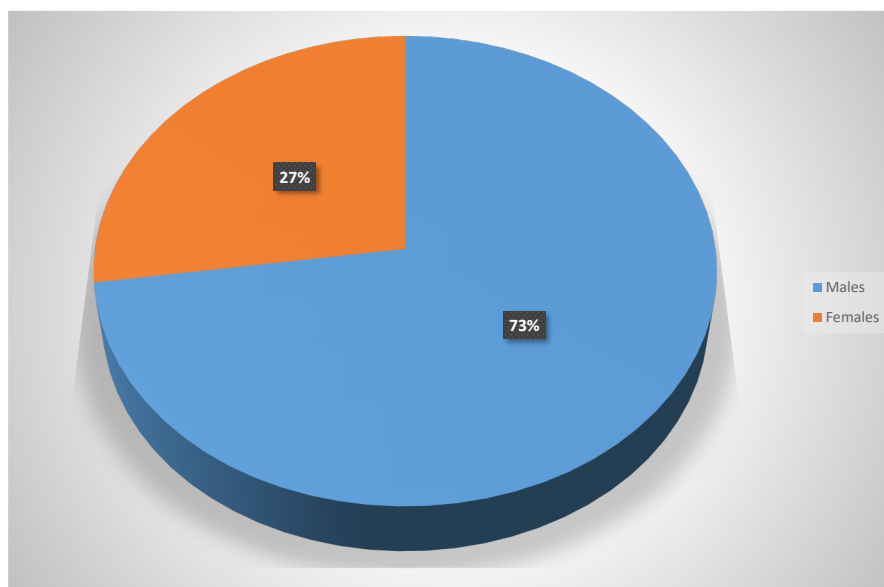


Figure 3. Disaggregated proposal submission by gender

The proposals submitted fell under the four thematic areas namely crop production, cross-cutting issues, animal production, farm management and agriculture/natural resource economics (Fig. 4). Majority of the proposals submitted were related to cross-cutting thematic area (64%), 13.6% on crop production, 13.6 % on farm management and agriculture/natural resource economics and 9.1% on animal production.

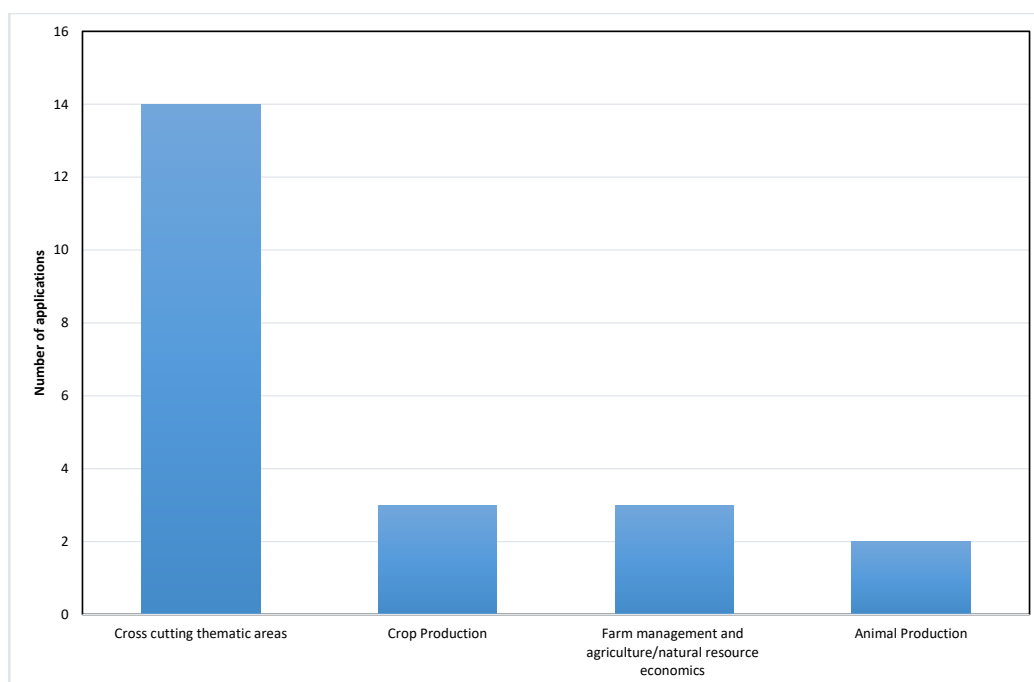
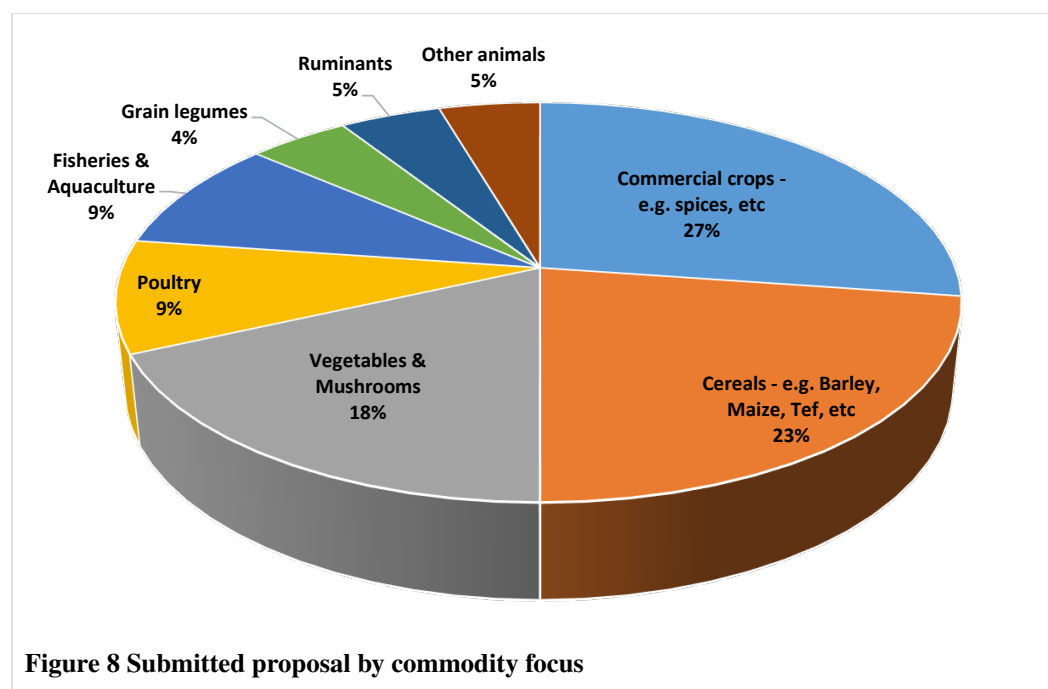


Figure 4. Disaggregation of proposals submitted according to thematic areas

Proposals under cross-cutting thematic areas were addressing agri-business management, rural development and socio-economics, food science and nutrition, climate change and natural resources management as well as agricultural extension, communications and information systems (Table 1).

Table 1. Proposed agribusiness incubation hubs by African Universities for increasing the vibrancy of entrepreneurship

Thematic area	Proposal focus area	% area of focus
Cross cutting issues (14)	Agri-business management	86
	Agricultural extension, communications and information systems	7
	Climate change and natural resources management	7
Crop Production (3)	Agronomy and agricultural engineering (cropping and pasture systems, agric. machinery)	67
	Post-harvest management (on farm storage, processing)	33
Farm Management and Agriculture /Natural Resource Economics (3)	Agribusiness (agro-processing, business, economics, entrepreneurship)	100
Animal Production (2)	Livestock nutrition and management	61.5
	Animal breeding and biotechnology	7.7



The Agribusiness Incubation Hubs commodity focus varied from commercial crops for instance spices (27%), cereals (23%), vegetables and mushrooms, poultry (9%), fisheries and aquaculture (9%), ruminants (5%), other animals (5%) and grain legumes (4%). (Fig. 8).

Insights from the proposed Agribusiness Incubation Hubs

This call required scientists to focus on different hubs which included youth business incubation, agro-processing business incubation, seed business incubation, livestock business incubation, agri-services and extension incubation, ag-technologies incubation, agribusiness financing and financial inclusion incubation. This was meant to encourage university scientists to develop platforms and processes that enhance innovation and inspire development of small agri-businesses that take advantage of available technologies.

Cross-cutting issues relating to agribusiness management, agricultural extension, communication and information systems and climate change and natural resources management, featured prominently in this 1st RECAP submissions. This suggests an increased appreciation to the role cross-cutting issues in the development of agribusiness incubation hubs. Most proposals under this theme were focusing on agribusiness management. Agribusiness incorporates half the world's labour force, half the world's assets, and consumer purchases (). It drives the public policy issues in economic development, food security, trade, nutrition, the environment, natural resources, protecting plant and animal diversity, intellectual property, genetics, and social and economic priorities. In Africa, agribusiness and agro-industries account for more than 30% of national incomes as well as the bulk of export revenues and employment (ILO, 2014). Scaling up agribusiness could be the next growth frontier. It could offer immediate value addition through commodity-based industrialization that exploits forward and backward linkages with the rest of the economy. Such industrialization could lift many rural populace out of poverty while creating jobs across economies. That is probably why there was very high interest in this theme from the universities. Considering Africa's growing population, the proposed hubs will provide lucrative opportunities to many smallholder farmers and students. Scaling up agribusiness is the next growth frontier. It offers immediate value addition through commodity-based industrialization that exploits forward and backward linkages with the rest of the African economies. Such industrialization could lift Africa out of poverty.

Less than half of the proposed hubs (36%) focused on other thematic areas including i) crop production issues, ii) farm management and agriculture/natural resource economics, iii) animal production. This might be attributed to limited interest in the areas, probably most scientists' felt that other themes have limitations in terms of business development. In addition, in the call the proposed hubs were largely focusing on agribusiness related hubs, as a result most scientists limited themselves to the theme of agribusiness management. Even so, maybe the next call should not limit the scientists on the themes to focus on, it should be open to allow scientists to be creative.

Review and review observations

Even though the call emphasized agribusiness and agripreneurship, some of the

proposals were much more focused on research or outreach and seemed more like an adapted form of research grants. The reviewers pointed out that:

- Applicants need much more guidance on what should be there in the AIHs.
- There is need to work even with the winning team to ensure that they are much more clear about what they will be doing, with who, what stage in degree/career and how the Hub and the enterprise finance schemes will work.
- There was a large discrepancy on the number of students to be supported under the hub from 2-50. The reviewers suggested that RUFORUM needs to streamline on the possible number of students to be supported by the hub.
- In the proposals, the universities did not clearly point out how they will be training the incubatees.
- A number of the proposals indicate that they are going to be giving extensive training and lectures to incubatees, but they are planning somehow was not clear how this will be done during their classes.
- If the training was to be done during the normal degree programme, then there is an ethical conflict if some students are getting classes and others do not.
- RUFORUM needs to get clarification from the applicants and focus the support and mentorship on the winning start-ups and this is to be done out of normal class programme.
- Very few proposals projects incorporated anything on gender yet it is RUFORUM's drive to increase women participation in agribusiness and agripreneurship. There is need to include it when refining the winning proposals.
- The student teams in their "start ups" could be encouraged to give some consideration to the environmental and social impacts of their projects.
- All in all some applications poorly scored based on their limited level of innovativeness.

Moving forward

The advent of the RUFORUM Agricultural Enterprises Challenge Program (RECAP) was designed to strengthen university entrepreneurship education and impact by supporting the development of Agri-Enterprise Innovation Hubs at universities that support the development of agricultural enterprises. This created new opportunities to support and promote innovation and entrepreneurship at African universities. In moving forward it is important for RUFORUM Secretariat to design mechanisms for continued engagement with the network to urge for timely submissions. This would enhance quality proposals development and timely submissions thereby eliminating the last minute hiccups that were experienced during this round of the call. The Secretariat would also need to hold dialogues with member universities to encourage them to respond to the RECAP call for proposals. It is important that throughout the course of application development, staff members should offer one-on-one assistance to all potential applicants so that research teams can effectively prepare strong, competitive applications that meet RECAP goals.

Acknowledgments

We gratefully acknowledge the funding from the mastercard foundation through the TAGDev (Transforming African Agricultural Universities to meaningfully contribute to

Africa's Growth and Development) project implemented by RUFORUM.

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