

RUFORUM field attachment programme award: An internship programme for MSc. students

Ntwali, C.A. , Nampala, P., Osiru, M., Nambi, E. & Adipala, E.

Regional Universities Forum for Capacity Building in Agriculture, P. O. Box 7062, Kampala, Uganda

Corresponding author: c.ntwali@ruforum.org

Abstract

At the core of its operations and business RUFORUM manages a Competitive Grants System (CGS) comprising three competitive granting mechanisms. These are the Graduate Research Grant (GRG); Community Action Research Grant (CARP); and the Field Attachment Programme Award (FAPA). Through the CGS RUFORUM's 29 member universities are encouraged to conduct participatory research involving faculty and students working in partnerships with the farmers and other agencies involved in research and development. The FAPA awards ensure that RUFORUM funded research has a wide reach and impact. Making research known or sharing research findings at any level of society not only adds value to the research but also validates the work that has been done. The field attachment programme awards are designed in such a way that students are encouraged to follow through with the dissemination of their research and to enable them to link more closely with the agencies working in their area of research. It is established for those students who have developed a useful intervention, product or service as part of their MSc. studies and who have handed in their thesis, have no more stipend due from the GRG or CARP, but who could make a more meaningful impact if they stay on for a few more months and provide advisory services related to their research. Through the FAPA students are exposed to real world experiences and establish contacts with development, private sector and government agencies.

Key words: Dissemination, field attachment, findings, impact, research, students

Résumé

Au centre de ses opérations et de ses activités, RUFORUM gère un système compétitif des subventions (CGS) comprenant trois mécanismes concurrentiels subventionnaires. Il s'agit de la bourse de recherche post-universitaire (GRG), la bourse de recherche-action communautaire (CARP) et la bourse du programme d'attachement sur terrain (FAPA). Grâce au CGS, 29 universités membres de RUFORUM sont encouragées à

mener des recherches participatives impliquant les professeurs et les étudiants qui travaillent en partenariat avec les agriculteurs et d'autres organismes impliqués dans la recherche et le développement. Les bourses du FAPA assurent que la recherche financée par RUFORUM a une large portée et un impact. Faire connaître la recherche ou partager les résultats de recherche à tous les niveaux de la société, non seulement ajoute de la valeur à la recherche, mais aussi valide le travail qui a été fait. Les bourses du programme d'attachement sur terrain sont conçues de telle manière que les étudiants soient encouragés à donner suite à la diffusion de leur recherche et à leur permettre d'être en liaison plus étroite avec les organismes qui travaillent dans leur domaine de recherche. Il est établi que ces étudiants qui ont développé une intervention, un produit ou un service utile dans le cadre de leurs études de maîtrise et qui ont remis leurs mémoires, n'ont plus d'allocation régulière de GRG ou CARP, mais celle qui pourrait avoir un impact plus significatif s'ils y restent pour un peu plus de mois et fournissent des services consultatifs liés à leur recherche. Grâce au FAPA, les étudiants sont exposés à des expériences réelles du monde et établissent des contacts avec le développement, le secteur privé et les organismes gouvernementaux.

Mots clés: Diffusion, attachement sur terrain, résultats, impact, recherche, étudiants

Background

The Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) is a consortium of 29 universities in Eastern, Central and Southern Africa established in 2004. RUFORUM sees African universities linked to a vibrant agricultural sector and the former producing high performing graduates and quality research relevant to the sector and economy as a whole. RUFORUM's mission is to strengthen the capacities of universities to foster innovations responsive to demands of small-holder farmers. To realize this, significant emphasis is put on linking faculty and students with rural communities, promoting inter-disciplinary research and encouraging multi-agency research teams to create impact across the region (Adipala and Osiru, 2012; Malcolm and Kay, 2012). This paper highlights one of the initiatives that is used to enhance dissemination research results generated by graduate students, while at the same time providing internship opportunities for the students.

**Programme
Description**

Universities in Africa have done vast agricultural research in the past and continue to do so amidst the fast changing global and regional contexts. Unpredictable global development realities due to aspects such as climate change and variability; global economic downturns and intensified fluidity in the transfer of information have resulted in increasing pressure on Universities to train proactive graduates, who can take stock of existing circumstances and respond appropriately to their realities. As an umbrella organization RUFORUM has devised different strategies for intervening and enhancing the capacity of universities to train relevant and proactive graduates. Through its regional training programme and its Competitive Grants System (CGS) RUFORUM has successfully trained over 700 MSc. students from the Eastern, Central and Southern Africa region. The CGS has formed the core of RUFORUM activities since the original conceptualization and launch of the former's predecessor programme, the Forum for Agricultural Resource Husbandry in 1992. The CGS comprises four granting mechanisms namely: 1) the Graduate Research Grants (GRG); 2) the Community Action Research Programme (CARP) 3) Field Attachment Programme (FAPA) and 4) Institutional Strengthening Grants (ISG). The CGS as a whole emphasizes linking faculty and students with rural communities, promoting inter-disciplinary research and encouraging multi-agency research teams to create impact across the region. Lessons from running the CGS for over a decade revealed that on submission of their theses for examination students had to wait close to three months or more before graduation. In order to use the three-months wait constructively RUFORUM came up with an initiative aimed at encouraging students to go back and share their MSc. research findings with the communities or institutions where their research was conducted. This initiative known as the RUFORUM Field Attachment Programme Award (FAPA) targets students who have completed their Masters research and are awaiting graduation or evaluation of their theses. The programme also targets faculty staff through a number of activities such as the mentoring and supervision of the students.

Programme objectives of the FAPA include:

- To provide an opportunity for students to continue the work of the Project with communities in finalizing implementation or communicating the research results and opportunities arising from their research;

- To provide a local implementing agency (local government, farmers group, NGO, government department, research agency, private company etc) with the specialized knowledge of the student's work for better institutionalization or scaling out of new research/approaches and to enable them to assess the employability of the student/s; and,
- To provide the student with an opportunity to obtain working experience within an organization and to make contacts for employment in the future.

Implementation of the FAPA Grant

RUFORUM has to date issued three FAPA Calls for Proposals (CfP). The first call for proposals was a pilot stage and it involved the recruitment of only one student. In the second call ten students applied but only nine of them confirmed availability to commence work. In the third call nine students responded and seven were selected for funding.

The FAPA granting process commences with submission of proposals, following a CfP, which proposals are then forwarded to the Technical Committee for review and selection. The outcomes of the Technical Committee review are then shared with the applicants and successful applicants are requested to make revisions accordingly. On receipt of the revised proposals together with letters confirming placement in a given community or institution, grant award letters are processed and sent to the selected students.

The calls for proposals are normally circulated widely by e-mail to the deans and graduate students in the RUFORUM member universities, posted on the RUFORUM website, and shared out during RUFORUM meetings and conferences. As a result of these efforts the number of member universities participating in the FAPA is growing and will eventually double following the higher number of students, who have enrolled and graduated under the Competitive Grants System. Table 1 indicates the number of applicants who have applied to the FAPA by University and gender disaggregation while Table 2 lists the awardees to date.

Outcomes from the FAPA

By the end of an attachment, each of the students is expected to have submitted at least one newsletter article and a report highlighting their experiences over the three months field attachment. A number of articles have been submitted (50% of the students) to the RUFORUM newsletter and a few are lined up for inclusion in newsletters before the end of 2012. A number

Table 1. Applicants under the Field Attachment Program Award.

University	Number of applications	Gender of applicants	
		Female	Male
Sokoine University of Agriculture	6	2	4
University of Nairobi	1	0	1
Egerton University	4	2	2
Makerere University	9	4	5
Total	20	8	12
	Percentages	40%	60%

First call - Pilot phase with one applicant; Second call - 10 applicants; Third call - 9 applicants.

of students have been able to disseminate their MSc. research findings with Non- Governmental Organizations (NGOs), Government Institutions, National Research Institutions and the private sector institutions. The FAPA is helping the students reach communities, and industry, and communicate their research outputs and experiences to different stakeholder groups. Through these interactions, communities are designing follow-up actions to respond to their community needs including enterprise development. Lessons from the internship experiences indicate that several organizations are willing to take on students for purposes of learning and gaining from their research. The students themselves have indicated that the field attachment has exposed them to reality of making their research known and useful in different settings.

Excerpt from a FAPA Awardee's News letter article

My name is Esther Sebuliba. I have just completed an MSc. Forestry degree training at Makerere University. My MSc. training was funded by RUFORUM and FOREAIM. I was honoured to be selected by RUFORUM to disseminate my research findings to the communities where my research was done under the RUFORUM Field Attachment Programme Award (FAPA). My FAPA was conducted in Sugar Corporation of Uganda Limited (SCOUL), Lugazi and aimed at field testing of the *mycorrhiza* bio-fertilizer I developed during my MSc. research. It was a very revealing, exciting and learning experience. The experiment is still ongoing but preliminary results were presented in the Uganda Sugarcane Technologists Association conference which took place 7th - 8th April 2011. During the conference, I came to learn that bio-fertilizers have been longed for by all sugarcane companies in the region. Attempts to acquire and even test them on sugarcane

Table 2. Students awarded grants under the Field Attachment Program Award (FAPA) 2010 and 2011.

No.	Name	Gender	Institution	Title of Thesis	Title of FAPA Project	Course completed	Country of Internship	Institution/Community of Internship
1.	Esther Ssebuliba	F	Department of Forestry Faculty of Agriculture Makerere University P. O. Box 7062 Kampala, Uganda Email: sebulibaesther@yahoo.com	Mycorrhiza assemblages and its inoculation potential for enhanced plant growth	Enhancing productivity of degraded soils of semi arid and sub humid regions	MSc. Forestry	Uganda	Sugar Corporation of Uganda Limited (SCOUL) Lugazi Tel: 0703666319 Email: suri_agron@yahoo.com
2.	Jimmy Obala	M	Regional Plant Breeding and Seed Systems MSc. Program, Department of Agricultural Production, School Agricultural Sciences, College of Agricultural and Environmental Sciences, Makerere University, P. O. Box 7062, Kampala, Uganda Tel: +256-702412752 Email: jimmyobala@gmail.com	Improvement of resistance to Fusarium root rot through gene pyramiding and validation of SSRPVR87 marker in common bean	Selection for resistance to Fusarium root rot and large seed size in early generation of multiple-parent populations of common bean	MSc. in Plant breeding & Seed systems	Uganda	Pan-Africa Bean Research Alliance/ CIAT National Agricultural Research Laboratories - Kawanda P.O. Box 6247, Kampala, Uganda Tel. +256-414-567670 Fax: +256-414-567635 Email: ciatadmin-uga@cgiar.org
3.	Jacob Kaingo	M	Department of Soil Science, Faculty of Agriculture - SUA, P.O. Box 3008, Chuo - Kikuu, Morogoro, Tanzania Email: jakekain@yahoo.co.uk	Spatial prediction of soil water retention in the Ngerengere sub-catchment, Morogoro, Tanzania	Proposal for field attachment with the Africa soil information services-afsis (Arusha, Tanzania)	MSc. in Soil Science	Tanzania	Department of Soil Science, Faculty of Agriculture - SUA, P. O. Box 3008, Chuo - Kikuu, Morogoro, Tanzania Email: jakekain@yahoo.co.uk

Table 2. Contd.

No.	Name	Gender	Institution	Title of Thesis	Title of FAPA Project	Course completed	Country of Internship	Institution/Community of Internship
4.	Kwemai Daniel Bomet	M	Department of Crop Science, Faculty of Agriculture, Makerere University P.O. Box 7062, Kampala Uganda Email: kwemai2000@yahoo.co.uk Cell: +256782711892/0702711892/0712711892	Characterisation of a diverse set of Maize Germplasm for resistance to infection by <i>Aspergillus flavus</i>	Establishing a Platform for Developing <i>Aspergillus flavus</i> resistant maize for Uganda	MSc. in Plant breeding & Seed systems	Uganda	National Crop Resources Research Institute (NaCRRRI), National Research Organization (NARO) P.O. Box 7084, Kampala (U) Email: grasea_99@yahoo.com Telephone: +256782031285
5.	Mayada Mamoun Beshir Mohamed	F	School of Agricultural Sciences, Makerere University, P.O. Box 7062, Kampala, Uganda Tel: +256 71 8111901 788705026 ARC - Wad Medani, Sudan +249 924307778 E-mail: mayadamamoun@yahoo.com	Development of molecular markers for introgression of resistance to Turcicum leaf blight in sorghum	Strengthening Breeding for Resistance to Turcicum leaf blight in Sorghum: Mapping of Resistance Quantitative Trait Loci	MSc. in Plant breeding & Seed systems	Kenya and Uganda	International Crops Research Institute for Semi Arid Tropics - BeCA/ICRISAT - Kenya
6.	Osaliya Richard	M	Institute of Environment and Natural Resources, Makerere University, P. O. Box 7062 Kampala, Uganda Tel: 0782451815 Email: osaliya@yahoo.com	The potential of storm water and effluent from Kasese Cobalt Company Limited for re-vegetation a degraded pyrite trail in Queen Elizabeth National Park, Western Uganda	Promoting corporate and community involvement in natural resource management through dissemination of research findings and participation in investigations of mine pollution in Kasese, western Uganda	MSc. in Environmental Sciences	Uganda	Kasese Cobalt Company Limited (KCCL) and Hamukungu Bay Fishing Community, L. George P.O. Box 524, Kasese Uganda Tel: (256) 0382 412000

Table 2. Contd.

No.	Name	Gender	Institution	Title of Thesis	Title of FAPA Project	Course completed	Country of Internship	Institution/Community of Internship
7.	Habonayo Glorioso	F	Sokoine University of Agriculture, Department of Crop Science and production, P.O.Box 3024, Morogoro, Tanzania Email: habonayoglo@yahoo.fr Tel: (+ 257)79 985887	Comparative effect of <i>Tithonia diversifolia</i> , farmyard manure and NPK fertilizer on maize grain yield improvement at Moso, south eastern region of Burundi.	<i>Tithonia diversifolia</i> in improving soil fertility and maize grain yield at Moso, South-Eastern region of Burundi	MSc. in Agronomy	Tanzania	Institut des Sciences Agronomiques du Burundi (ISABU) Soil Fertility component
8.	Mboni-hankuye Cyrille	M	Sokoine University of Agriculture, P.O.Box 3024, Morogoro, Tanzania Email: mbonicyrille@yahoo.fr	Effect of pruning on yield and quality of selected indeterminate tomato (<i>solanum lycopersicon</i> L.) lines	Increasing tomato production in Burundi for enhanced income generation of farmers	MSc. in Crop Science	Burundi	Institute des Agronomique Burundi – Horticultural Program
9.	Egeru Anthony	M	Makerere University, School of Education, P.O.Box, 7062, Kampala, Uganda	Determinants of fuel wood demand. A case of Olio Sub-county in Eastern Uganda	Enhancing efficient energy coping mechanisms	MSc. in Environmental Sciences	Uganda	Olio Sub County, Serere District - Uganda

Table 2. Contd.

No.	Name	Gender	Institution	Title of Thesis	Title of FAPA Project	Course completed	Country of Internship	Institution/Community of Internship
10.	Yazan Ahmed Mohamed Elhadi	M	University of Nairobi Department of Land Resources Management and Agricultural Technology P.O Box 2905300226 Nairobi, Kenya Email: yazanelahdi@yahoo.com Tel: + 254 737776276	Links between Seasonal Climatic Variability and Poverty: A case Study of Pastoral and Agro-pastoral Communities in Baringo District, Kenya	Beyond poverty and climate variability: research dissemination and feedback	MSc in Range Management	Kenya	University of Nairobi P.O Box 2905300226 Department of Land Resources Management and Agricultural Technology Nairobi
11.	Grace A. Achiando	F	Agricultural Information and Communication Management Department of Crops, Horticulture and Soil Sciences, Egerton University, Box 536-20115, Egerton, Kenya Tel: 0727-394 887 Email: graceolilo@yahoo.com	Integration of Indigenous Knowledge and Perception of effectiveness of Communication Systems for Adaptation to Climate Change by Smallholder Farmers of Kilifi District, Kenya	Integrating indigenous knowledge in agricultural information and communication systems as a tool for adaptation to climate change	MSc in Agricultural Information and Communication Management	Kenya	Kenya Agricultural Research Institute (KARI – MTWAPA) P. O. Box 16 – 80109, Mtwapa – Kenya Email: karimtwa@kari.org
12.	Habib Zobida Habib Omer	F	Sokoine University of Agriculture, Department of Agricultural economics and Agribusiness P.O. Box 3007, Morogoro, Tanzania Email: zobidahabib@yahoo.com Tel: +255-789-946153 +249-117-764127	Performance of street evening marketing of agri-food products in Morogoro municipality	Street vending of agri – food products: Quality and safety issues	MSc in Agricultural economics and Agribusiness	Uganda	Makerere University College of Agricultural and Environmental Sciences – School of Food Science and Bio- Systems Engineering

Table 2. Contd.

No.	Name	Gender	Institution	Title of Thesis	Title of FAPA Project	Course Internship	Country of Internship	Institution/Community of
13.	Mwerera Robert Louis	M	College of Agricultural and Environmental sciences , Makerere University, P.O. Box 7062, Kampala, Uganda Email: mweras@yahoo.com; rmwerera@forest.mak.ac.ug	Climate change adaptation strategies in rural farming communities of Uganda: A case of Highlands and Semi-arid - Kabale and Nakasongola districts	Enhancing the synergies between climate change adaptation and food security in Bukinda sub County	MSc in Environment	Uganda	Bukinda sub – County – Kabale District
14.	Mbigide Victoria	F	Egerton University Faculty of Agriculture Department of Crops, Horticulture and Soil Sciences, Egerton University, Box 536-20115, Egerton, Kenya Tel: (+256) 774- 763 088 Email: vmbigide@yahoo.com	Effect of information dissemination channels on small holder tea production in western Kenya	Improving rural women livelihoods through disseminating agriculture information Internship at women of Uganda network (WOUNET)	MSc. in Agricultural Information and Communication Management (AICM)	Uganda	Kubere Information Centre - Information Officer Plot 60/62 Market Street P.O. Box 154 Apac, Uganda Email: jachora@wougnet.org mlapio@wougnet.org kicinfo@wougnet.org
15.	Fred Ssegujja	M	Faculty of Agriculture Egerton University Email: ssegujjafred@yahoo.co.uk Tel: 783304551	Factors influencing access to agricultural information by commercial urban farmers in Kampala, Uganda	Promoting agricultural information dissemination to urban farmers through sharing of research findings	MSc. in Agricultural Information and Communication Management (AICM)	Uganda	Kampala Capital City Authority – Office of the Department of Production and Marketing

Table 2. Contd.

No.	Name	Gender	Institution	Title of Thesis	Title of FAPA Project	Course completed	Country of Internship	Institution/Community of Internship
16.	Stella Apolot	F	Department of Agriculture Extension and Innovation School of Agricultural Sciences College of Agriculture Tel: (+256) 77614866 Email: sapolot@yahoo.com	Potential of school gardening as a laboratory for developing life skills in agriculture in primary schools: A case study of Soroti and Kamuli districts, Uganda	School gardens for improved quality of primary education and community food security in Soroti district, Uganda	MSc. in Agriculture/ Extension/ Education	Uganda	SNV – Local Capacity Building TEMEDO - Soroti
17.	Dorcas L. Okello	F	Department of Agriculture Extension and Innovation School of Agricultural Sciences College of Agriculture Makerere University Kampala-Uganda Email: tresured@yahoo.com	Effects of Short Term Hunger on Schooling among Universal Primary schools in Kamuli and Soroti Districts, Uganda	The potential of school gardening to mitigate short term hunger among UPE schools in Kamuli district	MSc. in Agricultural Extension/ Education	Uganda	Volunteer Efforts for Development Concerns (VEDCO) P. O. Box 1244 Kampala, Uganda Tel: 256 414-270598 Fax: 256 414 348441 E-mail: vedco@infocom.co.ug

plantations were fruitless despite the fact that they are being applied in India. This experiment lit a candle that had for one reason or another been put out. Why *mycorrhiza*? Due to the soil degradation brought about by the continuous farming and low input, *mycorrhiza* would serve as a remedy to enhance among others water and nutrient uptake especially in P deficient soils, as well as reduce disease, pest and pathogen attacks. The performance of the isolate on Sugarcane yield indicators has prompted the managers of SCOUL to transfer the experimentation from one hectare experimental land to five hectare commercial land. After this test the isolate will qualify for large scale production.

Challenges in the Implementation of the FAPA

1. Transmitting FAPA funds through the University Faculty to the students proved challenging for students who study in one University (country) but return to the home country soon after completion of research. Sorting out logistics delayed implementation.
2. Supervision of students by University staff after students have returned to their home countries was not feasible since the FAPA grant does not provide funds to cover the travel costs of the Supervisor nor does it provide supervision allowances.
3. Making the Faculty Dean accountable for the FAPA funds reduced the level of responsibility on the students in reporting or accounting but this slowed down the submission of the required deliverables
4. All the FAPA proposals received so far are from the Eastern Africa region and yet there are students in member Universities from Southern Africa. Efforts are being made to broaden participation.

Emerging Lessons from the FAPA

1. The FAPA agreement binds the students/ Awardee therefore making them fully responsible for implementation of their grants. The Deans may no longer be involved in the signing of the grant award letters but this still requires further reflections.
2. The process for the transfer of the FAPA funds is now flexible since the funds can now be received directly by the awardees / students and not necessarily through the Faculty. Some Deans are not comfortable with this arrangement.
3. The disbursement of funds in installments ensures that the students/awardees submit all the deliverables prior to the receipt of the subsequent installments. The downside of this however is that more effort goes into managing a very small

grant due to the continuous monitoring and checking before processing of funds.

4. Awards involving students returning to their home country on completion of their studies have been modified to allow for flexibility. This is to allow awardees get supervisors/mentors from home institutions, rather than solely academic supervisors from the Universities where they trained. The returning students (four of the seventeen are assigned mentors with whom they work over a three months period to communicate research findings.
5. Students gain experience in writing news letter articles because they receive feedback from the Secretariat and mentors at the internship places.

References

- Adipala, E. and Osiru, M. 2012. Harnessing the capacity of African Universities to foster rural transformation in Africa. Proceedings of the Third RUFORUM Biennial Meeting 24 - 28 September 2012, Entebbe, Uganda. pp. 19 - 28.
- Malcolm Blackie and Kay Muir-Leresche, 2012. Establishing innovative Higher Education programmes in support of agricultural rural transformation in Africa: The case of FORUM and RUFORUM. Proceedings of the Third RUFORUM Biennial Meeting 24 - 28 September 2012, Entebbe, Uganda. pp. 1 -18.