



Call for Applications for PhD Candidates in Integrated Agriculture Productions under the UR-Sweden Research Training Partnership Programme 2019-2024

1. Background

The University of Rwanda – The College of Agriculture, Animal Sciences, and Veterinary Medicine (CAVM- UR) - in collaboration with the Swedish University of Agricultural Sciences (SLU), Sweden through the Research Training Partnership Programme, Rwanda (2019/24) has received funding from the Swedish International Development Agency (SIDA), Sweden, to implement a research and training programme entitled: **Integrated Agriculture Productions (IAP)**. The programme integrates three broad thematic areas: 1/ Integrated farming systems, 2/ Climate smart agriculture production systems; and 3/ Healthy and nutritious agriculture production systems. The major outputs will be 7 PhD holders (2 sandwich PhDs at SLU and 5 local PhDs at UR-CAVM). The major outcomes will be the promotion of quality, multidisciplinary and impactful research; further development of supervising skills for CAVM staff; an enhanced culture of publication and scientific exchange; collaboration with farmers, the private and public sectors and policymakers; and administrative/academic structures and systems supporting innovation and promoting a vibrant research environment.

The University of Rwanda is inviting committed potential candidates to apply for one Sandwich based PhD positions in Integrated Agriculture Productions starting May 2020. The PhD student will be registered at SLU, Sweden but field research will take place in Rwanda. According to the Sandwich PhD training model, student is expected to spend a maximum of 6 months per year in Sweden and carrying her/his research activities at UR, Rwanda for the remaining period of the year. The student will be jointly supervised by professors and senior researchers from both SLU and UR.

2. Research themes/ areas for the Sandwich programme

The proposed sandwich research training under the IPA program will focus on one area: Integration of urban organic waste stream into integrated agriculture systems (under **Climate smart agriculture production systems**)

Research area: Integration of urban organic waste stream into integrated agriculture

Rationale:

Solid waste management in many low-income countries often have a great proportion of recycling of valuable fractions, e.g. metal, hard plastics. However, the organic waste is not considered to be valuable and therefore often end up at landfills. In a study performed in Uganda, over 90% of the waste taken to landfills was demonstrated to be biodegradable (Komakech et al. 2014). At the same time there is a lack protein to be used for fish feed and plant nutrients to fertilise the fields. Treating the organic waste, including agricultural waste, with invertebrates have the potential of solving these two problems.



In the invertebrate assisted waste management, using either earthworms or fly larvae, highly valuable products are generated: treatment residue that can be used as fertiliser and animal biomass that can be used as animal feed (Lalander et al. 2015a; b). Generating high-value products introduce a shift in the organic waste value-chain and the increased revenue permit a reduced total cost of treatment.

Actions: 1) Identification of potential waste streams eligibly for invertebrate assisted treatment in urban and peri-urban Rwanda. 2) Evaluation the efficiency of process parameters and schemes for improved recovery of plant nutrients and proteins in the biodegradable urban and agricultural waste. 3) Evaluation of risk in terms of disease transmission within the recovery system. 4) Evaluate product quality of the generated products as feed and fertiliser.

Expected results: 1) Identification of potential waste streams; 2) Proposed treatment systems for productive waste management for local production of sustainable feed and fertilisers; 3). Evaluation of the potential hygienic and environmental risks associated to the proposed invertebrate assisted waste management strategy.

3. Funding

The funding for these PhD positions will be supported by Sida through UR Sweden Program for Research, Higher education, and Institutional Advancement.

4. Admission

The potential PhD Candidate is expected to express her/his motivation and interest to undertake the PhD programme in the area of Integrated Agriculture Productions for a maximum period of four years from date of registration. Applicants must qualify and meet the admission criteria and conditions both at UR and SLU. The following are key eligibility criteria:

5. Eligibility criteria

PhD applicants must qualify and meet the admission criteria and conditions as per the UR guideline. The following are key eligibility criteria:

- i. Be a permanent staff of the University of Rwanda
- ii. Be a Rwandan citizen
- iii. Hold a master's degree in agriculture and allied sciences delivered by an accredited university with specialization in Agriculture Engineering, soil and water engineering, Animal productions, Veterinary sciences, Forestry and Agroforestry, Agroforestry and soil management, Landscape restoration, Horticulture, Crop sciences, Food safety, Food processing, Agricultural waste management, etc...
- iv. Present a clear PhD research proposal about one of the proposed areas of interest,
- v. Be fluent in English, both orally and in writing (Proof of English proficiency (i.e., TOEFL or equivalent));



- vi. Readiness to adhere to UR capacity building policies and regulations;
- vii. Ready to continue working at the University of Rwanda after completion of the PhD studies
- viii. In line with UR's gender policy and UR's commitment to bridge the gender gap in research and teaching at UR, female candidates will be given a priority; all things being equal, female candidate shall be preferred.
- ix. Successful candidates should be prepared to work full time on the project and not be in possession of another fellowship for PhD studies. For those in teaching positions, the *teaching load will be reduced to a maximum of 20%*. Other side activities, assignments, consultancies, or employment are strongly discouraged.

6. How to apply

Interested applicants will have to submit the following documents to support their application:

- Application letter addressed to the Ag. Director of the Centre of Postgraduate Studies of the University of Rwanda [Max: 1 page];
- Certified copy of your Masters' degree relevant to this PhD program;
- A cover or motivation letter stating your interest in this programme and the gap to bridge after your PhD research and education [Max: 2 pages];
- Curriculum Vitae demonstrating your previous experience relevant to this PhD program plus the publication or academic experience [Max: 3 pages]
- Indicative PhD Project proposal. This should comprise (1) the background, (2) the problem statement demonstrating the research gap and the current art of science in the area of research of interest among the three thematic areas; (3) the methodology and anticipated sources of data to be used, (4) how you intend to make this project successful and what you see as future challenges in undertaking this research, (5) five to ten key references well documented likely to inform this study, (6) other relevant additional statements. [Max 5 pages].
- Three recommendation letters: one from the current employer, one from your previous supervisor, and the other from any other reference person (former employer or professor).
- Applicants from a College at UR need to inform the Principal about applying for this position; and attach a confirmatory letter from the Principal.
- Copy of the valid identification card or passport

7. Submission deadline

The deadline for application is 20th October 2021 at 23h59'



8. Recruitment process

- The hard copy application files shall be submitted to the office the Ag. Director of the UR-CPGS at the UR Headquarters (UR-Gikondo Campus);
- A soft copy of the application shall be sent to Mrs. Gloriose Umulisa Gashayija, Scholarships Officer at UR-CPGS (email: gashayijagloriose@gmail.com) with Cc to the Subprogramme Deputy Team-leader (Dr Simon Rukera Tabaro; email: simon.rt@gmail.com).
- The recruitment team includes senior academic staff from both UR and Swedish University of Agriculture Sciences. Successful candidates will be notified a couple of weeks after the interviews and are expected to start in January 2022.
- All applicants will be notified of the first selection outcome, and Eligible applicants will be invited for an interview for the final selection of the candidate.
- **The interview process will, apart from the interview, include an exercise in writing to test the candidate's English proficiency.**

9. Contact details for more information

For more information, please contact Dr. RUKERA-TABARO Simon, the Deputy Team leader for Integrated Agriculture subprogram/UR-Sweden Program, at simon.rt@gmail.com; s.rukeratabaro@ur.ac.rw and at +250 (0) 78 845 0031.

10. Important Dates for the application process

- **Submission deadline: 20th October 2021 at 23h59'**
- Publication of the list of shortlisted candidates and invitation to the interview by 08th Nov. 2021
- Selection interviews to be organized between 09th - 10th November 2021
- Successful candidates are announced by 01st December 2021
- Admission early February 2021
- Study leave/Contracts early March 2021

Done at Kigali, September 22, 2021

Prof. Nosa O. Egiebar

Deputy Vice Chancellor for Academic Affairs and Research

