



PhD Topic 3: Agri-food system pathways to improve human nutrition in banana- and cassava- based systems

Analysis of demographic and health survey data show that the Great Lakes Region struggles with high levels of chronic undernutrition, also compared to national averages. One of the major underlying reasons for those high levels of stunting are that the diets are generally very low in diversity and dominated by staples including banana and cassava.

Through the CIALCA Innovation Platforms, major barriers and opportunities to improve dietary quality have been identified. Two overall barriers include (1) limited access to appropriate knowledge with regards to nutrition practices (basic nutrition concepts, post-harvest handling, dietary diversity/combination, food safety and hygiene), and (2) limited access to highly nutritious food items to ensure nutrient adequacy particularly among vulnerable population groups.

This PhD will investigate agri-food system pathways that can improve diet quality, leveraging the local food diversity as well as market integration. In collaboration with public and private development partners, various pathways will be assessed in the context of banana- and cassava-based agrifood systems in Central Africa, with an initial focus on Burundi.

Starting research questions include:

- How are dietary gaps related to agro-ecological and food environment settings?
- What is the potential of local banana- and/or cassava- production systems to address those dietary gaps?
- How can market integration and value chain approaches contribute to address dietary gaps?
- What is the return on investment on agriculture-nutrition investments from development initiatives?
- How can government, public and private development organizations use this information to improve their programs?

Institutional context and supervision

- The PhD student will be enrolled in the PhD program of Ghent University in Belgium on a sandwich PhD scholarship. The total duration of the PhD is 4 years, of which 18 to 24 months in total will be spent in Belgium.
- CIALCA provides so-called 'sandwich' PhD scholarship. The 'sandwich' modality implies that PhD candidates receive a stipend when in Belgium, and that their Burundese academic or research institute provides salary when the PhD candidate is conducting



fieldwork in their respective country. The PhD scholarship covers all operational costs related to the implementation of the research.

- Professors Carl Lachat and Marijke D’Haese from Ghent University will serve as promoter and co-promoter.
- The project is part of the CIALCA consortium and network and will be co-supervised by researchers from CGIAR centres IITA and Bioversity International, as well as with national research and development partners.

Who is ideal candidate?

Required for this position:

- Enthusiasm for research in general and for agriculture and nutrition in particular;
- A MSc Degree or equivalent in nutrition, agricultural economics, agricultural engineering, or related
- Research and analytical skills that provide a starting point for completing the above-described PhD project;
- Having previously completed at least one individual research project (e.g. a MSc thesis);
- Proficiency in English and good understanding and communication in French;
- Good verbal and written communication and collaborative skills;
- Good skills on scientific paper writing;
- Be employed by national agricultural research institution or local universities in Burundi;
- Have Burundian nationality.

Desirable for this position:

- Experience with public or private sector development initiatives.

Application procedure:

- Applicants are to submit a concise letter of motivation, a detailed CV, the names of at least 3 relevant referees, and copies of BSc and MSc diplomas and transcripts indicating all courses and obtained degrees;
- Applications are to be submitted to agecon@ugent.be before 30 June 2018, midnight (Brussels time);
- Only short-listed candidates are contacted;
- Short-listed candidates are subject to an interview and written assessment.