

The Chancellor of Ghent University has the honour of inviting you to attend the public defense of the doctoral dissertation of

Diana Kirungi

Title of the doctoral dissertation:

Climate-Smart Agriculture Technologies in Uganda: adoption and the role of business models

The public defense will take place on Friday 20th December 2024 at 2 PM (CET) in the Azalea, room A0.1 at Campus Coupure, Coupure Links 653, 9000 Ghent. The defense can also be followed online: [Click here for the link.](#)

There will be a contiguous reception to which you are heartily invited.
Please confirm your attendance before 16th December to: diana.kirungi@ugent.be

Dissertation supervisors

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Abstract of the doctoral research

Climate change is posing a significant threat to agriculture in the tropics, causing crop failure, changes in planting times, and raising the need for drought-tolerant crops. It also increases crop pests and diseases and leads to soil fertility decline and low agricultural productivity. In Uganda, for example, flood disasters caused crop damage in 2010, reducing the productivity of major cash crops like coffee and food crops like bananas, and beans. Climate-Smart Agriculture (CSA) is a strategy that is being promoted to address these negative impacts and achieve Ecological Intensification goals. Climate-Smart Agriculture Technologies (CSATs) have been proven to increase crop yields, improve climate change resilience, and reduce greenhouse gas emissions. However, low adoption rates among smallholder farmers remain due to technological, socioeconomic, attitudinal, entrepreneurial, and behavioural barriers. The absence of systematic business models among farmers can further hinder the adoption of CSATs. Therefore, addressing CSATs adoption barriers is crucial for the sustained use of CSATs and achieving long-term climate change resilience among smallholder farmers. This doctoral research therefore explores the determinants for the adoption of CSATs among smallholder coffee farmers in Uganda, focusing on attitudes, entrepreneurial mindsets, technological attributes, and business model perspectives incorporating both farmer and expert opinions. This will help to advance knowledge on the sustainable adoption of CSATs and to generate evidence to inform policy and decision-making for agricultural development.

Brief Curriculum Vitae

Diana Kirungi is a doctoral researcher at Ghent University, Belgium, and a Research Associate at the International Institute of Tropical Agriculture (IITA), Uganda. She holds an MSc. degree in Nutrition and Rural Development from Ghent University, Belgium and a BSc. degree in Human Nutrition from Sokoine University of Agriculture in Tanzania. She has several years of experience in designing and promoting Climate-Smart Agriculture Technologies (CSATs) in the coffee sub-sector in the East African Region. Her current research interests include designing and promoting business models to enhance the adoption of CSA innovations among smallholder farmers. Her future research interests are in private-public sector engagements and investments to ensure sustainable and resilient smallholder farming systems. She is a member of the British Ecological Society and has received scholarships from various organizations, including the Belgian VLIR-UOS community, the Inter-University Council of East Africa, USAID, and Global Minds. She has attended and presented at several national and international conferences and workshops and has also written (led and/or supported) a number of scientific articles.