

TERMS OF REFERENCE FOR MSC STUDENTS

Project

DYNADOPT: Understanding adoption pathways, dynamics, barriers and facilitators of push-pull agroecological innovation in Eastern Africa

Background

Push-pull is an integrated cropping system that involves driving pests away from the main crop using a repellent intercrop (the push) while attracting them out of the crop with trap plants (the pull). The technology was developed and has been disseminated in mixed livestock-cereal farms in Eastern Africa. Adoption of push-pull technology by over 200,000 farmers since its development in 1997 has led to maize yields more than tripling, from 1 t/ha to an average of 3.5 t/ha. Literature shows that push-pull technology also improves soil health and water retention capacity; provides economic and high-value livestock fodder and, a recently developed climate-smart variant making use of traditional cereal varieties, increases system resilience to climate change. Through its increasing success in staple cereal crops and management of pests within the system, push-pull has enormous potential to be one of the most important discovery for food security and environmentally friendly agricultural management of the 21st century.

Despite its demonstrated potential for ecological stability and sustainable food production, adoption and spread (upscaling) of push pull have been low and varied due to various factors, yet yield decline due to the various challenges identified above remain a challenge. Through a combination of behavioral studies, qualitative studies, understanding of the additional factors that influence (or limit) adoption of the technologies will be sought. Few attempts have been made in applying behavioural studies and diverse qualitative tools in understanding and hence addressing these factors. The study will be implemented in Kenya and Uganda and will build on the findings and experiences of the UPSCALE project (<https://upscale-h2020.eu/>). Moreover, the expected outcomes of the activity will assist the EU H2020 project UPSCALE in identifying unresolved bottlenecks and suitable entry points for effective interventions.

In support of research and academic collaboration, the project wishes to recruit **one** Masters student to work within the project activities in Kenya. Successful candidates will start working on their proposals and data collection tools immediately (By July 2024) in line with the summary provided below:



Assessment of drivers influencing adoption, dis-adoption and sustained use of Push-Pull Technology (MSc student)

The aim of the project is to shed light on pathways to large-scale diffusion of innovative agroecological technologies for smallholder farming by analysing the dynamics, drivers, and barriers of adoption, dis-adoption as well as adaptation of the push-pull technology (PPT) in East Africa. The activity will provide benchmark data on PPT adoption and on the key socio-economic drivers that influence technology adoption, dis-adoption and adaptation. Furthermore, the activity seeks to provide a deeper insight into the decision-making and rationale of farmers adopting and practicing the technology. The resulting knowledge will help guide and optimize systematic interventions aimed at sustained adoption and autonomous diffusion of PPT and other innovative sustainable intensification (SI) technologies.

DYNADOPT project will apply both proven and novel (especially qualitative) approaches to reach out to diverse actors, and establish the factors that would influence adoption, adaptation or dis-adoption of the technology. The project wishes to recruit **one** MSc student to carry out this activity in Kenya as a case-study country. The objectives of the study will be to identify qualitative factors and dynamics, drivers and barriers of PPT adoption, adaptation and dis-adoption, and strategies to address them. This will build up on quantitative data already collected by the project, to answer the questions that would lead to increase adoption/adaptation of the technology, or any further improvements needed to make the technology more attractive to target beneficiaries. The successful candidate is expected to review relevant literature, together with other project partners design and implement the study (including qualitative data collection and analysis through focused group discussion, case studies e.t.c.), write a thesis, publish at least 1 peer-reviewed journal articles and communicate research findings to project partners and stakeholders and the global research community through internationally recognized forums.

Requirements/qualifications for the MSc. student:

1. MUST be a Kenya citizen not more than 30 years of age.
2. Registered in a local University for an MSc degree in agricultural sciences; preferably agricultural economics.
3. MUST already have completed their course work and cleared by the University to proceed for field work.
4. The MSc student will be engaged for 12 months and will be supported with research funds to conduct. **PLEASE NOTE:** that the project does not provide funds for tuition fees.
5. Knowledge in Econometrics related to behavioural studies, adoption and impact analysis.
6. Excellent oral and written English communication skills.

Interested candidates to submit a motivation letter and latest their CV to agecon@uonbi.ac.ke **as soon as possible, but not later than 21st June 2024.**

