**Project profile**

<table>
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<th><strong>Title</strong></th>
<th>Rice Brown sheath rot (<em>Pseudomonas fuscovaginae</em>) Disease in Burundi: an Assessment of occurrence, Germplasm Reaction, Seed health status and Disinfection Approaches.</th>
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| **Purpose** | This project is purposed to improve rice productivity in Burundi through improved management of rice brown sheath rot disease |
| **Project Summary/Abstract** | Burundi has just emerged from a long socio-political conflict, which resulted into a breakdown of many services including agriculture. The country is one of the poorest in Africa with an annual per capita GDP of US$170 and poverty affecting more than 65% of the population. The country was ranked 185th out of 187 countries on the 2011 United Nations Development |
Eight out of ten Burundians live below the poverty line. Rice is one of the major food security crops in Burundi however; most rice varieties grown in Burundi are susceptible to disease. Rice sheath brown rot disease is poorly understood in Burundi yet it is widespread and causes high yield losses. This study will be carried out to map the occurrence of the disease in Burundi, screen rice germplasm in Burundi for resistance to the disease, determine the pathogenic variation of *P. fuscovaginae*, study seed transmission of *P. fuscovaginae*, and evaluate methods in disinfecting seed of *P. fuscovaginae*. This research will be collaborative between Makerere University, the University of Burundi, and International Rice Research Institute. MSc students will be recruited from Burundi and will work with 4 Ugandan undergraduate students.

| Country and Specific Location(s) | Makerere University Agricultural research Institute Kabanyolo (MUARIK), Namulonge and Nakabango (Jinja), Uganda |
| Participating Institutions | Makerere University, Faculty of Agricultural Sciences University of Burundi, International Rice Research Institute (IRRI), East and Southern Africa |
| Start Date | Jan, 2014 |
| End Date | Dec 2016 |
| Amount of Funding | $65,000 |
Prof. Phinehas Tukamuhabwa is a distinguished academic in the field of planting breeding, genetics and seed-technology. He has specific concern of developing technologies and advancing knowledge that will help Ugandans to feed them, enhance household incomes and create wealth among smallholder farmer households. He has been a team Leader, Soybean Research and Development Project funded by IFAD through Vegetable Oil Development Project (VODP) and Alliance for Green Revolution in Africa (AGRA). In that project, his team addressed issues relating to; breeding soybean for resistance /tolerance to soybean rust disease, adapting soybean varieties to farmers conditions, multiplication and dissemination of improved soybean varieties to farmers in Uganda, and promotion of soybean production, utilization and marketing through rural based workshops conducted using a multidisciplinary approach. His engagement with breeding has led to the development of several new soybean varieties including among others: (Maksoy 5N, Mkasoy 4N, Maksoy 3N, Maksoy 2N, Maksoy 1N, Namsoy 4M, Namsoy 3, Nam 2) and 6 climbing bean varieties (Nabe 12C, Nabe 9C, Nabe 8C, Nabe 7C, Nabe 6C) all widely grown in Uganda. Prof. Tukamuhabwa has received distinguished scholarly awards. For example, in 2011, the then Faculty of Agriculture, Makerere University recognised Phinehas for exemplary service to the Faculty of Agriculture. The RUFORUM recognition of outstanding Impact Oriented soybean research (2007) and the Vice Chancellors award for developing soybean varieties that are resistant to soybean rust disease (2006) are some of other awards he has received.

Selected Publications


