

Factsheet interim findings Applied Research Fund Call 1



Development of potato seed quality based innovations for small scale farmers in the three provinces around Bujumbura town in Burundi

Summary

Potato is increasingly becoming the major source of income, calories and nutrient provision for Burundian population. However, unavailability and limited access to improved seeds and poor methods constrain value addition of the crop. The purpose of this project is to improve the availability of quality seed potato in order to contribute to food and income generation for small-scale holding families in Burundi. The project aims to enhance on-farm potato yield by using innovative crop husbandry. Knowledge on seed quality production and recommendations towards appropriate application of seed potato regulations will be developed. Substantial change is expected from this project to beneficiaries that will adapt, adjust and apply newly generated knowledge and new perspectives for action for pro-poor sustainable development.

The expected outcomes of the project are (1) development and promotion of gender responsive potato technologies and innovations, (2) improved capacity of value chain actors to produce, market and utilize quality seed, as well as improved storage and processing of potato, and (3) enhanced adoption of policies, standards and regulations for improved quality seed potato value chain performance in Burundi. The implementation of the project is conducted in the three provinces around Bujumbura town namely Bujumbura, Bubanza and Cibitoke. The approach used is mainly based on trials in the potato fields, training of farmers in the fields, organising workshops to link various actors of the potato value chain, and linking of the consortium partners to policy makers.

Interim Research Findings

Demonstration trials, potato seed plot technology and positive seed selection were conducted to disseminate innovations and technologies in rural areas. The treatments were arranged in a randomized complete block design (RCBD) with five replications. Within each province, one community was chosen and within community, five farmers were chosen as replication. As results:

In terms of gender responsive potato technologies and innovations, it appeared that positive seed selection can influence the quality of potato seed and the yield significantly. Though, seed harvested at early stage reduces the yield but at the same time it also reduces significantly attack by bacterial wilt disease. It was found that potato seed conserved in diffuse light gives a good performance in yield compared to potato seed conserved in bulk. In low altitude, three varieties out of eleven with good performance (yield, disease tolerance and taste) were selected.

Outcomes achieved	<p>Before the project, the producers grew potato on small plots using seeds of unknown sources. Improved capacity of potato value chain actors has been established through the training of farmers. Farmers can now conserve their potato seeds using knowledge received throughout these trainings and already some producers have adopted these new technologies. Furthermore, farmers have gathered in association of the seeds producers, which has strengthened their positions. Also, producers have signed contracts with the ISABU and private seed multipliers to source quality seeds. In addition, the seed law has been revised: before, it was required to multiply certified potato seed on at least 2 ha, but now it is allowed to multiply certified potato seed on 1 ha. The standard of living of the population has already improved, as more children of producers have been able to return to school.</p>
Messages to	<p>A) Actors from private sector:</p> <ul style="list-style-type: none"> • The interest rates for credits are very high. Private banks or microfinance institutes should grant agricultural credits with a reduced rate of interest to the producers of potato seed in order to accelerate developments in this sector. • Entrepreneurs and investors in the potato sector should negotiate with the government on possible subsidies for the farmers in case of natural disaster. <p>B) Civil society and practitioners organizations:</p> <ul style="list-style-type: none"> • Support the farmers to use certified seeds {in order to strengthen their position} • Produced quality seed doesn't reach all the small scale farmers with lower lands and low incomes, therefore organizations should facilitate the implementing of positive seed selection for the small scale farmers with lower lands <p>C) Policy makers:</p> <ul style="list-style-type: none"> • The Quality Declared Seed should be recognized as a formal category to increase the availability of quality seed for the agricultural community • The requirements of seed production should be reviewed
Knowledge products	<ul style="list-style-type: none"> • Buitenlandse investeerders tillen aardappelteelt in Burundi naar hoger niveau, Aardappelwereld Magazine, Article, Februari 2017 • Development of potato seed quality based innovations for small scale farmers in the three provinces surrounding Bujumbura town in Burundi, Project poster, September 2015 • On-farm experiments on improved propagation material and cultural practices of potato in Burundi, article submitted in the "Potato Research Journal"
Knowledge networks	<p>The consortium is part of the regional and international networks listed below:</p> <ul style="list-style-type: none"> • Platform for African European Partnership on Agricultural Research for Development (PAEPARD) • Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) • AgriProFocus
Co-creation	<p>The multi-stakeholder collaboration between the research institute, the private sector, the academic institute and the farmers' organizations was very useful for the implementation of the project. Co-creation in the joint fieldwork was possible because the skills of the members of the consortium complemented each other. Indeed, the connection of the consortium members with the beneficiaries has been facilitated by the involved farmers' organizations. For the remaining work, researchers will be working closely together with the farmers in order to upscale the outcomes of the project. Again, these activities will involve all the consortium partners as they are all working on the ground.</p>
Consortium Partners	<ul style="list-style-type: none"> • Confédération des Producteurs Agricoles pour le Développement (Capad) • Institut de Sciences Agronomiques du Burundi (ISABU) • Innovative Technology Development for Rural Entrepreneurship Center (ITEC) • Wageningen University and Research (WUR)
Contact person	<p>Pierre Claver Nahayo nahayop18@yahoo.fr</p>
Project website	<p>F&BKP Research Project page</p>