



CASE 2

Boosting Local Certified Seed Production in Burundi through Private Seed Sector Development

CASE STUDY BY IFDC BURUNDI



THE PROBLEM WE ARE TRYING TO SOLVE

Burundi is a strongly agrarian and densely populated country, with 257 people per square kilometer. Rapid population growth has resulted in a decrease in average land holdings from 1.04 hectares to 0.5 hectares per household between 1973 and 2009.¹ Additionally, agricultural production is low compared with other countries of the region.² A key cause is the lack of access to quality seed, with only an estimated 3.4% of the national seed requirement being met through certified seed. The opportunity cost per farm household, in terms of foregone revenue from not planting quality certified seed, is significant.

- 1 International Monetary Fund. 2012. Burundi: Poverty Reduction Strategy Paper II. IMF Country Report No. 12/224. Washington, DC. Available at: <https://www.imf.org/en/Publications/CR/Issues/2016/12/31/Burundi-Poverty-Reduction-Strategy-Paper-II-26155>
- 2 Collins, Christy; Magnani, Rich; and Ngomirakiza, Evelyn. 2013. USAID Office of Food for Peace Food Security Country Framework for Burundi (FY 2014–FY 2019). Washington, D.C.: FHI 360/FANTA. Available at: <https://www.fantaproject.org/sites/default/files/resources/FSCF-Burundi-2013-web.pdf>

Photo by Egide Nduwayezu, IFDC, Burundi.

About the International Fertilizer Development Center (IFDC) and the PSSD Project

The [International Fertilizer Development Center \(IFDC\)](#) is an independent nonprofit organization that combines innovative research, market systems development, and strategic partnerships to spread sustainable agricultural solutions for improved soil health, food security, and livelihoods around the world. IFDC partners with allies such as international research institutions, government and nongovernment agencies, and the private sector to advance, improve and promote food and nutrition security, agricultural sustainability, economic development, and environmental protection.

IFDC's [Private Seed Sector Development \(PSSD\)](#) project (2018-2022) is funded by the Embassy of the Kingdom of the Netherlands in Burundi and aims to double production and income of 178,000 farm households in Burundi by ensuring sustainable access to high-quality seed and agricultural advisory services.

To learn more about PSSD's model in Burundi, contact Dr. Anne Turner (aturner@ifdc.org) and/or Mr. Egide Nduwayezu (enduwayezu@ifdc.org), visit their [website](#), or watch a [video](#) describing their approach.



Larissa Kaneza, a seed entrepreneur working with PSSD. Photo by IFDC.

Joseline Butoyi is a farmer from Rwibaga-Mujejuru Hill in Bujumbura Province, Burundi. Like many farmers in her village, she struggled to increase her potato yield. Planted on less than a quarter of an acre (0.1 hectares), the seeds did not germinate well, the potatoes were susceptible to disease, and her crop often failed to thrive. The seeds Butoyi purchased were from the local market and were not certified.

In 2018, Burundi's seed sector was in an early stage of development and poor quality seed was commonly planted by farmers. There were only seven accredited seed inspectors for the entire country, and they faced many challenges in collecting seed samples and inspecting seed fields. In addition, some international nongovernmental organizations (INGOs) were providing seed to households for free. This was a disincentive for farmers to pay for seed, making it a challenge to develop the private seed sector.

At the same time, the absence of a robust formal seed system meant that all maize seed was imported from neighboring Uganda, Kenya, and Zambia. Moreover, ineffective quality control in the formal seed system resulted in the supply of diseased planting material, especially for Irish potato tubers, with the consequence of low yields. Many farmers were

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Previously I grew non-certified potato seed with poor yields at harvest time. I thought all seed was productive at the same level, and I found certified seed to be expensive. So, I thought it was unnecessary.

– MRS. BUTOYI

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either not aware of the existence of better quality, certified seeds or did not have access to them. When available, farmers had to travel long distances and pay more to obtain them.

Against this backdrop, the International Fertilizer Development Center (IFDC) launched the Private Seed Sector Development (PSSD) project to address the issue of poor-quality seed. Through testimonials from farmers, seed producers, and sales agents, this case study provides a glimpse into PSSD's approach to increasing access to and use of locally produced, certified seeds.

HOW DID WE TACKLE THIS?

The PSSD project supports local and international seed companies and entrepreneurs to increase certified seed supply and clearly demonstrate to smallholder farmers the value of using certified seed. It works with these actors to boost certified seed production and to develop sales and distribution models tailored to smallholder farmers, including consumer education through micro-demonstration plots and radio broadcasts.

In order to increase farmers' awareness of and access to certified seed, PSSD builds the capacity of seed producers to set up micro-demonstration plots and conduct field days in remote villages. The locations of the micro-demonstration plots allows mobility-constrained farmers easy physical access to the plots in order to see and learn more about the certified seeds. The field days allow farmers an opportunity to learn about good agricultural practices (GAPs) and ask questions about the certified seeds.

Additionally, the project works with seed producers to develop their last mile distribution capabilities through rural points of sales and mobile sales agents. With the support of PSSD, seed producers have set up seed outlets in remote villages and are selling their quality certified seeds in micro-packs that are labeled with a certification mark. The mobile sales agents, employed by the seed producers, travel to various villages to sell the micro-packs and answer questions from farmers about the certified seeds.



A mobile seed sales agent on his bicycle. Photo by IFDC.

“ [The demonstration plots] were really good fields compared to my own field. So, after being convinced, I went to the same contractor and bought 50 kg of certified [potato] seed. I sowed the seed and, surprisingly, the quantity harvested was far superior to what I had harvested before. Since that day, I use only certified seed that I buy from the seed contractors.

– MRS. BUTOYI

The project also works with seed producers on their marketing campaigns, including product branding to build trust between seed producers and consumers and developing specialized promotional materials for farmers. As part of their campaigns, seed producers promote their seed and shop locations through local radio stations.

The project has also provided targeted technical and financial support to the seed companies for critical infrastructure upgrades and production intensification, increasing production efficiencies. PSSD further supports the development of a business enabling environment to ensure that private sector actors can continue to autonomously develop and make available transformative products and services for Burundian farmers. It has operationalized the so-called Dutch Diamond approach³ by leveraging the expertise and networks of partners in the public, private, and research sectors to strengthen seed certification procedures. For example, PSSD's partnership with the public sector (i.e., with the Institut de Recherche Agronomique du Burundi [ISABU] and the Office Nationale de Contrôle et de Certifications des Semences [ONCCS]) has enabled the introduction of new varieties in Burundi. Adaptability tests were conducted jointly by the two institutions to accelerate the release of new varieties. In 2021, 23 varieties were released, including 14 fortified organic bean varieties, five hybrid maize varieties and four fortified organic composite maize varieties.

KEY FINDINGS

The PSSD project has been operating for five harvest seasons. Between 2019 and 2020, it supported 57 seed companies and entrepreneurs to sell 1,779 tons of certified seed to 107,312 farmers, of which 43% were women. In 2021, the project was scaled up to assist private sector entrepreneurs to produce seed in 16 out of 18 provinces in Burundi and signed strategic partnerships with private sector actors to ensure that seed was available for sale in all 18 provinces. During this time, the project partnered with seed producers to install 9,931 micro-demonstration fields and trained 93,613 farmers (of which 45%, or 42,211, were women) in GAPs.

PSSD conducted a survey with farmers in its implementation area to learn the most successful methods at increasing: a) farmer awareness of the availability and benefits of certified seed, and b) access to certified seed.

Farmers reported that their *awareness of the availability and benefits* of certified seed was improved through micro-demonstration plots (75% of respondents in a survey), certified seed promotion by mobile sales agents (59%), and certified seed promotion via smallholder adapted communication channels such as community radio broadcasts (20%).

Farmers reported that access to certified seed was most improved by the micro-demonstration plots (81% of respondents), proximity to rural points of sale (52%), sales agents (22%), and micro-packages (7%).

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I sold more than 500 kg of seed potato, and I had a great profit. I have been recognized in my community, and I plan to expand my customer base and my seed business in the future.
– BLAISE MANIRAKIZA, NIYUSURE
Seed sales agent
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³ The Dutch Diamond approach “recognizes the value addition of government, the private sector, civil society and knowledge institutions working in partnership to realize development results. Within the Dutch Diamond Approach, the competences of partners are combined and the various goals, funds, risks and responsibilities are pooled together. The corporate efficiency and market-oriented methods of the private sector are linked with the local knowledge of civil society organizations (CSOs). Knowledge institutions contribute their expertise, while governments act as brokers and co-financers.” OECD. 2016. Peer Learning Country Report, Netherlands. Available at: <https://www.oecd.org/dac/peer-reviews/Peer-Learning-Country-Report-Netherlands.pdf>.

Micro-demonstration plots increased access to seeds and sales by showcasing the value of certified seed and allowing farmers to learn about GAPs.

Anecdotally, farmers noted a number of benefits from using certified seed of improved varieties. These include increased profitability, yield production even in adverse growing conditions, pest and disease tolerance, and better marketability with higher prices for crops. As one farmer stated, “For the first time in my life I was able to produce three big bags (about 300 kg) of beans using 50 kg of Musole (bean) seed. I gave some to my family and sold the rest. I also learned that this variety is biofortified, which could help my wife who suffers from anemia.”

Farmers are not the only ones who benefit from a viable and vibrant seed industry that provides access to certified seeds. To date, PSSD partner seed companies and entrepreneurs have employed 564 permanent job and 23,239 temporary employees.

Niyasure, the seed contractor who sold the certified potato seed to Butoyi, has seen the positive impact that certified seed production can have in a community and stated, “The seed multiplication activity allowed me to understand the seed sector, to form a relationship with financial partners and technical institutions. I have created a multiplication center for potato, bean, and maize seeds. I have also created jobs, especially for women and young people. The money they earn allows them to meet their needs, such as food, clothing, schooling for children, and to purchase certified seed.”

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Being convinced by the demonstration plots and the extension agronomists, I bought the potato seeds of the Ndinamagara variety from the seed contractor and sowed them using good agricultural practices.

– REPORTED A FARMER FROM THE COMMUNE OF MUGONGOMANGA

Hybrid corn seed fields in Karusi. Photo by IFDC.



WHAT MAKES OUR MODEL WORK?

The micro-demonstration plots were installed close to farming communities, enabling smallholder farmers to easily access the plots and hear about certified seeds and GAPs. Having local seed producers establish the demonstration plots, rather than INGOs, has increased trust between farmers and seed producers and decreased the cost of farmer training to between USD 5 and USD 9.50 per farmer. Nkeshimana Nestor, a sales agent for a hybrid maize seed company, noticed an increase in sales over the course of a year due to micro-demonstration plot visits. “The sale of [certified] hybrid maize seed from our company has increased from 1,250 kg in 2019 to 5,000 kg in 2020, thanks to sensitization through micro-demonstration plots and visits (...). At first, we were afraid, but with this marketing we have sold all the seeds we expected.”

Farmer field days, critical for enabling farmers to learn and ask questions about the seeds, were organized at times of the day when farmers, women in particular, were most likely to be available. An employee of a Burundian NGO noted, “Thanks to the activity during the field days, the surrounding population of the activity area is starting to practice the new farming methods and buy certified seed from seed entrepreneurs.”

Another factor contributing to the model’s success is the rural points of sale and mobile sales agents. The project supported local and international seed entrepreneurs and companies to install 225 rural points of sale near rural communities, allowing farmers easier access to certified seeds and the ability to ask questions about their use.

WHAT IS NEXT?

The PSSD project will continue to support seed entrepreneurs and companies to grow sales and revenue by expanding to new regions of Burundi. The project will also refine and explore additional technologies and agricultural practices for presentation at farmer field days and demonstration plots. Most importantly, PSSD will continue to support seed producers with demonstration activities, marketing, and bookkeeping – to build the business skills they will need once the project ends.

The project is working on several other aspects of the seed sector in Burundi, including regulating seed certification, supporting new seed enterprises, and strengthening linkages between research and seed producers, sales agents, and farmers. The project recently convened seed inspectors and government representatives to create a more efficient certification system, shortening the time needed for certification. PSSD will continue such efforts to promote an enabling environment for seed system functioning in Burundi.



Maize seed producer's agronomist applying pesticide to prevent attacks on the seed crop by Fall Army Worm. Photo by Egide Nduwayezu, IFDC, Burundi