

Evidences

Study #3189

Contributing Projects:

- P1589 - Policy Support for Climate Resilient, Biodiversity-rich Seed Systems
- P263 - RPL EA: Regional and national engagement, synthesis and strategic research

Part I: Public communications

Type: OICR: Outcome Impact Case Report

Status: On-going

Year: 2019

Title: Community-based seed systems increases access/availability of high-quality adapted seeds for 189,000 farmers in East Africa

Short outcome/impact statement:

CCAFS-East Africa and Alliance Bioversity-CIAT partnered with national research institutions to establish community seed-banks for storage and multiplication of diverse resilient high-quality seeds adapted to local climatic conditions reaching 189,000 farmers in East Africa. About 107,000 farmers in Kenya and Uganda access seeds through seed-banks, another 82,000 potato farmers in Kenya are using web-based SMS platform for disseminating information on resilient seeds and ware. In Tanzania, CCAFS and International Potato Centre are undertaking trials and multiplication of adapted potato varieties.

Outcome story for communications use:

In East Africa, Community Seed Banks (CSBs) provide a repository of local crop genetic diversity that is adapted to the prevailing climatic conditions and is useful for contributing to community-based strategies for climate change adaptation, especially for smallholder farmers. Farmers within the community collect and store diverse high-quality seeds, conserve, multiply and commercialize the seeds for improved livelihoods. CCAFS-East Africa and Alliance Bioversity-CIAT partnered with national research institutions, government departments and agencies to establish CSBs for storage and multiplication of diverse resilient seeds adapted to climate change in the CCAFS climate-smart villages (CSVs) in East Africa. The CSBs allows farmers to access a wide range of diversity for climate change adaptation, and helps them protect and conserve their biological diversity and improve seed storage.

In Nyando CSVs a CSB was launched in partnership with the Kenya Agricultural and Livestock Research Organisation (KALRO) and Alliance Bioversity-CIAT (3,6,8). Through the CSB, nearly 100,000 farmers in Kenya have access to viable resilient seeds for a variety of crops that are adapted to the local climatic conditions. In addition, KALRO and the National Potato Council of Kenya, have registered 82,000 potato farmers on web-based SMS platform—NPCK Viazi Soko (<https://www.npckviazisoko.com/>) (2)—reaching about 10% of potato farmers in Kenya. The web-based SMS platform collects, processes, and disseminates improved seed and ware potato information to farmers. In addition, information on variety, price, location, and contact details for seed suppliers and other relevant information is made available to farmers. This information is provided in partnership with CGIAR centers such as International Potato Centre (CIP).

In Uganda, 7,000 smallholder farmers are accessing high quality resilient seeds through CSBs. The CSBs are now recognized and integrated into both Uganda's National Seed Policy (2018) and National Seed Strategy 2018/19–2022/2023 (4, 5,8). In Tanzania, CCAFS and International Potato Centre (CIP) are undertaking trials and multiplication of adapted potato varieties. In addition, farmers in Lushoto district of Tanzania are linked to the quality declared seeds (DQS) program that involves multiplying seeds at community level (1,7,8), through training champion farmers who grade the seeds based on variety, viability and uniformity in size. The improved seeds were obtained through participatory action research on appropriate portfolio of climate-smart agriculture (CSA) technologies Farmers now have access to new genetic material through local seed networks that multiply improved seeds and have formed farmer cooperatives around commodities and community-based organizations (CBOs) that are linked to markets.

Links to any communications materials relating to this outcome:

- Blog story in Tanzania: Addressing climate risks through improved potato production in Lushoto Climate-Smart Villages, Tanzania -
<https://ccafs.cgiar.org/blog/addressing-climate-risks-through-improved-potato-production-lushoto-climate-smart-villages>
- Blog story - Regional: Open source seed systems for climate change adaptation in Kenya, Uganda and Tanzania: highlighting the importance of policy support
<https://ccafs.cgiar.org/blog/open-source-seed-systems-climate-change-adaptation-kenya-uganda-and-tanzania-highlighting>
- Uganda's New Vision Newspaper. August 7, 2018. page 13 -
<https://cgia.sharepoint.com/sites/CCAFS/CRP%20%20Management/Forms/AllItems.aspx?id=%2Fsite%2FCCAFS%2FCRP%20%20Management%2FReviewing%20and%20Reporting%2FAnnual%20Reporting%2FTL%20and%20RPL%20Technical%20Reporting%2F2019%2FInternal%20Evidences%2FP263%2FEvidence%203189%2FHoima%5Fseedbank%20%5FNew%20vision%2Epdf&parent=%2Fsites%2FCCAFS%2FCRP%20%20Management%2FReviewing%20and%20Reporting%2FAnnual%20Reporting%2FTL%20and%20RPL%20Technical%20Reporting%2F2019%2FInternal%20Evidences%2FP263%2FEvidence%203189>
- Nyando Climate-Smart Village launches community seedbank:
<https://ccafs.cgiar.org/news/nyando-climate-smart-village-launches-community-seedbank>
- Newspaper Article - Uganda's New Vision Newspaper. August 7, 2018. page 13 -
<https://cgia.sharepoint.com/sites/CCAFS/CRP%20%20Management/Forms/AllItems.aspx?id=%2Fsite%2FCCAFS%2FCRP%20%20Management%2FReviewing%20and%20Reporting%2FAnnual%20Reporting%2FTL%20and%20RPL%20Technical%20Reporting%2F2019%2FInternal%20Evidences%2FP263%2FEvidence%203189%2FHoima%5Fseedbank%20%5FNew%20vision%2Epdf&parent=%2Fsites%2FCCAFS%2FCRP%20%20Management%2FReviewing%20and%20Reporting%2FAnnual%20Reporting%2FTL%20and%20RPL%20Technical%20Reporting%2F2019%2FInternal%20Evidences%2FP263%2FEvidence%203189>
- Uganda's New Vision Newspaper. August 7, 2018. page 13.
- National Potato Council of Kenya: <https://www.npckvazisoko.com/>
- Blog story - The future of banking is in seeds: Hoima district establishes a community seedbank to strengthen farmers' adaptive capacity:
<https://ccafs.cgiar.org/news/future-banking-seeds-hoima-district-establishes-community-seedbank-strengthen-farmers-adaptive>
- Blog story in Kenya - How community seed banking strengthens adaptive capacity: Experiences from a farmers exchange visit -
<https://ccafs.cgiar.org/blog/how-community-seed-banking-strengthens-adaptive-capacity-experiences-farmers-exchange-visit>
- Newspaper Article - Tanzania Sets Record in Potato Research, to Release Improved Varieties -
<https://www.potatopro.com/news/2018/tanzania-sets-record-potato-research-release-improved-varieties>

Part II: CGIAR system level reporting

Link to Common Results Reporting Indicator of Policies : Yes

Policies contribution:

- 363 - CCAFS-East Africa and Alliance Bioversity-CIAT, in partnership with national research institutions, establish community seed-banks, contributing to the National Seed Policy goal of ensuring availability, accessibility and affordability of high-quality seeds (<https://tinyurl.com/2pun5q7q>)
- 304 - The revised National Seed Policy (2018) recognizes community seedbanks, has provisions for regulation, production and sale of quality declared seeds, including a provision for the national listing of traditional varieties. (<https://tinyurl.com/2glwqkj8>)
- 362 - CCAFS-East Africa and Alliance Bioversity-CIAT, in partnership with national research institutions, establish community seed-banks to help achieve objectives of the Uganda National Seed Policy (2018) for increased agricultural productivity. (<https://tinyurl.com/2ns3lm67>)

Stage of maturity of change reported: Stage 2

Links to the Strategic Results Framework:

Sub-IDs:

- Adoption of CGIAR materials with enhanced genetic gains
- Increased conservation and use of genetic resources
- Enabled environment for climate resilience

Is this OICR linked to some SRF 2022/2030 target?: Yes

SRF 2022/2030 targets:

- # of more farm households have adopted improved varieties, breeds or trees

Description of activity / study: <Not Defined>

Geographic scope:

- Regional

Region(s):

- Eastern Africa

Comments: <Not Defined>

Key Contributors:

Contributing CRPs/Platforms:

- Genebank - Genebank Platform
- CCAFS - Climate Change, Agriculture and Food Security

Contributing Flagships:

- FP2: Climate-Smart Technologies and Practices
- FP1: Priorities and Policies for CSA

Contributing Regional programs:

- EA: East Africa

Contributing external partners:

- NPCK - National Potato Council of Kenya
- KALRO - Kenya Agricultural and Livestock Research Organization
- NARO - National Agricultural Research Organisation (Uganda)
- TARI - Tanzania Agricultural Research Institute

CGIAR innovation(s) or findings that have resulted in this outcome or impact:

Multi-functional Community seed banks and digital information systems for potato farmers in Kenya.

Innovations:

- 1072 - Holistic and dynamic approach and methodology to establish and support multifunctional community seedbanks (<https://tinyurl.com/2eozyneq>)
- 1070 - Resilient seed systems approach and methodology (<https://tinyurl.com/2l6unmdr>)

Elaboration of Outcome/Impact Statement:

Community-based seed systems have three major functions with associated services for farmers: i) local and rare seed conservation; ii) seed access and availability; and iii) seed and food sovereignty. Since 2012, CCAFS East Africa and Alliance Bioversity-CIAT have been working with Community Based Organizations (CBOs), National Agricultural Research Organisation (NARO) in Uganda, Tanzania Agricultural Research Institute (TARI), Kenya Agricultural and Livestock Research Organisation (KARLO), farmer cooperatives, government and private sector agencies, and non-governmental organizations to establish Community Seed Banks (CSBs) in East Africa (9,10,11). Through the CSBs, nearly 100,000 farmers in Kenya have access to viable resilient seeds for a variety of crops (6). Also, KALRO and National Potato Council of Kenya, have registered 82,000 potato farmers on a web-based SMS platform—NPCK Viasi Soko (<https://www.npckviasisoko.com/>) (3). The platform collects, processes, and disseminates seed and ware potato information to farmers. In addition, information on variety, price, location, and contact details for seed suppliers and other relevant information is made available to farmers.

In Uganda, 7,000 farmers access high quality seeds through CSBs (4). The CSBs are now recognized and integrated into Uganda's National Seed Policy (2018) and National Seed Strategy of 2018/19–2022/2023 (1,2). In Tanzania, CCAFS and International Potato Centre (CIP) are undertaking trials and multiplication of adapted potato varieties. In Lushoto district of Tanzania, farmers are linked to the quality declared seeds (DQS) program that involves multiplying seeds at community level (5), through training of champion farmers who grade the seeds based on variety, viability and uniformity in size. CCAFS-East Africa and Alliance Bioversity-CIAT are promoting community-based seed systems through continuous learning activities such as on-farm demonstrations with the appropriate CSA practices including improved seeds across CCAFS climate-smart villages (CSVs) (8). These include farmer fairs, exchange visits and capacity building activities for CBOs, cooperatives, and farmer groups to accelerate adoption of CSA with the potential to benefit large numbers of smallholder farmers in the region. An assessment of uptake and impact of CSA technologies and innovation in East Africa shows an increase in uptake of CSA across the CSVs, coupled with improved agronomic practices (7). Farmers adopting multiple stress-tolerant crop varieties, for example, had access to more types of food and accumulated more household assets than the non-adopting households. Adoption of improved multiple stress-tolerant crop varieties also increased household dietary diversity, increased asset index and increased household income per adult.

References cited:

1. Uganda National Seed Policy (2018):
<https://cgiar.sharepoint.com/sites/CCAFS/CRP%207%20Management/Forms/AllItems.aspx?id=%2Fsite%2FCCAFS%2FCRP%207%20Management%2FReviewing%20and%20Reporting%2FAnnual%20Reporting%2FTL%20and%20RPL%20Technical%20Reporting%2F2019%2FInternal%20Evidences%2FP263%2FEvidence%203189%2FUGanda%20National%20Seed%20Policy%202018%2Epdf&parent=%2Fsites%2FCCAFS%2FCRP%207%20Management%2FReviewing%20and%20Reporting%2FAnnual%20Reporting%2FTL%20and%20RPL%20Technical%20Reporting%2F2019%2FInternal%20Evidences%2FP263%2FEvidence%203189>
2. Uganda National Seed Strategy (2018) -
<https://cgiar.sharepoint.com/sites/CCAFS/CRP%207%20Management/Forms/AllItems.aspx?id=%2Fsite%2FCCAFS%2FCRP%207%20Management%2FReviewing%20and%20Reporting%2FAnnual%20Reporting%2FTL%20and%20RPL%20Technical%20Reporting%2F2019%2FInternal%20Evidences%2FP263%2FEvidence%203189%2FUGanda%20National%20Seed%20Strategy%202018%2Epdf&parent=%2Fsites%2FCCAFS%2FCRP%207%20Management%2FReviewing%20and%20Reporting%2FAnnual%20Reporting%2FTL%20and%20RPL%20Technical%20Reporting%2F2019%2FInternal%20Evidences%2FP263%2FEvidence%203189>
3. The National Potato Council of Kenya (NPCK): <https://npck.org/>
4. Letter from Uganda's National Agricultural Research organisation -
<https://cgiar.sharepoint.com/sites/CCAFS/CRP%207%20Management/Forms/AllItems.aspx?id=%2Fsite%2FCCAFS%2FCRP%207%20Management%2FReviewing%20and%20Reporting%2FAnnual%20Reporting%2FTL%20and%20RPL%20Technical%20Reporting%2F2019%2FInternal%20Evidences%2FP263%2FEvidence%203189%2FUGanda%20Letter%2D%20Community%20seed%20systems%2Epdf&parent=%2Fsites%2FCCAFS%2FCRP%207%20Management%2FReviewing%20and%20Reporting%2FAnnual%20Reporting%2FTL%20and%20RPL%20Technical%20Reporting%2F2019%2FInternal%20Evidences%2FP263%2FEvidence%203189>
5. Letter from Tanzania's Tropical Pesticides Research Institute -
<https://cgiar.sharepoint.com/sites/CCAFS/CRP%207%20Management/Forms/AllItems.aspx?id=%2Fsite%2FCCAFS%2FCRP%207%20Management%2FReviewing%20and%20Reporting%2FAnnual%20Reporting%2FTL%20and%20RPL%20Technical%20Reporting%2F2019%2FInternal%20Evidences%2FP263%2FEvidence%203189%2FTanzania%20letter%20%2D%20seed%20systems%2Epdf&parent=%2Fsites%2FCCAFS%2FCRP%207%20Management%2FReviewing%20and%20Reporting%2FAnnual%20Reporting%2FTL%20and%20RPL%20Technical%20Reporting%2F2019%2FInternal%20Evidences%2FP263%2FEvidence%203189>
6. Letter from Kenya Agricultural and Livestock Research Organization -
<https://cgiar.sharepoint.com/sites/CCAFS/CRP%207%20Management/Forms/AllItems.aspx?id=%2Fsite%2FCCAFS%2FCRP%207%20Management%2FReviewing%20and%20Reporting%2FAnnual%20Reporting%2FTL%20and%20RPL%20Technical%20Reporting%2F2019%2FInternal%20Evidences%2FP263%2FEvidence%203189%2FKenya%20Letter%2D%20Community%20seed%20systems%2Epdf&parent=%2Fsites%2FCCAFS%2FCRP%207%20Management%2FReviewing%20and%20Reporting%2FAnnual%20Reporting%2FTL%20and%20RPL%20Technical%20Reporting%2F2019%2FInternal%20Evidences%2FP263%2FEvidence%203189>
7. Radeny M, Ogada MJ, Recha J, Kimeli P, Rao EJO, Solomon D. 2018. Uptake and Impact of Climate-Smart Agriculture Technologies and Innovations in East Africa. CCAFS Working Paper no. 251. Wageningen, Netherlands: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). <https://hdl.handle.net/10568/99267>

8. Bonilla-Findji O, Recha J, Radeny M, Kimeli P. 2018. East Africa Climate-Smart Villages AR4D Sites: 2017 Inventory. Wageningen, The Netherlands: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). <https://hdl.handle.net/10568/99701>
9. Otieno G, Lacasse H, Adokorach J, Mulumba JW, Recha JW, Reynolds TW, Fadda C. 2018. Social Seed Networks for Climate Change Adaptation in Uganda: Strategies to Improve Access to Genetic Diversity and Information. CCAFS Info note. Wageningen, Netherlands: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). <https://hdl.handle.net/10568/93207>
10. Otieno G, Lacasse H, Fadda C, Reynolds TW, Recha JW. 2018. Social Seed Networks for Climate Change Adaptation in Western Kenya. CCAFS Info note. Wageningen, Netherlands: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). <https://hdl.handle.net/10568/93210>
11. Otieno G, Lacasse H, Recha JW, Mollel M, Reynolds TW, Fadda C. 2018. Social Seed Networks and Climate Change Adaptation in Central Tanzania. CCAFS Info note. Wageningen, Netherlands: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). <https://hdl.handle.net/10568/93209>

Quantification: <Not Defined>

Gender, Youth, Capacity Development and Climate Change:

Gender relevance: 1 - Significant

Main achievements with specific **Gender** relevance: Women are important players in informal seed systems; an analysis was done of women's role in seed systems in Uganda.

Youth relevance: 0 - Not Targeted

CapDev relevance: 0 - Not Targeted

Climate Change relevance: 1 - Significant

Describe main achievements with specific **Climate Change** relevance: The community seed banks allows farmers to access a wide range of diversity of high-quality seeds adapted to local climatic conditions, and helps them protect and conserve their biological diversity and improve seed storage.

Other cross-cutting dimensions: <Not Defined>

Other cross-cutting dimensions description: <Not Defined>

Outcome Impact Case Report link: [Study #3189](#)

Contact person:

John Recha: j.recha@cgiar.org