

INNOVATION FUND

Technology transfer through innovative seed and ware potato production systems in Kenya, Rwanda and Uganda

Parent project: Strengthening agricultural knowledge and the innovation ecosystem for inclusive rural transformation and livelihoods in Eastern Africa (AIRTEA)



PROJECT COORDINATOR

The Sustainable Development Goals Center for Africa (SDGC/A), Rwanda



PARTNERS

Egerton University, Kenya
Rwanda Agriculture and Animal Resources Development Board (RAB)
Kenya Agricultural and Livestock Research Organization (KALRO)
Kachwekano Zonal Agricultural Research Development Institute (KaZARDI) - National Agricultural Research Organisation (NARO), Uganda



LOCATION

Kenya, Rwanda and Uganda



PERIOD

March 2022 – August 2024



EU FUNDING

EUR 180,012.92

SECTOR

Agriculture

KEYWORDS

Seed potato, ware potato, certification, TIMPs, innovation platform



PROJECT CONTACT

Mr. Ambrose Rwaaheru Aheisibwe
The Sustainable Development Goals Center for Africa (SDGC/A)
P.O. Box 1240
Kigali, Rwanda

aaheisibwe@sdgcafrica.org
www.sdgcafrica.org

AIRTEA contact

Mr Kwaku Antwi
Forum for Agricultural Research in Africa (FARA)
kantwi@faraafrica.org



if@oacps-ri.eu
www.oacps-ri.eu

CHALLENGE

The potato industry in the East African Community (EAC) is characterised by a few large-scale ware and seed potato farms and smallholder farmers with an annual production estimated at 2.1 million metric tons (MT).

In 2020, the total area under potato cultivation in the EAC, mainly under rain-fed conditions, was approximately 500,000 ha with yields averaging from 8.0 to 11.0 T/ha, falling short of the global average of 17.0 T/ha.

Low yields are attributed to factors such as loss of inherent soil fertility resulting from continuous crop production over a long period of time, insufficient supplementation with soil nutrients, and poor farming practices.

Weak national and regional networks and platforms for knowledge sharing and learning, and uncoordinated supportive institutional arrangements lead to low adoption of technologies, innovations and management practices (TIMPs) for potato production. Moreover, from 153 potato varieties registered and released for commercialisation by EAC states, only 44 have been adopted by farmers.

PERSPECTIVES

The project provides a conducive environment for technology transfer and adoption, knowledge sharing and, therefore, makes the production of potato more profitable and sustainable by addressing the challenges that farmers face in their quest for access to profitable consumer-preferred quality seed potato that support agri-businesses in seed and ware potato.



Training of farmers on appropriate potato management practices in Nyamicucu village, Rugeshi cell, Butaro sector, Burera district in Rwanda

JUSTIFICATION

There is a need to bridge the seed gap supply of quality seed potato. Production of certified seed potato is extremely low (only 5% of the national demand is met) and seed multipliers in EAC states are few as seed potato production is regarded a risky investment due to rigorous production stages and regulatory compliance challenges. Rwanda made significant efforts in the supply of seed potato, producing 23,013 MT, which is still below the country's demand. Kenya and Uganda have not made significant progress in the supply of seed potato to growers and in the rapid technologies for quality seed potato multiplication and delivery.

Quality seed potato is a key ingredient with the potential to stimulate agricultural productivity, economic growth and entrepreneurial opportunities. The adoption of harmonised seed policies, standards, regulations and procedures allows for crop varieties including seed and ware potato varieties for regional trade. Productivity will also be enhanced through the uptake of TIMPs for potato production, along with other seed potato value chain technologies (diffused light stores, application of quality assurance procedures, increased knowledge transfer and business learning among farmers and other stakeholders...).





On-farm demonstration of sorting, grading and packing of harvested potato in Rugoma cell, Bwayu parish, Nyamweru subcounty, Rubanda District in Uganda

METHOD

A multi-stakeholder co-innovation platform will be established to enhance the capacity of smallholder farmers and their networks across the potato value chain in co-developing and availing quality seed potato of high yielding and profitable consumer-preferred varieties. This will enable an increased adoption and utilisation of technologies, knowledge generation and innovative service provisions. Women and the youth will be linked to national and regional markets through existing innovation platforms supported by available digital marketing applications, such as websites, mobile apps and social media platforms, to facilitate the promotion and sale of potato products, and create a more direct and efficient connection between producers and potential buyers in national and regional markets.

INNOVATIVENESS

Participatory tools actively engage actors in multi-stakeholder innovation platforms, fostering a profound sense of shared ownership. Integrating social and on-farm experimental trials aligns local perceptions with scientific evidences on practices and innovations for quality seed and ware potato production. This comprehensive approach significantly enhances the acceptance and adoption of identified practices and innovations, effectively bridging prevalent capacity and knowledge gaps in the production of quality seed and ware potatoes among smallholder farmers in potato-producing districts.



On-farm demonstration of sorting, grading and packing of harvested potato in Mudakama Village, Rukaba Cell, Gataraga Sector, Musanze district in Rwanda

AIRTEA

Strengthening Agricultural Knowledge & Innovation Ecosystem for Inclusive Rural Transformation & Livelihoods in Eastern Africa



AIRTEA is implemented by FARA in partnership with ASARECA and EAFF. **AIRTEA** fosters an inclusive research and innovation environment towards sustainable agrarian livelihoods and rural transformation, through: strengthening the production, processing and marketing capacities of youth and women in East Africa's multi-stakeholder value chain innovation platforms and women in East Africa's multi-stakeholder value chain innovation platforms and linking them to practical solutions within national, regional and global food systems; facilitating the transfer of technologies, knowledge and innovations, and their uptake through multi-stakeholder learning routes; and improving profitability and employment opportunities along agricultural commodity value chains by establishing national and regional Agricultural Business Learning Alliance (ABLA) platforms, business development services and mentorship.

AIRTEA supports 11 projects in Kenya, Rwanda and Uganda that focus on agricultural production, processing, marketing, agricultural digital application development, and extension (mainly aquaculture, dairy, and horticulture).



Rapid apical potato root cutting demonstration to potato farmers in Kapsita village, Elburgon ward, Molo subcounty, Nakuru county in Kenya

EXPECTED RESULTS

Impact

- Improved livelihoods of seed and ware potato farmers in the potato producing counties/districts of Kenya (Nakuru, Nyandarua), Rwanda (Burera, Rubavu, Nyabihu, Gicumbi, Musanze) and Uganda (Rubanda, Kisoro).

Outcome

- Technology, innovation and management practices (TIMPs) adopted by seed and ware potato farmers.
- Increased opportunities for seed and ware potato producers in selling seed and ware potato to national and regional markets.
- Improved service provision by members of Innovation Platforms to non-members in handling requests from seed and ware potato farmers.
- Institutional and policy environment enabled to support uptake of seed potato technologies and innovations.

Outputs

- Seed and ware potato farmers trained in rapid seed potato multiplication technologies for quality potato production.
- Improved use of existing digital marketing platforms.
- Innovation Platforms for knowledge transfer and technology strengthened or established.
- Policy makers engaged to support seed and ware potato value chains.