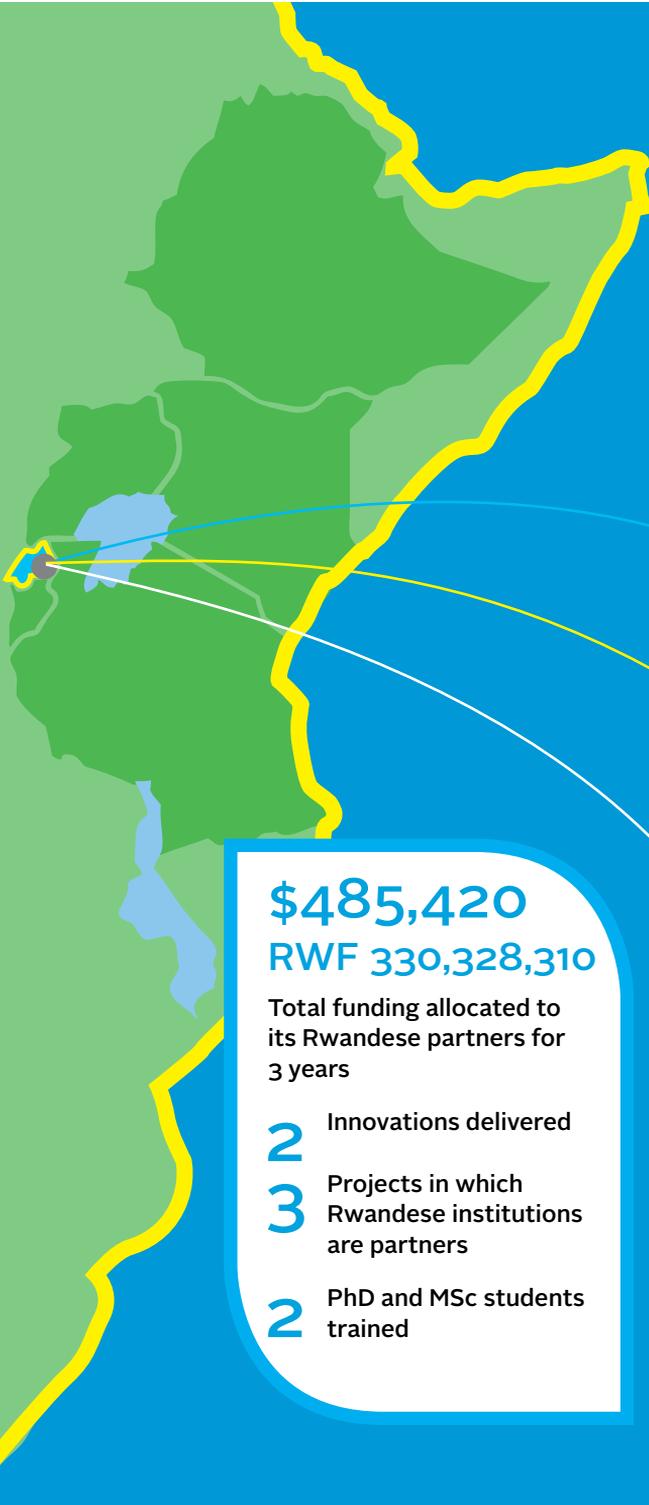


# Bio-Innovate in Rwanda

Creating effective partnerships  
along bio-innovation value chain



**\$485,420**  
**RWF 330,328,310**

Total funding allocated to  
its Rwandese partners for  
3 years

- 2** Innovations delivered
- 3** Projects in which  
Rwandese institutions  
are partners
- 2** PhD and MSc students  
trained



# Bio-Innovate in Rwanda

**Bio-Innovate Program supports multi-disciplinary biosciences and product-oriented innovation activities in the eastern Africa countries of Burundi, Ethiopia, Kenya, Rwanda, Tanzania and Uganda.**

Rwanda's population stands at 11.46 million people. This country also referred to as the land of a thousand hills is one of the most densely populated counties in Africa. Agriculture contributes 35% of GDP and employs 80% of the country's workforce. Demand for increased productivity to feed the ever-growing population has put a lot of pressure on existing land. Periodic drought, soil erosion and soil exhaustion are the other challenges farmers experience in Rwanda. With 57% of Rwanda's living below the poverty line the government is focusing on transforming the economy, the private sector and alleviating constraints to growth of investment to propel the country to middle income status by the year 2020.

## BioInnovate Partners in Rwanda

### Research and private sector organizations

1. National University of Rwanda
2. Rwanda Agricultural Board
3. Directorate of Science, Technology and Research, Rwanda
4. CRS Rwanda
5. Biosciences for Eastern and Central Africa (BecA-ILRI hub)
6. International Crops Research Institute for the Semi-Arid tropics
7. International Potato Center Sub-Saharan Africa

### Private Sector Partner

Urugaga Imbaraga



## Innovation Products and Technologies Developed

- Drought and disease resistant potato varieties developed

# Improving Food and Nutrition Security, Climate Change Adaptability, Productivity

## 1. Cassava potato and sweet potato agricultural innovations

Cassava, potato and sweet potato are three important cash and food crops that can provide food security and adaptation to climate change in the sub-Saharan sector. Productivity is a challenge as there lacks an efficient seed delivery system for clean planting material for smallholder farmers that are drought and disease resistant and adaptable to specific agro-ecological zones.

### Partnerships

- Rwanda Agricultural Board
- CRS Rwanda

## 2. Beans agricultural innovations

The canning industry in the region has had one canning variety, the Mexican 142 to work with for 60 years. This variety has succumbed to diseases like rust, angular leafspot, bacterial blight and susceptible to drought conditions over time. In addition, there is no organized production of certified seed for the bean farmers servicing the canning industry.

### Achievements

Rwanda has evaluated and will release new bean varieties for commercialization.

### Partnerships

- Rwanda Agricultural Board
- CRS Rwanda

# Bio-resource innovation policy analysis and sustainability

## Biosciences innovation policy project

In the region, there has been an awakening with governments realizing that science, technology and innovation (STI) are critical to the transformation of economies, reduction of poverty, and integration of the continent into the global knowledge economy.

Advances in biosciences offer the region opportunities to fully exploit the genetic potential and improve crop productivity, present new agro-processing opportunities to diversify smallholder productions, increase demand for local crops, thereby improving rural livelihoods. However,

enabling policy environment and support system is required that promotes bio-innovation and eventual commercialization of these technologies..

### Achievements

Policy and regulatory recommendations for the successful uptake of bio-pesticides and industrial effluent management technologies in the region have been developed.

### Partnerships

Directorate of Science, Technology and Research, Rwanda

# Bio-Innovate Mandate

Eastern Africa is well endowed with huge renewable bio-resources that can be harnessed to stimulate economic growth and competitively position the region in the global economy. For the region to integrate these bio-resources into economic growth, the link between research, innovation and end users has to be strengthened.

The region faces the challenge of poor crop productivity and resilience to climate change in small-scale farming systems, lack of sustainable industrial waste management systems as well as sustainable use of resources (water and land), minimal investments in technology incubation and other mechanisms for putting research into use, and absence of enabling policy environment for mobilization, catalysis and nurturing of a strong bio-resource and science-led economic growth agenda.

Bio-Innovate is providing a regional platform through functional academia and private sector partnerships to support the generation and delivery of bio-innovations that will utilize and translate bio-resources into products and services, as well as innovation policy analysis to support the uptake of these technologies. The Program is supported by the Swedish International Development Cooperation Agency (Sida).

## Vision

The Program's vision is to be a model of how to transform bioscience research to innovation and ultimately pass these products to the end user, and in the process ensure that science, technology and innovation actively contributes to socio-economic development and improve livelihoods in the region.

## Innovation platforms

Bio-Innovate has adopted a unique approach that involves the creation of functional innovation platforms to deliver products to the end users. To actualize this concept, the Program's consortia projects are designed to include key actors along innovation value chains including scientists, private sector, and other market actors.

The Program is providing an innovation platform that transcends universities, national and international research institutes, regional bioscience initiatives, private sector companies, NGOs and other developmental actors in the eastern Africa region.

## Program Management

The Program is hosted at the International Livestock Research Institute (ILRI) in Nairobi, Kenya. The day-to-day management of the Program is conducted by a Program Management Office and supported by a regional technical advisory committee that provides overall Program implementation oversight.



[www.bioinnovate-africa.org](http://www.bioinnovate-africa.org)



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