RWANDA AgriReview
2026

Beyond the Harvest:

Turning Production into Value

How innovation, investment and partnerships are transforming Rwanda's agricultural sector for higher incomes, food security and inclusive growth



DR. SINA GÉRARD'S VISION FOR VALUE ADDITION IN NYIRANGARAMA PG17



HOW CIAT IS CONNECTING HIGH-IRON BEANS, SCHOOL MEALS, FARMERS, NUTRITION AND CLIMATE RESILIENCE PG28



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Publishing Credits

CONTRIBUTORS

Aimable Twahirwa
Steven Nsamaza
Jejje Muhinde
Jane Munezero
Joan Mbabazi
George Kalisa
Gonzaga Muganwa
Elizabeth Tanganyika
John Mugisha
Viateur Nzeyimana
Stephen Tumusiime

DESIGN AND LAYOUT — Erick Sibo | 0788 554 350
MARKETING MANAGER — Robert Mugabo
MARKETING EXECUTIVES — Camarade Innocent, Alex Ntaganzwa, Umurerwa Mary

TO EXPRESS VIEWS WRITE TO:

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Rwanda Dispatch, Remera - Gisementi
P.O. Box 453 Kigali Rwanda.
Administration and Editorial: +250 788 306 472
Marketing and Subscription:
+250 785 450 077 / 0781 540 672
Email: rwandadispatch1@gmail.com
X:@rwandadispatch1
www.rwandadispatch.com

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Beyond the Harvest: Turning Production into Value

Thirty-two years after the Liberation struggle, Rwanda's agricultural sector reflects a remarkable journey of recovery and transformation. Following the 1994 Genocide against the Tutsi, rebuilding livelihoods was an immediate priority. Today, the challenge is to turn agricultural production into greater prosperity through higher farmer incomes, improved food security, job creation and increased value addition.

Agriculture remains central to Rwanda's economy, supporting livelihoods and supplying raw materials to agro-processing industries. Yet producing more is not enough. Farmers also need reliable markets, better storage, efficient transport and opportunities to process crops into higher-value products.

This was a key message at the 19th Rwanda Agricultural Show, held at Mulindi under the theme "Accelerating Agri-Food Systems Transformation through Innovation and Strategic Partnerships." Opening the show, Minister of Agriculture and Animal Resources Dr Telesphore Ndabamenye called for greater adoption of innovative technologies and stronger partnerships. He underlined agriculture's contributions to Rwanda's GDP and how it supports nearly 70% of its processing industries.

Government support includes fertilizer subsidies and concessional agricultural loans. Over the past three years, more than RWF 55 billion in financing was approved, with over RWF 30.9 billion disbursed through 31 financial institutions. Under the second National Strategy for Transformation (NST2), Rwanda aims to double private agricultural investment to US$4.6 billion by 2029 and increase annual export earnings to US$1.9 billion.

Achieving these ambitions will require investment in irrigation, research, modern equipment, finance and processing facilities. Farmers must also be able to meet quality and safety standards demanded by domestic and international markets.

The stories in this edition show how such changes are taking shape. Four decades of research are helping improve potato seed quality and develop varieties resistant to late blight disease. Orange-fleshed sweet potatoes offer opportunities to improve nutrition and household incomes. In Musanze, AgroPy and Horizon SOPYRWA are adding value to pyrethrum through processing, while irrigation at Gabiro is helping farmers reduce their dependence on rainfall. The East Africa Exchange and Control Union Rwanda are also supporting more organised agricultural trading and compliance with international standards.

However, these opportunities depend on strong connections across the value chain. Farmers need quality inputs, extension services and dependable buyers. Processors require reliable supplies, affordable energy and access to finance. Smallholders also need support to meet market standards without being excluded by compliance costs.

Women and young entrepreneurs can contribute through production, processing, technology, logistics and marketing. Expanding their participation could create rural jobs and make agriculture more attractive to younger generations.

Significant challenges remain, including limited arable land, declining soil fertility and increasingly unpredictable weather. Affordable finance, adequate storage, cold-chain infrastructure and accessible agricultural technologies will be essential to sustained progress.

Ultimately, Rwanda's agricultural transformation should be measured not only by export earnings and investment commitments, but also by improvements in farming households' incomes, nutrition, employment and resilience.

Rwanda has demonstrated its capacity to overcome formidable challenges. The next step is to translate policy commitments, research and investment into tangible benefits for farmers, cooperatives and agribusinesses across the country.

As the stories in this edition remind us, the real work continues on Rwanda's hillsides. We hope this edition informs, inspires and encourages you to be part of that journey.

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Rwanda's agriculture sector transformation

Ministry of Agriculture and Animal Resources (MINAGRI)

Over the past 32 years, Rwanda's agriculture sector has undergone a remarkable transformation, evolving from subsistence farming into a modern, market-oriented sector that plays a central role in food security, economic growth, and poverty reduction.

Following the 1994 Genocide against the Tutsi, the country faced immense challenges, including damaged infrastructure, low agricultural productivity, and reduced livestock populations.

But through post-genocide visionary leadership, sound policies, and sustained investment, Rwanda has rebuilt and modernized the sector, making it one of the key pillars of national development.

Today, agriculture utilizes more than 1.37 million hectares of land, representing about 58 percent of the country's total land area. Government programmes such as the Crop Intensification Programme (CIP), land consolidation, irrigation development, the promotion of improved seeds and fertilizers, as well as the development of a modern livestock sector have significantly increased crop and livestock productivity.



The Minister of Agriculture and Animal Resources (MINAGRI) of Rwanda, Dr. Telesphore Ndabamenye.

By 2024, nearly 40 percent of farmers in the country were already using improved seeds, while more than 64 percent applied mineral fertilizers, contributing to sustained higher yields of major crops including maize, rice, potatoes, and beans.

Agriculture continues to make a significant contribution to the national economy. In 2025, the sector accounted for 20 percent of Rwanda's Gross Domestic Product (GDP) and the sector remains a major source of employment and income for rural households.

In the livestock area, remarkable progress was made, especially through the Girinka programme, under which more than 450,000 households have received cows so far, thereby improving nutrition, household incomes, and access to organic manure for farming.

Technology and innovation have also become important drivers of growth in agriculture and livestock production. Through the Smart Nkunganire System (SNS), millions of farmers have gained easier access to subsidized agricultural inputs. Investments in irrigation, mechanization, climate-smart agriculture, and improved livestock breeding technologies have further enhanced productivity and strengthened resilience against climate change.









Rwanda has also expanded post-harvest infrastructure and agricultural value addition facilities. Storage facilities, drying infrastructure, cold rooms, tea factories, and coffee washing stations have contributed to reducing post-harvest losses, improving quality, and increasing the value of agricultural exports. These achievements have contributed significantly to improved food security and nutrition. Rwanda currently achieves nearly 83 percent food self-sufficiency, while increased production of crops, milk, and meat has enhanced access to nutritious foods and supported efforts to reduce malnutrition and stunting among children.

Looking ahead, Rwanda remains committed to building a modern, productive, technology-driven, and climate-resilient agricultural sector. Under the National Strategy for Transformation (NST2) that covers 2024 to 2029, the country aims to achieve annual agricultural growth exceeding 6 percent, expand irrigated land from 74,375 hectares to 132,171 hectares, and increase annual milk production from the current 1.1 million tonnes to more than 1.3 million tonnes.

Agricultural export revenues are also projected to rise from USD 893.2 million in 2024/2025 to USD 1.9 billion by 2029.

As Rwanda marks 32 years since Liberation, the transformation of agriculture stands as one of the country's most significant development achievements.

While challenges such as climate change and limited agricultural land remain, the progress recorded over the past three decades demonstrates Rwanda's commitment to building a resilient agricultural sector that supports economic growth, food security, and improved livelihoods for all citizens.

Rwanda currently achieves nearly 83 percent food self-sufficiency, while increased production of crops, milk, and meat has enhanced access to nutritious foods





RWANDA'S Agriculture by the Numbers

KEY INDICATORS, TRENDS AND FUTURE TARGETS

KEY AGRICULTURE INDICATORS

1.37 million ha
Agricultural land
Season A 2026

58%
Share of Rwanda's total land used for agriculture
Season A 2026

20%
Agriculture's contribution to GDP
2025

5%
Agricultural GDP growth
2024

8%
Food production growth
Q2 2024

80.1%
Agricultural households
2020

~83%
Food self-sufficiency
2024

4,946
Agricultural cooperatives
2023

Rwf135 billion
Value of cooperative shares
2023

ADOPTION OF AGRICULTURAL INPUTS (2024)



Farmers using organic fertiliser
Over 89%



Farmers using inorganic fertiliser
Over 64%



Farmers using improved seeds
Nearly 40%

249,000+ ha
Maize cultivated (2024)
Production still rising

Above 73 kg/ha
Inorganic fertiliser use
Up from below 4 kg/ha

74,375 ha
Irrigated area (2024/25)
Target: 132,171 ha by 2029

100,357 ha
Mechanised operations (2024/25)
Increase on previous years



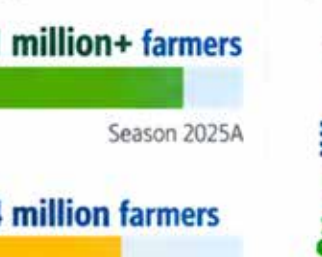
LIVESTOCK TRANSFORMATION

Annual milk production
1,152,514 tonnes
From 121,417 tonnes in 2005 (about 9.5x)





Cattle population
Over 1.3 million
About 172,000 in 1994





Meat production
219,523 tonnes
From 48,861 tonnes in 2005







450,000
Households given cows through Girinka (total to date)

SMART NKUNGANIRE

REACH OF DIGITAL AGRICULTURE

Farmers benefiting from subsidised inputs through Smart Nkunganire.

2.1 million+ farmers
Season 2025A

1.4 million farmers
Season 2025B

POST-HARVEST INFRASTRUCTURE

530 Storage facilities	**318,025** tonnes capacity	
901 Maize drying shelters	**31,171** tonnes capacity	
90 Cold rooms	–	
587 Rice drying grounds	**14,764** tonnes capacity	
56 Mobile dryers	**135,630** tonnes drying capacity	

AGRICULTURAL EXPORTS- THE BIG 2026 MILESTONE



US$893.2 million
Agricultural and livestock export earnings – 2024/25

Rwanda crossed the billion-dollar mark for the first time in 2025/26
US$1.1 billion



Source: National Agricultural Export Development Board (NAEB)

WHERE RWANDA WANTS TO BE BY 2029

> 6%
Agricultural growth annually



132,171 ha
Irrigated land (from 74,375 ha)



1,323,561 tonnes
Milk production (from 1,152,514 tonnes)



US$1.9 billion
Agricultural exports (from US$1.1 billion in 2025/26)





Small Farms, Bigger Ambitions: World Vision builds Rwanda's next generation of farmers

Thirty-two years ago, Rwanda's agriculture lay in ruins. The 1994 Genocide against the Tutsi had torn families and communities apart, displaced millions and disrupted the livelihoods of a country where farming was, and remains, the backbone of the economy. Survival came before farming. The question was not how big the harvest would be, but who was still alive.

When World Vision began working in Rwanda in 1994, it focused on life-saving emergency interventions, supporting displaced communities and helping reunite children with their families. As the country rebuilt its institutions and communities, the organisation gradually shifted from emergency relief to long-term development.

By 2000, it had established area programmes spanning education, child sponsorship, health and nutrition, water, sanitation and hygiene, and household economic empowerment. Today, agriculture is increasingly at the centre of that empowerment effort.

Building resilience through agriculture

"Our approaches are community-led," says Innocent Mutabaruka, Integrated Programs Director at World Vision Rwanda. That principle underpins the Transforming Households Resilience in Vulnerable Environments (THRIVE) project, which works with vulnerable households to build sustainable livelihoods. Launched in September 2024, THRIVE 2030 has three components: an empowered worldview, saving for transformation, and inclusive market knowledge and access (iMKA).



Innocent Mutabaruka, Integrated Programs Director at World Vision Rwanda.

Overall, the project aims to reach 324,010 households, across 14 districts by 2030. The iMKA component, which focuses on agriculture, has its own target of 97,203 households and has so far reached more than 55,000 across four value chains: maize, horticulture, piggery and poultry.

The iMKA component uses a market systems development approach. World Vision believes that handovers and asset provision can create dependency among small producers. Instead, it engages market actors to see smallholders' challenges as business opportunities, rather than solving those challenges itself.

Farmers, in turn, are helped to spot opportunities in the market, tap into them and understand how complex markets work. Through improved farming practices, savings groups, producer organisations and access to financial services, households build the skills and capital to invest and grow.

The approach complements Rwanda's Gira Wigire strategy for sustainable graduation from poverty. Households form or join savings groups, progress into producer groups and, where appropriate, are linked to financial services through Vision Fund.

"We understand what they are doing, so we can equip them with the skills and knowledge they need to move beyond subsistence farming and run successful businesses," Mutabaruka says.

Turning small farms into businesses

The change is visible among farmers who have turned modest beginnings into growing enterprises.

Noel of Gatsibo District began commercial farming in 2020 on leased land. Today he owns a one-hectare



farm beside a stream, which allows him to irrigate and harvest throughout the year.

For others, poultry has been a practical way into the market. In Buranga Cluster, Northern Province, Christine borrowed Rwf15,000 from her savings group in 2018 and bought 50 chicks.

She now keeps more than 250 hens and sells eggs to shops and restaurants. World Vision supports poultry farmers to develop markets for eggs, chicks and meat, and encourages households to see farming as an enterprise rather than simply a source of food.

The benefits often reach beyond the farm. Some farmers have invested agricultural income in transport, retail businesses, boutiques or small shops, creating new income streams and reducing their dependence on a single livelihood.

Producer groups are also becoming better connected to financial institutions. According to Mutabaruka, some cooperatives now access loans of more than Rwf5 million, enabling farmers to expand production and better withstand shocks such as pests and diseases.

Resilience also means preparing for a changing climate. Through its financial services partners, World Vision supports access to agricultural insurance that protects farmers against risks such as prolonged dry spells, and government subsidies have made that cover more affordable.

For Venant, a pig farmer in Kiramuruzi, Eastern Province, the support has brought confidence and stability. “I can access a loan, buy food to feed my family and pay my family’s health bills,” he says. Through THRIVE he was able to access a water tank, which lets him harvest and store water for his pigs and household.

The journey is not without obstacles. Mutabaruka acknowledges that limited resources mean THRIVE cannot reach every community in the districts where it operates. Farmers also continue to struggle with access to inputs and markets.

Poultry and pig farmers can find affordable feed hard to come by and may travel long distances to buy it, which raises production costs. Because hatcheries remain limited, some poultry farmers have to travel to Kigali for chicks.

Markets are another constraint. As production grows, farmers need reliable buyers and stronger processing infrastructure. A farmer producing hundreds of pigs needs slaughter, processing and packaging facilities able to absorb that supply, while maize growers who cannot sell their whole harvest see prices come under pressure.

Closing these gaps, World Vision says, requires stronger links between farmers, government and private investors.

The ambition goes beyond bigger harvests. It is to build farmers who can produce, save, invest, access finance, withstand shocks and sell competitively.

For Rwanda's predominantly agricultural economy, that shift from farming to survive to farming as a sustainable business could be one of the most important investments in the future of rural households.

Noel’s Journey to a Year-Round Horticulture Business

When Noel began commercial farming in 2020, he did not own any land. He leased a small plot in Rugarama Cell, Kanyajyese, Gatsibo District, hoping it would secure a better future for his family.

Today he grows tomatoes, beetroot, cabbages, carrots and other vegetables, and farming now provides about 80 percent of his household income.

Limited capital once held him back. That changed when he and fellow farmers received training and support from World Vision, through African Evangelistic Enterprise (AEE) Rwanda, under the Transforming Households Resilience in Vulnerable Environments (THRIVE) programme.

“While training us, they told us that what is important is having the know-how and skills,” he recalls. Impressed by the farmers’ commitment, the program market-linked them to irrigation equipment, to help them move towards more productive, commercial farming.

The results have reached beyond the farm. Within a few years, Noel built a house worth about Rwf15 million to replace the dilapidated home where he once lived.

His wife has joined the business, selling produce in a small shop and through deliveries, and the family uses e-Hinga for farming information, advice, technology and market opportunities.

For Noel, farming has become more than a livelihood. It is an investment in his family's future.

Turning Backyard Pens into Bigger Dreams

Farmers in Gatsibo are building more market-oriented pig businesses with support from the THRIVE 2030 project

BY JEJJE MUHINDE

For years, pig farming in Rwanda's Eastern Province was largely a backyard activity: a few animals, little training, uncertain markets and frequent losses to disease.

That was the reality for Venant of Kiramuruzi, Gatsibo District, when he decided to try pig farming in 2021. Today he keeps 20 pigs, leads a 12-member farmer cooperative and trains others to follow the path he took.

His inspiration was a neighbour whose herd had grown from five pigs to about 200, and who sold dozens of animals every few months but would not share his knowledge. Venant was determined to learn anyway. A veterinary friend, Emmanuel, taught him the basics, and he started with a single pig bought from a neighbour, an artificially inseminated sow that produced 11 piglets. "That turned out to be the start of everything. I started small to avoid losses," he says.

Venant is one of the farmers supported by the THRIVE 2030 Pig Value Chain Project, a seven-year initiative working across 14 districts and implemented by DUHAMIC-ADRI in partnership with World Vision Rwanda. The project helps farmers move from subsistence pig keeping towards market-oriented businesses, with a focus on improved breeds, skills, markets and livelihoods.

Improved breeding has been especially important. Artificial insemination gives farmers access to better genetics instead of relying on whichever boar happens to be nearby.

A few kilometres away in Nyabisindu Sector, Theophile is building a business on the same principle. A trained agriculturalist, he started Neyo Pig Farm in 2024 and says anyone serious about pig farming must understand breeds and their qualities.



"Understand the quality of pigs you are rearing and what breed suits your purpose, such as Large White or Landrace," he advises.

His clean pens include a separate enclosure for sows about to give birth.His first litters produced eight and 10 piglets, and two later litters produced 14 and 10.

"To be a pig farmer, you need to have passion for it, as well as love and being friendly with animals," he says.

However, better-quality pigs alone do not guarantee a profitable business. Farmers also need reliable markets and services. Mertha Uzayisenga, the DUHAMIC-ADRI field officer



responsible for Gatsibo, Kayonza and Nyagatare districts, says the project links farmers with markets, financial institutions and other value chain actors, so they are no longer dependent on occasional buyers.

Venant now sells piglets every 45 days for about Rwf50,000 each. On one occasion a buyer took an entire litter of 13. He increasingly keeps some piglets to expand his own herd rather than selling everything.

Theophile has diversified further, earning income from piglets, mature pigs and breeding services. He also uses manure on his soybean, Irish potato and maize fields, and estimates his farm is now worth more than Rwf5.6 million.

Feed remains one of the biggest challenges for both men. Venant sometimes travels to Rwamagana, Nyagatare or Kayonza to buy it, and transport adds to the cost. Theophile supplements available feed with local ingredients such as maize, rice husks and milk, particularly when feed is scarce. The project's emphasis on capacity building is creating a ripple effect. Venant has trained more than 20 people, while Theophile mentors 10 young people interested in pig farming and helps them develop their own projects.







Both urge beginners to resist the temptation to expand too quickly. "Start with one," Theophile tells young farmers. "Go slowly, build enough pens and expand after a year."

Venant has already moved well beyond his first pig. Besides his own herd, he leads Dukore, a cooperative of 12 farmers and hopes to shift increasingly towards selling mature pigs.

Theophile plans to expand his operation and bring his brother into a second pig-rearing venture.

Their journeys reflect the wider ambition of THRIVE 2030. The project has coached more than 7,700 pig farmers, supported the construction of more than 3,000 improved pigsties, facilitated the purchase of more than 4,200 improved-breed pigs and supported the insemination of more than 1,000 pigs.

For farmers in Gatsibo, though, the numbers are best understood inside their pens: a few pigs becoming growing herds, and a backyard activity gradually becoming a business.





Rwanda seeks to turn agricultural gains into better nutrition

BY AIMABLE TWAHIRWA

Rwanda has made progress in increasing food availability, but ensuring that households can afford nutritious, balanced diets remains a challenge, according to official statistics.

Data from the National Institute of Statistics of Rwanda (NISR) show that dietary energy availability reached 2,366.7 kilocalories per person per day in 2025, up from 2,328.9 kilocalories in 2024. However, carbohydrates accounted for 77.7% of available dietary energy, while fats contributed 12.2%.

The figures, published in NISR's Food Balance Sheets 2025 report, highlight the challenge of turning greater food availability into more diverse diets. They also underscore the need to address constraints affecting agricultural production, food distribution and access to nutritious foods.

Agriculture remains a major pillar of Rwanda's economy, contributing about 27% of gross domestic product in the 2023/24 fiscal year, according to the UN's Food and Agriculture Organization (FAO). The sector also provides livelihoods for a large share of the rural population.

To raise productivity and strengthen the sector's resilience, government launched its Fifth Strategic Plan for Agricultural Transformation (PSTA5) on 6 December 2024. Covering 2024–2029, the strategy seeks to modernise agriculture, improve market access, reduce post-harvest losses and promote climate-resilient production.

The plan has an estimated budget of Rwf6.6 trillion, of which the private sector is expected to contribute around 44%.

The investment reflects government's ambition to build a more productive, commercially oriented agricultural sector. However, its impact will depend on whether farmers can access the resources and services needed to increase production, and whether these gains translate into higher incomes and improved food security.



LAND CONSTRAINTS AND PRODUCTIVITY

Limited land is another challenge for Rwanda's agricultural transformation. According to NISR's Seasonal Agricultural Survey 2025, about 1.399 million hectares, or 59% of the country's total land area, were used for agriculture in Season A. The figure rose to 1.423 million hectares, or around 60%, in Season B.

With little room to expand cultivated land without putting more pressure on natural resources, raising productivity on existing farmland has become a policy priority. This will require better soil management, irrigation, access to quality seeds and agricultural extension services, as well as stronger links between farmers and markets. Ensuring that small-scale producers can afford and use these resources will be particularly important.

NISR's survey data show differences in the adoption of improved seeds across farm sizes. In Season A of 2025, 37.3% of farmers used improved seeds. In Season B, the share was 16.7% among small-scale farmers, compared with 72.1% among large-scale farmers.

These differences point to persistent barriers to technology adoption among smaller producers. Input costs, access to credit and the availability of agricultural advice can all influence whether farmers adopt improved practices.

LINKING PRODUCTION TO NUTRITION

Increasing agricultural output is only one part of Rwanda's food security agenda. Food available at national level does not necessarily mean that every household can afford a balanced diet.

Food prices, household incomes and access to markets determine whether consumers can obtain protein-rich foods, vegetables, fruits and other sources of essential nutrients. Reducing post-harvest losses and improving storage, transport and processing could increase the amount of food reaching markets while creating additional income opportunities for farmers.

Climate change adds to these challenges. Irregular rainfall, droughts and floods can damage harvests, disrupt supply chains and reduce the incomes of farming households. Expanding irrigation, improving soil conservation and providing timely weather information could help farmers manage these risks.

For Rwanda, the challenge is to ensure that investments under PSTA5 do more than increase harvests: they must also help farmers earn more and make nutritious food more affordable. The gap in improved-seed adoption

between small-and large-scale farmers shows that raising output is not enough if access to productive resources remains uneven.

MEASURING SUCCESS

Speaking at the Africa Food Systems Forum 2026, held in Kigali in September, Rwanda's Minister of Agriculture and Animal Resources, Dr Telesphore Ndabamenye, called for policy commitments to be translated into practical action and investment, with measurable benefits for farmers and communities.

Scientists and officials argue that Rwanda's agricultural transformation must be judged not only by higher yields and increased investment, but also by improvements in farmers' incomes and households' ability to afford diverse, nutritious diets. The Ministry of Agriculture and Animal Resources identifies low productivity, post-harvest losses, climate shocks and limited access to finance and markets among the challenges its agricultural strategy seeks to address.



For Dr Jean D'Amour Manirere, principal investigator of the Food Systems Transformation through School Feeding Programme at the University of Rwanda's College of Agriculture and Animal Sciences and Veterinary Medicine, these challenges show the need to link agricultural production more directly to nutrition and livelihoods. The programme promotes the consumption of micronutrient-rich crops and supports agribusiness, helping connect food production with healthier diets and economic opportunities.

Dr Manirere said efforts should also look at whether farmers earn enough to support their livelihoods and whether households can afford diverse, nutritious diets. Progress, he argued, should ultimately be judged by the benefits agricultural development brings to farming families and consumers, rather than by production figures alone.

"The success of agricultural transformation should not be measured by production alone, but by whether farmers earn a decent income and families can afford diverse, nutritious food," he said.



DR. SINA GÉRARD'S VISION FOR VALUE ADDITION IN NYIRANGARAMA

At Nyirangarama, in Rulindo District, agriculture is more than a way of life. It is increasingly becoming the foundation of a growing agro-processing ecosystem where farming, skills development, manufacturing and trade co-exist.

The area, once known mainly as a rural settlement, has developed into a busy trading centre. At the heart of this transformation is entrepreneur Dr. Sina Gérard, whose journey has been closely linked to agriculture and the effort to turn local produce into competitive value-added products..

Through SINA GÉRARD/ ENTREPRISE URWIBUTSO, a portfolio of more than 30 products has been built, many of them originating from agricultural production. The enterprise produces juices, chilli oil, yoghurt, biscuits, jams, honey products, wine, nuts, mayonnaise, bread and cakes, among others.

For Dr. Sina, however, the ambition goes beyond producing food.

"Whatever we do, our primary objective is to produce for our country, then we can look for other markets.



Dr. Sina Gérard.

We also ensure that our products are affordable to every Rwandan."

FROM AGRICULTURE TO VALUE ADDITION

Dr. Sina's approach is based on a simple principle: agriculture becomes more powerful when farmers can move beyond producing raw materials and participate in processing and value addition. His own experience reflects this philosophy.

He established vineyards in Nyirangarama in 2005 and subsequently invested in fruit processing. He developed Agashya juice processing plant, an initiative that demonstrated how locally produced agricultural commodities could be transformed into commercially viable products.

The enterprise later expanded into other areas, including Akarusho grape wine, Akabanga chilli oil, Agashya juices, Akaryoshye yoghurt, Akarabo biscuits made from locally sourced wheat and potatoes, Akizewe honey, jams and other food products.

Some of these products have found markets beyond Rwanda, including in Europe.

But innovation remains at the centre of the operation.

One of the more recent areas of interest is sugarcane, as the enterprise explores ways of developing the crop and transforming it into higher-value products.

The broader objective is to establish what Dr. Sina describes as a complete ecosystem — one that links farming, livestock production, processing, skills development and manufacturing.



College Fondation Sina Gerard.

"We cultivate, rear livestock, have workshops and ensure that we have a complete ecosystem," he says. "We start by providing skills to the young generation while producing for our community."

MODERNISING AGRICULTURE

Dr. Sina believes Rwanda's agricultural transformation will depend heavily on young people embracing farming as a modern and commercially viable profession.

He has therefore been progressively moving from traditional agricultural practices towards more modern approaches, combining production with innovation and processing.

> "Whatever we do, our primary objective is to produce for our country, then we can look for other markets. We also ensure that our products are affordable to every Rwandan.

For him, agriculture should not be viewed simply as subsistence farming. It can provide employment, generate businesses and supply industries with raw materials.

This philosophy is also reflected in his education initiatives at Nyirangarama.

Through Collège Fondation/Sina Gérard, students are exposed to practical and vocational skills, including agronomy, animal health and food processing. The school has incorporated hands-on training so that young people can acquire skills that connect education with the world of work.

The idea is to produce a generation that does not only seek employment but can also create opportunities through agriculture, technology and enterprise.

BUILDING A "MADE IN NYIRANGARAMA" BRAND

As production expands, Dr. Sina is pursuing another ambition: building a strong identity around products made at Nyirangarama.

"Made in Nyirangarama" is emerging as a brand concept that captures his desire to produce a wide range of goods locally, using local resources and skills wherever possible.

The strategy is particularly relevant to Rwanda's broader push for local production and value addition. Instead of exporting agricultural commodities in their raw form, processing them locally can create additional value, jobs and markets along the supply chain.

At Nyirangarama, this model brings agriculture closer to manufacturing: crops are cultivated, livestock is reared, raw materials are processed, products are packaged and ultimately brought to consumers.

INVESTING IN PEOPLE

For Dr. Sina, the ecosystem is not complete without investing in people.





Nyirangarama Headquarters.

His education initiatives, alongside the work of the Sina Gérard Foundation, seek to give young people opportunities to develop their talents and practical skills. The foundation has also supported activities in areas such as sports, reflecting his broader belief that healthy and skilled communities are essential to development.

His school has grown to serve thousands of students, while hundreds of children from vulnerable households receive education and scholastic materials each year.

His philanthropic efforts extend to healthcare and faith. Dr. Sina established a community health facility to improve access to essential healthcare, while his deep Catholic faith inspired him to build St. Gerard Church, providing a place of worship and spiritual nourishment for the community.

But the central lesson Dr. Sina wants young people to take from Nyirangarama is that opportunities can be created from what Rwanda already has. Agriculture, in his view, is one of those opportunities.

His involvement in media — including online television and social media platforms — has also helped him communicate ideas about entrepreneurship, innovation and development to a wider audience.

AGRICULTURE AS AN ENGINE OF OPPORTUNITY

The story unfolding at Nyirangarama illustrates a shift from agriculture as a source of raw materials to agriculture as the starting point of an entire value chain.

From vineyards and sugarcane to livestock, food processing and locally branded products, Dr. Sina Gérard is building a model in which farming feeds industry, industry creates jobs and skills development prepares the next generation to sustain the cycle.

His vision is not simply to produce more, but to produce differently — by adding value, creating competitive products and ensuring that more of the economic benefits of agriculture remain within Rwanda.

For Nyirangarama, the journey from a rural farming community to a bustling centre of trade and agro-processing is still evolving.

And at its centre is an increasingly clear proposition: the future of agriculture lies not only in what Rwanda grows, but in what it can create from what it grows.





IRISH POTATO: FROM IMPORTED GERMPLASM TO A SCIENCE-DRIVEN ENGINE OF RWANDA'S FOOD ECONOMY

Four decades of research, seed innovation and farmer-led breeding are reshaping one of Rwanda's most important food and income crops.

In Rwanda's highland farming areas, Irish potato is much more than another crop in the field. It is a source of food, cash and employment for farming households and an increasingly important raw material for markets and processors.

Yet behind today's potato fields lies a story stretching back more than four decades. A story of international germplasm, national research, rebuilding after the 1994 genocide against the Tutsi crisis, new seed technologies, farmer participation and increasingly, biotechnology.

Potato farmers depend on planting material that must be carefully multiplied and maintained. The disruption of Rwanda's agricultural systems in 1994 therefore created a major challenge

The partnership between Rwanda's national agricultural research system and the International Potato Center (CIP) began in the late 1970s and early 1980s, when Rwanda's national potato program began receiving advanced genetic material from CIP in Lima. The collaboration expanded into breeding, variety selection and disease management, leading to a broad research agenda today.



However, the focus is no longer simply on producing higher-yielding varieties. But also clean seed, disease resistance, nutrition, soil fertility, digital extension, farmer preferences, climate resilience and biotechnology.

While varieties such as Cruza-148 featured prominently, while Kinigi, released in 1981, remains part of Rwanda's potato story, more CIP-bred potatoes; at least 23 of the 28 potato varieties grown in Rwanda, illustrate the depth of CIP partnership's influence on the country's varietal landscape.

But genetic improvement alone cannot solve the industry's problems. Potato farmers depend on planting material that must be carefully multiplied and maintained. As demand for clean seed grows, new technologies become essential.

In 2009, through the Three-Generation (3G) project, CIP introduced a pilot aeroponics system at RAB Musanze, a technology enabled rapid multiplication of early-generation seed potatoes under controlled conditions, while Rwandan scientists and technicians received training.

Aeroponics became part of a wider approach incorporating tissue culture, rooted apical cuttings, sandponics, virus indexing, diagnostics and improved seed-quality management. The result has been a gradual transformation of the seed system from a bottleneck into an area of scientific and commercial innovation.

A NEW GENERATION OF VARIETIES AND COUNTING ON FERTILIZER INPUT

More recently, CIP and RAB have evaluated breeding materials with greater emphasis on yield, disease resistance, heat tolerance, processing quality and market preferences resulting in the release of 11 new potato varieties, while a National Potato Variety Description Guide developed by CIP, RAB, RICA and Agriterra in 2025 provides a standardized reference for Rwanda's officially released varieties.

This represents a shift in the philosophy of crop improvement. Farmers must like the variety, consumers must accept it, traders must buy it, processors need the right characteristics, and the variety must withstand diseases and environmental stresses.

Today, farmers are increasingly placed at the centre of varietal evaluation. Through citizen-science approaches such as TRICOT, farmers assess varieties under real production conditions while researchers combine their observations with agronomic, socioeconomic and environmental data for greater yields.



Rwanda's 2025 Season A statistics recorded approximately 45,928 hectares harvested for Irish potato, producing about 314,093 tons at an average yield of 6.8 tons per hectare.

For a crop with strong market demand, increasing productivity means not simply applying more inputs, but using the right inputs in the right place and at the right rate.

Through CGIAR Excellence in Agronomy and Sustainable Farming Programme (SFP) work, CIP, RAB, MINAGRI and the Rwanda Soil Information Service (RwaSIS) and BK Techouse have developed and validated site-specific fertilizer recommendations. These are being connected to Rwanda's Smart Nkunganire System (SNS), creating a pathway for farmers to receive more location-specific agronomic advice, creating the possibility of improving yields while reducing unnecessary fertilizer expenditure and protecting soil health.

FIGHTING A DISEASE THAT THREATENS TO TAKE AWAY THE HARVEST

One of the biggest threats remains late blight disease given its potential to rapidly spread and cause severe yield losses between 13 to 60 percent, forcing farmers to rely heavily on fungicides.

Under the Rwanda AgriBiotech Program-Cassava, Maize and Potato (RABP-CMP), CIP and RAB have been evaluating potato materials carrying three resistance genes, known as 3R-gene late blight-resistant potatoes, while using farmer and consumer preferred varieties as the genetic background.

The work has progressed through confined field testing, regulatory assessment, National Performance Trials, seed multiplication and the variety-registration pathway.



Rwanda's 2025 Season A statistics recorded approximately 45,928 hectares harvested for Irish potato, producing about 314,093 tons at an average yield of 6.8 tons per hectare.

The potential economic impact is substantial, with CIP's assessment projecting average annual net benefits of approximately RWF 4.514 billion for 3R-gene Ndamira and RWF 2.020 billion for 3R-gene Victoria.

IT STARTS ON THE PLATE AND GROWS INTO LIVING CLASSROOMS

As Rwanda's potato research advances, investment is also turning toward the scientists, institutions and systems needed to sustain innovation.

Launched in December 2025, the Rwanda Biotech Capacity Building (BioCap) project, led through a partnership between RAB and CIP, is strengthening national capabilities in genetic transformation, gene editing, molecular breeding, pathology, biosafety and regulatory science. A Centre of Excellence for Crop Biotechnology is also being established at RAB Rubona.

The investment recognises that advanced technology requires scientists able to evaluate innovations, regulators able to assess them, institutions capable of managing biosafety, stronger seed systems and farmers who understand how and why new technologies are introduced.



The potato agenda is also moving beyond productivity. So far CIP and RAB have evaluated iron-and zinc-biofortified potato clones across Rwanda's agroecological zones.

As Rwanda Irish Potato sector enters a new phase, biotechnology and national scientific capacity are becoming increasingly important with CIP's prioritizing expanding access to quality seed, scaling high-yielding and market-preferred varieties, strengthening rapid multiplication technologies, developing climate-resilient and disease-resistant varieties, and connecting farmers more effectively.

Contact:
Dr Eric Magembe:
Scientist, Molecular Biologist
e.magembe@cgiar.org;

Dr Bester Tawona Mudereri
Country Manager - CIP Rwanda
Bester.Mudereri@cgiar.org;
Website: https://cipotato.org/



SWEET POTATO: A FOOD-SECURITY CROP THAT MUST CHANGE TO A NUTRITIONAL AND ENTERPRISE OPPORTUNITY

How Rwanda is turning a familiar staple into a platform for nutrition, livelihoods, value addition and climate resilience.

For generations, sweet potato has been one of the crops that rural Rwandan households could rely on when food was scarce. It matures relatively quickly, can perform under difficult conditions and provides an important source of food for farming families.

But its role in Rwanda's agricultural transformation is increasingly moving beyond simply putting food on the table to being repositioned as a crop with potential to improve nutrition, generate income, support women and youth enterprises, and supply emerging food processing markets.

This transition has been driven in part by years of research and development work led by the International Potato Center (CIP), in partnership with Rwanda's agricultural institutions and development organizations from improved varieties and planting materials to building seed systems, promoting nutrition-sensitive agriculture, supporting processors and developing a broader commercial strategy for the crop.

However, the scale of the opportunity remains significant. Rwanda's 2025 Season A agricultural statistics recorded about 81,045 hectares harvested for sweet potato, producing approximately 652,515 tons. The crop therefore already occupies an important place in the national food system; the challenge is to capture more of its nutritional and economic value.

A CROP TAKES ON A NEW ROLE

One of the most important shifts in Rwanda's sweet potato story has been the introduction and promotion of Orange-fleshed sweet potato (OFSP).

Unlike traditional white-or yellow-fleshed varieties, OFSP is rich in beta-carotene, which the body converts into vitamin A. This gives the crop a special place in efforts to address micronutrient deficiencies while also improving household food security.

CIP's work in Rwanda helped move OFSP from a research innovation into farming communities and eventually into markets. With CIP the solution has been to connect laboratory-based production of clean planting material with decentralized vine multipliers who can supply farmers closer to where they live.

In recent years, reports indicate a growing network of more than 70 commercial sweet potato vine multipliers working with both CIP and RAB, alongside other partners.

The Feed the Future Rwanda Orange-Fleshed Sweet potato for Income and Nutrition Activity subsequently targeted 200,000 households and 300,000 children under five across ten districts.

For a vegetatively propagated crop such as sweet potato, the health and quality of planting material directly influence production. A farmer may have a promising variety, but without clean vines, disease can move through the production system and undermine productivity.

FROM NUTRITION PROJECT TO FOOD SYSTEMS AND BUILDING MARKETS BEYOND THE FARM

The development of OFSP in Rwanda was not designed simply as a crop-distribution exercise. Earlier initiatives such as SASHA and SUSTAIN linked improved varieties and planting material with nutrition education, utilization and markets.

The SUSTAIN program, launched in Rwanda in the mid-2010s, sought to integrate agriculture and nutrition interventions around OFSP, particularly for women and young children.

The Feed the Future



Rwanda Orange-Fleshed Sweet potato for Income and Nutrition Activity subsequently targeted 200,000 households and 300,000 children under five across ten districts. More than 500,000 households in Rwanda have also been reached with improved OFSP varieties since 2009. The question surrounding sweet potato shifted from producing more to rather how the variety can be nutritious and attract market.



However, a limited market for fresh roots has been a challenge. With many rural households already growing the crop, there must be an effort towards research and development for processing and value addition.

CIP-supported work has explored products made from OFSP, including bakery products, flour, snacks and other processed foods. Products such as the Akarabo Golden Power Biscuit, produced by Sina Gerard Enterprise using OFSP are already on the market, as well as emerging products such as OFSP crisps.

The broader ambition is to create a value chain in which farmers are connected to processors, retailers and consumers, activities that extend the economic life of the crop beyond the farm gate rather than depending entirely on local fresh-root markets.

A NEW ROADMAP AND CLIMATE RESILIENCE FOR THE FUTURE FARMER

In November 2024, stakeholders brought together from the African Development Bank's Technologies for African Agricultural Transformation (TAAT), CIP and RAB validated a Sweet Potato Roadmap aimed at transforming the crop into a more commercially viable contributor to economic growth, nutrition and export opportunities. The roadmap focuses on bottlenecks including early-generation seed, certified and quality-declared planting material, root production, value addition and marketing.

A newer five-year investment action plan goes further, proposing to scale Orange-fleshed sweet potato production and consumption through decentralized vine multiplication, farmer training, market development, cold-storage infrastructure and integration of OFSP into school feeding and health-centre meal programs. It targets more than 150,000 direct beneficiaries and identifies an estimated investment requirement of US$10.9 million

Sweet potato's potential also fits into Rwanda's wider search for crops and technologies that can withstand climate and economic shocks. The crop is relatively drought tolerant and early maturing, while OFSP varieties can provide both nutritional and economic benefits.

However, the current approach increasingly requires connecting research with investment, private enterprise and public institutions.

It is also why the future of sweet potato in Rwanda is likely to be determined by what happens after harvest as much as by what happens in the field.

Therefore, the next chapter must emphasize the crop's commercialization through creating reliable markets, expanding processing, strengthening seed and vine multiplication systems.

Rwanda has the opportunity to turn years of research and pilot projects into a sustainable value chain in which farmers can produce more confidently, consumers can access more nutritious foods, and businesses can see sweet potato as an investable agricultural opportunity.



Contacts:
Mr Nshimiyimana Jean Claude
Associate Scientist
j.nshimiyimana@cgiar.org;

Dr Bester Tawona Mudereri
Country Manager - CIP Rwanda
Bester.Mudereri@cgiar.org;
Website: https://cipotato.org/



GETTING HARVESTS TO MARKET: EAX PUSHES FOR MORE EFFICIENT COMMODITY TRADE

For Rwandan farmers, a good harvest is only the beginning. The bigger challenge is getting that harvest to market in the right condition, meeting the required quality standards and securing a price that rewards their effort.

BY STEPHEN TUMUSIIME

This is the challenge the East Africa Exchange (EAX) has sought to address since its establishment in 2013. Conceived as a regional commodities marketplace, EAX was created to tackle some of the structural weaknesses that have long constrained agricultural trade in East Africa, including fragmented markets, post-harvest losses, inconsistent quality, limited access to finance, price volatility, and inadequate storage and logistics.

The idea emerged from discussions among East African leaders at the World Economic Forum in Davos in 2012, with an ambition to create a common marketplace through which commodities could move more efficiently within the region, across Africa and eventually into global markets. Rwanda moved early to implement the concept, and Kigali became the Exchange's headquarters.

But EAX soon encountered a fundamental reality: a commodities exchange cannot succeed simply by providing a platform where buyers and sellers meet.

As EAX Chief Executive Officer Clement Kayitakire explains, the market also needs reliable supplies, trusted quality, adequate storage, transparent pricing and efficient systems for moving both commodities and money.



EAX Chief Executive Officer, Clement Kayitakire

That realization pushed EAX beyond the traditional role of a trading platform and deeper into the agricultural value chain—working to build the systems that can connect farmers and producers to more organised, transparent and efficient markets.

BUILDING THE MARKET FROM THE FARM

EAX has invested in certified warehouses, silos, mechanical dryers and other post-harvest infrastructure while using field extension services to train farmers and cooperatives on handling, storage, quality improvement and structured trading. The objective is to connect production with market requirements from the outset.

The need is particularly clear in the case of post-harvest losses. In the early years of EAX's operations, maize production was losing up to 30 percent after harvest. Such losses represented more than wasted grain. They meant lost income for farmers, reduced food entering the supply chain and economic value disappearing before produce reached consumers.

EAX's response has been to make quality a shared responsibility across the commodity chain.

Farmers are trained in appropriate drying and storage practices, including the use of tarpaulins and shelters, as well as careful shelling, cleaning and moisture management. Field officers test commodities for parameters such as moisture and aflatoxin levels and help determine their grade before the produce moves further into the market. As farmers have become more familiar with market requirements, the number of trucks rejected at EAX facilities for poor quality has fallen significantly.

For Mr. Kayitakire, this process is about helping farmers understand that quality is not simply an additional burden, but part of creating a commodity that the market is prepared to reward.

QUALITY BEYOND THE FARM

Quality assurance continues once commodities arrive at EAX facilities.

According to Herman Kazora, Head of Quality Assurance at EAX, their approach is to control quality

throughout the commodity chain rather than wait until a commodity is ready for sale.

"When commodities are received into EAX facilities, our quality team conducts inspection and sampling," Kazora explains. The process assesses moisture content, foreign matter, damaged grains, infestation and other relevant quality requirements. Commodities that meet specifications are accepted and recorded, while those that do not are assessed for appropriate corrective action.

That corrective action can include drying, cleaning, sorting, re-bagging or other forms of conditioning. Where a quality problem cannot be corrected or presents a food-safety risk, the affected commodity is isolated and handled according to established procedures.

Storage is equally important because quality can deteriorate even after a commodity has been accepted.

Therefore, EAX monitors stocks for moisture changes, infestation and other forms of deterioration, supported by proper stacking, aeration, hygiene, sanitation, pest control and fumigation. Quality checks continue during processing at milling plants to ensure both raw materials and finished products maintain the required standards.

Technology supports these processes through moisture meters, weighing systems and other testing equipment. But Kazora stresses that technology alone is insufficient. It must work alongside trained personnel, established procedures, regular inspections and effective warehouse management.

His mandate is straightforward: "receive the right quality, preserve that quality while the commodity is in our custody, and ensure that the commodity leaving our facilities still meets the required standards."

This system is also designed to build trust. Buyers want confidence that the commodities they purchase meet agreed specifications, while sellers need a transparent basis for determining the quality and grade of their produce.

When disagreements arise over rejected commodities or deductions, EAX relies on test results, clear explanations and, where necessary, re-testing. Maintaining records of interventions also provides traceability and helps identify the causes of quality problems rather than simply treating their symptoms.

Kazora notes that credibility is ultimately measured by the confidence of buyers who continue to do business through the Exchange because they know quality is taken seriously and accountability extends from receipt to final delivery.

INFORMATION THAT CHANGES THE BARGAINING POSITION

> **this process is about helping farmers understand that quality is not simply an additional burden, but part of creating a commodity that the market is prepared to reward**

Quality is only one part of an efficient market. Information is another.

EAX CEO identifies the information gap as one of the less visible challenges facing farmers. A farmer may know how much it costs to produce but have limited knowledge of prevailing market prices. This can create pressure to sell quickly, sometimes at unfavorable prices.

EAX's electronic trading platform provides price information and market analytics while connecting buyers and sellers across borders. Greater access to information can strengthen farmers' negotiating position and give buyers greater confidence in the commodities available to them.

The digital platform is complemented by electronic warehouse systems and electronic warehouse receipts. These allow commodities stored in certified facilities to be traded without physically moving the goods every time ownership changes.

The warehouse receipt can also serve as a basis for accessing financing from partner financial institutions, helping turn stored commodities into potential working capital.

This addresses another pressure that can force farmers to sell immediately after harvest: the need for cash.

If properly stored grain can support access to credit, farmers have greater scope to wait for more favorable market conditions rather than selling simply because they need immediate liquidity.



AIMING HIGH: TOWARDS INTERNATIONAL MARKETS AND THE EXCHANGE'S BROAD AMBITIONS

The combination of better quality, storage, market information and structured trading is increasingly connecting Rwanda to regional commodity flows.

If properly stored grain can support access to credit, farmers have greater scope to wait for more favorable market conditions rather than selling simply because they need immediate liquidity.

EAX's commodity portfolio now includes maize, dry beans, sorghum, paddy rice, soybeans and cooking oil, with commodities supplying local milling factories as well as government and strategic food-supply programmes.

When domestic production generates surpluses, commodities can move into regional markets. Beans, for example, are exported to the Democratic Republic of Congo and Tanzania, while some commodities moving through Tanzania ultimately reach Middle East markets. Rwanda also imports commodities when domestic production is insufficient to meet national demand, particularly during off-season periods.

This two-way movement is characteristic of a functioning regional commodity system: selling when supplies are abundant and sourcing when they are scarce.

For Rwanda, the significance goes beyond individual transactions. A more organized commodity market can strengthen food-security systems, improve supply-chain efficiency and create stronger connections between farmers, traders, processors, financial institutions and regional buyers.

A BROADER AMBITION

The agricultural exchange may, however, be only the beginning of EAX's longer-term ambition.

The Exchange is undergoing a restructuring process aimed at expanding its mandate toward a regional, continental and eventually global multi-commodity platform. The broader vision includes trading in minerals and metals such as gold, tin and tantalum; soft commodities including tea, coffee and edible oils; energy products; and, over time,













derivatives and more advanced risk-management instruments.

The logic is that the same principles used to organize agricultural commodities; standardization, transparent pricing, reliable infrastructure, quality assurance, digital trading and trusted settlement—can be applied to other strategic commodities.

For Africa, the potential is significant. The continent possesses enormous agricultural and mineral resources, yet many commodity markets remain fragmented and value chains underdeveloped. A transparent and technologically enabled marketplace could help connect production with capital, buyers and global demand.

The road ahead remains demanding. Storage and drying capacity must expand, logistics must become more efficient, farmer participation must deepen and regional standards must become more harmonized. A broader multi-commodity market will also require investment, sophisticated regulation and sufficient market liquidity.

But the direction is increasingly clear. EAX is seeking to build more than a place where commodities are bought and sold. It is building a system in which agricultural products can be stored better, graded more transparently, financed more effectively, priced with better information and traded more efficiently.

For farmers, that can mean stronger market access and greater opportunity to capture value. For buyers, greater certainty. For governments, better food-supply and market information. And for the region, another building block for economic integration.

A more organized commodity market can strengthen food-security systems, improve supply-chain efficiency and create stronger connections between farmers, traders, processors, financial institutions and regional buyers

The journey begins at the farm. But with the right infrastructure, information and quality systems, the value of what is produced there can travel much farther.

From harvest to market and increasingly from Rwanda to the region and beyond.



From the School Garden to students' Plates: **How the Alliance of Bioversity International and CIAT is connecting high-iron beans, school meals, farmers, nutrition and climate resilience**

In Rwanda, a school garden is becoming more than a patch of cultivated land. It is becoming a classroom, a source of nutrition and a link between children and the farmers who feed them.

Some of the science and knowledge shared during training initially seemed almost too good to be true. The first planting season provided its own answer.

There is something quietly transformative about watching a bean seed disappear into the soil. The transformation begins with simply a bean seed disappearing into the soil, carrying the promise of a future harvest.

At GS Kimironko II TSS in Gasabo District, during the bean growing season, Leothalie Mukantaganda, a teacher and the in charge of agricultural activities, bends over a garden bed as students measure the distance between planting holes. Nearby, rows of young bean plants have already emerged from the ground. What if food grown in a school garden could improve school meals, create demand for local farmers, and help them grow nutritious varieties using practices that build resilience to climate pressures?

This is the thinking behind two programmes implemented by the Alliance of Bioversity International and CIAT through the Pan-Africa Bean Research Alliance (PABRA): Sustainable School Feeding Innovations (SSFI), supported by Clifford Chance, and Scaling Sustainable School Feeding Innovations (3SFI). SSFI began in Kigali, Rwamagana and Kayonza, while 3SFI is taking the lessons into Western Rwanda in Nyamasheke, Rusizi and Karongi districts. Together, they show how a school meal can become an entry point for transforming a wider food system.

IT STARTS WITH WHAT IS ON THE PLATE AND ONWARDS TO GARDENS, BECOMING LIVING CLASSROOMS

Beans are hardly a new food in Rwanda. They are a staple in households and schools and are deeply embedded in the country's food culture.

A baseline survey for SSFI found that beans were served in 97% of the 195 schools surveyed in Kigali. Rather than asking schools and children to adopt an unfamiliar food, the Alliance and its partners saw an opportunity to make an existing staple more nutritious, easier to produce and easier to prepare.

The same survey found that 74% of the schools (145) already had school gardens, mostly used for food production and teaching. Beans were among the top three crops grown, alongside vegetables and bananas.

The gardens revealed an important possibility. Agriculture did not have to remain something children simply heard about in the classroom. They could



Leothalie Mukantaganda, the in charge of agriculture activities at GS Kimironko II TSS



rather see it, touch it and participate in it.

A bean plant could become a science lesson, a harvest an ingredient in a school meal, and the garden a demonstration of improved practices for teachers, students and surrounding communities.

SSFI therefore worked with schools to strengthen knowledge of nutrition, agronomy and climate resilience. With partners, 300 head teachers and teachers from 150 schools were trained.

At GS Ayabaraya in Masaka Sector, Kicukiro District, that idea became tangible. Alice Muhimpundu, a teacher and in-charge of agriculture activities recalls that some of the science and knowledge shared during training seemed "almost too good to be true." The first planting season provided its own answer: the school planted 12 kilograms of high-iron bean seed and harvested more than 100 kilograms.

Ayabaraya began sharing the knowledge and bean variety with teachers, support staff and community members for use in their home gardens. Students also learned practices they could share at home.

Plans to integrate the beans into school meals raised hopes of addressing students' nutritional challenges. For Alice, a productive, climate-resilient crop can benefit both fields and school feeding.

After the Alliance's training, the school planted just 500 grams of seed and harvested 12 kilograms, sharing some with students who had small plots and keeping some for the next planting season.

The experience is echoed at GS Rubirizi in Kanombe Sector, where head teacher Jean Baptiste Hakizimana focuses on what happens after harvest. After the Alliance's training, the school planted just 500 grams of seed and harvested 12 kilograms, sharing some with students who had small plots and keeping some for the next planting season. Hakizimana describes the variety as "incomparable with any other" he has seen.

Hakizimana also tested the variety at home, planting one kilogram and harvesting 19 kilograms. That is slightly less per kilogram planted than the school achieved (24 kilograms for every kilogram). He attributes the gap partly to differences in inputs, techniques and level of follow-up, and sees room for higher yields as these factors improve.

THE HIDDEN COST OF THE BEAN

Harvesting high-iron beans is only part of the story. Cooking them in school kitchens is another challenge. For schools feeding thousands of children, long cooking hours can be costly.

Working with Farm Fresh, SSFI explored processed and pre-cooked beans to reduce cooking time and fuel use. The focus was on building a school food system that is nutritious, efficient and sustainable. If schools need nutritious beans, their demand can also create a market for farmers.

At GS Kimironko II, Mukantaganda sees both the opportunity and the constraint. The school serves more than 2,000 students but has limited land to grow enough beans for them. The school plans to continue producing the variety while sharing seed with students' parents and other farmers. As production spreads, she hopes the market will eventually have enough supply to meet the needs of all students at the school.



From a Kigali experiment to Western Rwanda: more schools join in

The Alliance's 3SFI project is working across 509 schools in Karongi, Nyamasheke and Rusizi districts. Supported by the Swiss Agency for Development and Cooperation (SDC) and in partnership with the Rwanda Agriculture and Animal Resources Development Board (RAB), government ministries of Education and of Local Government, the National Child Development Agency (NCDA) and East Africa Exchange (EAX), the programme integrates high-iron beans and vegetables into school feeding, linking agriculture, nutrition education and community engagement.

The ambition is larger than improving school meals. Schools become demonstration sites. Farmers become learners and suppliers. Students become participants. And high-iron beans become both a nutritional crop and an agricultural opportunity.

At Mizero TSS in Rusizi District, Bibiane Niyindorera, the school bursar, offers a practical account of how high-iron beans are helping address school feeding challenges while improving agricultural productivity.



Bibiane Niyindorera at Mizero TSS.

The school planted 120 kilograms of drought tolerant high-iron bean seed variety on two hectares and harvested more than 3.2 tons (about 1.6 tons per hectare) in spite of the harsh climatic conditions.

"We were able to harvest 26 kilograms for every kilogram planted," Niyindorera says, pointing to the variety's potential to improve productivity, though she feels unfavourable weather kept them from getting the full yield.

The harvest became part of the school experience. Students' participation was equally educational, and they particularly enjoyed the prepared beans they had helped grow.

For more than 470 students, Niyindorera says the harvest made a big difference during the final weeks of the term. The school used 1.5 tons of beans to prepare meals over a period of over three weeks, reducing the money needed to purchase food.

"The variety came at the right time to help us deal with the challenges of school feeding," Niyindorera says. Students have also enjoyed the taste of the iron-rich beans, while the harvest has eased pressure on the school's limited resources by reducing food purchasing costs.

Beyond the school, Niyindorera sees an opportunity to extend these benefits to surrounding communities. The school already donated 200 kilograms of seed to local communities, encouraging wider production and potentially strengthening the supply of beans for school meals.

For her, however, achieving better results depends on applying the knowledge gained during training and the need to deal with climate shocks for better yields.

"The most important thing is to follow the guidelines and put into practice the knowledge we gained through the training by Alliance of Bioversity and CIAT," she says.

At École Secondaire Bugarama in Rusizi District, Anociatha Nirarija, also a school bursar, tells a similar story after harvesting 250 kilograms from only 10.8 kilograms of seed planted.

"The harvest became part of the school experience. Students' participation was equally educational, and they particularly enjoyed the prepared beans they had helped grow," says Nirarija.

Harvested beans are being served alongside other nutritious vegetables, while increased production in surrounding communities could help make the supply more reliable.

WHEN THE COMMUNITY COMES INTO THE PICTURE

One defining feature of 3SFI is its demonstration plots, where farmers can compare practices, learn planting spacing and soil management and observe improved varieties.

The testimonies from the schools show why. At ES Ayabaraya, iron-rich bean seeds moved from school to teachers, support staff, students and community members. At Mizero TSS, 200 kilograms of seed went to community farmers. At GS Rubirizi, students received seeds to establish their own gardens back home. The school garden is therefore becoming a point from which both food and knowledge travel.

For Ngabire Sam, National Coordinator of the Home-Grown School Feeding Project at the Ministry of Education (MINEDUC), improving school nutrition requires collective effort. "High-iron beans can help address stunting and anemia, particularly among young girls," he says, stressing the importance of a healthy, educated workforce to Rwanda's development agenda.

Ngabire says the 3SFI programme began in schools because knowledge gained through training can spread to surrounding communities as families put new practices into action. He hopes it will also strengthen local production of high-iron beans, helping address persistent supply gaps in school feeding.

Echoing this view, Olivier Kamana, Permanent Secretary at the Ministry of Agriculture and Animal Resources (MINAGRI), emphasises the importance of bean farming in tackling malnutrition. Given beans' widespread consumption in Rwanda, he argues, investing in bean production is essential to improving nutrition and reducing stunting.

MORE THAN A SEED

The 3SFI project recognises that improved seed alone is not enough. A high-performing crop needs the right conditions. Under 3SFI, soil testing guides recommendations on soil fertility and input use. Nutrition education, post-harvest storage and drought-tolerant bean varieties form part of the wider package.

The Alliance has also supplied schools in Karongi, Rusizi and Nyamasheke with 135 farm machines: 90 seed planters and 45 multi-crop threshers to make planting and threshing faster and more efficient.

The story of SSFI and 3SFI is not simply about high-iron beans. It is about connecting research to practice; schools to farmers; agriculture to nutrition; children to the origins of their food; and institutions, communities and businesses around a shared challenge.

The harvests in this story are quantities that can be planted again, served at lunch, taken home, shared with neighbours and turned into the next season's seed.

For Rwanda, the experiment continues. The rows of beans are growing. The lessons are being collected. And from Kigali to Western Rwanda, the school garden is becoming something larger than a garden.

It is becoming a classroom, a source of food, a demonstration plot and a practical bridge between the child with a plate of nutritious food at school and the farmer in the field.



Vice Mayor of Nyamasheke District in charge of Social Affairs (center) and Justine Umutoni CIAT Representative handing over seed planters and a multi-crop thresher machine to beneficiaries.

CONTROLUNION

Control Union Rwanda builds trust in Rwanda's agro-products



For a Rwandan farmer growing coffee, tea, fruits or vegetables, reaching an international market can require much more than producing a good-quality crop. Increasingly, buyers want evidence that the product was produced responsibly, handled safely, can be traced through the supply chain and meets the standards of the market where it is being sold. That is where certification comes in.



Control Union Rwanda is helping businesses and producers navigate this increasingly important world of international standards, providing certification, inspection and other services that can turn compliance into a competitive advantage.

A branch of Control Union Global, whose roots date back to 1920 in the Netherlands, Control Union has grown from its origins in agricultural inspection into a global Testing, Inspection and Certification (TIC) organisation serving clients in more than 80 countries. Its global portfolio includes more than 200 certification programmes covering agriculture, food, sustainability, environment, textiles, forestry, water and other sectors.

In 2017, Control Union Rwanda officially registered its operation with Rwanda Development Board (RDB). From Kigali, its scope extends to Burundi and parts of the Democratic Republic of Congo, making the office a regional hub for certification and related services.

MORE THAN A CERTIFICATE

For Innocent Rusharaza, Managing Director of Control Union Rwanda, certification is fundamentally about standards — and the changes those standards can bring to the way businesses and farmers operate.

The company provides four main areas of service: certification, commodity inspection, collateral management and academy services. Certification remains a major focus, covering standards required by different international markets.

For example, a Rwandan producer exporting to the United States may need to demonstrate compliance with the USDA National Organic Program,

while European buyers may require EU organic certification. Asian buyers may require compliance with JAS, or Japanese Agricultural Standards.

Control Union's certification portfolio includes major schemes such as EU organic, American buyer market may require USDA-NOP or related organic requirements, JAS and GLOBALG.A.P., among many others.

But obtaining the certificate is only the visible end of a much bigger process.

A certification audit can examine how crops are produced, how workers are treated, how chemicals are used, how waste is managed, how products are separated and recorded, and whether a business can trace its products through the supply chain.

In agriculture, this can extend all the way to individual farmers.

CONSIDER A TEA VALUE CHAIN.

A tea factory seeking certification cannot simply improve conditions inside the factory and expect the entire operation to qualify. The certification process can involve plantations and farmers supplying the factory, requiring good agricultural and environmental practices throughout the chain.

This can lead to changes that extend beyond production.

A farmer may be required to adopt safer approaches to waste management, avoid unauthorised agricultural chemicals and improve record-keeping. Issues concerning worker welfare, environmental protection and responsible agricultural practices are part of the process.

The result is that certification can become a mechanism for changing mindsets.

Good Agricultural Practice standards, for example, are designed to address issues including environmental impacts, chemical use, worker health and safety and responsible agricultural production.

For Rusharaza, the value of this process is particularly important in a country such as Rwanda, where agriculture remains closely connected to rural livelihoods.

If one farmer in a certified supply chain is producing according to the required standards, while another is introducing practices that compromise the integrity of the product, the entire value chain can be affected. Certification therefore creates an incentive for consistency — from the farm to processing and ultimately to the market.

> "Certification is fundamentally about standards—and the changes those standards can bring to the way businesses and farmers operate."

Protecting the Integrity of Rwandan Products

Traceability is another critical benefit.

International buyers need to know where a product came from and whether certified and non-certified products have been mixed. Control Union's GLOBALG.A.P. Chain of Custody programme, for example, is designed to maintain the identity and integrity of certified products throughout the supply chain.

THIS MATTERS FOR RWANDA'S EXPORT AMBITIONS.

Rwandan tea production for export, for example is relatively smaller than some regional competitors, yet its reputation for quality has helped it compete strongly in international markets. Certification adds another layer of confidence by providing evidence that production meets recognised standards. For exporters, that confidence can be decisive.

"Certification is a market need," the Managing Director of Control Union says, noting that more Rwandan agro-processing companies are seeking certification as they pursue international markets.

In this sense, certification is not simply about meeting a buyer's checklist. It can help businesses build systems that make them more credible, organised and competitive.



BRINGING GLOBAL STANDARDS TO RWANDA

One of Control Union Rwanda's most significant contributions is bringing international certification expertise closer to local companies.

The local office has built a growing team of auditors, with 31 auditors currently working within its Rwanda scope, including 21 Rwandan citizens. The team also includes Burundian and Congolese professionals serving the company's regional scope.

This localisation is important.

Rwandan auditors understand the country's agricultural systems, business environment and local realities while being trained to apply international standards. Control Union also has structured professional development for its auditors, with personnel progressing through training and field experience from supporting roles to auditor, lead auditor and senior auditor positions.

Rusharaza is a trained senior auditor with a background in Chemistry from the the former NUR, now the University of Rwanda. He later undertook specialised training in certification, particularly in coffee, tea and horticulture, in Kenya, Ethiopia, Asia and Europe.

Today, Rusharaza holds a master's degree in Environmental Economics and Natural Resource Management. He also worked as a Rainforest Alliance Senior Lead Auditor since 2012.

Where specialised expertise is not yet available within the Rwanda office, Control Union's wider international network can provide support. This means Rwandan companies can access expertise from other Control Union offices when particular certification requirements arise.

The company also works with accredited laboratories internationally, including facilities in the Netherlands and India, while Rwanda Standards Board laboratories can support preliminary analysis.

PREPARING FOR THE NEXT FRONTIER

Control Union Rwanda is now looking beyond traditional agricultural certification.

The office is preparing to provide certification services in tourism, alongside carbon-related certification, areas already available within Control Union's global network.

This expansion reflects a broader shift in what markets expect from businesses. Sustainability, environmental responsibility, traceability and climate-related performance are increasingly becoming part of competitiveness — not just corporate responsibility. For Rwanda, that creates an important opportunity.

As the country seeks to increase agricultural exports, develop agro-processing, strengthen tourism and attract investment, businesses must increasingly demonstrate that their products and operations meet international expectations.

CONTROL UNION RWANDA IS POSITIONING ITSELF AT THAT INTERSECTION.

Its role is therefore bigger than issuing certificates. By bringing global standards, independent verification and specialised expertise closer to producers and businesses, the company is helping build trust between Rwanda's supply chains and international markets.

Ultimately, the greatest impact of certification may not be the certificate hanging on an office wall. It is the change that happens before the certificate is issued — the farmer who adopts better practices, the factory that improves traceability, the business that strengthens its systems, and the exporter that gains the confidence to enter a demanding new market.

For Rwanda, those changes can help transform certification from a compliance requirement into a foundation for quality, sustainability and global competitiveness.

> “Certification is not simply about meeting a buyer's checklist. It can help businesses build systems that make them more credible, organised and competitive.”





BUILDING RWANDA'S JERSEY HERD, APPRECIATING THE POTENTIAL OF THE JERSEY COW

Interest in the Jersey cow is growing among Rwandan dairy farmers, and the Rwanda Jersey Farmers and Breeders Association (RWAJEFBA) is working to make sure the animals, the genetics and the markets are there to match it.

BY JOHN MUGISHA

Jersey cattle have been part of Rwanda's cattle farming for decades, but their value is receiving renewed attention as farmers increasingly recognise the benefits of a breed well suited to local farming.

Although relatively few Jersey cattle were present in Rwanda before the 1994 Genocide against the Tutsi, some were kept by farmers, others at government research stations. As the country rebuilt its agricultural sector after, efforts to revive livestock production created renewed opportunities for the breed. Government initiatives and international organisations encouraged farmers to adopt Jersey cattle, both through the importation of live animals and artificial insemination using Jersey genetics.

Heifer International Rwanda was among the organisations that helped farmers access Jersey cattle. Meanwhile, cooperation with the Royal Jersey Agricultural and Horticultural Society expanded access to Jersey semen and strengthened artificial insemination services.

As dairy farming developed, however, many farmers shifted their attention towards breeds and crossbreeds perceived to produce more milk. Jersey cattle, which are smaller than some other dairy breeds, were sometimes considered less valuable, like potential sale price of male cattle.



Ntare Cosmas, the association's chairman

This preference led some farmers to abandon Jerseys without fully appreciating their advantages, including efficient feed conversion, lower feed requirements and adaptability.

Today, interest in the breed is growing again as farmers reconsider what makes a dairy cow productive and profitable under smallholder conditions.

Ntare Cosmas, Chairman of the Rwanda Jersey Farmers and Breeders Association (RWAJEFBA), says the renewed interest is evident at agricultural exhibitions and farmers' events, where people regularly ask where they can obtain Jersey cattle.

"We have farmers who come to us asking where they can get Jersey cattle, but sometimes we do not have the animals to give them," Ntare said.

ORGANISING FARMERS AND IMPROVING THE HERD

Initiated in 2024, RWAJEFBA adopted its first statutes the following year and now has 79 members across 10 districts, with membership continuing to grow. Members come from Gasabo, Rulindo, Gicumbi, Nyagatare, Gatsibo, Kayonza, Ngoma, Rwamagana, Bugesera and Nyanza districts.

The association seeks to bring Jersey farmers together to promote good farming practices, improve breeding and genetics, strengthen animal management and expand market opportunities.

A key priority is genetic improvement through better identification and traceability. The association aims to establish a national Jersey herdbook documenting animals, their parentage, sires and production performance. Such records can help farmers make informed breeding decisions, monitor the quality of their herds and build a stronger foundation for long-term improvement.

"We need to know which animal comes from which parent, its production and its performance," Ntare said. "That is how we improve the breed."



RWAJEFBA members at Agricshow. Farmers regularly ask where to find Jersey cattle.

Beyond genetics, RWAJEFBA aims to strengthen farmers' knowledge and cooperation, helping them manage their cattle more effectively and improve the productivity and profitability of their dairy enterprises.

WHY JERSEY?

The value of Jersey cattle lies not simply in the volume of milk they produce, but in how efficiently they convert available feed resources into milk and other benefits for the farm. Jerseys are specialised dairy cattle known for producing quality milk rich in butterfat and protein. This composition makes their milk particularly valuable for dairy processing.

> "Jersey may not always rank highest in litres of milk, but when you consider the resources available to a smallholder farmer, it is a very appropriate cow."

Their relatively small body size is another advantage, especially in Rwanda, where many farmers have limited land for keeping cattle and producing fodder. Compared with some larger dairy breeds, Jerseys generally require less feed and housing space. Their efficient feed conversion can help smallholder farmers obtain good milk production from the resources available to them.

"Jersey may not always rank highest in litres of milk, but when you consider the resources available to a smallholder farmer, it is a very appropriate cow," Ntare said.

The breed is also valued for its hardiness, adaptability and reproductive performance. Jerseys are generally more heat-tolerant than many other European dairy breeds, while their disease resistance can be an advantage under appropriate management.

Their relatively early maturity and good fertility can also help farmers establish productive herds sooner, provided the animals receive adequate nutrition and veterinary care.

"Jersey are hardy cattle that are not threatened by changing climatic conditions like many other breeds," Ntare observes.

For farmers working with limited resources, these characteristics can make Jersey cattle a practical option. Rather than judging a cow primarily by its size, but consider feed costs, milk composition, reproductive performance, animal health and the overall returns from the herd.

The association also wants milk quality to receive greater recognition in the market. Ntare argues that better consideration of milk composition would encourage farmers to invest in suitable breeds, improved feeding and better animal management.

COLLABORATION TO STRENGTHEN JERSEY FARMING

RWAJEFBA's work is supported by Jersey Overseas Aid through the Royal Jersey Agricultural and Horticultural Society (RJAHS). The Rwanda Agriculture and Animal Resources Development Board (RAB) has also supported the association's institutional development, including the preparation of a strategic plan and procedures manuals.



A Jersey cow at a feeding trough. The breed's low feed requirement suits smallholder farms.

The wider collaboration builds on the RJAHS's longstanding engagement with Rwanda. Following the relationship initiated by President Paul Kagame's visit to Jersey Island in 2004, the Society supplied Jersey semen for crossbreeding between 2005 and 2012 and trained more than 370 artificial insemination technicians.

However, access to appropriate breeding material remains a challenge. Some farmers struggle to obtain semen when needed because of infrastructure limitations, including inadequate access to liquid nitrogen for preserving it.

For RWAJEFBA, improving access to quality breeding must be accompanied by stronger record-keeping and traceability systems. The association also wants to help farmers improve husbandry practices and address the high cost of dairy production.

Together, these efforts aim to expand the availability of suitable Jersey cattle, improve genetic quality and help farmers benefit more consistently from dairy farming.

A FARMER'S EXPERIENCE

For Uwera Flora, a farmer from Rukomo Sector in Gicumbi District, the advantages of Jersey cattle became clear through years of experience.

She obtained her first Jersey cow from Heifer International Rwanda around 2003. Over time, she expanded her herd, sold many animals and she still keeps at least seven today.

"When I got the Jersey, I realised that it did not eat much but produced a lot of milk," she said.

Uwera has strengthened her farming skills through training in cattle feeding, milk hygiene, animal management and fodder production. She now grows fodder, including alfalfa and Desmodium, and shares her knowledge with other farmers through groups she helped establish.

The benefits extend beyond milk sales. Manure from her cattle supports crop production, while surplus farm produce provides another source of income. After her husband died, income from livestock helped her raise their 15 children, meet healthcare expenses, acquire land and improve her home.

Her experience illustrates why the value of a dairy cow cannot be measured by size or milk volume alone. For a smallholder farmer, a suitable breed can support both livestock and crop production, strengthen household income and provide a more sustainable foundation for family livelihoods.

As RWAJEFBA works to improve breeding, traceability and farming practices, experiences such as Uwera's offer a practical reminder of the potential Jersey cattle hold for Rwanda's smallholder dairy sector.



Uwera Flora feeding fodder to one of her Jersey cattle.

FROM SUBSISTENCE TO PROSPERITY: THE QUIET TRANSFORMATION OF RWANDAN AGRICULTURE

For years, the reality for many of Rwanda's smallholder farmers was a cycle of season-to-season survival. Staple crops like maize put food on the table but rarely generated the surplus needed to lift families out of poverty, invest in their futures, or withstand increasingly frequent climate shocks. Often, farming has been about getting through the next harvest, not planning for the next generation.

Anatholie Ayinkamiye, a 39-year-old mother of three from Nyagatare District, knows this reality well. Before 2021, she farmed one hectare of land without access to quality inputs, scattering seeds by hand and harvesting just four bags of maize (about 400 kilograms). She farmed under the traditional Tugabane arrangement, a farming practice where land owners and landless members work together and fairly share the harvest. Because of this she was left with only two bags.

"With the two bags, I had to sell one to be able to plant for the next planting season, and we ate the remaining one," Anatholie says.

After joining Tubura, she gained access to financing, improved seeds, quality farm inputs, and agronomic training; increasing her harvest to 35 bags of maize that season.".

"I was so happy with my first harvest. But what made me happier was finally completing the loan we had taken to buy our house. I can't fully express the feeling of owning your own home,"she says.

> "I was so happy with my first harvest. But what made me happier was finally completing the loan we had taken to buy our house. I can't fully express the feeling of owning your own home."

This is just one story of what happens when farmers have access to the right support. Rwanda's Vision 2050 and the Fifth Strategic Plan for Agriculture Transformation (PSTA 5) set out an ambitious vision to move beyond increasing farmer production towards a modern, climate-resilient, and market-oriented food system.

PRODUCING MORE AND BETTER

The first pillar of PSTA 5 recognizes that increasing productivity begins with ensuring farmers can access the right tools and support. Quality seed, improved farm inputs, practical agronomic training, and climate-smart farming practices all play a critical role in helping smallholder farmers increase yields sustainably.

Across Rwanda, organizations such as Tubura are working with Anatholie and millions of other farmers to bring these services closer to their farming communities. Through a network of more than 1,800 Tubura field officers, farmers can access quality inputs and financing within walking distance of their homes, while receiving hands-on training and ongoing support to adopt improved farming practices. The impact extends far beyond the harvest, giving farming families the opportunity to invest in productive assets, improve household nutrition, educate their children, and strengthen their financial security.

BUILDING RESILIENCE AND OPENING MARKETS

As climate change makes



Anatholie Ayinkamiye, Gacundezi Sector, Nyagatare district

weather patterns increasingly unpredictable, resilience has become just as important as productivity. Farmers need climate-smart farming systems alongside reliable markets that enable them to earn a stable income and invest confidently in their futures.

For Odette Mukabarame, a 57-year-old mother of three from Gisagara District, resilience came through receiving support that turned a crop she had always grown into a dependable source of income. For years, she harvested avocados, but without reliable buyers, much of her fruit spoiled before it could be sold.

"Sometimes I would take the avocados to the market and couldn't get clients. Because they were ripe, I couldn't keep them any longer. I ended up giving them to pigs or throwing them away," she says.

Today, Odette sells her avocados through Tubura's market access program, where she has a guaranteed buyer and more stable prices.

"I am no longer worried about whatever quantity I may have because they will buy it,"Odette says. "I have a source of income. Now I can plan to buy livestock because I am getting money on time."

Like agroforestry trees, fruit trees also improve soil health, reduce erosion, strengthen biodiversity, and provide income that is less vulnerable to seasonal rainfall than annual crops. Since 2016, Tubura has distributed more than 145 million trees across Rwanda, helping farming households strengthen both their farms and their financial resilience.



Odette Mukabarame, Kigembe sector, Gisagara district.

Equally important is connecting farmers like Odette to fair markets. Through training, aggregation services, and access to premium value chains such as avocados, chilli, green beans, and green coffee; farmers are able to earn more from what they produce.

Last year, the organization aggregated and exported more than 378 metric tonnes of Rwanda's produce, creating greater opportunities for farming families.

Investment in local value addition is equally critical. In partnership with Impact for Africa, we established Avocado Oil Industries, an industrial-scale avocado oil processing facility, which has the capacity to process over 200 metric tons per week. The organization ensures fruit that once went to waste is processed locally, retaining more value within the country while creating employment opportunities for young people.

A SHARED VISION FOR LASTING PROSPERITY

The experiences of Anatholie and Odette show what is possible when smallholder farmers have access to the right support at every stage of their journey.

Achieving the Vision 2050 and the success of PSTA 5 will ultimately be measured, not only by harvests, but by whether farming families are better equipped to withstand climate shocks, invest in their futures, and see agriculture as a pathway to prosperity and in turn, largely contribute to the sector.

Continued investment in organisations already supporting farmers across the value chain will be essential to scaling proven approaches, reaching more households, and accelerating Rwanda's agricultural transformation.

This is what Vision 2050 looks like on the ground: farmers who are no longer farming simply to survive, but who are building resilient livelihoods and creating opportunities for generations to come.

About One Acre Fund Rwanda (Tubura)

One Acre Fund Rwanda, known locally as Tubura, is a Community Benefit Company supporting smallholder farmers to build resilient communities by providing agricultural solutions, financing, and training they need to grow more food and become prosperous. Through its three strategic pillars—Productivity, Resilience, and Markets—the organization directly contributes to Rwanda's Vision 2050 and PSTA 5.

Founded in 2007, One Acre Fund Rwanda currently serves over 1 Million farmers directly and more through partnerships, reaffirming its commitment to sustainable, farmer-focused development.

For more information, visit www.oneacrefund.org.

FARM TO FAMILY TABLE: TRÓCAIRE IS BUILDING A MORE RESILIENT FOOD SYSTEM FOR VULNERABLE COMMUNITIES

Across Rwanda, Trócaire and its civil society partners are helping vulnerable farming communities produce more food, improve nutrition, access markets and build livelihoods that can withstand climate shocks. At the heart of this work is an agroecological approach that connects sustainable farming practices with climate resilience, healthy soils, biodiversity and local knowledge, helping farmers work with nature while strengthening their livelihoods. For farmers who depend on small plots of land, these practices are more relevant than ever, as they are increasingly helping them adapt to a changing climate, keep their soils productive and sustain their farms for generations to come. Ultimately, this makes the difference between a family having enough food, selling a surplus or struggling through the dry season.

In many parts of Rwanda where Trócaire's intervention programmes have been rolled out, the difference is now more visible than ever. Manwari Cell in Mbazi Sector, Nyamagabe District, offers a compelling example. The link between improved harvests, increased agricultural productivity and climate resilience is becoming increasingly evident with Trócaire's agroecological approach. By helping communities strengthen their capacity to produce and withstand climate-related shocks, these interventions are contributing to higher household incomes while helping address nutrition challenges among surrounding communities.

Farmers who once carried watering cans, basins and plates to keep crops alive can now rely on gravity-fed and solar-powered irrigation system that allows them to cultivate throughout the year.



Marleen Masclee,
Country Director of Trócaire

For Marleen Masclee, Country Director of Trócaire Rwanda, this is at the heart of the organisation's approach: agriculture cannot be separated from climate resilience, household income, nutrition and environmental protection.

"Everything we do is very much linked at the intersection of agriculture and environment," Marleen says. The objective is not simply for farmers to produce enough food today, but to farm in ways that keep soils healthy so that future generations can continue producing.

FROM EMERGENCY RESPONSE TO LONG-TERM RESILIENCE

Trócaire began working in Rwanda in the aftermath of the 1994 Genocide against the Tutsi, initially supporting lifesaving and reconstruction efforts before progressively moving into livelihoods and development.

Its current Rwanda programme focuses strongly on climate resilience, agriculture and livelihoods, women's empowerment, humanitarian response when necessary, and localisation through partnerships with national and community organisations.

This partnership model is particularly visible in the Climate Just Communities (CJC) Programme, supported by the Scottish Government. Working with DUHAMIC-ADRI, Duterimbere, the National Union of Disability Organisations in Rwanda (NUDOR) and Rwanda Climate Change and Development Network (RCCDN). The programme targets vulnerable communities in Karongi, Ngororero and Gisagara.

These organisations were not simply implementing agencies. They provided the local knowledge, community relationships and technical support needed to turn climate and agricultural interventions into practical household-level change.

Marleen specifically credits DUHAMIC-ADRI





and DUTERIMBERE with supporting farmers and households, through irrigation and large-scale terracing. She says hundreds of hectares have been terraced and brought into agricultural use. UNICOPAGI, a farmers' cooperative in the Southern Province, has also played an important role in organising and supporting farmers, while CCOAIB has contributed to national advocacy and helped farmers and citizens understand agricultural policies and their rights and responsibilities.

This civil-society infrastructure is important because the interventions are intended to remain with communities after individual projects end.

WHEN WATER BECOMES FOOD

One of Trócaire's most practical contributions to agriculture has been improving access to water.

Through local partners and collaboration with districts and cooperatives, Trócaire has supported rainwater harvesting and irrigation systems that allow households to continue producing vegetables and crops during dry periods. The systems vary according to local conditions, with communities and cooperatives taking responsibility for their management.

The Manwari irrigation initiative illustrates what this means for farmers.

Before the intervention, Valentine Mukagashugi says farmers could cultivate only small areas because there was no reliable irrigation. They improvised with watering cans, basins and plates, but water was insufficient.

"Water was insufficient, and so the harvest was poor," she recalls. The consequences extended beyond production: families had less food and local markets had fewer vegetables.

Today, irrigation allows farmers to cultivate during all seasons and supply produce to the market.

According to Emmanuel Ntakirutimana, a member of the irrigation committee, farmers now receive water on time and have increased production and food security. Just as importantly, farmers regard themselves as the first beneficiaries and owners of the system and have committed to maintaining it.

MORE PRODUCTION, BETTER NUTRITION AND STRONGER LIVELIHOODS

The impact extends beyond irrigation infrastructure.

The independent endline evaluation of the CJC programme found that the proportion of participating farmers able to produce crops or vegetables throughout the year increased from 27% at baseline to 60% at endline.





Marleen reports a comparable improvement across Trócaire's wider programme funded by Irish Aid and the Irish public, saying that the proportion of people reached who can now grow vegetables and crops throughout the year has risen from about 20% to at least 60%. She links the progress to an integrated approach combining agricultural production, climate resilience and diversification of household income through livestock and off-farm activities.

For nutrition, this matters because regular access to vegetables can improve the diversity and reliability of household diets.

The CJC evaluation found that almost 80% of participants reported being self-sufficient in vegetables from kitchen gardens, compared with only 11% at baseline. Livestock ownership also increased substantially, from 50% to 86%, with 82% of livestock owners attributing their livestock ownership to the programme.

Yet the evidence also shows why resilience remains a long-term task. Sixty-four percent of CJC participants still reported experiencing food shortages although this was down from 79% at baseline. The evaluation therefore concludes that important gains have been made, but food insecurity remains a significant challenge.

A PROMISING FUTURE: CONSERVING LAND AND CONNECTING FARMERS TO MARKETS



Producing more food is only part of the equation. For farmers to turn a good harvest into lasting livelihood gains, they also need ways to preserve, market and earn from what they produce.

Trócaire's partners have supported community storage and drying facilities, alongside low-cost household storage methods designed to protect crops from spoilage, insects and animals. In some cases, the investment in irrigation has also been complemented by a community market, creating a stronger link between production and income.

The approach, therefore, is not simply about helping farmers produce more this season. It is about strengthening the ecological foundation on which future production depends.

Vegetable vendor Marie Claire Mushimiyimana remembers a time displaying her produce directly on the ground, leaving it exposed to dust and rain. The new market offers a cleaner and more organised space to sell, making customers more comfortable thereby contributing to increased income.

Elsewhere, Trócaire-supported partners have helped strengthen value chains around products such as sweet potatoes and mushrooms, connecting producers to markets within Rwanda and beyond.

Together, these civil society partnerships connect several stages of the food system — from production and climate adaptation to storage, markets, farmer organisation and policy engagement.

But building a stronger food system also means protecting the natural resources that make sustainable production possible. For Marleen, increased agricultural output cannot come at the expense of the soil, water and ecosystems on which farmers depend.

That is why Trócaire links agricultural support with soil and water conservation, terracing and climate adaptation. Partners such as DUHAMIC-ADRI and DUTERIMBERE have supported large-scale terracing and irrigation activities, with Marleen noting that hundreds of hectares have been brought into productive agricultural use through these interventions.

In Karongi and Ngororero districts, communities identified soil erosion, soil degradation, acidity, flooding and landslides among their major challenges. Their responses included progressive and radical terraces, afforestation, contour digging, riverbank protection, tree nurseries and increased use of organic manure.

In Gisagara, communities identified drought, flooding, irregular rainfall, environmental degradation and low agricultural productivity as factors contributing to food insecurity and poverty.

The approach, therefore, is not simply about helping farmers produce more this season. It is about strengthening the ecological foundation on which future production depends.

At the heart of this approach is a strong reliance on organisations already rooted in the communities they serve. Local partners understand the social and economic realities facing households and can maintain relationships beyond individual interventions.

The CJC evaluation found





that, working through local delivery partners was effective partly because these organisations were already known in the districts and sectors where they operated. The evaluation also highlighted the programme's community-led approach and its engagement with government throughout planning, implementation and monitoring. Sixty percent of participants said their lives had "improved a lot", while another 38% said they had improved a little, with livelihood security identified as the programme's greatest impact.

The benefits extended beyond farming. The evaluation found improvements in people's confidence that marginalised groups could participate in community decision-making, alongside greater recognition of the rights and participation of people with disabilities.

For Trócaire, this is what makes agriculture a development issue rather than simply a production issue.

Marleen points to collaboration with MINAGRI, RAB, district authorities and the Ministry of Environment as an important part of the enabling environment. At civil society level, organisations including DUHAMIC-ADRI, DUTERIMBERE, RCCDN, UNICOPAGI and CCOAIB bring complementary strengths, ranging from household agricultural support and farmer organisation to climate advocacy and policy engagement.

Trócaire's wider experience also demonstrates the role civil society can play in agricultural governance. Its research on citizen participation in local agricultural governance found that CSOs and NGOs have helped connect farmers with agricultural policies, strengthen associations and cooperatives, and support community-level participation.

Ultimately, Trócaire's contribution to Rwanda's agriculture and nutrition story is about more than increasing production. From an irrigation canal in Nyamagabe to a kitchen garden in a climate-vulnerable community, the focus is on strengthening households' ability to produce food, generate income and withstand shocks.



In Manwari, that change is tangible. Water reaches the fields, vegetables reach the market, farmers can cultivate for longer periods and households have greater opportunities to secure food and income.

Marleen observes that, success is not simply measured by how much a farmer produces today. It is whether families can continue producing, earning and feeding themselves when the next dry spell, heavy rainfall or economic shock arrives — and whether communities have the knowledge, organisations and systems to sustain those gains.

The evaluation also highlighted the programme's community-led approach and its engagement with government throughout planning, implementation and monitoring.

That is where Trócaire's partnership with Rwanda's civil society becomes critical: turning agricultural interventions into locally owned systems capable of sustaining progress beyond the life of a programme.

BUILDING AGRICULTURAL SYSTEMS THAT SUSTAIN INNOVATION

In conversation with
Dr. Eliud Abucheli Birachi



Agricultural research can produce new varieties, technologies and knowledge. But what happens when those innovations leave the research environment?

For **Dr. Eliud Abucheli Birachi, Country Representative of the Alliance of Bioversity International and CIAT in Rwanda,** the real measure of success is whether innovations influence decisions of farmers, entrepreneurs, businesses and institutions—and whether the benefits continue beyond the life of a project.

Q: What does the Alliance of Bioversity International and CIAT bring to agricultural development in Rwanda?

Dr. Birachi: The Alliance brings together the complementary strengths of two institutions CIAT and Bioversity. CIAT has strong expertise in agricultural innovation and commodities, while Bioversity International contributes expertise in biodiversity, conservation and the sustainable use of diverse crops and food resources.

Our goal is to create synergies that deliver greater impact. We are not just interested in research for its own sake; our work should contribute to tangible outcomes that matter to people such as higher incomes, improved nutrition, gender equality and inclusion, biodiversity conservation and climate resilience.

> **"Women should not be viewed only as beneficiaries. They can be entrepreneurs, investors, processors, aggregators and service providers."**
> **-Dr. Birachi**

In Rwanda, this means aligning our research with national priorities and working closely with national institutions.

Q: How is the Alliance contributing to country's agricultural modernization?

Dr. Birachi: Our research must respond directly to Rwanda's agricultural priorities. One important area is crop development, where we work jointly with the Rwanda Agriculture and Animal Resources Development Board (RAB) to develop varieties that are productive, climate-resilient and nutritious.

But developing a variety is only the beginning. We also have to ensure that farmers can access the technology and that private-sector actors, processors and businesses can create value around it. That requires looking at the entire system — from technology development and dissemination to markets, employment, investment and long-term sustainability.

Q: What have you learned about the difference between developing an innovation and getting it adopted?

Dr. Birachi: A good technology has little impact if people cannot access it. For example, farmers may have access to an improved variety, but if seed is unavailable or there is no reliable market for the produce, adoption will not be sustained.

That is why we work across the value chain. Together with RAB, we have supported seed entrepreneurs, contributing to the growth of Rwanda's private seed sector. We now have more than ten enterprises involved in the seed business.

One particular encouraging example is a woman who began as a contracted seed multiplier and later established her own seed company. Her business can now produce more than 80 metric tonnes of seed in a season. This demonstrates how agricultural interventions can help create sustainable businesses rather than dependency.

Q: Why are women entrepreneurs important to agricultural transformation?

Dr. Birachi: Women should not be viewed only as beneficiaries. They can be entrepreneurs, investors, processors, aggregators and service providers.

We have worked with an entrepreneur who contracts more than 20,000 farmers, providing varieties and other support and purchasing their grain. About 70 percent of those farmers are women. Her business is therefore creating markets and opportunities for thousands of farmers while also creating value for herself.

This is the kind of model we need to see more of. Where a business opportunity strengthens farmers' livelihoods and, at the same time, creates a viable enterprise.

Q: What does the growth of bean processing tell us about Rwanda's agricultural future?

Dr. Birachi: Rwanda is increasingly recognizing opportunities in value addition. There are now investors developing products such as composite porridges, pre-cooked foods and snacks from beans. This creates additional demand for agricultural production. Crops become raw materials for other businesses, generating opportunities for employment, investment and income. That is an important part of agricultural transformation.

Q: What does sustainability mean in practical terms?

Dr. Birachi: Sustainability means that the value created by a project continues after the project ends.

We have seen this in schools that participated in earlier projects and continue growing crops even after those projects formally ended. They continue because they have recognized the value of the practices.

We should ask: Has a business been created? Has a technology been adopted? Is the school continuing the practice? Has a local institution developed the capacity to continue the work? Those are stronger indicators of lasting impact.

Q: How important are partnerships in achieving this?

Dr. Birachi: Partnership is absolutely essential. Agricultural transformation cannot be achieved by one institution.

Research institutions bring knowledge and technology; government provides leadership and institutional frameworks; farmers understand production realities; businesses understand markets; and financial institutions can provide investment.

We work with national institutions so that innovations can become part of Rwanda's agricultural development.

Q: Can Rwanda's agricultural innovations benefit the wider region?

Dr. Birachi: Absolutely. Some bean varieties and technologies developed and tested in Rwanda are now being used in neighboring countries, including the Democratic Republic of Congo, Burundi and Tanzania.



Rwanda has also played an important role in the development and dissemination of high-iron beans. This demonstrates that innovation does not always have to come from outside Africa. Rwanda can develop and test solutions suited to its own conditions and share them with countries facing similar challenges.

Q: What is needed to take Rwanda's agricultural transformation to the next level?

Dr. Birachi: We need strong seed systems, functioning markets, investment, processing capacity, access to finance and capable institutions.

Climate resilience must also be integrated into these systems, while ensuring that women and young people participate meaningfully.

Q: What gives you confidence that this is achievable?

Dr. Birachi: The examples we are already seeing. When a woman who started as a seed multiplier establishes her own seed company, when an entrepreneur creates a market for more than 20,000 farmers, and when schools continue practices after projects end, we see evidence that innovation can become locally owned and sustained.

The Alliance's role is to contribute knowledge, technologies, partnerships and capacity. But ultimately, the transformation has to belong to Rwanda.

Linking farmers to Global Markets:

Horizon SOPYRWA Builds Rwanda's Natural Products Industry



In the volcanic soils of northern Rwanda, a small flower called pyrethrum has become an important source of income for thousands of farming families. It has also built the reputation of Horizon SOPYRWA Ltd, Rwanda's leading pyrethrum producer and exporter, but today the company's work reaches well beyond it.

Horizon SOPYRWA has grown into two further areas: essential oils and potato seed multiplication. The three lines are separate, each with its own crops, processes and customers, yet complementary, resting on a shared foundation: a network of more than 37,000 farmers and a commitment to adding value locally.



PYRETHRUM: THE FOUNDATION

Pyrethrin is a natural insecticide derived from the dried flowers of the pyrethrum daisy, and one of Rwanda's valuable cash crops. It is grown mainly by smallholders in Musanze, Burera, Nyabihu and Rubavu districts, where high altitude, volcanic soils and reliable rainfall provide suitable growing conditions.

For these farmers, the crop is more than an export commodity. Income from pyrethrum helps pay school fees, uniforms, books and other household essentials. Farmers who grow it alongside potatoes also report benefits from its natural pest-deterrent properties.

ESSENTIAL OILS: FROM FARM TO DISTILLATION

Separate from pyrethrum, Horizon SOPYRWA's essential oils business turns aromatic plants into natural ingredients. The company works with local farmers and cooperatives around the country and follows a farm-to-distillation approach.







The range includes eucalyptus, rosemary, lemongrass, geranium and ginger oils, along with green coffee oil/extract and roasted coffee bean extract. Patchouli and Artemisia are under research.

Quality is built into the process. Product documentation may include laboratory testing and Certificates of Analysis, depending on the product. For ginger oil/extract, the company has referenced gas chromatography–mass spectrometry (GC-MS) analysis from a certified laboratory. Buyers in fragrance and personal care need to know exactly what is in each batch, which is why testing and documentation matter as much as sourcing.

Horizon SOPYRWA develops these natural ingredients for commercial markets, including fragrance, personal-care and home-care formulations. For farmers and cooperatives, local processing opens a market beyond pyrethrum. For Rwanda, it keeps more of the value in the country.

POTATO SEED MULTIPLICATION: QUALITY FROM THE START

The third line meets a basic need in Rwanda's potato value chain: good planting material. Irish potato is one of the country's important food crops, and every harvest begins with seed. Horizon SOPYRWA's seed programme includes a tissue culture laboratory, which supports the production of clean planting material under controlled conditions, and a high-tech greenhouse, where plant material is grown and multiplied in a controlled environment.

The company sells plantlets, mini-tubers, and pre-basic, basic and certified seed potatoes, covering the successive stages of multiplication from laboratory plantlet to the certified seed farmers plant in their fields. Available varieties include Kirundo, Kinigi and Cyerekezo.

Clean, quality planting material supports healthier crops and better productivity for farmers, and strengthens the wider agricultural sector. Horizon SOPYRWA is developing this line alongside its established pyrethrum and essential oils businesses.

LOOKING AHEAD

Horizon SOPYRWA's focus is value addition and diversification beyond pyrethrum, improving quality, strengthening agricultural production and creating additional market opportunities. Essential oils and potato seed multiplication are important parts of this direction.

Flower, oil or seed potato, the pattern is the same. Horizon SOPYRWA connects farmers to local processing, quality products and market opportunities, strengthening Rwanda's agricultural value chains and keeping more of the value they create in the country.

BEYOND THE FLOWER

In a Musanze factory, AgroPy turns Rwandan pyrethrum into finished crop-protection and veterinary products for Rwanda and regional markets.

BY STEVEN NSAMAZA

Since the 1994 Liberation, Rwanda's agriculture sector has steadily moved beyond the production of raw commodities toward a more ambitious goal: creating greater value from what the country grows.

Pyrethrum grows well in Rwanda's volcanic soils. For decades, that was the end of the local story: farmers harvested the flower and exported a raw material with no value added, and Rwanda would later import pyrethrum-based products at a very high price.

Today, AgroPy's factory in Musanze is working to change where that chain stops.

The company buys refined pyrethrum oil from Horizon SOPYRWA, which works with farmers and processes the crop. Then AgroPy uses it as the main active ingredient in its own formulations — products designed to protect crops, animals and people, from pests.

It is the only Rwandan company adding value to pyrethrum rather than letting the refined ingredient leave the country entirely.



Deo Agaba, AgroPy's Managing Director

"Rwanda should not just produce and export," says Deo Agaba, AgroPy's Managing Director. "We need to add value."

It is a simple sentence, and it sits at the centre of a much larger shift: creating greater value from what the country grows. Rwanda's Productivity still matters, but so do processing, manufacturing, quality standards, technology and access to higher-value markets. AgroPy, established in 2011 as Agropharm Africa Ltd, is one expression of that ambition.

AgroPy's objective is to promote local value addition by transforming Rwanda's natural resources into high-quality, value-added products that are prioritized for domestic consumption, with a significant proportion supplied to the Rwandan market before being exported.

This approach aims to strengthen domestic market demand, foster industrialization, create jobs, support sustainable economic growth, reduce reliance on imported finished products, and enhance Rwanda's export competitiveness.

FROM CROP TO SOLUTION

One of AgroPy's early milestones came in 2016, when it worked with the National Agricultural Export Development Board (NAEB) to introduce Pyrethrins 2.19% EWC, a pyrethrum-based product used against Antestia bug in coffee.











The product continues to be used by organic coffee growers.

The company has since worked with institutions including the Rwanda Agriculture and Animal Resources Development Board (RAB), the Ministry of Agriculture and Animal Resources (MINAGRI), NAEB, Rwanda Biomedical Centre (RBC) and the Rwanda Development Board (RDB), among others, on product development, field trials, responses to agricultural challenges and public health through mosquito's control and other pests.

During the Fall Armyworm outbreak in the country, AgroPy supplied pesticides as part of the emergency response. It has also worked with RAB on strategic pesticide stocks for rapid deployment in the event of Desert Locust threats and supplied PermaPy Plus in response to Rift Valley Fever outbreak among cattle.

Mr Agaba says such work shows that value addition is not only about turning one physical product into another. It is also about developing solutions around the needs of citizens.

That philosophy has pushed the company to invest in research and field trials, like exploring biological approaches such as entomopathogenic nematodes (EPNs).

TAKING LOCAL PRODUCTS BEYOND RWANDA

The next test was whether locally formulated products could find customers outside the country. Between 2017 and 2022, AgroPy expanded into Ghana, initially supplying AgroPy 5EW for organic cocoa production. In 2026, the company also supplied Ghana COCOBOD, Ghana's cocoa sector regulator. The company exports 20 tonnes per year and its products have also been registered in Uganda and Tanzania.

For a company whose raw material begins with a crop grown by Rwandan farmers, reaching regional and international markets represents another layer of value. It means the country is not simply selling what it grows; it is selling knowledge, formulation, quality and finished solutions.

Quality has become central to the company's operations. AgroPy obtained ISO 9001:2015 certification in 2017 and now operates an Integrated Management System (IMS) incorporating a Quality Management System (QMS), an Environmental Management System (EMS), and an Occupational Health and Safety Management System (OHSMS).

It has also obtained







Ecocert registration for crop-protection products, supporting its work with organic-oriented production.

PROTECTION FOR THE FARM, THE HERD AND THE HOME

Whatever threatens what you have built, whether pests in the coffee, ticks on the cattle or mosquitoes in the bedroom, AgroPy has a product made for it.

On the farm, AgroPy 5EW and AgroPy EWC+ are pyrethrin-based insecticides trusted by organic coffee and cocoa growers, also used in other crops including fruits and vegetables, while Agrothrin protects stored grain.

For livestock, PermaPy keeps ticks, flies, mites and lice off cattle, sheep and dogs, Inkuyo+ fights flies ,ticks and mange, and A-Dust protects poultry from mites and lice. PermaPy Plus served the national Rift Valley Fever response.

At home, Bireti Repel keeps mosquitoes and other insects away from the family, Tuuza kills flying and crawling insects such as flies, ants and cockroaches, Bireti Plus tackles stubborn bedbugs and cockroaches, and AgroPy Hand Sanitizer, made with 80% ethanol, kills infection-causing germs.

For businesses and institutions, Fenitrothion controls termites, bedbugs and cockroaches, and AgroPy 33, applied by thermal fogger, treats entire spaces. AgroPy's teams serve banks, hotels, embassies, schools and health centres. Working with the RBC and local authorities, they have helped fight malaria through indoor residual spraying.

For customers, that means a crop that survives, a herd that stays healthy and a home that stays safe.

In northern Rwanda, the journey from crop to refined ingredient to finished solution — is already underway. And it raises a question that reaches well past pyrethrum: not only what Rwanda can produce, but how much more it can create from what it already grows.

Contact AgroPy Ltd:
+250 788 384 846,
info@agropyltd.com |
www.agropyltd.com



ARDI GUIDES FARMERS TO TURN NATURE INTO OPPORTUNITY

As you leave Kigali after Kabuga towards Rugende, a hill overlooking the wetland comes alive with trees. Rows of tree species selected for their friendliness to bees form a living demonstration farm. Tucked among the greenery are offices of the Association Rwandaise pour la promotion du Développement Intégré (ARDI), barely visible from the road. The setting reflects the organisation's philosophy: helping farmers build livelihoods by working with nature rather than against it.

Established in 1982, ARDI is an organisation that supports grassroots initiatives and has since helped communities develop sustainable sources of income. One of its earliest areas of focus was beekeeping, particularly in southern Rwanda, where many households faced food insecurity.

"We wanted farmers to benefit from areas that could not easily be cultivated," says ARDI Executive Secretary Patrice Musabimana. "If a farmer planted trees, they could wait years before getting any income. Beekeeping gave them a way to earn from those trees while also protecting them."

ARDI began providing beekeepers with training and equipment, helping farmers turn honey production into a viable livelihood. But the organisation soon realised that producing honey was only part of the challenge. Farmers also needed reliable markets and better prices.

That led ARDI to establish a complementary business structure that could collect, process and market honey. In 2010, it registered API Business Development Company Ltd (ABDC), a company involved in adding value to and selling honey.

According to Gilbert Kabayiza, the Manager of ABDC, the company works directly with cooperatives. It agrees on contracts at prices based on prevailing market conditions. Once a contract is signed, farmers receive an advance payment and the equipment needed to produce quality honey.

After harvesting, the honey is collected and transported to ABDC laboratories, where it is tested to ensure it meets quality standards. It is then processed and packaged before reaching consumers.

The approach has helped transform the value of honey. Musabimana says the average price per kilogramme has risen from around Rwf1,000 to about Rwf5,000, creating significantly greater income opportunities for beekeepers.

For some farmers, the change has gone beyond additional household income. Improved earnings have enabled beneficiaries to invest in homes, vehicles and other





assets, giving families a greater sense of economic security.

MODERN HIVES, HIGHER YIELDS

For 70-year-old Paul Nsabimana, beekeeping has been a lifelong activity, but it was ARDI's support that helped him turn traditional beekeeping into a more productive livelihood. A member of COOPAN Cooperative in Ryamulindwa, Nkungu Sector, Rusizi District, Nsabimana began adopting modern beekeeping practices in 2007 after receiving training, equipment and opportunities to participate in study tours, including a visit to Tanzania.

> "We used to harvest only two or three kilogrammes. With modern hives and improved practices, production rose to as much as 30 kilogrammes per hive."

Working near Cyamudongo Forest, he now harvests more than 600 kilogrammes of honey annually. This income, has helped him build his home and meet his family's basic needs.

In Huye District, Patrick Uwingabire, 40, has witnessed a similar transformation. President of KOPABUHU Cooperative in Kigarama Village, Nyakagezi, Huye Sector, Uwingabire inherited traditional beekeeping from his grandfather and later joined other young people to develop the activity.

Before ARDI's intervention, production was low and honey fetched little value. ARDI provided training, beehives and equipment, while its field staff regularly followed up with the cooperative. "We used to harvest only two or three kilogrammes," Uwingabire



recalls. With modern hives and improved practices, production rose to as much as 30 kilogrammes per hive.

The transformation has extended beyond honey production. Uwingabire says those who entered beekeeping as youth have since bought land and built houses. He himself has expanded his landholding near a road with electricity, where he grows bananas that generate about Rwf3 million a year. His honey production has also grown from 60 kilogrammes annually to around one tonne.

For both Nsabimana and Uwingabire, the success of beekeeping has been significant enough to inspire some of their children to follow in their footsteps.

Today, ARDI is working with 37 cooperatives representing about 2,420 farmers. Its support goes beyond beekeeping equipment, covering training, cooperative management and technical assistance.

The programme has also created opportunities for other members of the community. Young people are involved in carpentry, producing more affordable modern beehives, while women participate in tailoring protective clothing for beekeepers. Others produce skin oils from hive products, helping communities capture value from different parts of the apiculture chain.

ARDI's work is built around four broad areas: apiculture; food security and green development; environmental protection; and strengthening cooperatives and other partners.

Yet the organisation says the sector faces growing challenges. Pressure on forests can lead to the cutting of young trees, reducing the food sources available to bees. The excessive use









of chemical pesticides is another concern, as these can kill bees and affect honey production.

Musabimana believes farmers can play an important role in reversing these challenges. Encouraging wider adoption of beekeeping because bees contribute to pollination and can improve agricultural productivity. He also advocates for greater use of plant-based pesticides and awareness of good practices favorable to bees.

For ARDI, the future of apiculture lies not only in producing more honey but in making greater use of the many products that bees and their hives can provide. Farmers already produce honey, candles and skin oils, while other potentially valuable products such as bee pollen, bee venom, propolis and royal jelly remain largely undeveloped.

ARDI is gradually exploring projects to develop these products and create additional income streams for farmers.



ABDC's main market remains Rwanda, although its products have also reached international markets in Europe, the Middle East and Africa. With better processing, quality control and market access, ARDI believes Rwanda's beekeeping sector can continue moving from a traditional rural activity into a more valuable agricultural enterprise.

From the tree-covered hill overlooking Rugende wetland to cooperatives across the country, ARDI's experience demonstrates how supporting farmers with knowledge, equipment and markets can unlock value from resources that might otherwise remain underused.

For thousands of farmers, the humble bee is proving to be more than a source of honey. It is becoming a pathway to stronger livelihoods, healthier ecosystems and a more productive agricultural future.



GABIRO AGRIBUSINESS HUB: WHERE IRRIGATION MEETS VAST AGRICULTURAL INVESTMENT, MARKETS AND GROWTH

For Aloysius Ngarambe, Chief Executive Officer of Gabiro Agribusiness Hub (GAH), the transformation of agriculture cannot be measured simply by the amount of land developed or infrastructure constructed.

The real measure, he says, is whether that infrastructure creates productive businesses, improves agricultural productivity, attracts investment, generates employment and connects Rwandan farmers and producers to sustainable markets. That thinking is at the heart of Gabiro's emerging model.

Located in Nyagatare District in Rwanda's Eastern Province, Gabiro Agribusiness Hub was conceived as an integrated agricultural development platform, bringing together irrigation, land development, private investment, agricultural production, infrastructure, market linkages and opportunities for value addition. The Hub is being developed on approximately 5,600 hectares, with a strong focus on climate-smart and irrigated agriculture. Its development responds to the need to move from predominantly rain-fed production towards a more productive, commercially oriented and resilient agricultural system.

The rationale for the Hub is equally broad. The Hub's objectives include increasing agricultural productivity, expanding irrigated agriculture, improving food security, developing export-oriented agriculture, attracting private investment into commercial farming, creating employment, and opening opportunities for agro-processing and value addition.

For Ngarambe, this means infrastructure development must ultimately translate into more productive land, viable businesses and measurable benefits for farmers, investors and the wider economy.



Aloysius Ngarambe, Chief Executive Officer of Gabiro Agribusiness Hub (GAH)

The current GAH strategy similarly positions the organisation around creating an enabling environment for increased private investment in agriculture and attracting capable local and international operators into competitive and modern value chains.

The story of Gabiro, therefore, can be understood through two closely connected areas of operation: building the foundation for climate-smart agricultural production, and turning that foundation into a commercially driven agricultural ecosystem.





Part 1

Water, Infrastructure and Climate-Smart Production





MAKING AGRICULTURE LESS DEPENDENT ON RAINFALL

Ngarambe sees reliable water as one of the foundations of agricultural transformation. Gabiro is being developed around irrigated land to reduce the dependence of rainfall-fed production and make agricultural activity more predictable.

The Hub provides bulk irrigation infrastructure, internal roads, electricity and other services that allow investors to establish farms at a scale that would be difficult to achieve through conventional smallholder production. Currently, the Hub's Phase One is fully operational, with multiple investors already producing within the Hub.

"Our contribution is primarily through the development of an infrastructure and commercial ecosystem required for modern agriculture," he says.

Among the most important interventions is the installed irrigation systems. By providing reliable access to irrigation water, the Hub reduces dependence on rainfall and create opportunities for more predictable production and potentially multiple production cycles."

But irrigation alone is not enough. Ngarambe notes, the effectiveness of an agricultural hub depends on how water infrastructure interacts

with land-use planning, drainage, roads, electricity, agricultural services and the technologies used by producers.

That is why GAH's current service model includes management, maintenance and operation of its water infrastructure, alongside land-lease management and support for modern agricultural practices. The objective is to create an environment in which investors can concentrate on agricultural production while the essential infrastructure and services around their operations are properly managed.

FROM INFRASTRUCTURE TO PRODUCTIVITY

This approach also changes the way agricultural infrastructure is viewed. Rather than treating irrigation as an end in itself, Ngarambe describes it as an enabling platform for modern farming.

The Hub is intended to allow investors to adopt improved production technologies, make more efficient use of land and water and produce for markets that demand consistency and quality. GAH's current investment proposition highlights access to agricultural land, bulk water supply, electricity, farm roads and on-ground support for investors.



For Ngarambe, the challenge is therefore to make these systems work together. "Water availability, electricity costs, land-use efficiency, roads, drainage, timely technical support and market access are therefore critical," he says, stressing that investor success depends not only on having infrastructure, but on its reliability and affordability.

This places operational efficiency at the centre of GAH's work. Large agricultural infrastructure requires continuous management, maintenance and investment if it is to generate the intended economic returns.

The CEO of GAH acknowledges that operating such infrastructure comes with challenges, particularly the cost of irrigation and water-related services, the need for coordinated infrastructure development and the management of weather and water-related risks. His response is practical: stronger planning, project supervision, preventive maintenance, financial controls and closer coordination among stakeholders.

The goal, he says, is straightforward: "not simply to build infrastructure, but to ensure that the infrastructure performs reliably and generates economic value."





Part 2

Investment, Value Addition and Market-Oriented Agriculture

PUTTING PRIVATE INVESTMENT AT THE CENTRE

If water and infrastructure provide the foundation, Ngarambe sees private investment as one of the mechanisms for turning that foundation into productive agriculture. GAH's current mission explicitly focuses on creating an enabling environment for increased private investment in agriculture.

The Hub's current investor information shows more companies forming its investor community, with more than 3,000 hectares occupied by investors already. For Ngarambe, investors bring more than financial resources. They bring technical expertise, production systems, market knowledge and commercial discipline.

"Our private investors are equally important because they bring capital, technical expertise, markets and commercial discipline to agricultural production," he says.



That relationship is central to the Hub's model. GAH provides an agricultural platform and supporting infrastructure, while investors are expected to develop commercially viable agricultural enterprises.

Agropark Gabiro Ltd offers a practical example. The company was allocated 590 hectares at Gabiro and announced plans to invest more than Rwf10 billion over five years, with maize and chili among its dominant crops. Its experience also illustrates the operating realities of irrigated commercial agriculture: in July 2026, Agropark Managing Director Augustin Twagiramungu highlighted the economics of irrigated maize production, including the cost of water, during a discussion between Gabiro investors and the Government of Rwanda.

Another example is Kinvest Farms, which, through its partnership with Gabiro Agriculture Hub, has expanded its agricultural investment to 196 hectares of arable irrigated land. Its operations illustrate the productive foundation of the wider ecosystem: land, irrigation, crops, workers, agronomic expertise and post-harvest infrastructure.

Kinvest currently produces passion fruit, birdseye and teja chillies, French beans and coffee, while Hass avocado production is expected to begin harvesting in 2027.

According to Sage Umutoniwabo, Kinvest Chief Operating Officer, these crops were chosen for their marketability in international markets. She says the company looked for crops that could perform well under Rwanda's conditions while also producing sufficiently consistent volumes to meet customer demand. That market orientation is already taking Kinvest beyond Rwanda.

FROM PRODUCTION TO VALUE

For Ngarambe, however, the commercialisation of agriculture should not end with primary production. The next opportunity lies in value addition.

He identifies agro-processing as one of the key areas GAH wants to strengthen as it moves from infrastructure development towards a fully functioning agricultural hub. “We want to promote greater value addition and agro-processing so that more economic value is generated within Rwanda rather than exporting agricultural products in their least processed form,” he says.

This is important because the economic impact of agriculture extends well beyond what happens in the field. Processing, packaging, storage, logistics, marketing and other services can create additional business opportunities around agricultural production.

For Gabiro, this means developing an ecosystem in which production is connected to the businesses and markets that ultimately determine its commercial value.

Market orientation is therefore another defining element of Ngarambe's vision. He says GAH's long-term objective is to ensure that products produced at Gabiro are competitive not only within Rwanda but also in regional and international markets.

That requires investors to think about markets from the beginning of production rather than searching for buyers only after crops have been harvested.

The emphasis is increasingly on an agricultural model in which production, infrastructure and markets are designed to work together.

GAH, A PLATFORM FOR RWANDA'S AGRICULTURAL TRANSFORMATION

Ngarambe's vision for Gabiro ultimately goes beyond individual farms or individual investors. He sees the Hub as a platform through which Government, investors, farmers, service providers, development partners and communities can contribute to a more productive agricultural system.

That ambition is reflected in GAH's current direction. The organisation describes itself as providing integrated services for modern and sustainable agriculture, combining infrastructure, technical support and partnerships to support investors and communities.

THE NEXT CHAPTER

The next stage, according to Ngarambe, is particularly important. GAH wants to increase productive use of irrigated land, improve the efficiency and reliability of its irrigation system, attract additional quality investors, strengthen existing investors, promote agro-processing and value addition, and deepen





climate-smart agriculture and efficient water management, leading to its planned phase II.

Phase II focuses on extending an additional 10,000 hectares across parts of Nyagatare and Gatsibo districts, bringing the Hub’s total planned coverage to approximately 15,600 hectares, with some estimates reaching 16,500 hectares.

Supported by the Government of Rwanda, the African Development Bank (AfDB), Netafim, an Israel-based firm and other technical partners, the project aims to promote high-value crops, expand value addition, improve access to domestic and international markets, and create local employment opportunities. The expansion will aim at integrating a Special Agro-Industrial



Processing Zone (SAPZ), cold-chain logistics and storage facilities to strengthen agricultural processing, preserve produce quality and reduce post-harvest losses.

More so, GAH looks to increased investments for the expansion of irrigation system, water supply, roads and electricity to support increased productivity and efficient market access.

But perhaps the most important part is that Gabiro's success cannot be separated from the wider agricultural ecosystem. "Government can provide policy, infrastructure and an enabling environment," he says, "but sustainable agricultural transformation requires committed investors, productive farmers, strong institutions, technology, access to finance and reliable markets." That is ultimately the proposition behind Gabiro. It is not simply about irrigating land. It is about using irrigation and infrastructure as a foundation for productive enterprises, private investment, value addition and stronger agricultural markets.

According to Ngarambe, the measure of that transformation will remain practical: increased productivity, food security, jobs, rural incomes, investment, agro-processing and competitive agricultural products.

He says GAH is building an ecosystem for commercially viable, climate-resilient and market-oriented agriculture. That is the story Gabiro Agribusiness Hub is now seeking to write.





KT HUB: PUTTING BETTER TOOLS IN FARMERS' HANDS

BY JEJJE MUHINDE

In Rwanda, artificial insemination of cattle has involved a fair amount of guesswork. Without visual guidance, veterinarians relied on touch to locate the cervix and determine the right angle for insemination. If a farmer noticed signs of fertility in the evening, for example, a veterinarian might only arrive the next day.

A missed timing could mean the procedure failed, leaving the farmer to pay more when the cow was ready for another attempt.

Rwanda-based agribusiness company KT Hub Ltd is helping to address this challenge with a dual-camera insemination tool that gives veterinarians something they previously lacked: visibility.

The Digital handheld device enables a veterinarian to see the reproductive tract while positioning the insemination instrument, helping improve accuracy and reduce unnecessary attempts.

"Vets used to inseminate cows without visual guidance, using their fingers to locate the cervix," says Theoneste Kabahizi, Managing Director of KT Hub. "Now, the instrument goes in and you can see where it is heading."



Theoneste Kabahizi, Managing Director of KT

KT Hub, which works in partnership with the Rwanda Agriculture and Animal Resources Development Board (RAB), is involved in the cattle breeding value chain, including the importation and distribution of cattle semen to veterinary practitioners.

> **"When we encourage young people to innovate in agriculture, we are also encouraging them to see farming as an opportunity for jobs and enterprise."**

The technology was among the innovations KT Hub showcased at the 19th Agriculture Expo at Mulindi, where the company was recognised as Best Exhibitor for supplying modern animal production and reproduction equipment, as well as veterinary medicines.

For Kabahizi, the focus on practical solutions comes from experience. A veterinary graduate who previously worked as a veterinary officer, he saw first-hand some of the challenges facing farmers and began developing solutions around their needs.

Today, KT Hub is an integrated agribusiness platform owned by a consortium of established Rwandan companies with experience in areas including agricultural and crop production, livestock production, agro-processing, dairy, agro inputs & veterinary products, environment and renewable energy, fresh produce exports, infrastructure development & engineering, solar system











and irrigation solutions; research , consultancy & skills development.

Its ambition extends beyond selling individual products. The company brings together technical expertise, productive assets, infrastructure, innovation and market access under one platform.

At the exhibition, that approach was visible in a range of technologies, including fodder-cutting machines, grain dryers, storage silos, solar-powered farm security systems and electric motorbikes equipped with refrigerated milk boxes to help reduce spoilage during transportation.

The company also showcased cattle semen imported from Brazil and solar systems that can support water pumping, lighting, security monitoring and internet connectivity on farms.

“We don’t build technology for its own sake,” Kabahizi says. “We look at what farmers are struggling with first, then find solutions that actually work.”

KT Hub also sees innovation and inclusion as part of its role in agriculture. In partnership with the Ministry of Agriculture and Animal Resources, the company has supported young innovators, including by awarding a youth winner of an agricultural innovation competition.

“We’re a business, but we also want to help young people and women in agriculture,” Kabahizi says. “When we encourage young people to innovate in agriculture, we are also encouraging them to see farming as an opportunity for jobs and enterprise.”

KT Hub’s broader vision is to become a leading integrated agricultural and agribusiness hub in Africa — using technology, value addition and market access to improve productivity, promote exports and contribute to food security.

For Rwanda’s farmers, that vision increasingly translates into one simple proposition: better tools can mean better farming.

Caring for others, building their own future

MUSANZE COMMUNITY HEALTH WORKERS FIND OPPORTUNITY IN AGRICULTURE

BY ROBERT MUGABO



The morning is still young in Musanze, but four Community Health Workers (CHWs) are already thinking beyond their usual calling. Gathered about four kilometres northeast of Musanze town, the three men and a woman representing CHWs are discussing the next planting season. Their conversation is about Irish potato seeds, fertiliser, harvests and markets.

For these health workers, however, farming is more than a source of income. It is part of a bigger effort to build a better future for themselves and their families.

They represent members of Cooperative Ubuzima kuri Bose, a group formed by CHWs who recognised that while they devoted their time to caring for their neighbours, they also needed to create an economic support system for themselves.

"Being a Community Health Worker is a noble calling, but it is not a high paying job," says Felecien Munyanganizi, president of the cooperative. "That is why we decided to come together, contribute our resources and invest in activities that can support us."

The idea began in 2009, when they started pooling resources through member contributions. What began as a small initiative eventually became a legally registered cooperative in 2014.

Today, Cooperative Ubuzima kuri Bose has 120 members — 42 men and 78 women, including 12 young people — from Cyuve and Gacaca sectors.

The cooperative began with each member contributing Rwf 7,500 in shares, a capital base that has grown gradually over the years to Rwf 52,500 in shares today, reflecting its steady growth and members' continued commitment to strengthening the cooperative.



Felecien Munyanganizi, president of Ubuzima kuri Bose cooperative.

Its main investment is agriculture, an appropriate choice in Musanze, where fertile volcanic soils support the production of high-value crops, particularly Irish potatoes.

Munyanganizi says the cooperative owns two hectares of farmland where members grow Irish potatoes, maize and vegetables. It also owns an office and a commercial building that provides rental income.

The members have shown that their collective strength can generate assets beyond farming. After selling another building, the cooperative invested Rwf15 million of the proceeds in a union that brings together Community Health Workers in Musanze District.

FROM THE FARM TO THE MARKET

The cooperative's partnership with Winnaz Crisps Factory has given members a ready market for their Irish potatoes. Working under a contract with the cooperative, the factory supervises production from the farm to ensure

that the potatoes meet its quality standards.

Once the harvest is sold to Winnaz, members also receive at least 50 kilogrammes of potatoes each and the rest is taken to the open market, depending on production.

But the cooperative is about more than what members harvest.

In recent years, members have received dividends from the cooperative's profits. The cooperative has also organised social gatherings where members come together to share food and drinks.

According to Jean Damascene Twagirayezu, such moments may appear simple, but they reinforce the sense of belonging that inspired the cooperative in the first place.

During planting seasons, members work together on their land. After a day of collective labour, they often set aside some money to relax together.

"It has helped improve the welfare of Community Health Workers in Cyuve and Gacaca," he said, describing the cooperative as an initiative with a promising future.





A SAFETY NET FOR MEMBERS

The cooperative has also become a source of financial security.

Through its support, every member has been enrolled in Ejo Heza, Rwanda's long-term savings scheme.

Angelique Turikumwe observes that the cooperative also provides an informal safety net. When a member faces an urgent problem but lacks the resources, the cooperative can provide an advance, act as a guarantor or mobilise support, while fellow members contribute what they can.

STILL FACING HURDLES

The journey has not been without challenges. Access to quality Irish potato seed remains a major concern in the region. Fertiliser is another challenge, particularly when it arrives late and at high prices.

The cooperative also participates in an agricultural insurance scheme, but members believe the compensation system needs improvement. When harvests fell below projections, they say the compensation received was insufficient, with limited clarity on how the final amount was determined.

Despite these challenges, the members remain optimistic. They want partners who can help strengthen their agricultural skills and, importantly, support the construction of storage facilities.

Better storage would allow them to preserve their harvest and potentially secure better returns rather than being forced to sell immediately after harvest.

For Cooperative Ubuzima kuri Bose, the ambition therefore goes beyond producing potatoes.

It is about turning the solidarity that already exists among CHWs into lasting economic strength.

Every day, these CHWs move from household to household helping their communities stay healthy. Through their cooperative, they are also working to ensure that the people who care for others do not have to struggle to build secure lives of their own.







When harvests fail, insurance helps Rwanda's farmers recover

BY JEJJE MUHINDE

When David Birahamya lost a Friesian cow to disease, he lost more than an animal. The cow, valued at Rwf1 million, was a regular source of income from the eight to 10 litres of milk a day.

Birahamya had insured the animal under Rwanda's National Agriculture Insurance Scheme (NAIS) and received Rwf1 million in compensation, equal to the cow's reported value.

"The compensation for my cow provided a financial response to a loss that had already occurred," he said. His experience illustrates an important distinction: insurance can help farmers recover from a loss, but it cannot prevent the disease, drought or flooding that causes it.



Known locally as Tekana Urishingiwe Muhinzi Mworozi, the scheme was launched in April 2019 to help farmers manage risks to crops and livestock. The government pays 40% of the premium and farmers pay the remaining 60%. Cover applies to selected crops and livestock, including maize, rice, beans, Irish potatoes, vegetables and cattle.

LOSSES IN THE FIELD

In Musanze District, Ubuzima Kuri Bose Cooperative, set up by community health workers from Cyuve and Gacaca sectors, grows maize, Irish potatoes and vegetables on two hectares. After good previous harvests, drought damaged their crops in the 2025/26 season. Because they were insured, the prospect of compensation eased their worries.



Rice farmers at COPRORIZ Ntende cooperative in Gatsibo District faced a different hazard. Flooding in March and April damaged 44 hectares in the Ntende marshland. Etienne Isabane, the cooperative's agriculture department manager, said the land was expected to yield 210 tonnes of paddy rice, worth about Rwf94.5 million. The cooperative received Rwf13.5 million in compensation.

The gap reflects how the scheme is designed. Joseph Museruka, NAIS project manager, said insuring the full value of an expected harvest would require higher premiums, raising costs for farmers and the government. The scheme therefore covers eligible production costs, such as seeds, fertilisers, pesticides and labour, rather than the market value of the crop. A payment can help farmers prepare for another season, but it does not replace all the income they expected.

SCALE AND UPTAKE

In May 2026, the Ministry of Agriculture and Animal Resources (MINAGRI) reported cumulative compensation of about Rwf9.39 billion, of which Rwf5.26 billion related to crops and Rwf4.13 billion to livestock. Government premium subsidies totalled about Rwf7.03 billion.

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These figures show the scale of support, but not how many farmers remain uninsured or whether premiums are affordable to the smallest producers. Uptake remains a concern. In December 2025, the Rwanda Agriculture and Animal Resources Development Board (RAB) said participation was lower than expected and began engaging stakeholders in all 30 districts to encourage enrollment.

A 2022 study by Jules Ngango and co-authors of 325 households in eastern Rwanda found that education, land tenure, farm size, membership of farmer groups and awareness of insurance were associated with uptake, while income and access to credit shaped willingness to pay. Subsidising premiums alone may not be enough; farmers must also understand the cover and see its value.

The claims process is another test. MINAGRI's National Agriculture Financial Service Strategy has identified demanding access requirements and lengthy, costly claims as barriers. It has also raised concerns that some products cover investment costs without covering full production costs or the expected value of a harvest. The ministry's 2024/25 annual report says the Rwanda Veterinary Council Doctors has been brought in to mediate disputes between livestock keepers and insurers.

In May 2026, the scheme was expanded to cover greenhouse farming, including structures, equipment and crops. Museruka said some farmers invest Rwf30 million to Rwf40 million in greenhouses, which are vulnerable to strong winds and floods.

Confidence in the scheme depends on knowing what is insured, how losses are assessed and how quickly payment arrives. Insurance must also work alongside measures that reduce losses in the first place: irrigation, reliable water supplies, resilient crop varieties, disease prevention and veterinary services.

The wider test is whether the scheme can reach more farmers, match cover to their needs and settle claims fairly. Insurance cannot make farming predictable, but when its limits are clear and payment arrives when needed, it can help farmers recover and prepare for the next season.



Beyond the Showgrounds: What Rwanda's Agricultural Expo says about the future of farming





BY JEJJE MUHINDE

For ten days each year, Mulindi Agricultural Showgrounds becomes a marketplace of ideas, technology and opportunity. Farmers explore improved seeds, irrigation equipment and livestock technologies. Agribusinesses showcase new products, while researchers, financial institutions and government officials discuss productivity, climate resilience and access to markets.

"The true measure of this expo won't be found in the brochures we handed out or the tents we packed away here at Mulindi," said Minister of Agriculture and Animal Resources Dr Telesphore Ndabamenye as he closed the Agricultural Expo. "It will be measured back on the hillsides, in the yields we harvest, the resilience we build against







climate shocks, and how swiftly we turn these innovations into daily food security and economic growth for our communities."

His message was clear. The ten-day show, held from July 22 to 31 at Mulindi Agricultural Showgrounds, matters only if its ideas reach farmers and deliver lasting results.

The 19th Rwanda Agricultural Show (Agrishow 2026), was more than an exhibition. It offered a glimpse of the sector's progress, its emerging opportunities and the challenges Rwanda must overcome to build a more productive and commercially competitive agricultural sector.

More than 600 local and international exhibitors participated, attracting tens of thousands of visitors.

The stakes are rising. Rwanda recorded a major agricultural export milestone, for the first time exports surpassed the US$1.1 billion mark in the 2025/26 financial year, according to National Agricultural Export Development Board (NAEB).

The government aims to raise agricultural export earnings to US$1.9 billion by 2029, in line with the National Strategy for Transformation (NST2) 2024–2029.

Achieving that ambition will require more than increased production. Farmers must deliver consistent quality and reliable volumes, meet international standards, add value and adapt to increasingly unpredictable weather.

Agrishow is now a meeting point for farmers, cooperatives, researchers, technology providers, financial institutions and agribusinesses seeking practical solutions to production and market challenges.

At this year's exhibition, initiatives including the Commercialization and De-risking for Agricultural Transformation (CDAT) and the Sustainable Agricultural Intensification Project (SAIP) highlighted efforts to improve productivity and move farmers towards commercial agriculture.

Irrigation, fertilizer use, seed production, livestock breeding and agro-processing featured prominently. Equally important was the emphasis on solutions adapted to Rwanda's local conditions.

From Burera, KOTUARU Cooperative showcased Zaï pits, a water-harvesting technique used in cassava farming. In Muhanga, Iterambere rya Abahinzi

Borozi ba Makera (IRBM) demonstrated certified seed production and processing, while Umwiza Bakery from Kicukiro presented higher-value food products made from orange-fleshed sweet potatoes.

These examples illustrate how practical innovations can help farmers improve production, conserve resources and create value beyond the farm gate.



YOUNG INNOVATORS BRING NEW IDEAS

Youth and women-led enterprises also featured prominently, highlighting opportunities to create businesses across agricultural value chains.

Amazing Insects based in Gasabo, won first place in the Youth and Women Innovation category with a business that converts organic market waste into high-protein animal feed.

The government also distributed Rwf22 million in seed capital grants to youth-and women-led agricultural innovators.

Such support can help promising ideas move beyond exhibition stands. But building viable businesses requires sustained access to finance, technical expertise, reliable markets and opportunities to expand.

However, technologies on display raised a critical question: can ordinary farmers afford and access them?



Modern irrigation equipment, improved seeds, machinery, insurance, certification and processing facilities can improve productivity, but their benefits remain limited when farmers lack financing, infrastructure or the skills to use them effectively.

Climate change adds further pressure. Farmers who depend on rainfall remain vulnerable to drought and erratic weather, while inadequate storage, cold-chain facilities and processing capacity contribute to post-harvest losses. These constraints can undermine the gains.

BUILDING ON EXPORT SUCCESS

Rwanda's export performance demonstrates the opportunities available when production connects to higher-value markets.

In the 2024/25 financial year, the country exported 69,331 tonnes of vegetables













worth US$53.85 million and 33,376 tonnes of fruit worth US$27.63 million. Flowers generated another US$4.6 million, bringing horticultural export earnings to approximately US$86 million.

Coffee remains Rwanda's major earner, last year it generated nearly US$150 million from 23,860 tonnes of green coffee.

Expanding these gains across more agricultural products will require consistent quality, traceability, reliable supply chains and compliance with international market requirements. It will also require stronger domestic processing and better links between farmers, cooperatives, exporters and buyers.

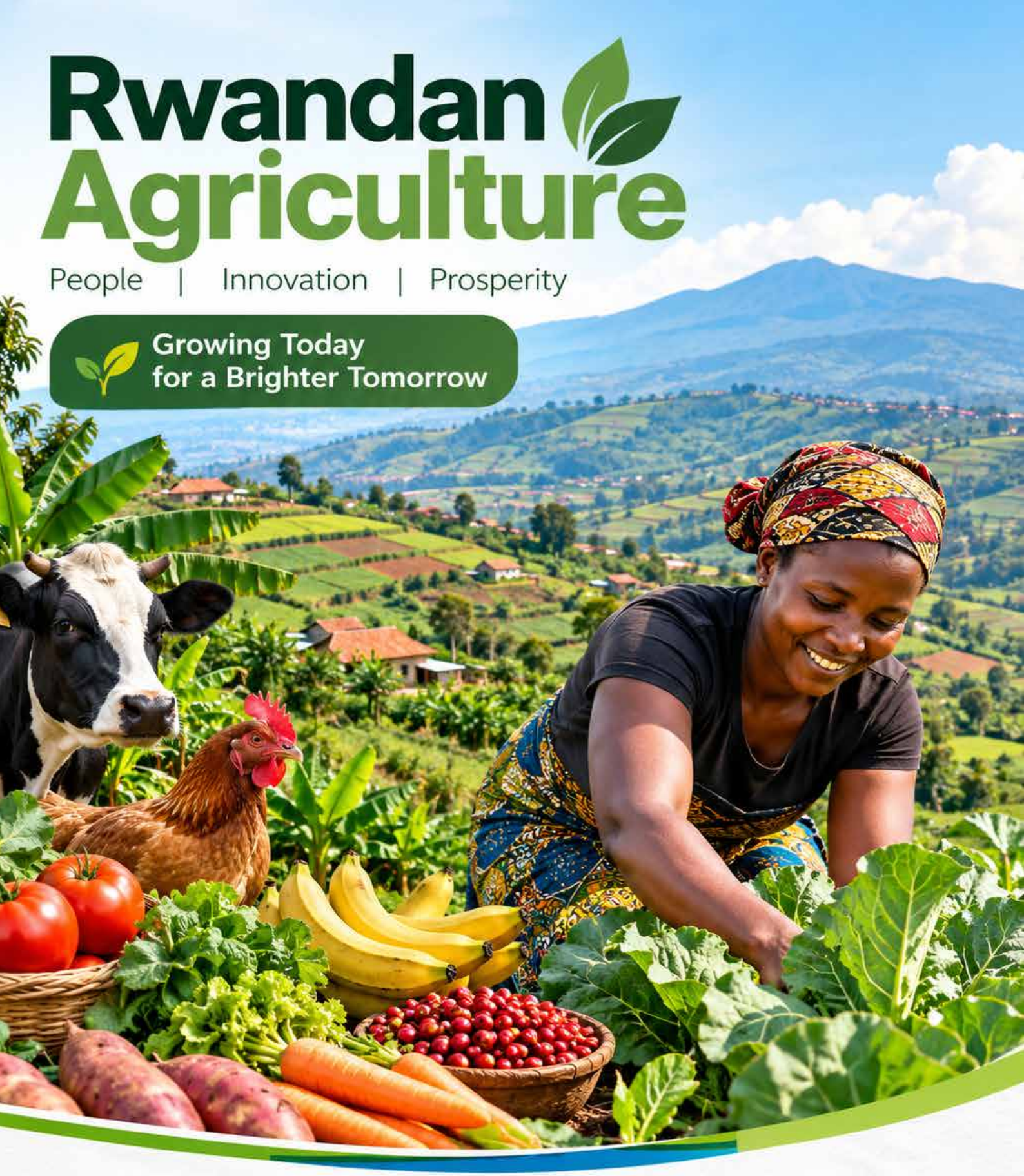
By the minister's yardstick, Agrishow's success will be judged not by exhibitor or visitor numbers but by higher farm incomes, lower post-harvest losses, stronger local value chains, greater climate resilience and more competitive products reaching export markets.

With the tents packed away, the real work continues on Rwanda's hillsides.

Rwandan Agriculture

People | Innovation | Prosperity

Growing Today for a Brighter Tomorrow



Productive Farms | **Innovative Solutions** | **Stronger Communities** | **Sustainable Growth**

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About us

Control Union Rwanda is a certification body. We are a part of the international group, Peterson and Control Union, which was formed in 1920 and its headquarters is located in Netherlands.

With its foundation in agriculture, CU Rwanda has focused its efforts in developing services around the sustainability of the industry's supply chains which feed into the food, feed, forestry, biomass, bioenergy, social compliance and textiles markets.

We are uniquely placed to manage challenges in today's global marketplace. Whether by tailoring a program around your specific needs, or selecting one of the more than 100 programs offered, Control Union Rwanda works to provide you with the options needed to source sustainability.

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Phone: (+250) 788 -512 -596 | Mobile: (+250) 781- 005 -192
Email: irusharaza@controlunion.com /nadelphine@controlunion.com

website: www.controlunion.com

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SINA GERARD / ENTREPRISE URWIBUTSO
Headquarters: NYIRANGARAMA
P.O.BOX: 3652 Kigali-Rwanda
Tel: +250 788 136 900 (Call Center) | +250 788 300 008 | +250 788 305 122
+250 788 382 222 | +250 788 388 195
E-mail: owner@sinarwanda.com | www.sinarwanda.rw