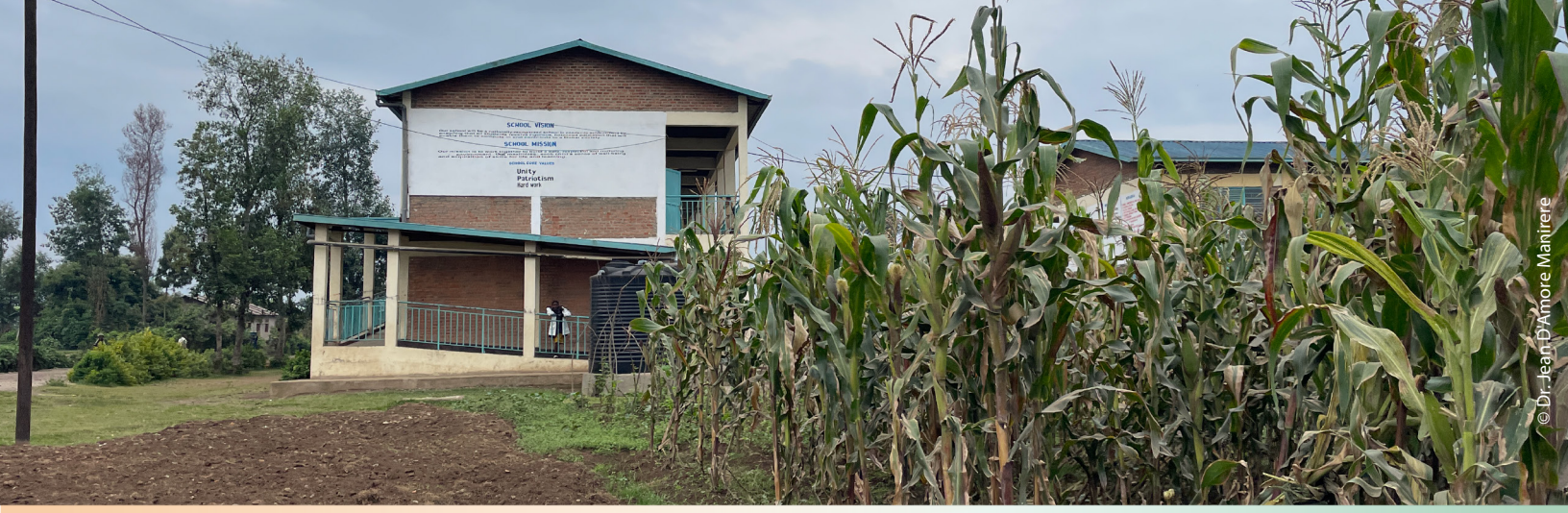

School Nutrition Gardens

A catalyst for food systems transformation in Rwanda

Project Brief 1 of 3

Context

In Rwanda, many school children face hunger and poor nutrition, which directly affects their ability to learn and grow. School meals programs (SMPs) have been instrumental in addressing these challenges, improving attendance and reducing dropout rates—particularly among girls. However, micronutrient deficiencies remain widespread—limiting physical growth, cognitive development, and overall health.

The Food Systems Transformation through School Feeding project under the CCHeFS initiative addresses this challenge by promoting interventions that integrate nutrient-rich, locally grown crops into SMPs. In Rwanda, researchers seek to improve children's diets, support smallholder farmers, and foster sustainable, community-driven nutrition interventions. This project spotlight details the status of school nutrition garden interventions in Rwanda.

Key Results

- Pilot study established 10 school gardens in three districts.
- Government supported project expansion to 43 schools across the country.
- Iron intake improved by 14% and crop nutrient density improved by 6–11%—particularly in iron, vitamin A, and calcium.
- SMP records showed that 60% of schools incorporated at least three locally sourced, nutrient dense crops into weekly school meals, and feedback from cooks highlighted improved meal acceptability and student satisfaction.

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Intervention and Impact

The aim of the project in Rwanda is to improve micronutrient deficiencies in school-age children and investigate the adaptability of micronutrient-rich crops in local agricultural settings, their role in climate change adaptation, and their potential to promote regenerative agriculture (RA) practices.

The project objectives include:

- Enhancing children's access to micronutrient-rich foods through diversified school meals;
- Strengthening school feeding systems by linking school farms with local smallholder farmers;
- Promoting RA practices that improve soil health, yields, and nutritional quality of crops;
- Building sustainable community ownership; and
- Influencing policy integration of nutrient-sensitive school feeding.

To achieve these objectives, the project is divided into four progressive initiatives: the establishment of school nutrition gardens, school meal nutrient analysis, community engagement, and policy engagement.

ESTABLISHMENT OF SCHOOL NUTRITION GARDENS

The first initiative of the project included a pilot study to assess the feasibility and impact of nutrition gardens. The gardens were established in 10 public schools across Musanze, Rulindo, Bugesera, Burera, Nyabihu, and Huye districts. Schools were selected based on three main criteria: (i) accessibility for regular monitoring and data collection; (ii) availability of basic infrastructure such as land, water sources, and minimal fencing; and (iii) willingness of school leadership and parents to engage in school agriculture initiatives.

Each school garden averaged 0.3 hectares. Six priority micronutrient-rich crops were planted in each garden—including comfrey, red amaranthus, carrots, orange-fleshed sweet potatoes, high-iron beans, and provitamin-A maize. These crops were selected based on performance metrics related to agronomic adaptability, high micronutrient content, and relevance to school meal diversity and health promotion.

Map of districts in Rwanda where school gardens were established..
Credit: Sourced from Canva, edited by Savannah Dysard

The gardens were monitored over three months and the following results were observed:

- 85% of pilot schools maintained active plots;
- 25% increase in bean yields after the integration of vermicomposting and other RA practices in school gardens; and
- 70% of schools engaged students in farm activities.

Following the successful pilot study, the Ministry of Education (MINEDUC) recommended the expansion of the project to 43 schools across all 30 districts of the country, including three international schools. The project expansion commenced in July 2025. School nutrition gardens have been successfully established across the country and project teams are monitoring their ability to: raise awareness on micronutrient-rich crops, improve dietary diversity in school meals, strengthen market-driven links with farmers, and influence supportive nutrition and agriculture policies.

SCHOOL MEAL ANALYSIS

To assess the nutritional quality of school meals, a comprehensive food sample analysis was conducted across public schools located in Musanze, Rulindo, Burera, Nyagatare, Nyamagabe, and Gicumbi districts. The schools were selected to represent a diversity of agro-ecological zones and SMP procurement models— centralized vs. decentralized.

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School teachers planting in school gardens. Credit: Dr. Jean D'Amore Manirere

A baseline food sample analysis revealed gaps in micronutrient content. However, after the integration of school nutrition gardens, iron intake improved by 14%, and RA practices improved crop nutrient density by 6–11%—particularly in iron, vitamin A, and calcium. Additionally, SMP records showed that 60% of schools incorporated at least three locally sourced, nutrient-dense crops into weekly school meals, and feedback from cooks highlighted improved meal acceptability and student satisfaction.

Research team in food anaylsis lab. Credit: Dr. Jean D'Amore Manirere

COMMUNITY ENGAGEMENT

During the pilot study, parents committees were mobilized in the 10 project schools. Each parents committee was trained on food systems transformation and introduced to the importance of utilizing nutrient-rich crops. By the start of the second season in 2025, parents began requesting seeds of the six crops for adoption in household farms. Early parental interest indicated a strong potential for household uptake of nutrient-dense foods and RA practices.

At the conclusion of the pilot study, stakeholders — including school head teachers, school meal coordinators, parent committee representatives, school cooks, local agronomists, and district education officers—gathered to assess and reflect on the implementation and outcomes of the school-based nutrition and agriculture interventions. Preliminary results indicate strong support for the project and increased awareness of the benefits of micronutrient-rich crops and RA practices. This support could benefit the long-term sustainability of school nutrition gardens.

POLICY ENGAGEMENT

A policy workshop was hosted at the University of Rwanda (UR) to secure commitments from district agronomists and school inspectors to integrate school nutrition gardens into policy development plans. The workshop brought together over 60 stakeholders from local and national government ministries, farmer organizations, schools, and research institutions. As a result, UR was appointed to the National School Feeding Committee, and development partners—such as the World Food Program and Food and Agriculture Organization of the United Nations—endorsed the model for national scaling.

A national community of practice (CoP) on school feeding and food systems was also established as a result of the policy workshop. The CoP lays the foundation for transformative, climate-smart, and nutrition-sensitive school feeding systems that are aligned with Rwanda's Vision 2050 and the African Union Agenda 2063. Policymakers' support also aligns with the government's Food and Nutrition Security Strategic Plan.

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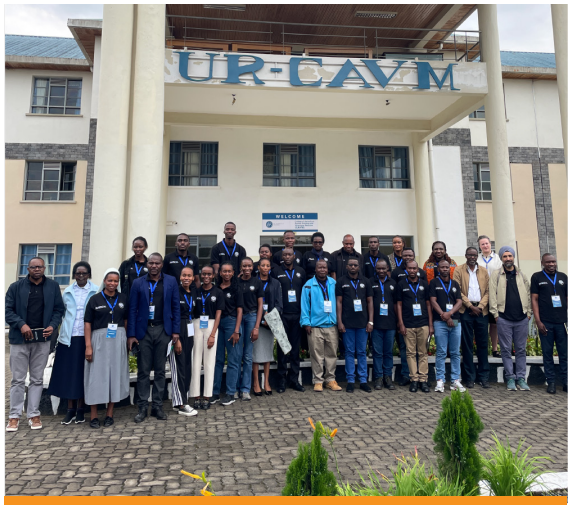
Next Steps

The final stages of the project will include:

- Conducting an agri-business study on micronutrient-rich crops (MNRCs) to guide large-scale SMP production and procurement;
- Disseminating findings on the agri-business study on MRNCs;
- Monitoring and evaluating the first season farm trials in 43 schools;
- Sharing results on the adoption of RA practices;
- Advocating for a strengthened and decentralized procurement system to integrate MRNCs into sustainable school feeding;
- Organizing policy dialogues; and
- Operationalizing the CoP on "Food Systems Transformation" in Rwanda.



Workshop participants gathered outside the University of Rwanda. Credit: Savannah Dysard

About this project brief

This project brief is part of a series aiming to convey the results and progress of the Food Systems Transformation Through School Feeding Project, funded by the International Development Research Centre (IDRC) and the Rockefeller Foundation under the Catalyzing Change for Healthy and Sustainable Food Systems (CCHeFS) initiative. The full series can be found at www.regenerativefoodsystemsalliance.org.

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