

*Providing Agricultural  
Solutions to Malnutrition*



**GARDENS FOR  
HEALTH  
INTERNATIONAL**



# Nutrition Burden in Rwanda

**Over 35% of children under 5 are chronically malnourished, even though 74% of the population is engaged in agriculture**

- Chronic malnutrition is especially prevalent in rural areas
  - 46.6% of agriculturally-engaged rural households have stunted children
- In 2018, 20% of households had borderline food consumption and 4 percent poor food consumption, which reflects an extremely unbalanced diet that is devoid of protein and comprised chiefly of starch together with some vegetables and pulses. These households do not consume any animal protein, dairy products, or fruits.
- Overall, 95 percent of households consumed vitamin A-rich food at least once a week and 69 percent consumed protein-rich food daily, but only 21 percent of households consumed the critical heme iron-rich food at least once a week.

**In general, children are consuming poor diets**

- Only 17% of children ages 6 – 23 months meet the requirements for minimum acceptable diet based on dietary diversity and meal frequency

*(Source; Comprehensive Food Security and Vulnerability Analysis, 2018)*

# Causes of Malnutrition

- **Intergenerational cycle of chronic malnutrition**

- Young mothers who are underweight or stunted themselves are more likely to have stunted children
  - In Rwanda the odds are 2.62 times higher that a child will be underweight if the mother is underweight
- The smaller the baby was at birth the more likely they are to be stunted

- **Knowledge**

- Knowledge gaps around nutrition and components of a balanced diet
  - Particularly around quantity versus quality of the diet
- Lack of consistent and relevant information among providers

- **Child food consumption patterns**

- In general, children's diets are poor in Rwanda with only 15% of children between 6 and 23 months meeting the requirements for a minimum acceptable diet based on dietary diversity and meal frequency.
- Accessing foods with sufficient micronutrients is a challenge for many families
- Only 56% of children 6-8 months in Rwanda receive timely complementary foods

*"I was born a farmer, I would cultivate crops for two purposes, either for selling at markets or for home consumption. I never considered the nutritional benefits of crops before." - Vestine Bayavuge, GHI Graduate, Shingiro Rwanda*

A photograph of a woman with a joyful expression, wearing a vibrant, multi-colored patterned top. She is holding a large basket filled with bright orange carrots. The background shows a lush green garden with more carrots growing in the soil. The overall scene conveys a sense of pride and health through agriculture.

# GHI's Innovative Approach

At Gardens for Health we couple targeted **agricultural support** with **comprehensive health education**, providing an integrated model that tackles the twin challenges of limited access to nutritious foods and lack of education about good nutrition

Our ultimate objective is to **use agriculture as a key driver of better health**, so that nutrition focused home gardens become a fundamental strategy for addressing, and ultimately eradicating, chronic malnutrition among vulnerable families

A smiling woman in a colorful patterned top is shown from the chest up, holding a basket of carrots. She is standing in a field with many more carrots on the ground. The background is a lush green field.

# GHI's Innovative Approach (Cont'd)

**KNOWLEDGE:** Our curriculum improves health outcomes by providing:

- Components of a balanced meal (“Four Colors”)
- Strategies for preparing that meal in a resource constrained setting (“One Pot, “One Hour”)
- Basic information on hygiene, IYCF, positive parenting, and related topics that contribute to malnutrition

**ACCESS:** Nutrition education is coupled with agricultural training and inputs that result in:

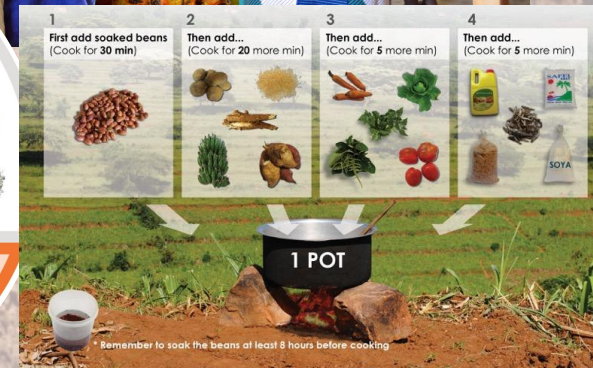
- Improved yields
- Increased income, allowing for better purchasing decisions
- Increase in the quantity and diversity of food grown for household consumption

# Health Center Program

Our Health Center Program works in partnership with 15 Health Centers in Musanze District, providing vulnerable families the combination of training, agricultural inputs, and support necessary to break the cycle of malnutrition

Our 14-week **health curriculum** is designed to address the many factors that affect a family's ability to feed their children nutritious meals. In addition to **comprehensive nutrition lessons** and practical demonstrations in **preparing a balanced diet**, we cover topics such as:

- Good nutrition
- Hygiene
- Family Planning
- Breastfeeding and Complementary feeding
- Listening and Communication



# Health Center Program

We couple our comprehensive health education with agriculture trainings on how to grow a diverse range of fruits and vegetables using local resources

- We work with families to design and plant a home garden that promotes both crop diversity and dietary diversity
- We provide each family with seeds and small livestock to start their own kitchen gardens
  - But they are not simply given a prescribed seed package
  - Instead, families are able to select crops from our home garden package that will grow best on their land, most improve their diet, and earn the most income at markets
- We cater to the most resource-constrained families and as a result, our home garden model is designed to thrive on even the smallest plots of land


# Home Garden Package







- 
**Avoka**  
 (Avocado)
 



- 
**Ibinyomoro**  
 (Tree Tomatoes)
 

- 
**Amatunda**  
 (Passion Fruits)
 


## Legumes

- 
**Soya**  
 (Soy Beans)
 



- 
**Inkoli**  
 (Pigeon Peas)
 



- 
**Ibishyimbo**  
 (Beans)
 

## Leafy Greens

- 
**Dodo**  
 (Amaranth)
 





- 
**Sukumawiki**  
 (Kale)
 



- 
**Isogo**  
 (Night shade)
 
- 
**Isogi**  
 (Spider plant)
 

- 
**Ibitunguru**  
 (Onions)
 





- 
**Tungurusumu**  
 (Garlic)
 
- 
**Puwaro**  
 (Leeks)
 



- 
**Karoti**  
 (Carrots)
 

- 
**Beterave**  
 (Beets)
 




- 
**Intoryi**  
 (Eggplants)
 

- 
**Puwavuro**  
 (Green Pepper)
 

- 
**Radi**  
 (Raddish)
 
- 
**Sereri**  
 (Celery)
 
- 
**Kokombure**  
 (Cucumber)
 

- 
**Kurujeti**  
 (Zucchini)
 

- 
**Ibijumba bya Oranje**  
 (Orange Flesh Sweet Potatoes)
 


- 
 Muscles
- 
 Blood
- 
 Healthy Pregnancy
- 
 Eyes
- 
 Immune System
- 
 Bones

# Antenatal Care Program

A young child with dark skin and short hair is shown from the chest up, wearing a light-colored, worn t-shirt. The child is holding a piece of yellow corn on the cob in their mouth and is in the process of eating it. The background is a blurred outdoor setting with green foliage and a tree trunk.

**GHI recognizes the importance of targeting pregnant women to receive critical health and nutrition education that can improve the health of both the mother and developing child to prevent malnutrition before it can begin.**

Our 6-week ANC curriculum is designed to address the factors that can contribute to malnutrition and improve access to full ANC care. We cover topics like

- The importance of ANC visits
- How to shop for healthy, affordable foods
- How to create a balanced meal
- Why hygiene and food safety are important to preventing malnutrition
- The importance of the timely introduction of breastfeeding and complementary feeding
- Postnatal care

# Our Impact

**Families we work with are building lasting, nutrient-secure futures for themselves and their families. After graduating from our program:**

## **Knowledge**

- 97% of graduates could correctly identify the components of a balanced meal, compared to only 26% before enrolling.

## **Nutrition**

- 65% of children on a positive growth trajectory two years after our program.
- 64% of children under two meet the standard for minimum dietary diversity compared to the national average of 29%

## **Agriculture**

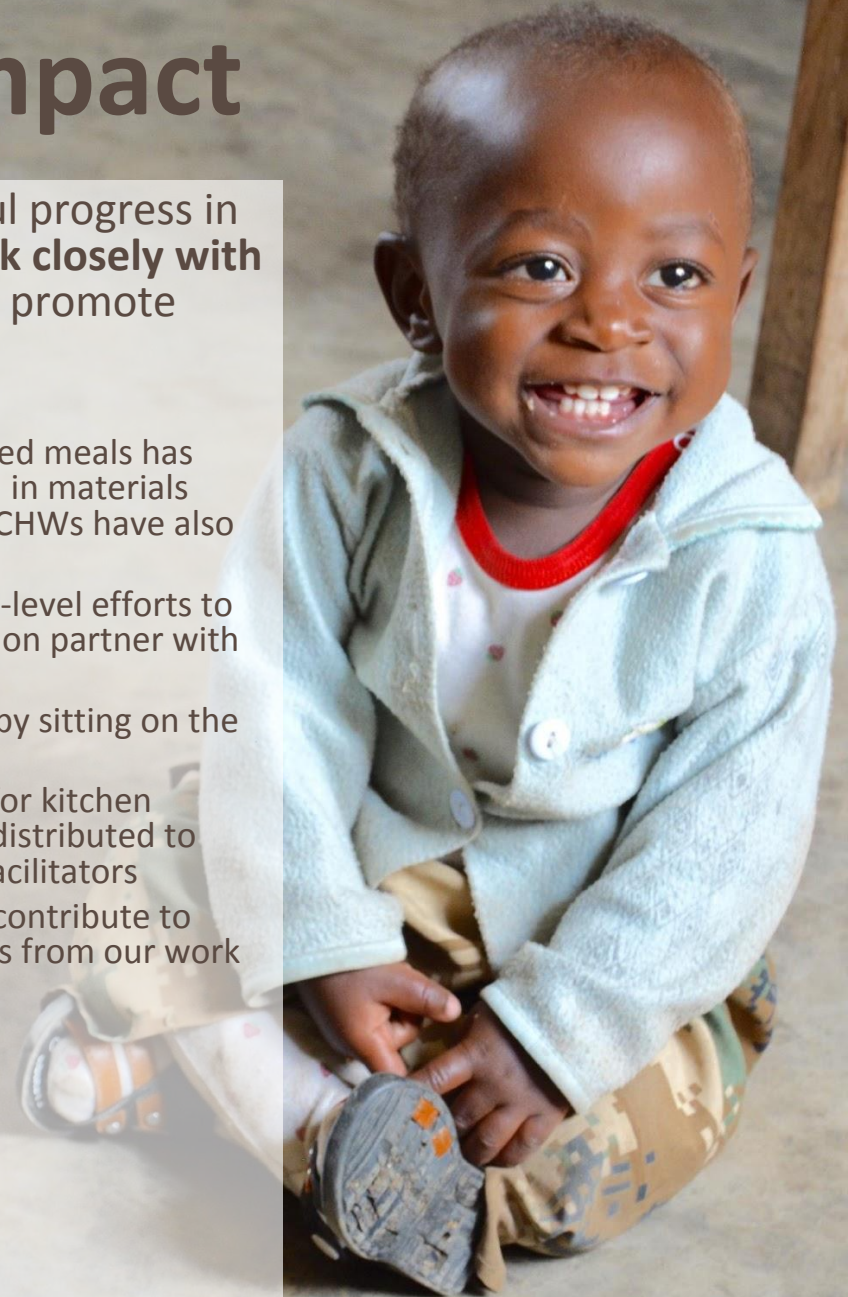
- 83% of households are growing vegetables and legumes, compared to 60% at baseline and 47-64% of households nationally
- Families grew an average of 4 vegetables 12 months after our program, up from 1 vegetable at enrollment.

## **Reach**

- 1,941 families enrolled in 2016 in the health center program, reaching an estimated 9,705 people
- About 1,580 pregnant women enrolled in the ANC program since August 2016
- In 2016, we trained 866 community health workers, lead farmers, hospital staff, mental health workers, and other community groups in our core health and agriculture topics

# Policy Impact

- We recognize that in order to make meaningful progress in the fight against malnutrition, we need to **work closely with the government and relevant stakeholders** to promote effective policies and programs
- **Successes to Date:**
  - Our **One Pot One Hour** strategy for preparing balanced meals has been adopted by the Ministry of Health and included in materials around the “1<sup>st</sup> 1000 days” campaign. About 44,000 CHWs have also been trained in this model
  - Our work is fully integrated into the Musanze district-level efforts to reduce malnutrition and we are listed as a key nutrition partner with our program written directly into the action plan
  - We continuously inform MoH and MINAGRI policies by sitting on the relevant technical working groups
  - We recently contributed to new national guidelines for kitchen gardens with MINAGRI. These guidelines have been distributed to 16,700 Farmer Promoters and Farmer Field School Facilitators
  - We recently formed a new partnership with WFP to contribute to policy around school nutrition gardens. Best practices from our work will be used to inform national guidelines



## **Private Sector Partnerships**

GHI supports the health aspects of the life skills program at the ADC factory in Rwanda to improve nutritional status of women factory workers

## **UN Partnerships**

In 2017 GHI established partnerships with UNHCR and WFP to expand our work into refugee camps and primary schools across the country

## **Clinical Settings**

GHI has partnered with the University Teaching Hospital of Butaro, and Masoro Health Center to adapt the GHI model to a hospital and clinical setting

# Expanding our Reach

## **Government Partnerships**

GHI works closely with the Ministry of Health and Ministry of Agriculture in Rwanda to integrate elements of our model in national efforts to eliminate malnutrition

## **NGO Partnerships**

To date GHI has worked with over 20 NGO partners from 6 countries in the region.

We are currently expanding further to work with the Mayan Health Alliance in Guatemala

**As part of our strategic plan for growth we are committed to expanding elements of our program into new settings**

# What Makes GHI Unique?

- **We make data driven decisions**
  - We are constantly collecting high quality data that we directly respond to
    - After each season, we conduct **results discussions** with each team in our organization
    - These discussions drive program decisions
  - We conduct trials to find new ways to adapt and implement our model
  - We solicit regular feedback from our field educators and partner families
- **We are values driven**
  - Our *turikumwe* values (kinyarwanda for “we are together”) guide everything we do and inform each aspect of our work. These values include:
    - Commitment to quality for the families we serve
    - Humility and empathy
    - Belief in the potential of people
    - Long-term impact
- **We have truly integrated into the communities we serve**
- **We combine nutrition and agriculture in landscape where these topics are frequently isolated**

# [Long term] Response to the Covid 19 pandemic

- **Promote an effective and resilient community-based nutrition model**
  - Leverage on our existing Nutrition and Agriculture model
    - ***Nutrition***
      - 4 color wheel [Balanced diet]: Boost immune system
      - 1 pot -1 hour- 1 complete meal: Contextually realistic
    - ***Agriculture***
      - Accessible, affordable and available: Indigenous leafy greens and staple grains
      - Less demanding: manure, compost and home-made pesticide
      - Sustainability: Seed saving and multiplication
      - Resiliency: techniques and practices that ensures resiliency during dry seasons

# Join us in the Fight to End Childhood Malnutrition

Website: [www.gardensforhealth.org](http://www.gardensforhealth.org)  
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