

# REACH

Ending Child Hunger and Undernutrition

---

## **Acting at Scale: Intervention Guide** Local Homestead Food Production (HFP)

August 2008

# Context

## **The following document is part of the REACH *Acting at Scale* set of materials**

- The documents' aim is to provide highly condensed information and lessons learned for scaling up REACH-promoted interventions to support field practitioners and other interested parties
- They are intended to become a living set of materials, updated periodically by the REACH Global Interagency Team
- These materials are a first step towards a larger REACH Knowledge Sharing service, which will be developed over time

## **The full set of *Acting at Scale* materials includes**

- *An Intervention Summary*
  - An overview document containing key facts for all of the 11 promoted interventions
- *Intervention Guides* for each of the interventions<sup>1</sup>
  - Containing rationale, lessons learned, costs and further resource lists
- *Implementation Case Studies* for each of the interventions<sup>1</sup>
  - Initial set of details and lessons learned from programs implemented at scale
- *Resource Lists*
  - Lists of key documents, organizations and programs at scale
  - Included at the back of each *Intervention Guide* and in Excel spreadsheets available from the REACH Global Interagency Team

## **These materials represent a preliminary version, to be validated and refined via additional consultations**

- Prepared in Summer 2008 by the REACH Global Interagency Team, based on inputs from 56 practitioners and experts, as well as extensive desk research
- A revised Version 2 of these documents will be released in late 2008 or early 2009, incorporating feedback from initial recipients

## **If you have questions or feedback on these materials, please**

- Contact your local REACH facilitator in Lao or Mauritania, or
- Contact the REACH Interagency Team Coordinator, Denise Costa-Coitinho, at [Denise.CostaCoitinho@wfp.org](mailto:Denise.CostaCoitinho@wfp.org)

1. Breastfeeding and complementary feeding have been combined into a single document due to strong linkage in delivery

# Table of contents

---

## Key messages

## Why implement

## How to implement at scale

- Define strategy
- Design
- Implement
- Monitor, evaluate and refine

## Where to go for further information

- Key reference materials
- Organizations
- Experts (*under construction*)
- Scaled-up programs

## Appendix: experts consulted

# Key messages

## **Local homestead food production (HFP) helps families to overcome micronutrient deficiencies via increased access to nutritious foods**

- Increases access to leafy greens with rich vitamin A content, as well as livestock containing bioavailable protein and micronutrients
- Often empowers women heads of household by enabling them to sell excess production to earn income to purchase additional food products for better nutrition

## **HFP requires certain prerequisites, hence may not be applicable/scalable in all settings**

- Requires relatively high degree of hands-on training to local intermediaries who work with individual households
- Requires a local tradition of homestead food production
- Requires a minimal level of access to water and fertile land, as well as rights to cultivate the land adjacent to the home

## **Scale-up by using existing delivery channels**

- Identify and assess NGOs with existing access to target communities
- Engage government extension services

## **Undertake solid analysis to ensure program will address micronutrient issues in the local setting**

- Ensure that produce that can be grown locally will provide sufficient nutrition
- Supplement with livestock to generate bioavailable protein and micronutrients

## **Focus on building sustainable systems for ongoing delivery**

- Focus on women, who are more likely to devote food and any income on improving <5 children's nutrition
- Consider sustainability as a key objective from the beginning to prevent dependency on the program
- Consider local traditions, existing food production activities and other cultural norms to ensure uptake
- Create participatory approaches to engage communities and ensure ongoing input supply, e.g. by utilizing village farms
- Consider cost-sharing to enhance ownership by beneficiaries
- Include nutrition education to ensure demand for and appropriate consumption of produce

## **Leverage the community to participate in M&E with simple indicators**

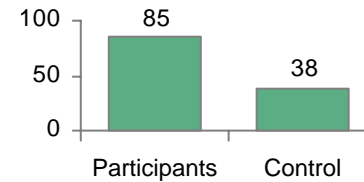
## Why implement

# HFP contributes to improved nutrition in the short-term...

**Increases consumption of vegetable/fruit and livestock produce**

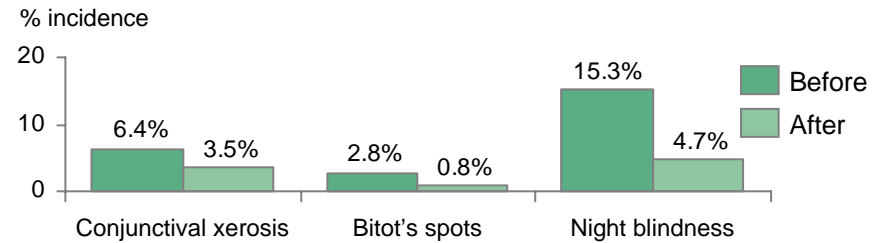
Example: HKI programs in Cambodia and Bangladesh

Household consumption of vegetables over the period of 3 months (median kg)



**Leads to improved micronutrient status**

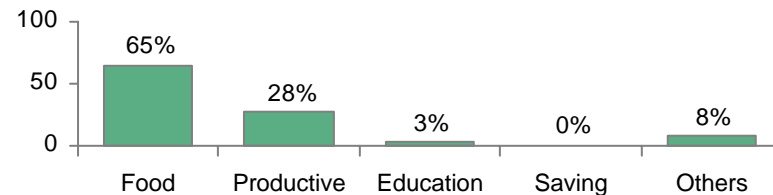
Example: West Bengal project in Purulia District reduced symptoms of vitamin A deficiency



**Improves diet when generated income is spent on food**

Example: HKI Cambodia

Income use (% of total income) - Cambodia



**Also increases food availability via year-round production**

Source: "Integration of Animal Husbandry into Home Gardening Programs to Increase Vitamin A Intake from Foods: Bangladesh, Cambodia and Nepal." HKI-AP, Special Issue, 2003.; Chakravarty I: "Food-based strategies to control vitamin A deficiency." FNB, Vol 21, No 2, 2000.; "HKI's homestead food production program sustainably improves livelihoods of households in rural Bangladesh." HKI-AP, 2003.; "Improving household food security in Cambodia through integration of poultry production into existing home gardening programs." HKI-AP, 2004.

# ...and is one step towards a number of longer-term, socio-economic objectives

**Contributes to food security**



- Meets objective of universal, sustained access to sufficient, safe and nutritious foods that meet dietary needs

**Empowers women**



- Puts women in role of
  - Deciding what their families will eat
  - Earning small incomes to invest further in nutritious foods for their children

**Generates income, contributing to economic growth**



- In Cambodia, participating families earned ~US\$ 3.9 / month by selling garden produce
  - Monthly average income amounts to US\$ 31

**Fosters community mobilization**



- E.g. HKI delivers its programs via village nurseries run by trained village members

# HFP often is neglected due to its lack of institutional government support

## No clear 'owner' of HFP

### Ministry of Agriculture

- Focuses on agricultural production at country level
- Traditionally focuses on quantity rather than quality of food security
- Household level activities focus on production rather than improving nutrition

### Ministry of Health

- Focuses on health interventions

### Nutrition office

- Typically focuses on clearly related and/or short-term nutrition interventions
  - e.g. infant feeding, nutrition education, supplementary feeding

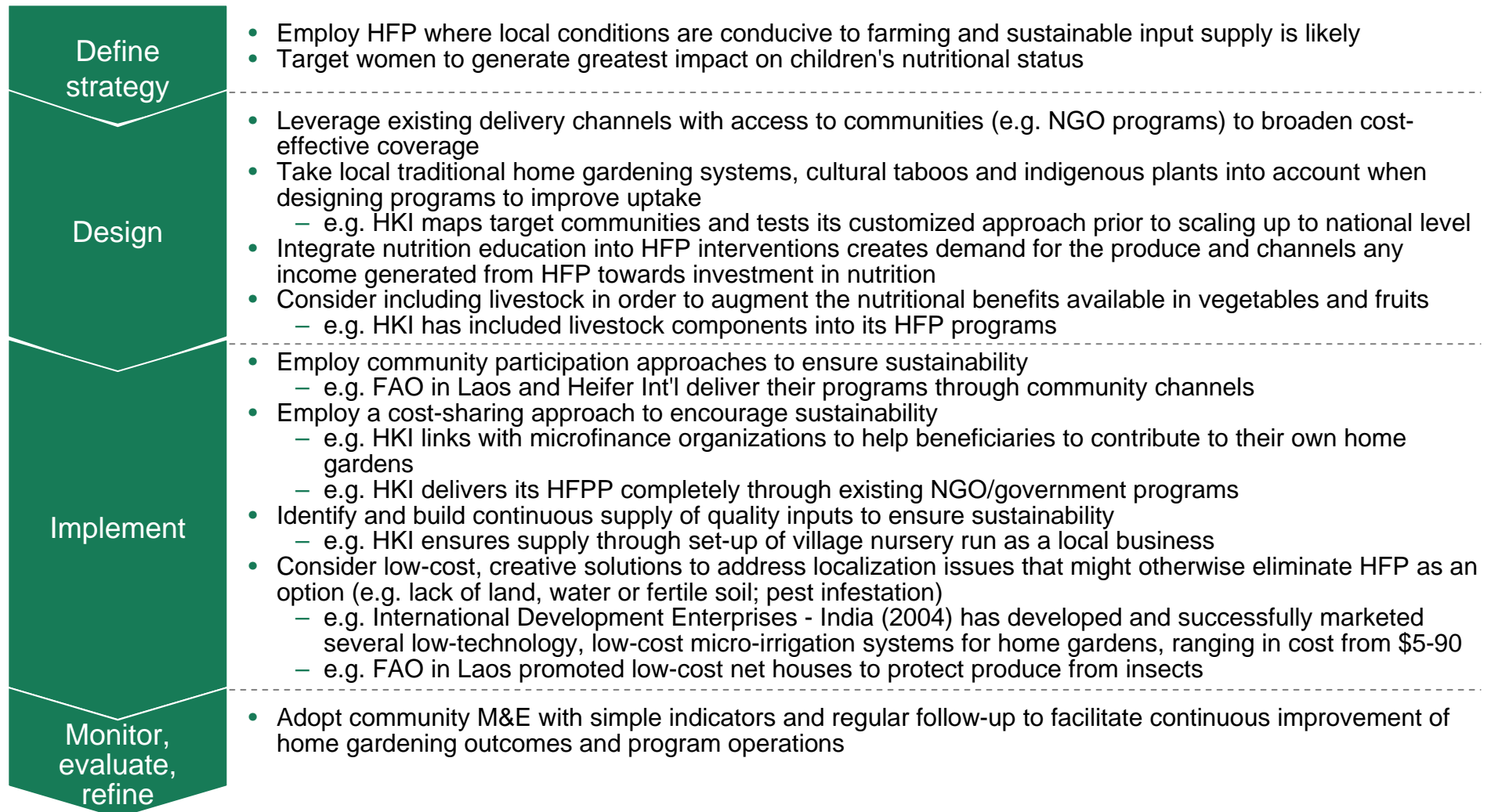
## HFP for improved nutrition gets lost

- Does not fall directly into a single sector due to cross-cutting benefits
- Typically generates medium- to long-term benefits



## How to implement at scale

# Key lessons learned from implementing local homestead food production at scale



# HFP is a useful tool to improve nutrition, but is only appropriate in certain contexts

## Precondition

**Suitable conditions for land cultivation**



**Existing tradition of land cultivation or livestock production**



**Ongoing capacity to deliver training throughout agricultural season**

- Need intervention at key juncture points
- Need technical capacity to answer questions



**Mechanism to deliver inputs on sustained basis**



## Implication

**Gardening may only be feasible where adequate land and water are available**

**Programs need to consider what traditions currently exists**

- Need to evaluate cost-benefit of improving existing gardening or livestock production approaches

**Think twice before implementing in the absence of a network of local NGOs or capable government extension services**

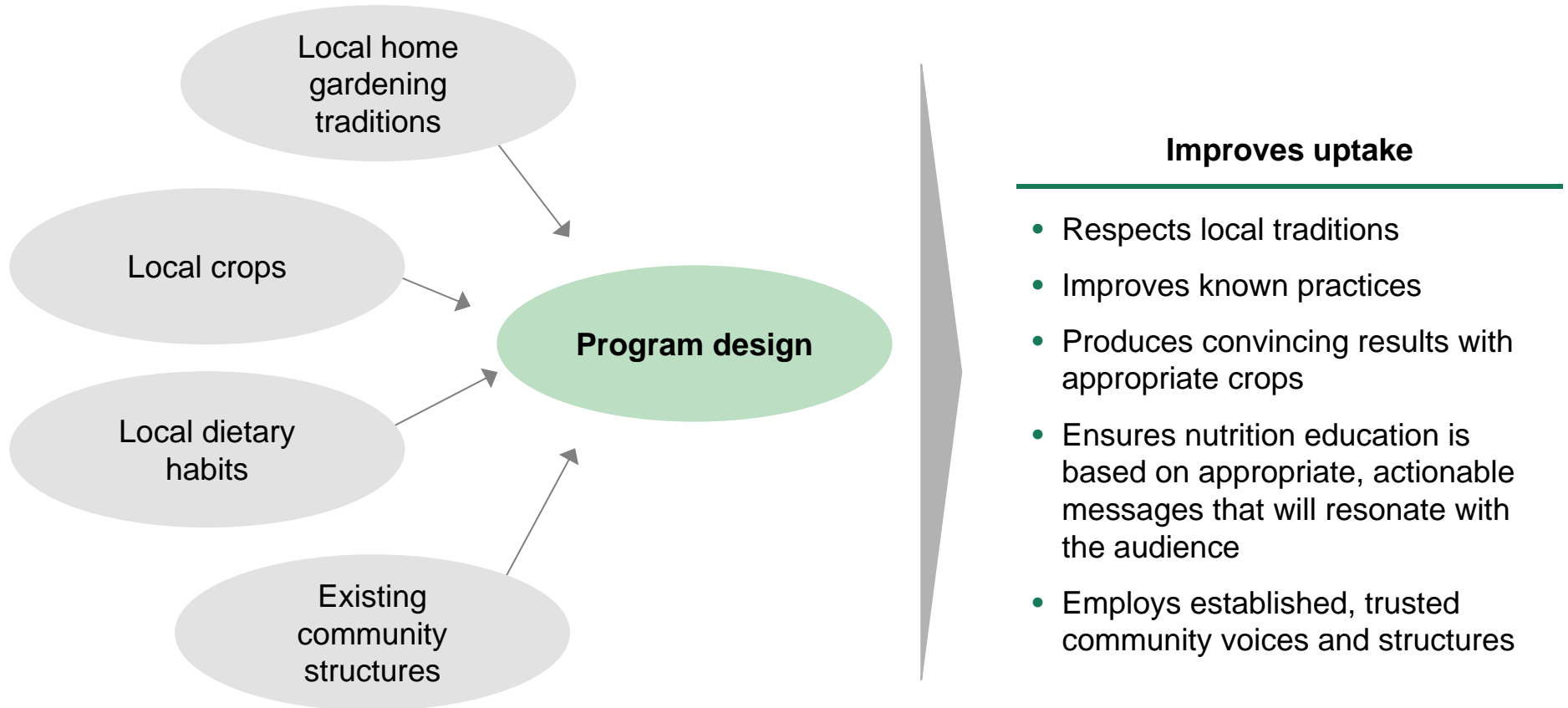
**Need to foster local capacity to deliver low-cost inputs**

- E.g. village farms, local market

# Successful HFP programs leverage existing delivery channels with best access to target communities

Typical delivery channels	How-to	Strengths	Lessons learned
<b>NGOs/communities</b>	<ul style="list-style-type: none"> <li>Identify NGOs with established connections to the community</li> <li>Determine need for technical training and provide support to fill gaps</li> <li>Determine need to provide inputs and design sustainable approach to deliver</li> </ul>	<ul style="list-style-type: none"> <li>Sustainable as capacity is built at community-level</li> <li>Leveraging existing relationships generates uptake</li> </ul>	<ul style="list-style-type: none"> <li>Participatory approaches to program design and cost-sharing approach create feeling of ownership</li> <li>Use of village nurseries to generate inputs enhances sustainability</li> </ul>
<b>Public services</b>	<ul style="list-style-type: none"> <li>Encourage MoA to engage in home gardening activities</li> <li>Work with MoA to assess capacity of existing extension officers and to fill training gaps</li> <li>Identify NGO partners for gov't to partner with</li> </ul>	<ul style="list-style-type: none"> <li>Sustainable as government capacity is built</li> <li>Cost-effective if it leverages existing gov't infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>If capacity is weak, provide management or technical training/support</li> <li>If coverage is low, supplement with other channels</li> </ul>

# Understanding local context is critical to achieve sustainable uptake of HFP activities



**Lessons learned from a pilot tailored to local context can provide valuable lessons for scaling-up**

# Lack of quality inputs, water, capital and land rights are key challenges to program feasibility

## Constraint to program implementation

**Lack of quality seeds and livestock**

- **Provide free quality seeds and livestock for beneficiaries to produce their own supply for future seasons**
  - e.g. Heifer International in South Africa provides goats to project communities
- **Establish local businesses for input supply**
  - e.g. HKI Bangladesh sets up village nurseries, which can also serve as training and demonstration centers

**Lack of water**

- **Focus on water-saving micro-irrigation**
  - e.g. International Development Enterprises (India) has developed and successfully markets low-cost micro-irrigation systems
- **Install low-cost community irrigation systems**

**Lack of capital**

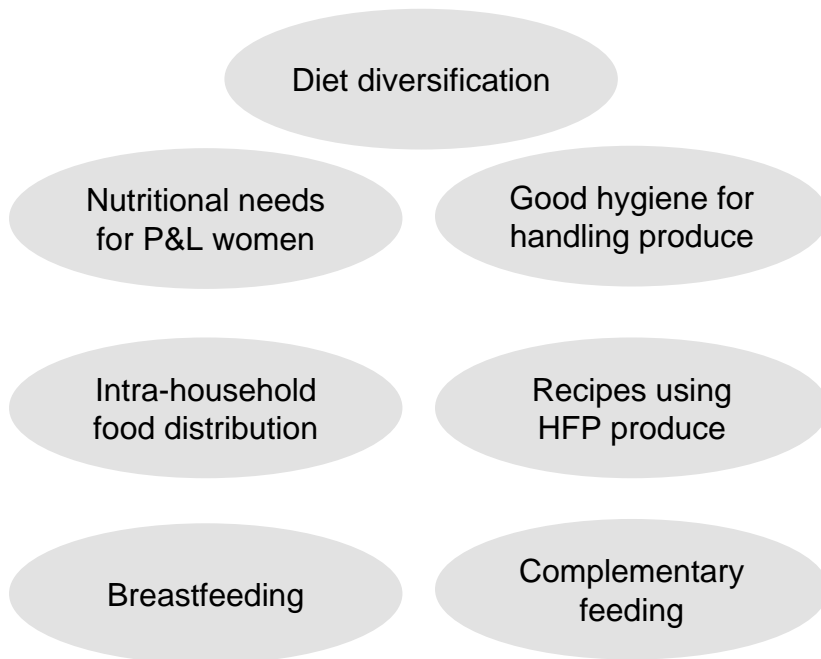
- **Partner with micro-credit programs**
  - e.g. HKI Bangladesh partners with existing microfinance programs to facilitate cost-sharing approach
- **Provide free livestock, which build assets through reproduction**
  - e.g. Heifer International in Nicaragua provides poultry to project communities

**Weak land rights**

- **Work with government to address at policy level**

# Nutrition education improves HFP program impact

## Deliver key nutrition messages



## Several studies demonstrate the impact of combined HFP and nutrition education

### China

- Reduced prevalence of wasting among 1-year olds by 50%
- Also reduced stunting and anemia prevalence

### Iran

- Reduced % of children below 3<sup>rd</sup> percentile of weight-for-age from 7.9% to 3.1% from 1994-96
  - compared to a 5.4% to 7.8% increase in a control group

### Iran

- Reduced prevalence of underweight by 50% in two villages
- Height-for-age greatly decreased in all areas

### Vietnam

- Reduced stunting from 50% to 42%

# Well-designed programs avoid the common pitfalls of unsuccessful HFP programs

Common pitfalls	Step to mitigate
<ul style="list-style-type: none"> <li>Lack of community involvement in the design and planning</li> </ul>	<ul style="list-style-type: none"> <li>Employ participatory approaches</li> </ul>
<ul style="list-style-type: none"> <li>Promotion of technologies and species inappropriate for local needs and resources               <ul style="list-style-type: none"> <li>e.g. high cost, high seasonal variability/risk, not culturally acceptable/palatable, too labor intensive, not compatible with existing garden or farm system</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Perform formative research and design programs based on findings</li> </ul>
<ul style="list-style-type: none"> <li>Exclusive focus on fruits and vegetables for micronutrient intake               <ul style="list-style-type: none"> <li>limited focus on animal protein and income for nutrition</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Integrate animal protein and income generation if local conditions are conducive</li> </ul>
<ul style="list-style-type: none"> <li>Creating dependency on monetary incentives               <ul style="list-style-type: none"> <li>e.g. free seed, tools, fencing materials, even cash</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Introduce cost-sharing</li> </ul>
<ul style="list-style-type: none"> <li>Weak extension officer technical and nutrition capacity</li> </ul>	<ul style="list-style-type: none"> <li>Provide training or identify NGOs to close gaps</li> </ul>
<ul style="list-style-type: none"> <li>Lack of focus on sustainability beyond program duration               <ul style="list-style-type: none"> <li>failure to institutionalize via local government, NGOs, village-based groups</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Design intervention to deliver via local channels so sustainability is more likely</li> </ul>
<ul style="list-style-type: none"> <li>Lack of collaboration and coordination between agriculture and health sector staff to ensure consistency in the dissemination of nutrition messages</li> </ul>	<ul style="list-style-type: none"> <li>Build partnership amongst key sectors</li> </ul>

Source: Marsh R: "Household gardening and food security: a critical review of the literature." unpublished, 1996.; REACH analysis



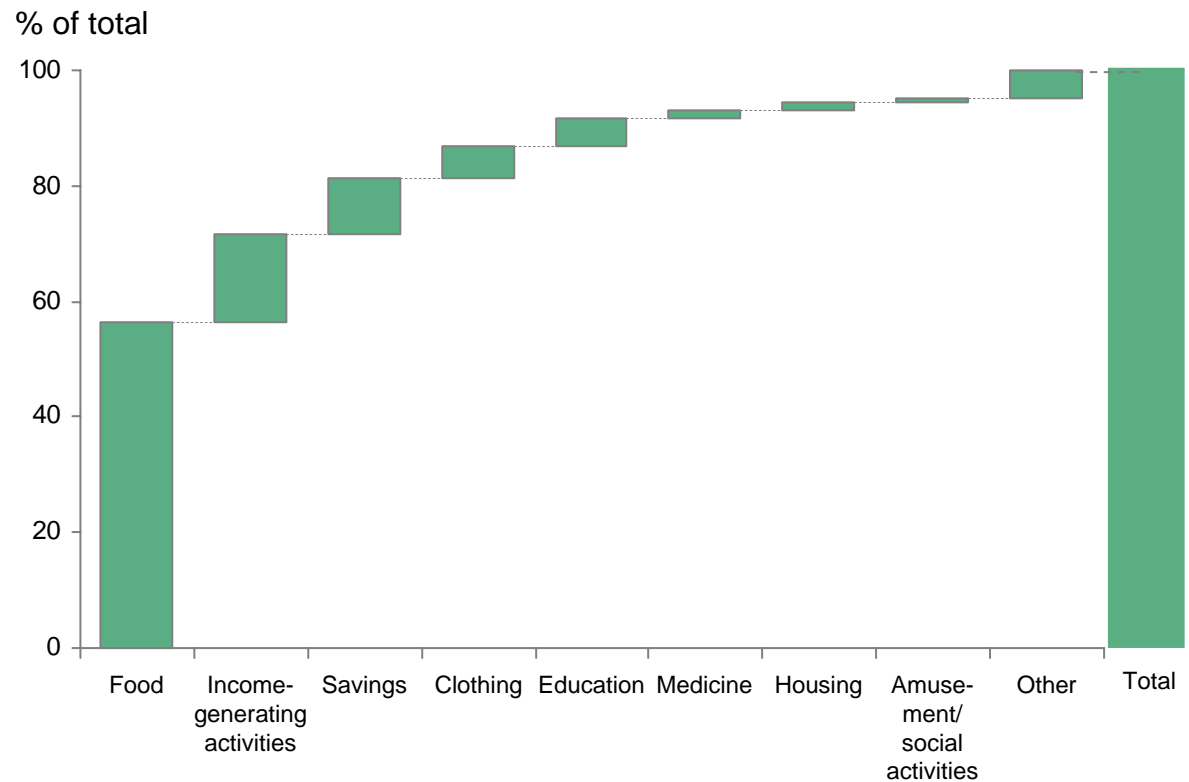
# Income generated from HFP also improves nutrition

Example: HKI's Bangladesh HFP program helps beneficiaries to earn income to buy more food

## HKI's Bangladesh HFP program includes income generation

- Enables households to earn ~\$4 / month from produce sales
- Income-generating activities include purchase of seedlings, fertilizer, etc
- 73% of the farms were owned by women
  - gives mothers control over income to buy food for children

## Beneficiaries use large share of income from HFP to buy food



Source: Talukdar, Kiess, et al. "Increasing the Production and Consumption of Vitamin A-Rich Fruits and Vegetables: Lessons learned in Taking the Bangladesh Homestead Gardening Program to National Scale." Food and Nutrition Bulletin, 2000.

# HFP often include messages about nutrition education

USAID's lessons learned from integrating nutrition education into agricultural training

---

## **Develop a narrow set of well-tailored, actionable nutrition messages**

- Simple so extension officers can disseminate at community events and during normal extension activities

**Develop messages that are simple enough that extension officers can deliver them accurately and with confidence**

**Take advantage of existing group-based activities to convey nutrition messages and lessons**

**Know the audience to craft appropriate messages**

## Where to go for further information

# Key reference materials: Local homestead food production

## Normative guidance

- "Family Nutrition Guide." FAO, 2004

## Operational guidance

- Clay WD: "Preparation and use of food-based dietary guidelines." Food, Nutrition and Agriculture, 1997
- "FAO/WHO Technical Consultation on National Food-based Dietary Guidelines." FAO/WHO, 2006
- Scheeman BO: "Preparation and use of food-based dietary guidelines: lessons from Thailand and the Philippines." Food, Nutrition and Agriculture, 2001
- "Handbook of Home Gardening in Cambodia. The complete manual for vegetable and fruit production." HKI Int'l Cambodia, 2003
- "Guidelines for Participatory Nutrition Projects." FAO, 1994<sup>1</sup>
- "Preventing micronutrient malnutrition: A guide to food-based approaches - A manual for policy makers and programme planners." FAO/International Life Science Institute, 1997<sup>1</sup>
- AVRDC Publications include technical guides on growing vegetables  
<http://www.avrdc.org/publications.html>
- "The UNICEF home gardens handbook: for people promoting mixed gardening in the humid tropics." UNICEF, 1982/85<sup>2</sup>

## Training materials

- "Improving nutrition through home gardening - A training package for preparing field workers in Southeast Asia." FAO, 1995<sup>1</sup>
- "Improving nutrition through home gardening - A training package for preparing field workers in Africa." FAO, 2001<sup>1</sup>
- "Improving nutrition through home gardening: a training package for preparing field workers - Latin America and the Caribbean." FAO, 2000<sup>2</sup>

1. Available online or directly at FAO.  
2. Not available at IACT headquarters.

# Organizations: Local homestead food production (I)

	Organization	Description	Key activities
Multilateral	<b>Food and Agriculture Organization of the United Nations (FAO)</b> <ul style="list-style-type: none"> <li><a href="http://www.fao.org">www.fao.org</a></li> </ul>	<ul style="list-style-type: none"> <li>Many small scale programs</li> <li>Home gardening also in the context of nutrition education</li> <li>Several school gardening programs for nutrition education</li> </ul>	<ul style="list-style-type: none"> <li>Fund</li> <li>Implement</li> <li>Advocate</li> <li>Provide guidance</li> </ul>
NGOs	<b>Hellen Keller International</b> <ul style="list-style-type: none"> <li><a href="http://www.hki.org">www.hki.org</a></li> </ul>	<ul style="list-style-type: none"> <li>Employ homestead food production to fight micronutrient deficiencies</li> <li>Only implementer at scale</li> </ul>	<ul style="list-style-type: none"> <li>Implement</li> <li>Fund</li> <li>Advocate</li> </ul>
	<b>Heifer International</b> <ul style="list-style-type: none"> <li><a href="http://www.heifer.org">www.heifer.org</a></li> </ul>	<ul style="list-style-type: none"> <li>Provide livestock and other material goods</li> <li>Conduct training and extension work</li> <li>Help with organizational development, which includes planning, management, record keeping, passing on the gift, reporting and evaluation</li> </ul>	<ul style="list-style-type: none"> <li>Implement</li> <li>Fund</li> <li>Advocate</li> </ul>
	<b>CARE</b> <ul style="list-style-type: none"> <li><a href="http://www.care-international.org">www.care-international.org</a></li> </ul>	<ul style="list-style-type: none"> <li>Support small scale farming and home gardening</li> </ul>	<ul style="list-style-type: none"> <li>Implement</li> <li>Fund</li> <li>Advocate</li> </ul>
	<b>Concern Worldwide</b> <ul style="list-style-type: none"> <li><a href="http://www.concern.net">www.concern.net</a></li> </ul>	<ul style="list-style-type: none"> <li>One of five focus areas is livelihoods</li> <li>Contribute to improve long term, sustainable access to food/income</li> <li>Build capacity</li> </ul>	<ul style="list-style-type: none"> <li>Implement</li> <li>Fund</li> <li>Advocate</li> </ul>

# Organizations: Local homestead food production (II)

	Organization	Description	Key activities
NGOs (cont'd)	<b>Alliance for a Green Revolution in Africa</b> <a href="http://www.rockfound.org/initiatives/agra/agra.shtml">http://www.rockfound.org/initiatives/agra/agra.shtml</a>	<ul style="list-style-type: none"> <li>African-led partnership funded by Rockefeller and Gates foundations</li> <li>Works across the continent to help small-scale farmers lift themselves out of poverty and hunger</li> <li>Programs focus on seeds, soil health and water, markets, agricultural education and policy</li> </ul>	<ul style="list-style-type: none"> <li>Fund</li> <li>Advocate</li> </ul>
	<b>World Vision</b> <ul style="list-style-type: none"> <li><a href="http://www.wvi.org">www.wvi.org</a></li> </ul>	<ul style="list-style-type: none"> <li>Small scale home gardening projects</li> <li>Home gardening for disaster response</li> </ul>	<ul style="list-style-type: none"> <li>Implement</li> <li>Fund</li> <li>Advocate</li> </ul>
	<b>World View International</b> <ul style="list-style-type: none"> <li><a href="http://www.wifoundation.net">www.wifoundation.net</a></li> </ul>	<ul style="list-style-type: none"> <li>Communication campaigns and training</li> <li>Fund projects</li> </ul>	<ul style="list-style-type: none"> <li>Fund</li> <li>Advocate</li> </ul>
Academic	<b>IFPRI</b> <b>International Food Policy Research Institute</b> <ul style="list-style-type: none"> <li><a href="http://www.ifpri.org">www.ifpri.org</a></li> </ul>	<ul style="list-style-type: none"> <li>Conducts evaluations for programs</li> <li>Conducts policy research</li> </ul>	<ul style="list-style-type: none"> <li>Conduct research</li> <li>Evaluate</li> </ul>
	<b>HarvestPlus</b> <ul style="list-style-type: none"> <li><a href="http://www.harvestplus.org/">http://www.harvestplus.org/</a></li> </ul>	<ul style="list-style-type: none"> <li>Focuses on biofortification to fight micronutrient deficiencies</li> </ul>	<ul style="list-style-type: none"> <li>Conduct research</li> </ul>

# Scaled-up programs: Local homestead food production

Name/country	Implementing partners	Other information
<b>HKI Homestead Food Production Program (HFPP)<sup>1</sup></b> <ul style="list-style-type: none"> <li>Bangladesh, Cambodia, Nepal, Philippines</li> </ul>	Helen Keller International	<ul style="list-style-type: none"> <li>900,000 households covered</li> </ul>
<b>Shahar</b> <ul style="list-style-type: none"> <li>Bangladesh</li> </ul>	CARE Bangladesh	
<b>PRONAF - National Program Of Family Agriculture</b> <ul style="list-style-type: none"> <li>Brazil</li> </ul>	Government of Brazil	<ul style="list-style-type: none"> <li>Collected from SCN REACH websurvey</li> </ul>

1. Initial case study provided

## Appendix: experts consulted



# Experts consulted during preparation of this document

Name	Organization and title	Area of expertise
Peter Glasauer	FAO	Implementation
Lora Iannotti	IFPRI; Postdoctoral Fellow, Food Consumption and Nutrition Division	Research
Ellen Mühlhoff	FAO; Senior Nutrition Officer	Implementation
Aminuzzaman Talukder	HKI Asia-Pacific; Country Director, Cambodia, Regional Agriculture Advisor	Implementation