Achievements and Lessons Learned from PHASE I of Rooting out Hunger in Malawi

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Presentation outline

- Background: challenges & opportunities
- Research Frame Work on OFSP Intervention in Malawi
- Achievement: evidence base results
- Lessons Learned & SWOT Analysis
Challenges in Malawi

- Climate change –
  → maize is a staple food

- Declining soil fertility
  example: finger millet
Challenges in Malawi

High population → small sized landholding per family

High levels of poverty, under-nutrition, stunted children and 59 %VAD under 5 years
Food diversification is in the core of Agriculture’s policy
The SUN 1000 Special Days initiative was launched in July 2011
High population → hard working people → potential manpower and eager to learn and adopt technology
The overall objective of this 4.5-year project is to improve vitamin A and energy intake for at least 70,000 rural households with women and young children using OFSP-based approaches and to ensure that at least 20% of households growing OFSP earn at least US $100 per year from OFSP sales and increase their average sweetpotato yields by 50%.

To date: we are finalizing the fourth year of project implementation
We have done: Baseline survey (published) and Endline survey (July – Aug 2013)
Strategic Objective flagship (at center) and linked products

- **OFSP Candidate Varieties**
  - Accelerated breeding methods & tools
  - Seed systems approaches, technologies and diagnostic tools

- **Options for sustainable intensification**
- **Evidence base for nutrition & behaviour change**
- **Models and technologies for upgrading OFSP value chains**
- **Partnership models & policy options for going to scale**

- **Seed systems approaches, technologies and diagnostic tools**
- **Partnership models, ownership, sustainability**

- **Evidence base for nutrition & behaviour change**
- **Models and technologies for upgrading OFSP value chains**
- **Partnership models & policy options for going to scale**

- **Evidence base for nutrition & behaviour change**

- **OFSP Candidate Varieties**

- **CIP SO Flagship**

- **CIP-led project SO Flagship in Malawi**

- **Irish Aid (funds)**
  - Rooting out Hunger in Malawi with OFSP launched in Oct 2009
  - Improved prod promoted crops (i.e. OFSP)
  - Promotion of dietary Adequacy
  - Improved diet quality for vulnerable groups
  - Intensified nutrition education
  - Market oriented research
  - Improved PPP

- **National and International Fora**
  - Irish Aid (funds)
  - ASWAp SOs
  - Improved prod promoted crops (i.e. OFSP)
  - Promotion of dietary Adequacy
  - Improved diet quality for vulnerable groups
  - Intensified nutrition education
  - Market oriented research
  - Improved PPP

- **Comprehensively Africa Agriculture Development Program (CAADP)**
  - National Nutrition Education and Communication Strategy → member of SUN team-work
  - Pillar IV: national research-for-development capacity, knowledge dissemination
  - Pillar II: food and nutrition security

- **Scaling up Nutrition (SUN) 1000 Special Days**

- **Rooting out Hunger in Malawi with OFSP launched in Oct 2009**

- **Evidence base for nutrition & behaviour change**

- **Hunger-Nutrition-Climate Justice Conference, Dublin, Apr 2013**
  - 1st Global Food Security Conference, Amsterdam, Oct 2013, etc.

- **Comprehensively Africa Agriculture Development Program (CAADP)**

- **National Nutrition Education and Communication Strategy → member of SUN team-work**
Conceptual framework for an integrated, OFSP-led food-based approach

**AGRICULTURE**

Introduce new source of Vitamin A and Energy: Biofortified OFSP

- 1. Substitute white with orange
- 2. Improve agronomic practices
- 3. Improve storage practices

**Mechanisms**

- 1. Increased supply of beta-carotene & energy
- 2. Sustained yields
- 3. Increased supply in off-season

**NUTRITION**

Demand Creation and Empowerment through Knowledge

- 1. Create awareness of Vitamin A problem
- 2. Create awareness of Vitamin A-rich foods
- 3. Empower caregivers to change practices

**MARKETING**

Market Development for OFSP Roots and Processed Products

- 1. Link to markets to earn income
- 2. Diversify use through development of products using OFSP

**Outcomes**

- 1. Knowledge in local community
- 2. Increased demand for Vitamin A-rich foods
- 3. Increased intake Vitamin A & energy

1. Increased household income for growers
2. Sustained OFSP cultivation over time

**Increased Serum Retinol Levels**
CIP working with partners and Irish Aid a founding partner in SPHI

CIP and its multi-partners:
- DARS
- DAES
- Dept of Nutrition, HIV and AIDS
- MVP
- CU
- CADECOM
- WALA-CRS
- Kachele Club (CBO)
- Farmers Union of Malawi
- FICA-FAO

Breeding

Seed Systems

Rooting out Hunger in Malawi with Nutritious Orange-Fleshed Sweetpotato

Food based Nutritional Programs & The ‘SUN 1000 Special Days’ Movement

Increased incomes through market development and diversified use

Primary and DVMs

Farmers-Private Sector-Consumers-Users for sustainability
Integrated Components Strengthening the OFSP Seed Systems for Sustainability

Donor(s)

Dissemination
- Strong partnership/multi-partners, Commitment, Ownership

Funds

Value chains & Market opportunities

Farmers

Training
- Multiplication, CPPDM
- Postharvest handling
- OFSP Processing
- Bookkeeping

Awareness/demand creation campaign, Sensitization, meetings

Voucher system

1-2-3 Seed Systems
A defined 1-2-3 (primary, secondary, tertiary) Sweetpotato Seed System

Note: DVM = Decentralized Vine Multiplication; 295 DVMs (35.5 ha)
Training Scheme

Sweetpotato Project

3 types of training modules written to support →

- NGOs: CU-Dedza & Phalombe, CADECOM-Chikwawa, MVPs-Zomba
- Extension-DAES: Dedza, Phalombe & Chikwawa
- DARS

4,075 change-agents trained
47% women

23,569 farmers
52% women

More Malawians have skills and knowledge on OFSP and its importance as a source of Vitamin A

Supporting: 2 PhD and 1 MSc candidates
A voucher scheme

DVMs earned USD 75,104 after 3 years: USD 46,482 from subsidized vouchers and USD 28,622 from NGOs, USAID, and a few individual farmers.
Awareness Campaign/Sensitization on Food diversification from OFSP
The trained farmers have done their assessment of selling the OFSP products during the Agriculture’s Show (taken in Jul and Aug 2012) – the demand was high!
Promotion of Intercropping OFSP + maize & OFSP + soybeans

- It strongly supports crop diversification as the core of Malawi’s agriculture policy
- It uses the land in an effective way where cultivated land is scarce due to the dense population in Malawi
- It potentially gives opportunities to farmers for food security, nutrition and household income generation
ACHIEVEMENT: EVIDENCE BASE RESULTS

Indication of Adoption of Zondeni:
- expansion of the areas
- having more IPs

Implementing Partners and project area since Oct 2009
1. Chikhwawa under Cadecom
2. Phalombe under CU
3. Zomba under MVP
4. Dedza under CU

Implementing Partner and project area since Jan 2011
5. Mulanje under CU

Implementing Partner and project area since Sep 2011
6. Salima under Kachele Club (farmers club)

Implementing Partners and project area since Nov 2011
7. Balaka under WALA
8. Machinga under WALA
9. Zomba under WALA
10. Chiradzulu under WALA
11. Thyolo under WALA
12. Chikhwawa under WALA
13. Nsanje under WALA

Implementing Partners and project area since Jan 2012
14. Dedza under FUM
15. Lilongwe under FUM
16. Dowa under FUM
17. Kasungu under FICA-FAO
18. Mzimba under FICA-FAO

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### Numbers of Beneficiaries Receiving OFSP vines through Subsidized Vouchers during the 2010/2011, 2011/2012 and 2012/2013 Rainy Seasons and Target of 2012/2013

<table>
<thead>
<tr>
<th>Partner</th>
<th>District</th>
<th>2010/11 rainy season (Y1)</th>
<th>2011/12 rainy season (Y2)</th>
<th>2012/13 rainy season (Y3)</th>
<th>Target for 2013/2014 rainy season (Y4)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No. of hh</td>
<td>Area (ha)</td>
<td>Yield (t/ha&lt;sup&gt;1&lt;/sup&gt;)</td>
<td>No. of hh</td>
</tr>
<tr>
<td>Concern Universal</td>
<td>Dedza</td>
<td>4,733</td>
<td>32.0</td>
<td>16</td>
<td>3,000</td>
</tr>
<tr>
<td>Concern Universal</td>
<td>Phalombe</td>
<td>859</td>
<td>5.8</td>
<td>20</td>
<td>3,235</td>
</tr>
<tr>
<td>Concern Universal</td>
<td>Mulanje</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>3,492</td>
</tr>
<tr>
<td>Concern Universal</td>
<td>Balaka</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>80</td>
</tr>
<tr>
<td>Millennium Village</td>
<td>Zomba</td>
<td>3,250</td>
<td>21.9</td>
<td>18</td>
<td>8,000</td>
</tr>
<tr>
<td>CADECOM</td>
<td>Chikhwawa</td>
<td>2,126</td>
<td>13.7</td>
<td>18</td>
<td>6,208</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6 districts</strong></td>
<td><strong>10,968</strong></td>
<td><strong>73.4</strong></td>
<td><strong>18</strong></td>
<td><strong>24,015</strong></td>
</tr>
</tbody>
</table>

*51% females and 49% males; †63% females and 37% males. In 2011/2012 an additional 34,405 HHs through local government, other NGOs, and USAID Mobilise project and farmers. From Joint program partners: 4606 HH in 2012/2013 Rainy season (58% women). Thus, a total of 101,047 HH beneficiaries have grown OFSP.

→ The cost of dissemination was Euro 10 (US$ 13) per HH, this low cost is due to multi-partnership approach.
LESSONS LEARNED FROM PHASE I
### Actions for strategic objective implementation of using OFSP for food and nutrition security in Malawi

<table>
<thead>
<tr>
<th>Scale of impact</th>
<th>Phase I</th>
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<tbody>
<tr>
<td></td>
<td>(1st Oct '09 - 30th April '14)</td>
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<tr>
<td></td>
<td>Year 1 – 2</td>
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<tr>
<td>Strategic Leadership</td>
<td>Elaboration</td>
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<tr>
<td>CIP’s roles</td>
<td></td>
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<tr>
<td>Research</td>
<td>Formative: proof-of-concept research on food and nutrition diversification; on-farm demonstrations; 3 tiers seed systems fit sweet potato growing calendar, awareness campaign on OFSP; value chains &amp; market</td>
</tr>
<tr>
<td>Implementation point</td>
<td>CIP’s roles</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>Year 1 and 2</td>
<td>-Elaboration</td>
</tr>
<tr>
<td></td>
<td>-Formative research</td>
</tr>
<tr>
<td>(1st Oct ’09 – 31st Oct ’11)</td>
<td></td>
</tr>
<tr>
<td>Year 3 to End of Phase I</td>
<td>-Coordination</td>
</tr>
<tr>
<td></td>
<td>-Supportive research</td>
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<tr>
<td>(1st Nov ’11 – 30th Apr’14)</td>
<td></td>
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<tr>
<td>Phase II</td>
<td>-Transformation</td>
</tr>
<tr>
<td>(1st May’14 – 30th Apr’18)</td>
<td>-Strategic research</td>
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## SWOT ANALYSIS ON OFSP INTERVENTION IN MALAWI

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
<th>Opportunities</th>
<th>Threats ????</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Availability of OFSP improved varieties</td>
<td>• Lack of sweetpotato value chain analysis and its cost effective technologies not well documented</td>
<td>• Current policies: ASWAP, SUN promoting the crop to combat malnutrition and food insecurity</td>
<td>• Other bio-fortified crops like yellow cassava, yellow maize, etc</td>
</tr>
<tr>
<td>• Improved technologies- of vine multiplication, production, and storage</td>
<td>• Lack of a market feasibility study for vine production (large scale) and OFSP products</td>
<td>• Urban consumption of OFSP could be increased with more sensitization</td>
<td>• Fortified sugar</td>
</tr>
<tr>
<td>• Strong partnership</td>
<td>• In adequate knowledge on consumer preference for sweetpotato consumption in urban areas</td>
<td>• Sweetpotato is grown by many farmers</td>
<td></td>
</tr>
<tr>
<td>• High interest among Relevant government agencies (i.e. DARS, DAES, DNHA), International and local NGOs, Donor(s), private sector, farmers</td>
<td>• ‘No’ processors of sweetpotato products using raw materials from farmers</td>
<td>• Current policies and budget promoting growth of agro enterprises</td>
<td></td>
</tr>
<tr>
<td>• Multi disciplinary team- Scientists, Technicians, Socio-economists, Market Specialist, Trained field staff (Partners)</td>
<td>• No assessment done on farmer capacity for producing ‘puree’ and its use in the industry</td>
<td>• Potential wheat substitution for OFSP flour could reduce cost of production of bread in bakeries</td>
<td></td>
</tr>
<tr>
<td>• Facilities for clean seed-Tissue culture lab/ Screen house and DVMs in 15 districts in 3 regions</td>
<td>• No specific research on gender</td>
<td>• Existence of school feeding programme by FAO &amp; WFP may create market for roots</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Project integration with regional project SPHI/SASHA through its existing platforms for learning from other projects within the region</td>
<td></td>
</tr>
</tbody>
</table>
Acknowledgement

- IRISH AID,
- Malawi Government,
- Implementing Partners
- Farmers

For support toward promoting OFSP development & promotion in Malawi

Thank you very much for your attention!

www.sweetpotatoknowledge.org