4TH ANNUAL SPHI TECHNICAL & EXECUTIVE STEERING COMMITTEE MEETING, NODA HOTEL KUMASI, GHANA
6 – 10 OCTOBER 2013

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

OPPORTUNITIES IN MALAWI

- 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

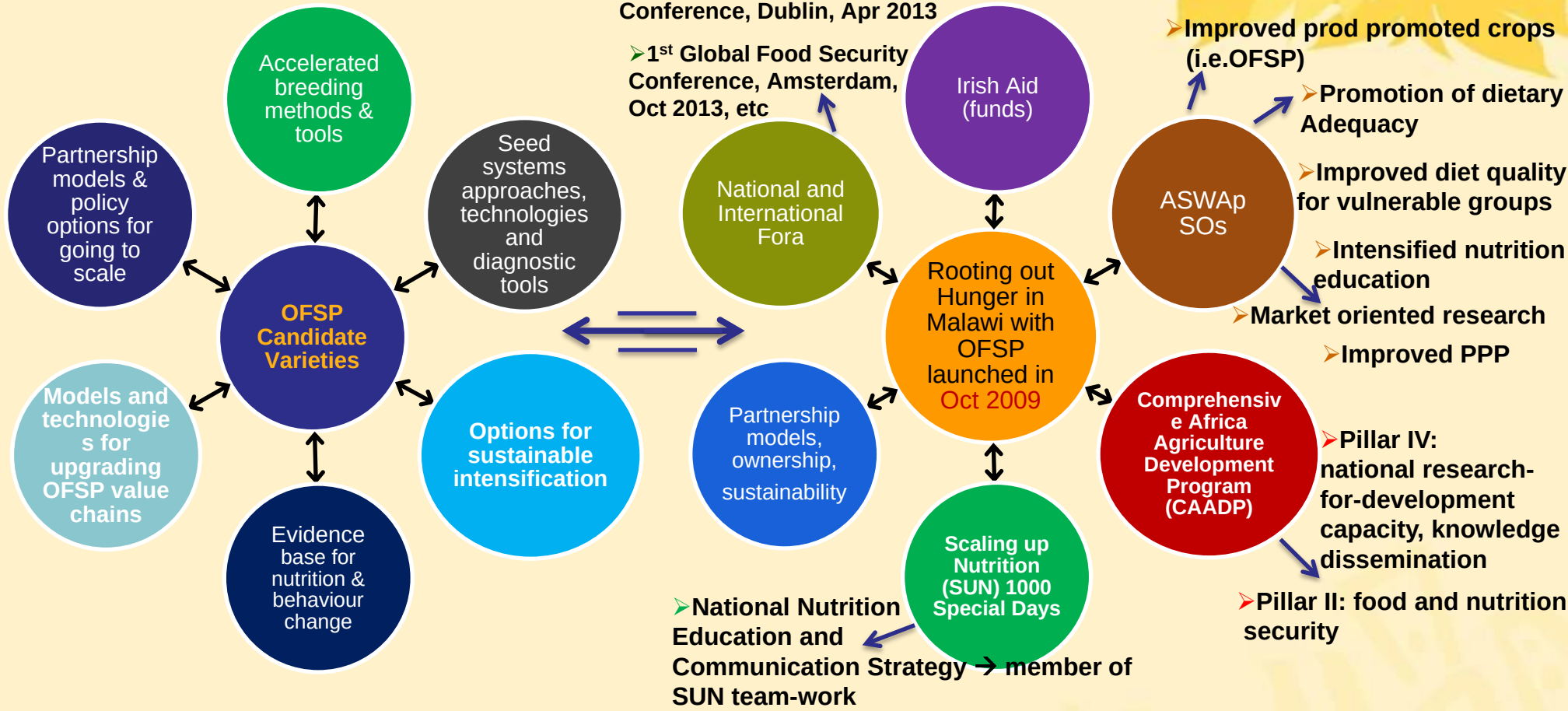
IN THIS PHASE I

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



CIP SO Flagship

CIP-led project SO Flagship in Malawi

Conceptual framework for an integrated, OFSP-led food-based approach

(source: Low, *et al*., 2007. *Journal of Nutrition* 137: 1320-1327**)**

	AGRICULTURE	NUTRITION	MARKETING
	Introduce new source of Vitamin A and Energy: Biofortified OFSP	***Demand Creation and Empowerment through Knowledge***	***Market Development for OFSP Roots and Processed Products***
Mechanisms	1. Substitute white with orange 2. Improve agronomic practices 3. Improve storage practices	1. Create awareness of Vitamin A problem 2. Create awareness of Vitamin A-rich foods 3. Empower caregivers to change practices	1. Link to markets to earn income 2. Diversify use through development of products using OFSP
Outcomes	*1. Increased supply of beta-carotene & energy* 2. Sustained yields 3. Increased supply in off-season	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

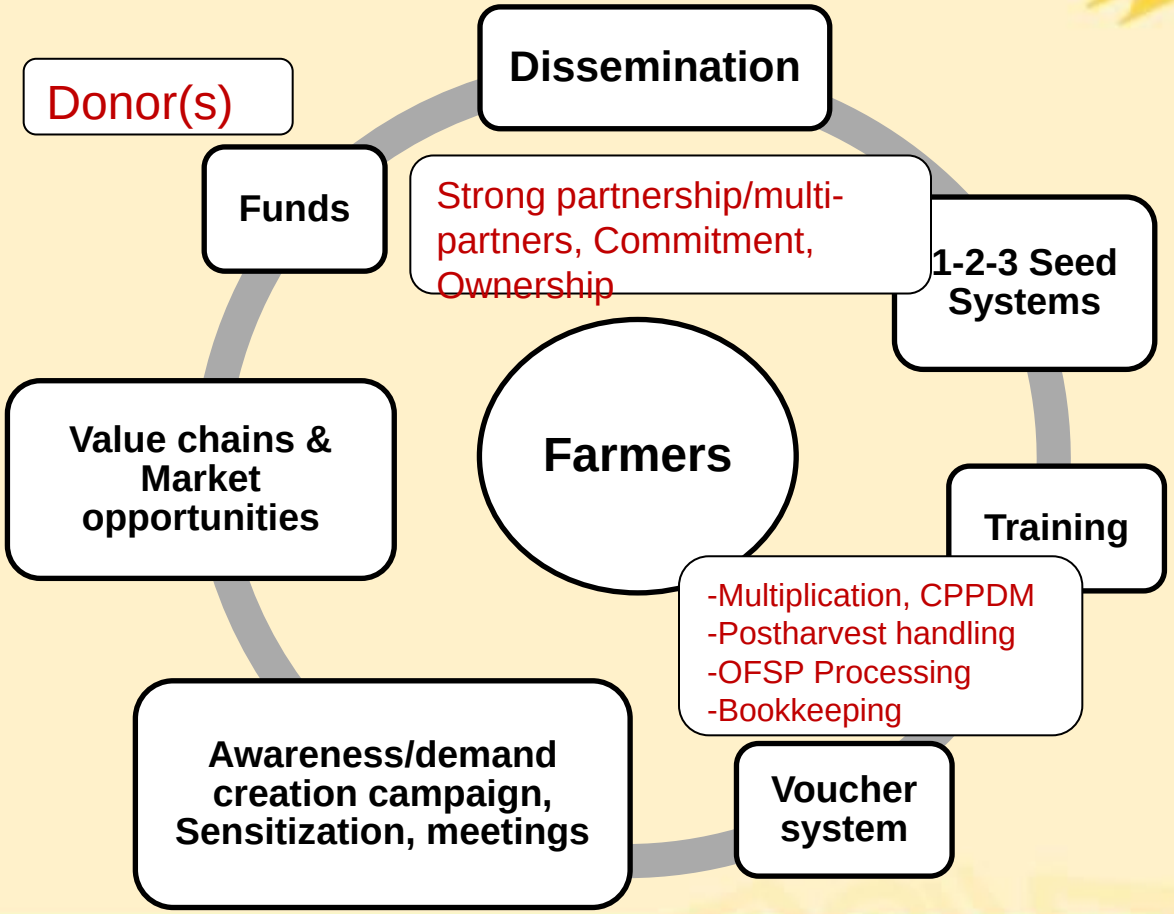
Breeding ↔ **Seed Systems**

Rooting out Hunger in Malawi with Nutritious Orange-Fleshed Sweetpotato

- Primary and DVMs
- Food based Nutritional Programs & The 'SUN 1000 Special Days' Movement
- Increased incomes through market development and diversified use

Farmers-Private Sector-Consumers-Users for sustainability

Integrated Components Strengthening the OFSP Seed Systems for Sustainability



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

SPHI Sweetpotato for Profit and Health Initiative

Vine Flow

Primary

- Bvumbwe Research Station – 6 ha plus tissue culture, screen house, and breeding activities for new varieties
- Clean planting materials; managed by Researchers (DARS and CIP)

Secondary

- DVM based on Group Village Head, supervised by extension and NGOs; act as demos; clean vine producers
- Using a standard bed of 1 m × 20 m with rapid multiplication technique
- Access to irrigation scheme

Tertiary

- DVM based on Group Village Head, and trained by the trainers
- Using adjusted conventional multiplication and access to irrigation
- Producing vines and storage roots

To Producers

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

Training Scheme

Sweetpotato Project

3 types of training modules written to support → Training

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

4,075 change-agents trained
47% women

Training

Farmers/groups
(secondary multipliers)

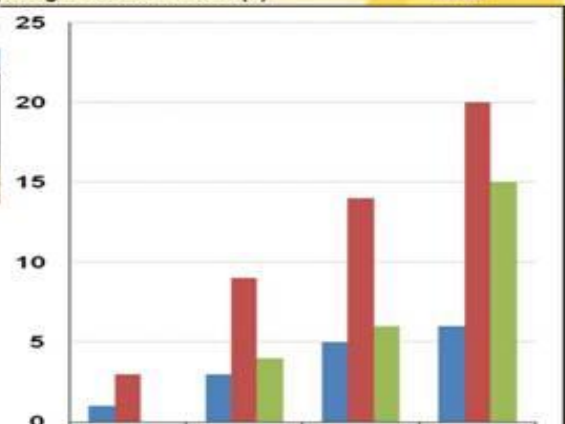
23,569 farmers
52% women

Training

Farmers/groups
(Tertiary multipliers or Beneficiaries)

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

Training of Trainers: 4075 were trained*
"Multiplication (1), Production (2), pest and disease management (3), postharvest handling (4), processing (5) & drip irrigation installment (6)"

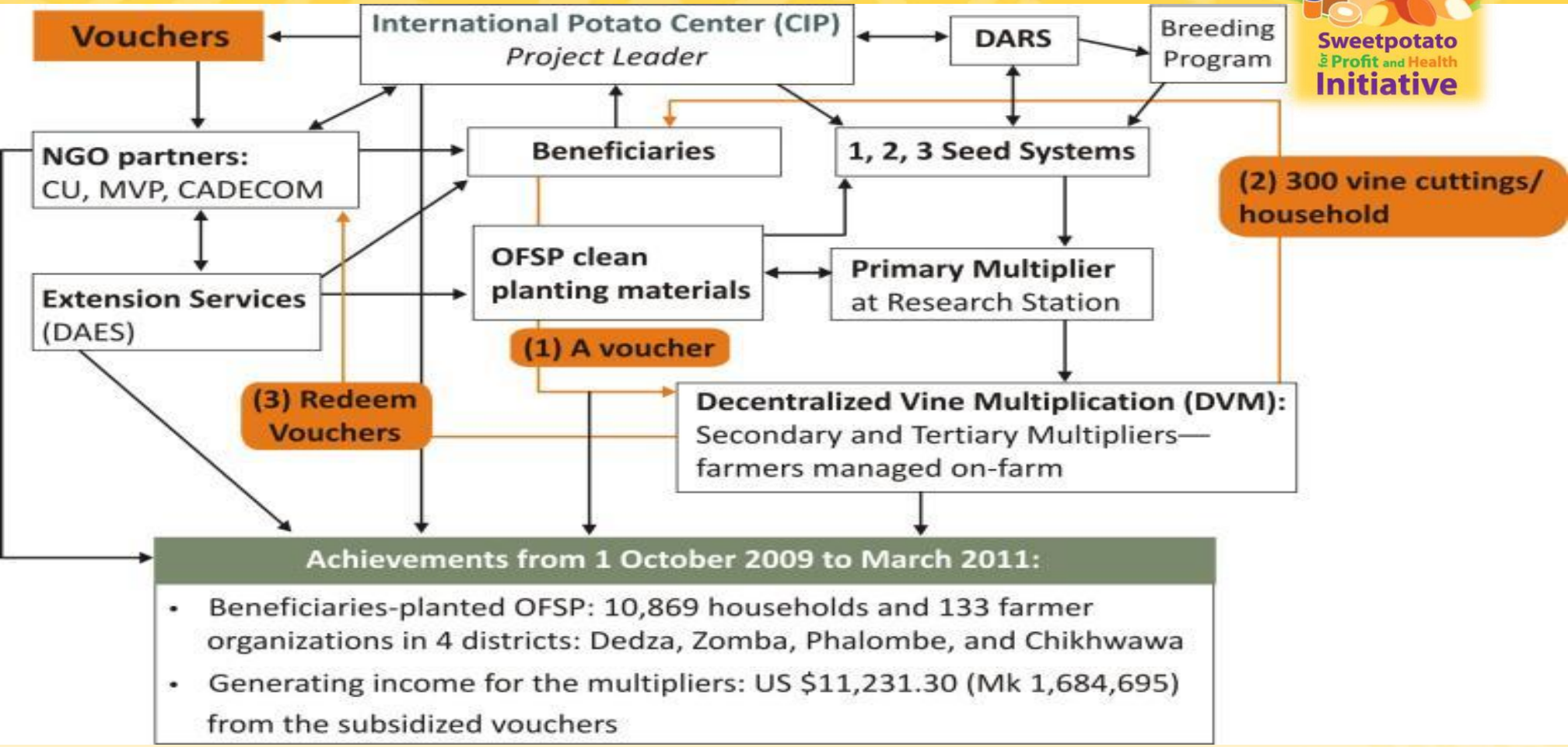


	2009	2010	2011	2012
types of training	1	3	5	6
no of organization incl lead farmers	3	9	14	20
no of districts	0	4	6	15

*NGOs, government extension staff and lead farmers, 47% females and 53% males

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

SPHI
Sweetpotato for Profit and Health Initiative

SPHI
Sweetpotato for Profit and Health Initiative

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

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

SPHI Sweetpotato for Profit and Health Initiative

Partner	District	2010/11 rainy season (Y1)			2011/12 rainy season (Y2)			2012/13 rainy season (Y3)		Target for 2013/2014 rainy season (Y4)
		No. of hh	Area (ha)	Yield (tha^{1})	No. of hh	Area (ha)	Yield (t/ha^{1})	No. of hh	Area (ha)	
Concern Universal	Dedza	4,733	32.0	16	3,000	20.3	15	3,500	23.6	1800
Concern Universal	Phalombe	859	5.8	20	3,235	21.8	18		47.6	1800
Concern Universal	Mulanje	NA	NA	NA	3,492	23.6	18	7,053		1800
Concern Universal	Balaka	NA	NA	NA	80	9.3	12	1,000	6.8	NA
Millennium Village	Zomba	3,250	21.9	18	8,000	54	18	8,000	54	1800
CADECOM	Chikhwawa	2,126	13.7	18	6,208	41.9	13	7,500	50.6	1800
Total	**6 districts**	**10,968***	**73.4**	**18**	**24,015†**	**170.9**	**16**	**27,053**	**182.6**	**9,000**

*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 Mobi+lise 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

		Phase I (1st Oct '09 - 30th April '14)		Phase II (1st May '14 – 30th Apr'18)
		Year 1 – 2	Year 3 – End of Phase I	Multi-years (4 years)
Scale of impact		More than 10,000 HHs reached	More than 70,000 HHs reached	HHs reached between 100,000 and 200,000
CIP's roles	**Strategic Leader ship**	**Elaboration** Identified demand; use of a subsidized voucher scheme; lessons learnt to design the next strategic objectives; project design to be aligned with agriculture's policies, i.e. food and nutrition security; and multi- partnership.	**Coordination** Coordinated new programs from the lessons learnt in SSA and Global programs; promoted OFSP integration into national programs, investment plans, government policies: ASWAp and SUN 1000 Special Days .	**Transformation** Transfer responsibility and enable leadership by national partners; link up diverse initiatives; facilitate cross-sector innovative training and development; link countries to regional and global networks for the cross-sector partners.
	Research	**Formative**: proof-of-concept research on food and nutrition diversification; on-farm demo trials; 3 tiers seed systems fit sweetpotato growing calendar, awareness campaign on OFSP; value chains & market	**Supportive**: build strong evidence base; strengthen national research programs, partnership, linking to diversified value chains and market	**Strategic**: assess scaling-up process; strategic research on key bottlenecks and new opportunities for expanding impact on value chains and poverty alleviation.

Partnership roles Across the CIP's roles

Implementation point	CIP's roles	Partners' roles
Year 1 and 2 (1st Oct '09 – 31st Oct '11)	-Elaboration -Formative research	Participation in technology development and proof-of-concept research; pilot interventions; organizing policy and stakeholder fora
Year 3 to End of Phase I (1st Nov '11 – 30th Apr'14)	-Coordination -Supportive research	Dissemination and adaptation of technologies and delivery approaches; evidence building through operational research; training; advocacy
Phase II (1st May'14 – 30th Apr'18)	-Transformation -Strategic research	Provide programmatic leadership; capacity strengthening; policy dialogue; strategic investments

SWOT ANALYSIS ON OFSP INTERVENTION IN MALAWI

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

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