



ROOTING OUT HUNGER IN MALAWI WITH NUTRITIOUS ORANGE-FLESHED SWEETPOTATO

Project Achievement by 30 April 2014:

ABR
2014

Funded by Irish Aid



Ireland

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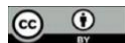
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Project Achievement by 30 April 2014: Rooting out Hunger in Malawi with Nutritious Orange-Fleshed Sweetpotato funded by Irish Aid

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Rooting out Hunger in Malawi with Nutritious Orange-fleshed Sweetpotato was a 4.5 year project funded by Irish Aid from 1 October 2009 to 30 April 2014. By the end of the project, a total of 106,478 HH beneficiaries (Table 1) benefited from OFSP enriched vitamin A through the subsidized voucher scheme used by the Rooting out Hunger project in the last 4 years of project implementation. With a dynamic movement through awareness demand creation campaign through a number of radio/tv programs, sensitization, meetings, trainings, and advocacies to politicians and policy makers (Fig 1-3), the demand was high. Many organizations wanted to join the CIP-led program Rooting out Hunger to intervene OFSP in their community (Fig 4). It is recorded an additional 79,617 households received OFSP vine cuttings from other sources, i.e. bought by USAID-Mobi+lise project, Balaka Rural Development program, Kambalame Farm in Balaka through Machinga Agriculture Development Division (ADD), Evangelical Association of Malawi, World Vision Malawi, Great Lakes, CARLA/Climate Change Programme, Goal Malawi, one entrepreneur in Bvumbwe and some individual farmers. Together with the number of beneficiaries from associated partners (n=4,997 HHs; Table 2), a total number of Malawians who benefited from OFSP intervention are 191,092 households by end of the first phase of the CIP-led project funded by Irish Aid on 30th April 2014. A total of 4,131 agriculturists (extension and lead farmers, 45% women) were trained. In addition, over 24,000 farmers and extension (52% women) participated in training, field days and other sensitization activities.

Table 3 shows the project objectives, indicator, target and achievement during the period 1 October 2009 to 30 April 2014 and Table 4 illustrates the project delivery and its impact pathway analysis using the CGIAR's Crop Research Program of Roots, Tubers and Bananas (CRP-RTB) format. Tables 5 and 6 describe CIP's roles and Partnership across CIP's roles during managing the Rooting out Hunger in Malawi project. As a result, Irish Aid stated in the Memorandum of Understanding for the final year of the project, that the project Rooting out Hunger has made a considerable contribution to addressing the challenge of under nutrition and food insecurity over the past four and half years.

Table 1. Numbers of beneficiaries receiving OFSP planting materials through subsidized vouchers during the 2010/2011, 2011/2012, 2012/2013 and 2013/2014 rainy seasons through the 3 core IPs

IP	District	Target of HH	2010/11 Rainy Season (Y1)				2011/12 Rainy Season (Y2)				2012/13 Rainy Season (Y3)				2013/2014 Rainy Season (Y4)		
			No. of HH	Area (ha)	Yield (T/ha)	Target of HH	No. of HH	Area (ha)	Yield (T/ha)	Target of HH	No. of HH	Area (ha)	Yield (T/ha)	Target of HH	No. of HH	Area (ha)	Yield (T/ha)
CU	Dedza		4,733	32.0	16	3000	3,000	20.3	15	3000	3,693	24.9	No data	1500	3,991	26.9	13
CU	Phalombe		859	5.8	20	3000	3,235	21.8	18	3000	7,053	47.6	23	1500	21,700	146.5	21
CU	Mulanje		NA	NA	NA	3000	3,492	23.6	18	3000			22	1500			
CU	Balaka		NA	NA	NA	NA	80	9.3	12	NA			1,000	6.8			
MVP	Zomba		3,250	21.9	18	8000	8,000	54	18	3000	8,058	54.4	18	3000	10,000	67.5	18
CADECOM	Chikhwawa		2,126	13.7	18	6000	6,208	41.9	13	3000	7,500	50.6	11.7 *	1500	8,000	54	15
	6 districts	7,097	10,968 ¹	73.4	18	23,000	24,015 ²	170.9	16	15,000	27,304 ³	184.3	15	9,000	44,191 ⁴	298.3	17

¹In 2010/11 rainy season: women 51% and men 49%; ²In 2011/12 rainy season: women 63% and men 37%. ³In 2012/13 rainy season: women 46% and men 54%. ⁴In 2013/14 rainy season: women 49% and men 51%. *during winter production, meanwhile the summer production was 2.5 MT/ha.



Fig 1. Advocacy using displays of various OFSP processed products targeting politicians and policy makers in Malawi (IFPRI conference on 26 Sep 2011, visits of Minister of Agriculture and Food Security in Zomba and Deputy Minister of Agriculture and Food Security in Salima on 5 July 2012); and Dr. Mary Shawa, the Permanent Secretary for Dep. of Nutrition, HIV and AIDS in the Office of President and Cabinet, the coordinator for Scaling up Nutrition (SUN) 1000 Special Days in Malawi. She was a guest of honor during the project Rooting out Hunger in Malawi planning and evaluation meeting, Blantyre, 5-9 October 2011.



Fig 2. The visits of Ireland's Minister of Trade and Development (Dedza, 14 June 2011), Ireland's State Minister for Overseas Development and Trade (tasted OFSP chips, Dedza June 2012), Former President of Ireland and President of Mary Robinson Foundation Climate Justice (MRFCJ) on 8 Jan 2013. Fanny Mafuli (a farmer from Phalombe) and Putri Erna Abidin (Rooting out Hunger Project Leader) were invited by Dr. Mary Robinson and Mr. Eamon Gilmore TD, the Minister for Foreign Affairs and Trade of Ireland to participate in the high level conference, "Hunger-Nutrition-Climate Justice 2013, A New Dialog - Putting people at the heart of Global Development", Dublin Castle, Dublin, Ireland, 15-16 April 2013.



Fig 3. Training of Trainers (lead farmers and extension staff) on storage roots conservation for planting material and fresh roots in the dry sand, OFSP processing, including the infants and young children porridges (IYCF) between 2011-2014.

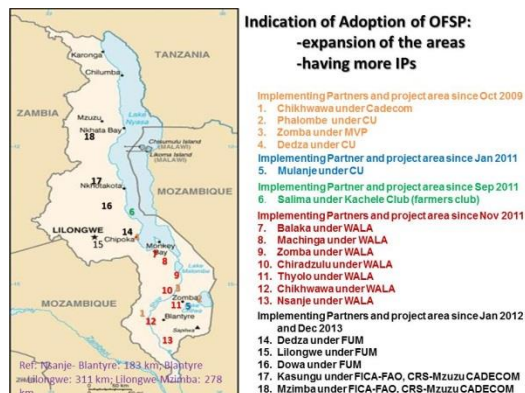


Fig 4. Map showing where OFSP vine dissemination in Malawi has taken place and its adoption history

Table 2. Number of HH beneficiaries and DVMs through joint program IPs: 2011/12, 2012/13

Joint Program IPs	District	2010/2011 rainy season					2012/2013 rainy season					
		DVM	Farmers Involved in Storage Root Production			Area for Multiplication at DVM (m ²)	DVM	Farmers Involved in Storage Root Production			Area for Multiplication at DVM (m ²)	Area of Production (ha)
			Male	Female	Total			Male	Female	Total		
FUM	Dowa	9	169	69	238	600	12	174	96	270	960	7
	Dedza	26	253	474	727	600	26	280	492	772	9,375	3.1
	Lilongwe	6	70	54	124	600	6	70	54	124	800	1.5
FAO	Kasungu	2	12	5	17	930	2	12	17	29	9,000	4.2
	Mzimba	1	11	13	24	75	2	11	13	24	675	4.5
WALA-Project Concern International	Balaka	1	-	-	-	200	20	194	272	466	3,680	7.53
WALA-Emmanuel International	Zomba	1	-	-	-	460	4	77	35	112	2,000	4.12
	Machinga	1	-	-	-	460	5	59	20	79	9,000	4.9
WALA-Save the Children	Zomba	2	-	-	-	180	4	525	975	1,500	8,500	4.6
	Chiradzulu	1	-	-	-	200	5	31	109	140	1,200	3.4
WALA-Africare	Mulanje	1	-	-	-	200	19	70	248	318	1,500	2.4
WALA-World Vision	Thyolo	3	-	-	-	200	12	129	173	302	8,500	3
WALA-Total Land Care	Nsanje	7	-	-	-	200	33	15	5	20	2,000	1.1
CU	Balaka	12	39	41	80	8,268	12	472	271	743	35,700	2.1
Kachele Club and Kachitemanja Group – Farmers' clubs	Salima	1	10	37	47	200	2	15	77	92	290	1
Kazingilira Estate	Kasungu	1	3	3	6	2,295	1	3	3	6	263	0.44
Totals		75	567	696	1,263	15,668	165	2,137	2,860	4,997	93,443	54.89

Table 3. Project objectives, indicator, target and achievement

Project Objectives	Indicators	Target	Achievement	Challenges and Gaps filled in through Cross-cutting program
Objective 1: Improve vitamin A intake for rural vulnerable groups in Malawi through effective establishment of DVMs and media-based demand creation.	-Many Malawians had clean planting materials -DVMs established and mapped. The multipliers could provide clean planting materials readily used by farmers.	-70,000 households by the end of the project (after 4.5 years programmed) -108 DVMs during 2010/2011 rainy season.	-More than 190,000 HH beneficiaries reached through subsidized voucher scheme and joint program partners. -171 DVMs operated during 2013/14 rainy season in 5 districts of Dedza, Balaka, Zomba, Phalombe, Mulanje and Chikhwawa (47% women).	-Training on Household surveillance assistance was done by IP NGOs who directly involved in SUN movement and UNDP, like CU in Dedza and MVP in Zomba and associated partners, FICA-FAO, FUM and Tuesday Trust and Palliative Health Care in Salima District. -Number of DVMs differed every year; it depended on the number of beneficiaries locally targeted by the NGO Implementing partners. -The targeted household beneficiaries were not necessarily the same as the randomly selected households interviewed during the baseline survey.
Objective 2: Increase effective demand by changing the perception of sweetpotato, develop fresh root marketing chains for OFSP in the Blantyre market, and reduce fluctuations in overall sweetpotato supply to the fresh market.	-Demand on OFSP planting material and roots high. -Many Malawians had knowledge and skills on OFSP production management and processing. Farmer-to-farmer talks about OFSP occurred. -drama/theatre, songs, dances and field days initiated by farmers' communities. -community base home grown school feeding program included OFSP in the program. -OFSP in the counselling card of Infant and young child feeding programmed for SUN in Malawi	-Target area: 3 districts of Dedza, Phalombe and Chikhwawa districts -training 6 agriculturists (extension staff) in 3 districts	-Since Jan 2012, many additional NGOs expressed interest in joining the OFSP programme led by the Rooting out Hunger project. These were FUM, FICA-FAO, USAID-WALA-CRS, Tuesday Trust, Palliative Health Care and Kachele Club (CBO in Salima). -15 districts have been recorded to have cleaned vines through the OFSP multipliers in Mzimba, Kasungu, Dowa, Lilongwe, Dedza, Salima, Balaka, Machinga, Zomba, Chiradzulu, Phalombe, Mulanje, Thyolo, Chikhwawa and Nsanje districts. -4,131 agriculturists (Extension staff) trained (45% women) and 24,815 lead farmers trained, sensitized, and attended workshops. -The project's strategic objectives were aligned with ASWAp and SUN for food and - nutrition security. -Participation in the 3 important fora: 1) On 26-27 September 2011, a high- level policy conference organized by IFPRI and MoAFS held in Lilongwe, Malawi: "Unleashing Agriculture's Potential for	-OFSP roots have not easily been seen and found at markets or alongside roads. We emphasized farmers to firstly eat the roots at home and the remaining could be sold. -Not all communities have funds to buy the ingredients for processing the OFSP into processed products, like buns, chapatti, mandazi, juices, etc. However, because some farmers realized on the benefits of OFSP, some clubs have collected funds from the members to conduct the training, for instance Michesi Club in Phalombe and communities of Nkhulambe EPA in Phalombe.

	-Advocacy and visualization the importance of sweetpotato in the international fora.		Improved Nutrition and Health in Malawi". A Summary Note was presented by Putri Erna Abidin and can be read at http://www.ifpri.org/publication/unleashing-agricultures-potential-improved-nutrition-and-health-malawi 2) On 15-16 April 2013, a high-level conference organized by government of Ireland, Dr. Mary Robinson Foundation – Climate Justice, WFP, CGIAR research on Climate Change, Agriculture and Food Security (CCAFS) in Dublin, Ireland: "Hunger-Nutrition-Climate Justice 2013. A New Dialogue: Putting People at the Heart of Global Development". The conference paper was written by Abidin, P.E. et al 2013 (page 55-58) and it can be read at http://www.mrfcj.org/pdf/hncj/conference-papers.pdf 3) From 29 Sep through 2 Oct 2013, Global Food Security Conference in Noordwijkenhout, Amsterdam, The Netherlands. The abstract, in-press for 2014 at Elsevier Pub., The Netherlands.	
Objective 3: Increase the production and quality of sweetpotato in intensifying farming systems to ensure surplus production for sale and decrease the length of the hunger season.	-OFSP became popular as food and cash crop -Farmers grow sweetpotato during winter season, particularly in the districts where the effect of climate change, like drought and floods are often being experienced. -farmers use the agricultural land efficiently and profitability	-Chikhwawa District, farmers in this district would advise to grow OFSP during winter. -Determined sweetpotato growing calendar for Malawi.	-Other districts, like Dedza, Salima, Mulanje, Phalombe and Zomba have cultivated OFSP during winter. -Based on yield estimate done by CADECOM and DAES, the yield of Zondeni was higher in the winter compared to planting them in the summer. -the 1-2-3 seed systems fit with sweetpotato growing calendar.	
Objective 4: Increase the capacity of DARS to	-Healthy planting materials are available when farmers need them.	-Renovated tissue culture lab -Building up a screen house	-Tissue culture lab was renovated together with potato project -A screen house was built and clean planting	-The newly released varieties which were released in September 2011 were not yet disseminated to many farmers.

produce clean, tissue culture sweetpotato plantlets, maintain primary multiplication, and design and conduct seed systems and integrated crop management (ICM research).	-Farmers have their own preferences on the varieties needed.	-Set up a nursery in the field covered by OFSP varieties -Support DARS on irrigation materials -Research on intercropping OFSP with maize, Soybeans and onion.	materials from tissue culture lab were multiplied in the screen house before planting them in the field. -Irrigation reservoir was built. -Intercropping OFSP and maize results were presented at the African Potato Association (APA) conference in 2013 and the scientific paper is currently in press at CABI publication for 2014. Intercropping OFSP and onion was written in a Master of Science thesis by Ms. Chifundo Kapalamula at the College of Agriculture and Natural Resources National Chung Hsing University (NCHU) in Taichung, Taiwan on 1 st July 2014. Putri Erna Abidin was one of her supervisors. The second season for intercropping OFSP and soybean is about to complete, the results will be submitted to the peer journal article. -Five of DARS scientists were financially supported to attend a number of national and international fora. -DARS sweetpotato breeder attended annual sweetpotato breeders community of practice meeting, sponsored by the SASHA project.	There is a strong effort to multiply these varieties, it is on the way. This effort can be read elsewhere in this report. -When there is no power, the reservoir may not have water since DARS only has electric pump. The Rooting out Hunger project intends to buy a diesel pump in the near future.
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Table 4. Project delivery and its impact pathway analysis

Project: Rooting out Hunger in Malawi with Nutritious Orange-fleshed Sweetpotato (OFSP)	
Description – please provide a one-sentence description of the project, including the location/target population of the delivery as relevant.	
This was a 4.5-years project funded by Irish Aid that aimed at improving vitamin A and energy intake for at least 70,000 households, particularly targeted expecting mothers and women with young children, the group most vulnerable to vitamin A deficiency (VAD), using of pro-vitamin A rich OFSP.	
Budget – please provide the budget which was broken down by delivery component from total budget in percentage, including what percentage went to partners.	
Delivery components based on research outcomes: Improved Vitamin A access: 22% Improved Demand: 25% Improved Productivity & Quality: 33% Increased Capacity of DARS including NGO partners: 22%, that actually went to partners	
Number of Farmers Reached – please quantify the number of households, farmers or amount of land that the research impacted. Was % women measured?	
OFSP clean planting material delivered to HHs through subsidized vouchers from the project: 2010/11 rainy season: 10,968 HHs (51% women) = 74.03 ha 2011/12 rainy season: 58,420 HHs (63% women) = 394.3 ha 2012/13 rainy season: 47,856 HHs (47% women) = 323.3 ha 2013/14 rainy season: 44,200 HHs (49.8% women) = 298.4 ha Every household beneficiary received the 300 healthy vine cuttings which equal to 4 kg was only one time. The 300 cuttings could be cultivated in the area of 67.5m ² . During winter these beneficiaries were advised to continue growing the OFSP as they have received the knowledge and skills on sweetpotato crop management. The area of production was corresponding to each planting season. Mostly, the beneficiaries expanded their area of production in the next planting season. For instance, Mr. Chimkota was visited by Irish Aid and CIP team on 6 March 2014. He was an household beneficiary from Zomba District who received 300 OFSP vine cuttings to be grown in 67.5 m ² of his land in 2010/11 rainy season. By the 2013/14 rainy season, he had expanded his land under OFSP to 0.5 ha (Fig 5).	
	
Fig 5. Mr. Chimkota (no 3 from the left) of Potani Village Traditional Authority (T/A) Mlumbe, Zomba District. In the picture, Mr. Henry Khonyongwa of Irish Aid Malawi was standing as the fifth person from the left.	
Recently, a smallholding vine multiplier in Chikhwawa District sold 80.72 tons (this is enough for 20,180 HHs or 136.2 Ha of land) of OFSP vines to Evangelical Association of Malawi, World Vision Malawi, Great Lakes, CARLA/Climate Change Programme, Goal Malawi and one entrepreneur in Bvumbwe. By end of the project (after 4.5 year program), a total of 191,092 households have grown OFSP.	
Average Impact per Farmer Reached – please quantify the average impact per farmer reached. Average impact per farmer refers to how much an individual household, farmer or unit of land demonstrated a measurable change as a result of the research output. It can refer to an increase in crop yields, reduction in resources required to produce the same amount of food, etc.	
The baseline survey was done in October 2010 and has been published (ref. Sindi et al., 2013). The report from the endline survey is	

on its final stage, however, the evidence base results on the impact of this project has clearly seen on the increase of land covered by sweetpotato and OFSP, household wealth accumulation, etc.

Table 5 presents information on the number of households growing OFSP and vine sales by each DVM reported by the 3 core NGOs, MVP, CU and CADECOM. In this Table 5, the information on DVMs and their revenues related to the household beneficiaries targeted by the NGO IPs. Tables 1 and 2 give the details on the number of household beneficiaries and DVMs in the 4 consecutive rainy seasons from 2010/11 to 2013/14 including numbers reported by the joint program partners.

During the 2013/14 rainy season, the average income per DVM was USD 158 (Mk 66,360) through the subsidized voucher¹. The beneficiaries have also generated incomes from root and leaf sales, OFSP processed products. A number of case studies related to the additional income were included in the early midterm and annual project reports of the project

(www.sweetpotatoknowledge.org).

Table 5. Number of household beneficiaries receiving vines from DVMs and the DVMs' revenues in the period of 2010/11 to 2013/14 rainy seasons.

IP	District	2010/11 Rainy Season		2011/12 Rainy Season			2012/13 Rainy Season			2013/14 Rainy Season	
		No. of HH received voucher	DVM Income from voucher (USD)	No. of HH received voucher	DVM Income from voucher (USD)	DVM Income from non-voucher (USD)	No. of HH received voucher	DVM Income from voucher (USD)	DVM Income from non-voucher (USD)	No. of HH received voucher	DVM Income from voucher (USD)
CU	Dedza	4,733	4406.1	3,000	2792.8	366.4	3,693	2363.5	No data	3,991	2,433.5
CU	Phalombe	859	799.6	3,235	3011.6	3,778.7	7,053	4513.9	No data	21,700	13,231.7
CU	Mulanje	0	0	3,492	3,250.8	0			No data		
CU	Balaka	0	0	80	0	0	1,000	640	No data	500	305
MVP	Zomba	3,250	3025.5	8,000	7447.5	19,475.7	8,058	5157.1	238	10,000	6,097.6
CADECOM	Chikhwawa	2,126	1984.8	6,208	5795.8	2,102.1	7,500	4800	12915.2	8,000	4,878.1
Total	6 districts	10,968	10,216	24,015	22,298.5	25,722.9	27,304	17,474.5	13,153.2	44,191	26,945.9

Notes: the price of vine cuttings in 2010/11 and 2011/12 was Mk 155/bundle or 93 cents USD; in 2012/13 was Mk 190/bundle or 64 cents; and in 2013/14 Mk 250/bundle or 56 cents USD.

CGIAR's Causal Role – please briefly describe how you verified CGIAR's or your partners' role in achieving delivery impacts.

Partners' roles (see detailed at Table 2) :

Year 1 and 2 (1st Oct '09 – 31st Oct '11): 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): Dissemination and adaptation of technologies and delivery approaches; evidence building through operational research; training; advocacy.

The project was designed to be parts of Agriculture Sector Wide Approach (ASWAp) of Malawi (Table 10) and SUN movement in Malawi.

Monitoring and Evaluation – please describe the monitoring and evaluation tools or methodologies used to assess the results of your research.

1. Standardization on:

- the nursery bed for primary and secondary multiplication: 1 m x 20m producing 3000 vine cuttings after 2 months for production and 6000 cuttings for a rapid multiplication (primary and secondary multiplication).

¹ CIP, 2014. Rooting out Hunger in Malawi with Nutritious Orange-fleshed Sweetpotato: End of Phase 1 report, prepared for Irish Aid and submitted by CIP. 120pp.

- the number of vines disseminated: 300 vine cuttings per HH; this was equal to 4 kg or one bundle; one bag of 50 kg in volume contains 600 vine cuttings of 30 cm long. - the initial cultivated area for OFSP per HH: 67.5 m² - voucher and its code. A voucher has 3 components: year issued, district and the respected number of HH received this voucher. - The value of a voucher for 300 vine cuttings or 4 kg vine cuttings. - The seed systems and decentralized vine multipliers were defined - Yield Estimate Plot being practiced by the Min of Agriculture and Food Security. The HH beneficiaries were trained to estimate their yield. 2. Monitoring and Evaluation – Case studies 3. Baseline survey was conducted when the project just started (October 2010). The report has been published (Sindi, et al., 2013). 4. Endline survey was conducted when the project has almost completed its Phase 1 (July – Aug 2013).
CGIAR's Causal Role – please briefly describe how you verified CGIAR's or your partners' role in achieving delivery impacts. Partners' roles (see details at Table 6) : Year 1 and 2 (1st Oct '09 – 31st Oct '11): 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): Dissemination and adaptation of technologies and delivery approaches; evidence building through operational research; training; advocacy. The project was designed to be parts of Agriculture Sector Wide Approach (ASWAp) of Malawi and SUN movement in Malawi.
Monitoring and Evaluation – please describe the monitoring and evaluation tools or methodologies used to assess the results of your research. 1. Standardization on: - the nursery bed for primary and secondary multiplication: 1 m x 20m producing 3000 vine cuttings after 2 months for production and 6000 cuttings for a rapid multiplication (primary and secondary multiplication). - the number of vines disseminated: 300 vine cuttings per HH; this was equal to 4 kg or one bundle; one bag of 50 kg in volume contains 600 vine cuttings of 30 cm long. - the initial cultivated area for OFSP per HH: 67.5 m² - voucher and its code. A voucher has 3 components: year issued, district and the respected number of HH received this voucher. - The value of a voucher for 300 vine cuttings or 4 kg vine cuttings. - The seed systems and decentralized vine multipliers were defined - Yield Estimate Plot being practiced by the Min of Agriculture and Food Security. The HH beneficiaries were trained to estimate their yield. 2. Monitoring and Evaluation – Case studies 3. Baseline survey was conducted when the project just started (October 2010). The report has been published (Sindi, et al., 2013). 4. Endline survey was conducted when the project has almost completed its Phase 1, it was conducted between July and Aug 2013.

Table 5. CIP's roles related to scale of impact towards its Strategic Leadership and Research

Scale of impact	Project Period	
	1 st Oct 2009 - 30 th April 2014	
	Year 1 – 2 (1 st Oct '09 – 31 st Oct '11)	Year 3 – End of Phase I (1 st Nov '11 – 30 th Apr'14)

		Reached more than 10,000 HHs	Reached more than 70,000 HHs
CIP's roles	Strategic Leadership	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. ASWAp, focusing on food and nutrition security; and multi-partnership.	Coordinated new programs from the lessons learnt out of previous years and SSA and Global sweetpotato programs; promoted OFSP integration into national programs, investment plans and government policies both in agriculture through ASWAp and nutrition intervention through SUN 1000 Special days initiative.
	Research	Food and nutrition diversification; on-farm demonstration trials; building up 3 tiers of seed systems based on sweetpotato growing calendar, awareness demand creation campaign on OFSP; and fresh root market opportunities and value chains	Building strong evidence result-base; strengthen national research programs and partnership, and diversified value chains and market opportunities at a smallholding level.

Table 6. Partnership roles across the CIP's roles

Project Period	CIP's roles	Partners' roles
Year 1 and 2 (1 st Oct '09 – 31 st Oct '11)	-Elaboration -Formative research -Collecting local knowledge to be brought forward into research conceptual approach	Participation in technology development and implementing the research results at the community level; pilot interventions; organizing policy and stakeholder fora
Year 3 to End of Phase I (1 st Nov '11 – 30 th Apr'14)	-Coordination -Supportive research based on local knowledge -Promoting OFSP in national and international for a -Produced scientific reports and journal reviewed articles	Dissemination and adaptation of technologies and delivery approaches; evidence building through operational research; training; advocacy