

Rooting out Hunger in Malawi with Nutritious Orange-fleshed Sweetpotato

**“Progress after 2 years
of implementing the project”
presented at Root and Tuber Platform
meeting from 20 to 21 March 2012**



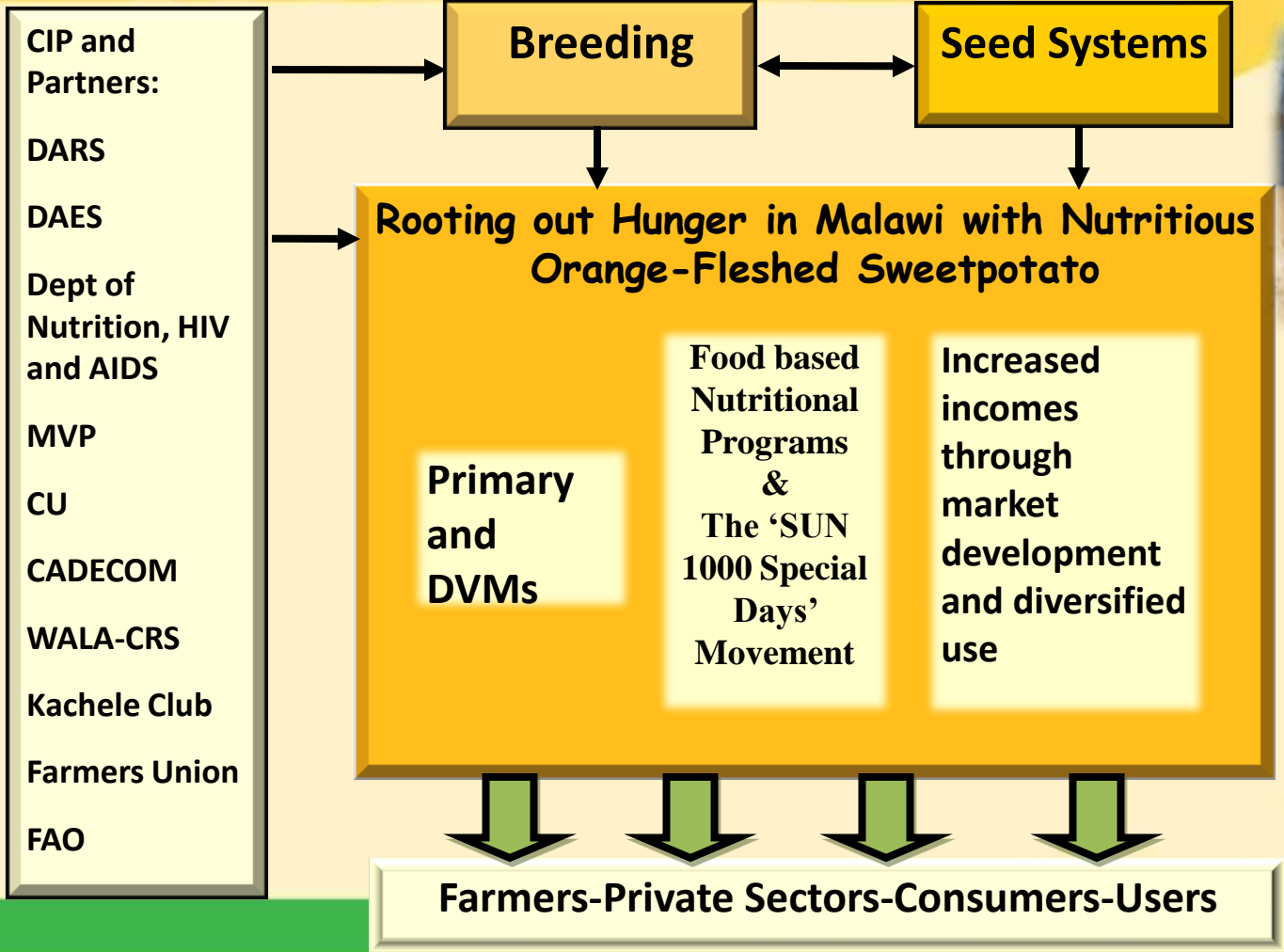
Sweetpotato
Profit and Health
Initiative

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CIP working with partners and Irish Aid a founding partner in SPHI



Result:

Primary Multiplication at Bvumbwe Research Station



➡ Assuring to produce clean planting materials with high yield

➡ through breeding
programmed by NARS
with a strong CIP 's backstop

Currently Available:

- 6 ha: Zondeni; Expanding to North and Centre
- 0.5 ha: 5 new OFSP
- Rapid multiplication & irrigation



In 2011 (Jan to Dec) this land provided 2,640,300 vine cuttings (4400 bags of 50kg) & in 2012 through March: 2,903,400 vine cuttings (4839 bags of 50kg) to various requests



Five newly released OFSP varieties: Anaakwanire, Chipika and the following 3 varieties




Result:

Secondary and Tertiary Decentralized Vine Multipliers (DVMs) in 2010/2011 & 2011/2012



NGO	District	EPA	Males	Females	Total	Notes
Kachele Club	Salima	Tembwe	10	37	47	20 beds (1 x 10 m) – 1 DVM (current)
Concern Universal	Dedza	Kanyama	98	267	365	405 Nurseries (DVMs)
		Bembeke	69	107	176	176 Nurseries (DVMs)
		Chafumbwa	95	187	282	242 Nurseries (DVMs)
Total for CU-Dedza			262	561	823	823 Nurseries (DVMs) Total area=15.66 Ha – 5 ha (current)
CADECOM	Chikwawa	Mbewe	3	0	3	3 DVMs = 0.3 ha
		Mitole	6	0	6	6 DVMs = 0.6 ha
		Livunzu	2	1	3	3 DVMs = 0.3 ha
Total for CADECOM-Chikwawa			11	1	20	12 DVMs = 1.2 ha + 8 DVMs (Year 3) Current: 3 ha
Concern Universal	Phalombe	Waruma, Naminjiwa & Nkhulambe			43	43 DVMs (gender balance is considered)
	Mulanje	Boma & Milonde			33	33 DVMs (gender balance is considered)
Total for CU-Phalombe and Mulanje					76	76 DVMs (gender balance is considered) – current: 5 ha
MVP	Zomba	Thondwe	112	198	310	16 DVMs, 2.5 Ha planted – current: 8 ha
Grand Total					1276	Vine Multipliers (individual/group)

Number of Households Benefiting from OFSP Vine Distribution during the 2010/2011 and 2011/2012 Rainy Season (each household received bundle of 300 vine cuttings) &Total beneficiaries during 2 years = 34903 households



NGO	District	Subsidized Vouchers for 2010/2011 rainy season (Yr 1)					# Household beneficiaries received vouchers (Year 2 through 26 Jan 2012):
		Female Beneficiaries	Male Beneficiaries	Total # of HHs	Area of Production (ha)	Based on Yield Estimation at HH harvested in May/June 2011 (t/ha)	
CU	Dedza	2,533	2,200	4,733	32.0	15	3,000
CU	Phalombe	779	80	859	5.8	20	3,235
CU	Mulanje	-	-	-	-	-	3,492
MVP	Zomba	1,156	2,094	3,250	21.9	18	8,000
Cadecom	Chikhwawa	1,094	1,032	2,126	14.3	18	6,208
Total		5,562	5,406	10,968	74.0	Average:17.8	23,935

Beneficiaries from a Non- Voucher Scheme



Actor	District	Non-Voucher system during the 2 years of project implementation (2010/2011 and 2011/2012 rainy seasons)						When?
		No. bundle (@ 300 cuttings or 4kg per bundle)	Source of planting materials	Purpose	Who bought it?	Where did it go and its purpose?	Income to Multipliers (Mk)	
Min of Agric	Malawi	5625	Primary multiplication - Bvumbwe	Revolving funds	Rooting out Hunger	Mulanje – disaster mitigation	843,750	Jan 12
CU	Balaka	1378	PM-Bvumbwe	Revolving funds	Rooting out Hunger	Balaka – tertiary multiplication	206,700	Jan 12
CU	Dedza	2000	PM-Bvumbwe	Revolving funds	Rooting out Hunger	Chafumbwa- beneficiaries	300,000	Feb 12
WALA	Balaka	25	PM-Bvumbwe	Revolving funds	Rooting out Hunger	Balaka – secondary multiplication	3,750	Feb 12
WALA	Thyolo	25	PM-Bvumbwe	Revolving funds	Rooting out Hunger	Thyolo – secondary multiplication	3,750	Feb 12
CU	Mulanje	200	PM-Bvumbwe	Revolving funds	Rooting out Hunger	Mulanje – Secondary multiplication	30,000	Feb 12
FUM	Lilongwe	100	PM-Bvumbwe	Revolving funds	Rooting out Hunger	Dowa, Lilongwe and Dedza – secondary multiplication	15,000	Jan 12

Beneficiaries from a non-voucher scheme - to be continued

Actor	District	Non-Voucher system during the 2 years of project implementation (2010/2011 and 2011/2012 rainy seasons) ¹						When?
		No. bundle (@ 300 cuttings or 4kg per bundle)	Source of planting materials	Purpose	Who bought it?	Where did it go and its purpose?	Income to Multipliers (Mk)	
MP	Zomba	250	PM-Bvumbwe	Revolving funds	Rooting out Hunger project	Makoka Research Station – Secondary multiplication	37,500	Jan 12
WALA	Zomba	15	PM-Bvumbwe	Revolving funds	Rooting out Hunger project	Zomba – Secondary multiplication	2,250	Jan 12
WALA	Machinga	15	PM-Bvumbwe	Revolving funds	Rooting out Hunger project	Machinga – secondary multiplication	2,250	Jan 12
WALA	Chilanzulu	25	PM-Bvumbwe	Revolving funds	Rooting out Hunger project	Chiradzulu – secondary multiplication	3.750	Mar 12
Chisawani Primary School	Thyolo	20	PM-Bvumbwe	Revolving funds	Rooting out Hunger project	Bvumbwe – school garden program-tertiary multiplication	3,000	Jan 12
CU	Dedza	6063	PM-Bvumbwe	Revolving funds	Rooting out Hunger project	Distributed to 4515 various farmers by CU in Dedza	909,450	Jan 11
Sub-Total from the project		15741					2,370,828	

Continued - Beneficiaries from a non-voucher scheme



Actor	District	Non-Voucher system during the 2 years of project implementation (2010/2011 and 2011/2012 rainy seasons) ¹						When?
		No. bundle (@ 300 cuttings or 4kg per bundle)	Source of planting materials	Purpose	Who bought it?	Where did it go and its purpose?	Income to Multipliers (Mk)	
Kachele Club	Salima	40	DVM	Generate income	FAO	Kasungu – tertiary multiplication	24,000	Jan 12
MP	Zomba	5310 ⁵	DVM	Generate income	Private Sector	Balaka –consumption	3,186,000	Feb 12
DVM ⁶	Chikhwawa	1000	DVM	Generate income	WALA-Thyolo	Thyolo-secondary multiplication	150,000	Jan 12
CU	Phalombe	1546	DVM	Generate income	USAID	Mulanje – secondary and tertiary multiplication	239,630	Jan 11
Cadecom	Chikhwawa	1333	DVM	Generate income	Evangelical Lutheran Development Service and various organizations	Chikhwawa - consumption	200,000	Feb 11
MP	Zomba	378	DVM	Generate income	Min of Agric	Machinga - consumption	56,700	Jan 11
CU	Dedza	394	DVM	Generate income	Individual	Bembeke – Dedza – consumption, multiplication	61,000	Jan 11
Sub-Total for free market		10001					3,927,331	
Gran Total		25742					6,298,159	

The success of the program was because of using an implementing strategy that includes six integrated components:



- Strengthening the partnership with the relevant government, NGOs, and private sectors
- Seed systems
- Training, visits, and field days
- Demand creation campaign through behavior change communication (theatre, dance, poetry, songs, and banners)
- Voucher systems
- Postharvest and marketing on a small-scale.

Schematic Presentation of the 1-2-3 Vine Multiplication System



Vine Flow

A 1-2-3 (primary, secondary, tertiary) system is implemented

Primary

- Bvumbwe Research Station - more than 4 ha plus tissue culture, screen house, and breeding activities for new varieties
- Clean planting materials; managed by Researchers (DARS and CIP)

Secondary

- Decentralized Group of farmers supervised by extension and NGOs; act as demos
- Using a standard bed of 1 m × 20 m with rapid multiplication technique
- Access to irrigation scheme

Tertiary

- Decentralized individual or group multipliers and trained by the trainers
- Using adjusted conventional multiplication and access to irrigation
- Producing vines and storage roots

To Producers

Sweetpotato vine multiplication managed by farmers



Clarification	Vine Multiplication	
	Secondary Vine Multiplier Principal Goal: Vine Production	Tertiary Vine Multiplier Principal Goal: Dual Purpose (roots +vines)
Planting period	Shortly after the main harvest for storage root production. This could be in the last month of the rainy season.	Two months after the secondary multiplication, tertiary multipliers start (during the dry season).
Irrigation	Irrigation is needed	Irrigation is needed
Planting method	Rapid multiplication	Adjusted conventional multiplication
Technique of multiplication	Two or three nodes are needed, and then plant them in a manageable sized plot (i.e., 10 x 20 m); planting distance of 10 x 20 cm. A plot size of 10 x 20 m contains 10000 plants. For Zondeni, 30000 vine cuttings of 30 cm long can be produced (50 bags of 50 kg in volume)	Vine cuttings of 30 cm long are planted in ridges. Planting distance within plants is 15 cm and between ridges 75 or 90 cm, depending on the locality.
Main objective	Producing vine cuttings	Producing vine cuttings as well as storage roots for food and nutrition security when facing the hunger season.

Rapid multiplication was practiced at the Secondary Multiplication



Chikwawa District



Salima District



Dedza District



Phalombe District



Zomba District

Tertiary Decentralized Vine Multiplication (DVM)



Method:

- Length of vine cutting: 30 cm
- Planting in ridge (5 m long)
- Planting distance:
 - Within plants: **15 cm**
 - Between ridges: 75 cm

Tertiary Multiplication with flood & control irrigation



Mr. Menard Winesi (0.7 ha – Tertiary DVM + 0.2 upland – home consumption), Village: Bwanaisa, TA: Mkhumba , EPA: Waruma, Phalombe District (140312)

Training of the Trainers on Vine Multiplication



Date	NAME OF FARMER CLUB	# MEMBERS (GENDER)	EPA	SECTION	VILLAGE	T/A	DISTRICT	GPS	NGO	TYPE OF TRAINING
18 Jan 12	Chimwemwe	M=8 & F=1 Tot = 9	Nachisaka	Namwiri II	Nyundo	Nsakambewa	Dowa	S 13°37.541' E 033°52.395' Elevation:1392m	Farmers Union of Malawi	Secondary and Tertiary Multiplication
19 Jan 12	Chaseta Irrigation Scheme	M=31; F=11 Tot = 42	Mlomba	Diamphwi	Chaseta	Chiseka	Lilongwe	S 14°20.174' E 033°48.521' Elevation:1197m	Farmers Union of Malawi	Secondary Multiplication
20 Jan 12	Chiphwanya	40 Members	Mayani	Matanda	Chiphwany a	Tambala	Dedza	S 14°03.406' E 034°15.746' Elevation:1301m	Farmers Union of Malawi	Secondary Multiplication
25 Jan 12	Mchenga	15 HHs	Malosa	Ndaje	Chilonga	Malemiya	Zomba	S 15°55.636' E 035°04.146' Elevation:721m	Emmanuel International-WALA	Secondary Multiplication
25 Jan 12	Nambazi Irrigation Club	3M=3; F=16 Tot=19	Nsanama	Lambulira	Pulika	Mlomba	Machinga	S 15°00.766' E 035°31.646' Elevation:638m	Emmanuel International-WALA	Secondary Multiplication
24 Jan 12	Chisawani Primary School		Dwale	Makungwa	William II	Bvumbwe	Thyolo	S 14°04.558' E 034°15.479' Elevation:1160m	School - GoM	Tertiary Multiplication
Totals										

Currently, the project also facilitates ToT on sweetpotato production and crop protection

Training of Trainers (TOT) on utilization in 2011, at CU – Phalombe/Mulanje

SPHI



Food diversification from Orange-Fleshed Sweetpotato



Sweetpotato Calendar in Malawi: Integrated Sweetpotato Production and Seed Systems Management



2011/2012 Rainy Season

Winter/dry

Dry/hot season

2011

2012

Nov Dec Jan Feb March Apr May Jun Jul Aug Sep Oct Nov

Primary Multiplication at Research Station: 3 nodes, 10 x 20 cm

Dambo (Lowland) - sweetpotato grown

Upland - 30 cm, planting distance 30 x 75 cm

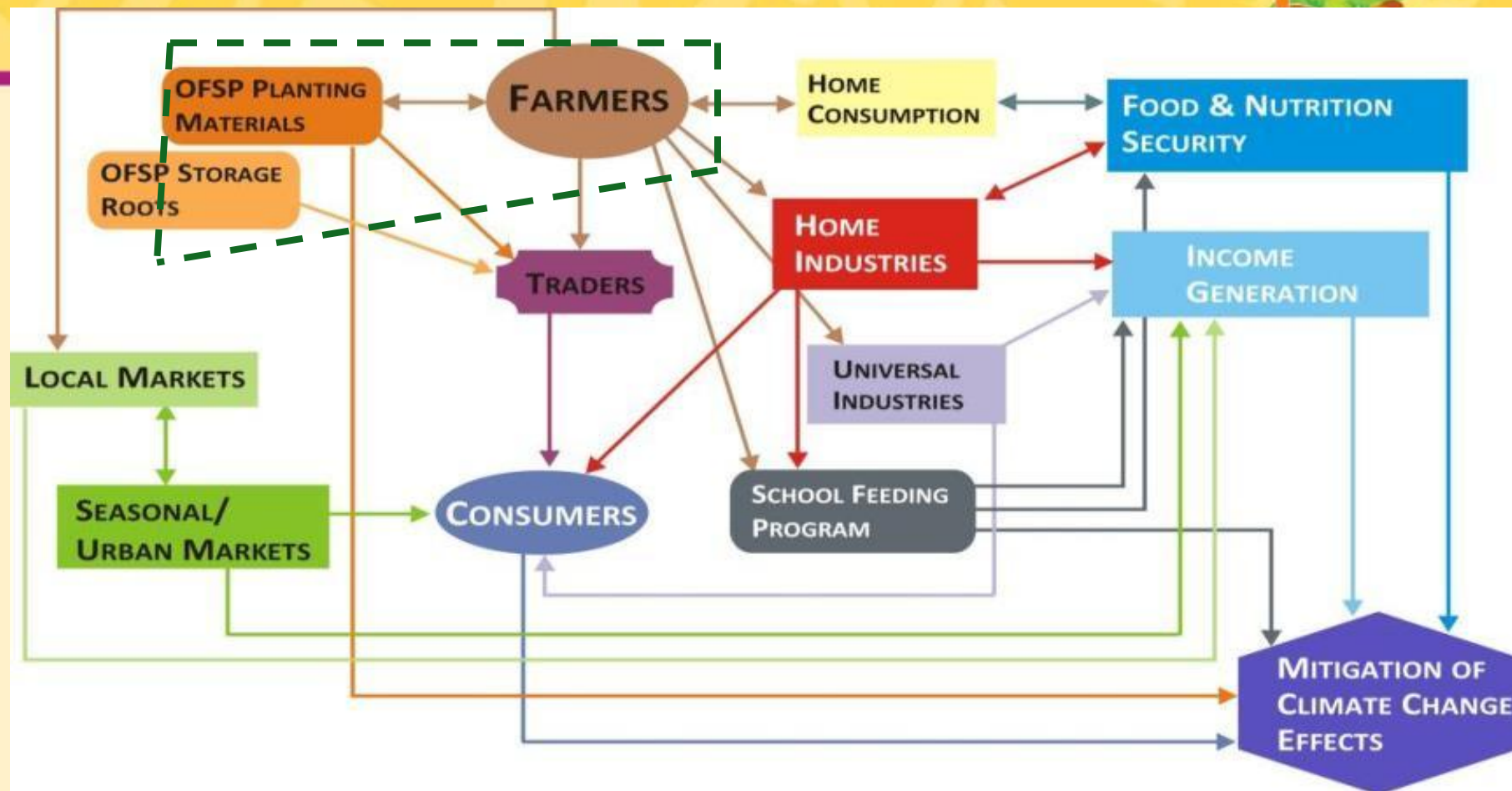
Sweetpotato production

3 nodes, 10 x 20 cm

Secondary DVM

30 cm, 15 x 75 cm

Tertiary DVM



A scheme showing potential market and product development options

Large scale processors



Sweetpotato crisp- Cordiner, **LU06/0527**,
Mugande, Kenya, **LU06/0428**, **LU06/0252**, **Zonden**





Market Orientation



Above: a woman sold veggies Zondeni leaves in Chikhwawa @ Mk 20/bundle (22 Dec 2011)

Right: Mr. Kapenuka, a Secondary DVM in Phalombe earned Mk 67,735 from 437 subsidized vouchers and Mk 10,484 out of selling vine cuttings @ Mk 60/kg (info: 14 March 2012)



Workplan for 2011/2012 (Year 3)



- Continue working on seed multiplication, training and dissemination of OFSP to 15000 beneficiaries with voucher system, and determine the opportunity on non-subsidized vouchers
- Continue conducting the trial of intercropping maize and sweetpotato on-station (2nd year trial)
- Focus on market orientation and value chains, monitoring and Evaluation
- Maintain the partnership that has already well established

Acknowledgement

- IRISH AID,
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For support toward
promoting OFSP
development & promotion
in Malawi

**Zikomo
Kwambiri**

