

Rooting out Hunger in Malawi with Nutritious Orange-fleshed Sweetpotato

“Improving livelihoods under Integrated Sweetpotato Production and Seed System Management in Malawi”



Sweetpotato
Profit and Health
Initiative

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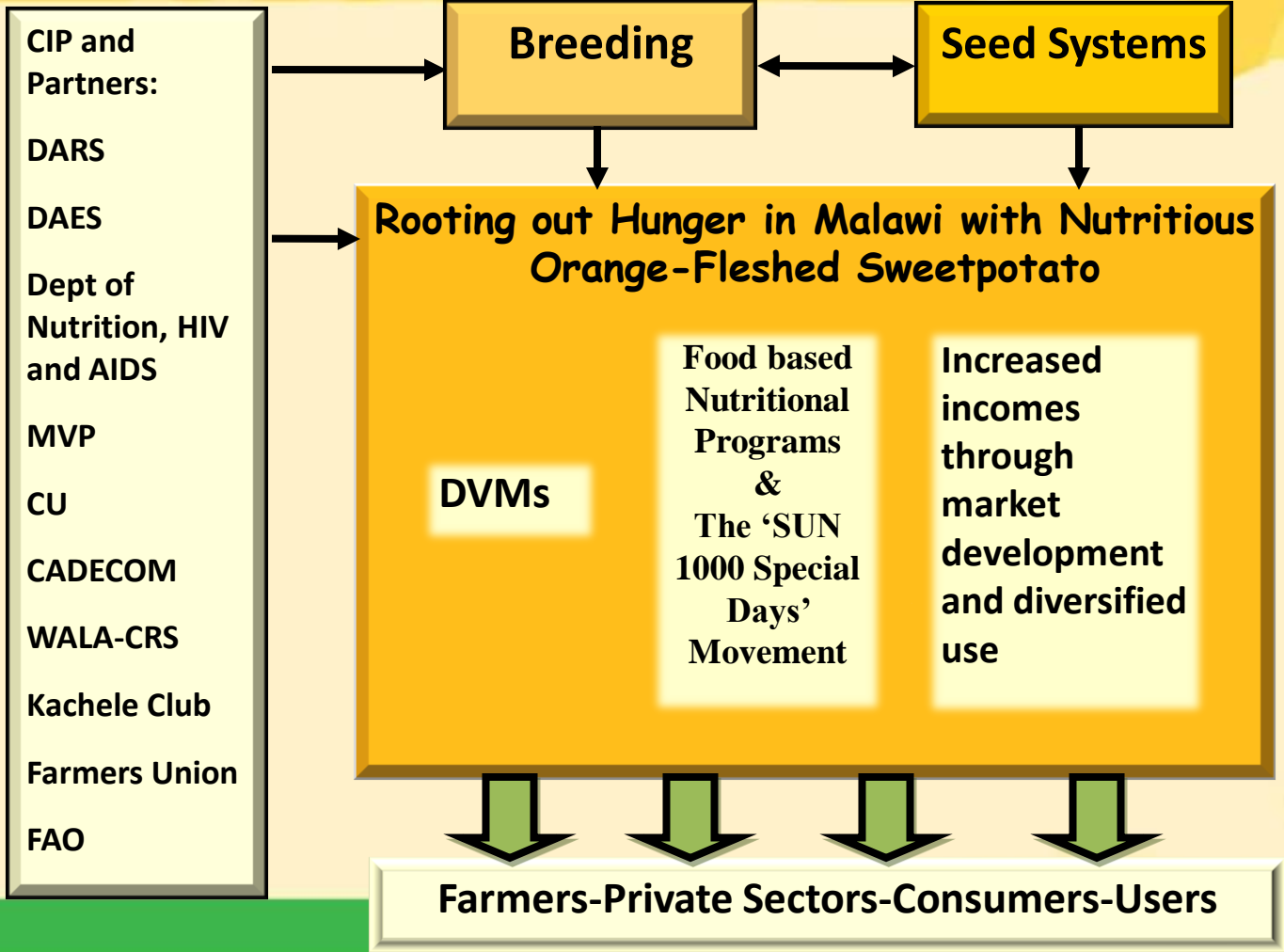
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Presentation: Progress of the Project



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



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

Secondary and Tertiary Multiplication decentralized at On-farm Vine Multiplications (DVMs) and 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	<ul style="list-style-type: none"> •Two or three nodes are needed, •Plant them in a manageable sized plot: 10 x 20 m (has 10000 plants) or 1 x 20 m (has 1000 plants) •Planting distance: 10 x 20 cm 	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

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

> 4 ha of land with irrigation



In 2011 (Jan to Dec) this land provided 2,640,300 vine cuttings to various requests



Rapid multiplication method:

- ❖ One vine cutting with 2–3 nodes is prepared and planted on a bed
- ❖ planting distance is 20 x 10 cm
- ❖ irrigation is needed
- ❖ Bed size: 1 x 20 m = 1000 plants



Rapid multiplication was practiced at the Secondary Multiplication



Chikwawa District



Dedza District



Salima District



Phalombe District



Zomba District

Tertiary Vine Multiplication



**Mr. Kapenuka in Phalombe (Mulanje Mt-background)
On 23rd September 2011, watering his tertiary
multiplication and waiting for the next rain season
expected in Nov/Dec 2011**

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**



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

Sweetpotato production

Secondary DVM

Tertiary DVM

Primary Seed Multiplication at Research Station

Summary of the OFSP Zondeni - 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	8 beds (1 x 10 m) on 29 Jan 2012; 1 bed has 1500 vine cuttings → On 21 Jan 2012, FAO bought 12,000 vine cuttings (30 cm long) - and brought to Kasungu District (40 HHs for tertiary multiplication)
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
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)
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)
MVP	Zomba	Thondwe	112	198	310	16 DVMs, 2.5 Ha planted
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 1 bundle of 300 vine cuttings)



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
	Balaka	-	-	-	-	-	1,378
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	25,313

OFSP vines distribution by Rooting out Hunger Project taken from the Primary Multiplication at Bvumbwe Research Station through 26 Jan 2012



NGO/DEPARTMENT	LOCATION	# BUNDLES (each 300 vine cuttings)	PURPOSE	DATE
CU	Mulanje	200	Tertiary Multiplication	30 Nov 11
Ministry of Agriculture	Mulanje	4500	Disaster mitigation	12 Jan 12
CU	Balaka	1378	Tertiary multiplication	17 Jan 12
Farmers Union of Malawi	Lilongwe,Dowa,Dedza	100	Secondary multiplication	20 Jan 12
MVP	Zomba	250	Tertiary multiplication	26 Jan 12
WALA(Emmanuel International)	Zomba	15	Secondary multiplication	24 Jan 12
WALA(Emmanuel International)	Machinga	15	Secondary multiplication	24 Jan 12
Ministry of Agriculture	Mulanje	1125	Disaster mitigation	25 Jan 12
Chisawani Primary School	Thyolo	20	Tertiary multiplication	24 Jan 12
Total		7603		

Training of Trainers (TOT), an example at Concern Universal – Phalombe/Mulanje

SPHI



Large scale processors



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



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**Thank
you for
your
attention**