



Angola
D R Congo – South
Lesotho
Malawi
Mauritius
Mozambique
South Africa
Swaziland
Tanzania –south
Zambia
Zimbabwe

Rowland Chirwa

**Updates on SABRN Presented at ECAREN SC Meeting – Feb
03-07 2014, Kampala, Uganda**

Outline

- Staff changes
- Network Coordination
 - Capacity Building
 - Network visits
 - Meetings and Workshops
- Bean Breeding and Germplasm Exchange
 - Generating populations
 - Nurseries
 - Trials
 - Seed Production
 - Germplasm Distribution

Staff Changes

Out-going:

Euster Banda - left CIAT-Malawi in June 2013 – Assistant Administrator

Lizzie Kachulu – left CIAT-Malawi in April 2013 – Research Assistant (Breeding)

In-coming:

Brenda Madeya – Joined CIAT-Malawi in July 2013 – Administrative Assistant

Barthlomew Chataika – Joined CIAT-Malawi in October 2013 – Program Technical Officer

Enock Maereka – Joined CIAT-Malawi in November 2013 – Seed Systems Specialist

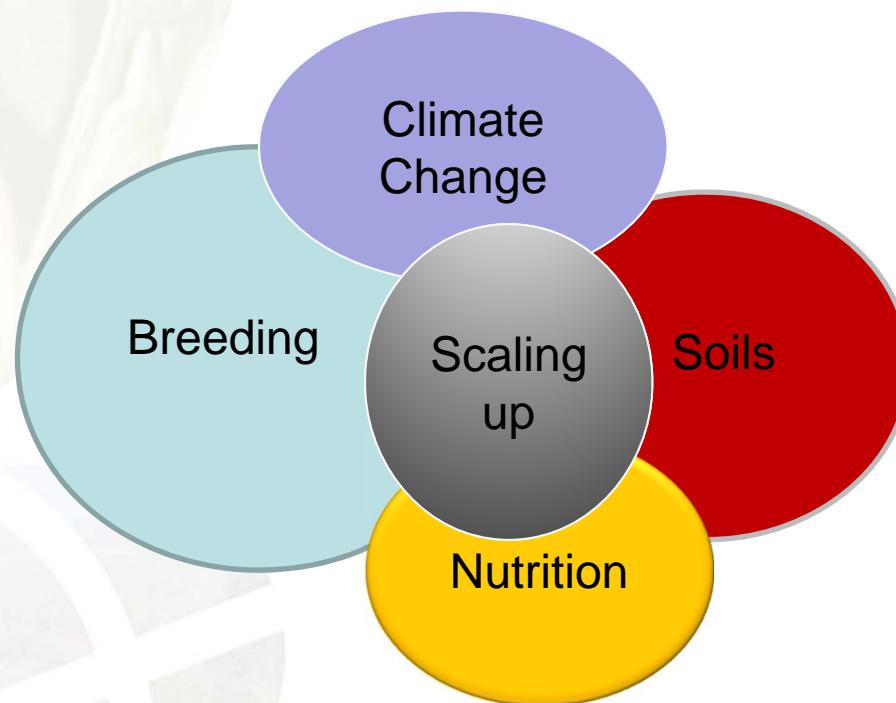
Zewdy Gebremedhin– Join CIAT-Malawi in December 2013 – PhD student on CIAT-NUIG project supported by Irish Aid

Veronica Guwela– Join CIAT-Malawi in January 2014 – Research Assistant on CIAT-NUIG project supported by Irish Aid



NETWORK SUPPORT

Operations from CIAT-Malawi



Network Support Through PABRA

Outcome #1.1: Increased access to bean varieties resistant to multiple stresses

Outcome #1.2: Increased farmers access integrated stress management options

Outcome #1.3: Improved nutrition and health for the vulnerable communities (children, women, and PLWHA)

Outcome #1.4: Increased access to high value bean products targeted to niche markets for men and women

Outcome #1.5: Increased capacity of men and women to participate in technology development, delivery and decision making bodies equitably

Outcome #2.1: Increased access to new and existing markets and opportunities for both men and women

Outcome #3.1: Increased access particularly for information and knowledge that shapes bean technology development, delivery and influence policy

2013 WORK PLAN & BUDGET

Country	Institution	Total (USD)
Angola	IIA	39000
D R Congo	INERA -Kipopo	50000
Lesotho	DAR	24500
Malawi	DARS	100950
Mauritius	MSIRI	19000
Mozambique	IIAM	84800
South Africa	ARCSEA	40500
Swaziland	MRS	33500
Southern Highlands of Tanzania	ARI UYOLE	95000
Zambia	ZARI	108800
Zimbabwe	DCRDRD	87500
Malawi-CADECOM	CADECOM	14000
Zambia-NFNC	NFNC	10000
Grand Total (USD)		707,550

Network Coordination Visits -2013

Apr 2013	PABRA SC meeting in Harare
April 2013	PABRA stakeholders and proposal development meeting in Kenya
May 2013	TL-I & TL-II meeting in Uganda
June 2013	Participate in CA meeting in Mozambique
June 2013	Backstop partners in Swaziland and Mozambique
July 2013	Backstop to Malawi and Mozambique
Aug 2012	Climbing bean workshop in Colombia
Sep 2013	Drought workshop in Colombia
Oct 2013	SAf CoP7 meeting in Malawi

NARS Participation in Training and Workshops

- **Breeders training in April, Uganda**
- **GCP training for breeders in May, Uganda**
- **Markets workshop group in South Africa, August**
- **Climbing bean workshop in August, Colombia**
- **Drought workshop in September, Colombia**
- **Nutrition working group meeting in Tanzania,**
- **October**
- **GCP supported -Bean Breeders training on molecular tools was held in Spain, October**



Degree Training

List of Degree Trainees

NAME	GEN	DEG	UNIVERSITY	FUNDING	STATUS
Monea Mucavea	F	MSc	LUANR, Malawi	N2 Africa	2 nd year
Abraham Dhlamini	M	MSc	Univ. of Pretoria	Other	Finalizing
Godwill Makunde	M	PhD	Free State Univ.	TL-II	Graduated
Isaac Fandika	M	PhD	New Zealand	Other	Graduated
Anica Massas	F	PhD	Penn State Univ.	Other	2 nd year
Karantini Mazengo	M	MSc	Sokoine Univ. of Agric.	TL-II	Starting
Nathan Phiri	M	PhD	Unv. KwaZulu Natal	AGRA	3 rd Year
Grace Munthali	F	MSc	Unv. Of Pretoria	Other	Finalizing
Lorain Chilipa	F	MSc	Unv. Of Zambia	Other	2 nd Year

Proposal -Resource Mobilisation

- **CIDA Funding - Current phase ends March 2014. SABRN team participated in thinking of a Way-Forward**
- **McKnight funded projects (Seed Systems, P-efficient and Climbing bean) are ending – Seed systems and Climbing Bean are requested to submit a proposal for some bridging funds**
- **SDC Funding – Current phase ends December 2014 – Possibly we have to develop a proposal for future funding**
- **APPSA supported by World Bank through CCARDESA – has some bean activities in Malawi, Mozambique and Zambia**
- **New project supported by USAID to be launched this month**
- **On-going projects supported by USAID-Mz, Malawi & TZ (Africa Rising)**

Network Breeding

Germplasm Development and Exchange

Generating segregating populations: were advanced at both sites Chitedze and Bembeke

Nurseries : Chitedze, Bembeke and other sites

Trials: Yield trials were conducted for different objectives, and regional trials were distributed across countries.

Breeder Seed Production: Chitedze increased seed for most released varieties

Seed increase for further evaluation: Seed for segregating breeding lines, nurseries and trials – planted at Kasinthula, Kandiyani and Bwanje



GERMPLASM DISTRIBUTION

Bean Germplasm Distribution - 2013

Nursery / Trial	Entries	No. of Sets per Country							
		AO	CD	MW	MZ	ZA	SZ	TZ	ZM
SARBYT	20	1	2	2	3	2	1	1	3
SARBEN	100	1		1	3	2	1		3
Drought Small Lattice	36	1					1	1	
BSM Nursery	12			1				1	2
Sugar Nursery	22	1	2	1	3			1	
ALS Nursery	46				2		1		
Navy Nursery	14			1	3				
Biofort Fast Track	32		3		2		1		2
SARBEN Climber Lattice	49				2		1	1	
New BILFA Lattice	25	1			3			1	

Bean Germplasm Distribution - 2013

Cont...

Nursery requested	Entries	No. of Sets per Country							
		AO	CD	MW	MZ	ZA	SZ	TZ	ZM
Commercial Varieties	15		3						
High Mineral Trial Lattice	25	1	2		2				
Calima Nursery	55			1	2				
Calima Nursery Lattice	49	1							
Khakhi Lattice Trial	36							1	
Khakhi Nursery	28			1				1	
Parental Lines	39				3				1
Mcknight Set II (On-Station)	30				2		1		2
Mcknight Set II (On-Farm)	20								
RILS Trial (for BSM) Lattice 10*10 4 Reps	100			1					

Bean Germplasm Distribution - 2013

Cont...

Nursery requested	Entries	No. of Sets per Country							
		AO	CD	MW	MZ	ZA	SZ	TZ	ZM
Calima Low N	8		3					1	
PVS Nursery	19		3						
NUA Lines	18		3					1	
Climbing Nursery Fe & Zn	316		1					1	
CBB Nursery	42		1					1	
Tanzania Collection	20		1						
F3 Populations	114							1	
F4 Selections	53							1	
Red Kidney	9			1					

Seed Bulking - 2013

Bulked Seed	Qty	LS	MW
CIM-Khak 02-22-1-2	500 g		
Nain Dekyondo (Bulk seed)	500 g		
CIM-Dwrf-Climb01-56-10	500 g		
CIM-Dwrf-Climb01-59-1	500 g		
CIM-Dwrf-Climb01-03-1	500 g		
CIM-RM02-67-2	500 g		
RCB 237	500 g		
CIM-Dwrf-Climb01-30-1	500 g		
SER 86	500 g		
CIM-Nav02-11-1	500 g		
VTTT 923/10-3	500 g		
CAL 143	500 g	5 kg	
NUA 45	500 g		AGRA
VTTT924/4-4	500 g		AGRA



REGIONAL YIELD TRIALS

SARBEN YIELD RESULTS

DESIG	Guruwe MZ	Msafu ZA	Mifulira ZA	Pannar SA	Potch SA	Mean yld
BILFA 4	504	2888	2,375	1,008	-	1,323
TIO CANELA 75	78	3229	2,542	700	476	1,261
CIM-KHAK 07-ALS-1	528	1804	2,792	1,238	282	1,154
UYOLE 03	318	1992	2,375	1,105	645	1,106
CIM-KHAK 07-ALS-31	498	1629	2,792	1,116	297	1,094
MR 13905-6	204	2092	1,917	1,092	124	1,090
CAL No 9	264	1992	2,042	1,470	282	1,027
GCI-SR-2273-RAR-3	24	1767	2,167	640	327	1,019
CIM-KHAK07-ALS-16-1	336	1633	2,667	913	321	1,006
NR 05 PN 220	822	1621	1,750	1,585	276	1,005
CIM-KHAK-04-01-22	282	1688	1,875	762	1,200	1,004
Local Control	-	492	542	1283	343	
Site mean	363	1594	1448	878	361	809
P Value (Design)						0.025
LSD						404
CV%						77

SARBYT YIELD RESULTS

Entries	Site	Seed Yield (Kg/ha)						Mean Yield
		BBK	CZ	MZ	SA	SZ	TZ	
RCB 261		1073	1651	2838	848	720	683	1302
CIM-SUG02-15-2		1198	1505	3229	437	580	558	1251
RCB 266		1128	1447	2398	1038	561	784	1226
CIM-NAV 02-10-1		413	1632	3257	762	557	684	1218
RCB 265		694	1229	2723	763	737	388	1089
29 EX VAM 2005B		917	1247	2228	973	475	538	1063
41 EX VAM 2005B		719	1302	2030	954	553	631	1032
CIM-NAV 02-12-1		646	1057	2492	758	557	686	1032
CAL 143		757	998	2018	955	445	754	988
RCB 233		812	1171	1496	1041	703	701	988
Mean yield		677	1219	1968	847	525	658	1074
P-Value								<0.001
LSD								726
CV%								34

Two new high yielding and stress tolerant bean varieties released in Lesotho

NUA 45



CAL 143



- Yield range from 2000– 2400 kg/ha in Highlands, 2900– 3500 in Lowlands.
- Grain type– Red mottled (Calima beans)
- Takes 90 days to reach physiological maturity.
- Large seeded beans, kidney shaped seed (55g/100 seeds)
- Rich in Fe and Zn
- Yield potential of 2000kg/ha
- Takes 90 days to maturity
- Red speckled medium sized seeds (42g/100 seeds)
- Drought resistant
- Determinate
- Resistance to Angular leaf spot

Two new bean varieties released in Swaziland

Masai-Red



ATTRIBUTES

- Suitable for All Agro-ecological zones
- High yielding (1310 Kg /Ha)
- Medium maturing (115 days)
- seeded
- Tolerant to diseases
- Fast cooking
- High Protein content (24.48)

Nua 45



ATTRIBUTES

- Suitable for All Agro-ecological zones
- High yielding (1290 Kg/Ha)
- Early maturing (95 days)
- Large seeded
- Tolerant to diseases
- Fast cooking
- High Protein content (18.82)

Two new high yielding, stress tolerant and market responsive bean varieties released in Zimbabwe

SWEET VIOLET (VTTT925/9/1/2)



ATTRIBUTES

- Suitable for High & Mid-veld
- High yielding >
- Preferred Grain type: Calima
- Large seeds: 45g/100 seeds
- Resistant to diseases
- Fast cooking < 2 hrs

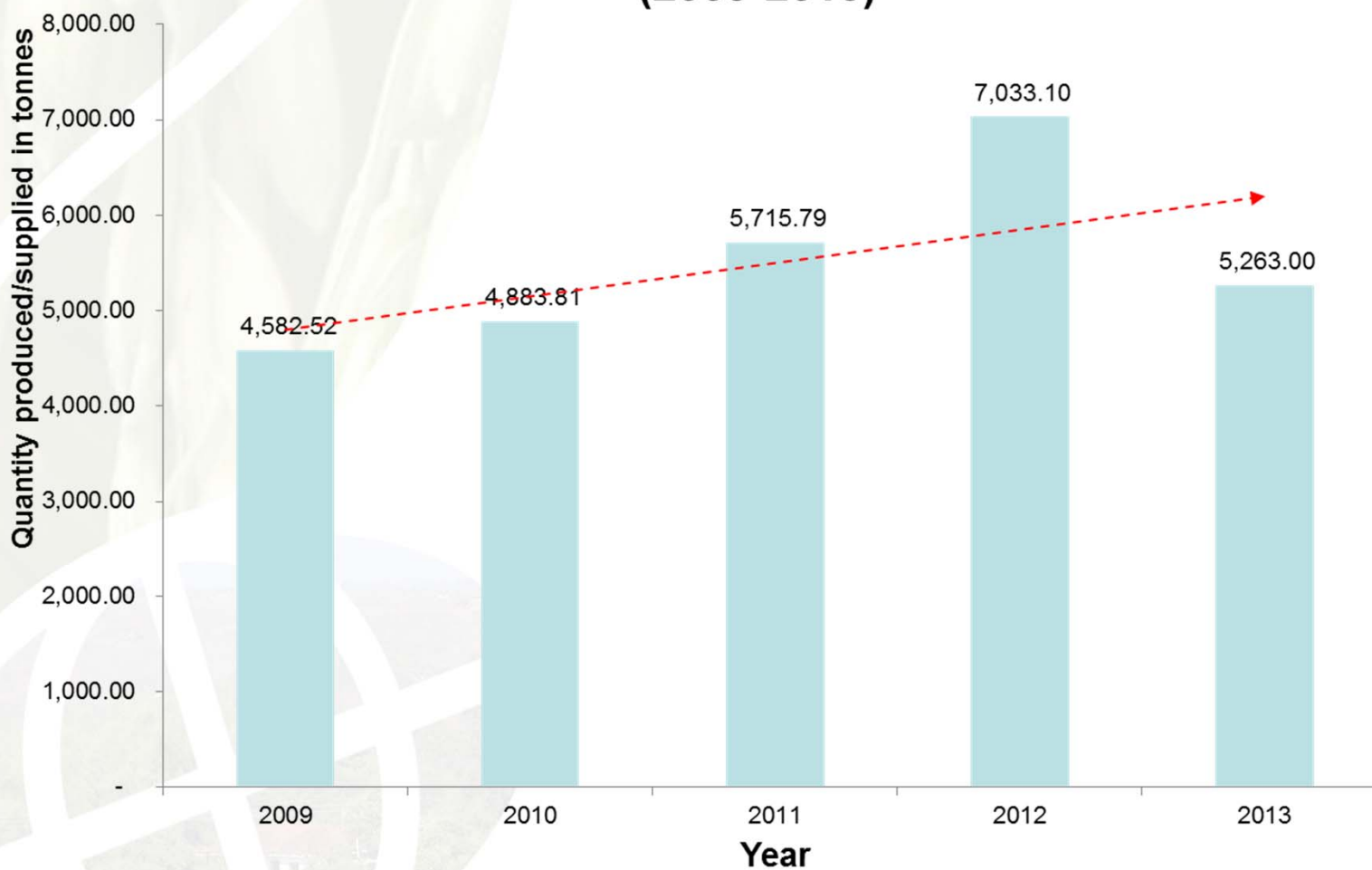
CHERRY (MG38)



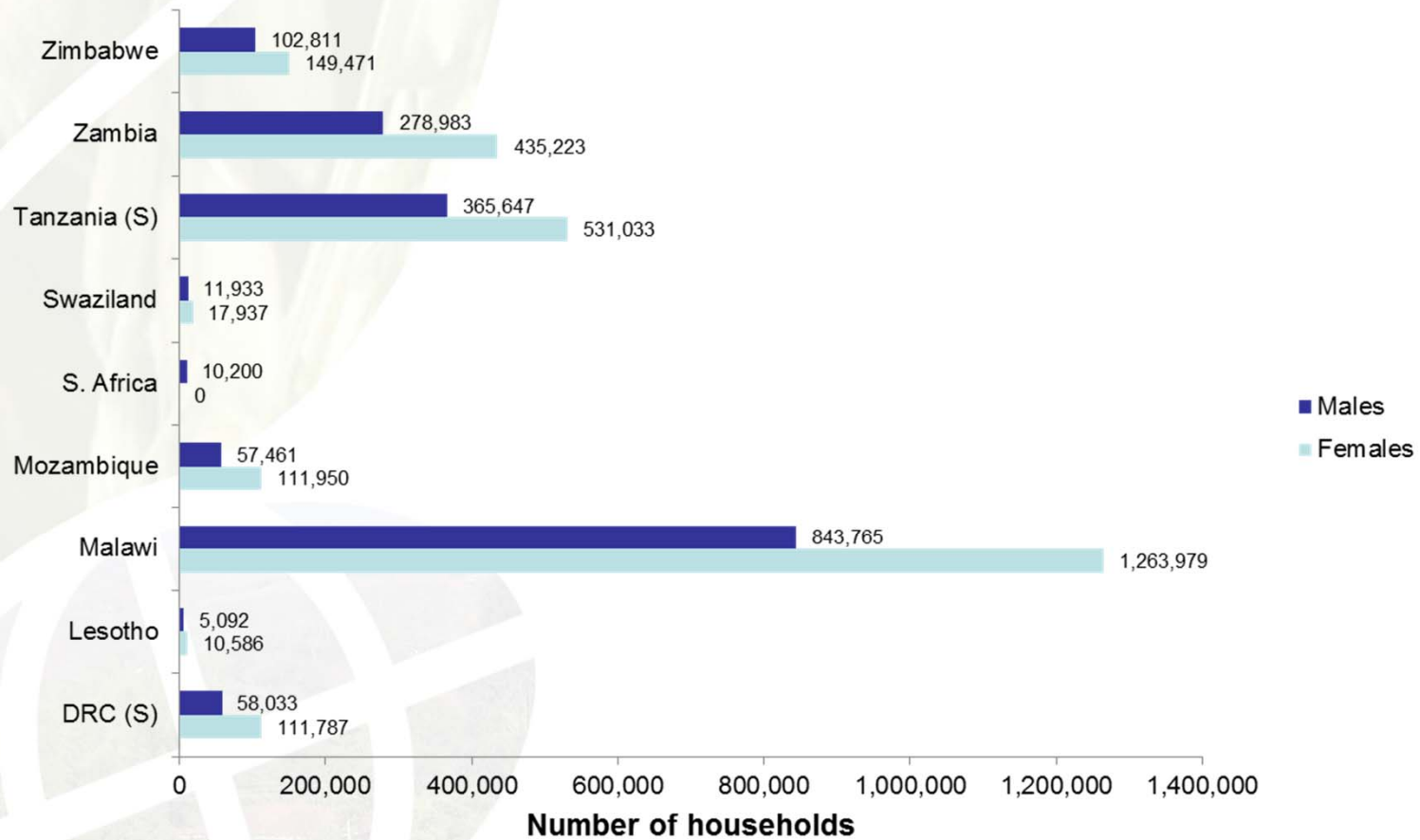
ATTRIBUTES

- Suitable for High & Mid-veld
- High yielding >
- Preferred Grain type: Sugar
- Large seeds: 55g/100 seeds
- Resistant to diseases
- Fast cooking < 2 hrs
- High Fe (100) & Zn (54) ppm

Bean seed produced/supplied to farmers in SARBN (2009-2013)



Number of households supplied with bean seed in SABRN by gender (2009-2013)



Available Nurseries for 2013–14

TRIAL OR NURSERY NAME	ENTRIES
F5 GENERAL	81
F1.6 ANDEAN DROUGHT	146
F8 DROUGHT EARLY	90
F 10 DROUGHT EARLY	99
F4.10 INTERSPECIFIC ACUT SX	97
LOW FERTILITY & DROUGHT	23
DROUGHT AND IRON EARLY	12
ALUMINIUM AND DROUGHT	186
HIGH IRON AND DROUGHT	167
LARGE WHITE & RED MOTTLED	56
ANDEN RED MOTTLED	31

TRIAL OR NURSERY NAME	ENTRIES
SARBEN	99
SARBYT	19
BILFA	25
ALS	115
MARKET CLASS	36
CALIMA	49

TRIAL OR NURSERY NAME	ENTRIES
RILS F4.7 (ICA BUNSI/SXB 405)	12
CBB TRIAL 7*7	49
DROUGHT PHYSIOLOGI LINES 10*10	100
DAB 5*5	25
DAB 14*14	196
ANDEAN 8*8	64
MESO 7*7	49
MESO9*9	81
RILS 10*10 (G212/BAT 881)	100
TL II	130
PHASEOLUS LUNATUS 6*6	36
TEPARY BEAN 5*5	25
DROUGHT ANDEAN BEANS 6*6	36



Thank you for your
attention