

An illustration of a smiling woman with a green headwrap and purple shirt feeding a baby with a spoon. They are surrounded by large sweetpotatoes. The background features a vibrant yellow field with colorful geometric patterns in red, purple, and orange.

Rwanda Sweetpotato Breeding progress

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SWEETPOTATO ACTION FOR SECURITY AND HEALTH IN AFRICA

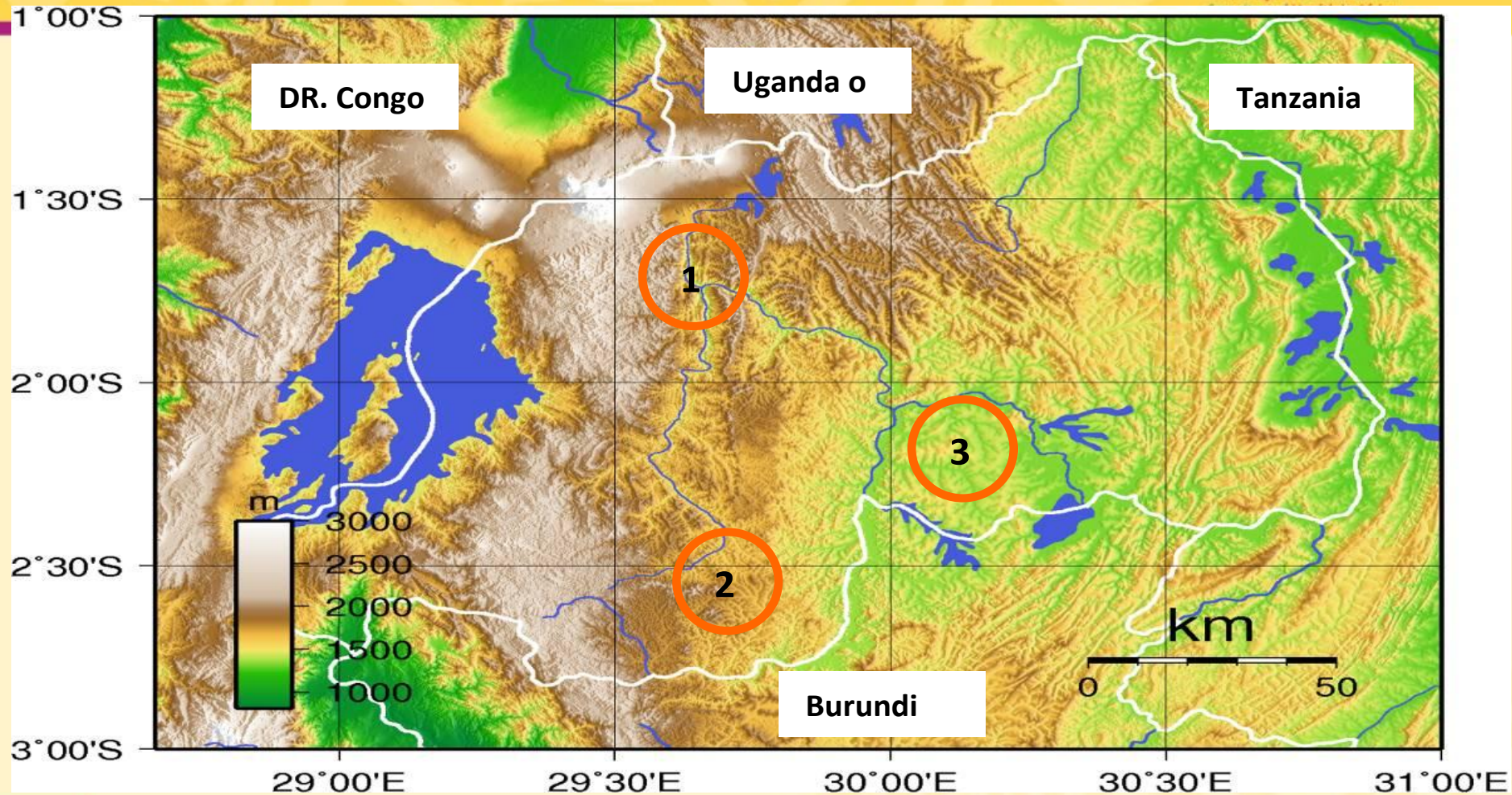
Overall breeding objective:

To develop sweetpotato varieties with:

- ☐ High yield
- ☐ Quality traits (mainly High DM, skin and flesh color/B-carotene)
- ☐ Tolerant to pests and diseases
- ☐ Suitable for specific or wide adaptation, farmer preferred)
- ☐ Dual purpose (Roots and Animal feed)



Sites selection



Strategy



- ❑ Collecting, evaluating and selecting from local germplasm
- ❑ Introduce promising genotypes from other countries/ NACCRI and evaluating them
- ❑ **Dvlpt SP using ABS more parents, more controlled crosses and a rapid selection scheme with farmer participation in Rwanda**

Type of sweetpotato trials 2012/13



Type of trial		Details	2009	2012/13
Crossing block				
	1	No. of parents in crossing block	40	30
	2	No. of seed collected from OP	16000	1100
		a. Total no. of families of OP seed	71	60
	3	No. of seed collected from crosses	16500	250
		a. Total no. of families of controlled crosses	60	60
Seedling nursery				
	1	No of seeds planted	16000	-
	2	No of seedlings established	5380	-
	3	Total no. of families planted	60	-

Type of sweetpotato trials 2012/13



Type of trial		Details	2009	2012/13
Observation trial				
(OT)	1	No of clones planted	8000	5380
	2	No of checks (check clones) planted	4	4
	3	No. of locations	3	3
Preliminary yield (PT)				
	1	No of clones planted	96	25
	2	No of checks (check clones) planted	4	3
	3	No. of locations	3	3
Advanced yield trial (AT)				
	1	No of clones planted	75	52
	2	No of checks (check clones) planted	3	3
	3	No. of locations	3	3

Type of sweetpotato trials 2012/13



Type of trial		Details	2009	2012/13
On-farm trials				
	1	No of farms/farmers/region/district / province		
		Regions	3	3
		Districts	14	14
	2	Total no. of trials whole country	36	29
No of varieties released			2	8

Participatory release



8 varieties released/ with 2 new OFSP

New released SP varieties



Official name	Farmer's name	Pedigree	Flesh color
RW11-17	Maryoha	Ejumula (OP)	white
RW11-1860	Giramata	2000-203 (OP)	white
RW11-4923	Mbakungahaze	Ukerewe (OP)	white
RW11-2419	Izihirwe	Mugande (OP)	white
RW11-2560	Terimbere	SPK004 (OP)	Deep orange
RW11-2910	Ndamirabana	97-062 (OP)	orange
RW97-062	Gihingumukungu	True seed from CIP	Deep orange
Ukerewe	Ukerewe	CIP/ Tissiculture form	Yellow

Yield performance of selected genotypes under ABS 2012

No	Clone code	Root yield (T/ha)	Dry matter content (%)	Flesh colour
1	2560	29.13	21.00	Deep Orange
2	3736	27.50	23.47	Light Orange
3	2910	25.28	31.13	Deep orange
4	1860	22.92	37.78	Cream
5	2285	22.78	30.00	Cream
6	17	22.35	30.80	White
7	5091	20.69	28.83	Light orange
8	5135	20.28	28.47	White
9	2419	18.87	24.90	White
10	3074	15.58	33.43	White

Sweetpotato staffing



Names	Institution	Discipline	Training level	Time (%)
Jean Ndirigwe	RAB	Plant Breeder	MSc (under PhD)	100
Damien Shumbusha	RAB	Plant Breeder	MSc	100
Lydie Kankundiye	RAB	Agronomist	Under Msc training	100
Anastasie Musabyemungu	RAB	Extensionist	BSc	100
Phanuel	RAB	Technician	Technician	100
J.B Shingiro	RAB	Food scientist	MSc	50
G. Night	RAB	Entomologist	PhD	10
Habineza J.C	RAB	Extentionist	Bsc	50 %

Source of funds



- GoR
- Sasha Project
- AGRA (Phased out/Feb. 2013)
- DONATA (Phased out/ March 2013)

Constraints



- SPVD on new WFSP/OFSP
- Virus testing for new improved sweetpotatovarieties currently in use

Proposed future plan



- Introduction and development of new SP with focus to virus tolerance
- Cleaning, Rapid multiplication and dissemination of released varieties

Thanks

