Block 1 Poster 9

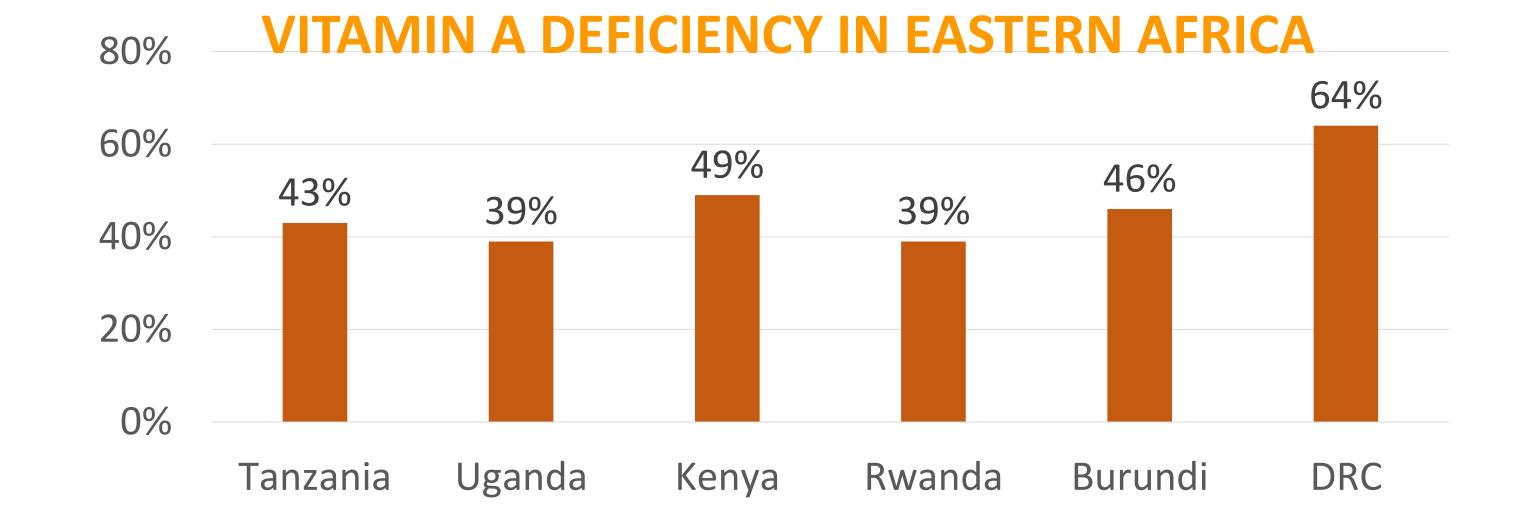


Addressing vitamin A deficiency through vitamin A-rich banana cultivars in East African farming and food systems

BACKGROUND

Vitamin A deficiency (VAD) remains a public health problem in Sub-Saharan Africa. In Eastern Africa, at least 4 in every 10 children under 5 years (>39%) have VAD, which is way above the WHO threshold point of 15%. Main reason is the consumption of monotonous diets mainly based on starchy staples with little or no animal source foods and yellow/orange/green vegetables and fruits.

WHY FOCUS ON BANANAS



FAST-TRACKING ΡΔΤΗ\//ΔΥ

- Important crop to the livelihoods of millions of both rural and urban people in Eastern Africa
- Food security crop (perennial, mixed / intercropped)
- Consumption in eastern Africa between 3-11 fingers/person/day and 0.70 kg/day/person in Uganda alone
- There is an affordable banana-based dish for any social-economic group
- Great banana germplasm biodiversity, managed by Bioversity (ITC Belgium)

CULTIVARS INTRODUCED IN EAST AFRICA

Cultiva rname	Country of origin	Bunch weight (kg)	Genome- Subgroup	Fruit ripening Stage	% contribution to Vitamin A daily need of <5yrs
Apantu	Ghana	25	AAB-	Unripe	80.42
			Plantain	Ripe	171.63
Bira	Papua New	22	AAB-Pacific plantain	Unripe	74.08
	Guinea			Ripe	177.42
Sepi	Papua New	28	AA-nd	Unripe	34.5
	Guinea			Ripe	165.8
Lahi	Hawaii	30	AAB-Pacific	Unripe	57.3
			Plantain	Ripe	178.3
To'o	Papua New Guinea	13	AA-Dessert	Unripe	9.67
				Ripe	136.03

Network analysis on farmer-to-farmer resource sharing at community level (2017-on wards)

Monitor adoption of varieties within farmers' farming and food systems (2015 : continuous)

- TOT approach used to reach community members with information and materials distributed systematically (2014 : continuous)
- Maintain mother gardens; multiplication (micro & macro propagation (2014 : on going)

12 varieties selected; agronomic trials established; sensory acceptability tests with local farmers (2010 : on going)

>400 accessions screened (2005 : 2008)



END USERS AND BENEFITS

- Small-holder communities dependent on banana for both food and lacksquareincome and vulnerable to vitamin A deficiency within East and **Central Africa**
- Target community actively involved in varietal testing and selection ulletthrough participatory agronomic evaluation, sensory evaluation and knowledge sharing and transfer
- Enhanced access to appropriate knowledge and techniques \bullet regarding production, postharvest handling and dietary use of the vitamin A-rich bananas
- Enhanced access to diverse banana varieties to not only meet their

Vitamin A-rich bananas on trial in Cibitoke, Burundi Field data collection, Burundi

LEVEL OF ADOPTION OR USE

- 5 cultivars (Apantu, Bira, Lai, Lahi, Pelipita) selected by farmers following agronomic and sensory evaluation
- >11000 plantlets of the materials distributed to farmers in Burundi and DRC
- 9565 households directly reached with information on the utilization of vitamin A-rich bananas in the diet
- Intensified macropropagation in progress to reach more farmers with materials

CRITICAL GAPS AND NEXT STEPS

- Proof of concept with regards to effect on serum retinal level following human feeding (needs funds)
- Scaling out to reach more regions in Burundi and DRC and additional farmers in Uganda, Kenya, Tanzania and Rwanda

calorie and income needs but also provide substantial levels of vitamin A

KEY PARTNERS FOR SCALING

Harvestplus, RTB & A4NH (additional funding to enable more research & scaling), NARs, Ministry of Agriculture & Ministry of Health (scaling in Burundi, DRC, Rwanda, Tanzania, Uganda and Kenya)

SCALING STRATEGY

- Continued capacity building through TOT approach and inclusion of both male and female community members
- Decentralization of macropropagation to community level through trained TOTs to ensure more materials are accessible to more farmers within short time
- Strengthening the work in Rwanda, Tanzania and Uganda and initiating the same work in banana consuming regions of Kenya

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