



# Fresh bean Pod- Product Profile Uganda

Presented at the Demand-Led Breeding (DLB)  
Product Profiles - A Practitioners Guide,  
On-line Launch Event

**Thursday 27 August 2020**

**Presenter: Dr. Stanley Nkalubo**



# Background

- **Defn: Fresh bean pod**

- Beans harvested at physiological maturity before the pods are dry and sold for consumption.

- **Problem**

- Currently the fresh bean pod is a US dollar 2 million niche market product that is taking the bean industry by storm especially in the urban and peri-urban areas of Uganda and we are seeing external markets showing lots of interest and promise.
- Fresh bean pod product suffers from deterioration and became easily unsellable immediately after harvest. This is the major reason for this product profile.







# Product Profile Design team

## PP Design Team Lead/Champion

PP Design Team		
Person	Area of Expertise	Name of organisation
Stanley Nkalubo	Breeder	NARO, Uganda
Clare Mukankusi	Breeder	Boversity-CIAT Alliance-Uganda
Ssekandi Wilber	Agronomist	NARO, Uganda
Luyima Gabriel	Seed systems	NARO, Uganda
Jean Claude Rubyogo	Seed systems	Boversity-CIAT Alliance-Kenya
Richard Ariog	Socio-economist	IFPRI-Uganda
Racheal Namaganda	Socio-economist	NARO, Uganda
Grace Nanyonjo	Gender specialist	National Crops Resources Research Institute-Uganda



**Stanley Nkalubo**



**Wilber Ssekandi**



**JC-Rubyogo**



**Racheal Namanda**



**Clare Mukankusi**



**Gabriel Luyima**



**Richard Ariong**

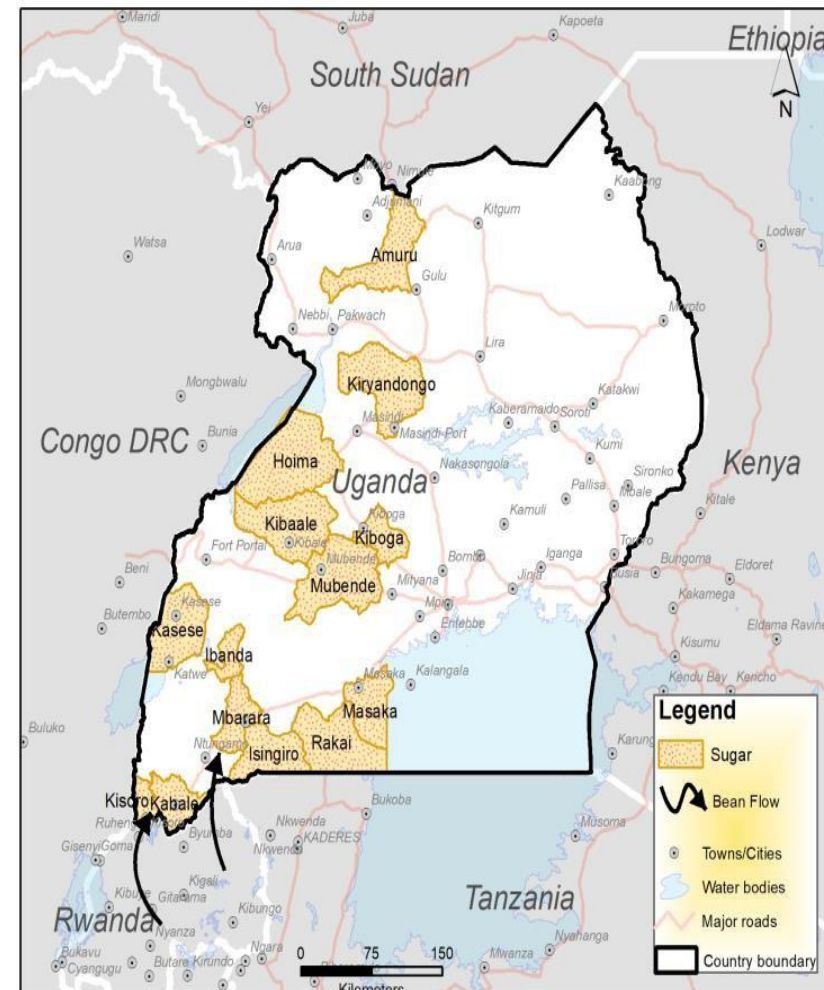


**Grace Nanyonjo**



# Product Profile Descriptors

Product profile name	Fresh bean pod
Crop	Common Bean ( <i>Phaseolus vulgaris</i> L.)
Country(s)	Uganda
Geographic region(s)	Central, Eastern and South-western Uganda
Market segment	New emerging market - fresh bean pods in Uganda and the East African region. High yield, attractive pods and grain appearance with good consumer taste and long shelf life
Name of target variety(s) or landrace to be replaced	"Kayembwa" a landrace, poor yielder, susceptible to diseases and "NABE 12C" has required features, a climber, expensive to produce with limited geographical production areas
Date PP created	27.4.2020



**SUGAR BEAN CORRIDOR**



# Target client and Use

Value chain primary clients/customers	Farmers, traders (market women), consumers
Market scale	Local and regional markets
Use	Food
Type of processing	None - fresh pod/grain
Market class	Sugar type







# Target crop producers and production system

Number of farmers	25,000-45,000
% ratio: male to female farmers	20-30% male; 70-80% female
Production system	Open field
Area of production system ha	15,000 - 30,000 ha
Growth habit	Bush (determinate/ indeterminate)
Expected level of inputs	Medium fertilizer, low crop protection chemicals
Typical yield range of target system	10-15 t/ha (fresh pod weight before threshing)
Cropping system	Continuous monocropping
Mechanisation	Mainly hand harvesting, some mechanical threshing
Agroecological zone(s)	Low-medium altitude (1000-1800m)
Potential seed needed	1,250-2,250 tonnes





# Variety/Product technical specification

Client/customer	Driver	Trait category	Preference group: Women (W) Men (M) Youth (Y) W+M+Y (All)	Trait demand classification: 1. Essential/"must have" 2. Niche opportunity 3. Added-value 4. Winning trait	Target traits	Trait description (Quantitative measures)	Name of benchmark variety	Performance required compared to benchmark variety <,> etc
Farmer	Productivity	Yield	A	Essential	Yield of fresh bean pods	Weight of fresh pods at physiological maturity in kg/ha	NAROBAN 1	>
		Biotic stress resistance	A	Essential	Angular leaf spot resistance	< 3 (CIAT scale)	NABE 4	>
			A	Essential	Anthraxnose resistance	< 3 (CIAT scale)	NAROBAN 1	>
			A	Essential	Root rot resistance (Pythium and Fusarium spp.)	< 3 (CIAT scale)	NABE 14	=
			A	Essential	Bean stem maggot damage resistance	< 3 (CIAT scale)	NABE 21	>
		Abiotic stress tolerance	A	Added value	Drought tolerance	After flowering (terminal drought)	NAROBAN 6	=
	Crop management and harvesting	Plant architecture	A	Essential	Erect bush	Erect bush type 1 or 2	NAROBAN 1	=
	Market value and price	Bean appearance	A	Essential	Fresh speckled bean seed grain	White with speckles (red, purple or dark blue)	NABE 12C	=
		Crop duration	A	Added value	Early maturing	Ready for harvesting < 60 days from sowing	NABE 15	≤
	Post-harvest storage	Storage-life	W	Winning trait	Stayfresh pod appearance	Pods fresh at room temperature (approx. 24C) for 5 - 7 days postharvest	NABE 12C	>
Consumer	Satisfaction	Taste	W	Essential	Good taste and palatable	Sweetish taste	NABE 12C	=
		Appearance	A	Essential	Speckled grain	White background colour with red, purple or darkblue speckles	NABE 12C	=
		Shelf-life	A	Added value	Long shelf-life	Fresh bean grain appearance	None	None
		Nutrition	W	Added value	High micronutrients levels in grain	≥ 80 ppm Fe and ≥ 35ppm Zn content in bean grain	NAROBAN 40	>
		Digestibility	A	Essential	Low or no gas production	Less than benchmark variety	NABE 12C	<
		Food preparation	W	Added value	Fast cooking time	Variety should have a short fresh cooking time (30-60 mins)	NAROBAN 3	<



- **Personally, I think;**

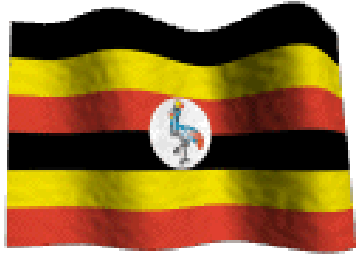
Preparing a Product Profile is a daunting task. You have to listen to so many different people. You also need to analyze what they're saying and turn it into a description that enables you to 'see' the new variety. This requires a lot of patience. But Product Profile development is a must - and a game-changer.





# Acknowledgements

- All the DLB Core Team
- Dr. Vivienne Anthony
- Dr. Gabriella Persley
- Dr. Yao Nasser



Alliance



*Thank you for  
Listening*

