

Culture, choice and action in legume seeds systems in East and North Uganda



Esther Njuguna, Catherine Lengewa
GSEED TEAM



Webinar based on an collaborative initiative on scaling seed technologies

-  Draw from an ongoing initiative on 'gender dynamics in seed systems' implemented in Uganda in 2018/2019.
-  Initial study was among the five studies implemented under the CGIAR wide research theme on 'Gender Dynamics in Seed systems' under the Gender platform
-  Current phase funded by the CRP-GLDC under FP4/COA4.4 on 'scaling of seed technologies'

Some hypothesis

1. Rural women in smallholder agriculture are the 'key decision makers' on use of non-hybrid seeds
2. Rural women in smallholder agriculture are not reached by information about improved seeds
3. Rural women in smallholder have developed and sustained an efficient systems of seed management and distribution for non-hybrid seeds
4. Rural women in smallholder agriculture are rational, with demonstrated genetic gains, they can use improved non-hybrid seeds

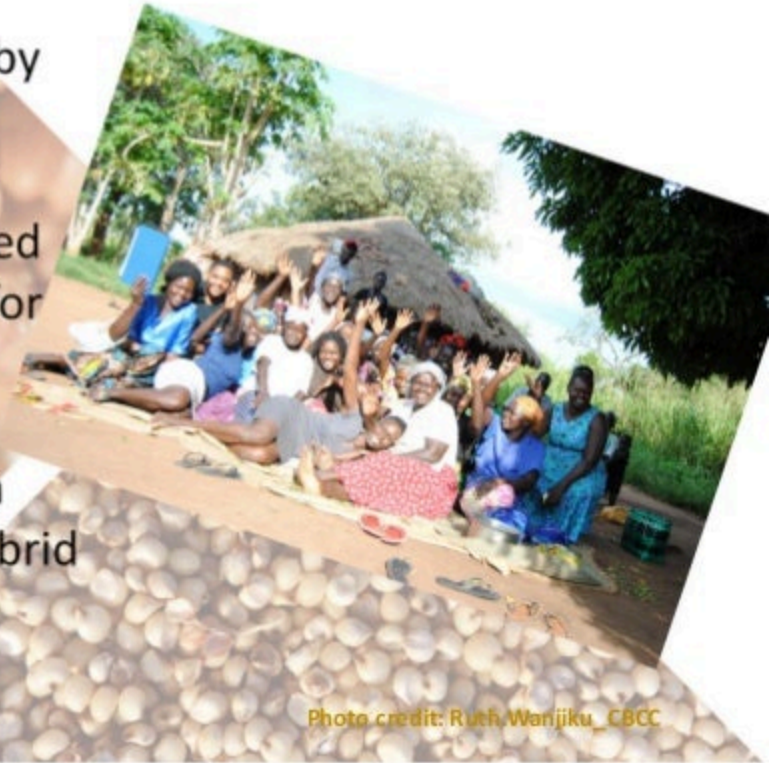


Photo credit: Ruth Wanjiku_CBCC

Baseline data collected through a mixed methods approach:

1. A quantitative household survey

Total sample (514 Households)	Districts covered	Crops covered	% of women respondents	% reporting top 3 groundnut seed sourcing arrangements
	Nwoya (n=125)	Groundnuts (n=291)	60.8	Own saved seed (56.7w, 52.5m)
	Dokolo (n=122)	Pigeonpeas (n=84, only in the North)	54.1	Cash transaction (31.3w, 36.7m)
	Kumi (n=139)	Millet (n=171)	56.1	Gifts (9.4w, 8.9m)
	Serere (n=128)	Sorghum (375)	55.5	

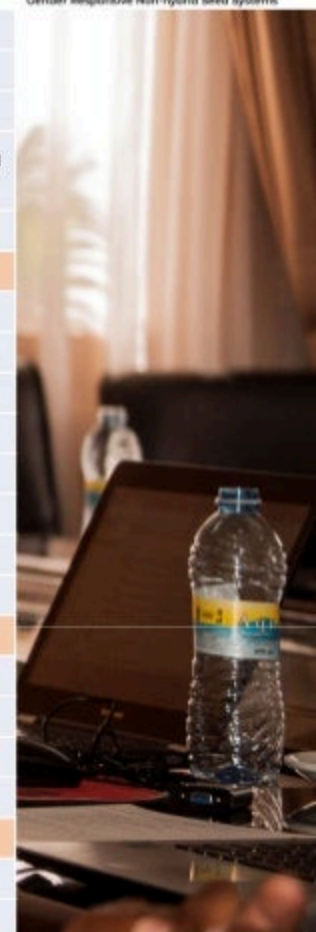
Our sampling frame for qualitative component

48 focus group discussions guided by a vignette in the four districts, covering the life of a young person marrying to the time they are old; their interactions with the crops, varieties, choices of seed, production, marketing, decisions and negotiations

	Men - youth <25 years	Men – mature (26 – 49 years)	Men – Senior (> 50 years)	Women - youth <25 years	Women – mature (26 – 49 years)	Women – Senior (> 50 years)	Total FGDs
Nwoya	2	2	2	2	2	2	12
Dokolo	2	2	2	2	2	2	12
Kumi	2	2	2	2	2	2	12
Serere	2	2	2	2	2	2	12

List all the groundnut varieties you know about

	Eastern				Northern				Total			
	Sex of the farmer				Sex of the farmer				Sex of the farmer			
	Female		Male		Female		Male		Female		Male	
	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %
Serenut 1R	3	3.2	4	6.5	1	1.4	0	0.0	4	2.5	4	3.7
2. Serenut 2	26	28.0	25	40.3	4	5.7	3	6.4	30	18.4	28	25.7
Serenut 3R	1	1.1	0	0.0	0	0.0	0	0.0	1	.6	0	0.0
Serenut 4T	0	0.0	0	0.0	1	1.4	0	0.0	1	.6	0	0.0
serenut 5R	3	3.2	0	0.0	2	2.9	0	0.0	5	3.1	0	0.0
Serenut 6T	0	0.0	0	0.0	1	1.4	0	0.0	1	.6	0	0.0
Serenut 8R	1	1.1	0	0.0	2	2.9	0	0.0	3	1.8	0	0.0
Serenut 9T	1	1.1	0	0.0	0	0.0	0	0.0	1	.6	0	0.0
Serenut 11T	0	0.0	0	0.0	1	1.4	0	0.0	1	.6	0	0.0
Serenut 14R	2	2.2	0	0.0	0	0.0	4	8.5	2	1.2	4	3.7
1.Red beauty	4	4.3	3	4.8	50	71.4	34	72.3	54	33.1	37	33.9
Amasoga	1	1.1	1	1.6	0	0.0	0	0.0	1	.6	1	.9
Erudurudu	8	8.6	4	6.5	0	0.0	0	0.0	8	4.9	4	3.7
Kabonge	1	1.1	0	0.0	0	0.0	0	0.0	1	.6	0	0.0
Egoromoit	1	1.1	1	1.6	0	0.0	0	0.0	1	.6	1	.9
3. Igola	28	30.1	16	25.8	3	4.3	2	4.3	31	19.0	18	16.5
Other	13	14.0	8	12.9	5	7.1	4	8.5	18	11.0	12	11.0
Total	93	100.0	62	100.0	70	100.0	47	100.0	163	100.0	109	100.0



From whom did you first get to know about this variety?

	1.11. Region											
	Eastern				Northern				Total			
	Sex of the head of household				Sex of the head of household				Sex of the head of household			
	Female		Male		Female		Male		Female		Male	
	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %	Count	Column N %
Government extension	1	4.2	3	2.3	0	0.0	0	0.0	3	2.2	3	1.3
Farmer group	1	4.2	3	2.3	4	19.0	4	4.2	5	11.1	7	3.1
NGO/CBO	0	0.0	0	0.0	0	0.0	2	2.1	0	0.0	2	.9
Research centre (trials/demos/field days)	1	4.2	11	8.4	1	4.8	0	0.0	2	4.4	11	4.8
Seed/grain stockiest	5	20.8	21	16.0	2	9.5	20	20.8	7	15.6	41	18.1
Another farmer relative	10	41.7	59	45.0	13	61.9	57	59.4	23	51.1	116	51.1
Another farmer neighbor	5	20.8	24	18.3	1	4.8	10	10.4	6	13.3	34	15.0
Radio/newspaper/TV	0	0.0	1	.8	0	0.0	0	0.0	0	0.0	1	.4
Other	0	0.0	9	6.9	0	0.0	2	2.1	0	0.0	11	4.8
Own Seed	1	4.2	0	0.0	0	0.0	1	1.0	1	2.2	1	.4
Total	24	100.0	131	100.0	21	100.0	96	100.0	45	100.0	227	100.0

But **why** and **how** do farmers, relatives and neighbours account for **66%** of the sources mentioned for groundnuts?

Own saved seeds – which is considered key for most legumes accounted for only 2.2% for the female farmers and 0.4% for male farmers



Photocredit: Ruth Wanjiku, CBCC. Women farmers in East Uganda

Culture of sharing seeds when starting a family

- It is a cultural practice to **gift seeds to newly married** couple, especially the girl. *Finger millet* seed is mostly gifted because of its use in *brewing beer* for the community
- traditional marriage ceremonies are celebrated with *groundnuts* and *sorghum*
- A young wife is expected to provide food for her family within the season – she needs reliable seed, early maturing, drought tolerant, disease and pests tolerance
- Seeds obtained at this point are sentimental, they have to work

Traits farmers discuss in an FGD interview

Traits	Associated Variety
Groundnuts	
- Butter quality (makes very thick tasty sauce)	Etesot , Erudurudu, Emoit
- Sweet taste which is important for confectionery use and sauce quality,	Etesot , Erudurudu, Emoit, red beauty, egoromoit
- Soft kernels for easy pounding and grinding.	Erudurudu
- Rich oil content which is sometimes extracted to be used for smearing new born babies as it's believed to prevent body rashes.	Etesot,
- Sauce that stays longer before getting rancid	Etesot
- Does not sprout when harvesting is delayed	Etesot
- Red colour which makes it marketable	- Emoit (red beauty)*
- Easy to harvest (just uproot and not require digging out)	- Ohino

Culture of sharing seeds as an integral part of sharing farm labour

		sex of the farmer	
		Female(n=291)	Male(n=223)
Labour Type used by Farmer		Column N %	Column N %
Family labour	No	0.0	.4
	Yes	100.0	99.6
Hired Labour	No	44.3	42.2
	Yes	55.7	57.8
Both family and hired labour	No	44.3	42.6
	Yes	55.7	57.4
Community shared labour Eleja			
Aleya			



Photo credit: Africacare/Adolphe Muwaw. Women working together in South Kivu

Is there room for
improved
groundnut varieties
in this culture?



Photocredit: Ruth Wanjiku, CBCC. Germinating groundnut seed

What factors contribute to a farmer planting improved groundnut varieties?

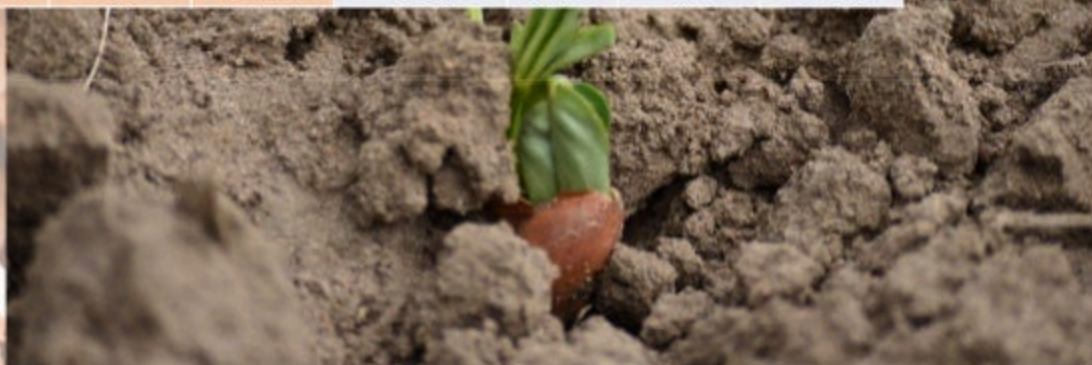
Logit regression analysis: Did you plant an improved variety in 2017/2018?

	Coef.	Std. Err.	z	P> z
Other farmers	-1.823	0.779	-2.340	0.019
commercial	0.969	0.577	1.680	0.093
Semi-commercial	1.240	0.505	2.460	0.014
North	1.475	0.410	3.590	0.000
_cons	0.961	1.006	0.950	0.340
		Number of obs		272
		LR chi2(12)		33.47
		Prob > chi2		0.0008
		Pseudo R2		0.132
		Log likelihood		-110.016



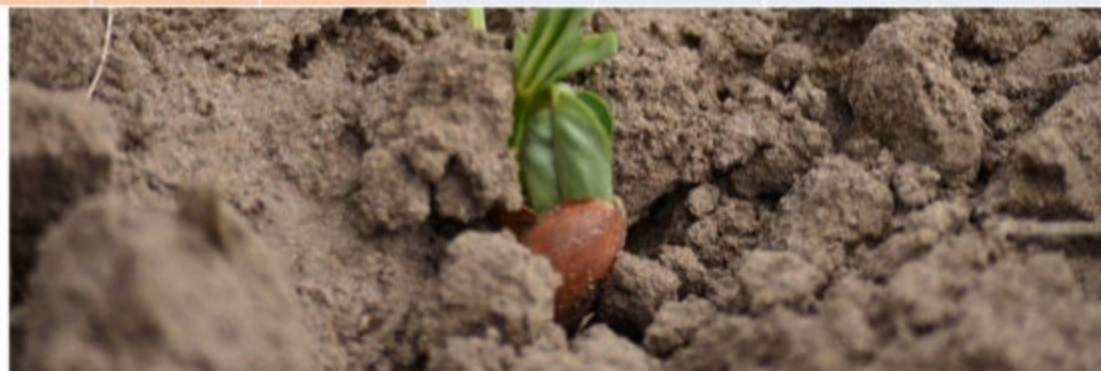
Have you ever changed the seeds of the groundnut variety since you first got it?

	Eastern				Northern				Total			
	Sex of the farmer				Sex of the farmer				Sex of the farmer			
	Female		Male		Female		Male		Female		Male	
	Count	N %	Count	N %	Count	N %	Count	N %	Count	N %	Count	N %
YES	3	3.6	3	5.2	12	18.8	1	2.3	15	10.2	4	3.9
NO	80	96.4	55	94.8	52	81.3	43	97.7	132	89.8	98	96.1



How many seasons did it take for you to change your groundnut seeds for the variety you planted?

Eastern				Northern				Total			
1.8. Sex of the farmer				1.8. Sex of the farmer				1.8. Sex of the farmer			
Female		Male		Female		Male		Female		Male	
Count	Mean	Count	Mean	Count	Mean	Count	Mean	Count	Mean	Count	Mean
93	2	62	2	70	3	47	2	163	2	109	2



Factors influencing the no. of seasons a farmer takes to change their seeds (tobit)

	Coef.	Std. Err.	t	P> t
Cereal grain stockist	-0.249	0.149	-1.67	0.096
semi_commercial objective	0.283	0.131	2.16	0.031
sex_farmer	-0.170	0.084	-2.02	0.044
secondary	0.382	0.168	2.27	0.024
_cons	-0.174	0.208	-0.84	0.403
var(e.change_afte~n)	0.427	0.037		
		Number of obs	=	272
		LR chi2(12)	=	26.73
		Prob > chi2	=	0.0085
		Pseudo R2	=	0.0471
		Log likelihood		-270.309



Photo Credit: Ruth Wanjiku, CBCC. A lady farmer in East Uganda showing access to her seed granary



Testing the
G-SEED
Social And
Behaviour
Change (SBC)
Strategy



What is Social and Behaviour Change?

Social and Behaviour Change (SBC) is the systematic application of interactive, theory-based, and research-driven processes and strategies to address social cultural, gender norms and behavior change at the individual, community and social levels, including the cross cutting use of strategic communication.

(FHI360 2012: C-Modules)



G-SEED SBC Process





Current thinking informing the GLDC theory of change

1. **Dialogue and deliberations:** Reciprocal process, evolving continuously in the interaction
2. **Simply giving correct information** – while important – does not change behavior by itself
3. **Individual behaviors:** Only addressing individual behaviour is often not enough
4. **Social cultural and market context:** Create/reinforce social cultural and marketing conditions that facilitate and encourage desired behavior
5. SBC Tension: **action is in the interaction**
6. **Multiple** strategies, approaches, level, audiences, materials
7. Start With '**At Scale Mindset**
8. Existing **structures**

The Core Problem and Desired Behaviour

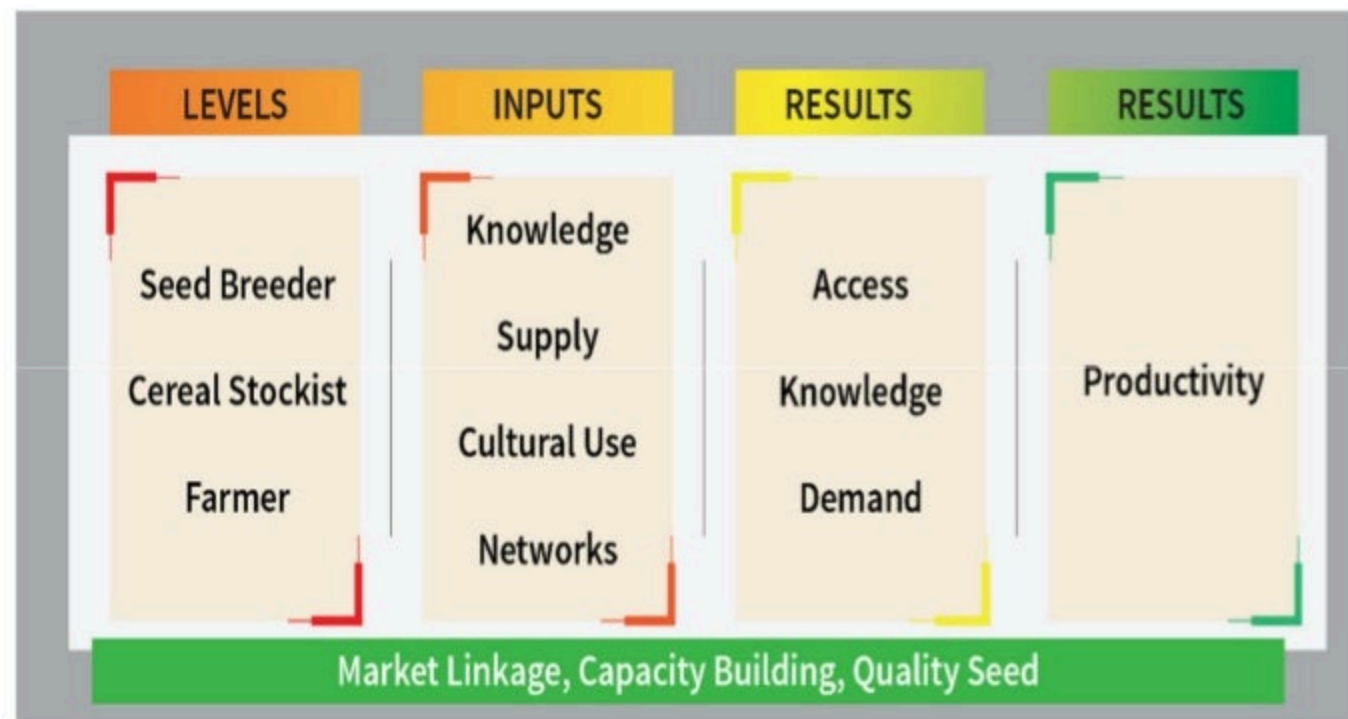


The Core Problem that the research findings highlights is the limited use of high-quality seed of improved variety leading to low productivity among rural farmers in Northern and Eastern Uganda



The desired behaviour is the adoption of high-quality seed of improved variety leading to high productivity among rural farmers.

The G-SEED Theory of Change



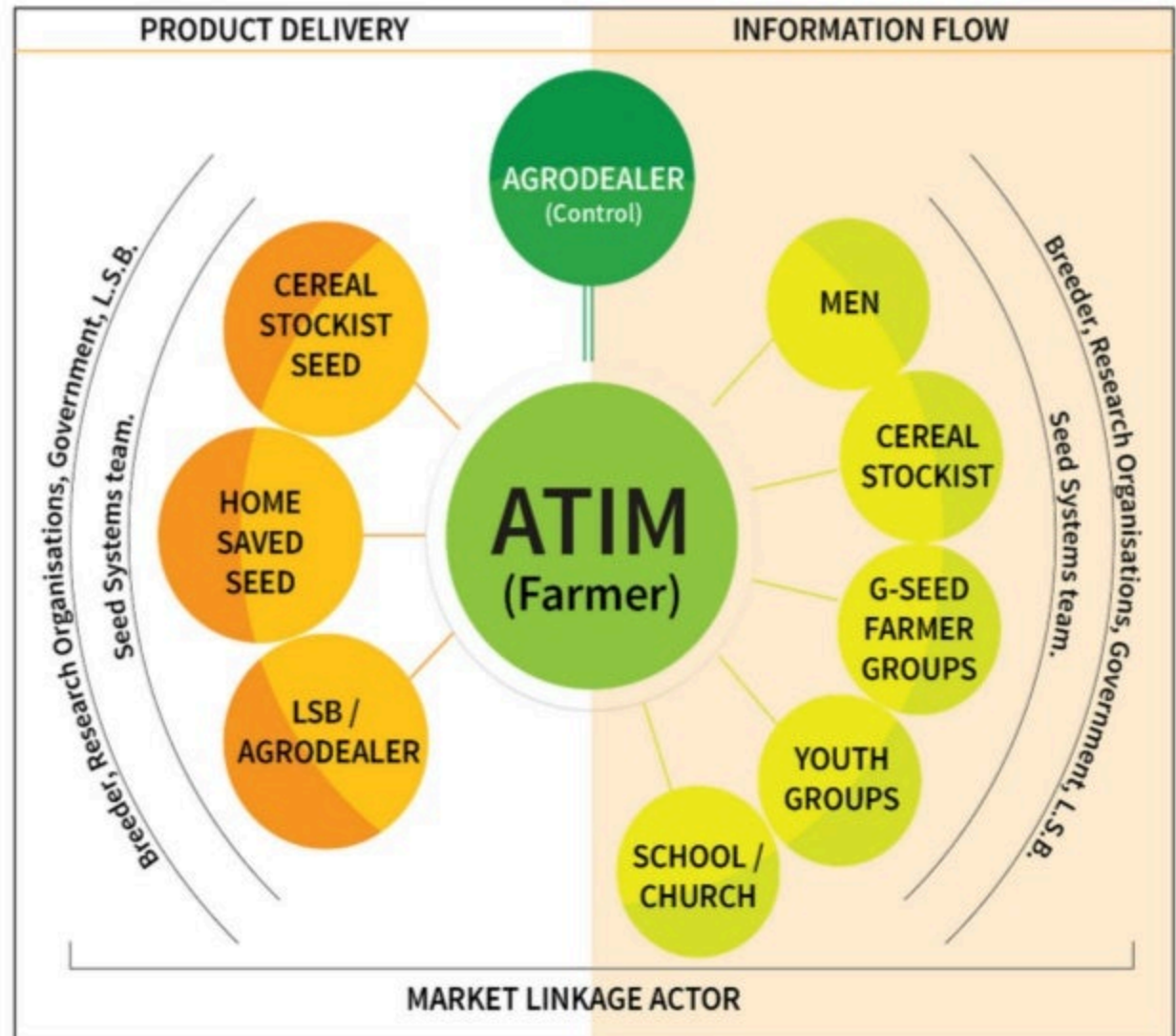


The G-SEED Theory of Change

The theory of change will focus on impacting the following areas in relation to the groundnut seeds;

1. **Knowledge:** increasing farmer knowledge on high quality groundnut seed varieties
2. **Supply:** enhancing ease of access of high-quality groundnut seed varieties among farmers
3. **Acceptability:** increasing the use of high-quality groundnuts in the existing cultural setting
4. **Networks:** Using different community networks and delivery models to increase access and demand of high-quality groundnut seed varieties

GSEED SBC Model



Human centred design, Co-creation and Iteration currently ongoing in Serere Uganda

Insight generation

- Empathize: Emotional connection

Idea Generation

- Co-design

prototype

- Develop messages/materials

Testing and iterating

- Does it work?

Piloting and scaling

- Roll out



In partnership with ICRISAT, National Agricultural Research Organization (NARO), Centre for Behaviour Change and Communication (CBCC), Makerere University and Mbarara University of Science and Technology (MUST) under the CGIAR Research Program on Grain Legumes and Dryland cereals

THANKYOU