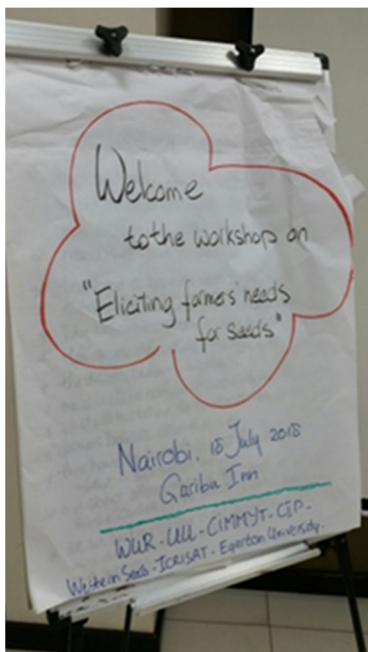


Farmers' demand for seed: maize, potato and cowpea in Kenya

Multi stakeholder Workshop held at 18, 19 and 20 July 2018, Qaribu Inn, Nairobi

Workshop report

Koen Beumer and Conny J.M. Almekinders, M. Misiko



"There is nothing new under the sun, except the forgotten"



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Scope of the workshop

The workshop took place in Nairobi, Kenya from 18-20 July 2018. The first day was devoted to the early engagement of local stakeholders in the elaboration of a full proposal under the call of “Seed Systems Development - Enabling and Scaling Genetic Improvement and Propagation Materials”. The second and third day were used to further developing the proposal with the core project team, building on the stakeholder input (see annex 5 for the full workshop program). This report focuses on the first day.

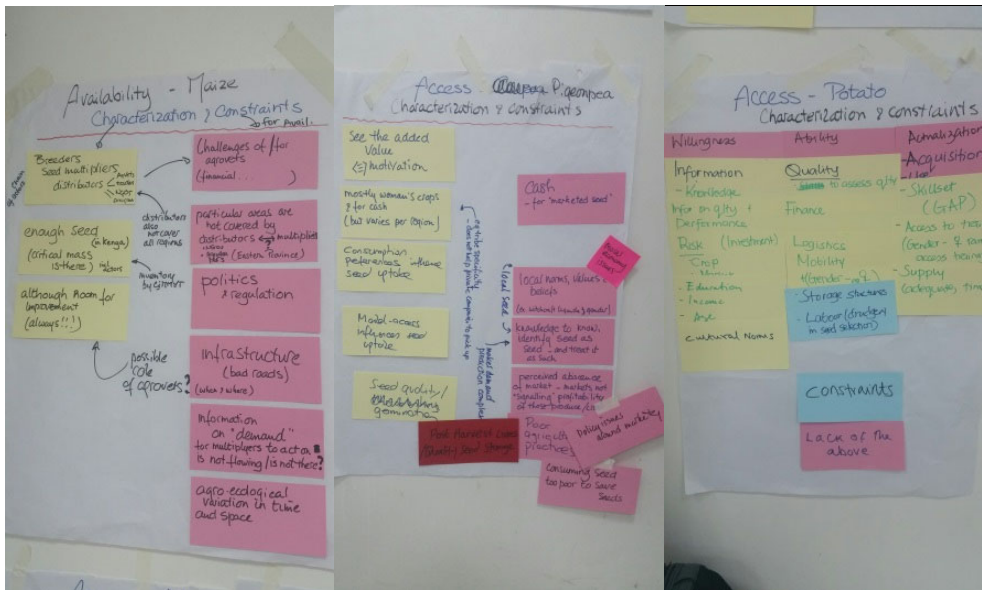
The stakeholder workshop on the first day was limited to 20 participants. The participants included representatives from companies, NGOs, universities, research organizations, and government agencies working on the crops in question (see annex X for the full list of participants), representing a variety of actors and perspectives in the seed value chain. After an interactive round of introductions, the main part of the day was spent on the diagnosis of the problems addressed in the seed sector in Kenya and in specific in relation to maize, potato and pigeon pea, the three crops on which the proposal would concentrate.

The starting point of these explorations was the view that information about trait preferences alone is insufficient to inform breeding decisions, and that farmers decisions to adopt new varieties are informed by various local and structural conditions as well. This was done in three sessions focusing on the three key issues in eliciting farmers’ needs: availability, access, and attractiveness of quality seed.

The stakeholder workshop had a set-up that allowed an interactive way of exploring the issues, so as to maximize stakeholder input and engagement. The participants were grouped according to their interest and expertise in the three crops (see figure 1-2), with each group including expertise on women and youth. Using posters, cards and post-its, the participants were asked to characterize the current arrangements for making high-quality seeds in terms of 1) availability, 2) accessibility and 3) attractiveness, and then to identify key bottlenecks and constraints (see figure 3-6). At the end of each session the crop-based insights were brought together. Each group presented their findings, followed by a lively discussion where both overarching cross-crop themes and key differences and similarities between crops were identified. The presentations, discussions, and the posters produced by stakeholders with a wide range of perspectives provided a broad view of the various issues that are relevant to the availability, access, and attractiveness of quality seed. In the penultimate session we created an overview of various existing initiatives to elicit farmers’ needs, develop new varieties and seed systems in Kenya. The outcomes of the different sessions are reported on in the following sections of this report.

All stakeholders were keen to stay involved in the project, both during the research and in the future use of results.

Figure 1-3. Examples of stakeholder posters (see appendix 4 for complete set of posters)



The second and third day of the workshop were used to further developing the research proposal with the consortium partners. Additional economic expertise was included through the presence of Dr. Marcel Gatto (CIP-Vietnam). We began the second day by taking stock from the stakeholder workshop and accordingly refining the research questions, research design, and overall objective to develop improved methods for eliciting farmers' needs.

This was followed by a session where we grouped all experience and knowledge of existing social science methods for eliciting farmers' needs. Next we had several sessions discussing all relevant aspects of the research project and proposal, including our own method and fieldwork sites; strategic ways to ensure knowledge sharing and uptake; monitoring and evaluation; and women and youth aspects discussed throughout the workshop.

Introduction of the program and objectives

Conny Almekinders explained the key message of the proposal: farmers needs for seeds. This topic is back on the agenda of donors. The fact that this is still an important topic means that we are apparently struggling about how to get it right. Do we capture-well the need of farmers? We do willingness to pay studies, we do adoption studies, we do participatory studies. But does this capture the right picture? We think these methods only take a snapshot. Are we using the right lens to capture the farmers' need? Should we look for a multifaceted lens?

An important question is therefore, looking at the "seed(-land)scape": what are we missing? But we first need to paint the seed-scape, and identify the blind spots. Therefore the three objectives of this day:

1. Characterize the seed-scape out there
2. Identify blind spots and constraints
3. Identify who are working on those issues

This was split up in three sessions: on availability, access, and attractiveness.

Availability of seeds

Koen Beumer kicked off this session which meant to explore the experiences and insights of the participants on the way and seeds are made available to farmers. Availability is not the same as access: for instance having seeds for sale in a local shop means that there is seed availability, but if those are too expensive or otherwise too difficult to acquire for farmers, then there is no seed access. Availability instead is usually defined as whether or not particular seeds are present in a geographical area. To characterize the availability, one can think of questions like:

- What types of seeds are available? Varieties that bring high yields or withstand droughts, varieties that grow best when requiring fertilizers? And are varieties for different crops available or are there biases towards particular crops like maize?
- When and where are seeds available? Are they available at the right time, throughout the year, and also in times of drought or crisis? And are they available everywhere or only near the big cities and the big roads?
- How are these seeds made available? Through seed companies, NGOs, informal networks, or seed fairs?
- Who determines what seeds are made available? Do scientists and breeders only focus on some traits and not others? Are there regulations and policies in place that steer what is made available? Are there

After the presentation, Koen asked participants to explore "what are the most important characteristics of how seed of maize, potato and cowpea is made available in Kenya?" Three crop groups explored and discussed questions like: How is seed made available? What actors are involved? What is the role of the private sector, the public sector, NGO's, and universities? What activities do they employ? Are these different for different types farmers or in different regions? What policies and regulations are in place? In short: what characterizes seed availability in Kenya? After the group discussions, each group presented the outcomes on a poster.

- Who are the most influential actors? Why are they so influential?
- Are there differences between regions? What causes these differences?

- Are there differences between farmers? What causes these differences?
- What is the role of the private sector? And the public sector?
- What policies and regulations are in place?
- How do different actors learn about farmers' needs?

The posters were presented and outcomes discussed. The following points emerged:

Kenya's food security policy is built on four pillars, which includes maize and potato). Potato is unique in its bulkiness, and limited availability foundation seed of improved varieties. Farmers need to order their seed in advance, then later take the bulky planting material home. The rationale of the obligatory certification of planting material does not reflect the reality in which, thus, 95 % of the farmers are criminal because of the use of informal seed. In maize there is a similar issue, albeit less problematic; the government turns a blind eye.

There are 6 newly released pigeon pea varieties, but there is no seed in the stores: the seed is made available through projects. The private sector is not attracted to take pigeon pea in the portfolio; village-based seed production may be a solution. Demand for the seed needs to be developed. It also is important to realise there is no (local) market for pigeon pea: it primarily an export market.

In maize, the situation looks much better, but still there is room for improvement. The current flaws in the traits of the available commercial varieties are not inhibitive. But the supply is not enough and not good enough to cover all agro-ecological zones of Kenya. One reason is that the agro-vets and NGOs do not cover all agro-ecological zones equally good. Another important issue is the lack of good information on the needs of the different types of farmers to inform the seed multipliers, i.e. companies.

The final conclusion on availability: the three crops face quite different constraints.

Access

Michael Misiko presented a definition of access as used by FAO: "The ability and *willingness* to acquire seed through cash purchase, exchange, loan, barter or use of power in social networks"¹. "Access" is defined by tangible and intangible variables like gender, culture (social) institutions. This led him to present examples of determinants of access to seed. i.e.:

- Financial capital – affordability
- Social capital/ networks – sharing, referrals
- Land/ physical assets – returns
- Suitable storage infrastructure

Following the determinants of access, one can also consider examples of seed-access disruptions

- Transition from traditional to modern seed systems
- Dysfunction in grain/seed markets
- Significant loss of assets e.g. war, Climate Change, misfortune

¹ FAO 2015. Building capacity for seed security assessments: Seed Security Assessment, a Practitioner's Guide. Food and Agriculture Organization, Rome, Italy.

He presented some data on the use of maize seed and varieties in the region (see annex 3) Michael invited the three crop groups to characterize access to seeds in the respective crops, maize, potato and pigeon pea, and associated constraints. Also here the group work resulted in three posters and a lively discussion around cross-crop comparisons

The following insights emerged from the group discussions and posters

It is important to understand how trust plays a role in accessing and sharing seed. For women the transport of bulky potato seed to and from seed areas forms a limitation.

Pigeon pea is becoming a male crop when transforming into a cash crop. For many it is a new crop and they do not know how to grow it; this aspect is not covered by the extension. At this moment, nobody markets seed of this crop aggressively. Seed companies could support the selling of seed by facilitating the access to (export) market. India is an important market and may offer opportunities for youth

Attractiveness

This session was organised as a plenary discussion. Conny started off by explaining that those in the lead of developing the proposal were presenting “attractiveness” as a new concept: its relevance still needs confirmation. The project-to-be-developed wants to explore the value of this concept. The starting idea is that, even when seed is available, and even when access constraints are overcome, farmers still do not necessarily go out, purchase and take home the seeds and plant. Or, in other words: “they do not sell the chicken and buy seeds at the Agro-vet shop”. This brings up the question: what is needed to make farmers actually adopt seeds? What is the X-factor to convince and activate the farmer? In other words: what is needed to “trigger” adoption?

An important part of the discussion addressed the importance and power of marketing. Private sector companies (like f.e. Coca Cola, mobile phone producers) invest a lot in marketing because it works. Are we doing enough to create seed brands? But, also the question was asked if with seed it works the same way. Because farmers have their own seeds, it is about replacement and thus the new seeds should be better seeds. Attractiveness instead should be based on how the seed is going to help to improve farmers’ livelihood – for instance telling them what inputs are required, what the advantages are of a particular seed. Views varied: on the need and usefulness of “marketing” vs “providing good information” on seeds of staple food crops, and to what extent this differs from Coca Cola, Sony cameras and vegetable seeds. It also involves considerations of service going with the seeds, alternatives. Also farmers may be different type of consumers: some need a little push where others are natural innovators. On Conny’s question if we could agree on the statement that “yes, an extra kick is necessary, and it is more marketing what can give this kick”, there was mixed response. For farmers it is also necessary to “see with their own eyes”.

Also, other factors can entice farmers to adopt. For example a shock that happens in the immediate environment (sickness or death), the climate changes; the expected demand of the product, the expected price of the product; the other crops that farmers grow, so the whole system – all this may influence farmer decisions.

One thought on the triggers, in both system theory and behavioural economics, is about the “nudging”. But, also, in all this: are we talking to/about the right farmers. Perhaps there is nothing wrong with product and communication. Most farmers we at ICRISAT talk to, want to get out of agriculture. So why would they invest in agriculture? They should focus on getting their kids into school. The availability of the farmer and stability of prices also influences their decision: it is about making money. We therefore need to reduce the cost of production such that the farmers get the profit.

But the market has its issues. For instance, the market is in the hands of the brokers. The farmer has to go through the broker, who sets the price and gets most of the profit.

Wrapping-up

Conny indicated that it was time to wrap up. In a final reflection the following issues were discussed:

- In the course of the workshop, the seed-scape and availability and access to seeds were characterized. In this arena, many actors are active. On the question whether the characterization of availability and access were providing new insights, the participants reckoned that it is. However, as one participant articulated: most projects focus on a specific technology because they want to push the technology and they then forget these other things and act as individual initiative. The bringing together of what we know and act upon it jointly is lacking. Not many people may have an understanding of the system as a whole and across the crops that farmers grow. And in our research we take snapshots, develop projects with the duration of 3 years.
- In terms of improvements, marketing is important. Marketing works because it triggers. They see a brand, and they buy it. The effect of branding is not there overnight: the value has to be there and it has to be consistent. Like with Coca Cola.
- A missing element in this discussion is: the institutions. The agricultural sector is very fractured and biased to supporting the rich farmers. The notion that farmers do not see far and only think about immediate needs, is not entirely true. My farmer was looking ten years ahead. But he had no institutional support.
- Discussions about the three crops this morning seem to be very similar. Farmers however, are dealing with very different and changing environments, with lots of rain or little. So the decisions they make, are targeting a moving target. It is therefore important to realize there is no one answer to the many questions that are around.

Conny then moved on, asking participants to shortly reflect and write on cards which projects and programs in Kenya that are actively contributing to the increasing availability and access to quality seed. The cards could be left on the table and would be picked up later. Conny finally pointing out the lively discussion and expressing the intention to follow up with more discussion, if project funding could be mobilised. She suggested that it could be worthwhile to integrate the collected information and develop some sort of policy brief, with participants as contributors. A small report of the workshop would be compiled and shared.

She thanked everybody for participating and wished them safe return home.

Annex 1. Proposal elaboration workshop programme

Workshop programme

Eliciting farmers' needs for seeds in a range of crops in Kenya

18, 19 and 20 July 2018

Venue: Qaribu Inn | Waterfront Gardens, off Waiyaki Way | Loresho | Nairobi

Wednesday 18 July: Stakeholder workshop

9.00-10.00	Welcome and introduction
9.30-11.00	Diagnosis of the problem: - Seed availability
11.00-11.30	<i>Coffee break</i>
11.30-13.00	- Seed access
13.00-14.00	<i>Lunch break</i>
14.00-14.45	- See attractiveness
14.45-15.00	<i>Coffee break</i>
15.00-15.30	Inventory of relevant initiatives
15.30-16.00	Continued engagement of stakeholders and input for knowledge diffusion and uptake

Thursday 19 July: preparing for the proposal writing (core team)

8.00-10.00	The topic and focus: definition and discussion of the shortcomings of existing methods for eliciting farmers' demand and of the new method that we propose; accommodation of inputs from the workshop
10.00-10.30	<i>Coffee break</i>
10.30-12.00	Experiences with the different methods for eliciting farmers' demand
12.00-13.00	The method and fieldwork 1 <i>Lunch break</i>
13.00-14.00	The method and fieldwork 2
14.00-15.00	Women and youth
15.00-16.00	Monitoring and evaluation, steering group

Friday 20 July: preparing for the proposal writing (core team)

8.00-10.00	Roles and budget 1
10.00-10.30	<i>Coffee break</i>
10.30-11.30	Roles and budget 2
11.30-13.00	Distributing the writing tasks, fixing deadlines and agreements
13.00 >	Time for joint writing of the proposal

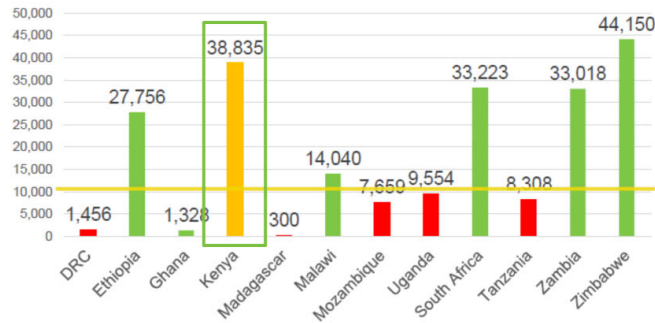
Annex 2. List of participants

Workshop participants list

	<i>Participant</i>	<i>Organization</i>	<i>Type of organization</i>
1.	Peter Mwangi	Kenyan Forum for Agricultural Advisory Services (KeFAAS)	Extension
2.	Geoffrey Kamau	Kenya Agriculture and Livestock Research Organization (KALRO)	Research
3.	Benjamin Kivuru	Kenya Agriculture and Livestock Research Organization (KALRO)	Research
4.	Agnes Oywaya-Nkurumwa	Egerton University	Research
5.	Wachira Kaguongo	National Potato Council Kenya	Public sector
6.	Gidraf Okeyo	National Potato Council Kenya	Public sector
7.	Daniel Wanjama	Seed Savers Network Kenya	Farmers (NGO)
8.	Lucy Wangari Mwangi	Farmer and rural development expert	NGO
9.	Chrispin Mwatate	International Institute of Rural Reconstruction (IIRR)	NGO
10.	Saleem Ismail	Kenyan Seed Association/ Western Seeds	Private sector
11.	Jan Debaene	ICRISAT	CGIAR
12.	Michael Hauser	ICRISAT	CGIAR
13.	Ganga Rao	ICRISAT	CGIAR
14.	Michael Misiko	CIMMYT	CGIAR
15.	Rahma Adam	CIMMYT	CGIAR
16.	Marcel Gatto	CIP	CGIAR
17.	Sarah Mayanja	CIP	CGIAR
18.	Elly Otieno	CIP/Wageningen University	CGIAR/Research
19.	Koen Beumer	Utrecht University	Research
20.	Conny Almekinders	Wageningen University	Research

Annex 3. Selected slides from the presentation of M. Misiko on access to seed.

Sale of Certified Maize Seed (Mt) in 2016



Potential growth countries:

- DRC, Uganda, Tanzania – low seed volumes
- Ethiopia: only 1 foreign company in cereals/legumes



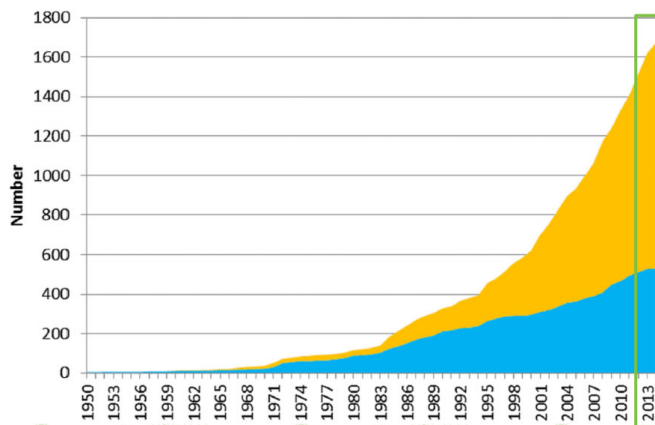
Region/country	Hybrids	OPVs	All
EA avg.	13.0	15.2	13.8
Ethiopia	10.6	17.7	13.5
Kenya	13.7	12.4	13.2
Tanzania	14.2	22.0	17.2
Uganda	10.7	16.4	13.4
SA avg.	12.4	26.5	15.4
Angola	NA	36.0	36.0
Malawi	10.7	10.1	10.3
Mozambique	10.5	16.0	11.9
Zambia	12.8	13.5	12.8
Zimbabwe	13.4	57.5	16.9
WA avg.	13.0	16.8	16.4
Benin	NA	10.4	10.4
Ghana	6.0	24.0	22.7
Mali	NA	17.9	17.9
Nigeria	14.8	11.8	12.6
SSA avg.	13.0	18.1	14.9

Weighted average age of maize cultivars grown in 13 surveyed African countries during the 2013/2014 main crop season

(Abate et al. 2017. Agric & Food Security.



Totals of maize cultivars released in SSA between 1950 and 2014



Abate et al. 2017 Agric & Food Security

These consists of 24 countries: Orange shade hybrids; cyan shade OPVs



Annex 4. Posters from group discussions and notes from plenary.

Availability - ~~Common~~ pigeonpea Characterization & constraints

- 11 ~~early~~ varieties (old & new)
4/10/10/10/10 operation
3 are major
- Drought resistance
- Multi-purpose
- Early maturing high yielding
- 'Nameless' varieties of lower-level
- Not for the highlands (available but unknown)
- Poor availability
- Dissemination through funded projects only
- Farmer | Farmer seed exchange
- Seed the Future Project, but no private sector engagement
↓
ICRISAT → KARI → FARI
- No promotion

Access - ~~Common~~ Pigeonpea Characterization & constraints

- See the added value
(\Rightarrow) motivation
- mostly woman's crops & for cash (but varies per region)
- Consumption preferences influence seed uptake
- Market access influences seed uptake
- Seed quality / ~~the~~ germination
- Post Harvest Losses / Quality Seed Storage

eq. the specificity - does not keep private companies to pick up

Local Seed

↑ makes demand and production complex

Cash - for 'marketed seed'

Moral economy issues

local norms, values & beliefs (ex. without liquids) gender

knowledge to know, identify seed as seed - and treat it as such

perceived absence of market - markets not "signalling" profitability of those produce / ex.

Poor agricultural practices

Policy issues around markets

Consuming seed too poor to save seeds

Availability - Potatoes

Characterization & Constraints

Types of seed Available

Certified seed
3%

Alternative seed
(Clean seed.)
23%

Farmer saved seed.
> 95%

Actors in formal system

FORMAL SYSTEM

- Private Co.
- Regulatory body: KEPHIS
- Public inst.: ADC
- Research inst.: KARI, CIP

Actors in the informal

- Small holder farmer
- Community based groups

Available traits

- Processing traits

JIN
varieties

- Disease resistant
- High yielding
- Early maturity

Tigoni
Asante
K. MP40
Shang'

Who determine the seed that Available.

- Market
- Research stations

Access - Potato

Characterization & constraints

Willingness	Ability	Actualization
Information - Knowledge Infor on qty + Performance	Quality - skills to assess qty	- Acquisition - 1.1.1.1 - Skillset (GAP)
Risk (Investment) - Crop - Income - Loss cultural Norms	Finance Logistics Mobility + (gender - eq) - Storage structures - Labour (budget in seed selection)	- Access to training (gender - & rarely access training) - Supply (adequate, timely)

Constraints

Lack of the above

Limited Amount

Dormancy period: Long

Distribution
- Infrastructure
- Centralized production

Constraints

Weak Policies

Expensive, and ~~quality~~ and ~~perish~~

Strict Regulations unworkable for small scale farmers.

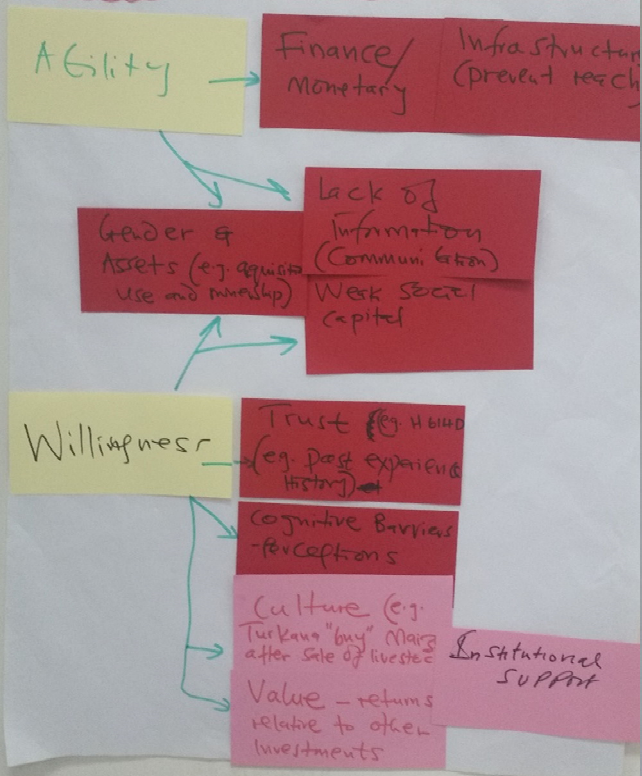
Foundation seed.

Bulky and perishable

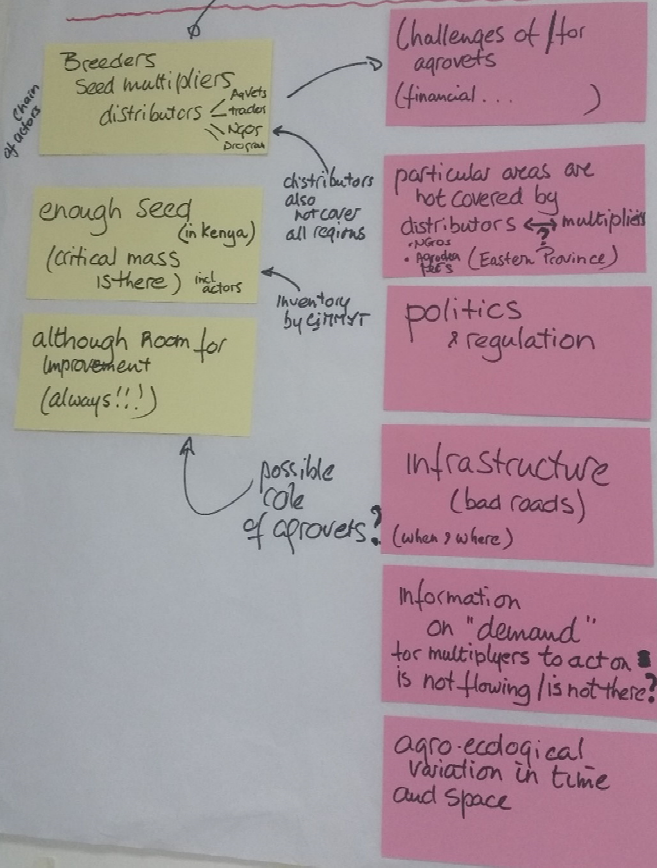
Rigorous and expensive certification process

11.1.1.1
CIP
KARI
ADC

Access - Maize Characterization & constraints



Availability - Maize Characterization & Constraints for Avail.



Attractiveness

What actually 'triggers' adoption

- * don't underestimate 'marketing' that makes it attractive, explains the value, branding the quality, which needs to be consistent
- * need that push to decide
- * the type of benefits need to be clear ^{for farmer from his/her perspective}
- * seed is ^{like coca-cola (an emotional thing)} not like coca-cola: raw materials ^{& relation with supplier}
- * Why horticultural seeds are easy to sell \Rightarrow quick
- * How do you differentiate the new from existing
- * the delivery package is important
- * ~~the~~ it is about considering alternatives where decision comes
- * what will marketing do to other varieties, companies?
- * farmers believe what they see
- * they have to know that what they buy is what they saw - information \rightarrow trust
- * is it about attractiveness of the seed or something in the "context" of the seed (expected prices etc)
- * are we talking to the right farmers for our seeds?
 \rightarrow do we understand our farmers, their goals and motives

100 100's directions

- * Snapshots: we miss the time dimension
- * Nothing new under the sun - how will we be different/making a contribution
- * everything is in literature but has to be brought together
- * triggering, nudging, branding
- * branding takes decision out of the equation
- * Kenya: fragmented ag. sector, weak institutions, poorly organised
- * there is a lot of "specificity" in seed & its context
 \rightarrow e.g. changes over seasons