

‘What do farmers want to record?’

Project: FRN NGO

Region: Western Kenya

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Background

- The project has been using checklist of principles of experimentation for the last 3 years
- However the principle of '*Keeping good records of what you do and what you see*' has proved difficult to get accepted
- Farmers say or claim that:
 - it is too tedious and unnecessary
 - which has not even changed by providing easy-to-use and well-designed forms, nor efforts to use electronic capture successful
 - they could remember what happened during the season and are happy to report it to data collectors (field officers and their selected colleagues)

Some hypotheses, questions and ideas

- Some important elements that build on our hypotheses may include:
- **Type of data:** observation / experimentation
- **Source of data:** local / others
- **Motivation-s for recording data:** for researchers / for own farm / for community / for personal status / for material benefits / other
- **Who is recording** (personal characteristics): “keen” farmers / literate farmers / non-literate /
- **Who is perceived as being the ultimate beneficiary:** farmers / field workers / researchers / NGOs / other
- **How it is recorded:** paper / digital / physical record such as voting with objects / etc.
- **How it is shared:** story-telling, experience / numbers, ratings / design of feedback tools
- **How is the information used:** decision-making / other??

Research questions

- *What information do farmers consider valuable to their decision-making processes?*
 - a) What information are farmers interested in? (what do they notice, what do they remember from past seasons, what do they want to find out from others, etc.)*
 - b) What would they be motivated to record?*
 - c) How would they want to record it (what format, what tool, etc.)?*
 - d) In what form would they want to receive the results?*

Methodology:

- The study was conducted in Western Kenya with volunteer farmers from the FRN NGO project
- Focus group discussions (FGDs) were conducted with 9 farmer groups from different NGOs.
- A total of 136 farmers who participated in last season trials were involved, coming from diverse backgrounds and constituted a mix of literate and non-literate farmers.
- Discussions were recorded in audio devices after farmers had consented to it.
- Notes from the discussions were recorded in fieldwork diaries by field workers.
- Observations on the overall atmosphere of the FGDs, farmers' attitudes and responses to questions were also recorded for later exploration alongside the audio recordings and field notes.
- The information from these records were transcribed, aggregated, synthesized and analyzed.

Findings

- Options, treatments and management practices tested last season
 - All farmer groups remembered the four trials from last season and previous seasons and explained them clearly
- Information of interest to farmers
 - Qualitative
 - farmers make a lot of qualitative (unmeasurable) assessments on their own or through learning with neighbouring farmers
 - taste, extent of pests and diseases infestation, maturity rate, level of damage by birds and variety's performance in poor soils
 - marketability, ability to do well in both short and long seasons and levels of striga infestation
 - role of varieties and crops towards soil nourishment
 - observed and compared different farm management practices and planting times
 - Effectiveness of methods of control e.g. striga, storage pests

Findings...

- Information of interest...
- Quantitative
 - Yield
 - Planting and harvesting dates
- Others (mainly descriptive observations)
 - growth habits e.g. beans, production of ratoons in sorghum, pod formation, and differences in soil fertility
 - Farmers also tend to be sensitive to options that reduce their work in the field
 - *'Some sorghum varieties were easy to process and are very clean like nyadundo sorghum variety 1'*

Summary information most useful to farmers

Measurable observations	Qualitative assessments	Descriptive observations
Yield (9)	Extent of pests and diseases damage (6)	Sorghum head formation (2)
Planting and harvesting dates (1)	Taste of varieties (8)	Possibility of ratooning (1)
	Maturity rate (which variety matures faster) (7)	Effect of weather on varieties (1)
	Extent of bird damage (3)	Vulnerability to FAW (1)
	Comparison of treatment effects towards striga control (2)	Effect on cooling the soil (2)
	Marketability (which variety is highly demanded in the market) (4)	
	Amount of rainfall requirements (1)	
	Variety suitability in different soils (1) Effect of agronomic practices on yield (1)	

Findings: How farmers learn

- From demo plots
- From own plots
- From neighbours' plots
- From distant farmers (having data presented by researchers)
- Extension officers
- Through trainings
- Videos
- Exchange visits

Findings: What farmers want to test next season

- Trials for next seasons are mostly influenced by farmers observations and assessments made in the previous season as already been discussed
 - to find ways to increase production, control striga, identify varieties that are tasty and good for farmer's soil, reduce bird damage in sorghum, to gain knowledge and reduce production costs
- This means farmers have questions of their own what they want to understand
- results from distant farmers may somehow instigate questions based on the regional differences
 - E.g. why differences in soils, why striga does not affect one region the way it does other regions?

Findings: Motivation for data recording

- reasons farmers mentioned why they recorded data
 - Demanded by data collectors
 - For personal references and sharing with neighbours within the FRN
 - For data collectors to collect from them

Findings: Reasons farmers don't record data

NO to recording because...	YES to recording because...
Farmer has good memory (4)	demanding by data collectors (1)
Some data can't be recorded (e.g. taste) (3)	spotted observations from others' farms (1)
Time consuming (2)	
Impossible to record everything we see (1)	
Some information is obvious e.g. taste, yield, disease attack (1)	
Can't read and write (1)	

Findings: Data farmers record

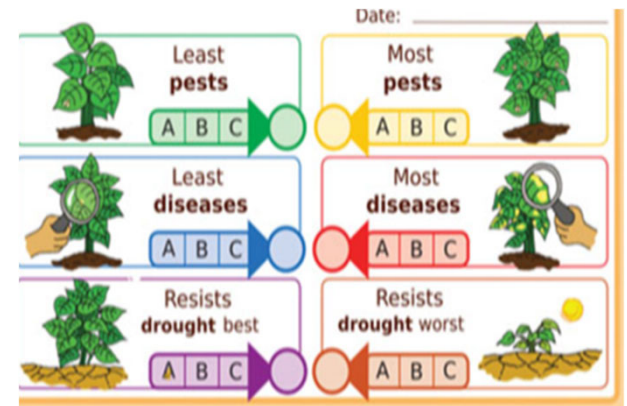
Data recorded	Formats/tools used to record
Yield (7)	Taking notes (9)
Planting and harvesting dates (7)	Memorizing information (9)
Germination period (date of emergence of flowers) (5)	Sorting and isolating labels of varieties (1)
Pests and diseases that appeared (4)	Writing on paper and wrapping with polythene to be kept for long (1)
maturity time (2)	
Drought-resistant varieties (1)	
Growth habit (1)	

Findings: Information farmers did not record

Parent node	Child/ grandchild node	# of excerpts
Peculiarity of varieties and crops	Taste	6
	Level of damage by birds	2
	Performance in low rains	1
	Germination rate	2
	Resistance to pest and diseases	3
	Easiness to process/thresh	1
	Growth habit (w.r.t beans)	3
	Performance in local area	1
	Maturity rate	2
	Yield	2
	Ability to preserve soil moisture	1
Planting techniques		1

Findings: Preferred format/tools/methods of data recording

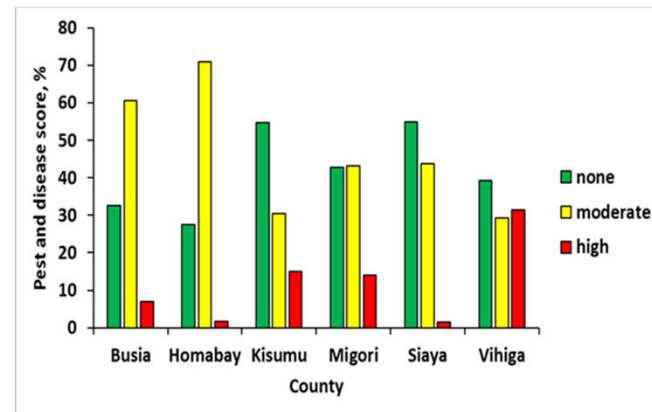
- Taking notes (9)
- Taking photos (8)
- Memorizing information (7)
- Voice/video records (2)
- Use different containers to differentiate one product from another (2)



Note: (A majority in all FGDs chose option 3 whereas a notable number mentioned other options)

Ways of receiving feedback

- Have someone come and explain to us
- Let us get pictures/photos of what happened
- written report (learned/lead farmer members can explain to us)
- Sharing of records and results (results here are likely the end-results of trials like yield)
- Let someone call us
- Graphs ('few favoured')
- Voice and video records
- Sms (text message)



Type of feedback(results), ways of presenting and disseminating feedback

Media	Types of feedback(results)& presentations	
	<i>results of neighbouring farmers only</i>	<i>...could include results from distant farmers</i>
<i>Meetings</i>	Farmers records/results (may include notes, photos, audio and video recordings)	<ul style="list-style-type: none"> - a complete written report of research results (to be explained by fellow farmer) - Pictures with simple explanations - Simple graphs (bar graphs) - Audio & video records
<i>Phone call</i>		- Summarized reports
<i>SMS (text messages)</i>		- Summarized reports with graphs, photos/pictures



Benefits of being in an FRN

- Access to inputs e.g. getting different varieties
- Access to information/training
- Learning among neighbouring farmers (own plots, visits to neighbours' plots)
- Becoming researchers
- Networking
- A sense of membership

What farmers disliked about the FRN

- Not providing some companion inputs like fertilizers for trials, pest control chemicals
- Delay in seed delivery
- Insufficient seed supply
- Experimenting on small plots
- Countereffect of trials: introducing smut disease
- Lack of motivation like t-shirts
- Demanding (time consuming) activities e.g. rigorous data collection
- Unequal participation in exchange visits

Discussion

- Is data recording an issue of literacy or rather a motivational or technical one?
 - Does it mean farmers don't have motive to record data?
 - Most said they would continue to memorize
 - Literate ones seemed not ready to do so in future
 - There seem to be limited methods for recording the type of information of interest to farmers
 - Information like yield, planting and harvesting dates, names of pests and diseases observed is what farmers write down
 - Qualitative assessments such as taste, extent of pests and diseases infestation, maturity rate, extent of bird damage and marketability, which are also very important to farmers are never recorded

Conclusion

- If farmers are to keep records of information during the season, better visual methods that are fun, engaging and motivating – which don't necessarily require much technical expertise or literacy skills in farmers need to be explored
- The methods can be categorized into those used by literate farmers and ones used by non-literate farmers to make them user-friendly
- we need to understand what information is useful to record and when it should be recorded
- **Some emerging questions:**
 - *What can be done to motivate farmers to record data?*
 - *should farmers record every piece of information they find interesting in a trial?*
 - *At what time during the trial should they be keen on recording information?*
 - *Is there a need for more preparation or training before work gets underway – because of the request for fertilizer, and chemical treatments for pests and diseases by some farmers?*

Acknowledgement

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