FROM TEACHER TO COACH

Manual for DA Training, Debre Markos

Improving Agricultural Extension Systems for
Wider Adoption of Technologies

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WHY DO WE WANT TO CHANGE THE TEACHER APPROACH?

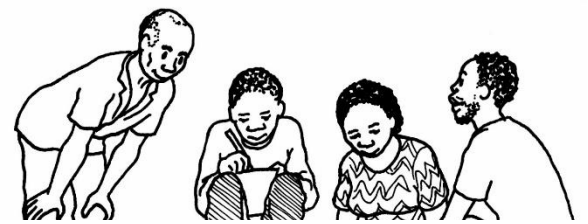
Linkage to government strategy

The Ethiopian Government has demonstrated a firm commitment to supporting farmers in developing the agricultural sector to a more productive, modernised level in short time. The Ethiopian extension system has huge potential in making a substantial and vital contribution to this effort: not only through the high level of training of development agents (DAs), but also through the shear and unprecedented quantity of extension services: in Ethiopia, we see approximately 21 DAs per 10.000 farmers on average, a number which may be much higher in some areas, and less so in others (ATA 2017). This means that Ethiopia has one of the highest densities in the World, a fact that bears great potential to provide a base for grass-roots extension services, and a real bottom-up approach (ATA 2017). In addition, there are close to 12 500 Farmer Training Centres (FTCs) in operation, though at varying degrees, they still offer a large potential (ATA 2017). The key principles the Ethiopian Government has laid out for developing extension further are as follows:

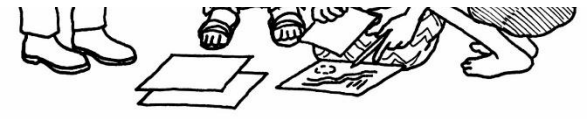
(1) Market-oriented and demand driven extension system,
(2) Government-led pluralistic extension service,
(3) Participatory and multiple extension methods and approaches,
(4) Value chain extension approach,
(5) Gender, youth and nutrition mainstreaming,
(6) Mainstreaming of sustainable environmental practices,
(7) Location and agro-ecologies specific interventions,
(8) Competent and skilled human resources,
(9) Specialization and diversification,
(10) Process and result oriented extension services,
(11) Inclusive extension services,
(12) Collaboration and harmonization with others complementary services,
(13) Scaling out & up of good practices and
(14) Responsibility & accountability. (ATA 2017)

In this part of your training, we would like to address the following aspects of this strategy:

(3) Participatory and multiple extension methods and approaches,
(8) Competent and skilled human resources,
(11) Inclusive extension services,
(14) Responsibility & accountability.



1:Regina Faul-Doyle, in Pretty et al. 1995.



What can we learn from the past?

According to reports like ATA (2017) and IFPRI (2009), communication and facilitation skills, participatory approaches, conflict management are some of the areas where DAs require more skills to successfully fulfil their role. In the past, DAs have been taught that their role was to mobilise farmers, to change their awareness and attitude. Farmers were framed as having little expert knowledge, as being poor and "risk-averse" as a result of poverty and/or ignorance. Lack of progress in agricultural development was often blamed on farmers' behaviour.

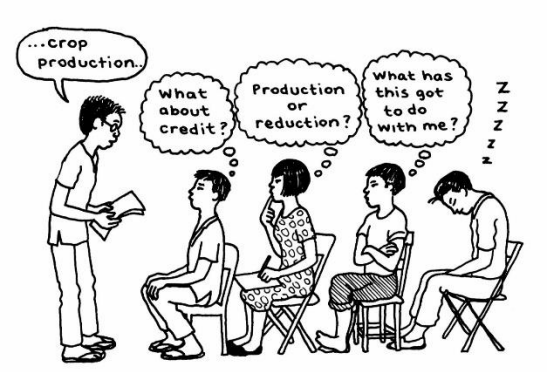
⇒ DAs need a new relationship with farmers, that is free of prejudice and blame. There are farmers who have a lot of knowledge, practical and theoretical, who are interested in learning more. There are others who for many different reasons are not, and perhaps never will be. We need to respect that without blame and shame.

Farmers have also blamed as culprits for environmental issues such as deforestation, soil erosion etc. since the Derg Regime, and it has been said repeatedly in government reports and scientific publications, that they are doing this because of a "lack of awareness", and/or poverty. This prejudice is extremely prevalent and prevents a more critical debate around the more complex and wider issues surrounding this issue. Equally, it serves to prevent a more pronounced and broader debate on rural injustice and inequalities that are also important driving factors of environmental degradation.

⇒ These issues are indeed much more complex, and deeply embedded in the historical and political context of each country. This complexity needs to be understood rather than searching simple explanations that blame solely farmers.

There was little understanding for differences between farmers as human-beings, and little regard for their different characters, personal situations, their varying social environments. Lack of adoption was attributed to farmers' behaviours and attitudes, and often farmers were blamed not to adopt technologies because they were not willing – or able - to take risks.

⇒ There is no general type of "a farmer", this categorisation is neither valid nor useful. We must aim at understanding the individual situation of a farmer to be able to understand his decision to adopt – or not.



2: :Regina Faul-Doyle, in Pretty et al. 1995.

Rarely the reason for lack of adoption of technologies was sought for in other areas: many technologies developed in research centres or designed as packages in extension offices are not relevant for a majority of farmers. Many farmers may also have doubts whether the risk is worth taking, as they may fear a reduction rather than increase in production. For example, in Ethiopia, as in many other African countries, there is an increasing indication that mineral fertilisers have a detrimental effect on sustainability of soil productivity. Farmers have quickly come to realise that there is a "soil dependency syndrome", and that once the soil has been contaminated with artificial fertilisers, it is a long process to return back to the use of organic fertilisers only. However, in an environment where farmers rarely dispose of assets or financial means to balance out financial losses due to e.g. climatically induced harvest loss, the inability to return to the use of organic or

no fertilisers is a disaster. When farmers become too dependent on agricultural inputs, bought by credit, and productivity and market prices do not match up to the expenses, this becomes a real existential issue driving farmers to commit suicide in masses as it happened for example in India with cotton farmers ("cotton suicides"). To produce cotton for the global, farmers had to buy lots of agricultural inputs. As they then could not compete with the global market, financial losses and increasing debts drove many to committing suicide when they no longer saw a way out of their situation.

"I'm getting around 50 dollars per quintal. Just a year ago it was 100 dollars. I've never seen such a low price. The costs of pesticides, fertilizers and seeds are increasing but the cotton price is falling down." He points out the dismal condition of debt-ridden farmers like himself in Vidarbha, many of whom are forced to take out loans or give up farming. "Government officials do not come to the village and listen to our plight. Just a few days ago, my neighbor burnt himself alive," Dhidkar said. […] Government data shows 11,772 farmers committed suicide in 2013 across India. That is 44 deaths every day.[1]

We really have to think about whether the technologies are suitable for the farmers' needs and whether it is a responsible decision for them take a credit to be able to implement this technology. We cannot take responsibility to force farmers to get indebted in order to carry out field trials. Is the technology really suitable for the specific area? Is this specific farmer who would like to adopt this technology really in a sufficiently safe position to do so? Does he have labour, assets or suitable land to change his farming practice?

In reality, few technologies are developed and implemented because specific farmers have asked for it. It is mostly researchers and policy makers who decide what a good technology is. This is a global phenomenon: decisions are made elsewhere, and farmers are then expected to implement what other people have decided is good for them. But farmers would also like to be treated as mature, responsible, knowledgeable and competent partners – this is important to your relationship with them as a DA.

- ⇒ If a farmer does not see the need for change, it will be very hard to "convince" him. And, if he needs to "convinced", it is most likely there is something wrong with the technology to start with: the technology must be convincing in itself. Therefore, research and extension must critically evaluate their approach, rather than seeking the fault with the farmers.
- ⇒ Critically assess the economic and personal situation of a farmer. To convince as many as possible to be able to report numbers in one year, and then find out the next year that most farmers have not continued with this technology, can hardly be in the interest of the government. And it is certainly not in your interest either!
- ⇒ If a farmer is willing and able to carry out field trials, then support him and ensure a linkage to research. This farmer himself can become part of this research in assessing the inputs he is using, the labour he invests, the actual harvest, potential environmental consequences etc. With adequate training, this is quite common on a global level. But field trials across the community without follow-up, monitoring and evaluation, feed-back to research to improve the technology and to come up with solutions for new, emerging problems like pests and diseases are not economically viable.

[1] edition.cnn.com/2015/04/19/asia/india-cotton-farmers-suicide/

The picture above shows very much how we have been working for decades. Farmers are the ones who are doing the actual work and then there is a whole chain of people, agencies, organisations linked to farmers' work. But the actual understanding for what a farmer needs is very low – DAs are the ones closest to farmers. That is why there is a great opportunity in being a DA: if someone has the potential to lead farmers on a successful path to agricultural development, then it is the DAs. But the role of a DA cannot be the role of a teacher – to work with farmers, we cannot only watch, we must listen and work with them.

Think about it – what is your reaction in these situations?

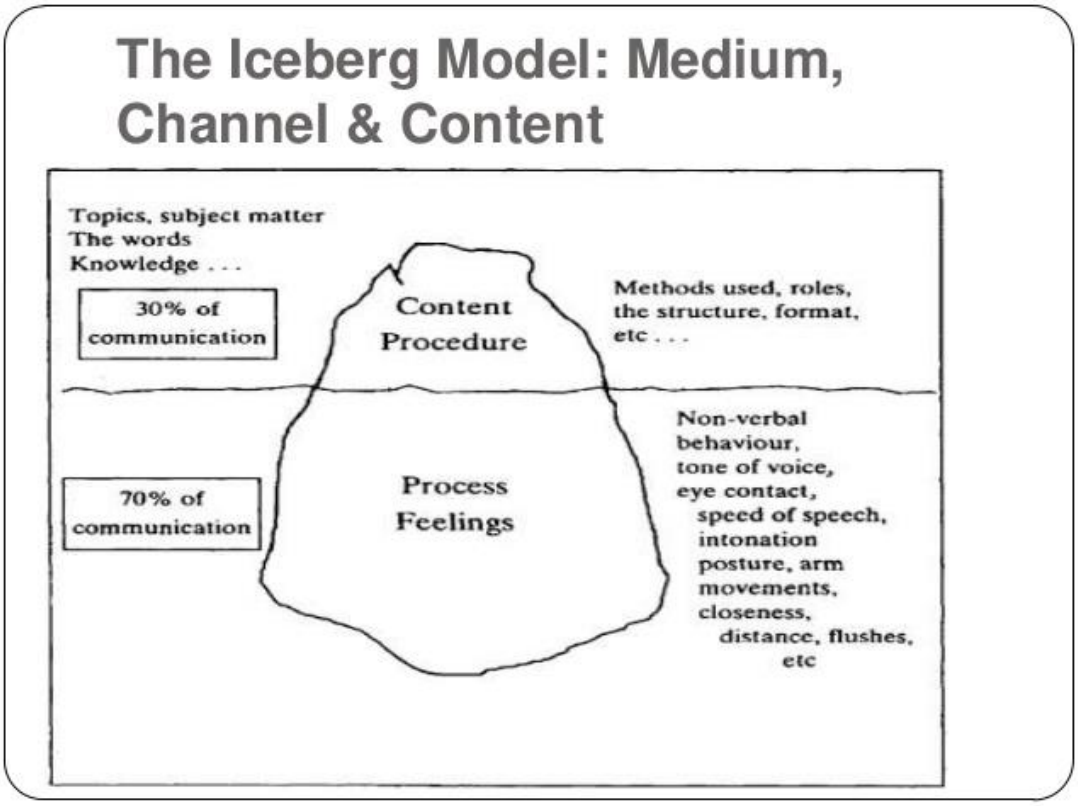
- A trainer discusses with your group for 10 minutes about what you would like to learn in the training. He dutiful notes everything down. Then he continues the training with his pre-prepared programme, not considering anything the group had told him.
- You have been working as a DA for some time. Now a new DA is assigned to work with you. He was a very good student and has great theoretical knowledge, so he keeps on correcting you and telling you that you are wrong, and how you should do things differently.
- You are holding a training for farmers. Your supervisor from the Woreda shows up on a surprise visit. He interrupts you and tells you that your training method is not good, and instructs you how to do things differently in front of the farmers.

You will perhaps be able to control your emotions in all of these situations. But what do you feel inside? If your culture would allow you, what would you say or do in these situations? What will be the consequence of these experiences?

As a new DA, you are an outsider to the farming community. You come with a lot of knowledge from the outside, new technologies, and you have been instructed to tell the farmers to implement this. But in many cases you will find that this does not work. Farmers do not adopt to the extent that you expect them to. Why is that the case? There are many explanations for that, many reasons for that. But for you to find your personal answer, you first of all need to understand the people you are working with. And you must realise, that they are your clients, not your students.

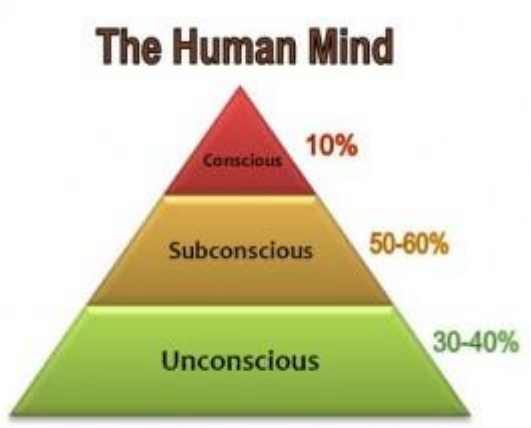
BASICS ABOUT COMMUNICATION

If human beings communicate, they always do so on two levels: one is about facts and contents, the other level is about emotions and relationships. While the first major level about facts and contents is obvious and located on the surface, the emotional level remains hidden. This looks approximately like this:

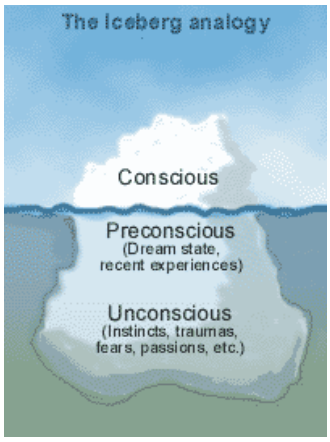


3: https://www.slideshare.net/raghavchadha39/preparing-your-communication-plan

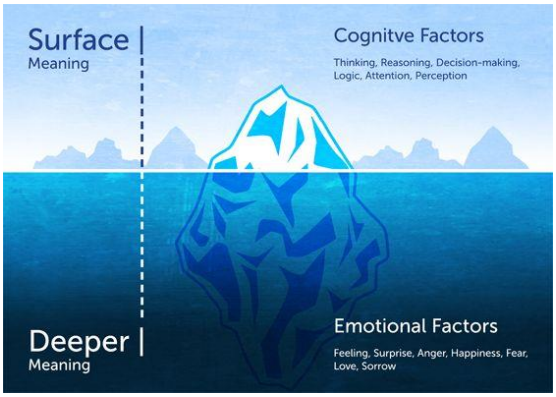
30% of communication thus happens in terms of contents, procedures, about facts. The largest part, 70%, of our communication takes place on another level: processes and feelings (this is non-verbal behaviour, the way we speak, how we position ourselves, who we are etc.). As already described by the famous Sigmund Freud, the human mind is not all consciousness, in reality it is only 10%. 50-60% is subconscious and 30-40% is in the unconscious. In other words, the sub- or pre-conscious is what we perhaps experienced recently, or in a dream, things that are not immediately present, but we still have some awareness for them. The unconscious on the other hand is deeply embedded in our mind, it is about fears, instincts, traumas – we cannot actively influence what is going on there, we do not even know what is in there – yet, it has a profound influence on who we are.



4 http://themindunleashed.com/2014/03/conscious-subconscious-unconscious-mind-work.html



5 http://www.gerardkeegan.co.uk/resource/imgs/iceberg_analogy_sm.gif

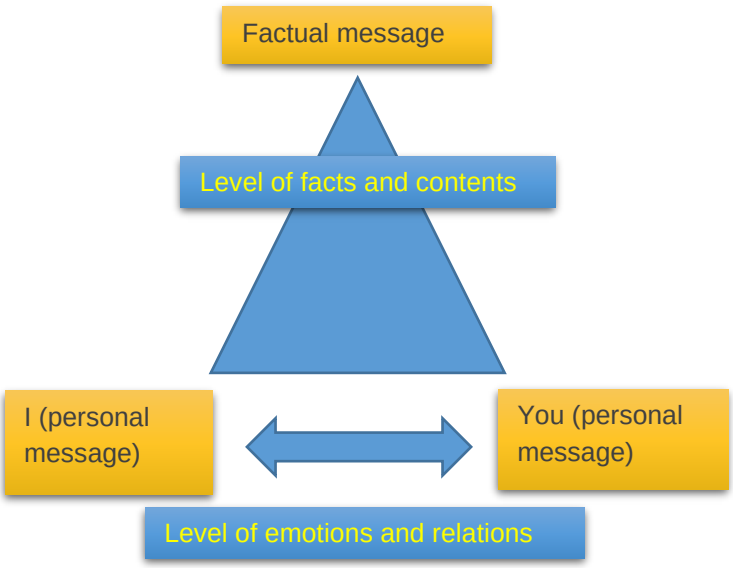


6: https://s-media-cache-ak0.pinimg.com/736x/bc/e9/ee/bce9eec0c65f2ace79e1d51b906f3782.jpg

What is hidden in the “lower” levels of our mind, is what really makes up who we are: our personalities, our way of thinking, our character traits and motives, beliefs, values, myths and thought patterns. It is all that we implicitly learned, subjective, and very difficult to change, while what is on the surface can comparatively easily be influenced, as this is objective, conscious and explicitly learned, influenced by seeing, hearing, touching.

The cognitive versus the emotional is a battle within each and all of us. What we can logically explain with reason, may not always correspond with what we feel emotionally. This influences what we know, what we accept as knowledge, and it also influences how we deal with change, innovation, and risk taking. It also influences how we receive the messages another person is sending to us.

In our communication we may talk about something as a fact, but implicit in what we say there is also a message about ourselves and about the person we are talking to. The message that comes across through the tone of voice, the way we look, our gestures, the situation has a huge impact on how the factual message comes across.



This is important for everyone who is working with people, but of course also useful to think about for our personal lives. Let us look at an example: A trainer welcomes his group with the words *“I am happy that you could all come here today!*”.

What is the factual message: *It is good that everyone showed up*.

How this comes across on an emotional or relationship level varies according to the person who says it, and the person who hears it:

I - personal message (sender): “*I am the one who is leading this group here!*” or “*Jesus, I am glad that everyone could make it here today!*”.

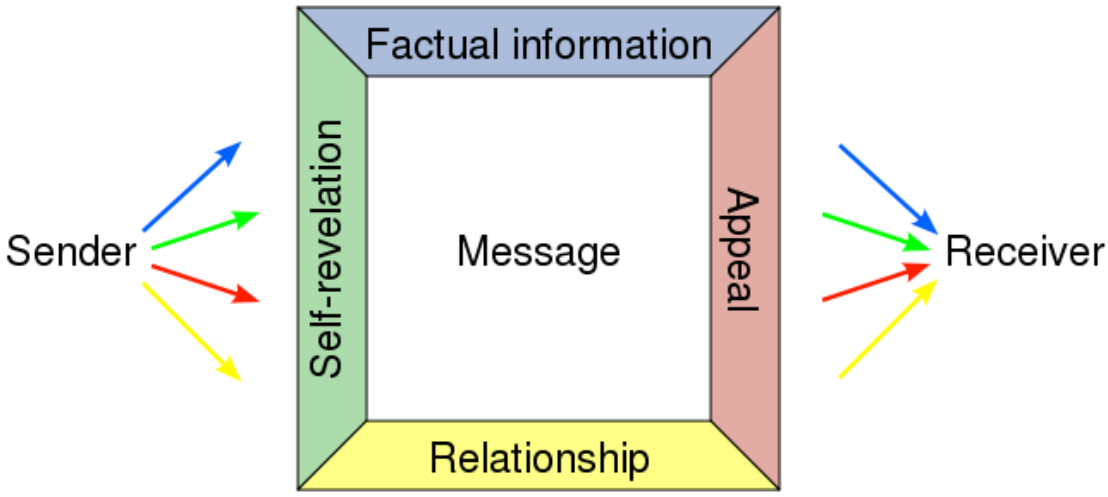
You – personal message (receiver): "*You are the participant*." Or "*I am addressing warm, official welcome words to you to show you appreciation.*"

The factual message will be understood through the filter of the personal message, the emotions and relations resulting from how something has been said, when, where and by whom and to whom, all of this together allows an interpretation of what has been said.

This is very important because for successful and respectful communication we have to ensure that our **factual messages are clear and comprehensible**. This can be ensured by:

- Simple language
- Well-structured speeches
- Keeping it short
- Down to the point
- Using visual support (demonstration, observation)

Personal messages must be honest, open and direct, appreciative: The person you are addressing should be sure that he is seen and accepted as a person, and that you do not look at him with suspicion, arrogance, or with contempt.

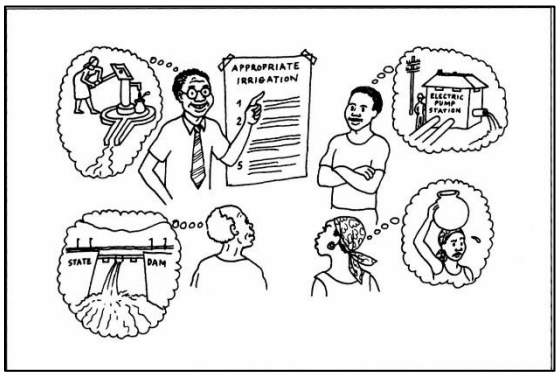


7: By JazzyJulius - Translated from http://en.wikipedia.org/wiki/File:Vier-Seiten-Modell_de.svg , which in turn was based on http://www.schulz-von-thun.de/mod-komquad.html , Public Domain, https://commons.wikimedia.org/w/index.php?curid=7685255

To explain this more in detail, every communication between human beings has two main aspects: content and relationship (Paul Watzlawick). Every information is composed of a contribution by the matter, the sender, and the receiver. The model of Schulz von Thun is based on four major aspects:

- Matter: E.g. data and facts as part of the message.
- Self-revealing: that is what the speaker reveals about himself (e.g. motives, values, emotions etc.)
- Relationship: tells us something about the relation between the sender and the receiver, this also influences how the message is perceived.
- Appeal: by the speaker, his desire, advice, instruction and intended effects. What I want to make you do.

Those layers offer many options for misunderstandings. The most famous example of the author, Schulz von Thun, refers to two people sitting in the car:



The front-seat passenger tells the driver: "Hey, the traffic lights are green". This message can be interpreted in different ways depending on which of the above mentioned aspects matter most to him:

- Matter: The driver will hear the fact, “the traffic lights are green”.
- Relationship: “I am telling you the lights are green because I want to help you”
- Appeal: “Come on drive now, the lights are green”
- Self-revelation: “I am telling you the lights are green because I am in a hurry and I want you to drive now”

Thus a simple message is prone to many misunderstandings and can lead to a lot of conflict and undesired consequences.

8: Regina Faul-Doyle, in Pretty et al. 1995.

DIFFERENTIATE MENTOR AND COACH

Coaching

"*Coaching means guiding people in discovering their potential so they can live with more autonomy and responsibility. It frees up existing resources by creating insights. It opens up a field of possibilities by defining one's personal and/or professional objectives. This is achieved by asking the right questions, giving assignments and feedback."* [2]

To redefine the relationship between DAs and farmers, a different approach could be taken where the DA moves from being a teacher or trainer to being a coach. The DA takes on the role of someone who assists farmers on their way to increase farm productivity. But he will do so in listening, acknowledging, questioning and in providing feedback. An important point about coaching is that it is future-oriented. The DA as coach and the farmers define a vision, where they want to be, and where they are now. Coaching helps to find the path leading from one to the other. Coaching is also a communication method – it helps to increase awareness about the self, but needs to change to reach the goals set. It develops confidence and understanding, ownership and empowerment, and it helps to increase motivation, clarity and focus. [3]

Mentoring

"*Mentorship is a relationship in which a more experienced or more knowledgeable person helps to guide a less experienced or less knowledgeable person."* [4]

This is the reason why mentors for farmers can only be other farmers – farmers who are seen as more experienced and knowledgeable in some areas than others.

Mentoring *is a skill that provides perspective to the coachee/mentee when they have exhausted their current level of knowledge, experience and thinking.*[3] Similar to coaching it is also used to empower and encourage people to improve learning, but mentor and mentee share similar experiences and work in similar fields. What's important about their relationship is that they trust and respect each other. This relationship works best if the mentor has had similar experiences as the mentee.[3]

How to differentiate coach and mentor

Coaching and mentoring have different emphasis, but they are often confused because they share the same principles. The roles of coach and mentor can sometimes also be reversed (Abiddin 2006). However, in the model that we are suggesting their roles are succinctly different. Both of them do create learning relationships facilitating learning and change, they look into different potentials and possibilities, and aim to achieve results agreed jointly. In our case they must be parallel processes with interlinking and mutually supporting each other:

"*Coaching is a well-guided learning through practice and feedback. It is about asking a lot of open-ended questions and providing encouragement, and mentoring is about sharing one's experiences. When mentoring, individuals share their own experiences and life learning. Unlike coaching, mentoring is more about directing or telling a person what to do rather than creating a space for the individual to discover*

[2] http://www.yourcoach.be/en/coaching/

[3] *PeopleSmart Factsheet*

[4] *https://en.wikipedia.org/wiki/Mentorship*

solutions for him or herself. In mentoring, role modelling has a greater importance than in coaching (Abiddin, 2006). " (Mamush Lemma et al. 2016)

The role model for a farmer is clearly another farmer, a person in the community that he can look up to, someone who stands out for his achievements in farming. Another prerequisite is the ability of this farmer, the mentor, to share his knowledge with others.

A similar example under a different name and a different system is the Farmer to Farmer (F2F) extension system applied in other African countries[5]: In the F2F extension system farmers receive training and material to train other farmers. The benefits of F2F are capacity development, low cost, sustainability, increasing adoption, increasing coverage. The challenges are conflicts (e.g. between farmer trainers and extension staff), limited budget, some challenges due to farmer-led trainings, dropout rates, and expectations of lead farmers.[5]

Regarding the motivation of farmers to become a trainer in F2F, studies have found that at the beginning the motivation is mainly the knowledge to be gained, followed by the idea of helping others. The motivation shifts after the first year, and the motivation to stay a trainer is first of all the income from extension activities (many of them start a business where they are selling inputs, tools and small machineries to other farmers). Added value comes from study tours, and from items pointing out social status such as awards, badges, T-Shirts….However, the motivation varies between different farmers, and it changes. What is important to note is that ***expert farmers are not necessarily good disseminators.*** In the study presented, about 40% of the expert farmers were not good disseminators. [5]

Farmer-to-farmer extension – in the sense of neighbourly support - has been practised for generations and will continue to make important contributions. Farmers (both women and men) can learn a lot from their more innovative neighbour(s) and adopt promising innovations. F2F extension systems, however, go a step further through by establishing a "structured" support to farmers:

The community – organised in farmer groups - selects an experienced and innovative farmer to be a "lead farmer". Those farmers selected as "lead farmers" are also often called "model/master farmers", or "farmer-trainer", etc. and are chosen for their agricultural expertise and their ability to share information. In other initiatives, they are called "farmer promoters", which emphasises their networking or training skills. An additional variant is the "community knowledge worker", sometimes equipped with a smart phone to improve farmers' access to information and advisory services. (MEAS, 2015)

These "lead farmers" provide necessary extension services to their fellow farmers in their community, e.g. training, advice, demonstration, etc. Unlike neighbourly support, these "lead farmers" are rewarded for their services through "payments" from the farmer beneficiaries or farmer group(s). Thus, lead farmers do not provide free support to neighbours of choice, but to all interested farmers in their community or farmer group(s). This "payment" for services is a serious obstacle to implementing F2F extension systems in many regions – and thus challenges their sustainability.

[5] Farmer to farmer extension (FTFE): Lessons from extension providers and farmer trainers - Steven Franzel, World Agroforestry Centre

For F2F extension to run effectively in the long term, it needs to be locally embedded, e.g. linked to the smallest governmental unit (e.g. CDCs in Afghanistan). These "local committees" receive support (and often funding) from the facilitating organisations to help the farmer groups and lead farmers to implement a F2F extension system. Their ownership by a local committee is key to ensuring institutional sustainability. Institutionally embeddedness is a major precondition for receiving public funding.

The role of the facilitating organisation, whether public, NGO or private, is to support the establishment and running of the F2F extension system. Firstly, farmers groups often require support to mobilise and operate, (see the "Working with Groups" concept note). Secondly, the facilitating organisation is often responsible for providing capacity-building to the "lead farmers" to ensure high-quality service delivery. This often translates into providing training to lead farmers, both on agricultural aspects and communication. Periodic training sessions, field backstopping and on-the-job training are important to ensure that "lead farmers" remain motivated and provide good-quality services (GFRAS, 2015).

Quoted from Helvetas, SLMP Training of Resource Persons on Participatory Extension, 2015.

DAs as coaches and farmers as mentors can make use of the experiences of the F2F extension system. Their task is to "*help people reach significant decisions and take appropriate actions. Successful coaches and mentors both depend on building a relationship based on trust and openness (Deans et al., 2007). Neither are there to solve problems but rather to help people identify issues and plan ways through them. The overall aim of good coaching and mentoring is to take someone beyond the boundaries of what they ever believed was possible. Instead of telling people how to do things, good coaches and mentors help them come up with their own ideas and solutions from experience.*" (Mamush Lemma et al. 2016)

In our specific case the DA acts as a coach, and works with teams of farmers. The mentor is a "*tankara gebere*", a strong farmer recognised by the community. He can be a model farmer, but given the historical connotation of model farmers it would be better to avoid a blending of the two.

We need a group of potential mentors from all section of the *got*, so wealthy, poor, landless, landowners, with knowledge on different issues such as crops, trees, soil management, livestock….There are always different farmers who are known to have knowledge on those different issues!

They work in groups of people with shared interests and similar situations (separate landowners from sharecroppers for example), but individual coaching should also be possible if the situation requires that. The mentor comes in on demand as a result of the coaching process.

An outcome of the coaching can also be the defined need for other technologies, or training, tailor made to the needs of these specific clients = farmers.

Table 1: Coaching and mentoring compared (based on Deans et al., 2007), taken from Mamush Lemma et al. (2016).

Coaching and mentoring compared (based on Deans et al., 2007) Elements	Coaching	Mentoring
Goal-setting	Coach drives the goal-setting process.	Agenda is set by the learner, with the mentor providing support and guidance.

Focus of activity	Focus is on immediate goals, specific skills. Generally more structured in nature. Meetings are scheduled on a regular basis.	Focus is on longer term development and capability. More informal. Meetings can take place as and when the learner needs some advice, guidance and support.
Role	Coach gives feedback, encouragement on performance; offers techniques for improvement.	Mentor gives feedback but also offers insight, broader perspective.
Key qualities	Coach is skilled in facilitating learning of skills, development of confidence; need not be subject matter expert	Similar skills Mentor is generally acknowledged expert in field (technical expertise or leadership roles)
Time frame	Relationship generally has a set duration	Ongoing relationship that can last for a long period of time

METHODS

Coaching

1) Goalsetting: to define something definite as a goal, something to work toward. These goals should help the farmers to increase their productivity. The main task of the coach (and also the mentor) is to ensure that these are realistic goals.
2) Monitoring: to provide feedback to farmers about their performance. Feedback should be positively oriented, and criticism should be constructive. Feedback should be expressed in appreciative ways, with I-messages, rather than "you": e.g. I have the impression that the new fertilisers that you have started using do not yield the desired outputs. What would you suggest as a reason for that? (rather than: You are not applying this fertiliser properly.)
3) If goals are achieved, then appreciate the farmers, and celebrate achievements with them.
4) Working with farmers in groups also creates team work: collaboration can evolve and should be appropriately managed, and that communication is working properly.

During the process of coaching and mentoring, DAs and farmers should strive to enable the mentees (farmers) to vocalize, listen to, help to envision realities. The DAs should collect the background information about the selected agricultural idea together with the mentor farmers. Then in a team they should together (coach, mentor, mentee) decide the best way for the mentee to achieve his goals as a farmer.
This will require a series of individual and group sessions, as well as background research, and additional training. However, farmers will have to learn to better manage farming resources and to improve their networks within and outside of their respective *got.* This is important for them to understand how they fit into the local, regional and national agricultural market and economy.

Preparatory process[6]

1. Clarify goals: clarify what you want to achieve, what are the expectations. What has the farmer already done to achieve his goals.
2. Motivations: is this something the farmer has asked for, or has someone told you this farmer needs to do this. If the request came from someone other than the farmer himself, clarify the relation between these two, and try to understand how this relates to the farmer's own perception. This only works if the farmer himself really wants to do this.

3. Collect background information: try to understand as much as possible about the type of farming practices the farmer is engaged in, his farming environment, as well as markets and value chains linked to his production sector.
4. Agree on the conditions for the process: clarify potential costs, the timeframe, and confidentiality. As a DA you have to be neutral and discrete.
5. Clarify your suitability to act as coach for this particular farmer: if you think you are not the right person to assist the farmer in achieving his goals, try to find an alternative solution.

Coaching conversations[6][7]

1. Establish contact and orientation: create a good basis for dialogue, create consent.
    a. Try to understand the personality of the farmer as much as possible, and whether you will be able to communicate in a trustful and constructive kind of way.
    b. Be clear about roles, expectations, and realistic outcomes of your interaction.
    c. Important aspects clarified during first meetings are competence, standing, credibility and treatment of the client. Clients tend to assess advisors – and coaches – based on these four criteria, and this first judgement is essential for the relationship between the two.
2. Analyse situation and goals of the client:
    a. Try to understand his situation, who else is concerned, what has happened until now to change thing….
    b. Sort and prioritise goals and topics with the client. Based on this you need find an entry point, that helps you and the client to start a proper working relationship. The entry point must be an issue that the farmer feels sufficiently comfortable with, and that also yields visible results within a relatively short time.
    c. Formulate goals in a positive, motivating, self-attaining and concrete/measurable kind of way. Most important: POSITIVE!
    d. Make a “contract” on the next steps: this can be an oral agreement on what will happen next. The farmer must commit to these steps. [8]
3. Develop solutions:
    a. As a coach you are now an important person to support the farmer on his way to achieve his goals. However, for the more practically oriented goals, this is where the mentor comes in.
    b. Clarify what you need to achieve these goals.
    c. Which abilities are important to find solutions here?
    d. How did the farmer solve such problems before?
    e. What does the farmer need to know, what is he already able to do to solve the problem?
    f. Who can support the farmer to find a solution?
    g. Which other support is possible?
    h. Address potential conflicts.
4. Ensure implementation: Farmer needs to be sure that this is what he wants to do.
    a. Make sure this fits with his value system and personal identity. (e.g. not every farmer will be happy to grow *khat*!)
    b. Does the suggested solution fit with the overall goals the farmer has set himself?
    c. What negative consequences could you anticipate and prevent?
    d. Think about whether this “innovation” is really going to bring an improvement.
    e. Define concrete steps for implementation: agree on time, people and resources involved, identify potential obstacles, clarify support needed, be sure this is important enough for the farmer to go through with it.
5. Close coaching process:
    a. Once everything is in place, ensure your coaching relationship comes to a proper closing.

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[6] *Maren Fischer-Epe (2007) Coaching: Miteinander Ziele erreichen. Rowohlt, Hamburg.*

[7] *More details can be found here: Mamusha Lemma, Berhanu Gebremedhin, Dirk Hoekstra and Azage Tegegne (2016) Coaching and Mentoring in Agricultural Value Chains. ILRI, Addis Ababa.*

[8] *This can be done on „commitment cards” (Mamusha et al. 2016): write down milestones and commitments with dates.*

b. Ensure a monitoring procedure to see the outcome of the process, and whether the farmer needs assistance in implementation.

Meeting settings

- Visit the farmer in his home and workplace, even if you work with groups, do not order them to come to the FTC / Kebelle, meet them in their own environment. Use these opportunities to walk around with them on their land to see how things are, which problems and opportunities they have there (informal transect walks).
- Respect their seasonal calendar – do not try to arrange meetings with them during times of high workload or other inconveniences.
- Adapt to the farmers' schedules, which means most likely you have to meet early in the morning, late in the afternoon/early evening, or during holidays.
- Be very clear about your role, the purpose of your visit and what the follow-up will be. Structure is important!
- Agree on how to record the outcome of your meetings.
- Most of all, ensure a comfortable AND confidential place for in-depth discussions.

Appearances

- Do not show up with entourage – it is you and the farmer(s) who meet, no need to bring others along.
- Show that you are on the same level, do not try to demonstrate power by dress, and other appearances. Just adapt to the situation!
- Greet properly, follow the farmers' customs, adapt to their local habits.
- Body language, tone of voice, facial expressions send important messages, you should be aware of that.
- You will benefit from showing a warm personality with the ability to show approval and acceptance of farmers, a good skill in noticing issues and problems in the specific setting, flexibility and knowledge on what you are communicating about.

2: Typical communcation blocks (Pretty et al 1995)

Solution or advice:	We imply indirectly: "You are too stupid to figure out the problem, so do it my way; your feelings are not important."
Orders:	Giving orders can provoke resentment as people are not given a choice and their feelings have not been considered
Threats:	We use our power to tell people what will happen if they don't do it our way. Their feelings are not important.
Moralising or lecturing:	When we tell people what they should or ought to do, we value our own values more than their feelings.
Criticism or ridicule:	We deny people's feelings by telling them that they are bad people and do not have a right to feel the way they do.
Praise or sympathy:	We try to substitute or cover up their feelings with another feeling. These statements avoid the real issue.
Questioning:	By trying to get people to think logically, we deny their feelings.

Source: Sam Joseph, pers. comm.

Open-ended questions, appreciative comments

1) Avoid leading questions that lead only to a yes or no answer.
2) Avoid lecturing and providing the answers.
3) Keep your language simple, without jargon (no English words, only local language!), speak in clear sentences
4) Be patient when your questions are not understood immediately, take your time, sit back and rephrase your question.
5) Be comfortable with silence, or refusal to answer. This means either that the other person is thinking about what you asked, or if he or she is not comfortable answering right now, then leave the thought with them as it is. Don't push, don't force.
6) Commit and keep your promises:
    a. Be on time, apologise in advance if you cannot make it.
    b. Delegate responsibility to the farmer until you have your next meeting, for example talking to the mentor, or someone else who is working on a technology he is interested. Create ownership.
    c. Recount at the next meeting what happened in the meantime, and also keep your own promises and bring with you what you promised.

How to become a good listener (Pretty et al 1995)

- Remain silent, let the others talk
- Acknowledge by making appreciative sounds and short comments like "I see"
- Invite people to expand: "Tell me about it…", "I'd like to hear more about that…"
- Paraphrase: "So you are saying that this year was a good year because…."
- Active listening: Describe your impression about that has been said, which feelings you observed, e.g. "I have the impression that you are upset about…", "It seems to me that you are unsure about what to do next…", or if the person keeps silent, "I have the feeling that you are anxious and upset"…
- Provide accurate information, such as when your next meeting will be held.
- Stay neutral, control your own emotions. Hide scepticism, hide your own personal opinion.
- Deal with criticism in a neural way, do not become self-defensive, rather accept along the lines of "Thank you for pointing this out to me. I will certainly consider what you have told me, and try to improve.", or sentences like "I agree….", "I appreciate….".

On phrasing questions

- Ensure to use open-ended, not leading questions
- Questions should be succinct, and easily understood
- Resist temptation to provide answers, choices and examples

Example:

Leading question: Would you like to have seeds for an improved wheat variety?

Alternative:

- What are your plans for this year regarding crops?
- What do you need to implement these plans?
- How can I assist you in realising this?

PRACTICE & FEEDBACK

In this part of the training we will carry out a role play. You will all be assigned different roles, such as farmers, DAs and other extension officers – some of you as coaches, others as mentors, or as farmers to be coached. The aim of the role play is for you to gain a better understanding of the position of other actors in your immediate professional environment, most of all your clients, the farmers.

Participatory Extension Methods

By: Aden Aw-Hassan

PARTICIPATION IN DEVELOPMENT

Participation means being involved in the process of any activity and taking part actively in the sense of exercising a shared responsibility in carrying out the activity (modified from UNESCO, 1986).

There are four levels of participation (Aycrigg, 1998, see also Long, 2001):

1. ***Information sharing***- one-way communication where people are included by informing them about what is being done.
2. ***Consultation:*** one-way communication with strong emphasis on feedback. Stakeholders provide inputs, but do not have significant say in the decision making process.
3. ***Collaboration:*** two-way communication supporting open interactions in decision-making. Inputs in decision making is balanced.
4. ***Empowerment:*** two-way communication that ensures shared decision making; there is strong transfer of control over decisions and resources.

The key point *here is that the participation of people in actions and decisions that affect their lives is critical element in development and the role of development agents to facilitate voluntary, effective and empowering participation. The levels of participation stated above implies that the higher order of participation (level 4) gives higher capacity and empowerment to make critical decisions and would be most effective in bringing social changes that yield positive welfare changes. Development agents should aspire to that level of empowerment participation.*

FARMERS AS INNOVATORS

An important concept in development is that farmers are innovators not only recipients of information and external knowledge. By accepting this concept, we embrace both the local knowledge of farmers and their innovative capacities. Development agents aim at nurturing and enhancing the capacity of farmers to innovate and adapt new practices rather than blindly following instructions. This is a clear departure from the traditional thinking that the development of innovations is solely attributed to research organizations, while the farmer's role in generation of innovations has largely been neglected. Globally there are many examples of farmers' innovations. On example is that the story of the Ramsaroop family in the Caribbean island of Trinidad (http://www.iica.int/en/newsletters/iica-delegation-usa-newsletter-july-august-2016, by * Inter-American Institute for Cooperation on Agriculture) who has designed, adapted and modified farm equipments to suit the conditions of their land. They developed innovations for a problem they face by trying to find solution and they succeeded and became major knowledge source for farm machinery. DAs need to work with farmers as potential innovators, and also respect their local knowledge and perspectives. Farmers' perspectives and how they assess innovations is based on deep rooted experience and

knowledge of the environment and the complex production system as well ecological system they live and work in. These perspective, even when they are contrary to the mainstream research views, should be respected.

PARTICIPATORY INNOVATION DEVELOPMENT (PID)

IN ORDER TO ENCOURAGE AND NURTURE FARMERS' INNOVATIVE CAPACITIES AND PARTICIPATION IN TECHNOLOGY EVALUATION AND ADAPTATION, THE CONCEPT OF PARTICIPATORY INNOVATION DEVELOPMENT (PID) HAS EMERGED.

PID, formerly known as "Participatory Technology Development" (PTD) is known by several names: "farmer participatory research", "farmer-led research", "participatory action research" or "action research and participatory on-farm research" (see, Scheuermeier, et al. 2004). The main distinction of PID is that that the participatory research and development activities deal not only with technologies but also with organizational innovation and change, including socio-cultural context such as in the roles of men and women (PROLINNOVA Working Paper 30, 2009). The main emphasis is on combining local and scientific knowledge in experimentation by linking farmers, extensionists, researchers and other relevant stakeholders (e.g. private sector input suppliers or traders). The objective of PID is to enable local communities with their valuable knowledge and skills to find new "things and ways that work" – innovations. Unlike demonstrations, where a technology is already proven, PID is about identifying and trying out useful new practices, which contribute to improving the livelihoods of rural people. "Practices" may include agricultural production technologies and interventions related to value chains (input supply, processing, marketing) or social aspects (e.g. organizing a seed bank). PID fosters a spirit of experimentation and exploration among the involved villagers, and this is very helpful for adapting to an increasingly complex and changing context. Rural people and farmers' competence to identify needs, opportunities and development strategies for themselves is strengthened, and local control over - and equal participation in - the development process is enhanced (Scheuermeier, et al. 2004). Development agents take on a facilitation role to bring the different stakeholders together.

Useful tips in implementing participatory extension approach

Extension agents: should consider these point for achieving scaling up technologies.

1. ***Group learning***: Adapt group learning approach organized in fields similar to the farmer field school extension strategy. Extension should act as a facilitator of the group learning events, create and facilitate opportunities where farmers learn from each other.
2. ***Gender diversity-*** involve both male and female from each community.
3. ***Farmer leaders –*** choose farmer leaders acceptable to community and help them establish access to information on a sustainable basis.
4. ***Farmer participatory research*** – encourage farmers to conduct research using their own resources to develop technologies appropriate to each area. Help farmers to analyze and disseminate the information.
5. ***Farmers science meeting*** – apart from field days (which give an opportunity for the farmers to see): organize village fora to discuss the results obtained.
6. ***Farmer cross visits*** – a most effective strategy: farmers can communicate in their own language.
7. ***Mass communication approaches*** – newsletters, posters, radio, TV programs, billboards in local languages are good ways to create awareness. But to ensure action, support is required and this should be planned.

Guiding principles of participatory approaches

Participatory approaches might best be described as a set of "guiding principles" that can help practitioners develop a different kind of relationship with the people that are supposed to benefit from their work. The guiding principles that really make up participatory approaches were reviewed in the FAO Fisheries Report No. 630 (2000).

Guiding Principles of participatory approaches	
Organized process	While participatory approaches make use of a flexible "basket" of different methodologies, those methodologies are guided by objectives and responsive facilitation.
Systemic learning	The methods used in participatory approaches emphasize learning about systems and the relations between different elements in those systems. Participatory approaches need to be "holistic". *Example, introduction of new variety in the agricultural systems has implications for other crops and inability to consider that may* limit the adoption of the new crop variety.
Multiple perspectives	Participatory approaches take into account the fact that different people have different perspectives and try to accommodate these different perspectives. *Note: Key point here is that local and indigenous knowledge need to be incorporated in to the different views about new crop technologies.*

Group learning	Participatory approaches emphasize the value of learning in groups as a means of coming to consensus decisions regarding action to address commonly identified objectives. (Understanding the "group" and the power relations within the group is important so that "consensus" decisions reflect the needs of weak group members as well as the strong ones.). *Note: facilitators task is t make sure that every one's vice in represented in the consensus, particularly those who tend no speak out; dominance of one or few should be avoided.*
Context specific	Each community and each farmers and their contexts are different. Participatory approaches accommodate their specific characteristics. (From experience, the importance of recognizing the differences within communities, and between social and economic groups, is also being emphasized more and more.). *Note: these contextual factors are important in influencing farmers decisions and they should be understood carefully, particularly form the perspectives of those who are affected.*
Facilitating	The use of participatory approaches by development practitioners involves the adoption of a facilitating or catalytic role, rather than protagonists. *Note: this means the extension agent should not be seen as a proponent for or advocate of certain social programs, but facilitate the learning process open to all views and perspectives.*
Leading to change	While participatory approaches accommodate local knowledge and skills, they are focused on facilitating changes that people regard as appropriate. *Note: The change will come once the beneficiaries found it useful and acknowledging that this may not fit every one.*

Tools for Participatory Research and development

Applications of participatory extension methods

A selection of participatory methods and their uses		
Participatory tool	**Brief description**	**Examples of particular use method**
Timelines	Historical profiles of longer-term events or trends	Crop yields over time, productivity changes, policy changes.
Seasonal calendars	Graphical representation of seasonal events or trends	Labor availability, climatic changes
Transect walks and through particular areas	Land- and water-use maps based on walking capital, local knowledge of microhabitat, current use of land resources	Quality and quantity of natural resource maps

Social maps	Maps locating key social features	Access to services and infrastructure
Wealth ranking	Socio-economic categorization of households	Assets, income distribution
Preference ranking	Ordinal ranking, e.g. based on pairwise comparisons, based on defined criteria with scoring	Livelihood strategies, assets and matrix ranking, access to services.

Tool 1. Drawing Timeline

Timeline us sued to understand the major events that has shaped livelihoods and agricultural in the past for example last 10 years. It is useful tool to put farmers' situation in terms of productivity, production, decision of technology adoption or dis-adoption and agricultural transformation in general into the context of the wider social and environmental dynamics. Understanding these macro-level dynamics will allow to Das to evaluate the feasibility of innovations in the changing rural contexts.

Exercise:

Groups of 8 participants will discuss the changes in cropping systems and the environmental and market conditions that may have affected crop yields for the last 10 years, mark the major events, the underlying factors and the consequent outcomes and the ultimate impacts on rural welfare. Draw the Y and X axis lines on a large white sheet of paper, and write the years on the X axis, and place symbols of major changes on sheet corresponding to the time it happened. Add key indicating what the symbols stand for. Explain the findings to the whole group.

Tool 2. Drawing Seasonal calendar

Seasonal calendar allows to understand the seasonal variations of agricultural activities and the variations of internal and external factors that influence the performance of agriculture and rural livelihoods.

Seasonal calendar presents how conditions change over the year. These include:

1. Intensity of household activities,
2. Food security (abundance and scarcity)?
3. Income for men and women?
4. Expenditure vary over for men and women?
5. Rainfall variation?
6. Water availability for human consumption?
7. Livestock forage availability?
8. Credit availability vary over the year?
9. Holidays and how many days in which month?
10. Most agricultural work carried out by women?
11. Most agricultural work carried out by men and by women?
12. Most non-agricultural work carried out by men and by women?
13. Most appropriate season for additional activities for men and women?
14. When time constraints exist?

Exercise

Groups of 8 participants will discuss the calendar of major crops in the region and develop crop calendar chart showing planting data, growing period, application of major inputs, maturity stage, harvesting and post harvesting; this will show important issues like how farmers resources such as labor availability changes during the calendar, and how that may affect farmers' ability to make certain changes. The calendar can also show non-farm activities that may influence the farming activities, for example if there are seasonal off-farm employment opportunities that reduce labor available to the farming or other similar factors.

Drawing the seasonal calendar:

1. Find a large open space for the group. The calendar can be drawn on a very big sheets of paper.
2. Draw a matrix, indicating each month along one axis by a symbol.
3. Start with rainfall patterns. Choose a symbol for rain and put/draw it next to the column which participants will now use to illustrate the rainfall. Ask the group to put (stones/symbols or stickers) under each month of the calendar to represent relative amounts of rainfall (more stickers meaning more rainfall).
4. Move to the next topic and ask people during which month the food is usually scare. Discuss the reasons why it is scarce; make sure that reasons for food scarcity are discussed and shown on the map.

Box

1. Rainfall
2. Food scarcity (many stones means less food available, indicate during which time people receive food donations (e.g. food for work))
3. Income (cask and kind) for women
4. Income (cash and kind) for men
5. Expenditure for men and women
6. Water availability for human consumption
8. Livestock forage availability
9. credit availability
10. number of holiday days
11. agricultural work load for women
12. agricultural work load for men
13. non-agricultural work load for men and women
14. inputs (fertilizer, seeds, etc.) credit availability

5. Go on like this, meaning topic by topic. After finishing all the columns your matrix should have covered the following 13 topics in Box 1:
6. After the calendar is finished ask the group which linkages they see among the different topics of the calendar. Encourage the group to discuss what they see on the calendar.
7. Make sure that your copy of the seasonal calendar - has a key explaining the different items and symbols used on the map.

Tool 3. Social mapping

A social map is drawn by the residents and shows the social structures and institutions found in an area. It helps us to learn about social and economic differences between the households. The aim of the Social Mapping is to learn about the social structures in the target community and the differences among the households by ethnicity, religion and wealth; to learn about who is living where; to learn about the social institutions and the different views local people might have regarding those institutions.

Key Questions:

1. What are the approximate boundaries of the community with regard to social interaction and social services?
2. How many households are found in the community and where are they located?
3. Is the number of households growing or shrinking?
4. What are the social structures and institutions found in the community?
5. What religious groups are found in the community? Where in the community are the different religious groups living?
6. What ethnic groups are found in the community? Where in the community are the different ethnic groups living?
7. Which are the female Headed Households and where are they are located?

Exercise:

1. *Group of 8 participants will draw a map of a "typical" village in a region showing where households are located. Drawing roads and significant land marks (church., Mosque, well, ect) will help for orientation.*
2. Discuss whether the total number of households has increased or shrunk during recent years. If there were any changes, ask why the number has changed and whether this has caused any problem for certain families or for the community at large.
3. Show institutions, buildings and places that offer some kind of social service or which are popular spots to meet and discuss. Example: schools, churches, health service, traditional healers, community administration, community leaders, local shop, kindergarten, places where people frequently meet, water point etc.)
4. Encourage the group to discuss and show on the map which different ethnic groups are living in their community. Using a common symbol, mark those households in which the minority ethnic groups live.
5. Discuss and show on the map which different religious groups are living in their community. Using a common symbol, mark those households in which the minority religious groups live.

6. Indicate with a symbol on the map all households that are female-headed. Make sure that everybody has the same understanding of what the characteristics of a female headed household are!
7. Make sure that a key is added in the map explaining the different items and symbols used on the map.

Tool 3. Wealth ranking

The objective of wealth ranking is to understand the perceptions of wealth differences and inequalities in a community, identify and understand local indicators and criteria of wealth and well-being; and to map the relative position of households in a community.

Selecting Key Informants: *Carry out the exercise with a few key informants who know the community well.*
Facilitator: *two extension agents*

Exercise

1. A numbered list is made of all the households in the community (see social map) and the name of each household head and the household number is written on a separate card.
2. A number of key informants who know the village and its inhabitants very well are asked to sort the cards as many piles as there are wealth categories in the community, using their own criteria.
3. After sorting, ask the informants for the wealth criteria for each pile and differences between the piles. Assure the informants of confidentiality and do not discuss the ranks of individual families, so as not to cause bad feelings within the community.
4. List local criteria and indicators derived from the ranking discussion.

Key Questions:
1. What are local perceptions of wealth, well-being and inequality?
2. What socio-economic groupings are there in the community and who belongs in what group?

Tool 4. Preference ranking

The field demonstrations or farmer led experiments set up for assessing new technologies to farming communities provide good opportunity for farmers to evaluate the technology based on their own preference. Innovations could be crop varieties or different soil management practices, or organizational issues like collective action to access market. In this case, we can apply preference ranking method.

Exercise
Group of 8 farmers will select a set if 7-10 similar technologies in one domain such crop varieties, land management practices, ect. and will conduct preference ranking method as described above. Farmers are asked to rank from best to least liked among the set of innovations/ options, that they have observed in the field. The ranking is used to generate an acceptance score for each option by assigning each rank a score, and adding the score given by all the farmers to each technology in the set, to arrive at an overall ranking. (note: you have to multiply the counts that each option is placed in the ranking by the score assigned to the rank and add them up to get the total score for the option). This method is most useful when assessing the acceptability of innovation which is already recommended or in the las stages in evaluation before release.

Farmers tanking of different crop varieties (10 hypothetical farmers).

Crop variety	Overall score	Acceptability score*
Crop variety A	52	88
Crop variety B	41	74
Crop variety C	36	65
Crop variety D	19	41
Crop variety E	11	18
Crop variety F	7	7
Crop variety G	0	0
*The acceptability score is computed as follows: 7 (top rank) X 10 (no. farmers0=70. A score of 70 means all farmers ranked an item in first place. The overall rank score for each is expressed as percentage of 70.		

Tool 5. Focus Group Discussion

The objective of the FGD is to understand local perceptions agricultural problems, productivity, constraints, services, and household food security; mechanisms for coping external shocks, and resources to obtain nutrition and household security. The FGD is an

opportunity for the extension agents to listen and learn, and not to lecture (this tool is adopted form Paul Lachapelle and Tara Mastel, Montana State University, MT200807HR Reviewed 2/17).

Exercise

The Group: 8-12 homogenous members from the farming community. Plan separate meetings for men and women so as to be able to capture gender-based differences in perceptions.

Need Facilitator and rapporteur: Facilitator manages the discussion and ensures that everyone is contributing and controls the situation; Rapporteur takes notes and reports the results. (audio or video recorder can also be used if circumstances allow)

Steps for FGD

Step 1: Clearly define the purpose.
One of the most important steps in conducting a focus group is having a clearly defined purpose. Having clarity of purpose, goals and objectives directly affects the quality of the focus group process and outcome.

Step 2: Identify and clarify the role of the facilitator.
An effective facilitator is critical to the success of the focus group. This individual should be perceived as neutral and be able to direct the discussion without influencing participants or expressing personal views.

Step 3: Develop the discussion guide.
Prior to convening the focus group, create a discussion guide with a specific introduction (explaining the purpose), body (main questions to be addressed) and conclusion (target date for reporting back to the group and community). The body of the discussion guide will typically consist of about three to seven questions based on the group's purpose, goals or objectives. If multiple focus groups are being conducted on the same topic, each group should follow the same general discussion guide so that information can be compared between groups. Structure the discussion guide with the least threatening questions in the beginning so that participants become comfortable with talking in the group setting. Estimate how much time each portion of the discussion will take and plan no more than two hours total for each focus group. Provide an opportunity for all involved to review and comment on the discussion guide.

Key Questions:

1. What are the major agricultural problems (weather factors, insects, diseases, prices fall, soil erosion, etc) that members of the community have faced during the past year? Rank these problems in order of importance by giving ten marks to the most important problem, one mark to the least important problem and a mark between one and ten to the remaining problems, *(also indicates which categories of farmers where most affected by the problem?*
2. What are the reasons for these problems and what is commonly done to resolve the problems? *Draw a matrix with the problems, the causes, the actions taken by the community and households) (Ask this question for each of the mentioned agricultural problems noted n=in Q1). (Probe deep enough into the reason for problem in order to understand the underlying causes) (probe deep enough into how the family addressed the problem and its causes)*

Problems	causes	Actions taken
1.		
2.		
3.		

3. How are decisions being made in the household with regard to addressing the problem faced? Who makes specific decisions?
4. What resources are needed by the community, households and individuals to become more successful at addressing the agricultural problem from recurring?

Step 4: Identify and recruit participants.
Involve all constituencies and interests in the focus group process and consider conducting several separate focus groups that represent different viewpoints. The invitation to participants should detail the purpose of the focus group and how the results will be used. Be sure to address confidentiality issues if they apply. The ideal number of participants per focus group is between six and 12 individuals.

Step 5: Prepare for the meeting.
Plan the meeting at a time that is agreeable to all at a neutral meeting place. Focus groups work particularly well when participants are seated in a circle so they can see each other. The facilitator should have access to colored markers, flipchart paper and an assistant to help take notes or capture information on a flip chart. Audio and video recording to aid note taking can be done but keep this can change the dynamic of the group and consent should be sought before the meeting begins.

Step 6: Begin the meeting.
Introduce the facilitator and participants and agree on ground rules and an agenda. Consider including the following in your ground rules: ***1. speak one at a time, 2. speak for yourself, not what you think others believe, 3. differing opinions are expected and we may not agree on everything.***

Step 7: Facilitate the focus group.
Make sure that every participant has an opportunity to speak and respond. Encourage discussion among participants and do not allow one person to dominate the conversation. Consider having a rapporteur (or note-taker) or have the facilitator write key ideas generated on a flip chart. Using the discussion guide, follow-up questions should be posed that encourage description and depth by avoiding yes/no inquiries. Be careful when asking "why" questions as they may cause participants to feel defensive. Consider probing questions that will give participants a chance to provide further detail to their ideas such as the following: ***• Could you tell us more about that? • Could you give us an example? • What do you mean by …?***
When the meeting has ended, reflect back by giving a summary of what was said or implied. At the end of the focus group, ask if participants would like to comment on the findings.

Step 8: Analyze the data.
Review the notes and all material generated by the Focus group (including if used audio, and video). Pick out all important key words, quotes and ideas and group them into categories or central themes.

Step 9: Report the findings.
Structure the report with a background of the central issue, a description of the process the group followed to develop the focus group and a summary of the findings. Allow participants of the focus group an opportunity to comment on the findings to ensure you captured the comments, opinions and ideas accurately. Report back to both the participants and the community about what was learned. This reassures participants that they were heard and that their views were accurately recorded. Provide both a detailed report and an executive summary so that the most vital information is easily accessible.

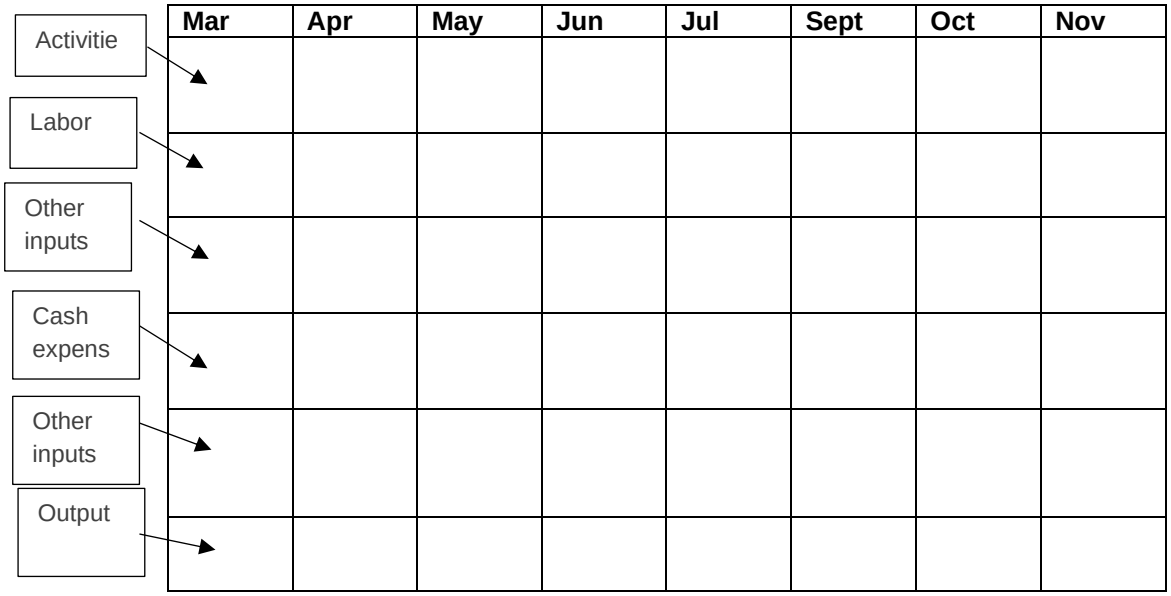
Methods: There are specific methods that can be used in the FGD and these include:
1. Semi-structured group interview
2. Ranking

3. Matrix

Tool 6. Participatory Budgets

Participatory Budgets (PB) are tools which examine a farmers' use and production of resources over time for a specific enterprise. Their main uses are for (1) analyzing farmers' existing activities, resource-use and production, (2) exploring the resource implications of a change to an enterprise, (3) comparing different enterprises, and (4) planning a new enterprise (this tool is adapted from Mark Galpin, Peter Dorward and Derek Shepherd, 2000).

Required material: Rows of holes in a board or on the ground, or a grid, anything that can act as counters, for example beans, seeds, small stones, dot stickers. On the board or grid, time is represented by each column being a month, week, day or other period of time. Activities for each time period are indicated in the top row, using symbols. The types of resources are indicated by different types of counters (seeds, or dot stickers) in different rows on the board or grid. Quantities of resources are indicated by the number of beans, with a value attached to each bean or counter.



Procedure for Participatory budgets

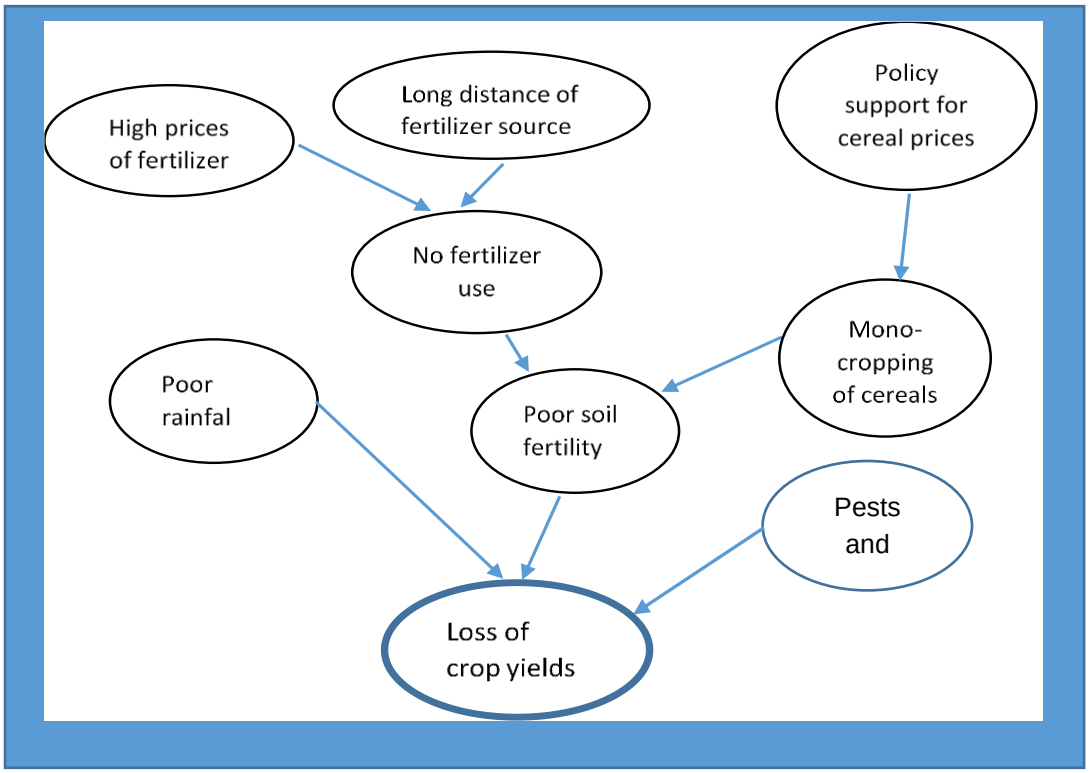
1. Identify an enterprise which the farmer would like to examine using a PB. Discuss and ask what time period she / he would like to examine the enterprise over. This should normally be the full production period, e.g. a season. Also clarify the size of the enterprise, e.g. the field area for crops, or the number of livestock.
2. Draw out a large grid on the ground with the number of columns relating to the number of time periods e.g. months which the enterprise covers. Ask to symbolize the different months in the top row of the grid. If the enterprise is greatly affected by the rainfall pattern, then it can be useful to include an indication of the rainfall expected by the farmer over this period.
3. Ask the farmer to indicate the different activities involved in the enterprise in each time period by placing symbols in the second row on the grid.
4. Discuss with the farmer which resources she / he considers important, and would like to include in the budget e.g. seed, labor, cash, manure. Identify different counters to represent each of these.
5. For the first resource selected, identify the units the farmer uses to measure this resource. For example, fertilizer may be indicated by number of bags, and labor by number of people and number of days. Ask the farmer to indicate the quantity of that particular resource required in each month, by placing a specific number of beans / counters in each column of the next row of the grid. Referring to the activities row will help with this.
6. Repeat step (4) for each of the resources the farmer wants to include on the PB.
7. In the same way indicate the outputs and income that the farmer will receive from the enterprise, including any by-products e.g. fodder.
8. If the farmer is interested in the end balance of resources, this can be worked out by comparing resources used (expended) and products received (income). It is important that all the outputs and inputs of the enterprise are included in this and not just those given cash values. Therefore, the end balance may be expressed as; 3 bags of maize and $100 cash. Or, if a cash loss is made; 3 bags of maize less $100 cash. More commercially orientated farmers may want to convert all resources into cash terms and calculate the profit.

Tool 7. Scored Causal Diagrams

Causal Diagrams are used to identify the causes of specific problems and the connections between these problems. They are most effectively used after farmers have discussed, listed and scored their

problems. Each of the problems listed is then represented on the large piece of paper by a symbol. The problems are connected by arrows representing cause and effect relationships. More elaboration of the problems and their causes and effects should be added to the diagram through discussion. This is a useful tool to aid discussion and in-depth analysis of problems and issues together with farmers. Scoring system is added to the causal diagram that allows to analyze the relative importance of each of the problems ((this tool is adapted from Mark Galpin, Peter Dorward and Derek Shepherd, 2000).

Figure 1. Causal diagram of hypothetical farm



Steps for scored causal diagram

1. After drawing the Causal Diagram, identify the end or final problem (the objective expressed as a problem) on the diagram. This should have no effect arrow exiting from it. In the example of hypothetical farmer is loss of crop yields.
2. Place an even number of counters (beans, seeds, dot-stickers) on this problem e.g. 10. The number of counters you start with is not important, although the more individual problems there are on the diagram, the more counters are needed at the start.
3. Ask the farmers to divide the 10 beans between the causes of that problem (i.e. the arrows entering the problem), to represent how important the causes of that problem are. In this example, low soil fertility, pests and diseases and poor rainfall are seen by the farmers as the primary causes of loss of yields.
4. The scores assigned to these primary causes are then taken back a further step and divided between the causes of the next problem using the same procedure.

5. If no causes of the problem have been identified on the diagram i.e. there are no arrows entering the problem, then the score remains on that problem. At each stage the scores are written on the diagram.
6. If a cause has more than one effect, then the scores from these effect arrows are added together. This total is then divided between the different causes of the problem.
7. The scoring is continued until all the problems on the diagram have been scored.
8. On completion of the scoring process, the relative scores of the root causes can be compared. The higher the score the more important the problem, can help farmers to prioritize the problems which require action.
9. The possible solutions to the root causes can be discussed and the effects of these solutions traced back on the diagram.
10. If the original list of problems were scored or ranked at the beginning of the exercise it can be useful to compare this with the ranking of problems using scores from the. Differences should be discussed and the reasons for lower or higher than expected ranked positions identified from the diagram.
11. It can be useful to get different categories of farmers to score the same diagram. These categories may be defined by the way they produce a particular crop or different wealth; gender or age groups could be used. This highlights the differences between the priorities and problems facing these different categories of farmers.

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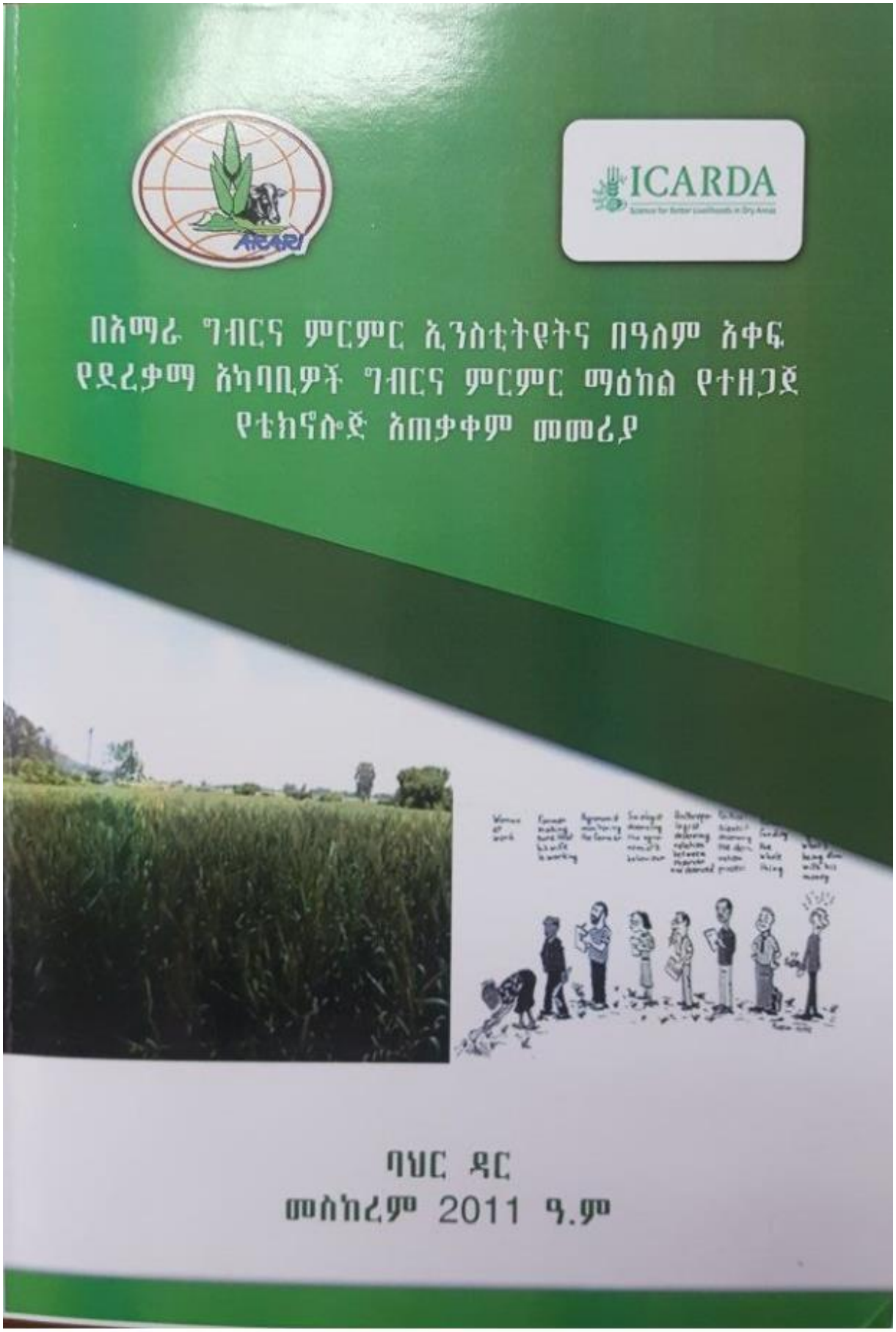
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