FACILITATION OF PARTICIPATORY FIELD TRIALS

Monitoring and Evaluation Guidelines

NOMAFSI

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IMPROVED MARKET ENGAGEMENT FOR SUSTAINABLE UPLAND PRODUCTION SYSTEMS IN THE NORTH WEST HIGHLANDS OF VIETNAM

AGB/2008/002

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MONITORING AND EVALUATION GUIDELINES

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PART I: INTRODUCTION

1. The concept of participatory monitoring and evaluation

This document provides a set of guidelines for agricultural researchers to conduct field trials ON farmers' fields and WITH farmers' participation. Doing research WITH farmers, rather than merely ON their fields, provides the opportunity to combine scientific and practical knowledge from the start. Farmers have experience cultivating their crops under the prevailing agro-ecological conditions. They can also help us evaluate, in a more comprehensive way, which proposed innovations are feasible or not considering their economic condition and the social or cultural characteristics of the community. Such collaboration will increase the chances of research resulting into outcomes that suit farmers' conditions and, therefore, will be utilized by farmers.

Working WITH farmers, however, requires researchers to do their work a bit differently from the way they have been trained at university. They may need to compromise their ideas of "the best treatments" because farmers have other, equally valid ideas. They will need to become facilitators of a dialogue with farmers to enable the sharing of scientific and practical background knowledge that is required before coming to an agreement on research methodology or conclusions. They will need to document not only numbers of quantitative measurements but also qualitative observations and farmer perceptions or experiences.

To support researchers to do all these things, the guidelines below describe a set of activities to facilitate the planning, implementation and evaluation of agricultural field trials in a participatory way, WITH farmers and ON their fields. It also provides forms for note taking of both quantitative and qualitative data. It is hoped that these guidelines will support field researchers to conduct a more comprehensive analysis of the potential of agricultural innovations under farmer conditions, and eventually help them change their ways of doing research in order to benefit smallholder farmers in Vietnam.

2. How to use these guidelines

These guidelines have been developed based on field experiences of collaboration between researchers and farmers within the North West Vietnam Project. They should not be seen as a blueprint to follow rigidly but rather as a proposed set of processes that needs to be adjusted to the local conditions every time they are used. Adjustment, however, is not cutting things short and the researcher/facilitator needs to take care that all necessary processes are conducted and notes are taken at every meeting of the researcher-farmer team. Any variation to the proposed process needs to be documented. Adaptation will also come more easily with experience, so it is recommended for less experienced researchers to follow the steps more closely.

It is important to review the guidelines for a particular activity prior to leaving for the field to ensure that all materials, equipment and arrangements are well prepared. The steps in the process should be memorized so that there can be natural interaction with the farmers. It is recommended, though, that before closing the meeting a quick cross-check is done with the guidelines to make sure that nothing is forgotten.

Each of the field guides contains the following outline:

- Timing
- Objectives
- Requirements
- Participants
- Preparation
- Steps
- Reporting

Any suggestions to improve these guidelines are welcome and need to be forwarded to Dr Pham Thi Sen (phamthisenprc@yahoo.com).

PART II: FIELD GUIDES

3. Guidelines for participatory planning meeting of a field trial

Timing:

This meeting has to be organized soon enough before the start of the new season in order for the team to have enough time prepare all the needed inputs for the trial implementations.

Objectives of planning

(With farmers' and local officers' great participation)

- To agree on the trial design with suitable treatments
- To make a detailed plan to work together toward all the experiments.

Requirements:

Farmers and local officers:

- Discuss actively with objective opinions to reach an agreement on all the work related to experiments.
- Understand clearly (1) all the experiments' objectives, (2) all the treatments, (3) experiment designs, (4) timing and (5) requirements for each task.
- Farmers learn that they take a main role in implementing all these experiments and that they are the directive beneficiaries from doing so; they have their ownership over these experiments; therefore, they will have to understand fully all their jobs during the whole process.

Participants:

- Farmer researchers
- Other farmers
- Local officers who have been involved in our project (Commune EO, District EO)
- Commune leaders and village leaders
- Project officers: field coordinator, field researchers

Preparation:

- Stationary such as butcher papers, colour markers, masking tape, scissors…
- Facilitators have to prepare carefully and understand clearly about all the objectives and the initial experimental protocols.

Methodology approaches and steps

- Explain why we have this meeting; discuss with participants what the objective of the trials is and what results we have to reach after this meeting. (One person is assigned as secretary to take notes).
- Talk briefly about the last season's experiments, and then introduce the coming season's general objectives.
- Introduce and facilitate a discussion on each session from the initial protocol (such as experiment names, objectives, content, methodology…) til an agreement and conclusion are reached by all participants.
- Discuss and agree on a crop calendar, requirements and methodology approaches for each task from preparation stage to the end of the season. Each member's responsibility is also raised and recorded (using template below).
- Before closing, ask questions if anyone has another opinion… to ensure a consistent agreement.

Report requirements

These following reports have to be written by the field researcher within one week after the meeting and sent to phamthisenprc@yahoo.com and le.huan.pt@gmail.com:

- Protocol
- Detailed plan for implementing all the experiments
- Report on planning meeting
- Report forms can be found in templates 1.1, 1.2 & 1.3 below

4. Mid- term review meeting with farmers to review progress of the field trial

Timing:

Meeting date can be set as agreement from the planning meeting or when necessary.

Objectives of regular progress review meeting

1. To detect all problems so that solutions can be addressed in time to minimize risks; also community's opinion about the experiment's progress can be captured. It would be ideal if we can listen to farmers' recommendations on how to overcome these problems.
2. To give objective evaluations on the progress of each treatment in each experiment: maize's development; peanut's growth??? If there are differences between treatments; ask farmers to explain the reason why and how does it affect to the soil preservation?
3. To agree on the upcoming plan

Requirements:

All participants can express their opinions freely about the current situation of the experiments. What is good? What needs to be improved… All ideas have to be recorded honestly.

Venue:

All participants go to the field to observe and evaluate the progress of the experiment, then if necessary, a place can be chosen for everyone to sit down and discuss. It is noticed that this meeting can be held right in the field where their experiments are set.

Participants

- Farmer researchers
- Other farmers
- Local officers (Provincial EO, District EO, commune EO)
- Commune and village leaders
- Field researchers, field coordinator

Preparation

- Stationary
- All field researchers have to understand the experiments design, requirements and objectives completely in order to monitor and evaluate the situation well.
- Field researchers should also predict all the difficulties that the local farmers may encounter when the crop starts (pest, diseases, drought..) then prepare some questions to discuss so that farmers can raise their solutions in advance.

Methodology approaches and steps

1. Explain clearly to all participants about the objectives of the meeting. One person is assigned to record all the opinions during the meeting.

2. Farmer researchers present to the participants how the experiment was designed (which plot is for which treatment…). Field researchers make sure that farmers make no mistake between treatments.

3. Motivate participants to observe and evaluate visually. For example they can compare and contrast between mulch and no mulch plots, the moisture of soil, weed, pest, maize development…

4. Inspire all members to discuss actively the differences amongst all the treatments (field researchers can suggest the questions for farmers to discuss.)

5. Motivate participants to raise questions so that field researchers can solve all the misunderstandings….

6. Evaluate what we have implemented since last meeting, also problems needed to be addressed to find suitable solutions.

7. Facilitate discussion and agree on the upcoming plan.

8. Check the recording book to see if farmers record consistently and cross check if necessary.

Report requirements

Report has to be written and sent to phamthisenprc@yahoo.com & le.huan.pt@gmail.com within one week after the meeting. Report templates are strongly recommended to be used as follows.

5. Community feedback session guidelines

Timing:

This meeting is organized during the harvesting day and right after the harvesting day or is organized during the 1st week before harvesting time.

Objectives

1. To capture the objective opinions from the community on different farming practices (experimental treatments): what is the crop development and yield for each treatment?; are there any differences between each treatment?; why they are different?; what are the benefits of each treatment in terms of preventing soil erosion?; which treatment can be applied on the larger scale?..
2. To consult the wider community's recommendations on the experimental implementing progress in order to improve the next season' experiments (what adjustment should be done for each treatment, how should we design them?; which implementation method we should apply?....).

Requirements:

During all these meeting, participants from the community can share their ideas freely and these ideas have to be recorded fully and precisely.

Venue:

- At the experiment field (if it is organized before harvesting).
- At a suitable revenue (if it is organized on the harvesting day).

Participants

- Project officers
- Farmer researchers
- District, commune, village leaders
- District, commune Extension Officers
- Others

Preparation:

- Stationary such as butcher papers, colour markers, masking tape, scissors…
- Facilitators have to prepare carefully and understand clearly about the objectives and requirements of this collecting feedback session. Also, some discussion questions can also be prepared in advance.

Methodology approaches and steps

Steps to conducts this meeting as follows:

1: Explain the purposes of this meeting and getting feedback from the community. One person is assigned as secretary to record all ideas and comments.

2: Farmer researchers recall for other members about the project's design: which treatment was used for which plots? Project researchers need to clarify if needed to make sure no mistake or confusion was made by farmers.

3: Farmer researchers present to other members about all the project's designs: which treatments were used for which plots? Project researchers need to clarify if needed) to make sure no mistake or confusion was made by farmers. (Repeated???)

4: Guide participants how to observer all the experiments and compare all the similarities and differences between all the treatments on terms of growth, yield, soil' humidity, the size of cob, weeds, insects or pests,…

5: Give guidelines and suggestions to all the participants about needed discussion and encourage other participants to raise their ideas (discussion points can be raised by project researchers, or they can raise questions for other participants to answer).

6: Encourage participants from the community to raise their questions or thoughts so that project researchers can answer all these questions.

7: Recommendations from participants are also greatly welcomed.

(Note: Only use step 2, 3 for meetings which are held before harvesting)

Report requirements

1. Report has to be written and sent to phamthisenprc@yahoo.com & le.huan.pt@gmail.com within one week after the meeting. The following report templates are strongly recommended to be used.

6. Guidelines for the facilitation of the photo reports

Timing

Once every 2-3 weeks throughout the season, starting during the planning meeting at the start of the season and finishing during the evaluation meeting at the end of the season.

Objectives

To visualise and document change as a result of the trials as perceived by the farmer researchers.

Participants

- Farmer researchers involved in the trial
- Field coordinator
- Extension officer
- Optional: Field researcher(s), provincial staff

Materials

- Camera an electronic photo frame that was left with the farmer researcher
- Laptop
- Portable projector
- Portable printer with ink cartridges
- Electronic photo report template (3.3 Photo report template.doc)
- A4 paper
- Masking tape
- Power point block and extension cord

Preparation

- At the start of the season, choose a suitable venue for the regular field team meetings during which the Photo Reports should be prepared. The venue should have electricity, a wall for display of the projected photos and the printed photo reports, and enough space for a small group to sit together and compose the photo reports.
- Prepare a folder on the laptop (or external hard drive) that will be used for the Photo Reports with subfolders, as follows:
    - PM&E Photo Reports
        - PR-Village name (6 sub-folders each with different village name)
            - Period 1 – start date-end date
            - Period 2 – start date-end date, etc.

- Before each meeting, ensure that all participants are aware of the date, time, venue and purpose of the meeting.
- The farmer researchers need to be given clear instructions on the use of the camera when it is handed out, as well as the purpose of the exercise. The task is to make photographs in their villages that show "CHANGE" or "DIFFERENCES" occurring in the village in relation to agricultural and social development. This may be CHANGE be for the good or the bad.
- At the start of each meeting, make sure that the batteries of the laptop used for processing of the photographs and the printer are charged. Also check with the farmer researcher that the battery of the camera has been charged.
- Assign a facilitator and a note taker.

Steps

1. Transfer all photographs made during the latest period from the camera to the designated sub-folder on the laptop.

2. Ask the farmers to sort all photographs, while projecting them on the wall, into two categories:

   - Private photographs, which are then transferred to the digital photo frame and deleted from the laptop.
   - Project related photographs showing "CHANGE" occurring in the village in relation to agricultural and social development, which are kept in the sub-folder on the laptop.
3. Ask the farmers to sort the remaining photographs again into two categories and store them into two new sub-folders (with "x" being the sequence number of the period under review):

   - PS x.1-project: Photographs showing pictures that relate to the project's erosion and/or ICM trial plots and activities.
   - PS x.2-non: Photographs showing pictures that show "CHANGE" in the village outside the trial activities.
4. Show all pictures in the sub-folder "PS x.1-project" in a photo viewer, projected on the wall. Ask the farmers to sort these pictures into two categories, and store them into two new sub-folders:

   - PS x.1.1-pos: Photographs showing change for the better or differences that are perceived positive by the farmers.
   - PS x.1.2-neg: Photographs showing change for the worse or differences that are perceived negative by the farmers.
5. Repeat Steps 4 for sub-folder "PS x.2-non" and move pictures to two new sub-folders PS x.2.1-pos and PS x.2.2-neg.

6. Show all pictures in the sub-folder “PS x.1.1-pos” in a photo viewer, projected on the wall.

    - Ask the farmers to group these pictures into clusters of 4-6 pictures that together tell a story of some change that occurred. Give them some time to discuss this. They don’t have to use all pictures. The 4-6 pictures of each cluster are moved to a new sub-folder that is given a sequence number and brief descriptor, e.g. PS x.1.1.1-variety; PS x.1.1.2-soil.
    - The pictures of one cluster are then inserted into a new document of the Photo Report Template. Through discussion ask the farmers to put the pictures in a sequence that illustrates the story. For each picture, a caption of maximum two lines should be formulated, and finally a title to the story. Write these on the template, as well as the location and the time period during which the photographs were taken.
    - Save the document with the same name as the folder, e.g. PS x.1.1.1-variety.doc.
    - Repeat the process for each cluster of pictures in the sub-folder. Make sure the various stories are not repetitive, and if they are try to have the farmers combine pictures to make on story.
7. Repeat the process for sub-folders PS x.1.2-neg, PS x.2.1-pos and PS x.2.2-neg. Not all the sub-folders need to necessarily contain pictures or produce a story.

8. Once all Photo Reports are ready, review them with the group, and revise or combine if necessary. When everyone is happy with the set of Photo Reports, print one copy of each report (only print the first page) and hang it on the wall under the appropriate heading of the four categories: Project – positive; Non-project – positive; Project – negative; Non-project - negative. These print-outs remain on the wall in the village as a source for discussion in the community.

9. The note taker should make detailed notes of relevant comments made by the farmers, researchers and facilitator, preferably by cluster and in bullet points.

Processing and Reporting

- The written notes should be transferred to the second page of the Photo Report Template and consolidated by the facilitator and note taker.
- Indicate which livelihood capital(s) is/are addressed in the Photo Report and provide a brief explanation of the intention.
- The digital version of the Photo Reports should be translated into English.
- Both Vietnamese and English versions are stored on an external hard drive.

7. Guidelines for harvesting a field experiment

Timing: when maize is ripe enough for harvesting

Objectives:

To collect sample and calculate yield for each treatment with farmer' participation.

Requirements:

Requirements for this activity as follows:

- Famers and researchers collect samples together to calculate yield and yield components.
- Farmers know how to collect samples, calculate yield and yield components for each treatment.
- Farmers and researchers have to reach an agreement in calculating yields for (1) each treatment, (2) yield components and (3) related comments (ex: the differences in terms of yield for each treatment, or the cob's weight …).

Participants for harvesting day:

- Project officers
- Farmer researchers
- District, commune, village leaders
- District, Commune Extension Officers
- Others

Requirements:

- Harvesting tools and sample containers
- Stationary
- Field researchers have to have a full understanding about all the (1) experiments, (2) its requirements, (3) objectives of the harvesting session, (4) sample collecting method, (5) and how to measure these samples and its indicators.

Methodology approaches and steps

Steps to conduct this meeting:

1. Researchers explain to all participants about (1) how to collect samples in (4 m^2), (2) calculate effective plants and ineffective plants in 4m2, (3) calculate yield components, (4) calculate yield in each plots and average yield for each treatment and (5) how to record all this calculated data.
2. Researchers need to make sure there is no confusion amongst all treatments.
3. Observe the differences/ similarities between all treatments.
4. Collecting samples
5. Calculate the average indicators for all treatments
6. Hold discussion to compare all the treatments
7. Record all the data in two notebooks: farmer's notebook and Researchers' notebook.
8. Take some photos

Notice:

If the yield for the whole experiment can be weighed then there is no need to collect sample in 4 $m^{2.}$

Report requirements

1. Report has to be written and sent to phamthisenprc@yahoo.com & le.huan.pt@gmail.com within one week after the meeting. The following report templates are strongly recommended to be used.

2. Within 1 month after harvesting, the field researchers have to analyse all the data and write a report to summarize the experiment implementation then send to these above emails. This report is similar to a scientific report which including:

   - Literature review
   - Experiment objectives
   - General information about the experiment: site, time, participants..
   - Approach
   - Material input
   - Results and discussions
   - Conclusions and recommendations

8. Participatory evaluation of a field trial

Timing:

This activity should be conducted after harvesting activity when yield and yield components for each treatment have been measured so that farmers can see the differences in terms of economic benefit amongst them.

Objectives of this meeting:

1. To identify the differences between each treatment then discuss with other farmers to find out the reasons which lead to these differences.
2. To draw lessons learnt from this season to improve next season's experiments.
3. To suggest ideas for the next experiments: which treatments should be used, how can we design them?

Requirements:

Make sure that all participants have a chance to raise their ideas and discuss with other participants.

Venue:

A suitable place that has enough room for all participants and for facilitator to install equipment for showing experiment data.

Participants

- Project officers
- Farmer researchers
- District, commune, village leaders
- District, commune Extension Officers
- Others

Preparation

- Stationary
- Before these activities can be conducted, the field researchers have to complete analysing all these following data with the farmer: crop development indicators, yield, yield components, total cost, total income, total net benefit, tables to present for farmers.

- The field researchers have to understand the experiments, its objectives and requirements for experiment evaluation. Some questions for discussion can be prepared in advance.

Methodology approaches and steps

1. Explain clearly for all participants about the evaluation meeting and why we have to organize this, and then facilitator can present the objectives of this meeting.

2. The farmer researcher can explain for other members about the experiment and each treatment. The field researcher needs to make sure that every member understands the experiment fully and exactly.

3. Either a farmer researcher or field researcher can next present the applied methodology for these experiments (participatory approach) and the whole process of implementing these experiments: preparing soil, sowing until harvesting, recording data and analysing data.

4. Either a field researcher or farmer researcher can present on the experiment results (crop development data on yield, yield components, gross benefit, and total cost, total income… and involved others in a discussion to compare the differences between each treatment).

5. Motivate a discussion on why there are differences between each treatment.

6. Engage all participants to raise their lesson learnt to improve the experiment for the next season.

7. Facilitate a discussion for next season preparation.

Report requirements

Report has to be written and sent to phamthisenprc@yahoo.com & le.huan.pt@gmail.com within one week after the meeting. The following report templates are strongly recommended to be used.

FORMS

Template 1.1: Planning Meeting Report Form

1. **Experiment general information:**
    - Experiment title:
    - Experiment site:
    - Farmer researcher:
    - Field researcher:
2. **Planning date:**
3. **Venue:**
4. **Participants** (Record names of those who was invited to participate):
5. **Absence** (Record all those who absent and reasons for their absence):
6. **Facilitator:**

CONTENT & RESULTS

1. **Present and discuss to reach an agreement on all the objectives of the planning meeting**

.....

2. Discuss and agree on the experimental protocol

.....

(Protocol should be attached herewith)

3. **Discuss and agree on the detailed plan, timing and all tasks as well as stakeholders' responsibility**

.....

4. Other opinions:

.....

RESULTS & RECOMMENDATIONS (raised by reporter)

- **Conclusion about the planning meeting** (give feedback on how successful was the meeting, on the timing and each stakeholder's participation…)

- **Recommendation:**

Date … month… year….

Reporter:

Template 1.2: Experiment Protocol Form

- **Field researcher:**
- **Farmer researcher*:***

1. Experiment title:

(Ex: Experiment on cultivating maize on sloping land using different mulch materials)

2. Experiment objectives:

(Ex: To evaluate the effectiveness of different mulch treatments (dead mulch materials or using intercropping plants: pumpkin or peanut) as mulch to improve farmers' income and prevent soil erosion).

3. Experiment content:

(Ex: Experiment implemented to compare different mulching treatments as follows:)

CT	**Using dead mulch materials**	**No mulch (Burn before preparing soil)**	**CT**
1	Farmer practice (only maize, distance and soil preparation according to farmers' practice)	Farmer pratice (only maize)	5
2	Maize intercrops with peanut	Maize intercrops with peanut	6
3	Maize intercrops with pumpkin with adjusted distance for both maize and pumpkin	Maize intercrops with pumpkin with adjusted distance	7
4	Maize intercrops with pumpkin as farmer's practice (randomly estimated distance not following trenches)	Maize intercrops with pumpkin as farmer's practice (randomly estimated distance not following trenches)	8

4. Experiment date:

(Ex: Spring- summer season 2011 according to the local crop calendar)

5. Experiment design:

(The experiment was a randomised complete block design with 2 treatments and 3 replicates where each block area is 1000 m^2 which is then divided into two equal plots: 1 plot is mulched with dead materials and the other is mulched with living plants.

Schematic map of the experiment should be drawn together with all participants in the planning meeting.

6. Variety *(Variety name, its characteristics and why we use these varieties:*

- Maize variety: Variety NK 66 (is the most commonly used variety in the local area due to its characteristics: .....)
- Pumpkin variety: Chinese variety (is the most commonly used variety in the local area due to its characteristics: .....)
- Peanut variety: Local variety with its prominent characteristics is.....)

7. Distance (state clearly the applied distance for each treatment):

Example:

- Maize (Treatment 2 & 3): the distance between each two rows of maize is 40 cm, and between each trench is 1m. The distance between sowing positions within the row was 25 cm.
- Peanut (CT 2): Two rows of peanut are sown between two trenches of maize. The distance between two rows of peanut is 30 cm, and the distance between two peanut sowing positions in one row is 10-15 cm. Two seeds were sown at one position.
- Pumpkin (CT 3): One row of pumpkin was sown between two rows of maize. The distance between two sowing position is 4.5 m with 3 seeds were sown at one sowing position.
- Pumpkin (CT 4): Maize was sown as in treatment 1 and pumpkin was sown following farmer practice.

8. Fertilizer: (Record exactly the amount of fertilizer used for each treatment and why we used this amount).

(Example: the recorded amount of fertilizer used was at the same level that farmer use in reality as below:

- Amount and type of fertilizer used: 700 Kg NPK 5:10:3, 200 Kg Urea & 100 Kg KCl.
- Fertilizer application method: NPK was all applied before sowing; ½ amount of Urea and Kali was applied two weeks after sowing for the second fertilizer dressing when maize has from 3-4 leaves. The rest of fertilizer was applied when maize has from 7-9 leaves (after sowing 40 – 45 days).

9. Crop care taking activity: (Weed clearing, replant.....)

10. Pest control activity: .....

11. Harvesting activity: (record exactly the date of harvesting and harvesting method for each crop)

12. Monitoring indicators:

1. ***Cost:*** Monitor and record all costs including labour cost, variety, fertilizer, and other costs... A separated recording sheet is recommended to use for each treatment.

2. ***Maize growth:*** Monitor and record: germination rate(%), development period and the length of each stage (day); maize's full height (cm); and maize's height at 1st cob, observe and give comments on maize' development for each treatment.

3. ***Peanut growth:*** Monitor and record: germination rate(%), development period and the length of each stage (day); observe and give comments on peanut' development and biomass for each treatment.

4. ***Pumpkin growth:*** Monitor and record: germination rate(%), development period and the length of each stage (day); observe and give comments on maize' development for each treatment.

5. ***Pest damages:*** monitor, observe and record the level of damage caused by each pest for each plan from each treatment.

6. ***Yield (the same method is applied for all treatments):***

- ***The actual yield (if possible):*** *measure the total yield of the whole experiment plot when maize is fresh and when maize is dry*
- ***Statistic yield:***
- ***Theoretical yield:***

7. ***The yield components***

Maize: The number of cobs per one maize; the cob's weight, cob's length, the cob's diameter, W seed/ W cob (%),W (g) 1000 seeds (get the average results from measuring 10 cobs):

- ***Peanut:*** number of seed/ plant, the weight of 1000 seeds
- ***Pumpkin****: number of pumpkin/ plant; size and weight*

8. ***Economic analysis for each experimental treatment (HQKT)***

HQKT = TT- TC

In which: TT = Gross benefit

TC = Total cost

Template 1.3: Crop seasonal calendar and stakeholder's responsibility toward experiment task

TT	Tasks	Requirements (quantity and quality)	Time	Who does this	Field researcher	Method
1	**Prepare**					
	Soil					
	Fertilizer					
	Variety					
	Mulch material					
	...					
	....					
2	**Collect soil sample**					
3	**Record all costs, comments and data…**					Follow the template from the recording notebook(*)
4	**Sowing/planting (including first fertilizer dressing and mulching)**					
	Maize					
	Pumpkin					
	Peanut					
	...					
	.....					
5	**Pest Monitoring**					Record all results and comments into the notebook
6	**Germination Monitoring**					Record all results and comments into the notebook
7	**Measure the plant's height**					Record all results and comments into the notebook
8	**Development time**					Record all results and comments into the notebook
9	**Yield**					Record all results and comments into the notebook
10	**Yield components**					Record all results and comments into

TT	Tasks	Requirements (quantity and quality)	Time	Who does this	Field researcher	Method
						the notebook
11	**Economic analysis**					Record all results and comments into the notebook
12	**Compare, analyse, evaluate amongst different treatments**					Record all results and comments into the notebook
	.....					

(*): Template 1.4

Template 1.4: Experiment Monitoring Notebook Form

1. **Experiment general information:**
   - Experiment title:
   - Experiment objective:
   - Treatments and experiment design (mapping the experiments clearly)
   - Sowing time:
   - Experiment site:
   - Farmer researcher:
   - Field researcher:

2. **Work recording and experiment Monitoring form**

No.	**Date/ month**	**Implemented tasks and cost** *(write down exact price)*	**CT 1**	**CT2**	**CT3**	**CT..**	**Who does this?**
1	3/5/11	Prepare soil	2 people	1-2 people	3 people		
2	15/5	Sowing					
3		Labour (cost VND70,000/ person)					
		Maize variety (cost VND50,000/kg)	0.5 kg	0.7 kg			
		NPK (cost…)					
		……					
4	28/5	Leaf-roller	one/ m2	Not observed	???		

3. **Total cost**

Items	**CT 1**	**CT2**	**CT3**	**CT..**
1. Labour	2 Labourers	1,2 Labours	3 Labours	
- Prepare soil (Labour x VND)				
- Sowing				
- Weed clearing				
-------				
2. Material inputs				
- Variety	0.5 kg	0.7 kg		
- NPK (cost…)				
- Manure				
……				
Total expense				

4. **Harvesting and calculating yield**
   - Harvesting date:
   - Participants (names needed to be recorded clearly):
   - Steps of collecting samples and analysis (in detail):

Yield and yield components	**CT 1**	**CT2**	**CT3**	**CT..**	**Who does this?**
-					

5. **Comments on experiments and experiment treatments**

Template 2.1: Regular Progress Review Meeting Report Form

1. **Experiment general information:**
    - Experiment title:
    - Sowing time:
    - Experiment site:
    - Farmer researcher:
    - Field researcher:
2. **Review date:**
3. **Venue:**
4. **Participants** (write down all people who are invited to participate):
5. **Absence** (write down names of those who is absent and their excuses):
6. **Facilitator:**

CONTENTS AND RESULTS

1. Farmer representative present on the experiment's general information

- Experiment objectives:
- Treatments for each experiment (and method):
- Experiment design:
- Tasks which they have implemented since the last meeting up to the present time:
- Give recommendations on the progress of the experiment: compare and contrast between each treatment: development, pest occurrence, disease, investment (labour, fertilizer….) and each treatment's effect to obtain soil erosion….
- Raise difficulties and advantages that they encounter:

2. Comments on farmer's presentation *(state your opinion if the farmer understands the experiment comprehensively, if they remember each treatment, if they understand what they are doing (what is the objective of implementing this experiment, if they remember what they have implemented so far in the field…).*

3. Discussion:

- On the project's implementation progress: *(How the experiment was conducted?; Has it gone as we planned?; Does it meet all the requirements?, What has changed compared with the original protocol?; What are the changes?; State why these changes happened?*
- On farmer's participation in terms of monitoring and taking notes: *(Do the farmer record fully what they have implemented in the field; what need to be done to improve their recording task…).*
- On stakeholder's participation:

- Project officers
- Farmer researchers
- District, commune, village leaders
- District, commune Extension Officers
- Others

4. Upcoming tasks

N#	Task	Requirements (Quality/ quantity)	Time	Who does this	Coordinator	Technical officer	Approach
	...						

5. Conclusion and recommendations (reporter's opinion)

- **On the success of the meeting** (Comment on the logistics and approach of the meeting and on the participation of each participant in terms of evaluating the experiment's progress and initial results).
- **On the progress of the experiment** (how each task was carried on and if they are consistent with the initial plan, do they meet all the requirements, and how was the stakeholder's participation…).
- **Recommendations (**to each stakeholder and to the project managing union).

Reporter:

Template 2.2: Result of Regular Progress Review Meeting Form

- Experiment title:
- Experiment objectives:
- Sowing time:
- Venue:
- Farmer researcher:
- Field researcher:

Number of evaluation meeting	Evaluating date	Maize development stage	Tasks which have been carried on since the last meeting	Comments
1				
2				
3				
....				

Template 3.1: Community Feedback Session Report Form

1. General information

- Experiment title:
- Sowing time:
- Experiment site:
- Farmer researcher:
- Field researcher:
- Time:
- Venue:
- Participants:
- Absence:
- Facilitator:
- Secretary:

3. Community feedbacks

3.1. Feedbacks on experiments and experiment implementation method

Record all the questions, answers and names of participants who ask questions

3.2. Questions and answers

Question raised from the community **(Note down the name of person who ask)**	**Field researcher's answers**

3.3. Recommendations

Community's recommendations (write down the names of those who raise their recommendations)	**Project officer's feedbacks**

3. Comments and recommendations*(reporter's opinion)*

- **On collecting feedback session activity** (comments on the approach of organizing this meeting, on the time frame, on each member's participation and on the result of the session).
- **On community's feedback on the project's implementation method and logistics** (How did they give feedback? What is the general recommendation?)
- **Recommendations** (for each stake holder, for Project Managing Union)

Date.....month.....year.....

Reporter

Template 4.1: Harvest record form

1. General information

- Experiment title:
- Sowing time:
- Experiment site:
- Farmer researcher:
- Field researcher:
- Harvesting time:
- Harvesting participants:
- Absence:

2. Implementing approach and experiment design: State comprehensively all the tasks which have been implemented in the field, its timeframe and method according to reality (How did soil preparing activity happen? How did farmers sow the seeds? How did they mulch? What was the mulch quantity? How was the quantity of used fertilizer? How did farmer apply fertilizer in their field? Did they spray herbicide? How did they spray it? Did they clear weed and how? …). If there is some changes compared to the protocol, reasons for the changes should be explained clearly. Field researchers also are required to comment on how these changes can affect to the experiment's results.

3. Harvesting method:

Field researchers write clearly their method of collecting samples, and how they measure it to have indicators

4. Harvesting results:

4.1. Yield and yield components:

	CT1				..	**CTn**			
	1st Repli-cate	2nd Repli-cate	3rd Repli-cate	Average		1st Repli-cate	2nd Repli-cate	3rd Repli-cate	Average
1.Maize									
Maize density									
Effective maize rate									
Maize's yield									
Cob's Length									
Cob's weight									
Seed rate									
.....									
2. For other crops (one crop at a time like maize)									
.....									

4. 2. Comments from the harvesting day

(Write down exactly and fully all the comments and commentators' names and participants who take part in the harvesting activity)

5. Comments and recommendations (reporter's opinion)

- **On organizing this evaluation meeting** (give comments about the stakeholders' participation, the time and method of the meeting)
- **On the experiment results** (general comments about the experiment and experiment's results…)
- **Recommendations**

Date.....month.....year.....

Reporter

Template 5.1: Report on the conduction of the activity's final evaluation

1. General information

- Experiment title:
- Sowing time:
- Harvesting time:
- Experiment site:
- Farmer researcher:
- Field researcher:
- Evaluating time:
- Venue:
- Participants:
- Absence:
- Facilitator:
- Secretary:

2. Discussion and evaluation on experiment result

2.1. Discussion and evaluation on the experiment result

- Discuss to compare and contrast amongst each experiment in terms of yield, crop quality, pest occurrence, and the reason why each experiment is different from each other.
- Give conclusion for each treatment (summarize each treatment: its advantages and disadvantages)

Treatment	Disadvantages	Reason	Advantages	Reason
CT1				
CT2				
.....				

2.2. Discuss and evaluate on experiment implementing approach

- On logistic tasks, implementation approach and stakeholders' participation (did the farmer really participate in our project? Did the project officer motivate and engage farmers into all the activities? Was it a participatory process or not?...)
- All comments can be recorded using this template.

Tasks	**How was it implemented**	**The level of participation of each stakeholder**	**Was it implemented on time and effectively? (state clearly yes or no)**	**Lessons learnt**
Experiment planning				
Preparing material input activities				
Sowing activities				
Experiment care taking activities				
Pest control activities				
Monitoring activities				
Recording activities				
Field day to visit experiment sites				
Harvesting activities				
Data analysis				
Information sharing				

2.3. Recommendations for the next season experiments:

- Which treatments should be implemented?
- Which varieties should be applied?
- What amount of fertilizer should be applied?
- Experiment area and experiment design?
- Recommendation on conducting the new trial season

	When and how this can be conducted	Stake holders' participation and responsibility			
		Project team (project officer)	Farmers Farmer researchers	District EO Commune EO	Commune leaders Village leader
Planning activities					
Preparing Input material activities					
Sowing activities					
Experiment care taking activities					
Pest control activities					
Experiment Monitoring activities					
Recording activities					
Organizing field day for farmer researchers					
Experiment harvesting activity					
Data analysis					

3. Comments and recommendations (reporter's opinion)

- **On organizing harvesting activity** (comments on method, schedule, each stakeholder's participation and results)
- **On the whole experiment and result:** (General and preliminary comments on the whole experiment and results...)
- **Recommendations:**

Date.....month.....year.....

Reporter:

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