Report on "Exchange visit and capacity building for maize ICM field teams"
NOMAFSI-Son La Station
Wednesday-Thursday, 15-16 September 2010

The 2-day meeting on participatory monitoring and evaluation (PM&E) of field experiments was held at NOMAFSI's Tay Bac Centre in Son La, on the 15th and 16th September 2010. There were 20 participants at the meeting: 10 from NOMAFSI, 4 from TBU, 3 extension officers from Son La and one representative from Son La DARD. Invited extension officers from Lai Chau did not attend the meeting but will be invited for the next event in November 2010. For a full list of participants see Appendix 1.

Main focus of the meeting was to review the benefits and constraints of the participation of farmers in the first season of maize ICM and erosion field trials, and to develop approaches to enhance farmers' participation in development, implementation and monitoring and evaluation of the next season trails (programme of the meeting is presented in Appendix2).

The first morning of the 2-day meeting was used to inform participants about the socio-economic and production realities of all project locations and to present preliminary results of the field trials that had just been completed. These presentations provided the opportunity to the participants to familiarise themselves more broadly with the project locations they were not directly involved with and to discuss overall direction of the project.

In the afternoon group a discussion was facilitated in which all participants shared their experiences with the participation of farmers in the first season experiments and expressed their views on what caused satisfactory or unsatisfactory levels of farmer participation (i.e. positive and negative factors influencing farmer participation). Factors identified that influence participation and suggestions of how participation can be improved are presented in Appendix 4.

At the end of the first day, draft guidelines for the end-of-season field team evaluation meeting (see Appendix 3) were presented and discussed. Participants made a work-plan to pre-test these guidelines in the field and prepared for the visit to Na Ot commune for the next day.

In the morning of the second day participants travelled to Na Ot commune were they conducted a participatory evaluation session of the erosion trial. Report of the evaluation is presented in Appendix 5. The evaluation session was concluded by lunchtime and in the afternoon the participants gave feedback on the completed evaluation process and outcomes. The main points recorded at the feedback session are presented in Appendix 6.

At the end of the meeting, participants concluded that they have to spend more time and effort to engage farmers in next year's field activities. Larger scale meetings with farmer researchers, village leaders and other interested farmers should be held at least 3 times over the season: first before sowing, second close to harvest time (field day) and the third after harvest (participatory evaluation of the trial). It was also acknowledged that during the meeting participants enhanced their ability to engage farmers and conduct a participatory evaluation session, but since this is a new concept for most of the participants as they did not have any prior experience, continuous support from project team members with experience in PM&E is necessary.

Appendix 1: List of participants

	Name	Male/Female	From
1	Nguyen Van Thanh	M	Extension office Moc Chau District
2	Luong Trung Hai	M	Phieng Luong commune
3	Ha Van Yeu	M	Extension Office Mai Son District
4	Nguyen Quoc Ai	M	DARD Son La
5	Dam Quang Minh	M	NOMAFSI Son La station
6	Nguyen Doan Hung	M	NOMAFSI Son La station
7	Hoang Xuan Thao	M	NOMAFSI Son La station
8	Trinh Duy Nam	M	NOMAFSI Son La station
9	Lo Ngoc Minh	F	NOMAFSI Son La station
10	Nguyen Van Bang	M	NOMAFSI Son La station
11	Nguyen Thi Thanh Ha	F	NOMAFSI Son La station
12	Do Sy An	M	NOMAFSI SaPa Centre
13	Le Huu Huan	M	NOMAFSI-Phu Tho
14	Pham Thi Sen	F	NOMAFSI-Ha Noi
15	Doan Duc Lan	M	TBU
16	Nguyen Hoang Phuong	M	TBU
17	Dang Van Cong	M	TBU
18	Vu Duc Toan	M	TBU
19	Do Thi Minh Hien	F	AJC
20	Oleg Nicetic	M	UQ

Appendix 2: Programme

Exchange visit and capacity building for maize ICM field teams
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Day 1

Time	**Activity**	**Presenter/moderator**
09:00-09:15	Welcome and introduction –objectives and expectations, agreement on program	Huan-Oleg-Hien
09:15-10:15	Presentation of main findings from diagnostic studies and implications for field trials	Oleg (Hien translations)
10:15-10:30	Tea break	
10:30-11:30	Presentations of trial results and discussion	Huan
11:30-13:30	Lunch break	
13:30-15:00	Discussion on participation of farmer researchers in the first year of trials	Facilitators: Hien and Oleg
15:00-15:30	Tea break	
15:30-16:30	Presentation "Participatory planning, implementation, monitoring and evaluation of field trials" (prepared by Elske and Oleg)	Oleg and Hien
16:30-17:00	Planning of PE in Na Ot	Huan-Oleg- Hien

Day 2

Time	Activity	Presenter/moderator
08:30-9:30	Travel to Na Ot	
09:30-11:00	Participatory Evaluation of erosion trials in Na Ot	Huan, Oleg, Hien
11:00-12:00	Travel to Son La station	
11:30-13:30	Lunch break	
13:30-15:00	Strategies to improve farmers' involvement in implementation, monitoring and evaluation of trials in next season	Facilitators: Huan, Hien and Oleg

Appendix 3: Draft Guidelines for the "End-of-season field team evaluation meeting"

Objectives

- To make up the balance of what was done in the trial and compare inputs with outputs.
- To evaluate outputs and outcomes of the field trials by analysing the collected data and conducting an economic analysis.
- To understand farmers' perspectives on the benefits and drawbacks of the various treatments.
- To formulate conclusions on the trial results and applicability in prevailing farmer practice.
- To formulate recommendations for follow-up activities.

Timing

This meeting is organised at the end of the season, soon after the trials has been harvested. The meeting should be planned for approximately 2 hours at a time convenient for all participants.

Participants

- Farmer researchers involved in the trial
- Extension officer
- Field researchers

Preparation

- Select a suitable time and venue (in the village where the trial was conducted) for the meeting allowing both farmer researchers and field team members to attend. Inform all participants of the meeting.
- Prepare a map of the trial lay-out on a large sheet of paper, clearly indicating treatments and replications (if any).
- Make sure all data from the trial have been scrutinised and entered into a spreadsheet.
- Prepare tables with data and, if appropriate, simple graphs showing results of each treatment.
- Prepare a simple economic analysis for each treatment by displaying production cost (seed, fertilisers, pesticides, labour, …) and gross income (yield multiplied by prevailing price).
- Prepare materials for the meeting: photocopies of processed data sheets/graphs/economic analysis for all participants, flipcharts, markers, coloured cards, tea/snack.
- Decide on a facilitator and a notetaker for the meeting.

Steps

1. Welcome everyone to the meeting, discuss the objectives of the meeting and emphasise the importance of getting everyone's perspective on the results of the trials.

2. Review the lay-out and implementation of the experiment to ensure that everyone recalls what was done throughout the season. Record any deviations from the actual design.
3. List the variables that were measured. Agree on an indicator for success for each variable (e.g. yield – more than 4 t/ha).
4. Presents the results of the experiment by comparing all variables that were measured across the treatments. Make sure everyone is following what is being discussed by clearly referring to the hand-outs with tables and/or graphs provided.
5. Allow the participants to provide feedback. The following attitudes or actions will help create an open atmosphere and encourage participants to openly share their perspectives and experiences:
   - Show interest in what people have to say. Listen rather than talk, but ask probing questions if needed.
   - Give people time to formulate their thoughts and always respond positively.
   - Relate how people's responses or ideas link (or not) to the results of the trial, to the ideas of others and to what has been experienced in other places.
   - Realise that people's perceptions are formed by their own experiences, and respect everyone's opinion. However, this does not mean that an opinion that contains information that is not totally correct should be accepted as the truth, but deal with the incorrect information in a respectful way.
   - Admit if you do not know an answer to a question or don't have an explanation for a certain result.
6. The following questions can be used to trigger a discussion:
   - Which treatments resulted in the best yields and/or the best quality of produce?
   - What are the advantages and disadvantages of the treatments tested, compared to farmer practice?
7. Facilitate the group to draw conclusions of the trial.
8. Discuss what needs to be done next. Is another experiment needed to further test and adapt the technology? Do the treatments need to be tested on a larger scale? Is the technology ready to be rolled out to more farmers?

Appendix 4: Results of Group Discussion

Factors influencing farmer participation in trials conducted in the 2010 maize growth season and suggested actions to improve future farmer participation

(Note: Points are presented without major editing to reflect as close as possible ideas of Vietnamese colleagues. Opinions and suggestions presented came from individual participants and are not agreed on or endorsed by other participants)

1. Factors that negatively affected participation of farmers in the first season of maize ICM and erosion trials

1.1 Farmer related factors

1.1.1. Hmong farmers in Sin Ho were very reluctant to share information, ideas and express their opinion. They have been suspicious towards inputs (e.g. fertilisers) provided by the project questioning its source, quality and potential negative impact on their soil. They thought that fertiliser can be poisonous. When farmers were given information, they have not done much with it.

1.1.2. Some farmers who participated in meetings were discussing a lot, promised to do a lot on the trials and project but when project staff left nothing was done.

1.1.3. Farmers are afraid that experiments will not be successful and that they will bear the loss.

1.1.4. Many farmers are very conservative and it is very difficult to convince them to try new agricultural practices.

1.1.5. Farmers are afraid of new things and how they will impact their livelihood.

1.1.6. Farmers pay more attention to immediate benefits and cannot see the long term benefits.

1.1.7. Farmers lack funds to invest in inputs or new technologies.

1.1.8. Many communities we are working with are inward looking and closed to outsiders.

1.1.9. Farmers were observing the trial plots but when something went wrong they did not take initiative to mitigate the situation or to contact the project staff to warn them about the adverse situation and ask for help.

1.2. Researchers related factors:

1.2.1. Researchers don't have enough knowledge about culture and habits of ethnic minorities and very often misunderstand them.

1.2.2. Researchers have not followed participatory approach from the start to the end of the experiment. Many times the researchers inspected the trials and made decisions without proper consultation with farmers in order to save time.

1.2.3. Project staff does not have enough time to follow up on all activities initiated with farmers.

1.2.4. Too many experiments were conducted at the same time and in the same village and it is difficult for farmers and researchers to follow up on all of them.

1.2.5. Previous projects conducted at the same locations were not successful and did not have participatory approach so farmers have negative preconceptions.

2. Positive factors

2.1. Hmong can be very active if they believe they will receive financial support from the project.

2.2. Thai people want to participate. They live in very connected communities where leader have very strong influence. If project staff work closely with a community leader and the leader is supportive of the project activities, it is easy to get community-wide engagement.

2.3. Kinh people are very eager to participate and they learn things very fast.

2.4. Thai and Kinh people share their knowledge with project staff and make significant contribution to the project with their ideas.

2.5. Once farmers understand potential positive impact of the project objectives on their production and livelihood, they do get actively involved.

3. Proposed actions to improve participation

3.1. Project staff should meet with farmer researchers and communities more often to address any arising problem on time

3.2. Project team members have to improve their technical knowledge particularly in regards to pest and diseases management including management of mice.

3.3. Researchers have to learn about different ethnicities, their culture and customs, social and economical background.

3.4. Researchers have to learn more about traditional cultivation knowledge and techniques that are practised in each research location, and integrate them to our experiments and the new techniques used in experiments.

3.5. Researchers have to give farmer a chance to speak out and to have more of a dialogue with them.

3.6. Researchers have to prepare very well before any activity is conducted and explain to farmers all details of the activity before it is implemented.

3.7. The design of experiment conducted in farmers' fields should be simple so farmers can understand them.

3.8. Research staff should go more often to experimental sites and interact more with farmers so that all operations in the field are done together with farmers.

3.9. Some experiments at each location should have outputs that will have immediate positive economic impacts.

3.10. Project has to cooperate with other organisations (PPRI, PPD) to forecast pest occurrence and develop pest management strategies.

3.11. Understanding about obligations between project and farmers should be established at the beginning of the experiments: project will pay compensation for use of land, farmer labour and any losses of production but farmers have to commit that they will follow instructions and keep regular contact with the project research team.

3.12. The experiment protocols should have clear statements about what farmers will get and what are farmers' rights and obligations.

3.13. To gain trust of Hmong farmers we should give them money to buy inputs themselves with our assistance instead of providing them with inputs ourselves.

3.14. Organise meetings with right people who really work, do things and have influence.

3.15. Experiments should be in easily accessible locations so more farmers can see and assess progress and results of experiments.

3.16. Except for the variety trials we should use varieties currently used in the area.

3.17. We should find a champion in each community that can be either the farmer researchers or another farmer to do advocacy for our project.

3.18. Research team should encourage and assist farmers to record observations from the field and make a "calendar of activities" on a large sheet of paper (butcher paper) that stays on the wall in a farmer's house.

Appendix 5: Participatory trial evaluation with farmers in Na Ot

Participatory trial evaluation meeting was held in farmer researcher's house. Five male farmers, 3 female farmers, spouses of male farmers, and approximately 10 participants (researchers and extension officers) from the PM&E workshop were present. The farmer researcher is a Communist Party leader in the village and one of the present farmers was the leader of the Famers' Union in the village. Mr Nam from NOMAFSI was the main facilitator of the meeting and Mr Huan assisted him.

At the beginning of the meeting, Mr Nam facilitated a reflection exercise on farmer experiences with deforestation. Farmers talked about how they cut forest 5-10 years ago and how that resulted in reduction of water availability and hence a reduction of crop yields. Now farmers do not cut forest anymore and they also re-forestated certain areas of their land. A parallel between deforestation and erosion was then drawn and potential devastating impacts of erosion on agricultural production was explored with the farmers.

Farmers are aware of erosion and acknowledged potential negative impact. They observed that after they burned stubble and cultivate on bare soil the moisture is much lower than in experimental plots where mulch is present. They also observed that maize is greener in plots with the mulch. However, farmers also observed that there are more weeds in mulched plots. Explanation for that was that increased moisture provides better conditions for growth of weeds than dry soil condition in farmers' fields.

Mini-terraces in combination with mulch were recognised by farmers and researchers to provide very good conditions for maize growth and reduce erosion significantly better than other treatments but farmer claims too much work has to be put in establishment of mini-terraces. Main constraint recognised by farmers is requirement for a strong buffalo to be able to plough and form mini-terraces, especially if stubble is present. It was pointed out that many families do not have buffaloes so that will be a major constraint in scaling up. Common practice is for two farmers to work in pair: one farmer ploughs and the other sows and applies fertilisers. To form mini-terraces an additional farmer is needed: two farmers plough and a third farmer sows and adds fertiliser.

Facilitators initiated analysis of workday's requirements for current farmer practice and when mulch is added. Result is presented in Table 1.

Farmers also pointed out that there were much more mice trapped where mulch was used but they could not quantify even roughly how many mice they trapped in their own field and how much in experimental field with mulch. Monitoring of mice population should be incorporated in next year's trial protocols.

Table 1: Workday's Requirements for Farmer practice, mini-terraces +mulch and mulch

	Workdays per hectare		
Operation	**Mini-Terraces + Mulch**	**Mulch**	**Farmer practice**
Cutting old trees	14	14	14
Ploughing	0	0	15
Ploughing to make row	12	6	4
Sowing + fertilising at sowing	21	21	21
Care (weeding)	10	10	10
Fertilizing	3	3	1.5
Mulching	10	10	0
Harvesting	30	30	20
Bringing mulch material from outside	30	30	0
Total	130	124	85.5

Farmers used much less fertilisers in their own fields than was used in experimental plots. For 33 kg of seed (approximately 2 ha) farmers used 200 kg of NPK and 200 kg manure at the time of sowing and they add 100 kg of Urea when maize developed 5-7 leaves. On the project plots 500kg of superphosphate, 150 kg potassium fertiliser (Kaliclorua) and 300 kg urea was added in 3 portions: first at sowing, second at 7-9 leaves stage and third at 13-14 leaves stage. Very significant increase in fertiliser use on experimental plots did not results in increase in yield proportional to the cost of inputs so farmer's practices was more profitable (see Table 2).

Mr Huan facilitated the economic analysis of farmers' production on their own fields and on the experimental plots. Analysis was done with full farmers' participation and they agreed on or supplied data used in the calculations (Table 2). The farmers concluded that experimental practices are good for erosion prevention but they require more work and do not deliver economic benefits.

Farmer pointed out that sowing in experimental plots was done bit too early. First rain was recorded on 20/04 and plots were sown on 18/04. Farmer pointed out that they make decision when to sow according to weather forecast they see on TV.

Meeting was concluded with farmers showing great interest in continuing with experiments next year. Fertiliser dose will be adjusted for next year experiments and farmer will use this year stubble as mulching material. These will significantly reduce input costs that will results in increased profitability on experimental plots. Farmers made firm commitment not to burn fields that will be used in experiment next year.

	Unit	Cost (VND)	Amount per hectare			$ (VND)		
			Farmer	***Mini-Terraces + Mulch***	***Mulch***	***Farmer***	***Mini-Terraces +Mulch***	***Mulch***
I-INPUT (1 ha)						6,481,000	14,810,000	14,450,000
Variety (LVN10)	kg	38,000	17	0	0	646,000		
Variety (LVN 99)	kg	60,000	0	17	17		1,020,000	1,020,000
Labour	day	60,000	85.5	130	124	5,130,000	7,800,000	7,440,000
Manure	kg	350	100	0	0	35,000		
Urea	kg	6,800	50	300	300	340,000		2,040,000
NPK (5:10:3)	kg	3,300	100	0	0	330,000		
Phosphate	kg	3,100	0	500	500		1,550,000	1,550,000
Kaliclorua	kg	14,000	0	150	150		2,100,000	2,100,000
Pesticide							300,000	300,000
II-INCOME	kg	4,000	3550	5400	5100	14,200,000	21,600,000	20,400,000
III-PROFIT	dong					7,719,000	6,790,000	5,950,000

Appendix 6: Reflection on participatory evaluation of erosion trial with farmers in Na Ot

(Note: Points are presented without major editing to reflect as close as possible ideas of Vietnamese colleagues. Opinions and suggestions presented came from individual participants and are not agreed on or endorsed by other participants)

1. Before the participatory evaluation meeting with farmers, researchers should discuss with farmer researchers about the presentation farmer will give at the PE meeting and help farmer to prepare for the presentation.

2. At PE meeting we did not give farmers enough time to think about questions we asked.

3. Researchers should hold short meeting with farmers before sowing so farmer understand fully what will be done in experiment.

3. Project staff should more involve local officials so dissemination of the results would be easier after the completion of the experiments and project.

4. Small allowance should be paid to village leaders and village extension officer.

5. Researchers should have 3 meetings with farmer researchers, village leaders and other interested farmers: first before sowing, second near the harvest (field day) and after harvest (PE). Researchers should record discussions and may be use video camera or similar.

6. Facilitator should encourage people to speak freely

7. Researchers or extension officers who can speak language of ethnic minorities involved in the experiments would be good facilitators but if facilitator cannot speak local language than somebody else should make translations. (Farmer researcher can have this role).

8. Methods for recording events in the field during experiment, like big wall calendar to record operations in the field, should be developed.

9. Researchers should talk less and let farmers talk more.

10. Farmer should be encouraged to speak one by one about the experiments and about what should be done to improve the experiments. When farmers speak in a group as was experienced at PE meeting in Na Ot most of conversations were dominated by one speaker.

11. Researchers should prepare all numerical data (e.g. inputs, yield) for the meeting but they should then write them on butcher paper one by in front of the farmers seeking farmers' agreement for all figures presented.

12. Data for yield and economic analysis should be shown in form of tables and figures because some farmer may better understand data visually.

13. Use of cameras that were supplied to farmers should be improved and researchers should make notes to accompany pictures during each visit to farmers.

14. Data should be presented on the way that is most understandable to farmer e.g. kg of seed used instead of area, moon calendar instead of western calendar etc.

15. Variety of maize used in experiments except for variety trials should be similar to the variety used in farmers' fields.