EXTENSION APPROACHES FOR SCALING OUT LIVESTOCK PRODUCTION IN NORTHERN LAO PDR (EASLP)

ACIAR PROJECT ASEM 2005 125

A Joint Project between the National Agriculture and Forestry Extension Service (NAFES) and Charles Sturt University (CSU) Australia, with collaboration from the Department of Livestock and Fisheries, CIAT Asia, National Agriculture and Forestry Research Institute and University of Sydney.

Report on 2007-2008 Farmer Cross Visits and follow up evaluations

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Summary

This report describes the implementation and evaluation of a series of cross visits held in September/October 2007 and July 2008 to stimulate farmer to farmer learning and staff capacity building in livestock management systems in northern Lao PDR. These activities relate to EASLP Objective 1 ‘to adapt livestock extension approaches to 11 targeted poor districts in northern Laos.’

Three types of cross visits were organised in succession:

1. **Two Mentored Provincial Cross Visits:** Cross visits outside the districts for new farmers and extension staff to learn from experienced farmers and mentor extension staff. (September 2007). Funded by EASLP (ACIAR).

2. **Four District Trainee Cross Visits:** Cross visits within each district to share experiences among farmers who are new to using forages, and allow trainee staff to gain experience in organising their own cross visits. (October 2007). Funded by CPB project (ADB).

3. **Two Advanced Livestock Production Cross Visits:** A cross visit on cattle feedlot fattening to Nonghet district, and a cross visit on pig breeding and management to Pak Ou district. (July 2008). Funded by EASLP (ACIAR)

For the first mentored cross visit, a total of 24 farmers and 23 staff/officials from Viengxai and Viengthong districts (Huaphan province) and Koun district (Xieng Khouang province) visited Pek district (XK) on 14 September 2007.

The second mentored cross visit involved a total of 12 farmers and 8 staff/officials from Phonxai district (Luang Prabang province) visiting Pak Ou district (LPB) on 30 September 2007.

The total number of farmers and officials attending mentored cross visits was 36 and 31 respectively.

The four district trainee cross visits were as follows:

1. **Viengthong district** A total of 28 farmers from 6 villages attended cross visit at Ban Muanghieme, Ban Samphanthong and Ban Nam Neuane on 12/10/2008.

2. **Koun district** A total of 44 farmers from Ban Nam lan and Pu Muangmai, 31 farmers from Ban San Kin and Nam lan and 7 government staff attended cross visit at Ban Tenpoun and Ban Syviengkham Khoun district on 16/10/2007.

3. **Viengxai district** A total of 53 farmers from 6 villages and 8 government staff attended cross visit at Ban Viengphan, Longkhou and Nakhou in Viengxai district on 19/10/07.

4. **Phonxai district** A total of 60 farmers from 10 villages attended cross visit at Ban Donexai and Ban Soap Chia on 22/10/07.

District cross visits were attended by a total of 185 farmers and 19 officials.
The cattle fattening cross visit was held on 3-4\textsuperscript{th} July 2008 to Nong Het district (Xiengkuang province). Attending were 12 visiting farmers from 6 villages of Khoun district (Xieng Kuang province), and 4 government officers.

The pig breeding and management cross visit was held on 13-14\textsuperscript{th} July 2008 in Pak Ou district (Luangphabang province). Twelve farmers from 12 villages in Viengxai and Viengthong district (Hua Phan province), 5 officers and 1 student attended.

The cross visits were generally well organised by district and provincial livestock staff, with guidance in planning and preparation from national staff at NAFES and DLF, and provincial livestock coordinators. Visiting farmers were shown a range of cattle, pig, poultry and fish raising systems based on the use of forages (grasses and stylo legume). These were;

- cattle fattening and trading;
- pig housing, breeding and watering using drip feeders;
- drying stylo to mix with rice bran/maize/cassava for pigs and poultry;
- vaccination and treatment for diseases and;
- collection of manure for composting and fertiliser.

Feedback sessions were held at the end of each cross visit to find out what farmers had learnt, what they would report back to their villages, what they planned to do next, the good and weak points of the cross visit and how such events could be improved. Interviews were also conducted with provincial and district staff in November and December 2007 to explore the benefits and weaknesses of both types cross visits. Staff were encouraged to reflect on their experiences and how they might improve farmer to farmer learning in the future.

Follow up visits to 35 farmers who attended 2007 mentored cross visit showed that after 12 months their forage area had doubled (from 15,949m\textsuperscript{2} to 31,114m\textsuperscript{2}). Cattle numbers increased by 16 head, buffalo by 26 head, goats by 71 head, pigs by 43 head, and poultry by 439 head. Increases in forage area were greatest amongst cross visit farmers in Phonexai district. These farmers have taken up goat fattening in numbers ranging from 2 to 22 head at any given time, as well as increasing their pig, buffalo and cattle numbers. Farmers from Koun, Viengxai and Viengthong district have been more conservative, preferring to fatten small numbers of livestock and slowly increase their forage area. This is most likely due to land, labour and cash flow constraints.

Three months after the 2008 cross visits, the 24 participating farmers were visited by district staff. There had been an overall increase of 25 cattle, 6 buffalo, 15 pigs and 131 poultry and expansion of 24,400m\textsuperscript{2} in forage area mainly in Koun district. The doubling of forage area in Koun district and rapid increase in cattle and pigs has been due to Hmong farmers having greater land availability and funds to purchase cattle. The cross visit to Nonghet enabled them to see large areas of grasses being used by another Hmong farmer and has given them confidence that they can establish a permanent feed source for fattening cattle.

Case studies being developed by district staff across a range of household wealth status should explain variances in the capacity of farmers to increase livestock numbers or forage area due to labour, land, financial or other constraints.

Overall, district staff report increased farmer awareness and confidence in; cattle and buffalo fattening using forages; animal housing and watering systems (eg drippers for pigs); using manure for composting; drying grasses and stylo; managing forage plots; how to cut, carry and feed to animals and animal health techniques (vaccination, de-worming). There has been a very
low incidence of mortality and disease since using forages except for a few reported sporadic outbreaks of Newcastle disease (poultry) and Classical Swine Fever (pigs).

It appears that cross visit farmers are making good profits from cattle and buffalo fattening but pig raising returns can be lower due to high input costs (vaccination, rice bran etc). In Viengxai and Vienthong districts there appears to be a stronger reliance on poultry and pig raising which if profitable may enable farmers to buy goats or cattle over time if they have enough forage area to support larger animals.

The cross visits have given farmers the basic knowledge, skill and experiences of livestock production such as pasture growing and management, livestock feeding systems, animal health, technique of animal housing construction and animal marketing. However, most farmers said they needed further training in piglet production, breeding selection, and advanced animal health including parasite control. They want to know more about the epidemic diseases of large animals, pig and poultry that frequently occur in Lao PDR.

There has been widespread dissemination of the information gained at the cross visits through regular village meetings and family networks. Staff also report an impressive increase in the number of families adopting forage use and improved animal husbandry across all four districts. This has been due to the ongoing efforts of district extension staff in visiting all farmers to give advice and assistance, not only those who attended cross visits.

The cross visits served the purpose of stimulating farmer interest and capacity in livestock production. There is now a critical mass of farmers within each district who can teach other local farmers without the need to go outside the district or province. The EASLP can now focus on new districts using these four districts as sources of expertise.
Introduction

The EASLP project is aimed at “assisting the Lao government to foster further adoption of improved livestock production by adapting extension methods and staff development approaches in northern Lao PDR.”

Cross visits and study tours for farmers were held in 2004-2005 in conjunction with the Aus Aid funded Forage and Livestock Systems Project (FSLP) managed by CIAT Asia and NAFRI. The cross visits proved very effective in stimulating farmer to farmer learning and improved livestock management systems. Provincial and district extension staff from Xieng Khouang and Luang Prabang who were involved in conducting these cross visits are now mentoring district staff in 16 new districts across five provinces.

After two years of livestock training and farmer implementation in the new districts, it was decided to trial a series of cross visits in 2007 and 2008. The objectives were:

For Farmers: To learn how to improve livestock production by seeing forage and animal health practices and their impacts, exchanging experiences with the host farmers, and learning practical aspects of how to use the technology.

For Staff: To strengthen their ability to plan and organise successful cross visits and critically analyse the effectiveness of the cross visits.

This report describes the implementation and evaluation of the cross visits held in September/October 2007 and July 2008 to stimulate farmer to farmer learning and staff capacity building in livestock management systems. These activities relate to EASLP Objective 1 to ‘adapt livestock extension approaches to 11 targeted poor districts in northern Laos.’

Three types of cross visits were organised in succession:

1. **Two Mentored Provincial Cross Visits:** Cross visits outside the districts for new farmers and extension staff to learn from experienced farmers and mentor extension staff. (September 2007). Funded by EASLP (ACIAR).

2. **Four District Trainee Cross Visits:** Cross visits within each district to share experiences among farmers who are new to using forages, and allow trainee staff to gain experience in organising their own cross visits. (October 2007). Funded by CPB project (ADB).

3. **Two Advanced Livestock Production Cross Visits:** A cross visit on cattle feedlot fattening to Nonghet district, and a cross visit on pig breeding and management to Pak Ou district. (July 2008)

Planning and Implementation of 2007 Cross Visits

**Planning**

In 2007, new district and provincial staff were assisted with planning cross visits by the EASLP project team (Mr Nhoungthong Sihanath and Mr Neuakhom Theppanid) on a visit to the provinces in August 2007. The following aspects were discussed;

- The reasons for having a cross visit.
• How to select farmers from each village to participate in cross visit (2 farmers from each village).
• Host farmer selection based on needs of visiting farmers (matching up)
• Important stages of the cross visits (before and after and follow up).
• Explanation of the aim of the cross visit to the visitors.
• How to raise questions and answers between visitor farmers and host farmers, and facilitate group discussion.
• The cross visit observation and reflection process (to farmers and to the new staffs themselves), eg strength and challenge for farmers and strength, weakness and challenge for new staffs themselves.
• How to summarize and report on the cross visit.
• Budgeting for the cross visit.
• Logistics of the cross visit (eg transport, accommodation, food, per diem etc)

These issues were also raised at a Capacity Building project staff workshop in September. District staff then selected the following participants to join the mentored cross visits:

- One farmer from each village (6 villages, 6 farmers), selected by farmers or village head themselves,
- One participant from DAFO.
- One participant from district government office.
- One participant from district plan unit.
- One participant from Target Village Group (Khet)
- Four district staff.

The cross visit locations and activities were selected by district staff in consultation with their provincial coordinators and mentor staff.

**Implementation**

The cross visits were carried out by CPB mentor staff from Xieng Khouang and Luang Prabang and district extension staff in Huaphan province (Viengthong and Viengxai); Xieng Khouang Province (Khoun) and Luang Prabang provinces (Phonexai). The EASLP project team (Project Coordinator and Research Assistant) attended all cross visits.

For the first mentored cross visit, a total of 24 farmers and 23 staff/officials from Viengxai and Viengthong districts (Huaphan province) and Koun district (Xieng Khouang province) visited Pek district (XK) on 14 September 2007.

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2. **Koun district**. A total of 44 farmers from Ban Nam lan and Pu Muangmai, 31 farmers from Ban San Kin and Nam lan and 7 government staff attended cross visit at Ban Tenpoun and Ban Syviengkham Khoun district on 16/10/2007.
3. **Viengxai district.** A total of 53 farmers from 6 villages and 8 government staff attended cross visit at Ban Viengphan, Longkhou and Nakhou in Viengxai district on 19/10/07.

4. **Phonxai district** A total of 60 farmers from 10 villages attended cross visit at Ban Donexai and Ban Soap Chia on 22/10/07.

The total number of farmers and officials attending mentored cross visits was 36 and 31 respectively. District cross visits were attended by a total of 185 farmers and 19 officials. Table 1 below summarises the participation of extension staff, villages and farmers in each cross visit. [LL=Lao Loum, LT=Lao Theung, LS=Lao Soung]

<table>
<thead>
<tr>
<th>Cross Visit</th>
<th>Host villages</th>
<th>No of host farmers</th>
<th>No of visiting farmers</th>
<th>No of staff and officials</th>
<th>Main Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pek (Mentored)</td>
<td>Ban Na Lam (LL)</td>
<td>1 man</td>
<td>12 Khoun</td>
<td>9 district officials</td>
<td>Cattle fattening</td>
</tr>
<tr>
<td>(14/9/07)</td>
<td>Ban Moune (LL)</td>
<td>2 men, 2 women</td>
<td>6 Viengxai</td>
<td>12 district staff</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ban Had Yer (LT)</td>
<td>1 couple</td>
<td>6 Vienthong (2 women)</td>
<td>2 provincial coordinators</td>
<td></td>
</tr>
<tr>
<td>Pak Ou (Mentored)</td>
<td>Ban Phai (LL)</td>
<td>1 man, 1 woman, 2 men</td>
<td>12 farmers of Phonxay</td>
<td>4 district staff, 1 District Governor 1</td>
<td>Cattle fattening</td>
</tr>
<tr>
<td>(30/9/07)</td>
<td>Ban Hathphang (Leu ethnic group)</td>
<td>2 men</td>
<td>district staff</td>
<td>1 provincial coordinator</td>
<td>Stylo for pig raising</td>
</tr>
<tr>
<td>Viengxai (Trainee)</td>
<td>Ban Viengphan, Ban Longkhou</td>
<td>1 man, 1 woman</td>
<td>53 from 6 villages</td>
<td>4 district staff</td>
<td>Pig raising, Fish raising</td>
</tr>
<tr>
<td>(16/10/07)</td>
<td>Ban NaKhou</td>
<td>1 man</td>
<td>(8 Women)</td>
<td>1 DAFO head</td>
<td>Poultry raising</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 provincial coordinator</td>
<td></td>
</tr>
<tr>
<td>Viengthong (Trainee)</td>
<td>Ban Muanghieme, Ban Samphanthag</td>
<td>1 man</td>
<td>28 farmers with 11</td>
<td>3 District staff</td>
<td>Pig raising, Fish raising</td>
</tr>
<tr>
<td>12/10/2007</td>
<td>Ban Nam Neuane</td>
<td>1 woman</td>
<td>women from 6 villages</td>
<td>1 DAFO head</td>
<td>Cattle fattening</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 district staff</td>
<td></td>
</tr>
<tr>
<td>Khoun (Trainee)</td>
<td>Ban Tenpoun (LT/LL)</td>
<td>2 men, 2 women</td>
<td>44 from Nam Lan (LS)</td>
<td>3 District staff</td>
<td>Poultry and pig raising with dry stylo</td>
</tr>
<tr>
<td>19/10/2007</td>
<td>Ban Syviengkham</td>
<td>2 women</td>
<td>&amp; Pu Muangmai (LS)</td>
<td>1 DAFO head</td>
<td>Cattle fattening</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 men</td>
<td>31 from San Kin (LS/LL)</td>
<td>1 District governor, 1 group farmer head</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 women</td>
<td>and Nam Lan (LS) (no</td>
<td>1 provincial coordinator</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>women)</td>
<td>1 group farmer head</td>
<td></td>
</tr>
<tr>
<td>Phoxnai (Trainee)</td>
<td>Ban Donexai</td>
<td>3 men, 2 women, 1 woman</td>
<td>60 farmers with 25</td>
<td>4 District staff</td>
<td>Cattle raising and pasture growing</td>
</tr>
<tr>
<td>22/10/2007</td>
<td>Ban Soap Chia</td>
<td></td>
<td>women from 10 villages</td>
<td>1 DAFO head</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 District governor, 1 provincial coordinator</td>
<td></td>
</tr>
</tbody>
</table>

Table 1 Summary of cross visit participants and topics
Farmer Feedback Sessions

Farmers who went on the cross visits to Pek and Pak Ou districts participated in a feedback session immediately after the cross visit back at the guesthouse.

Visiting farmers reported back to their villages within a few days of the cross visits. Pictures were shown using a TV if there was one available. Hard copies of photos were handed around. Staff reported a lot of interest and questioning from other farmers (where they attended village feedback sessions). Most villages also made a report and a plan for the coming year which they submitted to the district agriculture and forestry office. It appears that staff were unable to attend all the village feedback sessions where there were too many villages invited.

Pek cross visit (1. forages, 2. pig housing). Viengxai cross visit (1. host farmer, 2. forages for fish)

Follow up and Evaluation of 2007 Cross Visits

Interviews with district and provincial staff

Semi-structured interviews were conducted with a selection of district and provincial staff during November and December 2007 to explore the benefits and weaknesses of the cross visits. Staff were encouraged to reflect on their experiences and how they might improve farmer to farmer learning in the future.

The aim of the cross visit evaluation was explained and consent obtained to conduct the interview according to CSU human ethics guidelines. A summary of the interviews is shown in Table 2. Time did not permit all districts to be interviewed in 2007. Plans were made for the NAFES team to interview staff involved in the Pak Ou cross visit but this did not happen.

<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>No of staff interviewed</th>
<th>Interviewer</th>
</tr>
</thead>
<tbody>
<tr>
<td>18/11/07</td>
<td>Sam Neua Huaphan province</td>
<td>2 PAFO (XK, HPN) 1 EASLP research assistant</td>
<td>Jo Millar</td>
</tr>
<tr>
<td>19/11/07</td>
<td>Viengxai district</td>
<td>4 DAFEO</td>
<td>Jo Millar</td>
</tr>
<tr>
<td>21/11/07</td>
<td>Khoun district</td>
<td>3 DAFEO</td>
<td>Jo Millar</td>
</tr>
<tr>
<td>22/11/07</td>
<td>Pek district</td>
<td>3 DAFEO</td>
<td>Jo Millar</td>
</tr>
</tbody>
</table>

Table 2 Summary of staff interviews
The following interview guides were used. Questions were asked in English and Lao with translation provided by EASLP research assistant, Mr Neuakhom Theppanid.

1. Cross visit to Pek District

- Which villages and sites were most interesting to farmers from your district?
- What did you learn about how to do a cross visit?
- Would you do it differently, and if so how?
- Feedback from farmers about how the cross visit was run?
- How did farmers report back to their villages?
- Have they made any decisions or plans for 2008?
- Did you discuss these things at your monthly meeting after the cross visit?

2. District Cross Visits

- Which villages were visited? Where did the visitors come from? How many women and men? Which ethnic groups?
- What sites were looked at and topics discussed?
- Who facilitated the day?
- What were the main issues raised by visiting farmers during the cross visit?
- What did farmers say at the feedback session after the cross visit?
- What were the good and weak points about the cross visit for farmer learning?
- Was there a village feedback session and did you attend?
- What plans have each village or khumbun made for livestock management?
- What future learning activities do they need?
Results of Interviews

1. Cross Visit to Pek District

Farmers from Koun, Viengthong and Viengxai districts spent one day visiting three villages in Pek district. They started at 8am finishing at 5.30pm with a feedback session back at the Phonsavan guesthouse. Of the 12 farmers from Koun district, five were Hmong, and two were Lao Theung with no women visitors. Of the 12 farmers from Huaphan, most were Hmong and there were two women. Altogether there were 42 visitors including government staff and invited officials. The two groups alternated villages in the morning and afternoon. The cross visit was facilitated by Pek district staff (Viengsuk, Sin, Keonanon and Davone).

At Ban Na Lam, the host farmer, Mr Phonsi gave a summary first of the number of participating farmers in the village, how they had been planting forages since 2004 and the impacts gained. He outlined forage management and animal health practices. Visiting farmers looked at a 3 year old forage plot, how to use manure, how to cut 5 forage species and how to use cassava. They looked at cattle housing, feed troughs and pig housing.

Visiting farmers asked whether the host farmers got credit but Mr Phonsi explained that FLSP gave them forages only and they made money from fattening. Mr Phonsi explained the need to expand forage area to increase the number of cattle and the use of stylo for many animals not just pigs. He also explained how the farmers expanded forage areas using cuttings from their own plots and how to dry stylo.

Khoun district farmers were more interested in cattle and buffalo fattening (only one was more interested in fruit trees and pigs). They asked about time to impact - how much time does it take to make money? Five farmers are making money but Mr Phonsi is ahead of the rest- he bought land in Phonsavan, is building a new house, and has 2 new motorbikes. Na Lam farmers buy cattle from each other so a farmer can buy, fatten and sell quickly.

At Ban Moune, there were four host farmers although all farmers in the village have adopted forages. Sites visited included a demonstration of how to keep manure in a pit and mix with rice bran to spread onto paddy fields and forages. Visitors looked at forage plots and animals. Moune farmers rely on breeding their own cattle for fattening so it takes longer.

At Ban Had Yer, the host farmer, Mr Pin and his wife showed visitors how to dry stylo and make silage. They sell stylo hay in the market for 3,000 kip/kg. Pig management techniques were explained such as housing, vaccination and marketing.

The farmer feedback at the guesthouse revealed that farmers would have liked the cross visit to be longer (eg 2-3 days) to visit more villages, and more time to rest after travelling. They also expressed a need for seed and water nipples for pigs. Khoun farmers want to learn more about cattle fattening and trading.

The main benefits of the 2007 cross visit to Pek district were perceived by staff to be;

1. Many visiting farmers were able to see a wide range of livestock raising and trading systems and management practices.
2. Information and demonstrations on how to use forages for livestock fattening and animal health procedures (eg toxicara) were very clear.
3. Personal accounts by host farmers of the production and livelihood impacts from using forages and improved management.
4. Visiting farmers were impressed by the high percentage of farmers using forages in the host villages.

5. Important message from host farmers about using technologies to generate income not relying on credit or hand-outs from projects.

6. Host farmers able to talk confidently and proudly about their achievements to visiting farmers.

7. Visiting farmers were able to show pictures and photos on a TV to people back in their own villages.

8. Stimulation of farmers to adopt similar practices in their own villages.

Weaknesses identified by staff included;

1. Too many people.

2. Not enough time for good farmer discussion and learning (too rushed).

3. Few women (Staff tried to suggest 50:50 representation to villages but women wanted men to go first because they can speak Lao and are used to travelling)

4. Need to separate into small and large animal groups to focus in more depth on specific technologies and practices.

5. Not enough time to rest in between travel (long distances).

6. Not enough time to thank host farmers properly and present gifts.

2. Viengxai District Cross Visit

The Viengxai district cross visit had 53 visitors from 6 villages, mostly farmers already growing forages and a few other interested farmers. Only 8 women attended. The host villages had started planting forages in 2007 so plants were still young but were being used. There was very heavy rain from remnants of a typhoon in Vietnam so farmers had to walk through deep mud into the three villages. The whole day was facilitated by four staff from Viengxai district office.

The main topics included pig raising, forages for fish, poultry raising and cattle fattening. At the first village the farmer did not present well due to lack of confidence in speaking to a large audience. At the second village everyone sat down whilst the lady host farmer demonstrated pig husbandry. One village had forages that were not cut and another had poor pig housing.

Many issues were raised by visiting farmers however there was not a lot of time for discussion due to the large number of people. However, farmers still benefited from discussing their experiences with growing forages and fattening amongst themselves as evidenced by video footage taken by Mr LeeCha, Provincial Livestock Coordinator from Huaphan.

The feedback session was held in a crowded room inside a house where most people could not hear what was being said. Other weak points included not having any handouts for farmers. Farmers gave feedback to their own village but it was not attended by DAFO staff (another weakness). Farmers expressed interest in learning more about Veterinary practices (eg train VEW), breeding, and having a handbook on forages. Additional weaknesses identified by EASLP staff were low involvement of poor farmers, not enough time in between mentored and district cross visits for staff to reflect properly and staff not attending all village feedback sessions.
3. Koun District Cross Visit

The Koun district cross visit was held over two days with two groups visiting villages that had been planting forages since 2006. 1. Ban Nam Lan (LS) and Pu Muangmai (LS) went to Tenpoun. 2. Ban San Kin (LS/LL) and Nam Lan (LS) went to Syviengham. Total no of farmers was 75 (44 on Day 1; 31 on Day Two). There were no women visitors and mostly Hmong farmers. Three district staff facilitated both days.

Topics covered were poultry and pig raising with dry stylo, cattle fattening, and pig housing. The main issues raised by visiting farmers on the day were how to plant, how to cut and carry so forages can be quickly used, how long to fatten and when to sell livestock.

Good aspects of the cross visit from staff perspectives were that it was planned with the DAFO head with help from PAFO and mentors. Farmers had a good time as they were from the same district - a warm feeling was generated amongst the farmers. However staff identified the need to follow up farmers. More staff are needed to service increasing farmer demand. Cattle farmers would like to see advanced fattening in Nonghet. Staff would like computer training to assist with data records, reports, case studies, presentations etc.

4. Suggestions for improving cross visits

1. Spend at least two days visiting host farmers to allow enough time to discuss practices and impacts thoroughly.
2. Allow more time for rest after and before travelling.
3. Consider needs of old people and women (eg carsickness).
4. Have more than one host farmer at each village.
5. Separate groups into those more interested in small and large animals.
6. Involve more women.
7. Involve poor farmers by partnering them with an active farmer from their village.
8. Have one staff member per 4-5 visiting farmers to answer or interpret questions.
9. Make sure host farmers are using good practices and can present information with confidence (prepare them if necessary).
10. Once you have impacts, conduct cross visits within districts where possible as farmers identify more with one another.
11. Important to follow up after the cross visit.

A long muddy walk………Too many for a cross visit!......Good feeding demonstration.
Follow up visits in January 2008

EASLP project staff asked district staff to follow up cross visit farmers in January 2008 and collect information on the number of farmers adopting new practices. They reported increased farmer awareness and confidence in cattle and buffalo fattening using forages; animal housing and watering systems (eg drippers for pigs); using manure for composting; drying grasses and stylo; managing forage plots; how to cut, carry and feed to animals and animal health techniques (vaccination, de-worming).

An additional 163 farmers had been stimulated to adopt these practices in their own villages in Huaphan, Xieng Khouang and Luang Prabang provinces. The following Table 3 shows the increase in number of households adopting some of the practices introduced at cross visits, as of January 2008.

<table>
<thead>
<tr>
<th>Districts</th>
<th>Before Cross Visit No of Households</th>
<th>After Cross Visit (Jan 08) No of Households</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viengxai/Viengthong districts, Huaphan Province</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fattening Cattle/Buffalo</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Using WaterTaps for Pigs</td>
<td>0</td>
<td>17</td>
</tr>
<tr>
<td>Raising Goats</td>
<td>6</td>
<td>37</td>
</tr>
<tr>
<td>Koun district, Xienkhouang Province</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fattening Cattle/ Buffalo</td>
<td>11</td>
<td>21</td>
</tr>
<tr>
<td>Housing Pigs</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Phonexai district, Luangprabang Province</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housing Cattle</td>
<td>2</td>
<td>49</td>
</tr>
<tr>
<td>Housing Pigs</td>
<td>23</td>
<td>63</td>
</tr>
<tr>
<td>Housing Goats</td>
<td>0</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 3 Increase in households adopting recommended practices

Follow up visits from September to November 2008

From September 2008, district staff were funded to visit the 35 farmers who attended the mentored cross visits to Pek and Pak Ou districts. They collated monthly data on changes in livestock numbers, forage area and species, method of expansion, feeding methods and quantities, labour required per day, estimated growth rates and other production benefits, livestock sales per month, livestock costs, livestock problems, forage problems, feeding problems, general constraints, significant impacts on production or livelihoods, farmer innovations, village meetings on livestock, sharing of information, peer learning and adoption, information needs, preferences for ways to learn and how to involve poor households.

Increases in forage area and livestock numbers

In 12 months, the forage area doubled (from 15,949m² to 31,114m²). Cattle numbers increased by 16 head, buffalo by 26 head, goats by 71 head, pigs by 43 head, and poultry by 439 head (Figure 1 and Table 4). However, the increases do not take into account fluctuations in livestock numbers via sales and deaths only the difference between the month before cross visits and October 2008 figures. Although there has been a general increase over time in both forage area and livestock numbers, this has occurred mainly in Phonexai and Koun districts as shown in Figure 1.
Increases in forage area were greatest amongst cross visit farmers in Phonexai district. These farmers have taken up goat fattening in numbers ranging from 2 to 22 head at any given time. Six of the twelve farmers have increased their cattle numbers by 1 to 3 head, and eight farmers have increased buffalo numbers by 1 to 6 head. Similarly, eight farmers have also increased pig numbers by 2 to 9 head.

Koun district 2007 cross visit farmers have been more conservative with only four farmers increasing their number of cattle by 1 or 2 head. These same farmers have marginally increased their pig numbers and two farmers bought a buffalo each. The remaining seven farmers have pigs and poultry only and have not changed their livestock numbers possibly due to having smaller forage areas and lack of cash flow (ie poorer households). This is in contrast to 2008 cross visit farmers from Koun district who have rapidly increased their forage areas and livestock numbers (see page 25 of this report).

The six cross visit farmers in Viengxai district have slowly been increasing their forage area (some have doubled) but have mainly concentrated on poultry and pigs. Further investigation is needed via case studies to see if farmers are fattening cattle and buffalo on a regular basis as numbers appear to fluctuate.

Viengthong district farmers who attended the cross visit in Pek district have showed no changes in forage area or livestock numbers other than one farmer having two more pigs and more poultry. These results are similar to 2008 Viengthong cross visit farmers and require explanation in terms of household wealth, access to markets or extension staff capabilities. Case studies being developed by district staff across a range of household wealth status should explain variances in the capacity of farmers to increase livestock numbers or forage area due to labour and land constraints.

**Changes in forage and livestock management**

The main technique to expand the pasture areas for Guinea, Brizantha and Mulato is by cuttings. For stylo most people expand by seed and some people expand by seedling. Now nobody produces seed of either grasses (use cuttings) or stylo (buy seed). Most farmers who grow the grasses and stylo do not sell their grasses and seed, but give them away free to the neighbouring villages who need to grow it.

All farmers use the technology by cutting and carrying to feed their animals. The quantity of grasses that farmers give their cattle is around 20 kg per day and 30 kg per day for buffalos (10% of body weight). For pigs they give 1/3 of stylo mixing with rice bran and maize.
For large animal feeding, most farmers spend an average time of around 1 to 2 hours per day for 2 people for cutting and carrying. For pigs they feed 2 times per day and spend around 30 minutes to 1 hour for cutting and slicing stylo. In Viengxai district, farmers are cutting up to 600kg stylo per season and making up to 30 kg of stylo dried meal. Amongst 2007 cross visit farmers, they have cut 3,050 kgs of stylo and made 153 kgs of hay. They have collected 1,740kgs of manure.

Some farmers cannot weigh livestock but they can observe that the animals are fat, look in good condition, the skin is bright and some farmers can measure by tape around the girth to estimate growth rates. For example, in Viengthong district, the average of growth rate of pigs is around 206 g/day and 487 g /day for cattle.

The mortality of large animals is very low compared with before vaccination and improved feeding and housing.

Livestock sales, costs and profit

In Viengxai district, 3 cross visit farmers sold 15 pigs and got average of 100,000 kip per head. One farmer sold 60 head of chicken amounting to 2,100,000 kip (15,000 kip/head). Another farmer sold 3 buffalos for 8,600,000 kip. In Viengthong district 7 farmers sold 18 pigs and got benefit of 80,000-100,000 kips/head. In PhoneXai district some farmers sold 2 cattle,10 Goats and 8 pigs for 14,300,000 kips with a profit of around 3,310,000 kips.

In Viengxai district the average input cost of pigs is around 100,000 kip per head and 20,000 kip per head for chicken. In Viengthong district the average of input cost of pigs is around 90,000 kip per head. In PhoneXai district the average input cost of pigs is 75,000 kips per head. In Khoun district the average input cost of pigs is 85,000 kips per head. [Note; input costs appear to closely match price received. This may vary depending on age, weight and breed of pigs and needs further investigation.]

Livestock diseases

Diseases have not occurred for cattle and buffalos in Viengxai district up to now, but some families have experienced diseases of pigs, poultry and fish in some villages, including swine fever (pigs), and newcastle disease (poultry). There has been no disease in Viengthong district since they have been participating with the project. In PhoneXai district 5 pigs have died of swine fever disease.

Forage and feeding problems

Up to now there are no problems for Guinea, Brizantha, and King grasses, but stylo was killed by frost in January or February in Viengxai district. In Viengthong district the stylo is growing very well.

Some farmers say the first time it is introduced, pigs do not eat stylo. Some farmers have no more grasses to feed their animals, so they need to increase the new areas in the near future. Most of farmers have no water nipples for pig drinking water. Usually most farmers lack funds to purchase the large animals such as cattle for fattening and some farmers have no more land and insufficient labour.
### Table 4  Changes in forage area and livestock numbers after 12 months (35 farmers)

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>No in HH</th>
<th>Lab</th>
<th>Before cross visit</th>
<th>12 months after cross visit (October 2008)</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cattle Buffalo Goat Pig Poultry</td>
<td>Forages (m²)</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>m²</td>
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<td></td>
<td></td>
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<tr>
<td>1. Mr. Maisy</td>
<td>35</td>
<td>5 2</td>
<td>300</td>
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</tr>
<tr>
<td>2. Ms. Thienne</td>
<td>2</td>
<td></td>
<td>250</td>
<td>1 0 0 2 20</td>
<td>300</td>
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<tr>
<td>3. Mr. Phuangthong</td>
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<td>4 3</td>
<td>400</td>
<td>2 2 0 2 30</td>
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</tr>
<tr>
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<td>6. Mr. Vanekhen</td>
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<td>6 2</td>
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<td>5 2</td>
<td>360</td>
<td>0 0 0 1 15</td>
<td>360</td>
</tr>
<tr>
<td>3. Mr. Hialeu</td>
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<td>7 2</td>
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<td>1 0 0 6 12</td>
<td>400</td>
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<td>462</td>
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<td>0 0 0 3 13</td>
<td>360</td>
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<td>11 4</td>
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<td>0 5 0 2 95</td>
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<td>400</td>
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</tr>
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<td>7. Mr. Yingkongyang</td>
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<td>10. Mr. Nengheua</td>
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<td>-----------</td>
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<td>350</td>
<td>2</td>
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<td>4. Mr. Thongkheua</td>
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<td>625</td>
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</tr>
<tr>
<td><strong>Subtotal</strong></td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Farmer Learning

The farmers who attended the 2007 cross visits had a meeting with farmers in their village after the cross visit. In the meeting they explained about the new technologies they learned from the champion farmers. They focussed on the income generation information from the selling of animals as it is very high income compared with the traditional free grazing system.

Most farmers of each village have meetings at least 1 or 2 times per month to discuss vaccination, parasite control, animal feeding, pasture growing etc. There are now many farmers in each village interested in activities such as pasture growing, animal vaccination, pig housing construction, animal feeding using grasses and stylo, and reducing mortality. Many new farmers in each village agreed with the technologies that the farmers experienced through the cross visit.

The cross visit has given farmers the basic knowledge, skill and experiences of livestock production such as pasture growing and management, livestock feeding systems, animal health, techniques of animal housing construction and animal marketing. However, most farmers said they needed a training course on more advanced livestock production such as piglet production technology, breeding selection, piglet nursery feeding methodology, and more on animal health including parasite control. They want to know the epidemic diseases of large animals, pig and poultry that frequently occur in Lao PDR. They need to attend a special course on basic animal husbandry (eg breeding selection, feeding formulae using the local feeds, piglet, chick and calf nursery systems, epidemic disease, disease control, sick animal treatment).

Planning and Implementation of 2008 Cross Visits

Evaluation of the 2007 cross visits identified a need for cross visits on more advanced livestock production. Koun district farmers requested a visit to Nonghet district where cattle farmers have been fattening cattle and buffalo on a regular basis using forages and feedlots since 2003. The development of pig breeding and marketing systems in Pak Ou district provided a learning opportunity for women farmers from Huaphan province.

Planning

EASLP Project staff from NAFES together with PAFO and DAFO of Xiengkhuang province, (Khoun district) and Huaphan province (Viengthong and Viengxai district) met on 15th June 2008 at DAFO office of Khoun district, and on 16 -17 June 2008 at DAFO office of Vienxai and Viengthong districts to select the PAFO and DAFO staff who would organize this cross visit. One PAFO staff member and one DAFO staff member from each province and district was selected.

All agreed that the district staff would have a meeting with farmers to select farmers who are active in forage growing. The provincial staff would calculate the prices of both cross visits and send to the project coordinator, and the project staff would request the funds from DG of NAFES and send to PAFO to organize the cross visit. Funds would cover travel and materials cost, and perdiem for staff and farmers. Six villages were selected from each district with 24 active farmers growing forages. District staff then met with the target farmers to explain about the objectives and activities of the cross visits. The farmers had a discussion to select the active farmers to be the representatives to attend the cross visits.
Table 5 summarises the number and origin of participants selected including number of women and ethnic Hmong, and the number government staff.

<table>
<thead>
<tr>
<th>Cross Visit Location and Year</th>
<th>Host village and farmers</th>
<th>District visitors</th>
<th>No of visiting villages</th>
<th>No of visiting farmers</th>
<th>No of women</th>
<th>No of ethnic group</th>
<th>No.of staff</th>
<th>Main topic</th>
<th>Year start forages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nong Het district 2008</td>
<td>Ban Sandon</td>
<td>Khoun district</td>
<td>6</td>
<td>12</td>
<td>3</td>
<td>8</td>
<td>3</td>
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<td>2007</td>
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<tr>
<td></td>
<td>Mr. Chia Wa Lor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 PAFO</td>
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<td></td>
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<td>Mr. Nenghongt</td>
<td>Xieng Kuang province</td>
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<td></td>
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<td>EASLP</td>
<td></td>
</tr>
<tr>
<td>Pak Ou district 2008</td>
<td>Ban Hat Khao</td>
<td>Viengxai district</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>DAFO</td>
<td>2006 &amp; 2007</td>
</tr>
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<td>Viengthong district</td>
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<td>Ms. Phong</td>
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</tr>
<tr>
<td></td>
<td>Mr. Xienkhen</td>
<td></td>
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<td>24</td>
<td>14</td>
<td>9</td>
<td>10</td>
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</table>

Table 5  Summary of participants, Nonghet and Pak Ou Cross Visits 2008

**Implementation**

1. **Nonghet Cross Visit**

On 3rd of July 2008 the first cross visit was held at Ban Sandone (Nonghet district, Xiengkhuang province). We visited Mr. Chia Wa Lor, champion farmer, who is fattening cattle using new species of grasses and legume (Guinea, Brizantha, Ruzi and Stylo). He explained his methodologies of livestock production including:

- Back yard forage growing and management,
- Cattle fattening system,
- Feeding system,
- Animal health (disease control, vaccination),
- Marketing system (Income for cattle fattening, benefit per head).

Farmers asked questions such as:

**Q:** How to expand the pasture?

**A:** He expands the pasture by stem cuttings. Using this method is very easy to and the grasses grow well without weed control.

**Q:** How many times does he inject the vaccine?

**A:** 2 times per year. The vaccine that he injects is for haemorrhagic septicaemia, because this disease often occurs in Lao PDR.

**Q:** How to feed the cattle?
A: He feeds the cattle 2 times per day. He cuts the grasses from the back yard pasture, slices into small pieces and puts in the feed trough. Sometimes he mixes the grasses with stylo. He feeds the cattle with fresh grass at 9-10 O’clock and does not leave the grasses for many hours.

Q: *How long does he fatten the cattle for?*
A: Usually he spends 4 months fattening 2 times a year.

Q: *How much does he sell for, per head?*
A: Normally he gets 1,000,000 kip per head.

Q: *How to select the cattle for fattening?*
A: He selects the thin cattle that are still young.

After we finished the discussion at the house, the visitors went to have a look at the back yard pasture and cattle fattening at Mr. Chia Wa Lor’s farm. At his farm there were 4 cattle being fattened and he has around 3 ha of back yard pasture. Mr. Chia Wa Lor feeds his cattle around 20 kg of grasses per day. Regarding pasture management he suggested to the visitors that grasses should be cut 5 cm above the ground and legumes 10 cm. He warned against tying or leaving the cattle on the pasture because the cattle can destroy the grasses.

After the field trip the farmers were divided into groups to brainstorm using the questionnaire that the facilitator (Neuakhom) gave them. Questions included:

- What did you learn from the host farmers?
- What will you do after cross visit, when you go back?
- What are the good points and weak points of this cross visit?
- What do we need to improve for the next cross visit?

After group discussion a representative of each group presented what they had learnt. They reported that they understand and are more confident with:

- pasture growing and cattle and pig fattening by using the new species of grasses and legume,
- managing pasture (eg. cutting 5 cm above the ground for grasses and 10 cm for stylo, fertilizing by animal manure, seed harvesting),
- cut and carry method to feed animals,
- animal health (eg. vaccination),
- animal feeding system (eg. feeding rate, 20kg of grasses per day for cattle,30 kg for buffalo), fencing.
- breeding selection (eg. Often exchanging the bull, not mating between brother and sister)

During the presentations other farmers asked questions and exchanged experiences with each another such as; How to extend the technology of livestock production and back yard forage to other farmers? How to encourage farmers to use vaccines?

They concluded that they must practice cattle fattening and vaccination first to demonstrate this technology so other farmers can follow them (eg headman).

The participants highlighted the following good and weak points of the cross visit.
**Good points:**

- The farmers feel they understand and can adopt the technology of cattle fattening and will expand their pasture areas to produce enough feed for their cattle.
- Learnt about income from fattening
- Good extension team but need follow up by DAFO
- Felt well looked after (ie comfortable)
- Good to have time to plan questions for host farmer

**Weak points:**

- The farmer cannot see the all the activities of champion farmers and not enough time ask the champion farmers individual questions.
- Not enough per diem

**Other comments:**

- Would like to visit another province
- They need a revolving fund to purchase the animals for fattening, in order to increase household income.

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**2. Pak Ou Cross visit**

On 13th of July 2008 a second cross visit was held at Ban Hat Kham and Ban Phay (Pak Ou district, Luangphabang province). The cross visit mission travelled to Ban Hat kham and Ban Phay by bus from Sam Neua in Huaphan province. At the villages Ms. Alill, Ms. Phong, Mr. Khen and Ms. La, explained the methodologies of their pig fattening systems such as;

- Stylo growing and management
- Pig fattening system
- Animal health (disease control, vaccination)
- Animal quarantine
- Improving breeding and piglet production (using Singgu and Large White breeds)
- Marketing system (Income for pig fattening, benefit per head)
Visitors asked questions of the host farmers such as:

Q: How to expand the stylo pasture?
A: They expand the stylo pasture by seed. To do this they cultivate the land and sow the stylo seed in a row (spacing is around 50 cm wide). They also use the stylo seedling to transplant.

Q: How to feed the pig?
A: They feed the pig 2 times per day. They give 1/3 of stylo mixing with local feed such as rice bran, maize or sweet potato leaf. Before feeding they slice the stylo in small pieces. For piglet they use the concentrate, mixing with soft rice bran and broken rice.

Q: Where do they get piglets?
A: Usually in Ban Phay. Some farmers produce the piglets and sell to other farmers.

Q: How long is finishing?
A: Usually they spend for 4-6 months per period

Q: How many times do they inject with vaccine?
A: They give the vaccine 2 times per year. The vaccine that they give is for swine fever, because this disease is common in Lao PDR.

Q: How to nurse the piglet?
A: The piglet needs to have teeth and tail removed after birth. Inject dextran iron 3 days after birth and wean after 30 days.

Q: How to quarantine before fattening?
A: They have a quarantine area outside the village. They keep the pig in the quarantine area for 2 weeks. During quarantine the animals are given antibiotic and vaccine before being taken to the pen. Pens are cleaned every day using a concrete floor.

Q: How much do they get benefit per head?
A: Normally they get around 100,000 -150,000 kip per head. Made 8 million kip last year. Sell as a group to traders

After the field trip the farmers were divided into groups to brainstorm questions such as:

- What did you learn from the host farmers?
- What will you do after cross visit, when you go back?
- What are the good points and weak points of this cross visit?
- What do we need to improve for the next cross visit?

After group discussion a representative of each group presented to the whole on what they had learnt. This included:

- Pig fattening by using the stylo,
- Pig housing and watering systems (eg. dripper for pig),
- Stylo growing and managing stylo pasture (eg. cutting 10 cm above the ground, fertilizing by animal manure),
- Animal health (vaccination, treatment piglet sick by using antibiotic, de-worming parasite),
• Pig feeding system (eg cut and slice stylo to feed the pig, feeding rate of 1/3 of stylo mixed with 4 big bowls of rice bran maize per head).
• Breeding selection (eg. Often exchanging the boar, not mating between brother and sister).
• Sow -piglet system (eg. Teeth and tail cutting and navel cord cutting at 3-5 cm after birth).
• Piglet weaning system (eg. 30 days after birth).

During the presentations the farmers asked questions and exchanged experiences with each another, on topics such as:

• How to extend the technology of pig fattening and stylo growing to new farmers?
• What kind of medicine can they use for de-worming parasite?
• What kind of material can they use for cutting the teeth of piglets?
• They must practice pig fattening and vaccination first to demonstrate this technology to other farmers.

Overall, the participants found the following good and weak points of the cross visit.

**Good points:**

• New farmers have an opportunity to learn and share ideas about pig fattening and stylo pasture establishment from farmers who have attended the cross visit in Pak Ou district.
• They will improve the pig housing and feed trough system, increase pig fattening and producing piglets for sale, make stylo hay to feed the pigs in dry season, improve the feed formula for pigs to be high quality.
• They will improve their breeding by selecting good boar and sow to produce the piglets.
• They will extend the technology of pig fattening and stylo growing to other farmers.

**Weak points:**

• Long way to travel, need to see more examples, spend more than one day visiting villages.
• Need at least 2 representatives from each visiting village
• Plan budget to cover all costs

**Other comments:**

• Need to keep sharing experiences with the group
Follow Up and Evaluation of 2008 cross visits

District staff from Koun, Viengxai and Viengthong districts have been funded to follow up the 24 farmers who attended the cross visits to Nonghet and Pak Ou. The first visit in October 2008 resulted in the livestock numbers shown in Table 6. After three months there has been an increase of 25 cattle, 6 buffalo, 15 pigs and 131 poultry and expansion of 24,400m² in forage area mainly in Koun district.

Variations in livestock numbers between districts is shown in Figure 2 below.

The doubling of forage area in Koun district and rapid increase in cattle and pigs has been due to Hmong farmers having greater land availability and funds to purchase cattle. The cross visit to Nonghet enabled them to see large areas of grasses being used by another Hmong farmer and has given them confidence that they can establish a permanent feed source for fattening cattle. The Nonghet farmer and DAFO staff explained how to expand using grass cuttings, and the climate in 2008 was favourable for transplanting forages due to an extended wet season.

Farmers from Viengxai and Viengthong districts appear to have plenty of family labour but perhaps don’t have enough land to expand their forage area or enough ready cash to purchase boars, piglets, vaccines and rice bran. It may take more time for them to breed their own piglets, control diseases and fatten on a regular basis. As women farmers they may also have other family and farm commitments that prevent them from expanding their pig production.

Past experience with the Forages and Livestock Systems project has shown that farmers don’t systematically expand their livestock numbers until years 3 or 4 after planting forages. It takes time to build confidence in the practices, save enough cash to build housing and vaccines, iron out problems as they arise and start investing funds back into livestock purchase.
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<th>Name</th>
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<th>No in HH</th>
<th>Labor (head)</th>
<th>Before cross visit</th>
<th>Three months after cross visit (October 2008)</th>
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Conclusions and Recommendations

The 2007 and 2008 cross visits gave farmers the basic knowledge, skill and experiences of livestock production such as pasture growing and management, livestock feeding systems, animal health, techniques of animal housing construction and animal marketing. However, most farmers said they need further training in piglet production, breeding selection, and advanced animal health including parasite control. They also want to know more about the epidemic diseases of large animals, pig and poultry that frequently occur in Lao PDR.

There has been widespread dissemination of the information gained at the cross visits through regular village meetings and family networks. Staff also report an impressive increase in the number of families adopting forage use and improved animal husbandry across all four districts. This has been due to the ongoing efforts of district extension staff in visiting all farmers to give advice and assistance, not only those who attended cross visits.

The cross visits have served the purpose of stimulating farmer interest and capacity in livestock production. There is now a critical mass of farmers within each district who can teach other local farmers without the need to go outside the district or province. The EASLP can now focus on new districts using these four districts as sources of local expertise.

This evaluation has also highlighted areas needing improvement such as greater involvement of poor households and women, more time spent on field visits to allow meaningful farmer to farmer discussion, greater attention to farmer feedback sessions, and more time for reflection and learning between activities.