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1. Introduction

The Extension Service in Vietnam is fairly young. Many of the staff has previously been involved in state management of production, allocation of production quota and input supply. While in the lowland the continued focus on seed supply has been very successful, many obstacles are faced in remote mountainous areas, like Lai Chau. In view of highly variable production conditions – marked annual differences in weather, variations within small geographical areas – a different approach is needed. This new approach is often called "demand-based" extension. It focuses on extension workers facilitating identification of suitable options for each individual farmer by giving him decision tools rather than prescribing technical solutions. And this approach is needed now, as there are an increasing number of technical options available, where only the farmer knows what is suitable for his condition.

The main objective of this paper is to present a new approach to extension. This approach is described in a very practical way based on the experiences of the Agricultural Extension Station (AES) in Tua Chua. By documenting this approach, we want to invite agricultural extension stations of other districts to consider if this extension methodology might be applicable in their districts and to test as many elements as they consider useful. We are looking forward to your comments and experiences.

The structure of the document is as follows:

Extension starts with planning: This document first gives a short explanation of the village development planning (VDP) in chapter 2. This is a participatory planning of activities in a village for one year. The activities planned by the villagers are based on their problems and their capacity to solve problems. This paper will focus mainly on agricultural activities carried out by the AES although the VDP is not limited to agricultural activities nor by assistance of AES only.

The extension methodology depends very much on this participatory village development planning. By defining themselves their problems and opportunities, the farmers will be motivated to do the activity, even without assistance from outside. If the AES has possibilities to support the farmer in technical matters and not only input supply, the development process in the village could become more efficient. Chapter 3 describes in detail the steps that are necessary in the field after VDP in order to specify activities and the support of the Extension Station.

For each activity in agriculture a design phase, monitoring phase, and evaluation activities are described. The design of an activity contains a discussion with the villagers about objectives, problem analysis and potential solutions. Concerning the monitoring visits the criteria for monitoring are formulated (what, when, who, where to monitor). The harvest day is used to evaluate the activity when it concerns agricultural crops. At the same time the villagers can have a first conversation what kind of follow up for this activity should be taken up in the VDP for next year.

The second part of chapter 3 deals with the establishment and coaching of interest groups. Only the bee keeping activity in Tua Chua has set up interest groups. They seem to be very effective. But for other activities interest groups did not yet work. In order to improve farmers’ access to information it is well worth to analyse the options of forming interest groups and provide more background information how these interest groups function.

From theory to practice (chapter 4) tries to make clear how this extension methodology is done in Tua Chua in terms of the administrative office work. Planning, administration, monitoring and evaluation, task division and division of responsibilities are tasks that have been tackled. Furthermore, procedures have been devised for getting feedback information per activity, which is necessary to analyse each activity. The forms, guidelines and extension materials give very practical information of how the management can work with this extension methodology.

How can a district extension station apply this new methodology? Training is a very important issue in learning the extension methodology and in order to disseminates this extension methodology. Training is needed for different levels and on different topics. After initial training, courses need to be continued also during implementation. What exactly are training and which training is needed is discussed in chapter 5. Outlines for training’s given in Tua Chua are presented as examples.

Last but certainly not least the financial requirements need to be discussed (chapter 6). Budget allocation is very important and the very heart of good management. Practical information is provided on budget allocation in Tua Chua. Review of budget allocation is a very important management tool within AES.

2. Planning extension activities in the village

Agricultural extension is one of many services provided to the village from various sources (i.e. national programs, regular government budgets a.o.). In order to coordinate between the main service requirements of a village and the services available, a general decentralized planning process called Village Development Planning has been tested and recommended by SFDP. This process has been approved by the Son La People’s Committee in March 2000 and detailed guidelines have been completed.

Village Development Planning is based on a problem analysis within the village. After a discussion of problems, the identified problems are prioritized and solutions are proposed. The solutions then enter the Annual Village Development Plan, indicating clearly the responsibility of the village and the concerned district service administration. They are submitted as proposal to the commune and district level and provided the district has the required funds and approves them, they are implemented jointly within the following year. Within the village, a Village Management Board is responsible for the organizational matters and the committed village contribution.

Agricultural problems and proposed solutions are part of the Village Development Plan and provide the framework for the activities of the extension service, the plant protection service, the seed supplier and the veterinary service. The following examples illustrate problem analysis and proposed solutions with regard to agricultural issues:

Table 1: Examples of problem analysis and proposed solutions

<table>
<thead>
<tr>
<th>Problem</th>
<th>Causes</th>
<th>Proposed activities</th>
<th>Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food shortage</td>
<td>Decreasing soil fertility</td>
<td>Test application of green manure</td>
<td>Sufficient food supply</td>
</tr>
<tr>
<td>Soil erosion</td>
<td></td>
<td>Test hedgerow establishment</td>
<td></td>
</tr>
<tr>
<td>Shortage of irrigation water</td>
<td></td>
<td>Construct a small dam</td>
<td></td>
</tr>
<tr>
<td>Paddy land not used for crops in winter due to grazing</td>
<td>Discuss grazing regulations within the village</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low paddy rice yields</td>
<td></td>
<td>Test a new paddy rice variety</td>
<td></td>
</tr>
<tr>
<td>Low cash income</td>
<td>Low maize yields</td>
<td>Test financial gain from phosphor application</td>
<td>Higher cash income</td>
</tr>
<tr>
<td>High calf mortality</td>
<td>High calf mortality</td>
<td>Test financial gain from deworming calves</td>
<td></td>
</tr>
<tr>
<td>Long fattening cycle of pigs</td>
<td>Long fattening cycle of pigs</td>
<td>Analyze options for improving the feed ration</td>
<td></td>
</tr>
<tr>
<td>Low fish productivity</td>
<td>Low fish productivity</td>
<td>Analyze production system by fish expert</td>
<td></td>
</tr>
</tbody>
</table>

Following the analysis of the problems and a definition of the potential solutions, solutions are entered in the Village Development Plan, based on a discussion of village capacities and priorities as well as on district capacities and priorities. The format for this annual Village Development Plan is shown in the following table:

Table 2: Examples of a village development plan

<table>
<thead>
<tr>
<th>No.</th>
<th>Activity</th>
<th>Unit</th>
<th>Quantity</th>
<th>Time</th>
<th>Responsibilities/Tasks</th>
<th>Other depart.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>冯植. of green manure on paddy</td>
<td>Household</td>
<td>2</td>
<td>Start</td>
<td>Village</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Establish grazing regulations</td>
<td>Doc.</td>
<td>1</td>
<td>Finish</td>
<td>AES</td>
<td>Other depart.</td>
</tr>
</tbody>
</table>

An example of a final Village Development Plan for the district is given in Annex 1. Please note that more details on Village Development Planning are described elsewhere.

Before the discussion in the village starts the agricultural service providers have to analyze the political framework as well as the staff and financial capacity for the following year.
3. Designing and implementing agricultural activities in the village

In the last Chapter different types of service activities of the agricultural sector were listed. This Chapter particularly explains the process for implementing successful trials and for supporting producer groups for bees.

After the village has made the VDP and the approval of the authorities, the Agricultural Extension Station (AES) makes a feasibility plan concerning the activities they can support and the budget they have (see annex 4). The relation between this yearly planning and the VDP is shown in graph 1.

Graph 1: The graph above shows the relation between the VDP and the extension methodology.

3.1 Communication between the extension workers and the farmers

In order to improve the communication between the extension worker and the farmer, the following procedures were improved within the AES:

- Asking many questions to the farmer in order to get the problem of an activity very clear. Questions like: why, what, how, who, where and when.
- Planned visits were fixed on clear dates (every two weeks on a Monday morning or every 2nd of the month)
- Clear responsibilities of the actors involved (farmer, VMB, commune extension worker, extension worker and the management of AES)
- Use of the commune extension worker who can help to translate the discussion in the first meeting and at harvest day or field day
- Developing drawings and other kind of tools which are more understandable for literate people.

3.2 How to design and implement trials for annual crops

The trial has to respond to the demands and difficulties of the farmers as they were listed in the VDP by the farmers. Further discussion with the farmers is needed in the first meeting (see chapter 3.2.1). The trial needs to have a control plot. In the control plot the farmer will apply his traditional technique. The other part of the plot will be used by the farmer with only one new technique. The other conditions should be exactly equal in order to compare the two techniques based on only one technical difference. Some other basic rules are that the test is not too risky for the farmer and is suitable with the investment possibilities of the average farmer in the village.

3.2.1 Design and implementing an activity

For each activity they organize a first meeting in the village in order to discuss with the farmer the following subjects. They are also described in the guidelines for the extension worker (see Annex 2):

- the objective of putting this activity on the VDP
- analysis of the problems concerning this activity
- priority of the problems
- definition of the problem
- discussing the causes of the problem
- discuss possible solutions
- explain how to make a trial & demonstration (see above)
- which farmers are interested to participate in this activity
- which farmer takes responsibility to do the trial & demonstration (sign a contract, see annex 16)
- draw a plan of the trial plots
- explain the use of the notebook the farmer has to fill in regularly
- monitoring schedule of the extension worker; what, how, and when to monitor
- division of the responsibilities for farmer, commune extension worker, district extension worker and village management board (see annex 16)

3.2.2 Monitoring the activities
Every monitoring visit all interested farmers are invited to come to the trial & demonstration plot. The extension worker will discuss with the farmers the development of this activity. If farmers ask for specific information, the extension worker can explain more about this subject. Usually questions about how to prepare the soil will arise at the first meeting. Questions about how to sow the crop will follow in the sowing season, etc.

During the monitoring visits the extension worker gathers important data and makes a summary of the content of the discussion in a document (see Annex 3).

3.2.3 Evaluate the activities

When the activity finishes, usually at harvest time, all farmers in the village are invited to come and see the results of the trial or demonstration during a field day. The farmer who took responsibility to do the trial will report especially to those who did not visit the monitoring visits, the results of the trial. He therefore got a logbook to keep record of data, which are important to evaluate the activity. For example, kg of seed, kg of manure, kg of fertilizer, costs of the seeds, costs of fertilizer, labor-inputs, kg harvest, etc. If the farmer cannot read or write, he will usually find somebody in his village or his family who can help him/her.

During this evaluation the village can tear itself some conclusions. They also can decide if this activity needs some follow up in the next year and if they think it should become again on the VSP of next year. This makes the cycle complete and it will start from the beginning again. Every year activities can be left out and others can be put in.

Dissemination and follow up activities of a successful trial (e.g. seed supply in the same village, demonstrations in other villages) should be done by organizing meetings between different villages. Exchange between farmers is far more effective than between farmer and extension worker. The reasons herefore are language, culture, explaining phenomena with their own terminology, etc.

3.3 Supporting improvement in animal husbandry: the example of interest groups for bee keeping

Step 1: To evaluate situation of beekeeping in the village and to define difficulties of beekeeping activity.

Objectives:
- To analyze the situation of beekeeping in the local place
- To define the advantages and disadvantages of the beekeeping activity in the village. (forest area, flower...)
- To define the main causes of difficulties and to find feasible solutions

Step 02: Meeting, discussion about the implementation of the beekeeping activity

a) Objective:
- To discuss the advantages and disadvantages of the new beekeeping techniques according to the guidelines for extension workers in the first meeting (see annex 2)
- Use the farmer’s knowledge of traditional beekeeping techniques
- Discuss about visit schedule of the extension worker and the assistant of the extension worker concerning beekeeping activities

b) Implementation time: 01 day (March - April every year)

c) Participants
- Village Management Board (VMB), commune extension workers and all farmers of the village. (VMB organizes the meeting)
- Extension workers

d) Materials & tools
- Pictures, drawings, about the beekeeping activities
- Improved beehive
- Videotape of beekeeping. The problem with the videotape is the lack of electricity in the village. To transport a generator to the village is difficult.

e) Contents of the meeting

- Discuss about advantages and disadvantages of beekeeping activity in the village. Some difficulties of the beekeeping activity are:
  - The bees fly away
  - Low production of honeybee
  - Worms can destroy the beehive
  - Harvesting techniques

- Discuss about solutions:
  - Training techniques of beekeeping
  - establishment households
  - beekeeping in order to exchange experiences and learn from each other

- Discuss about beekeeping techniques:
  - Techniques to change a group of bees from one beehive to the other
  - To discriminate kind of bee.
  - Difference between dividing bee group’s naturally and when we divide them by ourselves
  - How to prevent the bees from flying away
  - How to prevent that a big robbing bee robs the honeybees and other enemies of the bee
  - How to prevent that the working bees are going to lay eggs
  - How to feed bee
  - How to prevent the beehive against weather (cold, hot...) for bee.
  - How to harvest honeybee

Step 03: Establishing interest beekeeping groups

a) Objective:
- Farmers help and work together in order to develop beekeeping activity
- Extension workers can be more effective concerning the beekeeping activities

b) Criteria for being member of the interest beekeeping group in the village

- Volunteer to take part in the interest beekeeping group
- Enthusiasm for beekeeping activity
- Like to learn

C) Structure of the interest beekeeping group

- Leader of group
- Vice-leader of group
- Secretary (if need)
- Members

Step 04: Make regulations of the interest beekeeping group
a) Role and tasks of the members of the beekeeping interest group.
- Help and work together to develop beekeeping activity
- Participate in all meetings
- Inform about beekeeping techniques and their effect
- Other people can take part in the group in order to expand the interest beekeeping group

b) Contents of the meeting
- Discuss schedule and content of the monthly meeting
- Discuss role and responsibility of leader, vice-leader, secretary and all members of group

Step 05: Make the yearly planning of the interest beekeeping group

Objective: Agree on all activities in one year, responsibility of the interest beekeeping group and extension workers.

Step 06: Organize the meeting group
- Leader or vice leader of the group organizes meeting. Contents of meeting include:
  - Evaluate plan last month.
  - Make plan for next month.
  - Time: From 28 to 30 of every month
  - All members report about situation and the work they have done
  - The group leader summarizes and writes the information in his/her notebook
  - After that compare with plan and know exactly what things they have done and what things they have not done yet
  - Find out main causes and give good solutions

Step 07: Evaluate yearly planning
a) Objective: Evaluate results of the interest beekeeping group after one-year operation

b) Contents of evaluation
- Total number of beehives
- Harvest of honeybee
- Number of divided beehives
- The group members help and work together
- Income from beekeeping activity
- Difficulties of developing beekeeping activity (knowledge, capital...)

Step 08: After one year of operation of the beekeeping interest group

Every quarter the beekeeping interest groups of a commune will meet each other at commune level to exchange information on beekeeping activities in their villages. At this quarterly meeting the extension worker will participate. She will reduce thereby here monthly visits to each new beekeeping interest group to 1 quarterly meeting at commune level. The beekeeping interest group has to continue more independent.

4. From theory to practice: Management issues

4.1 Introduction

The extension methodology in the field is well explained in chapter 3. In order to facilitate this fieldwork, practical tools should be provided to the management of the agricultural extension stations.
- The management should use clear planning tables as well as when to do the planning and how to involve its staff in this planning.
- Monitoring and evaluation are very important to solve problems before they become irreversible and to put priorities to certain activities. M + E is also important to take further decisions on management level.
- Task division and the division of responsibilities of AES staff and management, commune extension workers, VMB and farmers are very important to work efficient.
- Extension materials are to be developed, especially because many farmers can not speak, do not write nor read the Vietnamese language.
- Administration is important in order to inform the management about what their extension staff is doing when, where and how. The administration provides necessary information for monitoring.
- Budget allocation is important. It must facilitate smooth implementation, flexibility in case of changes being required, and motivation of staff. A separate chapter (Chapter 6) is devoted to this issue.

4.2 Planning is a major prerequisite

Planning by the management is done every week, month, quarter and year.

Every year the management has to decide which activities in which the extension workers will guide villages (see annex 4). This selection is based on the demands from the villages (VDP) and reviewed according to the capacity of the extension station. Final plans must fit into the frame of the budget as well as the capacity of the extension workers (time available and skills of the extension worker). Each extension worker should get the responsibility of some fixed activities in a certain commune according to their skills and the time they will be available (see example in annex 7). A meeting should be organised by the management in order to make a more detailed planning together with the district staff of AES as well as the commune extension workers. Date, duration and participants see table 3.

Quarterly planning does not yet exist in Tua Chua. In the near future we hope to establish this quarterly planning also in the toolbox for the AES management. The main reason is to invite every quarter also the commune extension workers and incorporate their planning in the planning table of the AES in close collaboration with SFDP, Debt Swap, SNV and any other institutions or organisation who work in close collaboration with the commune extension workers. Date, duration and participants see table 3.

Each month the management of AES should organise a meeting in which the planning for the coming month is discussed with their staff (see annex 5). The monthly planning is mainly based on the yearly planning in which the time to start until the time the activity will end is mentioned. However, review of the activities not yet completed in the on-going month will require changes for the next month. Thus monthly planning always starts with the evaluation of the on-going activities. In addition, Extension workers have made appointments already with farmers, VMB’s and commune extension workers. These must be incorporated in the monthly planning. Date, duration and participants see table 3.

Every week on Friday the management of AES makes a weekly plan (see annex 6) based upon the monthly planning and in consultation with all extension workers. Because of short-term changes (illness of an employee or other circumstances) it might be a little different from the monthly planning. Date, duration and participants see table 3.

Table 3: Overview of planning meetings

<table>
<thead>
<tr>
<th>Type</th>
<th>Timing</th>
<th>Duration</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Meeting</td>
<td>16 - 31 November</td>
<td>3 days</td>
<td>Management of AES</td>
</tr>
<tr>
<td>Quarterly meeting</td>
<td>20 - 31 of each quarter</td>
<td>1 day</td>
<td>Management of AES, Extension workers, commune + district, Other partners</td>
</tr>
<tr>
<td>Monthly meeting</td>
<td>20 - 31 of each month</td>
<td>1 day</td>
<td>Management of AES</td>
</tr>
</tbody>
</table>
4.3 Monitoring and evaluation to improve services

For the extension worker, organising the work in the village effectively is a difficult task. It becomes a bit easier, if the work is well structured in advance and the objectives of the visit are clear. Before each visit the extension worker has to fill in a form in which he or she informs the management about the objective of the meeting and the topics to be discussed by formulating questions (see annex 8). After agreement of the management the extension worker will go to the village and do his/her work. After the visit to the village the extension worker fills in the form with the results of the discussion. This planning tool not only improves implementation quality, but it also functions as activity monitoring tool: it makes the management of AES well aware of what their staff is going to do, why and how they are doing their work. After the village visit is completed the management can get clear information about the results.

How to make a monitoring plan for the management of AES. This monitoring plan is now made and executed by SFDP and SNV (see annex 17). In the future the management of AES has to take over this responsibility.

Secondly the extension worker has to fill in the standard form in which the progress of each activity per village is recorded (see annex 3). In this standard form the results of every visit are recorded. Not only general remarks but also specific data are gathered, which are of crucial importance for extension as explained below. Important data are the inputs like kg and price of seed, labour days, kg and price of chemical fertiliser, kg of animal manure, kg Ha, price of herbicides/pesticides, etc. On harvest day (especially for crops) it is very important to gather productivity data for the trial or demonstration. Productivity should be measured together with the extension worker, commune extension worker, the farmer and other villagers. Filling out this form ensures that per village an up to date record is available of the actual situation for each activity. This standard form should be kept by the extension worker but must be available for the management if they need detailed information. At the end of each activity these forms should be provided to the management in order to make the yearly reports and draw conclusions for the most effective activities in the following year.

4.4 Task division and division of responsibilities

In an organisation it is very important to make clear who is responsible for what. Not only between management and the staff of AES but also the role of the VMB, commune extension worker and the farmer need to be clarified. This will make the organisation more transparent and people then know clearly their duties and responsibilities.

How to discuss division of tasks and responsibilities? In every situation, division of tasks depends on individual capacities. Therefore it is important to discuss this task division in each district. An example of the task division in Tua Chua is given in Annex 7.

Division of tasks between staff: Above it has been mentioned that in the annual plan each extension worker should be responsible for a certain activity in one location from the beginning to the end. In addition, it is useful to give the extension worker geographical responsibility for a certain number of villages, as he is then able to combine his work effectively for a number of activities.

Division of tasks between AES management and district extension workers: The extension worker is responsible for what is happening in the field and the detailed reports including all necessary data. The management is involved in the planning (as detailed above), provides financing and support when problems arise and is responsible to monitor the activities of all extension workers including the quality and effectiveness.

Division of tasks between district extension worker and commune extension worker: Activities of the district extension worker need to be followed up and prepared in the field. The main task of the commune extension worker is to facilitate the communication between the district extension worker and the farmers. Inform the VMB and the farmers about meetings, translate during important meetings, help farmers to write necessary data in their logbook, make monthly and quarterly reports and planning’s.

Division of tasks between commune extension worker and VMB: Within the village, the VMB secures the interest of the farmer. The commune extension worker informs the VMB about planned and executed activities in the villages.

Division of tasks between VMB and the farmer: The VMB secures the interest of the farmers. But the farmers are responsible to execute the trial and to give feedback after the trial has finished. The farmers should be indicators for the next VDP.

Especially, when a new extension approach is implemented, it is important to regularly review the division of tasks. Changes should be considered at the end of a cropping season or (if that time extension is too busy) at the end of the year.

4.5 Quality of data information and data storage is important for increasing yields

In order to improve agricultural productivity we need accurate information on how a new technology or management option is effecting yields. Does an increase of P-fertiliser on paddy rice really increase the farmer’s income or does the additional revenue barely cover costs? When is the best time to fertilise? If P-fertiliser increases yield on this field, is this true for all the paddy in the village?

In order to improve agricultural productivity and to answer these questions, we need to do tests in the field. And after we have done tests, we need to evaluate technical and financial results thoroughly, compare them with other results, and test them again. Only on the basis of repeated trials the extension workers can give the farmer valuable information on how to improve his income in his specific case.

Gathering data is often very difficult. Therefore many extension workers and farmers do not like to put a lot of effort into it. Only, if we all understand the need for this information, we can expect that the data be collected thoroughly.

The more accurate the data, the better the management and the extension staff together with the farmer can analyse this information. Estimations are difficult to check on their reliability as well as the lack of knowledge of farmers about our way of measuring in hectares, labour days, kg of manure, etc.

Storing data: In order to have the information accessible, it is necessary to keep it in a standardised form (see annex 3). In Tua Chua technical and economic “Fact sheets” are used to store the information of all trials over the years (see annex 9). These fact sheets are consulted when the design for the upcoming trials is discussed.

4.6 Extension materials improve extension efficiency

In this extension approach, facilitation of technical improvements is seen as more important than input supply. The steps in the facilitation process include a lot of discussions on technical measures and alternatives. It is often a problem that technical proposals are difficult to explain orally, e.g. grafting fruit trees or planting hedgerows is more easily shown on pictures, fertiliser amounts are more easily written down. Furthermore, things discussed orally are easily forgotten without written or ‘picture’ reminders. Therefore good extension material is of the utmost importance in order to improve the communication between the extension workers and the farmers (men and women).

In addition to the material used during VDP, Tua Chua extension is using 3 main types of extension material:

A. Extension posters to explain technical options during meetings: The understanding of farmers and thus the effectiveness of a meeting are often enhanced, if new ideas are presented on posters. For the individual extension worker it is very difficult and time-consuming to make this material for his own work. Instead, the extension station may design certain materials to be used as standards.

Examples are pictures on hedgerows, pictures on bee keeping. The painted posters are not expensive (50.000 VND per poster). The advantage is that this poster is easy to change certain materials to be used as standards.

Estimated inputs: 1 working day 35.000 VND Material 10.000 VND Total for 1 poster 45.000 VND

Plastic printed posters should be ordered in bigger quantities and are expensive. Changes after printing are not possible anymore.

B. Extension leaflets as reminders for farmers: The most basic reminder, extension worker can leave behind is a written summary of the main points agreed upon (e.g. using the structure of technical fast sheets for trial design, leaving written minutes of meetings). However, as most farmers do not have a lot of exposure to written texts, they are often put aside and forgotten.
It is very difficult and time-consuming to develop good extension material that farmers really use. Good extension material should be concise and repeat the main points the farmer has to keep in mind. A small leaflet is in many cases a good option (see example for LVN10 maize in Annex 10). A combination of pictures and text is easy to understand: the more pictures and less text, the more farmers can understand and keep in mind.

After some introduction it is easy to design leaflets. They are of low-cost (40.000 VND/100 copies) and easy to update when new information has been gained from trials. However, as so far, extension has not monitored closely if these leaflets are actually used by the farmer for reference and if they are actually useful.

C. Posters as reminders for farmers:

An example is the poster on hedgerows. Advantage/Disadvantage compared to brochures: it can be placed in meeting room of VMB or interest group. Estimated costs: 1-2.000 VND.

Extension material for illiterates: In Tua Chua the extension staff is well aware of their limitations in extension work that largely depends on written information. Especially H'Mong farmers do not speak very fluently Kinh language. Most of them cannot read nor write. This makes the extension materials, in which written and spoken words in Kinh language, the main obstacle to improve the communication with the farmers. In Tua Chua the H'Mong women were almost excluded from the extension service because they didn’t understand Kinh language at all. Therefore, it is important to use pictures in extension. Developing drawings makes the extension livelier and therefore very important to open discussions with the farmers. Everybody can understand drawings but written words are only accessible by those who have been to school for several years. Some extension materials developed in Tua Chua will be presented in this workshop.

Sources for extension material: Not all extension material has to be developed at the extension station as the AES did for bee keeping in Tua Chua. Some other materials can be used coming from province or national level. However, it is important to be aware that the situation in every province or district or even village might be different. Standardised extension material from other areas may bring about confusion.

Experience with other means of extension materials: Theoretically, a number of other visualisation materials can be used; however costs and labour inputs limit their use.

Photos are a good tool during meetings, when a new idea can be documented (e.g. photos on hedgerows in another village, photos on maize trials, video, etc.). It is however not easy to make good photos that really visualise an idea, it takes specific planning to be in the field with the camera at the right time. While pictures can be covered with plastic and shown in the village, slides and videos are more difficult to make and to present. Videos are recently made on bee keeping, hedgerows and trials of applying manure in maize on paddy land. The major problem is lack of electricity in the villages. In order to show the video a car is needed to transport the generator to the village. This is difficult because the lack of good infrastructure to the village, high costs and difficult planning because of logistics.

3D models, transacts and other (PRA) tools have been used. The farmers were provided with drawing material and in order to make themselves drawings or designs in order to analyse their farming system. Evaluation of these tools is still pending.

Public relations material: It is important to differentiate between public relations material and extension material. Many potential extension tools are not useful to give specific technical information to a farmer, but they may be useful to facilitate his general interest and a positive disposition towards extension.

5. The need for training

For extension workers to change from being a seed supplier to being a facilitator requires many new skills. For getting these required skills training is needed.

There are many kinds of training. The classic way of giving training is the classroom training. You will have a teacher lecturing to a group of students. Another kind of training which seems to be much more efficient is working in sub groups with concrete examples. It is well known in adult education that people remember 20% of what they hear and see and 80% of what they hear and see and 80% of what they did and practised themselves. What is relevant when assisting the farmer about new agricultural techniques is also relevant when teaching extension workers: they have to learn about a new extension methodology and at the same time go to the village to practice it.

Most efficient in Tua Chua was training and assisting the extension worker when he or she went to a village. After the village meeting an evaluation of their extension skills was heard and see and 80% of what they did and practised themselves. What is relevant when assisting the farmer about new agricultural techniques is also relevant when teaching extension workers to change from being a seed supplier to being a facilitator requires many new skills. For getting these required skills training is needed.

While pictures can be covered with plastic and shown in the village, slides and videos are more difficult to make and to present. Videos are recently made on bee keeping, hedgerows and trials of applying manure in maize on paddy land. The major problem is lack of electricity in the villages. In order to show the video a car is needed to transport the generator to the village. This is difficult because the lack of good infrastructure to the village, high costs and difficult planning because of logistics.

3D models, transacts and other (PRA) tools have been used. The farmers were provided with drawing material and in order to make themselves drawings or designs in order to analyse their farming system. Evaluation of these tools is still pending.

Important are the training outlines (an example is given in annex 11). All training should have clear training outlines. These training outlines should contain the following subjects:

- Problem statement
- Training objective
- Target group
- Learning objective (obliged and optional)
- Method or exercise
- Time
- Responsibility
- Evaluation

5.1 General training needs

From our experience in Tua Chua and many discussions with AES management and their staff the following training needs were defined on different levels.

Management of AES

- Planning
  - yearly planning
  - monthly planning
  - quarterly planning
  - weekly planning
- Monitoring and evaluation
  - Introducing forms in which the management of AES knows who of their staff is doing what, where, when and how.
  - Monthly meetings with all staff of AES in which they report about the activities of last month and plan for next month. Problems should be discussed and potential solutions proposed.
  - Monthly meetings with all staff of AES in which they report about the activities of last month and plan for next month. Problems should be discussed and potential solutions proposed.
  - Regular field visits of the management of AES with the extension worker in order to understand better the difficulties the farmers and extension workers face in their daily work.
  - Discuss the responsibilities of the farmer, VMB, commune extension worker, district extension worker and the management of AES
  - Develop guidelines and manuals as well as clear forms

AES staff and commune extension workers

- Training about the strengths, weaknesses, opportunities and threats of the extension service
- Training to improve the extension worker and the farmer: How to ask questions? How to facilitate meetings?
- Training about the responsibilities of AES management, the district extension worker, the commune extension worker, the VMB and the farmers
- Training on farming systems and farm-household economics

Generally it is relatively easy to define a training topic (10 minutes discussion), but it is very time consuming to develop a good training course. For a one-day course, at least 5 days of preparation are required. And most times, only after a few repetitions of the same training course, a comprehensible balanced structure is found.

The first step after defining a training topic is to identify training objectives, persons that need training (there maybe different groups that need different training), learning objectives, method and/or exercises, timing, duration, potential teachers and their qualifications and. These specifications are called training outlines (see table 4).
Training outlines are a necessary basis for making detailed (e.g. hourly) time schedules for the training. They are furthermore used to evaluate the training afterwards; i.e. they allow for a comparison between the planned objectives and their fulfillment. An example of training outlines is attached in Annex 11.

The actual training tool consists of handouts and visualisation material for the participants.

All training documents developed and used in Tua Chua are available; including outlines (specifying objectives, etc.), time schedules (specifying training methods) and evaluation sheets (analysing results). These documents could be the basis for developing courses in other districts.

5.2 Training step by step: Example training plans for the 1st year

When a district extension station decides to change its extension approach, all of the above training topics become relevant. However, the time spent with training and with preparing training courses has to be realistically estimated. As not all courses can be implemented at once, the question is Where to start? How to start?

The following steps have to be taken by the management of AES regarding implementation of training topics:

a. Based on the discussion of training, training needs analysis (Strengths, Weaknesses, Opportunities and Threats = SWOT) should be held (see annex 12). Training topics should be prioritised.

b. Based on working schedules, a training plan should be outlined, for example: a 2-day training per month for district extension workers and a half-day training for commune extension workers, 1 coaching visit/month for commune extension workers.

c. Develop clear training outlines and manuals for the main training topics (for an example see annex 11), e.g. for training on trial and demonstration, for training and discussion about responsibilities and duties, training to improve the communication with the farmers, etc.

Table 5: Training programme implemented in Tua Chua during the year

<table>
<thead>
<tr>
<th>Topic</th>
<th>Target group</th>
<th>Date/Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong and weak points of AES</td>
<td>AES staff</td>
<td>07/06/1999</td>
</tr>
<tr>
<td>Communication with the farmer</td>
<td>AES staff</td>
<td>25/06/1999</td>
</tr>
<tr>
<td>Objectives and target group of AES activities</td>
<td>AES staff</td>
<td>13/08/1999</td>
</tr>
<tr>
<td>Trial and demonstration</td>
<td>AES staff, DARD staff and commune extension workers</td>
<td>17-18-19/11/1999</td>
</tr>
<tr>
<td>Training of farming systems</td>
<td>AES staff</td>
<td>28/04/2000</td>
</tr>
<tr>
<td>Exchange of experience with AES of Son La and Thuan Chau</td>
<td>AES staff of Tua Chua, Son La and Thuan Chau</td>
<td>16-17-18/05/2000</td>
</tr>
</tbody>
</table>

In addition to classroom training with an outside teacher/facilitator, exchange between extension workers of different areas (communes) is a very effective training tool. Listening to the problems other colleague’s face and the solutions they found to their problems can be very helpful in the learning process of the extension workers.

6. Financing requirements and financial issues

This is definitely one of the most important chapters of this document as funding and budgetary allocation is the basis for being able to apply the new extension method. Main elements are described below:

**Design of budgetary lines must be open:** Currently in Lai Chau, annual budgets to district extension stations consist of the regular extension budget, based on standard payments for predefined activities (e.g. setting up 10 ha of a new rice variety). The financing is provided in cash or in kind (e.g. seed, 1 breeding bull, and breeding goats). Additional budgets may come from other sources (e.g. Coffee Company, silk company, and veterinary station) and are similarly fixed to predefined issues. This predefinition does not allow the necessary flexibility to react to village demands.

**Total budget demand:** In Tua Chua, agricultural extension activities have been expanded slowly from a few villages in 1997 to meanwhile 33 villages in 2000. In order to respond to a few of the village requests, an average budget of 3,400,000 VND has been used. The annual budget that has been used over the last 2 years amounts to 90-100 Mio. VND. Out of this amount, about 52% have been spent on village activities, 20% on training of extension workers, and 8% on study tours of farmers, extension workers and management. Other categories, which have been differentiated, are: management fee (2%), photocopies (2%), support to the veterinary station (10%) and the plant protection station (6%).

**Budget allocation for inputs and training must be restructured:** According to the current standards within most budget lines (i.e. for promoting a new hybrid variety), approximately 80 % of the financing is spent on inputs, only about 20 % is available for covering training and per diems. Within the new extension approach, the amount spend on inputs decreases (below 10 %) and the amount for training, per diems, fuel, management and photocopies increases to around 90 %. This change in budget allocation is necessary to provide high quality extension leading to sustainable results. This change of budget allocation requires political support. As an example, the 1999 budget for Tua Chau is attached in Annex 13.

Some training expenses are not visible in this overview because they were put in the budget of SFDP and SNV.

**Planning based on estimating available funds:** Planning the costs for next year or next month is difficult (see annex 4 and 5). The management should consider how many personnel they have available, the activities they can do and the funds, which can be allocated to these activities. This should then be put into relation of the demands coming from the villages by their VDP’s. Priorities have to be set because usually the AES can not answer all demands of the villagers.

**Strict budgetary transparency:** When using the new extension methodology, a larger amount of the budget is not going into input purchase. With current monitoring tools (i.e. mainly purchase bills) it is thus more difficult to monitor. Therefore the expenditures on training and on field visits have to be well monitored, plausible and transparent. If the budget and the realised costs are not in line with each other, the funding institutions (project or authorities) can lose confidence or become very sceptical about the capacities of the management of the AES. This will cause enormous problems in the future to regain this confidence again. Therefore careful planning of the financial aspects is very important. Book keeping of real costs should be done according to official documents (see annex 14). Signatures of the person who receives the money as well as the signature of the person who handed over the money is essential on a form, which is developed in Tua Chua (see annex 15). On other forms the signature of the responsible person (management of AES) as well as the staff member who has been responsible for executing the work is necessary. On the tables with totals the responsible for book keeping should sign. The final sheet with all totals should be co-signed with the manager of the AES.

**Separation of cash handling and bookkeeping:** Preferably the bookkeeper has no access to the cash. The cashier should not do any book keeping in order to differentiate tasks and minimise the possibility of task diffusion. Task diffusion can lead easily to fraud.

**Per activity the real costs should be compared with the budget.** If these two are not the same an explanation should be given. If possible it should be reported already in the month the differences occur. But at least in the quarterly reports this should be mentioned. In the yearly report the differences should be reported again as well as their explanation.

7. How to start applying the new extension methodology?

The above paper has summarised the extension approach in Tua Chua, taking into consideration the interests of other district extension stations. Some readers may now come to the conclusion that this methodology is appropriate for other remote areas. How then can a district extension station start to implement this new approach?
Not all activities can be implemented at once. The following steps have to be taken into account by the management of AES during the first year:

- Secure a budget for pilot activities in a few villages. This budget must cover initial training of staff, planning in the village (VDP), and implementation of some activities. Estimated budget requirements are in the area of around 2 Mio/village.
- Implement village development planning in a few villages keeping in mind which kinds of services the district will be able to offer (1 or 2 kinds of training courses, few trials, etc.).
- Select activities chosen and make a clear annual plan with assigned responsibilities.
- Implement the planning tools: It should be emphasised that starting to make a yearly, quarterly, monthly and weekly planning is of the utmost importance (see annexes 4, 5 and 6). In the beginning many mistakes will occur. From these mistakes the management should learn quickly to improve their planning every week, quarter, month and year. This kind of planning should be done in collaboration with all staff of AES. No specific training is necessary but an open discussion together with the staff of AES will be the best way to learn quickly how to use these planning tables. The management should organise every month a meeting with its staff to evaluate the activities of last month and to plan the activities for next month. No specific training available. The management should learn to listen to the problems their staff faces and help them to find solutions for the future. This meeting should be incorporated in the quarterly and monthly meeting as mentioned under point)
- Discuss clear guidelines and manuals (monitoring forms) with the AES staff and commune extension workers using the proposed formats as starting points (see annexes 2 and 16).
- Make a training needs analysis: Based on this report a meeting or training on strengths, weaknesses, threats and opportunities should be held (for an example see annex 12).
- Design a training programme (formal and informal) for district and commune extension staff for the first year based on training needs and considering the task division and materials and guidelines chosen. (see annex 2 and 7)
- Adhere to administrative procedures and strict budgetary transparency to secure financing for the following year.

Extension Station Tua Chua, SNV and SFDP are happy to get your response and comments. Of course, we are also happy to assist with any questions that may come up.

### List of Annexes

#### Annex 1: Example of the outcome of all VDP’s in the Tua Chua district

<table>
<thead>
<tr>
<th>Block</th>
<th>Area (ha)</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Industrial crop</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Rice</td>
<td>257.2</td>
<td>55</td>
<td>22</td>
<td>157</td>
</tr>
<tr>
<td>7 Cotton</td>
<td>2.2</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>8 Tobacco</td>
<td>6.2</td>
<td>0</td>
<td>0</td>
<td>6.2</td>
</tr>
<tr>
<td>9 Sugar cane</td>
<td>905.9</td>
<td>505</td>
<td>300</td>
<td>805</td>
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<tr>
<td>10 Vegetable</td>
<td>17</td>
<td>12</td>
<td>2</td>
<td>19</td>
</tr>
<tr>
<td>11 Potato</td>
<td>1800</td>
<td>315</td>
<td>944</td>
<td>1259</td>
</tr>
<tr>
<td>12 Green house</td>
<td>12359</td>
<td>416</td>
<td>435</td>
<td>851</td>
</tr>
<tr>
<td>13 Fruits</td>
<td>4635</td>
<td>56</td>
<td>100</td>
<td>154</td>
</tr>
<tr>
<td>14 Coffee</td>
<td>17430</td>
<td>375</td>
<td>6275</td>
<td>1200</td>
</tr>
<tr>
<td>15 Rice</td>
<td>1369</td>
<td>334</td>
<td>5975</td>
<td>6020</td>
</tr>
<tr>
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<td>4635</td>
<td>56</td>
<td>100</td>
<td>154</td>
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<tr>
<td>17 Tobacco</td>
<td>17430</td>
<td>375</td>
<td>6275</td>
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<tr>
<td>18 Potato</td>
<td>1800</td>
<td>315</td>
<td>944</td>
<td>1259</td>
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<tr>
<td>19 Green house</td>
<td>12359</td>
<td>416</td>
<td>435</td>
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<tr>
<td>20 Fruits</td>
<td>4635</td>
<td>56</td>
<td>100</td>
<td>154</td>
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<td>E Agro-ecological unit</td>
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<td>613.15</td>
</tr>
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<td>Ht.</td>
<td>2000</td>
<td>1555.3</td>
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<td>Stem.</td>
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</tr>
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<td>Pl.</td>
<td>Ht.</td>
<td>1800</td>
<td>1216.8</td>
</tr>
<tr>
<td>Stem.</td>
<td>Ht.</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
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<td>1229.7</td>
<td>32.7</td>
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<td>Ht.</td>
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<td>0</td>
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</tr>
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<td>4 Afforestation</td>
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<td>1344.8</td>
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<td>6 Forestry tools</td>
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<td>Stem.</td>
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<td>0</td>
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<tr>
<td>7 Regenerated forest planting</td>
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<td>8 Forestry fence</td>
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<td>Stem.</td>
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<td>0</td>
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<td>Ht.</td>
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<td>1.1 Crop protection</td>
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<td>1.2 Crop production</td>
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<td>2 Agricultural inputs</td>
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<td>3.2 Elephant grass growing technique</td>
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<td>%</td>
<td>0</td>
<td>0</td>
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<tr>
<td>3.3 Fat rice growing technique</td>
<td>Plant</td>
<td>%</td>
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<td>0</td>
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<tr>
<td>3.4 Rice growing technique</td>
<td>Plant</td>
<td>%</td>
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<td>0</td>
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<tr>
<td>3.5 Goat beans growing technique</td>
<td>Plant</td>
<td>%</td>
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</tbody>
</table>
Annex 2: Guidelines for the extension worker on organizing the first meeting, monitoring visits and the field day and evaluation

1. The first meeting with the farmers in a village

- The extension worker has to discuss with the commune extension worker in order to prepare the first meeting:
  - date, place and time of meeting
  - who to invite
  - content of the meeting
  - inform/invite SNV and SFDP.

- The extension worker has to prepare the content of the first meeting in the office.

- Discuss with the farmers the objective of the first meeting: Why did you put this activity in your village development planning for this year?

- Discuss with the farmer the following questions:
  - Why to do this activity?
  - What for?
  - How to implement?
  - When to organize monitoring visits?
  - What are the responsibilities during this trial of the farmer, village management board, commune, commune extension worker and the district extension worker?

- The discussion should then contain details about:
  - What should be the conditions of a household who is going to conduct this trial/demonstration?
  - Which households want to volunteer to use his land for this activity?
  - Who invests on which inputs?
  - Make a work plan with the farmers i.e. what might be the content for each monitoring visit, which farmers are interested to participate in these monitoring visits, and other questions which arise during the meeting.
  - Explain the method how to implement this trial/demonstration.

2. The outcomes of this discussion have to be reported to SNV.

This report is at the same time an outline for this activity in this village. After agreement of SNV in consultation with SFDP, this activity can be implemented.

3. Monitoring visits

Discuss the development of the crop with the farmer every monitoring visit. Make notice of necessary data like inputs (kg seed, 1kg seed = ... dong, labor input, kg NPK, kg manure, etc.) following the instructions of the official report system.

Give technical training (= discuss with the farmer about the stage of development of the crop: soil preparation, soil fertility, seeding techniques, weeding, diseases, etc.) and try to find in the discussion the solutions the farmer can do by himself without help from outside.

Help farmers to collect the data they need and help them to write them in the logbook of the farmer. Try to find somebody of the farmer's family or his neighbor to help him next time.

4. Field day

The field day should be organized during the harvest so farmers who participate in this field day can see the results themselves. Harvest with the farmer, collect harvest data and discuss the results with all the participants on the spot in the field.

5. Evaluation

Next questions should be discussed with the participants during the field day (if possible):

- Is it necessary to do an on-farm trial again next year concerning this activity?
- If yes, what should we try out?
- Why?
- Who will be interested to participate?
- Is assistance of AES necessary or can the village do it by themselves next time?
- Has this activity high or low priority in the village?
Annex 3: Monitoring book of trial and demonstration

Monitoring book
Field trial and demonstration

Name of trial: ..................................... Number: ............
Objectives of trial: ..............................................................
..............................................................................................
..............................................................................................
..............................................................................................
Name of Extension worker: ...........................................
Working address: ..............................................................

Year 2000

1. 1st Repeat:

1. Basic figures:
Name of household doing the trial: .............................................
Village: .............................................................. Commune: ...........................................
Total trial area (including the comparison area): ...................... m²

<table>
<thead>
<tr>
<th>Formula</th>
<th>Area (m²)</th>
<th>Notes (variety, sloppy rate, soil type...)</th>
</tr>
</thead>
<tbody>
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2. Trial map:
..............................................................................................
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3. Monitoring criteria:
Criteria need monitoring was discussed on ............... 2000

<table>
<thead>
<tr>
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<th>How</th>
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Criteria monitored:

<table>
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<tr>
<th>Date</th>
<th>What?</th>
<th>How long (minutes)</th>
<th>How many participants</th>
<th>Signature of farmers</th>
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Page 12 of 24
4. Budget for trial:

4.1. Materials cost:

<table>
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<th>Items</th>
<th>Formula 1</th>
<th>Formula 2</th>
<th>Formula 3</th>
</tr>
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<td>Total</td>
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4.2. Labor cost:

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<tr>
<td>Total labor cost:</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Price (d/labor)</td>
<td></td>
<td></td>
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<td>Total amount:</td>
<td></td>
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5. Productivity:

<table>
<thead>
<tr>
<th>Formula</th>
<th>Land area (m$^2$)</th>
<th>Productivity (ton/ha)</th>
<th>Output/plot (kg)</th>
<th>Ton/ha</th>
</tr>
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<tbody>
<tr>
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6. Balance:

Price: .............. d/kg

<table>
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<tr>
<th>Formula</th>
<th>Materials (d/ha)</th>
<th>labor (d/lha)</th>
<th>spending (d/ha)</th>
<th>Receiving (d/ha)</th>
<th>Benefit (d/ha)</th>
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</thead>
<tbody>
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</tbody>
</table>

2. 2nd repeat:

1. Basic figures:

Name of household doing the trial: .................................................................

Village: .......................................... Commune: ..........................................

Total trial area (including the comparison area): .............. m$^2$
### 2. Trial map:

```

```

### 3. Monitoring criteria:

Criteria need monitoring was discussed on ............... 2000

<table>
<thead>
<tr>
<th>Criteria need monitoring</th>
<th>When</th>
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<th>How</th>
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Criteria monitored:

<table>
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<tr>
<th>Date</th>
<th>What?</th>
<th>How long (minutes)</th>
<th>How many participants</th>
<th>Signature of farmers</th>
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### 4. Budget for trial:

#### 4.1. Materials cost:

<table>
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<tr>
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#### 4.2. Labor cost:

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<th>Formula 3</th>
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</table>
5. Productivity:

<table>
<thead>
<tr>
<th>Formula</th>
<th>Land area (m²)</th>
<th>Productivity (ton/ha)</th>
<th>Output/plot (kg)</th>
<th>Ton/ha</th>
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<tbody>
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6. Balance:

<table>
<thead>
<tr>
<th>Formula</th>
<th>Materials (d/ha)</th>
<th>Labor (d/ha)</th>
<th>Spending (d/ha)</th>
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<th>Benefit (d/ha)</th>
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</table>

3. 3rd repeat:

1. Basic figures:

Name of household doing the trial: .................................................................
Village: ........................................ Commune: ........................................
Total trial area (including the comparison area): ...................... m²

<table>
<thead>
<tr>
<th>Formula</th>
<th>Area (m²)</th>
<th>Notes (variety, sloppy rate, soil type...)</th>
</tr>
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2. Trial map:

........................................................................................................
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........................................................................................................
........................................................................................................

3. Monitoring criteria:

Criteria need monitoring was discussed on ................... 2000

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<th>How</th>
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Criteria monitored:

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<th>What?</th>
<th>How long (minutes)</th>
<th>How many participants</th>
<th>Signature of farmers</th>
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4. Budget for trial:

4.1. Materials cost:

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<th>Items</th>
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<th>Formula 2</th>
<th>Formula 3</th>
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4.2. Labor cost:

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<th>Formula 3</th>
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Total labor cost:

Price (d/labor)

Total amount:

5. Productivity:

<table>
<thead>
<tr>
<th>Formula</th>
<th>Land area (m²)</th>
<th>Productivity (ton/ha)</th>
<th>Output/plot (kg)</th>
<th>Ton/ha</th>
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6. Balance:
Price: ......................d/kg

<table>
<thead>
<tr>
<th>Formula</th>
<th>Materials</th>
<th>labor</th>
<th>spending</th>
<th>Receiving</th>
<th>Benefit</th>
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<tr>
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<td>(d/ha)</td>
<td>(d/ha)</td>
<td>(d/ha)</td>
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</table>

Field day:

Date: .........................

In household of: ...................... Village: .............. Commune: ..............

Visiting trial of: ............................................... ...........................................

Field day organizer:

1: ........................................... Address: ...................................

2: ........................................... Address: ...................................

Number of participants: ...................... man: ...................... women: ..............

Objectives of the field day:


Contents of the field day:

1: .................................................................

2: .................................................................

3: .................................................................

4: .................................................................

5: .................................................................

6: .................................................................

7: .................................................................

Results of the field day:

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<th>Farmer's Evaluation</th>
<th>Farmer's choice</th>
<th>Reason of the choice</th>
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Notes: Farmer can evaluate according to 3 level: good, fair, weak or evaluate the most important criteria.

Comments of the extension worker and farmers:

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<th>Issues</th>
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<th>Farmers</th>
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<td>Conclusion:</td>
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Overview

Cost: (dong/ha)

<table>
<thead>
<tr>
<th>Items</th>
<th>1st repeat</th>
<th>2nd repeat</th>
<th>3rd repeat</th>
<th>Average</th>
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</thead>
<tbody>
<tr>
<td>TRAIL PLOT</td>
<td>COM. PLOT</td>
<td>TRAIL PLOT</td>
<td>COM. PLOT</td>
<td>TRAIL PLOT</td>
</tr>
<tr>
<td>Materials</td>
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<tr>
<td>Labor</td>
<td></td>
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</tr>
<tr>
<td>Total</td>
<td></td>
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</table>

Productivity: (ton/ha)
ANNEX 4: FORM FOR THE ANNUAL PLANNING AND BUDGETING OF THE AE

Balance: (dong/ha).

<table>
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<th>Items</th>
<th>1st repeat</th>
<th>2nd repeat</th>
<th>3rd repeat</th>
<th>Average</th>
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<td>TRIAL PLOT</td>
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<tr>
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<tr>
<td>Factual produc.</td>
<td></td>
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<tr>
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<td>COM. PLOT</td>
<td>TRIAL PLOT</td>
<td>COM. PLOT</td>
</tr>
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<tr>
<td>Spending</td>
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</tr>
<tr>
<td>Balance</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Proposal:

...........................................................
...........................................................
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Date:..................2000

Extension worker
Annex 5: Form for the monthly planning and budgeting of the AES

(Only in Vietnamese)

Annex 6: Form for the weekly planning of the AES staff

Extension Station of Tua Chua

Weekly Plan

------------- Week: ........(from ........ to ....... ) Month: ........ Year: ........

<table>
<thead>
<tr>
<th>City</th>
<th>Kh, ph</th>
<th>Book</th>
<th>Ych</th>
<th>Hing</th>
<th>H-sp</th>
<th>TueGa</th>
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<td></td>
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</tbody>
</table>

Annex 7: Task division in Tua Chua for 2000

(Only in Vietnamese)

Annex 8: Visit form of the extension worker
Activity: 

Name: 

Field: Village: Commune: 

Date: Time start: Time end: 

Total participants: 

including: male: female: 

old men: Old women: 

young men: Young women: 

Objective meeting: 

A. Prepare questions: 

B. Discussion: 

I. Subject: 

II. Farmers opinion: 

III. Opinion extension worker: 

C. Evaluation: 

I. Evaluation of the discussion: 

II. Remarks by the extension worker: 

what went wrong: 

what went well: 

solutions for next discussion: 

III. Other remarks: 

Annex 9: Fact sheets 

(Only in Vietnamese) 

Annex 10: Leaflet of VN10 maize 

(Only in Vietnamese) 

Annex 11: Example of a training outline 

Training on trial and demonstration 

Problem definition: 

The extension worker doesn't know how to conduct a trial/demonstration. 

Lack of communication between the extension worker (EW) and the farmer. 

Training objective: 

Clear outlines to conduct a trial for the extension workers. 

Get commune extension workers (CEW) involved in the trials in order to improve the communication between farmer and EW. 

Target group: 

- Extension workers: 
  - Lý Quốc Khảnh 
  - Nguyễn Đình Cény 
  - Nhật Đình Sông 
  - Nguyễn Đình Hùng 
  - Lê Hưng Thời 

- Possible future extension workers but actually working for DARD: 
  - Phạm Quang Lý Ún 
  - Nguyễn Văn_SRệ 
  - Lê Văn Mùn 
  - İşah Xa-dat Thép 
  - Nguyễn Văn Hùng 

- Commune extension workers: 
  - Sônh Quê Cha (KNV s. SÝah phòng) 
  - Giàng_a Klay (KNV x. SYah phòng) 
  - Thép v’a SÝah (KNV x. M̀ng b-ng)
LEARNING OBJECTIVES:
- The extension workers and the officers of the DARD will have knowledge of how to set up a trial together with the farmer according the outlines for a trial year 2000.
- The EW’s and the officers of DARD are able to conduct such a trial in 2000.
- The EW’s and the officers of DARD understand the potentials of spreading the training courses for the farmer in which the training content correspond with the activity on the farm.
- The CEW will be able to assist this kind of trial.
- The CEW will be able to improve the communication between the EW and the farmer.
- The participants can clearly see the difference in the approach of trials in 1999 and the planned approach of trials in 2000.

METHOD/EXERCISES:

Day 1 am:
- Introduction:
  - Presentation of the participants
  - Objectives of this training
  - Organization during this training
- Review 1999. Working in 3 sub groups. Every group chooses 1 activity of 1999. Making an overview in which the following questions are answered: When? What? Why? How? What was the role of the farmer? What was the role of the EW? Every sub group should be equally divided in EW’s, CEW’s and officers of DARD.

Day 1 pm:
- Presentation of the results per sub group
- Discussion of the presentations and the problems

Day 2 am:
- Summary of day 1
- Methodology and outlines on trials 2000, explained by Mr. Loi (see document).
- Working in 6 sub groups with the same questions as in day 1 but using the outlines given by Mr. Loi.

Day 2 pm:
- Continue working in sub groups

Day 3 am:
- Summary of day 1 and 2
- Presentation of the results of every sub group
- Discussion of the presentations and the limitations for 2005

Day 3 pm:
- No clear program (suggestion: discuss clearly the role of the CEW. How should he be involved and how to organize incentives for his engagement?)
- Closure of the training
- Party

TRAINING TOOLS:
- White board markers
- Markers for paper
- Big sheets
- Small cards to fix on the board
- Cello tapes
- Documents

COSTS:
- Travel allowance for 6 CEW x 30.000 180.000
- Incentives/money for meals 3 days x 18 x 30.000 1.620.000
- Incentives/money for meals for CEW coming from far 4 x 15.000 60.000
- Hotel 4 x 20.000 + 6 x 20.000 x 3 nights 440.000
- Training materials 195.000
- Documents 18 x 5000 90.000
- Coffee, tea and biscuits 18 x 10.000 x 3 days 540.000
- Party at the end of the training 24 x 25.000 600.000
- Field trip 200.000
- Travel from the city 4 x 30.000 120.000
- Total costs 3.925.000

EVALUATION:

Please mark your choice with an x Remarks

a. Documents:
   - Suitable ☑ ☑ ☑ ☑ not suitable ........................

b. Methodologies used:
   - Day 1
     - Introduction: Happy ☑ ☑ ☑ ☑ not happy ....................
     - Sub groups: ☑ ☑ ☑ ☑ ☑ ☑ ........................
Discussion: 

Day 2

- Lecture Mr. Loi:  
- Sub groups: 
- Discussion:

c. Time schedule:
- Too long 
- Too short

d. Knowledge on trials:
- What was your knowledge on trials before this training course?
- What is your knowledge on trials now after the training course?
- Do you think you can apply this new set up for trials? Why?
- Which problems do you foresee in 2000 by using this new set up for trials?

e. Trainers:
- Mr. Li: good 
- Mr. Wim: good

f. Remarks/proposals:

Results of the evaluation is that many answers were very superficial. Two specific remarks I would like to make to these answers:

1. One CEW preferred a practical training in a village.
2. Many stated that the farmer has a low level of knowledge.

Point 2 shows that still the officers of the state think that they are the only ones who have knowledge. Unfortunately they have no answers to the problems the farmers face. Many 'solutions' can not be applied by the farmers. So I prefer to say that the officers lack of knowledge to understand the farmer. Therefore they will need a lot more training and their activities should be evaluated/monitored regularly by others who show them their weaknesses in the hope that one day they will understand that knowledge you can not learn only in the school benches but also by working and learning (as farmers do)!

I think therefore that this training was very useful but that most of the officers (AES/DARD) will still have many problems to execute these outlines for trials because they tend to 'teach' the farmer than to listen and discuss with the farmer.

Tua Chua, 23-11-1999

Wim Spieringhs
DA of SNV in Tua Chua

Annex 12: Example of a SWOT training

Tua Chua 31-05-1999

TRAINING FOR 07-06-1999

Training objectives:
- to analyse the main problems according to the extension workers
- to analyse also the strong points
- to analyse the expectations the extension workers have towards the DA of SNV

Target group: AES staff of Tua Chua

Learning objectives:
- the extension workers know better and more about the definition of extension
- the extension workers do understand more about how to transfer knowledge and technology related to agricultural extension

Method:
- SWOT: discussing Strengths, Weaknesses, Opportunities and Threats
- Everybody write down by himself the definition of extension. Than we start a discussion on the various definitions and try to come to one definition
- Brainstorming about extension methods in order to find out the knowledge that already exists with the extension workers

Exercises/questions:
0. What is going well, what are the strong points of the extension station in Tua Chua?
1. What are the main problems you face today? What are the weak points of your station? Why?
2. Do you see any opportunities? Which ones?
3. What are the threats, or obstacles?
4. What is the definition of Extension? Everybody is given 5 minutes to write down one sentence to give a definition. Everybody writes his sentence on the board. Than a discussion starts to come to one or two final definitions
5. What does this definition mean for you as extension worker? What would you like to do different in your next visits?

Evaluation:
- What do you think of this training method?
- What have you learned during this afternoon?
- What could be a next discussion point?

RESULTS/EVALUATION OF THE TRAINING

Results of SWOT discussion/questions 1, 2, 3 and 4:

1) Strengths:
- AES staff is young strong and dynamic
- good service regulations and good cooperation between extension workers
Annex 14: Responsibilities of the different actors in trials and demonstrations

This annex presents the tasks and responsibilities of farmers and different functions and levels of AES involved in the implementation of a trial. For each level a number of tasks and responsibilities are defined to facilitate a proper implementation of the trial.

**TASKS AND RESPONSIBILITIES OF THE FARMER(S), EXECUTING THE TRIAL**

1. To invite other members of their household and other people in the village for every visit of the district extension worker (only for Tua Chua)
2. Participate in all meetings and monitoring visits of the district extension worker
3. Do the work correctly in his trial plot and control plot according to the trial outline
4. Do the work correctly in his trial plot and control plot according to the trial outline
5. Inform AES/SNV/SFDP and/or CEW in time if problems arise
6. In case of a successful result of the trial the farmer participating in the trial should in the first year after the trial be available for other farmers or act as resource person to others.

**TASKS AND RESPONSIBILITIES OF THE COMMUNE EXTENSION WORKERS**

1. Inform the farmers about the first meeting and the last meeting of every activity in every village of his commune
2. Organize the 2 meetings for every activity per village
3. Participate in the 2 meetings (the first meeting and the last one named the field day)
4. Translate from Kinh in the local language of the village and vice versa
5. Facilitate the communication so that the farmers also express their opinion
6. Report about the 2 meetings in the logbook given to the farmer who will execute the trial and provide one copy for AES
7. Help the farmer to fill in the logbook according the outlines
8. Assist the DEW of the AES
9. Participate every month at the meeting with AES, SNV, SFDP and Debt Swap to report about all agricultural activities of last month and make the planning for next month.
10. During the trial once every week/two weeks/month the CEW visits all farmers conducting a trial in his commune, discusses progress of the trial with all farmers and reports to the

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**Discussion about the definition of Extension (question 5 and 6):**

1. Brainstorming on the definition of extension:
   - To try to define exactly a definition of the word extension as well as to determine which words in the brainstorming session were of big importance. We came to the following conclusion: encourage, to collect information, to give information, being a friend and organization.
   - I explained what a two-way communication means and the difference between a two-way communication (discussion, telephone call, etc.) and a one-way communication (TV, radio, etc.). Important in a two-way communication is to have respect for the other and the opinions of the other. Ask his/her opinion regularly, inform him/her as well as possible and treat him/her with respect.

2. Continuation of the discussion. What is extension? :
   - We did not try to define exactly a definition of the word extension as well as to determine which words in the brainstorming session were of big importance. We came to the following conclusion: encourage, to collect information, to give information, being a friend and organization.
   - I explained what a two-way communication means and the difference between a two-way communication (discussion, telephone call, etc.) and a one-way communication (TV, radio, etc.). Important in a two-way communication is to have respect for the other and the opinions of the other. Ask his/her opinion regularly, inform him/her as well as possible and treat him/her with respect.

3. Opportunities:
   - To discuss next training: 'how to transfer new technology' and 'how extension workers can contact the farmer more effectively'.

**Evaluation:**

- Everybody was happy with the trainings method and hope this will continue
- What have you learned this afternoon:
- know some weak points
- extension worker needs to help the farmer, to encourage, collect info and organize/management
- know the advantage and disadvantage in relation to agricultural production
- understand about agricultural extension work
- give advantages and disadvantages
- opportunities for implement responsibilities
- threats and difficulties which need solution on higher level
- understand meaning of extension
- What is agricultural extension (advantages and disadvantages)
- role and responsibility of the extension worker in the future in relation to the farmer
- To discuss next training: 'how to transfer new technology' and 'how extension workers can contact the farmer more effectively'.

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**Annex 13: Form for paying farmers and commune extension workers**

(Only in Vietnamese)
Tasks and Responsibilities of the District Extension Workers

1. The district extension worker is responsible for all activities in a fixed region, i.e. a number of villages.
2. The district extension worker informs the CEW, the commune management board and the village management boards about every activity in 2000.
3. The district extension worker discusses the problems related to the activity with the farmers in the commune and formulates the objective of the trial and fixes a day, time and place for each activity. He/she visits each week/2 weeks/month the village.
4. The district extension worker discusses the program of his/her visits (outlines of the trial) together with the village and the CEW. In this planning he indicates: general information meeting (problems, objectives), monitoring visits and finally a field day (activities should not be mixed up, i.e. one visit per activity and two activities can not be treated at the same time).
5. In the same meeting (see point 4) the district extension worker explains the practical utility to set up a group of interested farmers for at least the time the activity will last (this should not be a pre-condition with a number of internal rules. This is not compulsory and the rules can be made according to the decision of the farmers).
6. This first meeting of every activity must be well prepared and SNV/SFDP are invited to participate in this meeting. The farmer on which land a trial will take place, is encouraged to take notes of all the activities, dates, results and other data (see outlines for the farmer).
7. For every monitoring visit the district extension worker prepares a list of questions which have to be agreed upon by the responsible person of AES one week before the visit will take place. For every monitoring visit all farmers interested in this activity will come together and the questions, prepared by the district extension worker, will be discussed.
8. After every monitoring visit the district extension worker fills out the rest of the form on which he/she prepared the questions which will be sent to AES as soon as possible.
9. The district extension worker is responsible to fill in correctly each month his/her working calendar per activity, the kilometers per activity and other expenditures for every activity. These forms have to be signed by the district extension worker. If payments are made to third parties, their signature should be on a special receipt on which clearly is stated for which activity he/she has been paid.
10. If any problem occurs, the DEW informs the management of AES. This might be agricultural problems as well as lack of participation or any other kind of problem which effects the activity.
11. The field day is to evaluate the activity together with the farmers who participated in this activity (not only the farmer on which land the trial took place!). The DEW is final responsible for the content (subjects to be discussed) of the field day.
12. The district extension worker has to fill in the report as provided by SFDP for each activity. Technical information should be filled in as well as other data. The final report will be offered to the management of AES.

Tasks and Responsibilities of the Management of AES

1. The management is responsible to execute the activities as agreed upon in the contract.
2. The management is responsible to devise the activities per district extension worker in which he assigns every district extension worker to a fixed region with no regard of the activities.
3. The management is responsible for the well functioning of the district extension workers.
4. The management is responsible for the monthly and weekly planning in consultation with the district extension workers.
5. Every month a joint meeting is organized by AES, Debt Swap, SFDP and SNV in order to evaluate the activities of last month and to make the planning of next month. District as well as commune extension workers are invited to participate in this meeting.
6. A joint management meeting is organized at least every quarter by AES, Debt Swap, SFDP and SNV.
7. The management is responsible for the subject to be discussed in every field day visit as well as the questions to be discussed (the district extension worker is responsible to prepare this document and the management signs for agreement).
8. The management of AES is the final responsible for the forms to be filled in after every monitoring visit. These forms should be signed also by the district extension worker and the farmer on which land a trial will take place. For every monitoring visit, all farmers interested in this activity will come together and the questions, prepared by the district extension worker, will be discussed.
9. The management is the final responsible for the financial reports and the content of these reports. These reports should be handed over to the DA of SNV. For every activity the district extension worker makes an overview of the costs and signs this form as well as the total overview of every month.
10. If any problem occurs, the management of AES informs the DA of SNV and the responsible for agriculture of SFDP. This might be agricultural problems as well as lack of participation or any other kind of problem which effects the activity.
11. The management is responsible for the final report of each activity. He will sign the report together with the district extension worker.

Annex 15: Plan to coach the extension workers (and the commune extension workers)

(Only in Vietnamese)