TUA CHUA EXTENSION UNIT:

SWOT ANALYSIS AND SUPPORT PLAN FOR 1995

Consultancy report No. 3

Prepared by

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1. INTRODUCTION

This report is prepared for the Song Da watershed Social Forestry Development Project, supported by GTZ and implemented by GFA. The objective of the field mission was to assess the current situation of agricultural extension within Tua Chua district, Lai Chau province and to develop and discuss an operational plan for 1995 in which the district extension station and the SFDP could mutually support each other.

The relative isolation of Tua Chua in terms of physical and socio-economic isolation is a major contributing factor behind the slower pace of change, leading to a perceived weaker and more threatened institutional
environment. The companion report documenting Yen Chau extension plans for 1995 will illustrate a few issues that have not yet arisen in Tua Chua. As such it is good to read in order to anticipate emerging situations. Particularly the sections on Opportunities and on Long term systems development debate valuable issues from which Tua Chua can take its advantage.

The current report describes the strengths and weaknesses of the encountered extension organization at the district level. For there on, some opportunities for change are identified, some of which are operational modes, some are support options for SFDP. Training is an important component of further support necessary to make the changes possible. The report concludes by presenting annexes which details some extension events, an extension program example and specifications for technical expertise deemed necessary.

The nature of the plan is flexible and all involved parties are called on to be creative in identifying appropriate activities, timing and funding inside and outside of the plan for the necessary adjustment of the plan during implementation.

2. STRENGTHS

2.1 Personnel and organization

The agriculture section is assigned responsibility for the management of agriculture production. The section divides into different sub-sections responsible for various activities. Under its professional but not operational guidance are three stations: Plant protection, Veterinary and Seed stations. These report directly to the Lai Chau provincial divisions responsible for the same subject.

The ‘Extension station’ is an integral part of the Agriculture section, currently still named ‘station for transfer of technology’. According to the head of Agriculture section, the decision to formally establish the extension station is to be taken within a very short period of time. The commitment to officially establish the station has been mentioned also by the district authorities. The management of the extension station will then be taken over by the provincial Extension center under the Department of Agriculture.

Table 1 Agriculture sections and staffing

<table>
<thead>
<tr>
<th>Organization/Profession</th>
<th>Nr of Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture section</td>
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<tr>
<td>Irrigation</td>
<td>7</td>
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<tr>
<td>State management</td>
<td>4</td>
</tr>
<tr>
<td>Cooperatives management</td>
<td>2</td>
</tr>
<tr>
<td>Office &amp; management</td>
<td>5</td>
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<tr>
<td>Plant protection station</td>
<td>5</td>
</tr>
<tr>
<td>Veterinary station</td>
<td>5</td>
</tr>
<tr>
<td>Extension station</td>
<td>5</td>
</tr>
<tr>
<td>Crops &amp; Agriculture management</td>
<td>2</td>
</tr>
<tr>
<td>Livestock &amp; Veterinary</td>
<td>1</td>
</tr>
<tr>
<td>Forestry</td>
<td>2</td>
</tr>
</tbody>
</table>
The personnel situation of the agriculture section is very adequate. The total number of agriculture and forestry staff employed within the district is reported at 54 people, of which 18 work in the Forest protection station. Another reported breakdown of 47 agriculture staff is presented in Table 1.

Of this only the agriculture section is (will) resort under the direct responsibility of the district authorities, the other units are part of their respective superior levels at the province.

After completion of establishment procedures for the extension station, the actual extension work and 'chi dao' will be implemented in only five communes: Muong Bang, Xinh Phinh, Trung Thu, Ta Phinh and Lao Sa Phinh. The remaining communes are to be served by the agriculture section staff.

### 2.2 Funding

The amount of funding that the district attracts is from different sources. The amount of funding available indicates strength in the capital mobilization through maintaining good contacts as well as the presentation of adequate plans. The latter three sources are part of longer term, mostly forestry oriented, activities of which the reported figures were said to be confirmed funding commitments.

- The source of primary agriculture funding comes according to provincial and national plans for which 166 million Dong is available for 1995. This fund is directly allocation to specific stations.
- From four different projects (for Xinh Phinh+Muong Bang, Trung Thu and Ta Phinh) under the 327 program a reported total of 909 million Dong will be available in 1995
- In addition, 150 million Dong is promised from CEMMA directly to the extension station for model establishment
- Another 200 million Dong is funded for 1995 by CEMMA through the Forest Science Institute for both studies and implementation in Trung Thu commune

The use of funds is mostly as grants, although both the agriculture funds and 327 projects have a credit component. Another credit source being used since early 1995 is under program 120 "hunger eradication and poverty alleviation", totaling 50 million VND.

### 2.3 Concepts and experiences

The district presents a very strong view on the way it perceives the guidance of the agricultural production according to the district plans. This includes the distribution of seeds of improved varieties of rice and maize. The planting of these new varieties has this year been supervised in all communes by agriculture staff. This "chi dao" is a management style that mobilizes all available staff into field functions.

The concept of extension is gradually moving away from the above concept, indicated by the establishment of the separate unit for transfer of technology, now again renamed as Extension station.

Through the seed station demonstration plots are organized with technology transfer to 7 households in Talacao paddy scheme. This seems to be both a modest approach in terms of size. Also it takes a new approach by establishing a working demonstration site in somewhat varying conditions under technical guidance.
3. WEAKNESS

3.1 Personnel and organization

Table 2 Fund allocation as decide by province Ext. center in '000

<table>
<thead>
<tr>
<th>Organization</th>
<th>Credits</th>
<th>Grants</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed price support</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Animal husbandry &amp; Veterinary station</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant protection station</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extension station</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>25200</td>
<td>140863</td>
<td>166683</td>
</tr>
</tbody>
</table>

Currently the activities that could be called extension are organized dispersed over the whole agriculture sector. The ruling logic seems to be financial expediency, if not an attempt to provide equal amounts of work for the different stations.

Agriculture funding is earmarked by the province directly to stations. Only in case of seed price support, the district is able to decide on implementation mode, which in practice has been through the seed station. In the studied decision forthcoming from the provincial extension center, no specific task was set for the use of the funds.

Not all of the funds mentioned on earlier pages are channeled through the extension station, nor even the Agriculture section. As the district authorities have decided, in coordination with and adhering to instructions from superior levels, the 327 projects in Xinh Phinh + Muong are managed by Agriculture section, the remainder by Sedentarisation board. This leaves activities widely dispersed between a range of organizations of which some activities seem, as a result, not well coordinated. The FSI managed funds do not lead to any integrated activity.

The agriculture funds for seeds have been used for purchasing IR64 and CR203 rice seeds and Bioseed maize seeds for allocation to different communes and free distribution to households with wet rice production facilities and maize growing areas respectively. A small amount of CR203 seeds was set aside to implement adaptive trial/demonstration in Talacao. (NB simultaneous with free distribution.) All provided inputs have to be transported by the Commune from the district center.

As all activities were reported to be depending on funding through plans and projects decided upon by authorities beyond the agriculture section, little leeway is available for planning extension work that responds to local needs. There is not so much a series of technical programs that need funds but a set of funding opportunities that predefine the introduction of specific technologies.

In practice no staff member reported to have been assigned any given task to be fulfilled. At the demand of the agriculture section, all staff gets into motion, either being temporarily assigned to a professionally delineated task, alternatively to a geographical task area. Activity planning as part of extension workers’ tasks does not seem to exist.

The result of the last few years has led to exasperation on the side of the agriculture staff who as a consequence of failures, all declare the local population to be resistant to change, backward. They are puzzled by the lack of endeavor in the application of new technology while they notice at the same time that the population reports not to have enough to eat.

The ability to perform field duties has been curtailed by the unclear assignments within the current management system. Staff commitment to function in direct contact with the population has been negatively influenced by the various organizational and conceptual limitations indicated above. In addition, due to
personnel changes and placement of young staff members, there appears to be a lack of adequate, in-the-field-experienced staff members, guiding field work. As a secondary consequence of this, the language skills of the staff necessary to communicate effectively with the H'Mong population is underdeveloped.

Different maize and rice varieties have so been distributed in the past few years. The technology to produce the new varieties was assumed to be similar to existing varieties and therefore assumed well known. None of the distributed varieties was therefore supported by explanatory sessions with variety specific information.

No outside technical support has been forthcoming since the initial establishment of the Transfer of Technology station in late 1993. This is a lost cooperation opportunity with the Forest Science Institute which is bringing in new view points and skills.

3.2 Available technology

During the last few years the introduction of improved technology has been limited to only distribution of seeds of improved rice and maize varieties. This year 30 tons of rice seeds and 6 tons of maize seeds were reported as distributed via the seed station. None of the introduced varieties have proven to out yield the local varieties.

No other efforts were noted outside the recent establishment of the models on the extension station. The models in the extension station focus on agroforestry solutions such as Tea-Aleurites or fruit trees.

This year an attempt has been made to apply hedgerows in upland rice fields but the summary knowledge of methods has led to inadequate implementation. Other efforts to be undertaken this year are the introduction of Sind (cattle) bull and Nubian goats for livestock breed improvement (Carcass increase respectively milk orientation).

Veterinary measures have been applied at standard rates, probably vaccinating less than 10% of the large livestock herd. No detailed investigation was undertaken here.

Analysis of the problems in current farming systems are based on aggregated data from the regular statistical sources, rather than on field observations. Requirements of the local farming system have been neglected in favor of introducing technology that is input or market sales dependent.

3.3 Concepts and experiences

The management of agriculture production is mostly implemented with the perception of managing a labor force that follows set-out plans. This is an inheritance of earlier economic systems with a heavy reliance on cooperatives. As in earlier times, this perception displays a lack of attention to technical information and spread of innovations, suitable to the local environment. Promotion of new technology takes the overhand over analysis and respective solving of existing farmer problems.

Model establishment has gradually been recognized as a good tool to introduce new ideas to farmers. The current focus is on establishing ‘models’ on the grounds of the extension station, while no such models have been implemented in villages or on farmer owned plots. Therefore most efforts of the staff and most available financial resources are absorbed on-station. This is only with one exception of four sites of boiled down (and inadequately applied) model of hedgerow upland rice farming in which all expenses are borne by the extension station budget and labor force. All four sites’ owners are officials in district service.

No efforts seem to have been undertaken to adequately monitor (through systematic implementation and performance data collection) model development as a learning exercise. So far no model has been judged as adequately enough established for the organization of technology transfer to households.

4. OPPORTUNITIES
In respect of assessing opportunities on the long run, a view in the companion report with the Yen Chau, Son La document will be illustrative.

4.1 Organizational establishment

With the in-pipeline-decision to establish the extension station as a separate unit (suggested date July 1995) clarity will be created. This will have a beneficial impact on activities of the extension station. After enactment of this decision the extension station will become more independent, meaning to have a larger say in planning and implementation of activities and operational matters. With the indicated task distribution on the basis of only 5 communes supported by the extension station, a limited workload will enable staff to gain experience in new working methodologies and technical matters.

The province will be able to bring in more new ideas and expect adoption of new working methods. Direct support, e.g. from the SFDP, to the extension station will then also become possible.

With the functioning of an extension station, it can be assumed that the tasks for extension will consist of

- Applied research through experiments in farmer fields
- Establishment of small-scale technical and organizational models in villages
- The introduction of technology, centered around the models through extension events
- Mobilization and participation of commune and district officials in extension
- events and the promotion of improved technologies.
- Details of this functions will have to be worked out in practice and will to a large extend depend on the station management and the particular staffing capacity of the station.

If the extension station will be the sole operator in the assigned communes, much will be gained in terms of efficiency and in terms of the ability to accumulate local experience.

4.2 Conceptual development

Through the implementation of the above listed extension functions, the extension station staff members will be able to adopt newer style working methods. It will be the local experience, the exposure to everyday farming problems that will lead to a better problem analysis, followed by more applicable technology propositions.

A trial and error style of work with regular sharing of information and reviews of activities will accumulate most quickly the necessary experience to have an extension station operating efficiently. All new technology has to be introduced and placed in a real-life situation such as a demonstration site, before farmers could be expected to accept anything.

There needs to be a recognition of farmers as independent decision makers who might need advice before deciding. With adequate technical knowledge, much effort has to be put in the creation of learning opportunities, of exposure to and exchange of technical information.

4.3 Project support

Cooperation with the SFDP will bring benefits in terms of material and skills development. The support forthcoming however has to be applied in the framework of village and household development efforts to be really effective. To achieve efficiency regular session will have to be held to assess the development of appropriate working methods, technology and organization. Fine-tuning of the support is to be based upon the outcome of such evaluation sessions.

5. THREATS
5.1 Unfavorable balance of on station work vs. on-farm

The implementation of extension messages originating from national and provincial sources without deeper studies of local needs and necessary adaptation will enlarge the gap between farmer needs and the work of extension workers. No doubt the resulting move will be that more work will have to be done on-station in order to achieve the output of technical ‘models’. This will especially become the case if the current orientation of work and fund distribution is not adequately adjusted for the new organizational setting and outreach functions.

The extension systems runs a definite risk of being overloaded with work on the models on-station, such that work in villages and on-farm will suffer, through which extension workers might loose motivation.

5.2 Complications with fund souring

Securing funds is never finished until they have arrived. Several extension activities are listed for funding through a range of projects. If the funding is affected, a quite likely course of action will be the reduction, delay or cancellation of these activities. Alternatively, such problems could lead to a further focus on on-station work.

5.3 Technically inappropriate messages

Without technically appropriate messages, little extension work is going to lead to successful adoption by large numbers of farmers. The supply of more seeds of untested and unproven varieties is not going to solve production problems, certainly if the variety introduction is not accompanied by appropriate technical guidance.

6. EXTENSION SUPPORT PLAN

6.1 Extension activities projected

The activities of the extension staff will be, as broadly agreed upon, organize extension events such as documented in Annex 4. The technical elements on which the efforts are to focus are the

- cultivation of Bioseed maize,
- improved rice variety CR203 and IR64 cultivation practices and
- the promotion of off-season soybeans, i.e. after wet rice cultivation.

The key to extension is, rightly, placed in the organization of extension events, costing very little in terms of funds or hardware. However, these events are the primary essential ingredient contributing to success of extension that no outside fund or hardware can replace. The village level extension events are not supported directly by the project because it was indicated that sufficient funds were available for 1995.

In order to promote greater exchange of insights and experiences among farmers, aiming at creating awareness among the targeted population, in addition to village based extension events, a series of events has to be organized to look outside the communes and district. The choice of technical topics is directly linked to the current efforts undertaken.

Although planned for here and budgeted in Annex 4, no detailed attempt has been made to schedule these activities over time. It envisaged that the project does provides support, sometimes in kind or in facilities, sometimes by other means to realize the following activities.

6.1.1 Rice variety introduction

The extension station shall organize an excursion of 20 farmers from Xinh Phinh to Muong Bang in order to observe wet rice farming practices and the CR203 and IR64 varieties. At the harvest season an evaluation session will be held for Xinh Phinh farmers to observe in the field and discuss the results and
problems/opportunities of the new rice varieties and cropping practices.

6.1.2 Maize varieties introduction

The extension station shall organize an excursion of 20 farmers from Xinh Phinh to Muong Bang in order to observe upland maize cultivation practices and the Bioseed variety. At the harvest season an evaluation session will be held for Xinh Phinh farmers to observe in the field and discuss the results and problems/opportunities of the new maize varieties and cropping practices.

6.1.3 Soil erosion and green manure practices trials

The extension station shall organize an excursion of 20 farmers from Xinh Phinh and Muong Bang to Mai Son and Yen Chau districts, Son La in order to observe soil erosion control and green manure practices. During the harvesting season an evaluation session will be held for farmers to observe in the four fields in Muong Bang and discuss the results and problems/opportunities of the new cropping practices.

6.1.4 Goats and cattle breeding trials

The extension station shall organize an excursion of 20 farmers from Xinh Phinh and Muong Bang to Moc Chau, Son La in order to observe the breeds of goats and cattle that are introduced. During the dry season an evaluation session will be held for farmers to observe the grazing and growth performance.

6.1.5 Forestry and fruit garden introduction

The extension station shall organize an excursion of 20 farmers from Xinh Phinh and Muong Bang to Mu Cang Chai, Yen Bai in order to observe forestry successes in practices.

6.2 Skills development support

The primary contribution to the extension work will be though training. For this it is envisaged that all or a major portion of the following sessions are realized within 1995.

Other training might also be forthcoming as and when available through other project activities e.g. beekeeping, fruit trees. Training might also become available as scholarships to training sessions available within the country to which individual staff could be sent as and when opportune and scheduled.

Table 3 Training sessions

<table>
<thead>
<tr>
<th>Title/subject</th>
<th>Trainers</th>
<th>Targeted staff</th>
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</thead>
<tbody>
<tr>
<td>Organization of extension events, 3 days</td>
<td>VASI, Bac Thai Extension center</td>
<td>All ext. stn staff, including some Provincial Extension center, jointly with Son La</td>
</tr>
<tr>
<td>Cropping practices wetrice, dryrice, maize 3 days</td>
<td>VASI, LC Agriculture Dep.</td>
<td>All ext. stn staff</td>
</tr>
<tr>
<td>Livestock husbandry &amp; disease prevention, 3 days</td>
<td>LC Ag Dep., LC Vet. Div</td>
<td>All ext. stn staff</td>
</tr>
</tbody>
</table>

Expertise will be necessary to evaluate in-depth several production problems. As yet identified, the upland and lowland fertility management issues and the water management of paddy schemes are to be studied. Work will have to focus on the incorporation of green manure in the farming systems. For suggestions,
proposed terms of references are included in Annex 2

Other learning opportunities come about through excursions. It is proposed to organize an two week excursion to a selection of places in northern Viet Nam, Vinh Phu, Bac Thai, Ha Bac to visit sites in which extension efforts are underway for a somewhat longer period. Exchanges between and visits organized jointly with the Yen Chau project site staff will benefit the development of a more unified approach. A workshop is to be organized late ’95 to evaluate the extension events and related activities. This will stimulate the emergence of local extension experience.

6.3 Hardware support

Hardware is supported by the project in order to obtain a higher rate of efficiency in the work of the extension station, specifically to overcome elements mentioned under the chapters Weakness and Threats.

One motorcycle will be supplied to achieve greater mobility for the staff. An effort will be undertaken to provide all kinds of documentation that will enable the staff to improve upon their knowledge. Secondly, funding will be made available on a case to case basis for the purchase or production of appropriate printed material that can be distributed to farmer-households.

To stimulate the development of appropriate technology, inputs necessary for trials will be purchased. At this stage no specific plans are made but these are to be finalized before the project and district annual planning cycle is concluded. As it will be likely that a wide range of yet unknown species and varieties of crops will be grown that need to be multiplied, a fund will be established that will purchase seeds. The fund will, after purchase, sell or lend seeds, which will contribute to the creation of a market.

7. ANNEXES

7.1 ANNEX 1: Proposed Terms of Reference for experts

Green Manure application systems and species

Three systems can be envisaged for introduction:

- Pre or post single crop (paddy)rice
- Fallow improvement after-before upland rice or maize
- Hedgerow on uplands

Duties of the study include:

- Study the local farming system and the environmental factors and define the technical arrangements possible within each of the three systems. Cooperate with local staff and local people to discuss realistic options. The systems are to be described with at least the following: the site choices, spatial arrangements, timing and seasonal arrangements, labor requirements and benefits, agronomic/fertility drawbacks and benefits, etc.

- Assess which species of leguminous crops can be grown within each of these systems. For this purpose specifically indigenous species are to be assessed. Assessment is to include growth patterns, multiplication methods (natural and man-made), crop size, coping ability and rooting pattern.

- Discuss issues of the relation between A) the identified arrangements within each system and B) the use of land and crops by livestock under current as well as the proposed systems and arrangements. Take both the village and the individual household points of view into account.

- Propose trials appropriate to the identified arrangements to test species and arrangements

Terms of Reference
Paddy scheme improvement

The Talacao paddy scheme is developed over the years and is cultivated by households from 6 villages. Many water sources provide water with varying waterflows during the year. Drought is a widely reported reason for crop losses.

The study has to provide insight in the following elements

- An assessment of crop yields, the variation over recent years (since at least 1985) and the extend of crop losses ascribed to drought, in relation to crop development periods.
- The different water sources available, the status of water distribution mechanisms such as secondary channels, draining provided and the methods of managing water flows. Describe the social and organizational arrangements of water management and present an overview of maintenance expenditure in labor, finance or other resources, both at scheme, village and household level.
- Improvements possible through the application of improved water management practices, including maintenance practices, limited investments in water distribution or in other earthen+stone structures
- Improvements possible through labor intensive methods to address the percolation, bunding and flash floods. For each option to improve on current situation or implement preventive measure, provide an overview of required inputs in labor and other resources and benefits, coupled with descriptions of technical nature.

To be considered:

- Composting of rice straw
- Green manuring
- Better pudding + increased weeding /soil work
- Bunding percolation control, e.g. with more organic matter, building permanent bunds
- Water Inlet-outlets of field
- Grazing patterns changes

7.2 ANNEX 2 Extension activities planned

Adaptive trial program

7.2.1 Excursion before adaptive trial

Before the implementation of a trial technology, a trial holder-to-be can visit a established technology managed in other commune or district. Based on the observations the demonstration can be adapted to the local situation of the new site. This visit should be organized in time with the season so that the results of the other locations are visible and convincing.

Expenses will include means of travel, a lunch and some costs for the hosts, totaling 800000 VND.

7.2.2 Adaptive trial plot

This is the site where a technology is implemented of which the outcome is not necessarily successful. The technology is implemented with guidance of an extension worker under farmer conditions. Extensive monitoring of specific pre-define indicators is to be done to adequately prepare an evaluation. Inputs ought to be provided by the trial initiator.

In case of failure of the demonstrated technology, compensation for the incurred loss should be given to the extend that the traditional or local technology would yield.

The size of the plot should be limited to a manageable risk, preferably smaller than 5 % of the farmer area of the farmer/ plot holder.
Expenses involved will depend on each technical program and are covered by the Extension Station.

### 7.2.3 Adaptive trial plot evaluation visit

Evaluation of the trial should be done by a visiting group of farmers from within the village, e.g. like a demonstration plot visit. In addition, all the farmers participating in the trials from the different locations and the related extension staff should be brought together to jointly discuss the success of the technology. The duration of such a visit should not be extended beyond 4 hours, preferably shorter.

After successful evaluation the trial plot can be used as a demonstration plot, mostly for excursions. The presence of a successful trial plot is thus an opportunity to organize visits such as the inter-communal excursions, as if it were a training ground for farmers who want to adopt the technology, thus functioning exactly like a demonstration plot.

Expenses will include means of travel, a lunch and some costs for the hosts, totaling 500000 VND.

### 7.2.4 Demonstration plots

There are plots or sites that carry an improved or new technology. These plots are established within a farmer environment with a technology that is almost guaranteed to succeed in the plot and farmer conditions. The selected technology is either available within the village because of an innovative farmer or because an extension worker has assisted technical advice/guidance. The technology is to be an essential part of the technology message of the extension system. The farmer implementing the demonstration has an important role to play in 1) demonstrating the success of the technology 2) explaining to interested farmers what the technology comprises of and what the cost/benefits are (labor, inputs, outputs, etc.)

Failure insurance is recommended.

The size of a demonstration plot should, if possible, be limited to less than 10% of the demonstration holder's total area of the same crop/animal. The best result of the demonstration, in terms of extension objective, is reached if there are two to three farmers performing the demonstration in one village. More participating farmers or larger areas are not necessary for demonstration purposes, less is possibly not representative of different conditions.

Expenses involved depend on the technology to be promoted as part of the ongoing technical programs of the Extension Station.

### 7.2.5 Demonstration plot visits (village)

The presence of a demonstration plot is an opportunity to organize visits. These visits should be timed to coincide with two important moments: 1) When an important action within the improved or new technology is implemented; 2) When the result of the improved or new technology is visible. The visits can be recurrent if that is beneficial. The target group for the organized visit is primarily the villagers who have similar conditions (plot and household) to the demonstration plot and plot holder. Secondarily, visits can be organized for farmers from other villages within the commune or from other locations. The duration of such a visit should not be extended beyond 3 hours, preferably shorter.

### 7.2.6 Technical pamphlets

Documentation to describe the costs and benefits of a (improved or new) technology, and the required steps, inputs and environment to adopt the technology. Usually one page and illustrated. The technology is to be clearly defined, described in steps or stages.

Expenses amount to 300 VND per page roneo. With an estimated audience of 40 people per demonstration visit, one such visit is budgeted for 12000 VND.

### 7.3 ANNEX 3: Extension Program example

New chicken breeds introduction program:
Step 1: Identification of the need for improved chicken breeds, the conditions available; establish the fact that other breeds match the identified need and are available

Step 2: Identify farmers (appropriate household members) who are interested and ready to experiment with chicken breeds. E.g. two locations, one to three households per location; total 2-6 households

Step 3: Organize an excursion for the selected household members to a household (other district/province) who raises the identified chicken for an exchange of experience

Step 4: Supply the chicken and monitor technical indicators during a specific period (age and growth curve, age of first egg production, monthly egg production, feed demand). Evaluate the costs and benefits.

Step 5: After positive evaluation, assess target group and its demand for the chicken breed, identify interested households. E.g. three communes are selected, in which four villages each and two households per village, total of 24 households

Step 6: Organize an inter communal visit to observe the chicken and share experience with the trial holder

Step 7: Supply the chicken and provide monitoring guidelines.

Step 8: Describe the appropriate chicken husbandry technology in a technical pamphlet

Step 9: Organize a demonstration plot visit for targeted households in 12 villages, visiting both demonstration plot holders. Have the demonstration holder explain the required husbandry, costs-benefits, etc. and discuss with the visiting households. Distribute the technical pamphlet to all visitors

Step 10: Assess demand and provide chicken supplies if necessary

Step 11: Evaluate chicken performance and extension worker performance

7.4 ANNEX 4

EXTENSION PROGRAM TUA CHUA, BUDGET

<table>
<thead>
<tr>
<th>Extension events</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice Farmer excursion, XP to M Bang</td>
<td>800,000</td>
</tr>
<tr>
<td>Rice Farmer evaluation session</td>
<td>500,000</td>
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<tr>
<td>Maize Farmer excursion, XP to M Bang</td>
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<tr>
<td>Maize Farmer evaluation session</td>
<td>500,000</td>
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<tr>
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<td>SALT Farmer evaluation session</td>
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Extension station and staff support

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<th>Service</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training</td>
<td>Extension</td>
<td>3,500,000</td>
</tr>
<tr>
<td></td>
<td>Crops</td>
<td>3,500,000</td>
</tr>
<tr>
<td></td>
<td>Livestock</td>
<td>3,500,000</td>
</tr>
<tr>
<td>Excursion</td>
<td>Northern Viet Nam</td>
<td>5,000,000</td>
</tr>
<tr>
<td>Scholarships</td>
<td>various staff members</td>
<td>30,000,000</td>
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<tr>
<td>Evaluation</td>
<td>two sessions</td>
<td>5,000,000</td>
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<tr>
<td>Expertise</td>
<td>two missions, VN experts</td>
<td>15,000,000</td>
</tr>
<tr>
<td>Trials</td>
<td>to be planned</td>
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</tr>
<tr>
<td>Fund</td>
<td>Seed buy back fund</td>
<td>5,000,000</td>
</tr>
<tr>
<td>Motorcycle</td>
<td>1 Minsk</td>
<td>7,000,000</td>
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<tr>
<td>Documentation</td>
<td>Books and printing support</td>
<td>5,000,000</td>
</tr>
</tbody>
</table>

**Grand total** 87,500,000

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Government

SOCIALIST REPUBLIC OF VIET NAM

Nr 164/TTr

Independence - Freedom - Happiness

Ha Noi 16 March 1995

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Decision of Prime Minister

Approval of Forestry extension program 1995-2000

THE PRIME MINISTER

With reference to the Law on State organization September 30, 1992


DECIDE

Article 1.

Approval of forestry extension program 1995 to 2000 includes 8 programs as follows:
1. Program for Forestry integration with agriculture on sloping land after swiddens
2. Program for sustainable cropping on degraded soils and barren hills
3. Program for application of technical progress, increase natural and planted forest quality
4. Program for selection and improvement of indigenous and precious tree sp.
5. Program for people’s forestry in delta and coastal areas
6. Program on forest disease and fire protection and prevention
7. Program on improvement of cultivation, processing of forestry and non timber forest products
8. General program on training, transfer of technology and propaganda and mobilization regarding forestry extension.

Article 2.

Funding and expenditure procedures for forestry extension have to be implemented according to Decision 13/CP 2 March 1993 of the Government regarding Agriculture extension and the guiding interministerial circular (Nr 02/LBTT 2 August 1993) by the ministries of MAFI, Forestry, Fisheries, Finance, Government organization board.

Article 3.

- MoF is responsible for the implementation of the above mentioned 8 programs; prepare annual plans and study and publish the guiding standardized economic an support norms to facilitate the annual planning, disbursement and accounting

- SPC, Ministry of Finance is responsible for the establishment of balanced annual budget allocations for forestry extension for approval by the Government.

Article 4

This decision will be enacted as of the signature date

The Minister of Forestry and the Chairmen of the People’s Committee of all provinces, cities resorting under national government have the responsibility to implement this decision. All ministries of Agriculture & Food Industries, Finance, Fisheries, MOSTE, SPC, Government organization Board and all related ministries, sectors will be responsible for coordination with the Ministry of Forest in the implementation of this decision.

As signed PRIME MINISTER
DEPUTY PRIME MINISTER
Signed Tran Duc Luong

Notes on Meeting with extension section, Silviculture Department, Ministry of Forestry

Extension work is regulated by government decisions, the one directly relating to forestry extension here annexed. The extension system is organized parallel and integrated with the Agriculture extension system. That is, a division within the Ministry responsible for policies and planning, a Provincial level Extension center responsible for technical matters and detailing of plans and a District level extension station. The latter unit is the one responsible for implementing extension. Regular consultations between agriculture and forestry staff members is intended to maintain a high degree of integration between the two sectors.

Activities within forestry extension mostly draw budgets from national sources, specifically allocated to extension, from projects under the 327 program and from provincial budgets. The national forestry extension budget for 1995 is 2 billion Dong. For 327 projects a specific allocation is made equal to 1-2% of the total project budget. Provincial funds are only forthcoming in those provinces that recognize the value of extension. Prime examples in this respect are Bac Thai and Thanh Hoa.

Most (plm75%) of the national funding for forestry extension is allocated to model establishment. This has
taken place in 1994 in 9 locations, selected according to each location's representativeness of a agro-
ecological zone. As such these models have a national value. However, during 1995 an additional 6 models
are in the process of being established. A model encompasses different technical subjects but usually
engages several villages and series of households in forestry activities.

Each model is expected to be completed after three years of investment. The value of models is expressed
also in monetary terms, requiring 50 million Dong per site per year. Models implemented by lower level
organization can also qualify for funding but only for smaller sums and for shorter duration such as 1 or 2
years.

Requests for funding of models is to be budgeted carefully with about 50% of budget allocation going to
material inputs provided. The remainder is divided over nurseries, training, workshops, excursions,
propaganda and management fees.

Training has also taken place, with a focus on extension methods. During 1994 a total of 556 trainees
attended, mostly from state forest enterprises and provincial forest departments, all playing roles in
implementation of 327 projects. The plan for 1995 is to train an additional 600 people. The focus is to shift to
being more technical with the trainee selection to take place so as to include selected farmers, taking part in
the model establishment.