

DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

GUIDELINE

IMPLEMENTATION OF PARTICIPATORY AGRICULTURAL EXTENSION METHODOLOGY



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PARTICIPATORY AGRICULTURAL EXTENSION METHODOLOGY (PAEM) PLANNING

1. Objective and requirement

Developed plan should be feasible for implementation and suitable with conditions of household economy, local condition and investment ability from budget outside.

PAEM planning should be conducted based on general orientation of agricultural development, goal of economic development of each locality, farmers' needs and consuming market.

PAEM planning should be carried out annually and based on farmers' urgent basic needs, avoiding imposition during PAEM plan development at grassroots.

2. Procedures of development of PAEM plan

Step 1: Meeting on PAEM planning

Participant: leader representatives of local authorities, villages, professional staff and key farmers, facilitators from projects and programs (if any).

Meeting content:

The meeting aims to develop necessary agricultural extension activities related to the local conditions before have these activities discussed for agreement in the meeting.

Location and time of the meeting:

The meeting is organized meeting halls of commune or village, near farmers' resident place so that all farmers can participate in the meeting.



Meeting chairman:

The meeting is usually chaired and written with the meeting minutes by representative of the local authorities. Discussion in the meeting is facilitated by an extension worker.

Step 2: Needs development

- Main necessary activities are identified based on farmers' needs and market orientation; priority rank is carried out to have implementation methods related to agricultural extension.
- Assessment of the local practice.
- Clear and detailed description of activities.
- Identification of specific objectives, short-term and long-term objectives.
- Recommendation of implementation methods.
- Proposal of specific activities for implementation based on the defined methods as above.

Step 3: Selection of priorities to be included in the plan

Based on the procedure defined in the **step 2**, select priorities of agricultural extension activities to include in the plan.

Implementation guidance:

- Farmers are divided into groups for discussion
- Stationery such as A0 papers, marker pen, diagram, sketch, seasonal calendar, etc are applied.

Opinions are discussed, agreed and written in A0 paper for contributions from members in the group.



Example: Status of agricultural production in village A

Activity	Status	Objective	Solutions
Rice cultivation	- Old variety is degenerated..... - Lack of techniques 	- Apply high-productivity variety - Improve techniques of rice production	- Select or apply new variety - Technical training; study tour....
Maize cultivation
Pig raising
.....

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Example: PAEM plan in village A in 2012

Activity	No. of involved households	Implemented by	Location	Time	Technical and budget support
1. Technical training: - Pig raising - Pepper cultivation techniques					
2. Demonstration model development - Cultivation model: Rice cultivation - Husbandry model: chicken raising - Forestry model: bamboo plantation					
3. Study tour to on-field meeting - Visit cross-bred rice cultivation model					
.....					

Step 4: Aggregation and finalization of the village PAEM plan

The village PAEM plan developed and contributed by villagers will be finalized by the working group and then sent to the Agricultural Extension Station or the district Economic Section for consideration and approval. Issues to be adjusted and revised will be discussed and explained with villagers before included in the plan.



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AE Planning: Identification of Market Demand and Farmers' Needs

step No.	Content of M&E	Objectives & qualitative indicators	Level of Impact	Impact Indicator	Means of Verification
1	Identify market demand for agricultural product	Establish long list of agricultural products, and prioritize according to market demand and potential income benefits for farmers	output	long list of products available	long list with market priorities
2	Identify Development Priorities	Check 5 year SEDP for Development priorities of province, districts, communes	output	long list, rectified by development priorities	long list with market and dev. Priorities
3	Identify Farmers' Needs	Training Needs Assessment on village/hh level, following criteria: - AE activities to meet the needs of the local people - AE activities to mainly serve food security or market-oriented production	output	Over 70% of interviewees agree on training priorities. About 50% of interviewees are men, about 50% are women. Over 50% of interviewees agree on market-oriented product of specific product.	Short list of AE training topics, based on market demand, development priorities, and farmers needs
4	PAEM training packages	PAFEC to develop or adapt technical PAEM training packages which correspond with the training needs and priorities of farmers	use of output	PAEM materials and training handouts available in high quality, well-presented, scientific and have renovation in PAEM	Copies of materials, tests for CEW
5	Impact of PAEM on other planning processes	Strengthen grassroots democracy and change local people's awareness Have influence on other local development planning	indirect benefit	Participatory method is applied for 100% of local activities . Over 70% of the local people agree with new planning method.	Quick survey at the end of each training

TRAINING ON PARTICIPATORY TECHNICAL TRANSFER

1. Objective and requirement

Training contents are suitable with farmers' needs, understandable and applicable into production and easy to be disseminated to other farmers.

The trainer should have good understanding of training method for the adult; participatory training method is applied with an aim to stimulate farmers' participation.

“Using trainees as centre” and “CEWs/ trainer as facilitator” are applied.

Visible tools, theories, practice, training materials as well as on-field learning method are also applied.

2. Steps of carrying out a participatory training course

Step 1. Preparation of teaching schedule (lesson plan)

The teaching schedule or lesson plan should be specifically prepared. This lesson plan is used as a material for training guidance during the training course.

Steps of preparation of a lesson plan:

- Identify name of sections and learning objectives
- Prepare contents of these sections
- Identify total time for sections and for each section.
- Identify teaching methods to be applied and how to apply these methods.
- Prepare visible tools, examples and models (if any) for study tour during the training
- Present in details training contents and specific methods.

Example of sample lesson plan:

Lesson:			
Objective: After this lesson/ lecture, trainees will learn/ understand/ practice/ apply contents as follows: - Content 1 - Content 2			
Main contents of the training: - Content 1 - Content 2			
Content	Method	Estimated time	Material
Warm-up, revision	Play warm-up games Question for previous lesson revision: Do you remember what content we discussed last week?	5 minutes	
Introduction of training content	Brainstorming+ presentation <u>Question for brainstorming/ presentation</u>	10 minutes	
Content 1	Practice/ example/presentation	60 minutes	
Break	Play games	15 minutes	
Content 2	Practice/ example/presentation	60 minutes	
Check trainees' acquiring and summarize the lesson (25 minutes) - The trainer invites trainees to review trained contents. - After that, the trainer expresses important contents. - Questions and answers			
Evaluation of the learning results (05 minutes)			

☞ **95% the success of the training depend on lesson plan preparation!**

Step 2. Initial activities of the training course

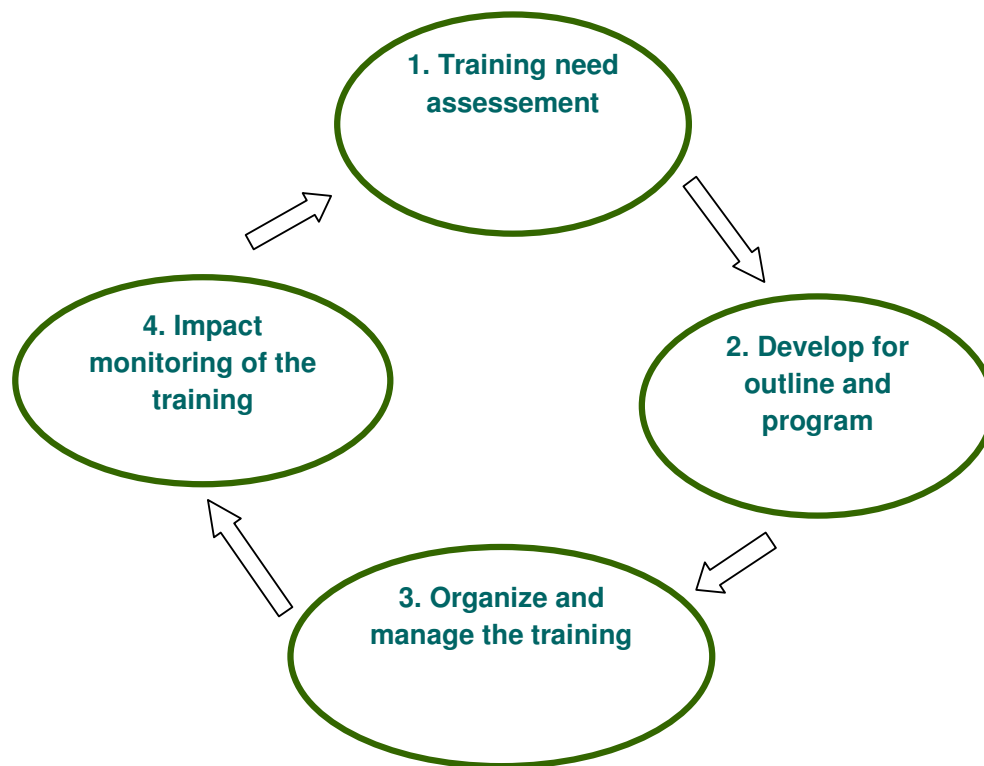
- Welcome trainees
- Inform logistic issues
- Introduce training objectives
- Trainees introduce themselves
- Start with the first training content

Step 3: Find out trainees' expectation and needs

- Review trainees' needs before starting the lesson; compare trainees' training needs with needs of the training course.
- Trainees write down their needs' on provided color cards or answer direct questions raised out by the trainer; Collect trainees' needs written on color cards or direct questions. The trainer aggregates and draws out results relating to the training contents.

Step 4: Organization of training

- Use the prepared lesson plan for training
- Apply methodologies and skills of PAEM training:
 - ❖ **Training methodology:**
 - Visible tools
 - Group discussion
 - Brainstorming
 - Modelling, practical guidance
 - Model observation
 - Individual and group consulting
 - Farmer-to-farmer exchange
 - ❖ **Training skill**
 - Skills of preparation for training course
 - Skills of using stationery
 - Skills of presenting in front of the crowded
 - ❖ **Communication skills**
 - Apply two-way communication questions.
 - Use material and visible tools
 - Apply knowledge and experience of local farmers
 - Listening
 - Observation
 - Comments
 - How to solve difficult situations in training courses



Step 5: Evaluation of learning results and lesson summary

- The trainer asks some of trainees to make examples for showing their learning results; try to answer trainees' questions and repeat important points.
- Trainee evaluation
- Trainer evaluation
- Evaluation of training contents
- Evaluation of effectiveness of training courses
- ❖ ***Evaluation contents:***
 - Available knowledge and training need of trainees.
 - Trainees' acquiring and application of trained knowledge.
 - Trainees' participation, attitude and behaviour with the trainer and other trainees.
 - Trainees' expectation after the training course.



❖ - **Evaluation method:**

- Apply written test with prepared questions.
- Oral test with dialogue, interview, role-play, individual presentation, group presentation, etc.

Evaluation of practice: is conducted via tours to practical production, observation, practical skill check, survey, discussion.

Requirements of an evaluation tool

It is necessary to have mark levels or answers to be the basis for evaluation.

The evaluation is reliable, reflecting exactly trainees' ability and training objectives.

The evaluation method should be objective, feasible, concise and understandable.

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AE Training with PAEM Method

step No.	Content of M&E	Objectives & qualitative indicators	Level of Impact	Impact Indicator	Means of Verification
1	Impact on trainers, CEW	Improved capacity of trainers / commune extension workers	use of output	CEW trained in application of new PAEM materials 100% of trainers apply PAEM material to train Group division and content discussion Trainer raises questions and finds out answers together with trainees	Tests for CEW Quick survey at the end of each training
2	Improved demand-driven services to farmers	PAEM training implemented, based on short list of farmers' needs	output	6 PAEM training courses every year in each of the 6 rural districts of QB, each course with about 30 participants on average, participants are about 50% men, 50% women over 90% of participants understand training content all participants confirm that training topic corresponds with their needs	Reports on trainings implemented and evaluated
3	Impact on participating Farmers	Improved learning effect by PAEM, Increased knowledge on production techniques	use of output	At least 50% of farmers apply trained knowledge into the 1st crop. Over 70% of farmers apply trained knowledge into the 2nd crop. At least 90% of farmers applying new techniques confirm that soil fertility is maintained.	Survey among participants of all trainings 1 year later
4	Impact on participating Farmers	Increase of agricultural productivity, increase of incomes from agriculture	direct benefit	60% of farmers apply training result and increase their income from agriculture by at least 5% per year (net of inflation)	Survey among participants of all trainings 1 year later
5	Outreach, wider dissemination	Poverty reduction in rural areas, while maintaining soil fertility	indirect benefit	In pilot communes 30 % of all farmers adopt new agricultural techniques from those who participated in PAEM training course (farmer -to -farmer exchange)	Random surveys in pilot communes 1 year after all PAEM trainings

IMPLEMENTATION OF PAEM MODELS

1. Objective and requirement

Farmers easily approach and apply technical advances in their production to increase their income and livelihood.

Scale of PAEM models is suitable with local production condition, model for advanced technical transfer or for replication. These models are implemented at farmers' cages and fields

PAEM models should be based on farmers' needs (farmers voluntarily participate in models), connected closely with consumption market and can be reduplicated.

2. Methodology of implementation of PAEM models.

2.1. Location selection

PAEM models are developed near villages, population areas; organize on-field meetings and study tours for farmers; on-field meetings for farmers' study tour are organized.

Select cages, fields of farmers who directly involve in models to implement.

2.2. Farmer selection

Farmers voluntarily participate, directly implement, monitor, record, analyze and evaluate model results.

Models are implemented based on farmers' needs which are identified in the meeting on the development of PAEM plan.

Number of farmers directly involving in models is reasonable depending on each type of model, about 20-30 farmers/model.

During the model implementation process, farmers should be given practical observations and technical instructions at suitable time periods so that they have technical methods to achieve high effectiveness in their production.

After models completed, facilitated farmers are able to organize on-field meetings, evaluate results and to recommend for other farmers.

2.3. Extension workers

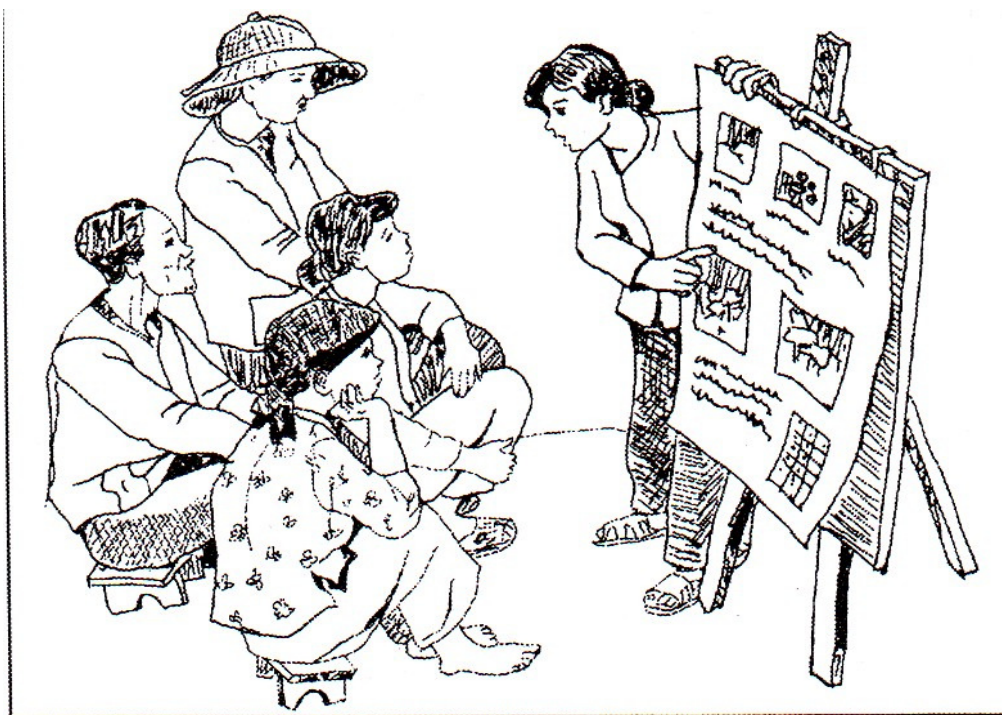
Extension workers together with farmer groups develop implementation plans of models, discuss and have an agreement on time, methodology, responsibility to successfully implement models.

Regularly monitor, check and facilitate farmers to implement sufficiently contents, and requirements of models as well as to give instructions of techniques, recording, evaluating results and to organize study tours for farmers for model reduplication in production.

Common implementation of PAEM models includes 8 steps as follows:

Steps 1: Preparation of the first village meeting

- Extension staff has to guide villages in preparation of the meeting on issues as follows:
- Time and location of the village meeting.



- Participants (notably, sex balance).

- Who is responsible for inviting participants?
- Meeting objective and contents.
- Necessary documents (agricultural extension plan, etc).
- Information on support source (techniques, materials, capital, etc).

Step 2: Organization of the first meeting

Organize the first village meeting:

- The meeting is chaired by village head
- Select the meeting secretary
- The meeting should not take much time

Only prepared contents are discussed

Select farmers participating in model implementation

The meeting minutes should be available and approved by farmers after the meeting.

Step 3: Organization of meeting for selected farmers

The meeting covers following contents:

- Have agreement on identification of location and area for development of PAEM models.
- Agree and sign written commitment with selected farmers.
- Guide techniques of PAEM model development, including:
 - *Method of model selection*
 - *Techniques and seasonal crops*
 - *Techniques of cultivation, tending and pest and disease prevention, etc.*
- Guide how to make a recording book
- Develop a plan for model visits

Step 4 : Establishment of PAEM model together with farmers

The seasonal crops are selected based on the seasonal crop plan (structure of cattle and poultry herd) of district, commune, agreement between CEWs and farmers.

CEWs together with village management board check activities at each household:

- Soil preparation (cage/ field)
- Input service supply (varieties, fertilizers, other materials, etc)
- Check model development (Do models reach objective requirements?; difficulties to be solved and supported, etc)



- Set up notice-board on name and content of the model in the field or animal cages.

Step 5: Monitoring of PAEM models (by CEWs and farmers)

- Involved households and interest households participate in monitoring PAEM models.
- Together with farmers discuss difficulties during the model implementation
- Guide farmers to record information on growth, development of stages of plants and animals, technical methods applied for models, etc.
- This is an important activity which help farmers discuss and draw out conclusions to be discussed in on-field meeting.
- PAEM model monitoring is the basis for CEWs to record, reoport to the Agricultural Extension Station for developing and adjusting technical materials more suitable with kinds of plant and animal in each locality as well as recommending applicable technical methods.

Step 6: Planning and preparation of on-field meeting

The on-field meeting plan is developed when the time for harvest crop, selling of poultry and cattle is nearly coming. This is suitable time for showing model results for all farmers in the village and in other villages. The on-field meeting should be prepared in advance (notably sex equality).

CEWs support involved farmers in preparing:



- List of farmers to be invited.
- Time, location of the on-field meeting.
- Present model implementation results (preparing inputs).
- Questions to be discussed.
- Record books on field checks.
- Achieved results are presented in tables on A0 paper (input, output, cost and profits).

Step 7: Organization of on-field meeting- report on model implementation results

- This is the most important time period of the participatory agricultural extension because at that time farmers can evaluate their models compared to traditional method. Farmers draw out lesson learnt from their implementation by themselves.
- Farmers who implement models will report on their model effectiveness to those who cannot participate in the meeting.
- The on-field meeting should be organized at the harvesting time.
- CEWs together with farmers calculate output and effectiveness of models
- Calculate and balance total costs and selling price in the market.
- Discuss actual effectiveness of models and raise out recommendations.
- Final report on models.

Step 8: Impact Evaluation of PAEM models

This is a new important step in implementing PAEM models. The impact evaluation of PAEM models is carried out after models are implemented in a short time period such as in 3 or 6 months.



Evaluation contents

- Farmers's attitude
- Effectiveness of model application
- Percentage of replication and technical application of models
- Farmers' attitude for models

Evaluation methodology:

- Questionnaires for interviews
- Observations
- Survey method and aggregation, etc.



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AE Field Demonstration Modells, PAEM Impementation

step No.	Content of M&E	Objectives & qualitative indicators	Level of Impact	Impact Indicator	Means of Verification
1	Implemten Field Demonstratin Modells	Based on market demand for specific products, on development priorities, and on farmers's expressed needs, implement field demonstration models with a maximum participation of farmers	output	Depending on technical and financial capacity, own contributions by farmers and possible support by projets, implement, monitor and evaluate 4 to 6 small models in each of the 6 rural districts of QB every year. All modells must be simple and small, ready to be replicated by farmers with their own resources.	Evaluation reports on models
2	Local Authorities Support	Local authorities, organizations directly monitor the model development at the localities (or possibly participate in the model implementation	use of output	100% of activities and policies are approved and have the local authorities' guidance.	DPC and CPC confirmation letters
3	Farmers' participation and ownership	Farmers participate enthusiastically in the model implementation Farmers understand and apply technical contents into their production	use of output	Over 90% of farmers involved in any model directly participate in the field implementation All participating farmers keep notebooks to record results of models Over 70% of them apply the model into their production techniques of cropping or animal husbandry	Farmers' notebooks, Evaluation reports on models
4	Facilitators' Capacities	Facilitarors on provincial, district level are able to coach CEW in model implementation CEW able to guide farmers in model implementation	use of output	CEW assessed by farmers, facilitators assessed by CEW: According to bottom-up assessment, 100% of facilitators and CEW are able to coach, guide implementation and evaluation of models	Assessment statements, Evaluation reports on models
5	Impact on participating Farmers	Increase of agricultural productivity, increase of incomes from agriculture	direct benefit	60% of farmers directly involved in the model increase their income from agriculture by at least 5% per year (net of inflation)	Survey among participants of all models 1 year later
6	Outreach, wider dissemination	Poverty reduction in rural areas, while maintaining soil fertility	indirect benefit	For each model, at least 100 other farmers visit the model and understand the new techniques (farmer -to -farmer exchange)	Random surveys in communes where model was implemented 1 year after model ends

EVALUATION OF PAEM ACTIVITIES

1. Objective and requirement

Consider the implementation process, result as well as impacts of PAEM activities on socio-economic activities in localities in order to draw out measures for overcoming shortcomings and developing positive impacts of PAEM activities.

All activities relating to local AE are to focus on assessment to be basis for guiding, reckoning-up activities and making plan orientation for the coming time.

Use a lot of different methods, tools and target people to assess an activity in order to get high objectiveness and accuracy of assessment documents.

2. Contents and methodology of evaluation of PAEM activities

2.1. Contents of evaluation of PAEM activities

There are a lot of different PAEM activities in localities but following main activities should be focused.

Evaluation of training courses for farmers, including both training implementation process and impacts of training results with the following contents:

- Training methodology: which training methodologies are applied, “traditional” or “irregular” methodologies?, seat arrangement, etc
- Farmers’ participation, sex and their needs.
- Appropriateness of training location, conditions, material facilities, etc.
- Contents and form of training material; level of using supporting tools.
- Result of checking farmers’ awareness after trainings.
- Number of trained farmers applies trained knowledge into their production.
- Increase of farmers’ income when they apply trained knowledge.

Evaluation of model implementation and impacts on production. Contents to be evaluated can be seen as follows:

- Appropriateness of models with planning of farmers' need identification; Scale and type of model.
- People who participate in model implementation and their needs of models; Number of farmers directly involve in models.
- Appropriateness of locations in which models are implemented such as model manager, favorable condition for transportation, village centre, favorable condition for study tours, etc.
- Socio-economic and environmental effectiveness of models.

Number of farmers applies model result and their increase of income due to the application of new models.

Evaluation of PAEM planning with the following contents:

- Origin of PAEM activities in localities; who makes decision on drawing out activities?
- People who participate in planning; rate of involved farmers.
- Appropriateness of PAEM activities with farmers' needs; improvement of technical and scientific knowledge, consuming market and capacity of result reduplication.



2.2. Methodology of evaluation of PAEM activities

To evaluate a PAEM activity, it is proposed to use tools and methods as follows:

- Develop questionnaires on survey and information collection; aggregate and evaluate survey results.
- Direct interviews with relevant individuals/groups.



- Group discussion and group interviews.
- Field survey in household farms and localities.
- Observations and recording, etc

It is necessary to prepare a sample of questionnaire to evaluate any activity. The questionnaire sample on PAEM model evaluation can be seen as below:

IMPACT EVALUATION OF PAEM MODELS

Model type:
Implementation location: village.....Commune.....
Time: From To.....
Responsible CEW.....
Answer following questions:

1. Is the model product based on market demand: Yes No
2. Consumption possibility: easily consumed difficultly consumed
3. Purpose of product use:
used only in the family sold in the market both
4. Is the model implemented based on local agricultural development priority rank?
Based on priority rank Not based on priority rank
5. Is the model implemented based on farmers' needs: Yes No
6. Implementation location of the model: selected by farmers Not selected by farmers
7. How often do CEWs facilitate and support during the model implementation?
Regularly Support as needed No
8. Support by the local authorities and mass organizations
 - a. Local authority
Directly guide model activities only pay attention when implementing
Pay attention when model has effectiveness No guidance and attention
 - b. Farmers' Union
Guide model activities Guide but a little No guidance
 - c. Women's Union
Guide model activities Guide but a little No guidance
9. Farmers participation:
Enthusiastic Not yet enthusiastic Not enthusiastic
10. How effective is the model?
Productivity and output increase than before Not increase Decrease
11. Is the model affect household's income
Increase income Not change Decrease income
13. Model replication
Continue implementing next seasonal crop Wait for outside support
Not implement any more
14. Community support
Help and guide other farmers to implement model Not help and guide
15. Evaluate capacity of CEWs in guiding the model implementation?
Meet requirement and enough capacity Not yet meet Still poor

16. Affect environment?

Environment pollution No environment pollution Others

Others:
.....
.....

Surveyor

