



Community Based Rice Seed Production system.  
Experiences from Climate-Smart Village (CSV), Phailom, Lao PDR

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## Overview

This manual provides a snapshot of community based quality rice seed production activities drawing from experiences Climate-Smart Village (CSV), Phailom in Lao PDR.



Seed is a critical input in crop production and its quality determines the status of agriculture practiced.

Currently about 85% of rice farmers in Laos use their own seed for cultivation and CSVs are no exception. Use of own seed is perceived to be an important factor attributed to low rice production. With low production farmers often consume their seed especially during times of scarcity due to poor climate conditions. As climate becomes increasingly erratic and unpredictable due to climate change, there need for improved seeds and good crop

management practices. However improved seed is costly input especially with rural farmers who majorly contribute national rice production in Laos.

International Rice Research Institute (IRRI) Laos under CGIAR Research Program on Climate Change Agriculture and Food Security (CCAFS) project in collaboration with Cuso International /NAFRI /PAFO implemented a community based rice seed production in Phailom (CSV) with a view to out scale and upscale this practice. This has been out scaled and upscaled in other villages in partnership with FAO-CAWA

projects in Champhone District, Savannakhet province. The manual is intended to provide support for facilitators in delivering hands on skills to local community seed producer group of farmers through a farmer field school approach (FFS) or other approaches. In building skills and knowledge of such farmer groups, it is expected that the communities will have an inbuilt team of skilled individuals or groups with capacity to produce good quality rice seeds thus enhance community's seed security, improve incomes and livelihoods.

The modules in this facilitation manual have been developed based on the experiences in Phailom CSV in its initial implementation and lessons learnt in subsequent implementations have been factored in.

It should be noted that before commencing community based seed production, a team of extension facilitators should be set up and capacity build.

All the modules and sessions included in this manual may not be covered in all situations. It is advised that facilitators first identify the issues facing farmers in order to select those modules and sessions that best

meets their needs. Each module consists of the following components:

1. Learning objectives
2. Methodology
3. Content
4. Resources

## **Module 1**

### Introduction

The first step after the target community have been identified is to find out what are the main issues surrounding seed in the community in terms of availability, access, quality, varieties etc.

This will allow the facilitators to select the modules or sessions that best fits their situation.

### Activity: Preliminary Visits/Inception

#### **Objectives**

- i. Needs assessment – Can use existing as in this case used Situational/ baseline studies carried out earlier by CCAFS in Phailom CSV.
- ii. Identify specific issues and concerns pertaining to seeds in the target community.
- iii. Identify target farmers based on agreed criteria

- iv. Develop working team at grassroots for the specific project/group.
- v. Ensure all stakeholders understand and agree on proposed intervention.

**Methodology**

- vi. Group work
- vii. Open discussion
- viii. Experience sharing Q/A
- ix. Role plays

**Content.**

The module covers the following sessions:

Session 1: Seed issues in our communities.

Session 2: Identification of target farmers and establishing of local Leadership.

**Session 1. Seed Issues**

- 1. Find out issues surrounding seeds-varieties, sources etc
- 2. what are common issues and concerns that farmers raise in terms of seeds- preferences, quality and varieties-
- 3. How are the concerns being addressed and by who?
- 4. Are there any existing seed exchanges in the community? How they do it?

- 5. Where do farmers get seeds-eg neighbour, NAFRI, Thesano, Xebenfai

- Group presentations.
- Summary of presentations

**Session 2. Identification of potential Farmers and Leadership set up.**

- Develop criteria for selection? Eg own land, Willingness and commitment etc - be clear
- Find prospects for demonstration
- Set up/ map farms- site requirements for demonstration farms.
- Find out local champions-maybe district staff-extension, area leaders, volunteers etc

**Establish Local Leadership**



- Form Teams (community level, District, Provincial) team to mobilise and organize farmers.
- Emphasize gender equity and participation.
- Use tools available tools.

#### **Resources Required.**

- Logistics – fuel etc
- Team of facilitators
- Stationary
- Target farmers

### **Module 2**

Activity: Site Visits/ Site Selection.

#### **Objectives.**

- Identify suitable sites for seed production
- Check suitability of sites against set standards.
- Mapping of sites eg GPS.

#### **Methodology.**

- Discussion
- Farm walks

### **Content**

It is important to commence a field visit to farmers proposed fields/sites with a view of determining their suitability against agreed seed production requirements. Where a farmer's field is not suitable a farmer can suggest alternative field.

The site must meet requirement which may include;

- Fertility
- Previous history
- Drainage
- Accessibility
- Diseases and pests history

#### **Resources Required.**

- Logistics – fuel etc
- Team of facilitators
- Stationary
- Target farmers

### **Module 3**

Activity: **Participatory work Plan and Crop calendar Development.**

#### **Objectives**

- Prepare a workable plan of action for the season.
- Develop a cropping calendar

## **Methodology**

Open discussion

Group work

Presentations

## **Content**

These are simple tools that help the group and individual farmer to plan farming activities to ensure timeliness in undertaking specific farm operations.

The farmers understand better the local conditions and need to take active role in planning.

Once agreed upon, each farmer should pin up his/her own calendar at a convenient place.

It should however be fairly flexible based on prevailing weather conditions.

The group also develops a joint action plan detailing their activities from seed to seed.

### **Session 1. Action Plan development**

Decide who will facilitate the planning meeting eg the head of village, influential group member/leader.

*Illustration*

*Project Team during action planning meeting with farmers.*



*Action plan.*



### **Session 2. Crop Calendar**

*Illustration*



### Resources Required.

- Logistics – fuel etc
- Team of facilitators
- Stationary
- Target farmers

### Module 4

Activity: Launch of Community based Seed Production.

#### Objective.

- To officially kick start the rice seed production activities for the season.
- To bring stakeholders together .
- To provide inputs to target famers.

#### Methodology

- Speeches
- Discussion

Launching brings local authorities and other stakeholders in seed production together and helps kick start rice seed production in target area. This should include government extension, interested private companies, research institutions, NGOs etc.

If possible this coincides with issuance of inputs if is part of the project.



### Resources Required.

- Logistics – fuel etc
- Team of facilitators
- Stationary
- Target farmers

### Module 5

**Activity: Community Seed Fair.**

#### Objective.

- To establish seed resources in the target areas.
- To identify the needs in terms of appropriate seed varieties.
- To bring stakeholders together
- To develop potential markets linkages

## Methodology

- i. Speeches
- ii. Discussion sessions
- iii. Displays/Exhibition

Seed fair is an occasion where farmers and other stakeholders meet and display their rice seeds. It also presents farmers and other stakeholders to buy, sell or exchange rice seeds and learn from each other

The first seed fair is held before the season commences to showcase rice seed variety resources in the target area and allow various stakeholders interact and share experiences. Participants in the value chain including farmers, government extension agents from both district and provincial offices, local research stations, eg National Agriculture and forestry research institute as well as international institutions eg IRRI may be invited to the seed fair. The farmers display their rice seeds and share their perceptions about different rice varieties.

Local Research stations eg Xebangfai and Thesano can display their seeds, posters of their varieties to provide farmers with vital information and best practices needed for good production.

Learning institutions such as universities colleges eg Savanakheth university students may also attend the seed fair.

The key features in the seed fair included:

- Table displays of seeds by farmers from Phailom and Ekxang climate smart villages.
- Cooked recipes for different rice varieties.
- Participatory selection and ranking of varieties by farmers
- Open forum for discussion in which farmers, researchers and extension agents shared various issues related to rice seed production.

The discussions focus on suitability of the seed varieties in light of climate change experienced in the region and specific challenges relating to rice seed in the climate smart village.

Resources Required.

- Logistics – fuel etc
- Team of facilitators
- Stationary
- Target farmers



Participatory Variety selection.

**Participatory Varietal selection**

ການປະກອບສ່ວນໃນການເລືອກແນວພັນ

**Matrix Ranking tool.**

ວິທີການເລືອກແນວພັນເຂົ້າ

**Materials:** Markers, Tapes, Manila papers, diagrams to represent different physical features.

**ສຸ່ປະກອນ:** ມາກເກີ້, ສະກັອດຕິດເຈ້ຍ, ເຈ້ຍສີ, ເຈ້ຍແຜ່ນໃຫຍ່ ສໍາຫຼັບຜັກອົບຮົມໃຊ້ໃນການອະທິບາຍແຕ່ລະລັກສະນະຂອງແນວພັນເຂົ້າ

1. Invite farmers to a meeting ເຊິນຊາວນາເຂົ້າຮ່ວມປະຊຸມ
2. Find out their preferred varieties - The varieties commonly used by farmers in the community. List on paper. ຊອກຫາແນວພັນເຂົ້າທີ່ຊາວນາມັກໃຊ້ - ແນວພັນເຂົ້າທີ່ຊາວນາມັກຈະໃຊ້ປູກຢູ່ພາຍໃນບ້ານ. ກະລຸນາຂຽນອອກມາເປັນລາຍການລະອຽດໃສ່ເຈ້ຍແຜ່ນໃຫຍ່.
3. Find out by asking them the factors that makes them decide on choosing the varieties(This is the farmers criteria) e.g. seed color, seed size, aroma, taste, resistance to a pest or disease etc. ຊອກຫາໂດຍການຖາມຊາວນາກ່ຽວກັບປັດໄຈທີ່ເຮັດໃຫ້

ພວກເຂົາຕັດສິນໃຈເລືອກເອົາແນວພັນເຂົ້າ (ມາດຕະຖານຂອງຊາວນາໃນການເລືອກ) ຕົວຢ່າງ: ສີຂອງເມັດພັນ, ຂະໜາດຂອງເມັດພັນ, ຄວາມຫອມ, ລົດຊາດ, ທົນທານຕໍ່ສັດຕູພືດຫຼືພະຍາດແລະອື່ນໆ.

4. Write down the farmers criteria on a chart against the different varieties. ຂຽນມາດຕະຖານຂອງຊາວນາໃນການເລືອກແນວພັນເຂົ້າໃສ່ຕາຕະລາງໂດຍປົບປາກແຕ່ລະແນວພັນເຂົ້າ.
5. Ask each farmer to compare these varieties based on each criteria. ໃຫ້ຊາວນາແຕ່ລະຄົນປົບປາກແນວພັນເຂົ້າດັ່ງກ່າວໂດຍອີງໃສ່ແຕ່ລະມາດຕະຖານ.
6. Rank them accordingly (Use 5 as the best and 1 as the worst). ໃຫ້ຈັດລຳດັບແນວພັນເຂົ້າໂດຍອີງໃສ່ມາດຕະຖານ (5 ແມ່ນດີທີ່ສຸດແລະ 1 ແມ່ນບໍ່ດີທີ່ສຸດ).
7. Continue with all farmers if the group is small or with about 10 farmers if the group is large. ສືບຕໍ່ຖາມຊາວນາທຸກຄົນຖ້າເປັນກຸ່ມນ້ອຍຫຼືມີຊາວນາທັງໝົດ 10 ຄົນຖ້າເປັນກຸ່ມໃຫຍ່.
8. The variety with the highest score is their preferred variety. ແນວພັນເຂົ້າທີ່ໄດ້ຮັບຄະແນນສູງສຸດຖືວ່າເປັນ

ແນວພັນເຂົ້າທີ່ຊາວນາ  
ມັກໃຊ້ໃນການເຮັດນາ.

- Present the result to farmers and confirm with them if it is their preferred variety or not. Sometimes varieties with the highest score may not necessarily be their best because of preferences to a specific characteristic.

ນຳສະເໜີຜົນໃນການປະເມີນ  
ໃຫ້ຊາວນາຟັງແລະຢັ້ງຢືນ  
ກັບຊາວນາຖ້າຫາກວ່າແນວ  
ພັນເຂົ້າດັ່ງກ່າວເປັນ  
ແນວພັນເຂົ້າທີ່ຊາວນາ  
ມັກໃຊ້ຫຼືບໍ່ມັກໃຊ້,  
ບາງຄັ້ງແນວພັນເຂົ້າທີ່  
ໄດ້ຮັບຄະແນນສູງສຸດກໍ່  
ບໍ່ໄດ້ຖືກເລືອກເປັນແນວພັນ  
ເຂົ້າທີ່ດີທີ່ສຸດເພາະ  
ມັນຂຶ້ນກັບຄວາມມັກຂອງ  
ໃຜລາວ.

Farmers criteria ມາດຕະຖານ ຂອງຊາວນາ	Variety A ແນວພັນເຂົ້າ A	Variety B ແນວພັນເຂົ້າ B	Variety C ແນວພັນເຂົ້າ C
Seed color ສີຂອງເມັດພັນ	2	5	5
Weight ນ້ຳໜັກຂອງເມັດເຂົ້າ	1	1	1
Resistance to bacterial leaf blight	1	3	1

ທົນທານຕໍ່ພະຍາດໃບແຫ້ງ			
Resistant to stem borer ທົນທານຕໍ່ດ້ວງກໍ່	4	2	3
Yield ຜົນຜະລິດສະມັດຕະພາບທີ່ໄດ້ຮັບ	3	4	4
Aroma ຄວາມຫອມ	2	2	2
Taste ລົດຊາດ	1	2	4
<b>Total ລວມ:</b>	<b>14</b>	<b>19</b>	<b>20</b>

The best variety is C followed by B.

ແນວພັນເຂົ້າທີ່ດີທີ່ສຸດ  
ແມ່ນ C ຕໍ່ມາແມ່ນແນວ  
ພັນເຂົ້າ B

Confirm this with farmers and reach a consensus.

ຢັ້ງຢືນຜົນຂອງການປະເມີນໃຫ້  
ຊາວນາຟັງແລະເຂົ້າເຖິງຄວາມຄິດ  
ເຫັນທີ່ເປັນເອກະພາບກັນຂອງ  
ຊາວນາສ່ວນຫຼາຍ.



**Viewing of seeds by participants and ranking of varieties during seed fair.**  
 Participants go round the various displays and share information with each other after which they participate in a variety ranking.



Farmer display



Displays for farmers



Cooked recipes

Government extension participants view.



Displays from Research institutions.



Module 6

**Activity: Farmer Field School (FFS) –**  
Selected farmers: on-farm demonstrations  
for seed

Objectives.

- i. Provide hands on skills development for target farmers on rice seed production skills.
- ii. Develop a skilled rice seed producer group

**Methodology.**

- Farmer Field School
- Other suitable extension approaches
- Use actual farmers' fields as seed growing sites after meeting agreed selection standards.

Production (Lead by farmer TOTs and Supervised Lead facilitator and extension Staff)-

**Content:**

Seed (usually Foundation seeds) to seed (farmer declared quality seed) practical skill training on the farmers demo farms.

Seed and nursery preparation.



Transplanting



Crop establishment



FFS Session



Rogueing



Nutrient management



Seed cleaning.



## Packaging , storage and seedbanking



4. Link farmers to potential seed and grain marketeers.

A Seed and grain buyer for IDP company examines farmers seed during seed fair.



## Resources Required.

- Logistics – fuel etc
- Team of facilitators
- Stationary
- Target farmers

## Module 7.

The second and subsequent seed fairs are held after the farmers' production under FFS or any other extension approach.

The objectives of this event are:

1. To showcase seeds produced by selected farmers in the season.
2. To initiate seed banking for farmers in the target village.
3. To strengthen linkages/information sharing among farmers as well as other stakeholders.

## Module 8

Monitoring and evaluation.

## Introduction

This module aims at imparting knowledge and skills on Monitoring and Evaluation (M&E) to enable members of community seed producer Committee to understand how community seed producer internal quality control ensure quality seed production sustainability and access to seed supplies.

The module introduces participants to importance of M&E. It will assist members

in proper management of seed producer group.

### Objectives

By the end of this module, participants should be able to:

1. Conduct monitoring and evaluation
2. Describe key points of monitoring and evaluation

This session contains the following topics:

Session 1: What is monitoring and evaluation? Session 2: How to carry out monitoring and evaluation

### Introduction

Monitoring and Evaluation are important for management and improvement of projects as well as existing services. Knowing and understanding the progress and status of projects and/or activities in the management cycle is essential for its effectiveness and completion. Periodic information on facility management is required so that proper action is taken. It is necessary to follow a proper sequence for the planning and implementation of successful seed production activities in a community action cycle.

Monitoring is a continuous processes and it is an on-going activity and provides a continuous picture as to whether or not projects or services are proceeding or functioning according to the plan.

Evaluation is carried out at intervals either in response to a problem or when a project phase or period is completed. Monitoring is an internal activity, whereas evaluation may be carried out also externally or in a combination. It is necessary to review the process and status of implementation. This ultimately aims at reviewing the activities of seed producer group at community level.

Monitoring and evaluation data should be used as corrective measures in seed production. The focus should be on learning, and on adapting and improving procedures, activities and results.

### Objectives

- i. Develop a monitoring/inspection plan.
- ii. Prepare monitoring report.
- iii. Methodology**
- iv. Open discussion
- v. Group work
- vi. Presentations

## **Content.**

What is monitoring and evaluation?

### Step 1

The facilitator divides participants into groups to discuss how communities can take part in M&E.

### Step 2

The facilitator consolidates the responses and presents areas in which communities can take part.

content

### Objective of the Monitoring

Monitoring is a regular check-up to see progress of activities in the management cycle and to see if the communities are achieving their goals or results.

It provides data on the progress of each activity – what has been done and what has

not been done – and identifies problems and their causes. This data helps seed producer groups to make decisions to improve various activities.

Evaluation is to assess the impact of the implementations / activities during and/or end of the seed production cycle.

Resources Required.

- Logistics – fuel etc
- Team of facilitators
- Stationary
- Target farmers



## APPENDIX

### STAFF TRAINING

#### Purpose of Training

This training focuses on quality seed as a critical factor in rice production and food security. It aims at providing the participants with basic skills in rice seed production at community level. Further, it seeks to equip the Ministry of Agriculture staff with basic principles for establishing a community based seed system for up scaling of the practice and to ensure sustainability once CCAFS exits.

**Objectives** 1. To develop participants' skills in rice seed production

2. To provide participants with basic principles in establishment of a community seed system

#### Model for capacity building

Seed Improvement advisor trains Ministry of Agriculture Staff (Community based seed

System/seed Production)-**2016**

Agriculture staff train 10-15 Farmers (TOTs) – (Rice seed production) -**2016**

TOTs train other farmers (Rice seed production)-**2017**

Seed fair (participatory seed/variety selection)

**Farmer Field School (FFS)**–Phailom CSV (**2017**) - 10 on-farm demonstrations for

seed

Production (Lead by farmer TOTs and Supervised by Seed improvement advisor

and

Ministry agriculture Staff)- **Seed to seed practical skill development on 10 demo**

farms



standards

Seed fair (Farmer organization/setting

and Community regulations)

**Rice Seed bank** – (Rice seed producer group- Linkage with other stakeholders)

#### PROGRAMME FOR SEED FAIR PHAILOM CLIMATE SMART VILLAGE (CSV) 21<sup>ST</sup> DECEMBER 2016

<b>Time</b>	<b>Activity</b>	<b>Responsible</b>
9.00 -9.30 am	Arrival, registration and introduction of guests	Mrs. Ketsana (PAFO Savanakhet Province)
9.30 -10.00am	Aim of seed fair	Mrs. Ketsana (PAFO Savanakhet Province)
10.00 -10.20 am	Welcoming speech	DAFO Champhone District
10.20-10.40 am	Opening speech	PAFO
10.40-11.30am	Speeches by other invited guests	-
11.30-11.40 am	Overview of Phailom(CSV)	Mr Othai- Farmer Leader.
11.40 pm -1.00 pm	Viewing of seeds from various farmers and research stations	All
1.00Pm- 2.00pm	Group Lunch	All
2.00pm-3.00pm	Discussion	All
3.00pm-3.20pm	2017 planned activities	Mr Benard Okumu
3.00-3.30pm	Closing speech	DAFO-
3.30pm	Closing	All

**FARMERS OBSERVATION CHECKLIST (Farmer Field School)**

Period: \_\_\_\_\_

I. Crop development (Appearance)

II. Insects- Good / Bad (pests)

III. Diseases

IV. Weeds

V. Weather

VI. Fertilizer use –      Type                      Amount                      Time

**Programme for 2 day visit CCAFS-CSV site2 (Phailom village)**

**On 4<sup>th</sup> -5<sup>th</sup> October 2016**

**PAILOM VISIT ON 4-5 OCTOBER 2016**

**Key Aims**

- ✓ Identify issues and concerns related to seed and players if any
- ✓ Identify farmers for involvement in seed production
- ✓ Form community team
- ✓ Discuss seed fair and seed banking
- ✓ Discuss FFS
- ✓ Develop an action Plan

<b>Date</b>	<b>Time</b>	<b>Descriptions/Activities</b>	<b>Who</b>
Identify 4/10/2016	7:00-8:30	Team travels to Phailom village for CCAFS-CSV site 2	Benard, Phalida, Ketsana, Souliphon
	9.00-9.30	Introduction and objective of the visit	Benard, Phalida, Ketsana, Khonlai
	9.30-11:30	Discussion on common issues and concerns with respect to seed: availability, accessibility, quality and variety Any Actors or groups or seed exchanges/seed bank	All
	11:30-13:00	Group lunch	All
	13:00-14:00	Identification of 20 farmers for seed production demonstrations.	All
	14:00-15:00	Form steering committee	Farmers
5/10/2016	8.30.00-10.30	Identification/Visit of sites	Benard, Phalida, Ketsana
	10.30-11.00	TOTs selection	Farmers
	11.00-1130	Discussion on seed fair	Benard, Phalida, Ketsana
	11.30-13.00	Group Lunch	All

	13.00-3.00	Development of Action plan including FFS 2017	All
	3.00-4.30	Team travel back to Savanakheth	Benard, Phalida, Ketsana















