

**Ministry of Economic Development
Democratic Socialist Republic of Sri Lanka**

Democratic Socialist Republic of Sri Lanka

**The Project for Development Planning
for the Rapid Promotion of Reconstruction
and Development in Jaffna District**

**Pilot Project Completion Report
- Appendix 2 -**

November 2011

Japan International Cooperation Agency (JICA)

**IC Net Limited
Oriental Consultants Co., Ltd.**

Democratic Socialist Republic of Sri Lanka
The Project for Development Planning for the Rapid Promotion
Of Reconstruction and Development in Jaffna District

Pilot Project Completion Report
(Appendix 2)

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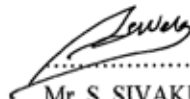
Pilot Project Completion Report

Name of the Pilot Project:	Strengthening of Seed Production Cooperative Society
Pilot Project Code:	AC 01
Name of the Implementer:	PDP Jaffna with SEEDCO
Pilot Project Site	Thirunelvely, Jaffna District
Background	<p>Since inferior seed is one of the causes of low yield, stable supply of quality seeds is one of the key to increase productivity of crops.</p> <p>Farmers are able to get some high-quality seeds from SEEDCO via ASC. SEEDCO had been supplying 1,860kg vegetable seeds and 90,000kg of paddy seeds annually. However, SEEDCO was only able to supply less than 20% of the total seed requirement of the district. The shortfall was being met by personal seed production of farmers and private seed suppliers; however the quality of their seeds is generally substandard.</p> <p>SEEDCO was cleaning paddy seed and vegetable seeds manually, its efficiency was very low and its capacity was limited. It was necessary to up-grade seed cleaning capacity, so that more famers would be able to obtain better quality seeds.</p>
Objective	This Project supports SEEDCO in its aim of increasing the quantity as well as to improving the quality of paddy and vegetable seeds to be distributed to farmers in the district.
Activities	<ol style="list-style-type: none"> (1) Provision of seed cleaning machine and accessories (2) Construction of a small structure to house the cleaner (3) Provision of Dunnage & grain moisture meter (4) Provision of training on operation and maintenance of seed cleaning machine
Evaluation	<p>The quality of seed paddy was improved to a remarkable extent compared to the prior method, manual processing. The quantity of paddy seed processed by SEEDCO was expected to be more than double that of the prior operation. Following are the major achievement:</p> <ol style="list-style-type: none"> (1) Amount of quality seed supplied by SEEDCO <ul style="list-style-type: none"> At the beginning: 4,500 bushels of seed paddy per year. According to the records of operators, on average, around 60 bushels of seed paddy were being processed per day. At the end: Since the daily seed processing capacity was increased by more than three times that as compared with the manual operation, more than 10,000 bushels of seed paddy are expected to be processed per year. (2) Technical improvement of SEEDCO on operation and maintenance of seed processing facility <ul style="list-style-type: none"> The technical operators of SEEDCO have been trained on how to operate and maintain the facility and they were performing according to instruction. Prior to operation, the seed grader is checked and lubricants are applied in a regular manner in order to keep it in good operating condition. (3) Involvement of member farmers in seed production and operation of seed processing facility <ul style="list-style-type: none"> At the beginning: 62 contract growers (seed paddy) At the end: 104 contract growers (seed paddy)
Annex	<ol style="list-style-type: none"> (1) Plan of Operation (2) Handing-over Certificate (3) Final Inspection Sheet after Defect Liability Period

Seed Production Cooperative Society Ltd, Jaffna

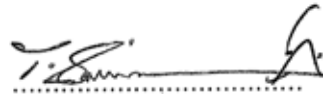
3. Operating schedule:

No.	Activity	Ja	Fe	Ma	Ap	Ma	Ju	Jul	Au	Se	Oc	No	De
1.	Production of seed												
1.1	Paddy		_____										
1.2	Pulses	_____				_____			_____				
2.	Processing (Operating Seed Cleaning Machine)												
2.1	Paddy		_____						_____				
2.2	Pulses		_____			_____					_____		
3.	Maintenance												
3.1	Daily		_____								_____		
3.2	Periodical maintenance											_____	
4.	Distribution												
4.1	Paddy					_____			_____				
4.2	Pulses	_____				_____							_____



Mr. S. SIVAKUMAR
 Deputy Director,
 Department of Agriculture (Ext),
 Jaffna

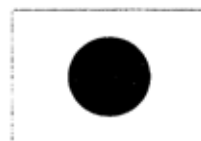
S. SIVAKUMAR
 DEPUTY DIRECTOR OF AGRICULTURE (EXT)
 JAFFNA



Mr. T. SIVALOGANATHAN
 General Manager, Seed Production
 Cooperative Society Ltd,
 Jaffna

General Manager
Seed Production Co-operative
Society of Jaffna Peninsula (Ltd.)
SEED CO.
 IMPUNELVELY, JAFFNA

Annex 2



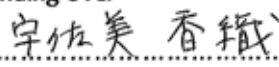
PROJECT FOR THE DEVELOPMENT PLANNING FOR
THE RAPID PROMOTION OF RECONSTRUCTION
AND DEVELOPMENT IN JAFFNA DISTRICT

HANDING OVER CERTIFICATE

TITLE OF THE PROJECT	: STRENGTHENING OF SEED PRODUCTION COOPERTIVE SOCIETY
IMPLEMENTING AGENCY	: JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
HANDING OVER TO	: SEED PRODUCTION COOPERATIVE SOCIETY OF JAFFNA PENINSULA (LTD)
CONTRACT VALUE	: RUPEES 2,072,000.00
CONTRACT PERIOD	: 6 MONTHS
COMMENCEMENT DATE	: 13 TH DECEMBER 2010
COMPLETION DATE	: 11 TH JUNE 2011
CONTRACTOR	: KAMSHIKAAS CIVIL ENGINEERING WORKS AND SUPPLY
LOCATED AT	: > DISTRICT : JAFFNA > D.S. DIVISION : NALLUR > G.N. DIVISION : THIRUNELVELY

Above mentioned construction of house for seed cleaner has been completed under the Project for the Development Planning for the Rapid Promotion of Reconstruction and Development in Jaffna District (PDP-Jaffna) with the assistance of Japan International Cooperation Agency and handed over on 15th of July 2011 to Seed Production Cooperative Society of Jaffna Peninsula (Ltd) by JICA Study Team. The Seed Production Cooperative Society of Jaffna Peninsula (Ltd) is fully responsible for Operation and Maintenance under the supervision of Department of Agriculture (Extn.), Jaffna.

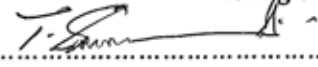
Handing Over

for 

Mr. Hiroaki YONESAKA

Team Leader
JICA Study Team, PDP Jaffna
Acting for and on behalf of
Japan International Cooperation Agency
Japan

Taking Over



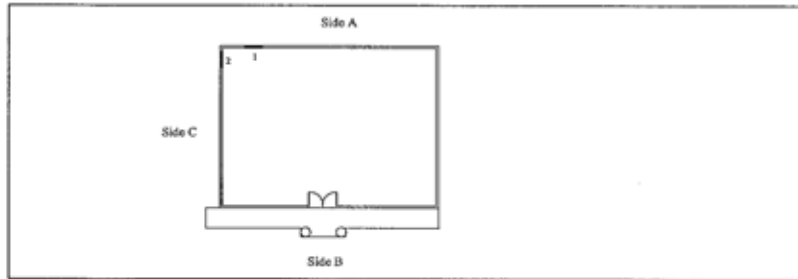
Mr. T.SIVALOKANATHAN

General Manager
Seed Production Cooperative Society
of Jaffna Peninsula (Ltd.), Jaffna
Democratic Socialist Republic of Sri Lanka
Sri Lanka

Annex 3

FINAL INSPECTION-AFTER DEFECT LIABILITY PERIOD

SEED CLEANER - THIRUNELVELY



No.	Item	Inspection date	Re-Inspection date	Comments
		26.09.2011	04.10.2011	
1	4" Concrete Black wall			
	Side A	✓		
	Side B	✓		
	Side C	✓		
2	Out side Plaster			
	Side A	x	✓	Plaster cracks / Corrected
	Side B	x	✓	Plaster cracks / Corrected
	Side C	✓		
3	Inside Plaster			
	Side A	x	✓	Plaster cracks / Corrected
	Side B	x	✓	Plaster cracks / Corrected
	Side C	✓		
4	Out side Paint			
	Side A	✓		
	Side B	✓		
	Side C	✓		
5	In side Paint			
	Side A	✓		
	Side B	✓		
	Side C	✓		
6	Main door	x	✓	One Barrel bolt not working / Corrected
7	Window			
	No.1	✓		
	No.2	✓		

Legend

Accept ✓
Not Accept x

JICA Study Team (PDP Jaffna) *[Signature]*

Deputy Director (DOA) *[Signature]*

General Manager (Seedco) *[Signature]*

Contractor (Kamshikaas) *[Signature]*

PDP Jaffna - JICA
3rd Floor, Registrar's Building
District Secretariat, Jaffna
Tel- 021-320-758
Date: 04/10/2011

DEPUTY DIRECTOR OF AGRICULTURE (EXTN) *[Signature]* Date: 04/10/2011

General Manager *[Signature]* Date: 4-10-2011

B. PIRATHEEBAN
Director

Kamshikaas Civil Engineering Works & Supply
Karaveddy.

Production & Operation Society of Jaffna Peninsula (Ltd.)
SEED CO.

THIRUNELVELY, JAFFNA

No.	Item	Inspection date	Re-Inspection date	Comments
		26.09.2011	04.10.2011	
8	Roof	✓		
9	Roof Steel purlins and GI welded mesh	✓		
10	Floor Rendering	✓		
11	Electrical fittings Flauracent lamps Plugs	✓ ✓ ✓		
12	Outside Pavement	✓		
14	Sunshades & Columns	✓		

Legent

Accept ✓
Not Accept X



JICA Study Team (PDP Jaffna)

Deputy Director (DOA)

General Manager (Seedco)

Contractor (Kamshikaas)

DEPUTY DIRECTOR OF AGRICULTURE (EXTN)

JAFFNA

Date 04/10/2011

Date 4-10-2011

General Manager Seed Production Corporation

Society of Jaffna Peninsula (Ltd.)

B. PIRATHEEBAN
Director

SEED CO.

Kamshikaas Civil Engineering Works & Supply
HIRUNELVELY, JAFFNA
Karaveddy.

Pilot Project Completion Report

Name of the Pilot Project:	Strengthening of Agricultural Extension Services
Pilot Project Code:	AC 02
Name of the Implementer	PDP Jaffna with DOA
Pilot Project Site	Thirunelvely, Jaffna District
Background	<p>Agricultural Extension Service plays a vital role in providing knowledge and technology to the farming communities to step-up agricultural production, productivity and value addition in Jaffna District.</p> <p>Several training programmes had been conducted for farmers at DATC, but DATC lacked the latest training equipment and facilities. AIs' knowledge were also rather outdated.</p>
Objective	This Project aimed to strengthen the agriculture extension services via providing audio visual equipment and quality training.
Activities	<ol style="list-style-type: none"> (1) Provision of necessary equipment for the audio visual unit. (2) Training of extension officers on audio visual equipment. (3) Training of farmers on important topics such as soil fertility, groundwater management, banana dense planting, Plant Protection and pre-post harvest technology.
Evaluation	<p>The results of pre-post test and feedback from participated farmers indicates that the training programmes conducted by the pilot project fulfilled the requirement of farmers and satisfied the objective of the pilot project. Followings are the major achievement:</p> <ol style="list-style-type: none"> (1) Number of trainees At the beginning: 0 At the end: 997 (2) Change of pre-post test result At the beginning (Mean score of pre test): 23.4% At the end (Mean score of post test): 45.9% Progress – up 22.5% (3) Feedback from trained farmers Since most of the training subjects were useful technologies for the farmers, they said it was a good opportunity to study them. (4) Improvement of trainers' knowledge Staff members of DOA have developed their training capacity and knowledge through audio visual training.
Annex	<ol style="list-style-type: none"> (1) Completion report of training on handling and maintenance of audio visual equipments (2) Completion report of the technical training on ground water management and micro irrigation system (3) Completion report of the technical training on banana dense planting under drip irrigation system (4) Completion report of the technical training on soil fertility (5) Completion report of the technical training on pre and post harvest technology of fruits and vegetables (6) Completion report of the technical training on plant protection

Annex 1

**COMPLETION REPORT OF TRAINING ON
HANDLING AND MAINTENANCE OF AUDIO VISUAL EQUIPMENTS
DECEMBER 2010**

1. Programme Description**Introduction**

The training programme was arranged in Gannoruva Audio visual Center. It was established in 1980. This organization is a media centre nesting under the Extension and Training Division of the Department of Agriculture.

Programme Objectives

The main objective of this training programme is to produce wide spectrum of audio visual materials (instructional media materials) ranging from low cost to high-tech.

In addition it offers training programmes in the production and use of audio visual materials to improve skills in presentation who are involved in transfer of technology.

Programme Participants

A total of 10 trainees include Agriculture Instructors, Assistant director and a Driver from the Department of Agriculture (Ext) (DOA (Ext)) (8: Agriculture Instructors, 01: Assistant deputy director, 01: Driver from the DOA (Ext)): Trainers are the Senior Photographer and the Programme Assistant at Gannoruva Audio visual Center. Name list of participants is as follow:

No.	Name	Position	Organization	Dec 13 th	Dec 14 th
Participants					
1	S.Sivanesan	Assistant Director of Agriculture	Department of Agriculture (Ext)	●	●
2	M.Yoganathan	Agriculture Instructor	Department of Agriculture (Ext)	●	●
3	A.Sivabalan	Agriculture Instructor	Department of Agriculture (Ext)	●	●
4	P.Pathmanathan	Agriculture Instructor	Department of Agriculture (Ext)	●	●
5	R.Soundararajan	Agriculture Instructor	Department of Agriculture (Ext)	●	●
6	S.Vijayakumar	Agriculture Instructor	Department of Agriculture (Ext)	●	●
7	K.Thanabalasingam	Agriculture Instructor	Department of Agriculture (Ext)	●	●
8	Miss.K.Suthajini	Agriculture Instructor	Department of Agriculture (Ext)	●	●
9	Miss.C.M.Savarimuththu	Agriculture Instructor	Department of Agriculture (Ext)	●	●
10	Y.Satheeskarana	Driver	Department of Agriculture (Ext)	●	●
JICA					
1	Mrs.K.Karthika	Agriculture Development Specialist	JICA ,Jaffna.	●	●

● Indicator for participation**Programme Activities**

The training was mainly conducted by the Audio Visual Center Gannoruva. The training consists of lectures and practices. A two-day training program was organized with the following contents.

Day 1
<p>Lecture I</p> <ul style="list-style-type: none"> ■ Principal of Photographic media ■ Operation of Digital Still Camera <p>Practice I</p> <ul style="list-style-type: none"> ■ Shooting Practical at Agriculture park Gannoruwa ■ Downloading Digital Photographs to Computers
Day 2
<p>Lecture II</p> <ul style="list-style-type: none"> ■ Photo Editing ■ Basic Shoots - Video <p>Practice II</p> <ul style="list-style-type: none"> ■ Video Shooting

Training Schedule

13 December	
08:00 – 10:00	Introduction to Audio Visual Media – Dr.Rohan Wijekoon(Assistant Director of Agriculture)
10:00 – 11:00	Principal of Photographic Media – Mr.A.C.Udayasiri (Photographer)
11:00 – 11:15	Tea Break
11:15 – 12:30	Operation of Digital Still Camera – Mr.A.C. Udayasiri (Photographer)
12:30 – 13:30	Lunch
13:30 – 15:30	Shooting Practical at Agriculture park Gannoruwa – Mr.A.C. Udayasiri (Photographer)
15.30 _ 15.45	Tea Break
15:45 – 17:30	Downloading Digital Photographs to Computers – Mr.A.C. Udayasiri (Photographer)
14 December	
8:30-10:30	Briefing of Practice II
10:30-10:45	Tea Break
10:45-12:30	Mr.A.C. Udayasiri (Photographer)
12:30-13:30	Lunch
13:30-16:30	Mr.A.C. Udayasiri (Photographer)
16:30-16:45	Tea Break
16:45-17:30	Course Evaluation

The total cost of the training program was 27,960 SLR, and the cost per participant was 2,796.00 SLR. However, the total cost and per capita cost were underestimated. It is because the trainers' are the experts from the Audio Visual Center Gannoruva and the cost was zero. Generally they never charge from the government Agric Departments in Sri Lanka.

No	Description	Quantity	Unit Price	Total
1	Accommodation and meals for participants (DOA staff) during training at Audio Visual training center.	10 people	1,584.60	15,846.00
2	Fuel expenses for travelling from Jaffna to Kandy and vice versa.	165 Liters	73.42	12,114.00
Grand Total				27,960.00

2. Evaluation ,Findings and Results

(1) Evaluation of Sessions

The table below shows the average scores for five sessions in terms of contents, materials, trainers/facilitators, and level of understanding. The training participants were asked to rate the contents, materials, materials, trainers/facilitators, and their level of understanding of each session on a scale of 1 to 10 with 10 being the best possible score.

Session	Contents	Materials	Trainers/ facilitators	Under- standin g	Total
Lecture I					
Principal of Photographic media	7.78	8.03	7.89	7.57	7.82
Operation of Digital Still Camera	8.08	8.00	8.87	8.77	8.43
Practice I					
Shooting Practical at Agriculture park Gannoruwa	8.00	7.96	8.59	7.90	8.11
Downloading Digital Photographs to Computers	8.90	8.95	8.93	7.17	8.49
Lecture II					
Photo Editing	7.98	7.90	8.95	8.97	8.45
Basic Shoots - Video	7.93	8.64	8.07	7.71	8.09
Practice II					
Video Shooting	8.79	7.89	8.07	6.64	7.85
Average	8.20	8.20	8.48	7.82	8.18

All categories received the average score of over 6.64. In total, the session on Downloading Digital Photographs to Computers Practice I received the highest score, followed by the session on Photo Editing at the site in Lecture II. Practices are more highly evaluated than lectures.

(2) Evaluation on Venue, Time, Management and Overall Evaluation

Venue	Time	Management	Overall
8.60	6.70	8.00	7.43

The scores for venue, time, management and overall evaluation were higher than 6.70, which may show that the training participants liked the training facilities and management of the training course. Time got the lowest score of 6.70, because many participants felt time for training was short.

(3) Comments and Suggestions for Improvement

Venue

- The room for training is too small to accommodate more than ten participants.

Contents

- The lecture is useful for handling of audio visual equipments.

Time

- Time was too short to follow the lecture. Because that is a five days training programme arranged to two days.

Lecturers/Facilitators

- The lecturer should give clear explanations.
- The practices also simply and easily explained.

3. Recommendations

Based on the evaluation results, the following recommendations have been developed for improvement of future training sessions.

Recommendation 1:

The next training should be held at a bigger venue that would be more comfortable for practicals.

Recommendation 2:

Time of the training schedule should be modifying from two days to 5 days for more practical assessment to facilitate to do each and every participants.

Recommendation 3:

To have participants better understand the training contents; improvement of training management is necessary. The training management should be providing the handouts to participants. In addition, more time should be allocated to each session.

Annex 2

**COMPLETION REPORT OF THE TECHNICAL TRAINING ON
GROUND WATER MANAGEMENT AND MICRO IRRIGATION SYSTEM
DECEMBER 2010**

1. Program Description**1.1 Program Objectives:**

The prime objective of the training programme is to provide quality training on the importance of ground water management to explain the significance of efficient water usage in agriculture and provide enough awareness on micro irrigation system. Some of the specific objectives of this training programme are mentioned below,

- a) To understand the importance of water resources in Jaffna.
- b) To introduce suitable water saving methods for different crops in Jaffna agriculture.
- c) To make awareness among farming population on importance of ground water and water pollution.
- d) To understand the importance and technical issues of micro irrigation systems etc.

1.2 Program Activities:

The ground water management, one day training programme was organized by Department of Agriculture (DOA) - Extension and supported by PDP – Jaffna, JICA project. Farmers from far away were brought to District Agricultural Training Center (DATC) by DOA vehicle and near by farmers directly came to DATC. Agricultural Instructors (AI) from respective AI ranges were responsible for arrangements and beneficiary selection.

Lecture Hall and crop field in DATC were used for both conducting lectures and field practical sessions. Lectures were conducted with the help of multimedia projector and quality of training also was good. Stationeries including pen, exercise book, file cover and relevant handouts / leaflets were provided to farmers. Cooked meals and refreshments were also provided for the training participants.

AIs, Agriculture Monitoring Officers (AMO) Subject Matter Officers (SMO) and Assistant Director of Agriculture (ADA) were the resource persons for the training program.

1.3 Training Schedule:

Time	Programme
9.00am – 9.30am	Registration of participants
9.30am – 9.45am	Introduction session (Briefing)
9.45am – 10.15am	Pre - test
10.15am – 11.00am	Lecture I
11.00am – 11.15am	Tea Break
11.15am – 12.30pm	Field Demonstration
12.30pm – 1.30pm	Lecture II
1.30pm – 2.30pm	Lunch Break
2.30pm – 3.30pm	Lecture III
3.30pm – 4.00pm	Discussion and Brainstorming session
4.00pm – 4.15pm	Tea Break
4.15pm – 4.45pm	Post-test and Feed Back
4.45pm	End of training.

1.4 Participants' summary:

There were 204 farmers from all over the Jaffna district who participated in this six days training programme. Participation of women for this training programme was 32%.

Date	Male	Female	Disables	Total
16/12/2010	22	3	1 (Male)	26
17/12/2010	19	25	0	44
18/12/2010	25	4	0	29
21/12/2010	29	8	0	37
22/12/2010	20	3	0	23
24/12/2010	23	22	0	45
Grand Total	138	65	1	204

2. Evaluation and methods:

The evaluation of the training was conducted in order to assess the effectiveness of the training program. Two different questionnaires were prepared for evaluation, such as feedback and pre - post test forms. Pre and post tests were done at start and end of the training, respectively. Feedback forms were distributed to farmers at the end of training. These two formats (in local language 'Tamil') were distributed to farmers and allowed to answer individually. Based on the performances of pre - post test and feedbacks obtained from them, evaluation was furnished (see formats of pre - post test and feedback forms as appendices).

3. Findings and Results

The tests were composed of fifteen questions. One question was counted as one point, and the total score was fifteen points.

The table (Table 1) below shows the summary of pre-post test scores of all the six days training.

Table 1: Pre-post test scores of ground water management training

Day	Training Date	AI Range	Average of correct answers		
			Pre Test %	Post Test %	Progress %
1	16.12.2010	Velanai	17.95	34.49	16.54
2	17.12.2010	Urumpiraai, Chavakachcheri	12.00	33.11	21.11
3	18.12.2010	Thellipalai, Uduvuil	21.82	40.58	18.76
4	21.12.2010	Tholpuram	14.58	34.17	19.58
5	22.12.2010	Puloly	20.87	47.45	26.58
6	24.12.2010	Chavakachcheri, Puththur	15.42	54.67	39.25

The percentage of the total correct answers was calculated based on the number of participants for both pre and post tests. The results show that there was highest progress (nearly 40%) achieved in the training programme of Chavakachcheri and Puththur AI range.

Table 2: Summary of Pre-Post test scores

Average score percentage		
Pre-Test	Post-Test	Progress
17.11 %	40.74 %	23.63 %

For the pre-test evaluation, 175 participants took part, which is around 86% of the total participants. The percentage of correct answers of the pre-test was 17.11%. Totally 153 training participants took the post test, which is 75% of the total participants. The percentage of correct answers of the post test was 40.74%.

Therefore, the progress from the pre-test to post-test was 23.63%. These results can be considered more precise since large sample size (n=175 (pre), n=153 (post)) was used for analysis of the test results. Consequently, it can be said that this technical training program has improved the knowledge and understanding of participants on ground water management and micro irrigation system.

The figure (Figure 1) shown below illustrates, that the percentage of correct answers increased for all the questions evaluated. There was around 60% increase for the question 1 and for the questions No 2, 3, 4, 5, 8, 9 and 11 there was more than 25% increment in the post evaluation.

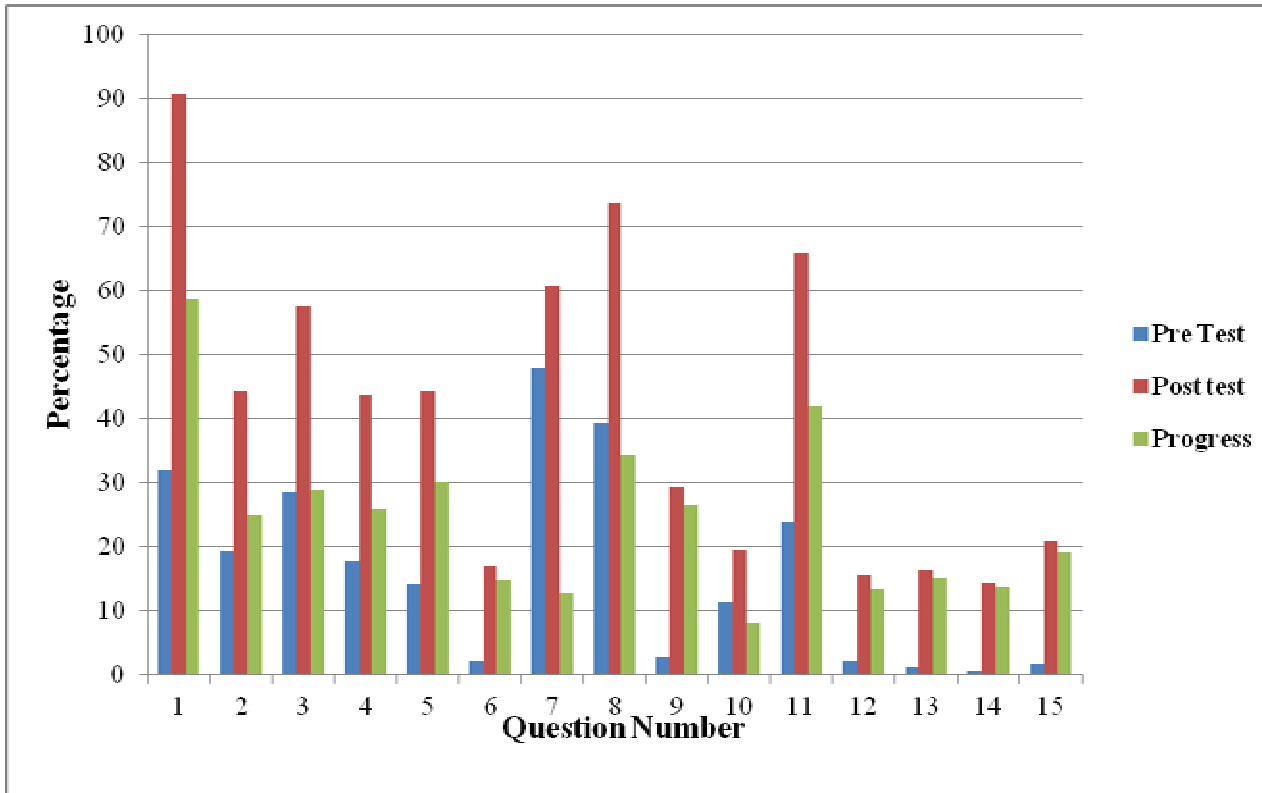


Figure 1: Pre- & Post- test evaluation: Progress of each questions

According to the overall assessment of the farmers feed back, most of the farmers (> 90%) have marked very useful for the question on the usefulness of the key themes discussed on the training programme. It has been also found that farmers were not much aware of the discussed topics and they were able to get better explanation via this training. No any of the participants left complain about the quality of the training programme; felt satisfied. Farmers agreed that this kind of regular trainings in future will help them to solve the problems they face at their fields. Essential matters they gained from this training programme are, importance of ground water management, pollutants of ground water, prevention of water salinity, types and advantages of micro irrigation system, factors to be considered in selecting the type of micro irrigation system etc.

4. Comments on the training programme:

4.1. Venue:

The training was conducted in DATC Lecture Hall. The training center has enough facilities to accommodate around 50 participants. It was comfortable to farmers.

4.2. Training Contents:

The contents of training were useful and fulfill the requirements.

4.3. Training method:

The training method was almost good and attracted more farmers. Since, DOA used power point slides with more explanatory photos, farmers were more attracted. Field demonstration was also good. AMO well explained about usage of micro irrigation under banana demonstration plot. This was an effective method.

4.4. Training materials:

Handouts / leaflets were provided to farmers as supporting material. Quality and contents of training material also were good and understandable.

5. Recommendations:

Based on the overall evaluation of the training programme, following recommendations are suggested for further improvement of quality of the training.

- 1) It is better, if the training programme can be conducted at least by three different resource persons on the same day.
- 2) The DOA also can invite expertise people from other districts of the country to conduct trainings in order to transfer the technology adopted in other places.
- 3) Apart from field level demonstration, video clips on the technical matters/success stories at field level need to be visualized in relevant topics in order to provide deeper explanation to the farmers; better to display in the evening time to direct their full concentration on training.
- 4) The number of participants should not be more than 40 per training.

6. Expenditure Summary

Items		Unit	Qty	Unit Price (Rs.)	Amount (Rs.)
1. Lunch and Refreshments	Meals, tea and short eats	n/a	n/a	n/a	39,103.00
2. Banner	To display project name	Item	02	1680.00	3,360.00
3. Stationeries	1. File cover	Item	204	25.00	5,100.00
	2. Handout I		200	28.00	5,600.00
	3. Handout II		200	14.00	2,800.00
	Pen		204	15.00	3,060.00
Grand Total					59,023.00

Appendices:**Appendix A: Feed Back Form**

Date:.....

Name of the technical training:

Name of the farmer:.....

- 1) What do you think about the key themes of this training programme?

I) Very useful II) Useful III) less useful IV) Not useful

- 2) Do you apply key themes of this training to your farming? Yes No

- 3) Do you know about the key themes before you conduct this training programme? Yes No
If No, How? Where?

.....
.....

.....
.....
4) Do you feel Satisfaction about the key themes in the training pogramme? Yes No.
If No, which chapter?
.....
.....
.....
5) Do you feel any discomforts of this training Programme?
.....
.....
.....
.....
6) Do you think to combine any specific training programme? Yes No
If yes, what is the specialty?
.....
.....
7) Do you think this type of training programme will be useful to solve problems in farming? Yes No
Reason:
.....
.....
8) How can we improve this kind of training programme in future?
.....
.....
9) State two important things that you gained from this training?
1).....
.....
2).....
.....
10) Others:
.....
.....
.....

Appendix B: Pre - & Post-Test forms

PRE - / POST - EVALUATION ON TECHNICAL TRAINING OF GROUND WATER MANAGEMNTS AND MICRO IRRIGATION SYSTEM

- 1) What is the specific water resource for ground water in Jaffna peninsula?
- 2) How do the small water tanks contribute to the ground water?
- 3) What are the main reasons for ground water pollution?
- 4) What are your strategies for the improvement on ground water quality?
- 5) Agro wells with fresh water have been changed to saline. What is the reason for this?
- 6) What do you understand about sprinkler irrigation system?
- 7) Indicate two advantages of sprinkler irrigation system?
- 8) What are the types of water pumps suitable for sprinkler irrigation system?
- 9) What is the pressure suitable for the better functioning of sprinkler irrigation system?

- 10) What are the precautions need to be taken for the better functioning of sprinkler system?
- 11) Which is the perfect time suitable to irrigate using sprinkler system?
- 12) What do you mean by Drip irrigation?
- 13) What are the differences between the water outlet functioning with and without pressure in drip irrigation?
- 14) Indicate the water conservation/saving percentage in following types of irrigation systems?
 - I) Sprinkler irrigation:
 - II) Drip irrigation:
- 15) What is the irrigation efficiency of the following types of irrigation systems?
 - I) Basin irrigation
 - II) Sprinkler irrigation:
 - III) Drip irrigation:

Annex 3

**COMPLETION REPORT OF THE TECHNICAL TRAINING ON
BANANA DENSE PLANTING UNDER DRIP IRRIGATION SYSTEM**



JANUARY 2011

1. Program Description

1.1 Program Objectives:

The objective of this training programme is to provide quality training and new techniques used in Banana cultivation and to explain the efficient usage of water through Micro irrigation particularly under Drip irrigation system. Furthermore, some of the specific objectives of this training programme are mentioned below,

- a) To understand the importance of Banana cultivation in Jaffna peninsula.
- b) To introduce suitable water saving methods for Banana cultivation in Jaffna agriculture.
- c) To make awareness among farming population on importance of new techniques in Banana cultivation.
- d) To understand the importance and technical issues of Drip irrigation systems in Banana cultivation.

1.2 Program Activities:

The Banana Dense planting was an one day training Programme. It was conducted by DOA (Ext) by the support of PDP Jaffna. The Programme arrangements were done By the Coordination of Agriculture Monitoring Officer (AMO),DATC Farm Manager (FM) and the responsible AI

The Beneficiaries were selected by responsible AIs from their AI ranges and they took from their AI ranges by the help of DOA Vehicle, because the AI ranges were bit far from DATC.

The DATC main lecture hall and the banana dense planting field were used for the both lectures and the Field session. Lectures were conducted by the help of Multimedia projector and the white board with markers. The Quality of the training programme was very good.

Stationeries including pen, exercise book, file cover and relevant handouts/leaflets were provided to farmers. Lunch and refreshment's were issued to whole participants in this training programme.

The resource persons were come from DOA and DATC. They were AIs, Agriculture Monitoring Officer (AMO), Subject Matter officers (SMO) and Assistant Director of District Agriculture (ADA), Farm Manager of District Agriculture Training Center (FM – DATC) .

1.3 Training Schedule:

Time	Programme
9.00am – 9.30am	Registration of participants
9.30am – 9.45am	Introduction session (Briefing)
9.45am – 10.15am	Pre - test
10.15am – 11.00am	Lecture I
11.00am – 11.15am	Tea Break
11.15am – 12.30pm	Lecture II
12.30pm – 1.30pm	Field Demonstration
1.30pm – 2.30pm	Lunch Break
2.30pm – 3.30pm	Lecture III
3.30pm – 4.00pm	Discussion and Brainstorming session
4.00pm – 4.15pm	Tea Break
4.15pm – 4.45pm	Post-test and Feed Back
4.45pm	End of training.

1.4 Participants' summary:

There were 193 farmers participated in this seven days training programme. The farmers were come from different AI ranges in Jaffna district. The women Participation for this training programme were 23.87%.

Date	Male	Female	Disables	Total
27/12/2011	27	03	0	30
31/12/2011	27	09	0	36
03/01/2011	32	03	0	35
04/01/2011	30	09	0	39
21/01/2011	09	05	0	14
24/01/2011	13	04	0	17
28/01/2011	18	04	0	22
Grand Total	156	37	0	193

2. Evaluation and methods:

The evaluation was done by two different assessments in order to assess the usefulness of the training programme. The assessments were conducted through two different questionnaires, Feed back and Pre – Post test. (See formats of pre - post test and feed back forms as appendices).

Pre – Post test were done at start and end of the training respectively and the feed back forms were issued to famers at the end of the training. These two formats (in local Language ‘Tamil’) were distributed to farmers and allowed to answer individually. Based on the performance of Pre and post test and feed backs were obtain from them and the evaluation was finished.

3. Findings and Results

The tests were composed of fifteen questions. One question was counted as one point, and the total score was fifteen points.

The table (Table 1) below shows the summary of pre-post test scores of all the seven days training.

Table 1: Pre-post test scores of Banana Dense planting training

Day	Training Date	AI Range	Average of correct answers		
			Pre Test %	Post Test %	Progress %
1	27/12/2011	Velanai	27.36	64.17	36.81
2	31/12/2011	Theppalalai & Uduvil	38.59	49.90	11.32
3	03/01/2011	Mathagal	35.07	55.56	20.48
4	04/01/2011	Point Pedro, Karaveddy	26.86	52.99	26.13
5	21/01/2011	Erlalai	36.92	45.45	8.53
6	24/01/2011	Tholpuram	27.11	38.75	26.04
7	28/01/2011	Siruppiddy	34.55	53.64	19.09

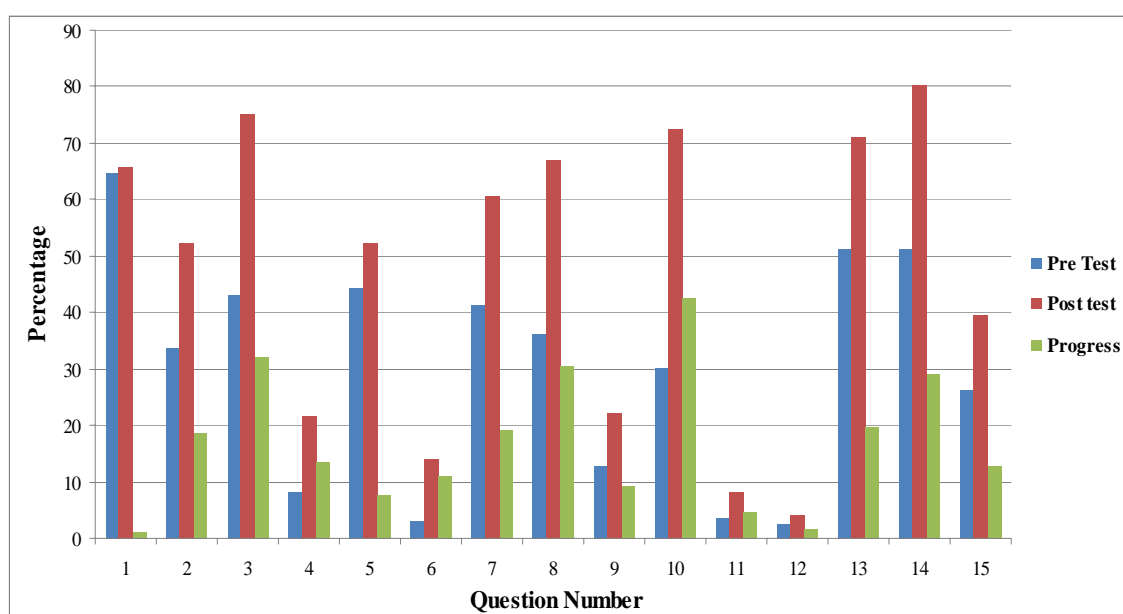
The percentage of the total correct answers was calculated based on the number of participants for both pre and post tests. The results show that there was highest progress (nearly 37%) achieved in the training programme of Velanai AI range.

Table 2: Summary of Pre-Post test scores

Average score percentage		
Pre-Test	Post-Test	Progress
32.35 %	51.49 %	21.20 %

For the pre-test evaluation, 169 participants took part, which is around 88% of the total participants. The percentage of correct answers of the pre-test was 32.35%. Totally 177 training participants took the post test, which is 91% of the total participants. The percentage of correct answers of the post test was 51.49%. Therefore, the progress from the pre-test to post-test was 21.20%. These results can be considered more precise since large sample size (n=169 (pre), n=177 (post)) was used for analysis of the test results. Consequently, it can be said that this technical training program has improved the knowledge and understanding of participants on Banana dense planting under Drip irrigation system.

The figure (Figure 1) shown below illustrates, that the percentage of correct answers increased for all the questions evaluated. There was around 43% increase for the question number 10, for the questions number 3, 8 and 14 there was around 30% increase, for the questions number 2, 7 and 13 there was around 20% increase, increment in the post evaluation.

**Figure 1: Pre- & Post- test evaluation: Progress of each questions**

According to the overall assessment of the farmers feed back, most of the farmers (> 95%) have marked very useful for the question on the usefulness of the key themes discussed on the training programme. They were able to get better explanation via this training. Some of them were conduct this like of training programmes at DATC and their Agrarian service center. No any of the participants left complain about the quality of the training programme; felt satisfied. Farmers agreed that this kind of regular trainings in future will help them to solve the problems they face at their fields. Essential matters they gained from this training programme are, importance of Banana Dense Planting, prevention of water salinity and advantage of Drip irrigation System for Banana cultivation, factors to be considered in selecting the type of micro irrigation system for Banana cultivation etc.

4. Comments on the training programme:

4.1. Venue:

The training was conducted in the DATC main Lecture Hall. The training center has enough facilities and suitable environment for farmers training programme. The training hall accommodates more than 40 participants and well comfort to farmers.

4.2. Training Contents:

The contents of training were very useful and fulfill the farmers' requirements in their fields.

4.3. Training method:

The training method was good and attractive. The DOA used Multimedia projectors to visualize the instructive photos and charts, etc for farmers. The participated farmers were attracted more. The field demonstration was also good. The demonstration was conducted by the DATC Farm Manager (FM).He was explained about the advantages of the Banana Dense planting, efficient usage of micro irrigation for Banana cultivation. Identify the suitable micro irrigation system for Banana cultivation, Factors consideration during the selection of micro irrigation and How to increase the yield and the quality of Banana. The field demonstration was done under banana dense planting plot. This was a very efficient method.

4.4. Training materials:

Relevant Handouts / leaflets were issued to farmers to their reference and the Quality of the Handouts / leaflets were good and prepared in a local language (Tamil) to facilitate the farmers for easy understandable.

5. Recommendations:

According to the overall evaluation the following recommendations were identified and suggested by the farmers for further improvement of the training in future.

- 5) The DOA can invite youths from the farmers societies, who were involved or interested in modern farming to shear the new technology into their farming Societies.
- 6) The DOA can invite expertise people from other districts of the country to conduct trainings in order to introduce and adapt the Successful new technologies in Jaffna District.
- 7) Apart from field level demonstration, video clips on the technical matters/success stories at field level need to be visualized in relevant topics in order to provide deeper explanation to the farmers; better to display in the evening time to direct their full concentration on training.

6. Expenditure Summary

Items		Unit	Qty	Unit Price (Rs.)	Amount (Rs.)
5. Lunch and Refreshments	Meals, tea and short eats	n/a	193	200.00	38600.00
6. Stationeries	1. File cover	Item	193	25.00	4825.00
	2. Handout I		193	28.00	5404.00
	3. Handout II		193	14.00	2702.00
	4. Pen		193	15.00	2895.00
Grand Total					54426.00

Appendices:**Appendix A: Summary of Feed Back Form**

Date: 04.01.2011

1) What do you think about the key themes of this training programme?

I) Very useful

II) Useful

III) Less useful

IV) Not useful

Discription	No of beneficiaries accept						
	27.12.2010	31.12.2010	03.01.2011	04.01.2011	21.01.2011	24.01.2011	28.01.2011
Very useful	17	23	19	28	08	10	09
Useful	0	05	13	6	03	02	07
Less useful	0	0	0	1	01	0	0
Not useful	0	0	0	0	0	0	0

2) Will you be able to apply the key themes of this training to your routine farming practice? Yes No

Decision	No of beneficiaries accept						
	27.12.2010	31.12.2010	03.01.2011	04.01.2011	21.01.2011	24.01.2011	28.01.2011
Yes	22	30	27	39	11	13	22
No	0	01	03	0	02	0	0

3) Do you know the key themes of technical training before this training programme? Yes No

If Yes, How? Where?

Decision	No of beneficiaries accept						
	27.12.2010	31.12.2010	03.01.2011	04.01.2011	21.01.2011	24.01.2011	28.01.2011
Yes	12	15	24	14	08	11	03
No	11	09	07	23	05	03	14

- Through DATC training programme at Thirunelvely
- Our Agrarians Service Center

4) Do you have clear picture about this training programme? Yes No.

If No, On which part of training?

Decision	No of beneficiaries accept						
	27.12.2010	31.12.2010	03.01.2011	04.01.2011	21.01.2011	24.01.2011	28.01.2011
Yes	31	30	31	39	13	13	22
No	01	0	01	0	0	01	0

- Marketing of Production through Corporative Society

5) Do you feel any inconveniences/discomforts of this training Programme?

Description	No of beneficiaries accept						
	27.12.2010	31.12.2010	03.01.2011	04.01.2011	21.01.2011	24.01.2011	28.01.2011
inconveniences/discomforts	0	01	0	07	0	0	0
No comments	29	30	31	32	13	14	22

6) Do you think any specific training programmes need to be provided further? Yes No

If yes, what kind of training and it is importance?

Decision	No of beneficiaries accept						
	27.12.2010	31.12.2010	03.01.2011	04.01.2011	21.01.2011	24.01.2011	28.01.2011
Yes	15	18	17	21	09	09	12
No	12	9	12	15	04	04	10

7) Do you think this type of training programme will be useful to solve the problems in farming?

Yes No

If Yes / No what's the reason:

Decision	No of beneficiaries accept						
	27.12.2010	31.12.2010	03.01.2011	04.01.2011	21.01.2011	24.01.2011	28.01.2011
Yes	25	30	24	35	11	12	21
No	01	0	01	02	02	01	0

- We can reduce Labour cost.
- Selection of suitable varieties for cultivation
- Protect ground water by the usage of micro irrigation
- We can get new benefit cultivation methods.
- Improve cultivation Methods during the cultivation
- Understand, how to reduce and protect from the pest attack

8) How can we improve /efficiently contact this kind of training programmes in future?

- Encourage to well come the young generation
- Encourage and support the farmers for higher production varieties cultivation
- Enhance and support for export of Banana
- Arrange the training programme at farmers' place because some innovative farmer's couldn't come to DATC.

9) State two important things that you gained from this training?

- Increase benefits
- Never frighten for cultivation
- Save the resource

- Banana cultivation was accepted by the farmers
- Understand about water saving and drip irrigation
- Understand about banana dense planting
- We were cleared our doubt.
- Understand, how to get benefits from the cultivation
- Reduce the expense during the period of cultivation
- Understand, how increase the yield in banana.
- Understand about the easy ways of cultivation methods and better to get high benefits.
- Introduce new varieties
- Understand about planting methods and micro irrigation methods.
- Understand about efficient usage of ground water
- Understand about new technologies' and How to get more income than the traditional methods in banana cultivation

10) Will you eagerly participate for this kind of training in future: Yes No

Decision	No of beneficiaries accept						
	27.12.2010	31.12.2010	03.01.2011	04.01.2011	21.01.2011	24.01.2011	28.01.2011
Yes	25	27	24	36	11	13	18
No	0	01	0	01	0	0	0

Appendix B: Pre - & Post-Test forms

PRE - / POST - EVALUATION ON TECHNICAL TRAINING OF BANANA DENSE PLANTING UNDER DRIP IRRIGATION SYSTEM

- 1) What is the suitable age of banana suckers for plantation?
- 2) What is the planting space for banana sucker?
- 3) What is the planting depth of banana sucker?
- 4) What is the tender leaf production interval in banana plant?
- 5) How many suckers are allowed to grow with the mother plant?
- 6) Normally, after how many leaf formations the bunch will appear?
- 7) How many days will it take for the maturity of a banana bunch?
- 8) When the first sucker will be allowed?
- 9) In traditional method how many years the banana trees can be maintained?
- 10) In new method, how many years the banana trees can be maintained?
- 11) Do you know about the dense planning of banana under drip irrigation?
- 12) Do you apply the inorganic fertilizers for banana cultivation?
- 13) What are the organic fertilizers applied for banana cultivation with 1000 plants?
- 14) What are the organic fertilizer application for one square feet and the application interval?
- 15) What are the advantages of covering the banana bunch?

Annex 4

**COMPLETION REPORT OF THE TECHNICAL TRAINING ON
SOIL FERTILITY MANAGEMENT**



JANUARY 2011

1. Program Description

1.1 Program Objectives:

The objective of this training program is to provide quality training and enhance soil fertility in terms of its physical, chemical and biological properties in Jaffna. Further more, some of the specific objectives of this training program are mentioned below;

- a) Understanding soil nutrient problems.
- b) Introduce soil fertility enhancing strategies that maximize profits and agronomic use efficiency.
- c) Introducing methodologies and tools to assess suitability, economic feasibility, and impacts of ISFM (Integrated Soil Fertility Management) on agricultural production, soil fertility, and the environment.

1.2 Program Activities:

The soil fertility management, one day training Programme was conducted by DOA (Ext) with the support of PDP Jaffna. The Programme arrangements were organized by Agriculture Monitoring Officer (AMO), Farm Manager of DATC (FM) and some responsible AIs.

The transport arrangements were jointly organized by DOA and PDP – Jaffna to take participants from different places of Jaffna District.

The DATC main lecture hall and the DATC demonstration plots were used for both lectures and field practical sessions. Lectures were conducted with the help of Multimedia projector and other teaching aids. The Quality of the training programme was good.

Stationeries including pen, exercise book, file cover and relevant handouts/leaflets were provided to farmers. Lunch and refreshments also provided them.

Agriculture Instructors (AI), Agriculture Monitoring Officer (AMO), Subject Matter officers (SMO) and Assistant Director of Agriculture (ADA), Farm Manager of District Agriculture Training Center (FM – DATC) were the resource persons of the training program.

1.3 Training Schedule:

Time	Programme
9.00am – 9.30am	Registration of participants
9.30am – 9.45am	Introduction of session (Briefing the objectives of the training)
9.45am – 10.15am	Pre - test
10.15am – 11.00am	Lecture I
11.00am – 11.15am	Tea Break
11.15am – 12.30pm	Lecture II
12.30pm – 1.30pm	Field Demonstration
1.30pm – 2.30pm	Lunch Break
2.30pm – 3.30pm	Lecture III
3.30pm – 4.00pm	Discussion and Brainstorming session
4.00pm – 4.15pm	Tea Break
4.15pm – 4.45pm	Post-test and Feed Back
4.45pm	End of training.

1.4 Participants' summary:

There were 203 farmers participated in this seven days training programme. The farmers were come from different AI ranges in Jaffna district. The women Participation for this training programme were 53.69%.

Date	Male	Female	Disables	Total
16/03/2011	05	14	0	19
01/04/2011	13	06	0	19
12/04/2011	24	16	0	40
25/04/2011	27	04	0	31
11/05/2011	0	24	0	24
21/05/2011	21	24	0	45
08/06/2011	04	21	0	25
Grand Total	94	109	0	203

2. Evaluation and methods:

The evaluation was done by using two different formats ie; questionnaires such as feed back and pre – post test forms in order to assess the usefulness of the training programme. (See formats of pre - post test and feed back forms as appendices).

Pre – Post test were done at start and end of the training, respectively and the feed back forms were issued to famers at the end of the training. These two formats (in local Language ‘Tamil’) were distributed to farmers and allowed to answer individually. Based on the performance of Pre and post test and feed backs from them, the evaluation was furnished.

3. Findings and Results

The tests were composed of fifteen questions. One question was counted as one point, and the total score was fifteen points.

The table (Table 1) below shows the summary of pre-post test scores of all the seven days training.

Table 1: Pre-post test scores of Soil Fertility Management training

Day	Training Date	AI Range	Average of correct answers		
			Pre Test %	Post Test %	Progress %
1	16/03/2011	Velanai	26.67	52.55	25.88
2	01/04/2011	Kodikamam,Chavakachcheri	31.37	56.00	24.63
3	12/04/2011	Uduvil ,Thellippalai	33.33	50.63	17.29
4	25/04/2011	Puloli,Karaveddy	47.18	54.36	7.18
5	11/05/2011	Nallur	27.67	61.33	33.66
6	21/05/2011	Thellippalai	27.11	54.17	26.04
7	08/06/2011	Chavakachcheri	32.59	59.73	27.14

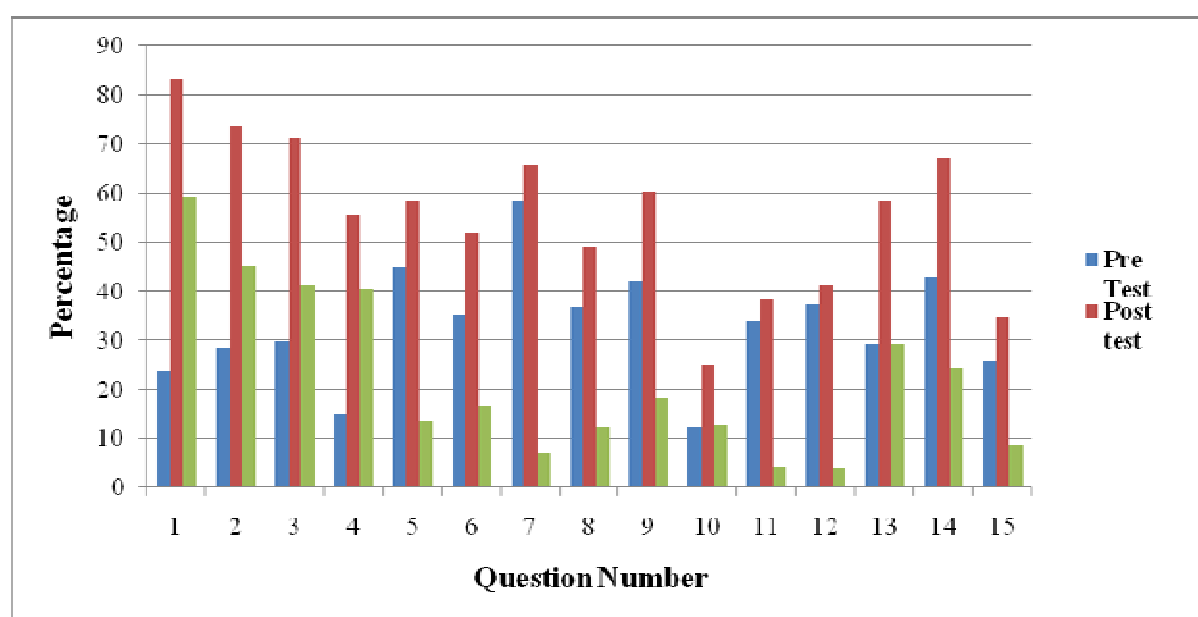
The percentage of the total correct answers was calculated based on the number of participants for both pre and post tests. The results show that there was highest progress (nearly 34%) achieved in the training programme of Nallur AI range.

Table 2: Summary of Pre-Post test scores

Average score percentage		
Pre-Test	Post-Test	Progress
32.27	55.54	23.26

For the pre-test evaluation, 147 participants took part, which is around 72.41% of the total participants. The percentage of correct answers of the pre-test was 32.27. Totally 167 training participants took part in the post test, which is 82.27% of the total participants. The percentage of correct answers of the post test was 55.54%. Therefore, the progress from the pre-test to post-test was 23.26%. These results can be considered more precise since large sample size (n=147 (pre), n=167 (post)) was used for analysis of the test results. Consequently, it can be said that this technical training program has improved the knowledge and understanding of participants on Soil fertility Management.

The figure (Figure 1) below illustrates that the percentage of correct answers has increased for all the questions evaluated. There was around 60% increase for the question number 1; there was around 42% increase for the questions number 2, 3 & 4 and there was around 30% increase for question number 13.

**Figure 1: Pre- & Post- test evaluation: Progress of each questions**

According to the overall assessment of the farmers feed back, most of the farmers (> 90%) have marked very useful for the question on the usefulness of the key themes discussed on the training programme. They were able to get better explanation via this training. No any of the participants left complain about the quality of the training programme and felt satisfied. Farmers agreed that this kind of regular trainings in future will help them to solve the soil problems they face at their fields.

4. Comments on the training programme:

4.1. Venue:

The training was conducted in the DATC main Lecture Hall. The training center has enough facilities and suitable environment for farmers training programme. The training hall accommodates more than 40 participants and is well comfortable to farmers.

4.2. Training Contents:

The contents of training were very useful and fulfill the farmers' requirements in their fields. It includes introduction to soil characters and its fertility, importance and function of plant nutrients (macro and micro), deficiency symptoms, and different makes of compost and its application and importance of soil amendments.

4.3. Training method:

The training method was good and attractive. The DOA used Multimedia projectors to visualize the instructive photos and charts, etc to farmers. The participated farmers were attracted more. The field demonstrations were also good. The AMO of DOA explained how to improve the soil fertility, soil fertility management in organic farming and production of organic products.

4.4. Training materials:

Relevant Handouts / leaflets were issued to farmers as reference materials and the quality of the handouts / leaflets were also good. They were prepared in local language (Tamil).

6. Recommendations:

According to the overall evaluation, following recommendations can be suggested for further improvement of the training program in future.

- 8) The DOA can invite youths from the farming societies who interested in modern farming to share new technology in their farming activities.
- 9) The DOA can invite expertise people from other districts of the country to conduct this kind of trainings for knowledge sharing.
- 10) Apart from field level demonstration, video clips on the technical matters/success stories need to be visualized in relevant topics to provide deeper explanation; better to display in evening to direct their full concentration on training.

6. Expenditure Summary

Items		Unit	Qty	Unit Price (Rs.)	Amount (Rs.)
Lunch and Refreshments	Meals, tea and short eats	n/a	203	200.00	40600.00
Stationeries	1. File cover	Item	203	25.00	5,075.00
	2. Handout I		203	28.00	5,684.00
	3. Handout II		203	14.00	2,842.00
	4. Pen		203	15.00	3,045.00
Grand Total					57,246.00

Appendices:**Appendix A: Summary of Feed Back Form**

Date: 04.01.2011

1) What do you think about the key themes of this training programme?

I) Very useful II) Useful III) Less useful IV) Not useful

Discription	No of beneficiaries accept						
	16.03.2011	01.04.2011	12.04.2011	25.04.2011	11.05.2011	21.05.2011	08.06.2011
Very useful	11	11	30	37	16	29	17
Useful	0	02	03	0	02	0	0
Less useful	0	0	0	0	0	0	0
Not useful	0	0	0	0	0	0	0

2) Will you be able to apply the key themes of this training to your routine farming practice? Yes No

Decision	No of beneficiaries accept						
	16.03.2011	01.04.2011	12.04.2011	25.04.2011	11.05.2011	21.05.2011	08.06.2011
Yes	17	17	36	30	24	44	22
No	0	0	0	0	0	0	0

3) Do you know the key themes of technical training before this training programme? Yes No

If Yes, How? Where?

Decision	No of beneficiaries accept						
	16.03.2011	01.04.2011	12.04.2011	25.04.2011	11.05.2011	21.05.2011	08.06.2011
Yes	03	05	01	0	0	02	0
No	16	14	36	30	23	42	24

- Through DATC training programme at Thirunelvelly
- Through Agrarian Service Training programmes

4) Do you have clear picture about this training programme? Yes No

If No, On which part of training?

Decision	No of beneficiaries accept						
	16.03.2011	01.04.2011	12.04.2011	25.04.2011	11.05.2011	21.05.2011	08.06.2011
Yes	14	11	33	30	17	44	24
No	02	04	02	0	06	0	0

- Banana Dense planting under micro irrigation.
- Micro irrigation for soil fertility management.

5) Do you feel any inconveniences/discomforts of this training Programme?

Description	No of beneficiaries accept						
	16.03.2011	01.04.2011	12.04.2011	25.04.2011	11.05.2011	21.05.2011	08.06.2011
inconveniences/di scomforts	0	0	0	0	0	0	0
No comments	18	17	34	29	20	41	23

6) Do you think any specific training programmes need to be provided further? Yes No

If yes, what kind of training and it is importance?

Decision	No of beneficiaries accept						
	16.03.2011	01.04.2011	12.04.2011	25.04.2011	11.05.2011	21.05.2011	08.06.2011
Yes	14	17	38	26	19	28	16
No	02	01	0	02	03	12	01

- Importance and new techniques in coconut cultivation

7) Do you think this type of training programme will be useful to solve the problems in farming?

Yes No

If Yes / No what's the reason:

Decision	No of beneficiaries accept						
	16.03.2011	01.04.2011	12.04.2011	25.04.2011	11.05.2011	21.05.2011	08.06.2011
Yes	16	18	33	30	19	42	21
No	0	0	0	01	03	01	01

- Introduce the new technologies in farming.
- Enhance the economic development
- Selection of suitable varieties for cultivation
- Improve the soil structure to get more production

8) How can we improve /efficiently contact this kind of training programmes in future?

- Encourage to well come the young generation
- Arrange the training programme at farmers' place because some innovative farmer's couldn't come to DATC.

9) State two important things that you gained from this training?

- Get more information about home gardening
- To improve the production and benefits
- Identify the plant symptoms, whether the nutrient deficiency or the pest attack.
- Importance of Banana Dense planting
- Importance of different irrigation System with the suitable crops.
- Soil Management and Wormy compost.

10) Will you eagerly participate for this kind of training in future: Yes No

Decision	No of beneficiaries accept						
	16.03.2011	01.04.2011	12.04.2011	25.04.2011	11.05.2011	21.05.2011	08.06.2011
Yes	16	11	28	25	18	32	22
No	0	01	01	0	01	01	0

Appendix B: Pre - & Post-Test forms

PRE - / POST - EVALUATION ON TECHNICAL TRAINING ON SOIL FERTILITY MANAGEMENT

- 1) What are the macro elements essential for crop growth?
- 2) What are the micro elements essential for crop growth?
- 3) Which element deficiency produces the earliest yellowing of matured leaves?
- 4) Which nutrient element is essential for root growth?
- 5) Will C/N ratio have an effect on the compost preparation?
- 6) Will C/N ratio have an effect on the preparation of wormy compost?
- 7) What are the advantages by application of compost?
- 8) The soil structure modification occurs via the application of inorganic fertilizer or organic fertilizer?
- 9) How many days are necessary to prepare compost?
- 10) How many days are required to prepare Wormy compost?
- 11) How many days are required for the preparation liquid fertilizer?
- 12) What are the materials can be used for green manure?
- 13) What are the materials can be used for soil reclamation?
- 14) What is importance of mulching?
- 15) How many days are necessary to get the Wormy wash after filling of the earthworm pit?

Annex 5

**COMPLETION REPORT OF THE TECHNICAL TRAINING ON
PRE AND POST HARVEST TECHNOLOGY OF FRUITS AND VEGETABLES
JUNE 2011**

1. Program Description**1.1 Program Objectives:**

The objective of this training programme is to provide knowledge about pre and post harvest technology of fruits and vegetables cultivated in Jaffna District. Some of the specific objectives of this training are mentioned below,

- a) Properly identifying the maturity period of fruits and vegetables.
- b) Making awareness on importance machineries during pre and post harvest operation, processing of vegetables and fruits and modernization of post harvest technology in Jaffna.
- c) Introducing basic techniques on storage methods and usage of optimum level of chemicals.

1.2 Program Activities:

The pre-post harvest technology was conducted by DOA (Extn) by the support of Department of Agricultural Engineering, Faculty of Agriculture, University of Jaffna. The program arrangements were done by the Coordination of Agriculture Monitoring Officer (AMO), DATC Farm Manager (FM) and the responsible AIs.

The beneficiaries were selected by responsible AIs from respective AI ranges. The DATC main lecture hall was used for the purpose of training. Lectures were conducted by the help of Multimedia projector and two staff from Faculty of Agriculture were resource persons for this.

1.3 Training Schedule:

Time	Programme
9.00am – 9.30am	Registration of participants
9.30am – 9.45am	Introduction session (Briefing)
9.45am – 10.15am	Pre - test
10.15am – 11.00am	Lecture I
11.00am – 11.15am	Tea Break
11.15am – 1.30pm	Lecture II
1.30pm – 2.30pm	Lunch Break
2.30pm – 3.30pm	Lecture III
3.30pm – 4.00pm	Discussion and Brainstorming session
4.00pm – 4.15pm	Tea Break
4.15pm – 4.45pm	Post-test and Feed Back
4.45pm	End of training.

1.4 Participants' summary:

There were 197 farmers participated in the five days training programme. The farmers came from different AI ranges in Jaffna District. The women Participation for this training programme were 54.82%.

Date	Female	Male	Disables	Total
01/06/2011	24	28	0	52
02/06/2011	06	20	0	26

03/06/2011	25	30	0	55
06/06/2011	40	0	0	40
07/06/2011	13	11	0	24
Grand Total	108	89	0	197

2. Evaluation and methods:

The evaluation was done by two different assessments in order to assess the usefulness of the training programme. The assessments were conducted through two different questionnaires, Feed back and Pre – Post test. (See formats of pre - post test and feed back forms as appendices).

Pre – Post tests were done at start and end of the training program, respectively and the feed back forms were issued to famers at the end of the training. These two formats (in local Language ‘Tamil’) were distributed to farmers and allowed to answer individually. Based on the performance of Pre and post test and feedbacks, assessment was furnished.

3. Findings and Results

The test paper contained fifteen questions. One question was counted as one point, and the total score was fifteen points.

The table (Table 1) below shows the summary of pre-post test scores of all the seven days training.

Table 1: Pre-post test scores of Pre and Post Harvest Technology

Day	Training Date	AI Range	Average of correct answers		Progress %
			Pre	Post	
1	01.06.2011	Velanai	29.38	47.04	17.66
2	02.06.2011	Vasawillan, Punnalaikadduvan	22.35	38.04	15.69
3	03.06.2011	Karainagar, Sandilipai, Arali	27.44	40.86	13.42
4	06.06.2011	Ariyalai	32.78	45.30	12.52
5	07.06.2011	Uduppidi	25.96	51.97	26.00
Average			27.58	44.64	17.06

The percentage of the total correct answers was calculated based on the number of participants for both pre and post tests. The results show that there was highest progress (26%) achieved in the training programme of Uduppidi AI range.

For the pre-test evaluation, 163 participants took part, which is around 88% of the total participants. The percentage of correct answers of the pre-test was 27.58%. Totally 139 training participants took the post test, which is 70.5% of the total participants. The percentage of correct answers of the post test was 44.64%. Therefore, the progress from the pre-test to post-test was 17.06%. These results can be considered more precise since large sample size (n=163 (pre), n=139 (post)) was used for analysis of the test results. Consequently, result revealed that this training program has improved the knowledge and understanding of participants on Pre and Post Harvest Technology.

The figure (Figure 1) shown below illustrates, that the percentage of correct answers increased for all the questions except 11 and 12. There was around 64% progress for the question No 4, 35% for question No 9 and 30% for question No 7

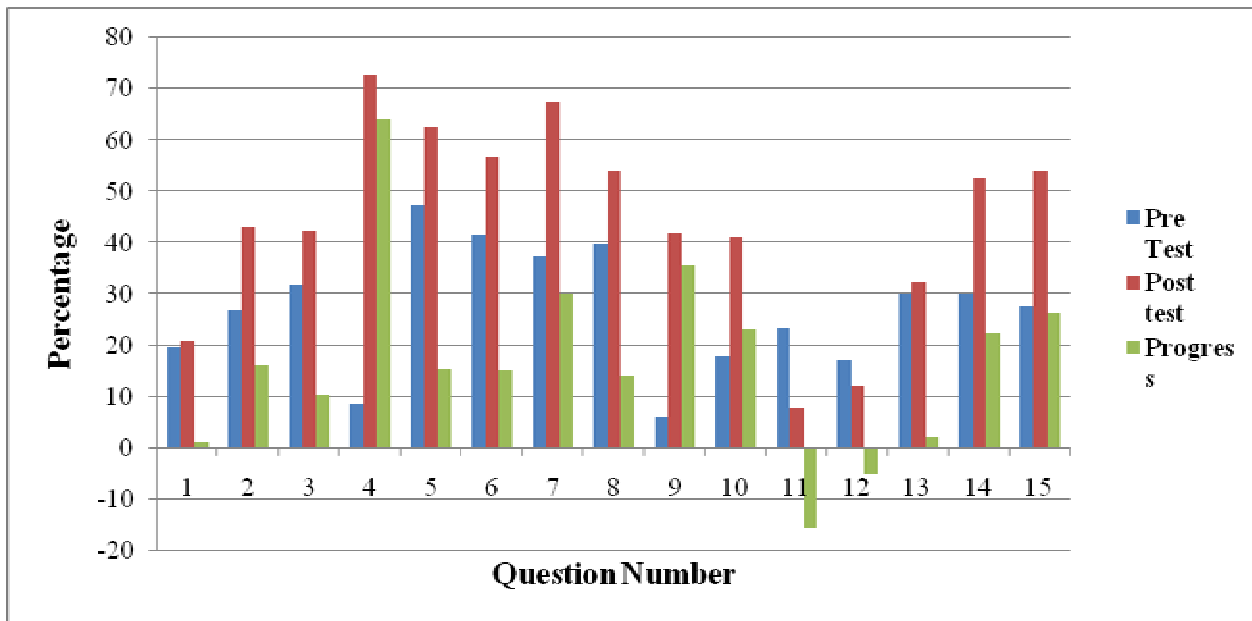


Figure 1: Pre- & Post- test evaluation: Progress of each questions

According to the overall assessment of the farmers' feedback, most of the farmers (95%) have marked very useful for the question on the usefulness of the key themes discussed on the training programme. They were able to get better explanation via this training. Some of them already participated like these training programmes at DATC and Agrarian Service Center. None of the participants left complain about the quality of the training programme; felt satisfied. Farmers agreed that this kind of regular trainings in future would help them to solve the problems they face at their fields.

4. Comments on the training programme:

4.1. Venue:

The training was held in the DATC main Lecture Hall. The training center has enough facilities and suitable environment for farmers training programme. The training hall accommodates more than 40 participants and well comfort to farmers.

4.2. Training Contents:

The contents of training were very useful and fulfill the farmers' requirements.

4.3. Training method:

The lecture was conducted by Head and Assistant lecturer of Department of Agricultural Engineering, Faculty of Agriculture, University of Jaffna. They explained the subject with the help of power point slides and with more explanatory photos. They taught about harvesting, storage, processing, machinery used in harvesting and processing etc.

5. Recommendations:

According to the overall evaluation, following recommendations are suggested for further improvement of the training in future.

- Encouraging this kind of trainings in farmers' village level with increased participants.
- DOA should arrange this type of trainings continuously.
- Encourage the youths to make familiar with machinery and provide training programs about machinery.
- Arrange training programs with video clips which helps to understand easily

- It is better to arrange training programs with demonstration of machinery of harvesting, storage and processing

6. Expenditure Summary

Items		Unit	Qty	Unit Price (Rs.)	Amount (Rs.)
9. Lunch and Refreshments	Meals, tea and short eats	n/a	197	200.00	39400.00
10. Stationeries	File cover	Item	197	25.00	4925.00
	Pen		197	15	2995.00
Grand Total					47320.00

Appendices:

Appendix A: Summary of Feed Back Form

Date: 04.07.2011

3) What do you think about the key themes of this training programme?

I) Very useful

II) Useful

III) Less useful

IV) Not useful

Discription	No of beneficiaries accept				
	01.06.2011	02.06.2011	03.06.2011	06.06.2011	07.06.2011
Very useful	16	17	30	32	18
Useful	06	02	09	6	03
Less useful	1	0	0	0	00
Not useful	0	1	0	0	0

2) Will you be able to apply the key themes of this training to your routine farming practice? Yes No

Decision	No of beneficiaries accept				
	01.06.2011	02.06.2011	03.06.2011	06.06.2011	07.06.2011
Yes	25	21	41	38	24
No	1	0	0	01	00

3) Do you know the key themes of technical training before this training programme? Yes No.

If Yes, How? Where?

Decision	No of beneficiaries accept				
	01.06.2011	02.06.2011	03.06.2011	06.06.2011	07.06.2011
Yes	08	13	07	07	07
No	18	11	34	32	17

- Through DATC training programme at Thirunelvelly
- Our Agrarians Service Center
- Throughout experience
- From school study
- From books

4) Do you have clear picture about this training programme? Yes No.

If No, On which part of training?

Decision	No of beneficiaries accept				
	01.06.2011	02.06.2011	03.06.2011	06.06.2011	07.06.2011
Yes	26	20	40	39	24
No	00	2	01	0	0

5) Do you feel any inconveniences/discomforts of this training Programme?

Description	No of beneficiaries accept				
	01.06.2011	02.06.2011	03.06.2011	06.06.2011	07.06.2011
inconveniences/discomforts	0	00	01		0
No comments	26	23	38	39	24

6) Do you think any specific training programmes need to be provided further? Yes No

If yes, what kind of training and it is importance?

Decision	No of beneficiaries accept				
	01.06.2011	02.06.2011	03.06.2011	06.06.2011	07.06.2011
Yes	13	15	19	19	07
No	13	4	21	20	13

- Practical explanation
- Video clips
- Fruits and vegetable processing in home range
- Explain about mushroom cultivation

7) Do you think this type of training programme will be useful to solve the problems in farming?

Yes No

If Yes / No what's the reason:

Decision	No of beneficiaries accept				
	01.06.2011	02.06.2011	03.06.2011	06.06.2011	07.06.2011
Yes		20	15	39	23
No		1	21	00	00

- If cultivated with planning, earn more
- Understand about how to reduce the losses during pre and post harvest time
- Understand about storage techniques
- Understand how to earn more profit after harvest
- Useful for home gardening

8) How can we improve /efficiently contact this kind of training programmes in future?

- More explanation is needed
- Encourage to do research in farmer's place then explain
- Continuously do like this training
- Give good variety of seeds
- Do like this training in village level
- Introduce easy techniques in pre and post harvesting time

- Do more lecture with practical
- Television programme

9) State two important things that you gained from this training

- Understand about how to increase yield
- Understand about impacts of chemical
- Gather knowledge about processing of fruits and vegetables
- Understand about how to harvest fruits properly
- Induce to make design of machines
- Understand about storage techniques
- Gather knowledge about maturity level of fruits and vegetables
- To know about techniques used in other countries

10) Will you eagerly participate for this kind of training in future: Yes No

Decision	No of beneficiaries accept				
	01.06.2011	02.06.2011	03.06.2011	06.06.2011	07.06.2011
Yes		22	17	36	24
No		00	0	01	0

Appendix B: Pre - & Post-Test forms

PRE - / POST - EVALUATION ON TECHNICAL TRAINING ON PRE AND POST HARVEST TECHNOLOGY OF FRUITS AND VEGETABLES

- 1) Regarding the Vegetable cultivation, what do you mean by post harvest loss?
- 2) What is the extent of post harvest loss on vegetable crop cultivation?
- 3) What are the factors influencing on post harvest losses and indicate the necessary steps to reduce such losses?
- 4) How the harvesting period for tomato cultivation is decided?
- 5) How to decide the maturity stage of pumpkin?
- 6) How to decide the maturity stage of Banana bunch?
- 7) How will you cut the banana bunch during harvesting?
- 8) How to decide the maturity stage of root crops?
- 9) How many days the Guava fruits can be preserved in normal temperature?
- 10) What is the required temperature and RH for the preservation of Guava fruits without any detrimental changes for a period of three weeks?
- 11) What is the favorable time for harvesting of mango fruit? Why is this time chosen?
- 12) What are the precautions need to be taken in order to protect the harvested mangos from disease infection?
- 13) What is the required average weight of mango fruit for exportation?
- 14) How to decide the maturity of jack fruits?
- 15) What is the CO₂ concentration maintained for the long term storage of matured fruits in store house?

Annex 6

**COMPLETION REPORT OF THE TECHNICAL TRAINING ON
PLANT PROTECTION
JULY 2011**

1. Program Description**1.1 Program Objectives:**

The objective of this training program is to provide quality training and enhance the farmers' knowledge on plant protection in terms of ecological pest management. Some of the specific objectives of this training program are mentioned below;

- a) Identifying pest species and studying about key and major pests.
- b) Making awareness among farmers on judicious use of agro chemicals.
- c) Introducing innovative techniques for efficient pest control.

1.2 Program Activities:

The plant protection training was one day programme conducted by DOA (Extn.) with the support of PDP Jaffna. The Programme arrangements were organized by Agriculture Monitoring Officer (AMO), Farm Manager of DATC (FM) and some responsible AIs.

The transport arrangements were jointly organized by DOA and PDP – Jaffna to take participants from different places of Jaffna District.

The DATC main lecture hall and the DATC demonstration plots were used for both lectures and field practical sessions. Lectures were conducted with the help of Multimedia projector and other teaching aids. The Quality of the training programme was good.

Stationeries including pen, exercise book, file cover and relevant handouts/leaflets were provided to farmers. Lunch and refreshments also provided them.

Agriculture Instructors (AI), Agriculture Monitoring Officer (AMO), Subject Matter officers (SMO) Assistant Director of Agriculture (ADA), Farm Manager of District Agriculture Training Center (FM – DATC) and Coconut Development Officer from CCB were the resource persons of the training program.

1.3 Training Schedule:

Time	Programme
9.00am – 9.30am	Registration of participants
9.30am – 9.45am	Introduction of session (Briefing the objectives of the training)
9.45am – 10.15am	Pre - test
10.15am – 11.00am	Lecture I
11.00am – 11.15am	Tea Break
11.15am – 1.30pm	Lecture II
1.30pm – 2.30pm	Lunch Break
2.30pm – 3.30pm	Lecture III
3.30pm – 4.00pm	Discussion and Brainstorming session
4.00pm – 4.15pm	Tea Break
4.15pm – 4.45pm	Post-test and Feed Back
4.45pm	End of training.

1.4 Participants' summary:

There were 200 farmers participated in the six days training programme. Farmers were brought from different AI ranges in Jaffna district. The women Participation for this training programme were 66.67%.

Date	Male	Female	Disables	Total
13.06.2011	10	10	0	20
21.06.2011	33	0	0	33
25.06.2011	27	36	0	63
06.07.2011	8	10	0	18
07.07.2011	36	0	0	36
11.07.2011	6	24	0	30
Grand Total	120	80	0	200

2. Evaluation and methods:

The evaluation was done by using two different formats ie; questionnaires such as feed back and pre – post test forms in order to assess the usefulness of the training programme. (See formats of pre - post test and feed back forms as appendices).

Pre – Post test were done at start and end of the training, respectively and the feed back forms were distributed to famers at the end of the training. These two formats (in local Language ‘Tamil’) were distributed to farmers and allowed to answer individually. Based on the performance of Pre and post test and feed backs from them, the evaluation was furnished.

3. Findings and Results

The tests were composed of fifteen questions. One question was counted as one point, and the total score was fifteen points.

The table (Table 1) below shows the summary of pre-post test scores of all the seven days training.

Table 1: Pre-post test scores of plant protection training

Day	Training Date	AI Range	Average of correct answers		
			Pre Test %	Post Test %	Progress %
1	13.06.2011	Kopay	9.21	27.37	18.16
2	21.06.2011	Ariyalai	7.13	46.26	39.14
3	25.06.2011	Tholpuram, Keerimalai	6.39	41.39	35.00
4	06.07.2011	Velanai	9.63	19.26	9.63
5	07.07.2011	Sandilipay	6.11	61.85	55.75
6	11.07.2011	Vasawillan	8.97	28.46	19.50

The percentage of the total correct answers was calculated based on the number of participants for both pre and post tests. The results show that there was highest progress (nearly 56%) achieved in the training programme of Sandilipay AI range.

Table 2: Summary of Pre-Post test scores

Average score percentage		
Pre-Test	Post-Test	Progress
7.9	37.43	29.53

For the pre-test evaluation, 182 participants took part, which is around 91% of the total participants. The percentage of correct answers of the pre-test was 7.9%. Totally 180 training participants took part in the post test, which is 90% of the total participants. The percentage of correct answers of the post test was 37.43%. Therefore, the progress from the pre-test to post-test was 29.53%. These results can be considered more precise since large sample size (n=182 (pre), n=180 (post)) was used for analysis of the test results. Consequently, it can be said that this technical training program has improved the knowledge and understanding of participants on plant protection.

The figure (Figure 1) below illustrates that the percentage of correct answers has increased for all the questions evaluated. There was around 52% increase for the question number 7; there was around 48% increase for the questions number 3 & 8; there was around 40% increase for question number 5 & 10 and there was around 34% increase for question number 2,6,14 & 15

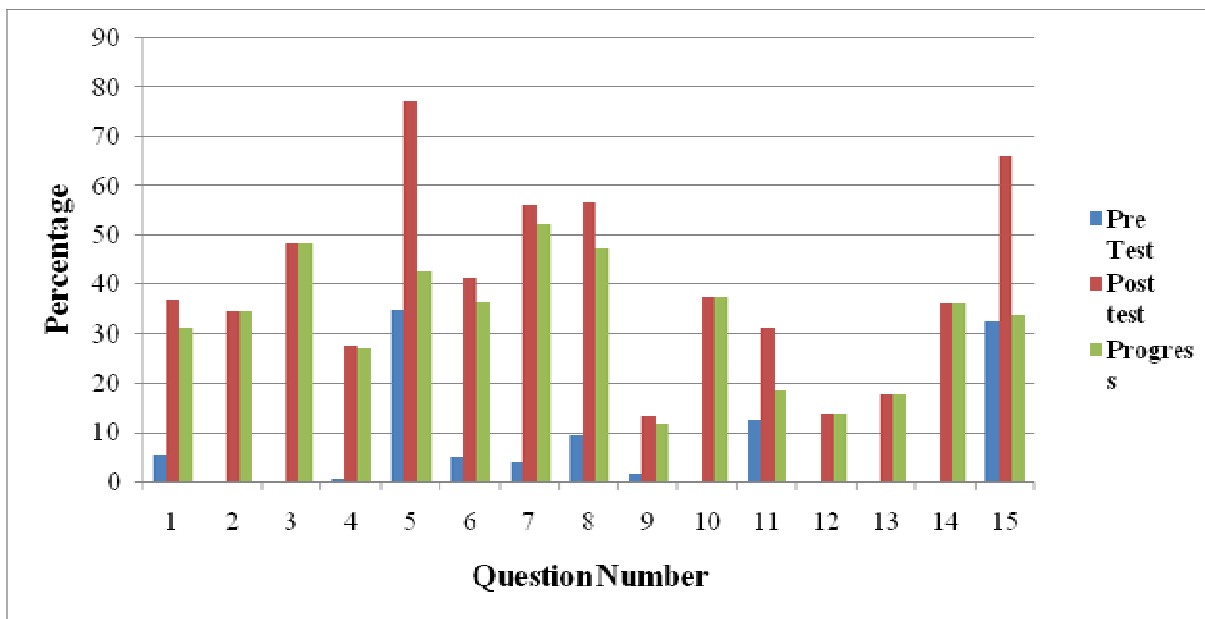


Figure 1: Pre- & Post- test evaluation: Progress of each questions

According to the overall assessment of the farmers feed back, most of the farmers (> 75%) have marked very useful for the question on the usefulness of the key themes discussed on the training programme. They were able to get better explanation via this training. None of the participants left complain about the quality of the training programme and felt unsatisfied. Farmers agreed that this kind of regular trainings in future will help them to solve the pest problems they face at their fields.

4. Comments on the training programme:

4.1. Venue:

The training was conducted in the DATC main Lecture Hall. The training center has enough facilities and suitable environment for farmers training programme. The training hall accommodates more than 40 participants and is well comfortable to farmers.

4.2. Training Contents:

The contents of training were very useful and fulfill the farmers' requirements in the field. It includes identification of pest attack and the major pests, eco friendly pest management by traditional and biological methods, awareness on judicious usage of agro chemicals and new techniques for efficient pest control methods.

4.3. Training method:

The training method was good and attractive. The DOA used Multimedia projectors to visualize the instructive photos and charts, etc to farmers. The participated farmers were attracted more. The field demonstrations were also good. The AMOs and SMOs of DOA explained well about the relevant subject.

4.4. Training materials:

Relevant Handouts / leaflets were issued to farmers as reference materials and the quality of the handouts / leaflets were also good. They were prepared in local language (Tamil).

7. Recommendations:

According to the overall evaluation, following recommendations can be suggested for further improvement of the training program in future.

- 1) The DOA can invite expertise people from other districts to conduct this kind of training for knowledge sharing.
- 2) Apart from field level demonstration, video clips on the technical matters/success stories need to be visualized in relevant topics to provide deeper explanation; better to display in evening to direct their full concentration on training.

6. Expenditure Summary

Items		Unit	Qty	Unit Price (Rs.)	Amount (Rs.)
Lunch Refreshments	and Meals, tea and short eats	n/a	200	200.00	40,000.00
Stationeries	1. File cover	Item	200	25.00	5000.00
	2. Handout I		200	28.00	5600.00
	3. Handout II		200	14.00	2800.00
	4. Pen		200	15.00	3000.00
Grand Total					56,400.00

Appendices:**Appendix A: Summary of Feed Back Form**

1) What do you think about the key themes of this training programme?

I) Very useful II) Useful III) Less useful IV) Not useful

Discription	No of beneficiaries accept					
	13.06.2011	21.06.2011	25.06.2011	06.07.2011	07.07.2011	11.07.2011
Very useful	16	28	42	15	32	18
Useful	3	5	4	2	4	7
Less useful	0	0	2	0	0	1
Not useful	0	0	0	0	0	0

2) Will you be able to apply the key themes of this training to your routine farming practice? Yes No

Decision	No of beneficiaries accept					
	13.06.2011	21.06.2011	25.06.2011	06.07.2011	07.07.2011	11.07.2011
Yes	19	33	46	17	36	25
No	0	0	2		0	1

3) Do you know the key themes of technical training before this training programme? Yes No.

If Yes, How? Where?

Decision	No of beneficiaries accept					
	13.06.2011	21.06.2011	25.06.2011	06.07.2011	07.07.2011	11.07.2011
Yes	7	5	31	11	20	24
No	12	28	17	6	16	2

- Through DATC training programme at Thirunelvelly
- Our Agrarians Service Center
- Throughout experience
- From school study
- From books
- from news paper
- exhibition

4) Do you have clear picture about this training programme? Yes No.

If No, On which part of training?

Decision	No of beneficiaries accept					
	13.06.2011	21.06.2011	25.06.2011	06.07.2011	07.07.2011	11.07.2011
Yes	18	33	46	17	34	26
No	1	0	2	0	0	0

- need practical explanation

5) Do you feel any inconveniences/discomforts of this training Programme?

Description	No of beneficiaries accept					
	13.06.2011	21.06.2011	25.06.2011	06.07.2011	07.07.2011	11.07.2011
inconveniences/discomforts	1	0	3	0	2	0
No comments	18	33	45	17	34	26

- need practical explanation

6) Do you think any specific training programmes need to be provided further? Yes No

If yes, what kind of training and it is importance?

Decision	No of beneficiaries accept					
	13.06.2011	21.06.2011	25.06.2011	06.07.2011	07.07.2011	11.07.2011
Yes	7	10	20	11	20	20
No	12	23	28	6	16	6

- banana diseases and control methods
- water resource management
- compost making
- new techniques methods for pest control

7) Do you think this type of training programme will be useful to solve the problems in farming?

Yes No

If Yes / No what's the reason:

Decision	No of beneficiaries accept					
	13.06.2011	21.06.2011	25.06.2011	06.07.2011	07.07.2011	11.07.2011
Yes	19	33	47	17	35	26
No	0	0	1	0	1	0

- If cultivated with planning, earn more
- Useful for home gardening
- useful for how to apply chemical effectively
- to know how to cultivate with low cost
- how to control pest properly

8) How can we improve /efficiently contact this kind of training programmes in future?

- Encourage to do research in farmer's place then explain
- Continuously do like this training
- Do like this training in village level
- Do more lecture with practical
- Television programme

9) State two important things that you gained from this training

- how to control coconut pest
- how to control the pest by environment friendly method
- how to identify the major pests
- to know about fertilizer application and usages of manure
- to understand about chemical name

10) Will you eagerly participate for this kind of training in future: Yes No

Decision	No of beneficiaries accept					
	13.06.2011	21.06.2011	25.06.2011	06.07.2011	07.07.2011	11.07.2011
Yes	19	33	48	17	35	26
No	0	0	0	0	1	0

Appendix B: Pre - & Post-Test forms

PRE - / POST - EVALUATION ON TECHNICAL TRAINING ON SOIL FERTILITY MANAGEMENT

- 1) Mention two insect pests observed on Brinjal crop?
- 2) Write the name of insect which appears like white cotton patches on Brinjal crop?
- 3) Write the name of insect which attacks on sting bean when it is in two leaves stage?
- 4) What is the reason for immature pod production in sting bean cultivation?

- 5) Write the name of black insect which occur gregariously on tip of the sting bean?
- 6) Briefly state how to control fruit fly attack on Bitter gourd and snake gourd?
- 7) Which insect pest causes skeletanization like damage on snake gourd?
- 8) What is the name of inset pest which bores into tomato fruits?
- 9) What are the main symptoms caused by the attack of green bug on okra leaves?
- 10) Write the name of insect which appears in red colour on abaxial surface of leaves in Okra and Brinjal?
- 11) Why do farmers wash the onion tips in the morning?
- 12) Write the name of insects which causes leaf curl complex in chilli plant?
- 13) Write some integrated insect pest management tactics to manage leaf curl complex in chilly plant?
- 14) How can we call insect pest in general which cuts and eats ground nut leaves?
- 15) Write the correct cropping stage of Cowpea on which insecticides should be sprayed to control the pod borer?

Pilot Project Completion Report

Name of the Pilot Project:	Strengthening of Mango Growers Society
Pilot Project Code:	AC 03
Name of the Implementer	PDP Jaffna with DOA
Pilot Project Site	Chavakatchcheri, Jaffna District
Background	<p>Jaffna District was traditionally famous for mango production, which was cultivated in an extent of 684.5ha with an average production of 5 tons /ha. Most of the mango trees were old, over grown and became unproductive due to poor maintenance. Pruning and training of trees had not been carried out by the farmers which were essential to enhance availability of sunlight to entire canopy and also to check the pest infestation. Farmers had lost their economical strength and they were not in a position to restore their status back as was in the year of early 1990's.</p> <p>On the other hand, the Chavakachcheri Fruit Producers and Sales Cooperative Society, which was mango growers' society in real terms, was established in 2009. The society was expected to lead the development of mango production. However, the society was still young and needed some more support from DOA and other agencies.</p>
Objective	This Pilot Project aimed to improve the productivity of mango cultivation while strengthening the capability of the Chavakachcheri Fruit Producers and Sales Cooperative Society, which was mango growers' society in real terms.
Activities	<ol style="list-style-type: none"> (1) Provision of essential tools for mango cultivation (2) Provision of training to young members and administrative members of mango growers' society (3) Provision of awareness program to mango growers in Chavakachcheri (4) Provision of exposure visit
Evaluation	<p>Over 500 farmers were participated awareness program and got aware of pruning mango trees to improve mongo productivity and practiced leaned technology. 48 youth were trained on mango cultivation and the result of post test was increased 19% over pre test. The administrative members of the society were received capacity building program and practicing learned knowledge. This is expected to enhance the productivity of mango and benefit mango growers. Following are the major achievement:</p> <ol style="list-style-type: none"> (1) Number of mango trees pruned According to the data of DOA, the Mango Society and the responsible field official (Chavakacheiri AI), 480 mango trees were pruned and trained during and after awareness programmes in Chavakacheri DS. (2) Number of mango growers practicing technology (pheromone trap and others) Most of the trained farmers are practicing the technology with the tools provided by the pilot project. (3) Institutional development of Mango Growers Society in terms of progress of meetings, other activities, and recording condition After establishment of fruits collection and sales outlet, the Society has been conducting a weekly meeting every Sunday.
Annex	<ol style="list-style-type: none"> (1) Completion report of training on pruning and training mango trees (2) Completion report of awareness program on mango cultivation (3) Report on exposure visit to Ellavala mango farm (4) Check list of Capacity building training program

Annex 1**Completion report of training on pruning and training mango trees****1. Program Description****1.1 Program Objectives:**

The mango pruning and training is a vital activity to revivify old mango trees and maximize its fruit bearing ability with good quality. The objectives of this training program are as follows:

- Removing dead or diseased wood / un productive branches
- Removing additional growth flushes to allow more light penetration into the leaf canopy
- Control tree height and thereby facilitate cultural management practices.
- Managing pests of mango, especially Mango hoppers.
- Give a better canopy and good shape for mango trees

1.2 Program Activities:

The technical training on mango pruning is a one day training Program. It was conducted by DOA (Extn.) with the support of PDP- Jaffna. The DOA was invited youths from the Mango Grower's societies who interested in modern farming to share new technology in Mango pruning activities. The Program arrangements were organized by Agriculture Monitoring Officer (AMO), Farm Manager of DATC (FM) and Chavakachcheri AI.

The transport arrangements were jointly organized by DOA and PDP – Jaffna to take the participants from Chavakachcheri Divisional Secretary division to DATC Thirunelvely.

The DATC main lecture hall and the DATC mother plants section were used for both lectures and field practical sessions. Lectures were conducted with the help of Multimedia projector and other teaching aids. The quality of the training program was good. Stationeries including pen, exercise book, file cover and relevant handouts/leaflets were provided to farmers. Lunch and refreshments were also provided them.

Agriculture Monitoring Officer (AMO), Subject Matter officers (SMO), Assistant Director of Agriculture (ADA) and Agriculture Instructor (AI) were the resource persons for this training program.

1.3 Training Schedule:

Time	Programme
9.00am – 9.30am	Registration of participants
9.30am – 9.45am	Introduction of session (Briefing the objectives of the training)
9.45am – 10.15am	Pre - test
10.15am – 11.00am	Lecture I
11.00am – 11.15am	Tea Break
11.15am – 1.30pm	Field Demonstration
1.30pm – 2.30pm	Lunch Break
2.30pm – 3.30pm	Field Demonstration
3.30pm – 4.00pm	Discussion and Brainstorming session
4.00pm – 4.15pm	Tea Break
4.15pm – 4.45pm	Post-test and Feed Back
4.45pm	End of training.

1.4 Participants' summary:

There were 48 youths participated in this training programme. The youths were from farming population of Chavakacheri AI range. The women participation for this training programme was 35%.

Date	Male	Female	Disables	Total
20/05/2011	10	08	0	18
23/05/2011	07	03	0	10
16/06/2011	14	06	0	20

2. Evaluation and methods:

The evaluation was done by using two different formats ie; questionnaires such as feed back and pre – post test forms in order to assess the usefulness of the training programme. (See formats of pre - post test and feed back forms as appendices).

Pre – Post test were done at start and end of the training, respectively and the feed back forms were issued to famers at the end of the training. These two formats (in local Language ‘Tamil’) were distributed to farmers and allowed to answer individually. Based on the performance of Pre and post test and feed backs from them, the evaluation was furnished.

3. Findings and Results

The tests were composed of fourteen questions. One question was counted as one point, and the total score was fourteen points.

The table (Table 1) below shows the summary of pre-post test scores of all three days training.

Table 1: Pre-post test scores of Mango Pruning training

Day	Training Date	AI Range	Average of correct answers		
			Pre Test %	Post Test %	Progress %
1	20/05/2011	Chavakachcheri	27.84	56.89	29.05
2	23/05/2011	Chavakachcheri	46.67	57.33	10.66
3	16/06/2011	Chavakachcheri	42	56.67	14.67

The percentage of the total correct answers was calculated based on the number of participants for both pre and post tests.

Table 2: Summary of Pre-Post test scores

Average score percentage		
Pre-Test	Post-Test	Progress
37.26	56.89	19.63

For the pre-test evaluation, 38 participants took part, which is around 79.17% of the total participants. The percentage of correct answers of the pre-test was 37.26. Totally 47 training participants took part in the post test, which is 97.92% of the total participants. The percentage of correct answers of the post test was 56.89%. Therefore, the progress from the pre-test to post-test was 19.63%. These results can be considered more precise since large sample size (n=38 (pre), n=47 (post)) was used for analysis of the test results.

Consequently, it can be said that this technical training program has improved the knowledge and understanding of participants on Mango pruning.

The figure (Figure 1) below illustrates that the percentage of correct answers has increased for all the questions evaluated expect question number 11 and 14. There was around 63% increase for the question number 1; there was around 32% increase for the questions number 6, 7 & 13 and there was around 25% increase for question number 10 & 12.

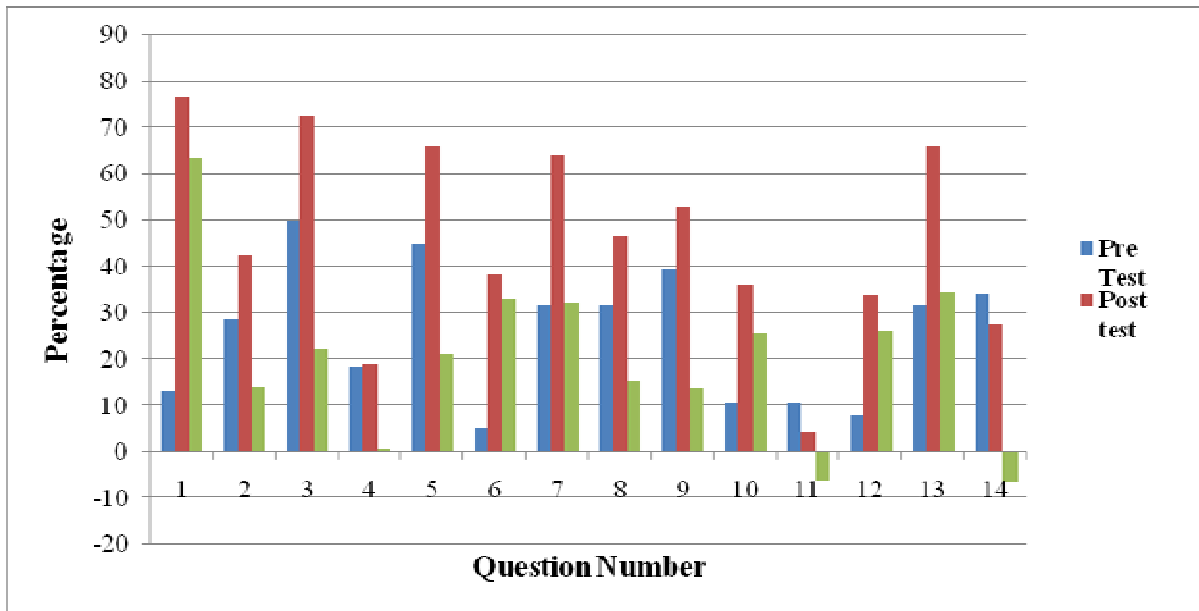


Figure 1: Pre- & Post- test evaluation: Progress of each questions

According to the overall assessment of the farmers feed back, most of the farmers (> 98%) have marked very useful for the question on the usefulness of the key themes discussed on the training programme. They were able to get better explanation via this training. No any of the participants left complain about the quality of the training programme and felt satisfied.

4. Comments on the training programme:

4.1. Venue:

The training was conducted in the DATC main Lecture Hall. The training center has enough facilities and suitable environment for farmers training programme. The training hall accommodates more than 40 participants and is well comfortable to farmers.

4.2. Training Contents:

The contents of training were very useful and fulfill the farmers' requirements in their fields. It includes introduction to Importance of Pruning and Training, Use of pruning tools, Method of pruning, time of pruning, After care of pruning ,Fruit thinning, Importance of organic fertilizer, Method of organic manure application and Mulching, Importance of Rejuvenation of old trees and Rejuvenation pruning method

4.3. Training method:

The training method was good and attractive. The DOA used Multimedia projectors to visualize the instructive photos and charts, etc to farmers. The participated farmers were attracted more. The field

demonstrations were also good. The AMO of DOA explained how to improve Pruning and Training, Fertilizer Management and Rejuvenation of old trees.

4.4. Training materials:

Relevant Handouts / leaflets were issued to farmers as reference materials and the quality of the handouts / leaflets were also good. They were prepared in local language (Tamil).

5. Recommendations:

According to the overall evaluation, following recommendations can be suggested for further improvement of the training program in future.

- 1) The DOA can invite expertise people from other districts of the country to conduct this kind of skill trainings for knowledge sharing.
- 2) Apart from field level demonstration, video clips on the technical matters/success stories need to be visualized in relevant topics to provide deeper explanation; better to display in evening to direct their full concentration on training.

6. Expenditure Summary

Items		Unit	Qty	Unit Price (Rs.)	Amount (Rs.)
11. Lunch and Refreshments	Meals, tea and short eats	n/a	48	200.00	9600.00
12. Stationeries	1. File cover	Item	48	25.00	1200.00
	2. Handout I		48	28.00	1344.00
	3. Handout II		48	14.00	672.00
	4. Pen		48	15.00	720.00
Grand Total					13,536.00

Pre - & Post-Test forms

PRE - / POST - EVALUATION ON TECHNICAL TRAINING ON MANGO PRUNING

- 1) What are the main places for mango Cultivation?
- 2) How to maintain the Mango trees?
- 3) What are the cultural activities made on Mango tree?
- 4) How to identify the varieties of Mango?
- 5) Do you prune the Mango trees?
- 6) What is the time interval between two prunings?
- 7) When will you make the pruning on mango trees?(Before rain or After rain)
- 8) What is the total production Before Pruning of mango trees? Fruit/plant
- 9) What is the total production After Pruning of mango trees? Fruit/plant
- 10) How to prune the mango trees?
- 11) What is the height to determine for pruning?
- 12) What are the activities in your site after pruning?
- 13) What is your opinion about production after pruning?
- 14) What are the benefits after pruning?

Annex 2

Completion Report on Mango Awareness Program**1) Introduction:**

Mango is one of Jaffna specialties and its production becomes declined due to several reasons. Because of lack of maintenance and proper management, trees are overgrown and it led unproductive. To revivify and rejuvenate, such mango trees should be pruned and trained properly. According to the proven agronomic technology of mango, pruning induces fruit bearing ability. Therefore, DOA suggested PDP Jaffna to assist the mango awareness program under the pilot project of strengthening of mango growers society.

2) Project Objective:

Mango awareness program was conducted with the objective of teach mango growers and public about the importance of pruning of old mango trees and pest management.

3) Activities:

Chavakcheri DS was chosen as it is potential place for mango cultivation and production in the District. 503 mango growers were made awareness of this proven technology and around 500 mango trees were pruned during the awareness program. Chavakcheri AI trained participants how to prune and train mango trees and do pest management especially on mango hopper.

4) Participants summary:

Following table illustrates summary of participants for mango awareness program.

No	Date	No. of participants
1	25/02/2011	96
2	26/02/2011	90
3	18/06/2011	34
4	19/06/2011	22
5	27/06/2011	37
6	03/07/2011	100
7	10/07/2011	77
8	14/09/2011	47
Total		503

5) Cost for awareness program:

Description	Qty	Unit Price	Total Amount
Refreshment for participants	503	50	25,150.00

Annex 3**Exposure visit to Ellavala mango farm****1. Program Description****1.1 Program Objectives:**

The main objective of this exposure visit is to provide innovative knowledge about export standard mango cultivation in southern part of Sri Lanka.

Some of the specific objectives are mentioned here under;

- a) to know about micro irrigation system for mango trees.
- b) to understand about improving market value of mangoes.

1.2 Program Activities:

The Exposure visit was a three days organized by DOA (Extn.) with the support of PDP Jaffna. Initial arrangements were done by Subject Monitoring Officer (SMO) and relevant AIs from DOA. Participants were 25 farmers and 5 DOA staffs. During the exposure visit, participants visited to Ellawela farm (150Ac) located in Dambulla. This farm is a private farm and mainly they cultivate mango variety – Tom Yersy, which has higher demand in middle East countries. Farm manager (FM) of this farm initiated with introduction of farm history then explained about mango cultivation practices such as grafting of mango trees, revivification of old trees, importance of pruning and pruning methods, drip irrigation for mango, intercropping with pineapple, fertilization, importance of quality mango production and packing of mangoes. Participants were got satisfied with FM explanation and FM answered the farmers' questions clearly.

On next day, farmers visited to CIC farm which is located in Pelwehera with the extent of around 1500ac. This farm consists of other field crop sector, prawn culture and piggery. CIC farm appointed field technicians for every section and they well explained about their sectors. Mango varieties in the farm are same as Jaffna varieties such as Karuththakolumban, Willard etc. CIC has own fruit juice center and they produce fresh juice. Participants were also taught about how to produce quality juice. They produce and sell grafted mango seedlings, hybrid banana suckers and other planting materials.

2. Expenditure Summary

Description	Amount
Total expenses for entire visit, including daily allowances	Rs. 172,500.00

Annex 4

Check list of Capacity building training program

Target CBO :- Fruit Producers and Sales Cooperative Society, Chavakacheri

Items	Plan	Actual
Objectives	To improve the knowledge and right attitude of Fruit producers and sales Cooperative society members to develop themselves as an efficient organization for a economical viable productions of fruits in the district by effectively utilizing the facilities provided by PDP Jaffna and DOA	The Fruit producers and sales Cooperative society have been given the necessary training facilities jointly by DOA and PDP and thereby their standard have been enhanced as economically viable organizations. The planned objective has been completely achieved.
Activities	1. Training for 20 members from mango growers society on leadership. 2. Training for 20 members from mango growers society on Book keeping	Attendance recorded 100% Attendance recorded 100% objective achieved completely
Target	Committee members and selected active young members	Out of the participants 40% committee members and 60% young members
Target numbers	20	Participants 20 – and target achieved
Training contents:-	<ul style="list-style-type: none"> • Leadership <ul style="list-style-type: none"> ○ Introduction and Objective of the training ○ Definition of Leadership ○ Types of leadership ○ How to develop leadership knowledge • Book keeping <ul style="list-style-type: none"> ○ Why book keeping? ○ What is book keeping? ○ Books of account of a small organization ○ Preparing primary entry books 	<p>Leadership training covered the important topics as planned and well explained by the resource personnel</p> <p>Provided the basic accounting training and explained with relevant examples . The concept of ‘cost of production’ also taken as additional input above the planned topics.</p>
Lectures	Cooperative Council Resource Personals	The explanation was simple as suitable for the grass root organization and the participants were able to understand the topics clearly. Necessary examples were given wherever possible to make the participants to understand the contents of the lecture.
Output		The leadership skill and the accounting knowledge of the participants have been improved and they will be in a position to manage their organizations effectively.
Feedback from participants		Content. 19 highly satisfied,1 satisfied, 0 dissatisfied. Resource Persons’ Training Delivery: 18 highly satisfied, 02 satisfied, 0 dissatisfied. Logistics: 14 highly satisfied,6 satisfied, 0 dissatisfied.etc.
Feedback from lectures		The participants have been selected to suit their needs and the interaction between them shows their interest to improve their knowledge.
Feedback from related officers		AI:- This is new thing for them and it will be useful for their society CDO:- The basic knowledge of book-keeping would have been increased and thereby the Society members are in a position to understand their responsibility.

Pilot Project Completion Report

Name of the Pilot Project:	Promotion of Mushroom Cultivation
Pilot Project Code:	AC 04
Name of the Implementer:	PDP Jaffna with DOA
Pilot Project Site	Thirunelvely, Jaffna District
Background	<p>At the beginning of the project, about 100 families in Jaffna district had recently started mushroom cultivation with the support of various projects. The production of mushroom was insufficient to fulfill the requirements of the district population. The level of mushroom production differed from family to family based on their technical and managerial skills.</p> <p>Also farmers were facing difficulty to obtain quality mushroom spawn. Spawn needed for mushroom cultivation was still delivered from Colombo. However, the delivery was often disrupted due to various logistic reasons, causing a serious constraint for mushroom production in Jaffna.</p>
Objective	This pilot project aimed to promote mushroom cultivation among local farmers.
Activities	<ol style="list-style-type: none"> (1) Construction of a mushroom spawns production facility. (2) Provision of training with a demonstration facility for strengthening the extension service. (3) Provision of capability building training to the Mushroom Producers and Sales Society.
Evaluation	<p>Obtaining spawns for mushroom cultivation was the major bottleneck to Jaffna growers. This has been solved and spawns are available locally in required amount. Farmers have been provided various trainings including technical training on cultivation, exposure visit and capacity building training for the growers' society. Through these activities, the society and famers' technical skill have been enhanced and farmers are stimulated into mushroom cultivation. Followings are the major achievement;</p> <ol style="list-style-type: none"> (1) Amount of spawn produced by the mushroom spawn production facility <ul style="list-style-type: none"> As of the end of September, 78 bags (7.8 kg) of mushroom spawn had been produced since operation started in July. It was expected to produce 50 kg of spawn per month in near future. (2) Number of members of the Mushroom Cultivation Society <ul style="list-style-type: none"> At the beginning: 113 Expected at the end of the Project: 150 (Some newly trained cultivators were expected to join the Society.) (3) Institutional development of the Mushroom Cultivation Society in terms of progress of meetings, other activities, and recording condition <ul style="list-style-type: none"> The Mushroom Society had a monthly meeting at DATC and it discussed the issues related to obtaining saw dust and marketing of mushroom harvest. Records were being maintained by the Secretary of the Society.
Annex	<ol style="list-style-type: none"> (1) Completion report of technical training on mushroom spawn production technology (2) Completion report of technical training on mushroom cultivation (3) Check list of Capacity building training program (4) Handing-over Certificate (5) Final Inspection Sheet after Defect Liability Period

Annex 1**Completion Report of Technical Training on Mushroom Spawn Production Technology****1. Program Description****1.1 Program Objectives:**

The objective of the training programme is to provide good quality training on mushroom spawn production technology under aseptic condition and train participants on handling and maintenance of laboratory equipments. Some of the specific objectives of this training programme are mentioned hereunder,

- a) Understand how to maintain and grow mother and daughter cultures.
- b) Study and explore usage of cost effective materials as substrate for spawn production.
- c) Pest management during mushroom spawn and cultivation.

1.2 Program Activities:

The mushroom spawn production technology, two days technical training programme was organized by Department of Agriculture (DOA) – Extension, conducted by Department of Agriculture – Agriculture Research Station, Sita Eliya and supported by PDP – Jaffna, JICA. Six staff of DOA, three technical trainees and one mushroom cultivator were undergone for this training at ARS, Sita Eliya.

The Lecture Hall and ARS laboratory were used for both conducting lectures and practical sessions. Lectures were conducted with the help of multimedia projector and quality of training also was good, said by Technical trainees.

1.3 Training Schedule:

This is the common training schedule for Spawn Production Technology training:

Time	Programme
8.00am – 8.30am	Introduction about ARS, Sita Eliya.
8.30am – 9.00am	Introduction of spawn production laboratory, spawn production technology, types of spawn, etc.
9.00am – 12.30pm	Media preparation for mother culture production.
12.30pm – 1.00pm	Lunch
1.00pm – 5.00pm	Substrates preparation for mother culture and commercial spawn production.

2. Evaluation and methods:

The evaluation of the training was performed in order to assess the effectiveness of the training program. Feedback form (questionnaires) was distributed to participants at the end of training. Based on the feedbacks from them, evaluation was furnished (see format of feedback forms as attached herewith).

3. Findings and Results

Almost all participants had given positive responses about training and expressed the facilities of arrangements. Since, the training is the first attempt to participants, it was innovative and fulfill the requirements of participants.

4. Comments on the training Programme:

4.1. Venue:

The training was conducted in ARS, Sita Eliya lecture room. The research institute had enough facilities to conduct training on mushroom spawn production technology as they have been producing spawns and growing mushroom several years.

4.2. Training Contents:

The contents of training were useful and fulfill the requirements. Participants were trained on various aspects of spawn production such as rising up of pure culture, preparation of mother culture, identifying suitable substrates, multiplication of spawn, hygienic precaution to be taken and economic production of spawns.

4.3. Training method:

The training method was almost good and attractive.

5. Recommendations:

Based on the overall evaluation of the training programme, following recommendations are suggested for further improvement of quality of the training.

- 1) Since this is the new training for DOA staff and other technical staff, it is better to have training again in local environment at Jaffna to strengthen their capacity.
- 2) Produced spawns should be undergone for a trial mushroom cultivation and after confirmation only, this should be released.

6. Expenditure Summary

Items	Unit Price	Qty	Total (Rs.)
Allowances for participants	n/a	n/a	52,000.00
Allowances for Resource Person	n/a	n/a	9,000.00
Total (Rs.)			61,000.00

Appendix: Feed Back Form

TECHNICAL TRAINING FOR AGRICULTURE DEVELOPMENT – FEED BACK FORM

Date:.....

Name of the technical training:

Name of the farmer:.....

4) What do you think about the key themes of this training programme?

- I) Very useful II) Useful III) less useful IV) Not useful

5) Do you apply key themes of this training to your farming? Yes No

3) Do you know about the key themes before you conduct this training programme? Yes No.
If No, How? Where?

.....
.....

4) Do you feel Satisfaction about the key themes in the training pogramme? Yes No.
If No, which chapter?

.....
5) Do you feel any discomforts of this training Programme?
.....
.....

6) Do you think to combine any specific training programme? Yes No
If yes, what is the specialty?

.....
7) Do you think this type of training programme will be useful to solve problems in farming? Yes No
Reason:
.....

8) How can we improve this kind of training programme in future?
.....

9) State two important things that you gained from this training?
1).....
.....
2).....
.....

10) Others:
.....
.....
.....
.....

Annex 2**Completion Report of Technical Training on Mushroom Cultivation****1. Program Description****1.1 Program Objectives:**

The objective of this training programme is to provide practical knowledge on mushroom cultivation and understand its importance. Some of the specific objectives are mentioned below hereunder;

- a) Study about the value addition / processing technologies of mushroom.
- b) Understand the marketing tactics of mushroom in Jaffna.

1.2 Program Activities:

The technical training on mushroom cultivation was a one day training program. It was conducted by DOA (Extn.) with the support of PDP Jaffna. The Program arrangements were done by the coordination of Agriculture Monitoring Officer (AMO), Farm Manager (FM) of DATC and the responsible AI.

Lecture session was conducted at DATC main lecture hall with the help of multimedia projector and other ordinary teaching aids. Practical sessions were conducted at demonstration unit of DATC. Stationeries including pen, exercise book and file cover were distributed to farmers.

1.3 Training Schedule:

Time	Programme
9.00am – 9.30am	Registration of participants
9.30am – 9.45am	Introduction session (Briefing)
9.45am – 10.15am	Pre - test
10.15am – 11.00am	Lecture
11.00am – 11.15am	Tea Break
11.15am – 1.30pm	Practical Session I
1.30pm – 2.30pm	Lunch Break
2.30pm – 3.30pm	Practical Session II
3.30pm – 4.00pm	Discussion and Brainstorming session
4.00pm – 4.15pm	Tea Break
4.15pm – 4.45pm	Post-test and Feed Back
4.45pm	End of training.

1.4 Participants' summary:

One hundred mushroom cultivators and beginners participated in the training programme. They came from different AI ranges in Jaffna district and women participation for this training programme was high and it was 87% of total participants. The table below illustrates the summary of participation.

Date	Female	Male	Total
27.06.2011	28	2	30
15.07.2011	20	0	20
05.08.2011	7	9	16
10.08.2011	32	2	34
Grand Total	87	13	100

2. Evaluation and methods:

The evaluation was done by two different assessments in order to know the usefulness of the training programme. The assessments were conducted through two different questionnaires, feed back and pre – post test (see formats of pre - post test and feed back forms as appendices).

Pre – Post test was done at start and end of the training program, respectively and the feed back forms were issued to famers at the end of the training. These two formats (in local Language ‘Tamil’) were distributed to farmers and allowed to answer individually. Based on the performance of pre and post test and feedbacks, the assessment was furnished.

3. Findings and Results

The test paper contained fifteen questions. One question was counted as one point, and the total score was fifteen points.

The table (Table 1) below shows the summary of pre-post test scores of all the four days training.

Table 1: Pre-post test scores of Mushroom Cultivation

Day	Training Date	AI Range	Average of correct answers		Progress %
			Pre Test	Post Test	
1	07.07.2011	Sandilipay	7.18	64.76	57.58
2	11.07.2011	Vasawillan	16.33	51.67	35.33
3	15.07.2011	Athiyadi	0.51	36.92	36.41
4	05.08.2011	Tholpuram	10.11	49.43	39.31
Average			8.53	50.69	42.16

The percentage of the total correct answers was calculated based on the number of participants for both pre and post tests. The results show that there was highest progress (57.58%) achieved in the training programme of Sandilipay AI range.

For the pre-test evaluation also participants took part, which is around 92 of the total participants. The percentage of correct answers of the pre-test was 8.53% Totally, 91 training participants took part the post test. The percentage of correct answers of the post test was 50.69 Therefore, the progress from the pre-test to post-test was 42.16%. These results can be considered more precise since large sample size (n=91 (pre), n=92 (post) was used for analysis of the test results. Consequently, result revealed that this training program has improved the knowledge and understanding of participants on mushroom cultivation.

The figure (Figure 1) shown below illustrates, that the percentage of correct answers increased for all the questions. There was around 59% progress for the question No 7 and No 9 and 53% for question No 2.

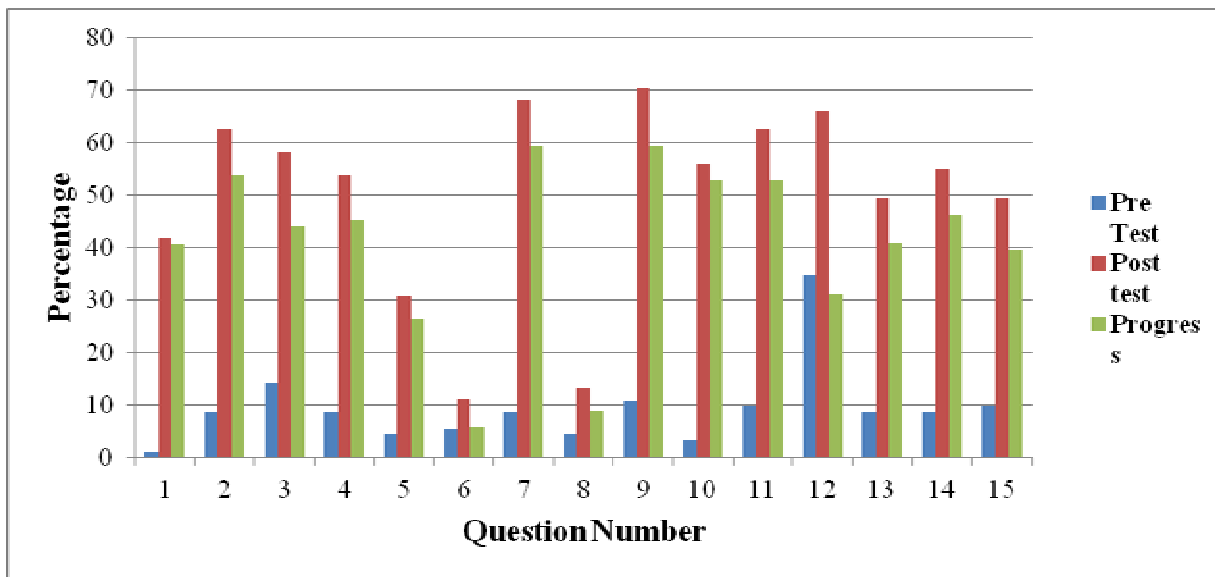


Figure 1: Pre- & Post- test evaluation: Progress of each questions

According to the overall assessment of the farmers' feedback, most of the farmers (95%) have marked very useful for the question on the usefulness of the key themes discussed on the training programme. They were able to get better explanation via this training. No any of the participants left complain about the quality of the training programme and they felt satisfied. Farmers agreed that this kind of regular trainings in future would help them to solve the problems they face during cultivation.

4. Comments on the training programme:

4.1. Venue:

The training was held in the DATC main Lecture Hall and mushroom demonstration sheds. The training center has enough facilities and suitable environment for farmers training programme.

4.2. Training Contents:

The contents of training were very useful to do mushroom cultivation in home level. Cultivators got the clear picture about cultivation technologies of mushroom such as species of mushroom, requirements for cultivation, media preparation, sterilization of media, spawn inoculation, incubation, harvesting, processing and financial analysis.

4.3. Training method:

The lecture was conducted by AI, who specialized in mushroom cultivation technology. She explained the technologies with the help of teaching aids like power point slides and white board. Practical sessions also were done by such AI in the mushroom sheds and the way of demonstration was very useful to the participants.

5. Recommendations:

According to the overall evaluation, the following recommendations are suggested for the further improvement of the training in the future.

- Encourage to do this kind of training in farmers' home level for more better understanding.
- DOA can arrange this kind of training continuously.

- Encourage the vulnerable people to do mushroom cultivation in home level by giving some assistance.
- Do some awareness programs about mushroom and its consumption among people in Jaffna.
-

6. Expenditure Summary

Items		Unit	Qty	Unit Price (Rs.)	Amount (Rs.)
13. Lunch and Refreshments	Lunch and Refreshments	item	100	200.00	20,000.00
14. Stationeries	File cover	item	100	25.00	2500.00
	Pen		100	15	1500.00
Grand Total					47,320.00

Appendix A: Summary of Feed Back Form

TECHNICAL TRAINING FOR AGRICULTURE DEVELOPMENT –SUMMARY OF FEED BACK FORM

1) What do you think about the key themes of this training programme?

I) Very useful II) Useful III) Less useful IV) Not useful

Discription	No of beneficiaries accepted			
	27.06.2011	15.07.2011	05.08.2011	10.08.2011
Very useful	25	16	8	25
Useful	5	0	1	1
Less useful	0	0	0	0
Not useful	0	0	0	0

2) Will you be able to apply the key themes of this training to your routine farming practice? a) Yes b) No

Decision	No of beneficiaries accept			
	27.06.2011	15.07.2011	05.08.2011	10.08.2011
Yes	27	16	14	28
No	3	0	0	2

3) Do you know the key themes of technical training before this training programme?

a) Yes b) No.

If Yes, How? Where?

Decision	No of beneficiaries accept			
	27.06.2011	15.07.2011	05.08.2011	10.08.2011
Yes	2	13	0	4
No	28	3	14	26

- Through DATC training programme at Thirunelvelly
- from school
- from already trained people

4)) Do you have clear picture about this training programme? Yes No.

If No , On which part of training?

Decision	No of beneficiaries accept			
	27.06.2011	15.07.2011	05.08.2011	10.08.2011
Yes	30	16	14	29
No	0	0	0	1

- how to inoculate spawns into bags
- spawn production

5) Do you feel any inconveniences/discomforts of this training Programme?

Description	No of beneficiaries accept			
	27.06.2011	15.07.2011	05.08.2011	10.08.2011
inconveniences/discomforts	0	0	0	0
No comments	30	16	14	30

6) Do you think any specific training programmes need to be provided further? Yes No
If yes, what kind of training and it is importance?

Decision	No of beneficiaries accept			
	27.06.2011	15.07.2011	05.08.2011	10.08.2011
Yes	14	15	9	8
No	16	1	4	22

- Spawn production method

7) Do you think this type of training programme will be useful to solve the problems in farming?

Yes No

If Yes / No what's the reason:

Decision	No of beneficiaries accept			
	27.06.2011	15.07.2011	05.08.2011	10.08.2011
Yes	30	16	14	30
No	0	0	0	0

- to know about mushroom and its cultivation method
- mushroom is a substitute for other protein food
- discarded medium can be used as manure
- we can earn from mushroom cultivation in home level

8) How can we improve /efficiently contact this kind of training programmes in future?

- arrange for exposure visit
- do village level
- continually arrange these kinds of training

9) State two important things that you gained from this training

- generate income from mushroom cultivation
- easy to cultivate the mushroom
- to know about how to make mushroom curry
- do mushroom cultivation as self employment

10) Will you eagerly participate for this kind of training in future?

Yes No

Decision	No of beneficiaries accept			
	27.06.2011	15.07.2011	05.08.2011	10.08.2011
Yes	30	16	14	29
No	0	0	0	1

Appendix B: Pre - & Post-Test forms

PRE - / POST - EVALUATION ON TECHNICAL TRAINING ON MUSHROOM CULTIVATION

- 1) How to identify the edible mushroom?
- 2) What are the instruments to be needed for mushroom cultivation?
- 3) What are the inputs to be needed for mushroom cultivation?
- 4) How to disinfect the culture medium of mushroom?
- 5) What are the sanitation methods to be done in mushroom cultivation?
- 6) Describe the method of inoculation of spawns into bags?
- 7) How many days and how should keep the prepared bags in incubation shed?
- 8) How to maintain the mushroom bags in harvesting shed?
- 9) How can you manage the excess harvest of mushroom?
- 10) How much mushroom you can harvest from one culture bag?
- 11) What are the steps need to be taken to reduce the temperature in mushroom shed?
- 12) What are the species cultivated in Sri Lanka?
- 13) What are the nutrients found in mushroom?
- 14) What is the type of bag to be used to fill prepared medium?
- 15) When will harvest the mushroom after inoculation of spawns?

Annex 3

Check list of Capacity building training program

Target CBO :- Mushroom Growers Society

Items	Plan	Actual
Objectives	To improve the knowledge and right attitude of mushroom growers society members to develop themselves as an efficient organization for a economical viable production of mushroom in the district by effectively utilizing the facilities provided by PDP Jaffna and DOA	To improve the knowledge and right attitude of mushroom growers society members to develop themselves as an efficient organization for a economical viable production of mushroom in the district by effectively utilizing the facilities provided by PDP Jaffna and DOA The planned objective has been completely achieved.
Activities	1. Training for 20 members from mushroom growers' society on leadership. 2. Training for 20 members from mushroom growers society on Book keeping	Attendance recorded 20 Attendance recorded 20 objective achieved completely
Target	Committee members and selected active young members	Out of the participants 30% committee members and 70% young members
Target numbers	20	Participants 20 – and target achieved
Training contents:-	<ul style="list-style-type: none"> • Leadership <ul style="list-style-type: none"> ○ Introduction and Objective of the training ○ Definition of Leadership ○ Types of leadership ○ How to develop leadership knowledge • Book keeping <ul style="list-style-type: none"> ○ Why book keeping? ○ What is book keeping? ○ Books of account of a small organization ○ Preparing primary entry books 	The training covered planned topics
Lectures	Resource Personals from Jaffna Cooperative Council members	Resource Personals from Jaffna Action Centre. The explanation was simple as suitable for the grass root organization and the participants were able to understand the topics clearly. Necessary examples were given wherever possible to make the participants to understand the contents of the lecture.
Output		The leadership skill and the accounting knowledge of the participants have been improved. Ex-trainees — will be in a position to manage their organizations effectively.
Feedback from participants		Content. 16 highly satisfied,4 satisfied, 0 dissatisfied. Resource Persons' Training Delivery: 13 highly satisfied, 07 satisfied, 0 dissatisfied. Logistics: 16 highly satisfied,4 satisfied, 0 dissatisfied.etc.
Feedback from lectures		The participants have been selected to suit their needs and the interaction between them shows their interest to improve their knowledge.
Feedback from related officers		AI:- This is new thing for them and it will be useful for their society

Annex 4 Handing Over Certificates for Mushroom Spawn Production Laboratory and Mushroom Cultivation Demonstration Shed



PROJECT FOR THE DEVELOPMENT PLANNING FOR
THE RAPID PROMOTION OF RECONSTRUCTION
AND DEVELOPMENT IN JAFFNA DISTRICT

HANDING OVER CERTIFICATE


TITLE OF THE PROJECT	: ESTABLISHMENT OF MUSHROOM SPAWN PRODUCTION LABORATORY IN JAFFNA
IMPLEMENTING AGENCY	: JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
HANDING OVER TO	: DEPARTMENT OF AGRICULTURE (EXTN.), THIRUNELVELY, JAFFNA.
CONTRACT VALUE	: RUPEES 1,990,240.00
CONTRACT PERIOD	: 6 MONTHS
COMMENCEMENT DATE	: 21 ST DECEMBER 2010
COMPLETION DATE	: 11 TH JUNE 2011
CONTRACTOR	: VASKAR ENGINEERS AND CONSTRUCTORS
LOCATED AT	: > DISTRICT : JAFFNA > D.S. DIVISION : NALLUR > G.N. DIVISION : THIRUNELVELY

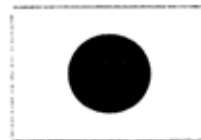
Above mentioned construction of mushroom spawn production laboratory has been completed under the Project for the Development Planning for the Rapid Promotion of Reconstruction and Development in Jaffna District (PDP-Jaffna) with the assistance of Japan International Cooperation Agency and handed over on 15th of July 2011 to Department of Agriculture (Extn.) by JICA Study Team. The Department of Agriculture (Extn.) is fully responsible for Operation and Maintenance of the facility.

Handing Over

Taking Over

for 
.....
Mr. Hiroaki YONESAKA
Team Leader
JICA Study Team, PDP Jaffna
Acting for and on behalf of
Japan International Cooperation Agency
Japan


.....
Mr. S. SIVAKUMAR
Deputy Director
Department of Agriculture (Extn.)
Thirunelvely, Jaffna
Democratic Socialist Republic of Sri Lanka
Sri Lanka
S. SIVAKUMAR
DEPUTY DIRECTOR OF AGRICULTURE (EXTN.)
JAFFNA



PROJECT FOR THE DEVELOPMENT PLANNING FOR
THE RAPID PROMOTION OF RECONSTRUCTION
AND DEVELOPMENT IN JAFFNA DISTRICT

HANDING OVER CERTIFICATE

TITLE OF THE PROJECT : ESTABLISHMENT OF MUSHROOM
PRODUCTION AND DEMONSTRATION CENTRE

IMPLEMENTING AGENCY : JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

HANDING OVER TO : DEPARTMENT OF AGRICULTURE (EXTENSION),
JAFFNA

CONTRACT VALUE : RUPEES 1,120,000.00

CONTRACT PERIOD : 6 MONTHS

COMMENCEMENT DATE : 13TH DECEMBER 2010

COMPLETION DATE : 10TH JUNE 2011

CONTRACTOR : SARUKAYA CONSTRUCTION


LOCATED AT : > DISTRICT : JAFFNA
> D.S. DIVISION : NALLUR
> G.N. DIVISION : THIRUNELVELY

Above mentioned Construction of Mushroom Production and Demonstration center has been completed under the Project for the Development Planning for the Rapid Promotion of Reconstruction and Development in Jaffna District (PDP-Jaffna) with the assistance of Japan International Cooperation Agency and handed over on 15th of July 2011 to Department of Agriculture (Extn.) by JICA Study Team. The Department of Agriculture (Extn.) is fully responsible for Operation and Maintenance of the facility.

Handing Over

for 
.....
Mr. Hiroaki YONESAKA
Team Leader
JICA Study Team, PDP Jaffna
Acting for and on behalf of
Japan International Cooperation Agency
Japan

Taking Over

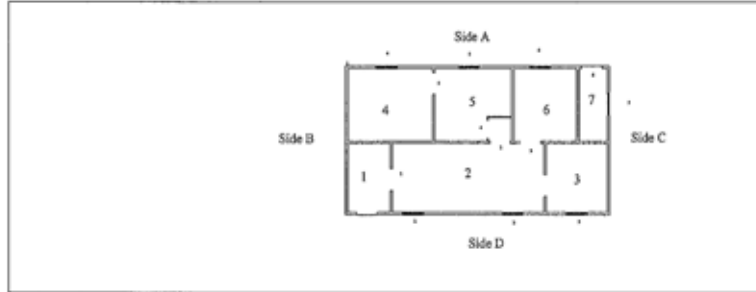

.....
Mr. S.SIVAKUMAR
Deputy Director
Department of Agriculture (Extn.)
Thirunelvely, Jaffna
Democratic Socialist Republic of Sri Lanka
Sri Lanka

S. SIVAKUMAR
DEPUTY DIRECTOR OF AGRICULTURE (EXTN.)
JAFFNA

Annex 5 Final Inspection Sheet after Defect Liability Period for Mushroom Spawn Production Laboratory and Mushroom Cultivation Demonstration Sheds

FINAL INSPECTION-AFTER DEFECT LIABILITY PERIOD

MUSHROOM LABORATORY - THIRUNELVELY



No.	Items	Inspection date	Re-Inspection date	Comments
1	4" Concrete Black wall	03.10.2011		
	Side A	✓		
	Side B	✓		
	Side C	✓		
	Side D	✓		
2	Out side Plaster			
	Side A	✓		
	Side B	✓		
	Side C	✓		
	Side d	✓		
3	Out side Paint			
	Side A	✓		
	Side B	✓		
	Side C	✓		
	Side D	✓		
4	Valance board/Barge board			
	Side A	✓		
	Side B	✓		
	Side C	✓		
	Side D	✓		
5	Outside Lamps			
	Side A	✓		
	Side B	✓		
	Side C	✓		
	Side D	✓		
6	Room No 1			
	wall plaster	✓		
	wall paint	✓		
	Floor rendering	✓		
	Ceiling	✓		
	Gate	✓		
	Lamps and switches	✓		

Legend:
Accept ✓
Not Accept X

JICA Study Team (PDP Jaffna)

Deputy Director (DOA)

Contractor (Vaskar Eng. & Constructors)

PDP Jaffna - JICA
3rd Floor, Registrar's Building
District Secretariat, Jaffna
Tel- 021-320-7581
Date: 03/10/2011

DEPUTY DIRECTOR OF AGRICULTURE (EXTN.)
JAFFNA

Vaskar Engineers & Constructors

Eng.M.D. Vasecharan
Sole Proprietor

Date: 03/10/2011

Date: 03.10.2011

No.	Item	Inspection date	Re-inspection date	Comments	
7	Room No. 2	03.10.2011			
	wall plaster	✓			
	wall paint	✓			
	Floor rendering	✓			
	Ceiling	✓			
	Aluminium doors				
	No. 1	✓			
	No. 2	✓			
	No. 3	✓			
	Aluminium windows				
	No. 1	✓			
	No. 2	✓			
	Lamps and switches	✓			
	Plugs	✓			
	Air Conditioner	✓			
8	Room No. 3				
	wall plaster	✓			
	wall paint	✓			
	Floor rendering	✓			
	Ceiling	✓			
	Tile work				
	wall	✓			
	table	✓			
	Kitchen sink	✓			
	Water tap	✓			
	Lamps and switches	✓			
	9	Room No. 4			
		wall plaster	✓		
		wall paint	✓		
		Floor rendering	✓		
Ceiling					
Aluminium doors					
No. 5		✓			
Aluminium windows					
No. 4		✓			
Lamps and switches		✓			
Plugs		✓			
Air Conditioner		✓			

Legend
 Accept ✓
 Not Accept X



JICA Study Team (PDP Jaffna)

Deputy Director (DOA)

Contractor (Vaskar Eng. & Constructors)

DEPUTY DIRECTOR OF AGRICULTURE (EXTN.)
 JAFFNA

Vaskar Engineers & Constructors

Eng.M.D. Vasecharan
 Sole Proprietor

Date 03/10/2011

Date 03/10/2011

Date 03.10.2011

No.	Item	Inspection date	Re-Inspection date	Comments
		03.10.2011		
10	Room No. 5			
	wall plaster	✓		
	wall paint	✓		
	Floor rendering			
	Ceiling	✓		
	Aluminium doors			
	No. 4	✓		
	Aluminium windows			
	No.5	✓		
	Fixed glazed partition	✓		
	Lamps and switches	✓		
	Plugs	✓		
	Air Conditioner	✓		
11	Room No. 6			
	wall plaster	✓		
	wall paint	✓		
	Floor rendering	✓		
	Ceiling	✓		
	Aluminium doors			
	No.3	✓		
	Aluminium windows			
	No.6	✓		
	Lamps and switches	✓		
	Plugs	✓		
12	Room No. 7			
	wall plaster	✓		
	wall paint	✓		
	Floor rendering	✓		
	Lamps and switches	✓		
	Door	✓		
	window	✓		
	Lamps and switches	✓		
	Plugs	✓		
13	Switch board	✓		
14	Roof	✓		
15	Steps	✓		
16	Earth Electrode	✓		

Legend
 Accept ✓
 Not Accept X

JICA Study Team (PDP Jaffna)

Deputy Director (DOA)

Contractor (Vaskar Eng. & Contractors)

PDP Jaffna - JICA
 3rd Floor, Registrar's Building
 District Secretariat, Jaffna
 Tel: 021-329-7581
 Date 03/10/2011

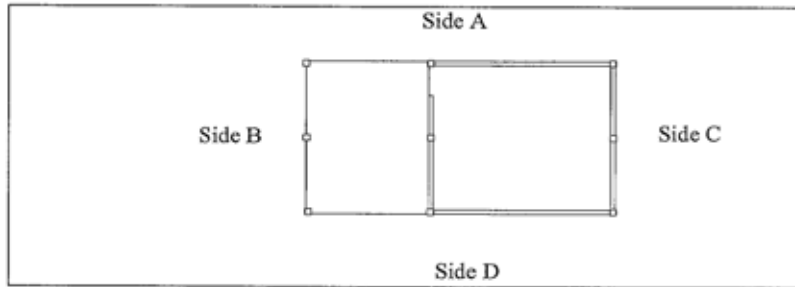
[Signature]
 DEPUTY DIRECTOR OF AGRICULTURE (EXTN)
 JAFFNA Date 03/10/2011

Vaskar Engineers & Constructors

[Signature]
 Eng.M.D. Vasecharan
 Sole Proprietor
 Date 03.10.2011

FINAL INSPECTION-AFTER DEFECT LIABILITY PERIOD

INCUBATION SHED - THIRUNELVELY



No.	Item	Inspection date	Re-Inspection date	Comments
		27.09.2011	04.10.2011	
1	4" Concrete Black wall			
	Side A	✓		
	Side B	✓		
	Side C	✓		
	Side D	✓		
2	Out side Plaster			
	Side A	✓		
	Side B	✓		
	Side C	✓		
	Side d	✓		
3	Out side Paint			
	Side A	✓		
	Side B	✓		
	Side C	✓		
	Side D	✓		
4	Inside Plaster			
	Side A	✓		
	Side B	✓		
	Side C	✓		
	Side D	✓		
5	Inside Painting			
	Side A	✓		
	Side B	✓		
	Side C	✓		
	Side D	✓		
6	PVC Insect proof net			
	Side A	✓		
	Side B	✓		
	Side C	✓		
	Side D	✓		

Legend
Accept ✓
Not Accept X

JICA Study Team (PDP Jaffna)

PDP Jaffna - JICA
3rd Floor, Registrar's Building
District Secretariat, Jaffna
Tel- 021-320-7581
Date: 04/10/2011

Deputy Director (DOA)

DEPUTY DIRECTOR OF AGRICULTURE (EXTN.)
JAFFNA

Date: 04/10/2011

Contractor (Sarukaya Construction)

N. Nanthan

Date: 04-10-2011

SARUKAYA CONSTRUCTION

No.	Item	Inspection date	Re-Inspection date	Comments
		27.09.2011	04.10.2011	
7	Roof	✓		
8	Light fittings & switches			
	Inside	x	✓	Not working / Corrected
	outside	x	✓	Not working / Corrected
9	Wooden door	✓		
10	Wooden shelves	✓		
11	Floor rendering			
	inside	✓		
	outside	✓		
	Step	✓		
12	Outside Columns			
	Plaster	✓		
	Paint	✓		

Legend
 Accept ✓
 Not Accept X

PDP Jaffna - JICA
 3rd Floor, Registrar's Building
 District Secretariat, Jaffna
 Tel- 021-320-7581
 Date 04/10/2011

JICA Study Team (PDP Jaffna)

rc

Deputy Director (DOA)

[Signature]

DEPUTY DIRECTOR OF AGRICULTURE (EXTN.)
 JAFFNA

Date 04/10/2011

Contractor (Sarukaya Construction)

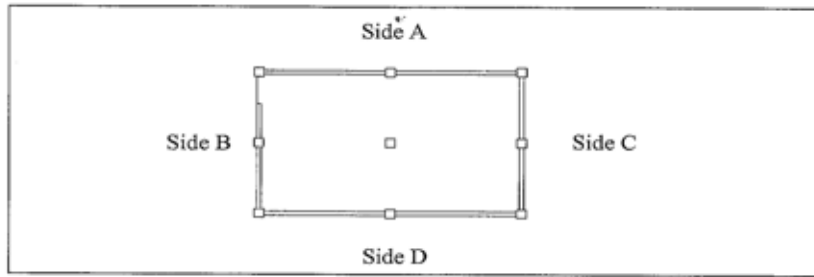
N. Nanthan

Date 04-10-2011

SARUKAYA CONSTRUCTION
 Cheddiyar Valavu,
 Chunnakam.

FINAL INSPECTION-AFTER DEFECT LIABILITY PERIOD

CROPPING SHED - THIRUNELVELY



No.	Item	Inspection date	Re-Inspection date	Comments
		27.09.2011	04.10.2011	
1	4" Concrete Black wall			
	Side A	✓		
	Side B	✓		
	Side C	✓		
	Side D	✓		
2	Out side Plaster			
	Side A	✓		
	Side B	✓		
	Side C	✓		
	Side d	✓		
3	Out side Paint			
	Side A	✓		
	Side B	✓		
	Side C	✓		
	Side D	✓		
4	Inside Plaster			
	Side A	✓		
	Side B	✓		
	Side C	✓		
	Side D	✓		
5	Inside Painting			
	Side A	✓		
	Side B	✓		
	Side C	✓		
	Side D	✓		
6	PVC Insect proof net			
	Side A	✓		
	Side B	✓		
	Side C	✓		
	Side D	✓		

Legend
 Accept ✓
 Not Accept X

PDP Jaffna - JICA
 3rd Floor, Registrar's Building
 District Secretariat, Jaffna
 Tel. 021-320-7581

JICA Study Team (PDP Jaffna) _____ Date 04/10/2011

Deputy Director (DOA) [Signature] _____ Date 04/10/2011

Contractor (Sarukaya Construction) N. Nanthu _____ Date 04-10-2011

SARUKAYA CONSTRUCTION
 Cheddiyar Valavu,
 Chunnakam.

No.	Item	Inspection date	Re-Inspection date	Comments
		27.09.2011	04.10.2011	
7	Roof	✓		
8	Heat Insulation & GI net	✓		
9	Sprincies	x	✓	2 nos broken / Corrected
10	Light fittings & switches	x	✓	Not working / Corrected
11	Wooden door	✓		
12	Wooden shelves	✓		
13	Floor rendering	✓		
14	Water pump & other accessories	✓		
15	Plug	✓		

Legend
 Accept ✓
 Not Accept X



JICA Study Team (PDP Jaffna)

Deputy Director (DOA)

Contractor (Sarukaya Construction)

[Signature]
 DEPUTY DIRECTOR OF AGRICULTURE (EXTN) Date 04/10/2011

[Signature]
 Date 04-10-2011

SARUKAYA CONSTRUCTION
 Cheddiyar Valavu,
 Chunnakam.

Pilot Project Completion Report

Name of the Pilot Project:	Rehabilitation of Atchchuvveli Coconut Seedlings Nursery
Pilot Project Code:	AC 05
Name of the Implementer:	PDP Jaffna with CCB (part of training and provision of machineries and irrigation system)
Pilot Project Site	Atchchuvveli, Jaffna District
Background	<p>Annual demand for coconuts in the district is estimated at around 78 million nuts. At the beginning of the project, only 20–30% of this demand were being met locally, since more than half of the coconut trees were damaged during the conflict time. To recover the production of coconut quickly, it was necessary to supply quality seedlings at the highest pace and volume possible.</p> <p>CCB has a coconut nursery over 2.8ha in size in Atchchuvveli, Kopay DS Division, with a capacity of 150,000 seed nuts. This nursery can provide genetically superior plants, and is thus helping to increase coconut production and rehabilitate low-yield coconut plantations.</p> <p>However, The CCB nursery was not used for a long time. It was heavily damaged during the war. CCB reopened the nursery in Jaffna in 2010 but the number of seedlings produced was only 60,000 in 2010.</p>
Objective	This Project was intended to recover fully the nursery production so that a large number of local famers can get quality seedlings from the nursery at a reasonable price. Some seedlings from the nursery were also to be distributed free of charge to returnee farmers.
Activities	(1) The recovery of Atchchuvveli Coconut Nursery, including construction of facilities and the provision of machines and hardware
Evaluation	<p>Machineries and irrigation system provided by the project had been utilized effectively and the number of quality seedlings produced at the Nursery was increased. Farmers including returnees were receiving more number of quality seedlings from the Nursery. Followings are the major achievement;</p> <p>(1) Number of coconut seedlings produced at the Nursery Last year (2010): 60,600 viable seedlings produced. This year (as of 12 September): 69,000 seedlings Expected for this year: 127,000 seedlings (70,000 additional seedlings were expected to be produced) Expected for next year: 150,000 seedlings</p> <p>(2) Technical improvement of technicians in operation and maintenance of irrigation facility and agricultural machinery The CCB staff did not previously know about the technical aspects of Four Wheel Tractor and its accessories. After the training at FMTC, four CCB staff members developed good skills in tractor operation and maintenance, handling of tractor accessories, and operation of sprinkler irrigation system. Now, they are operating farming implements and tractors independently and are maintaining them in good working condition.</p> <p>(3) Number of farmer training courses conducted at the Nursery Two (2) training courses on coconut cultivation were conducted at the newly constructed training hall by the end of the project. Total number of participants was 337.</p>
Annex	(1) Completion report on operation and maintenance of farming implements

Annex 1**Completion report on operation and maintenance of farming implements****1. Program Description****1.1 Program Objectives:**

The objective of this training programme is to provide knowledge about operation and maintenance of four-wheel tractor and sprinkler irrigation system. Some of the specific objectives of this training are mentioned below,

- a) To understand about micro irrigation and installation of micro irrigation system
- b) To understand about systems of four wheel tractor

1.2 Program Activities:

This training was a Three-days training Programme. It was conducted by Sri Lanka – West German Farm Mechanization Training Center (FMTC) located in Anuradhapura by support of PDP Jaffna. Beneficiaries were two officers and two technicians from coconut cultivation board as selected by Regional Manager Northern Province of Coconut Cultivation Board (CCB).

Lecture was conducted in main auditorium of FMTC, with support of multimedia projector and white board. Training consists of lectures and practices. For more details, please refer to the training schedule.

1.3 Training Schedule:

Date	Time	Programme
20.06.2011	8.00am – 9.00am	Welcome speech
	9.00am – 10.30am	Introduction to micro irrigation system
	10.30am – 11.00am	Tea break
	11.00am – 1.00pm	Fertigation and micro irrigation components
	1.00pm – 2.00pm	Lunch
	2.00pm – 4.30pm	Introduction of water pump and installation
21.06.2011	8.00am-11.00am	Operation and maintenance of 4 wheel tractor engine & Hydraulic system
	11.00am-11.30pm	Tea break
	11.30am-1.30pm	4 wheel tractor implement & transmission system
	1.30pm-2.30pm	Lunch break
	2.30pm-4.30pm	Cooling, steering & break system
22.06.2011	8.00am-9.00am	4 wheel tracer maintenance
	9.00am-11.00am	Driving
	11.00am-11.30am	Tea break
	11.30am-1.30pm	Driving
	1.30pm-2.30pm	Lunch
	2.30pm-4.30pm	Driving

1.4 Participants' summary:

A total of 4 trainees include two officers and two technicians came from CCB. Participants' details are given below

1. Lecturer (Agricultural Engineering, University of Jaffna)
2. Coconut development officer
3. Office in charge (coconut nursery)

4. Irrigator
5. Mechanic

2. Comments on the training programme:

2.1. Venue:

The training was held in the FMTC main auditorium. The training center has enough facilities and suitable environment for this training programme. The training hall accommodates more than 30 participants and well comfort to Trainees. Practical lecture was held in laboratory and field.

2.2. Training Contents:

The contents of training were very useful and fulfill the trainees' requirements in their fields.

2.3. Training method:

The lecture and practical session were conducted by instructors and technical staff of FMTC. They explained by multimedia projector and power point slides with explanatory photos. Practical session was held in different laboratory and field according to subjects. Lecture was done by English, therefore one of the participants as Lecturer (Agricultural Engineering, University of Jaffna) helped to translate those things to trainees.

Evaluation was done by practical assessments. Firstly, resource persons explained how to operate or fix the four-wheel tractor and micro irrigation related machinery parts. After that, trainees had to do that part individually. All trainees did that work successfully.

3. Recommendations:

According to the overall evaluation, the following recommendations are suggested for further improvement of the training in future.

- DOA could establish training center in Jaffna district that will help to most of the farmers and technicians of Jaffna district.
- If training programme duration could extent to one week, trainees gathered more about these systems.

4. Expenditure Summary

Items		Unit	Qty	Unit Price (Rs.)	Amount (Rs.)
Allowance for Trainee	Accommodation, Traveling	n/a	4	6500.00	26000.00
Allowance for Lecture	Accommodation, Traveling	n/a	1	12000.00	12000.00
Lecture Fees		n/a	n/a	n/a	9100.00
Helper & Driver Fees		n/a	n/a	n/a	3240.00
Co-coordinator Fees		n/a	n/a	n/a	350.00
Fuel cost		L	10	76.30	763.00
Grand Total					51453.00

Pilot Project Completion Report

Name of the Pilot Project:	Improvement of Milk Processing Facility in Point Pedro
Pilot Project Code:	AC 06
Name of the Implementer:	PDP Jaffna with DAPH and LIBCO
Pilot Project Site	Point Pedro, Jaffna District
Background	<p>To increase local milk consumption, diversification of processed milk product is one of the solutions.</p> <p>There were no large animal-products processing industry in Jaffna. However, a few LIBCOs were producing some sort of processed milk products such as milk juice packets, yoghurt, lollies, and paneer. Compared to the other 11 LIBCOs, the Point Pedro LIBCO was functioning particularly well in terms of milk processing. Before starting the project, they did not have proper production and storage facilities, limiting their production.</p> <p>LIBCO was taking important role to develop livestock production in Jaffna. However, most of the LIBCOs were not very active. They were lack of good administration and poor management. As LIBCO, Point Pedro had shown better performance than other LIBCOs. Further support to develop this LIBCO as a model case was envisaged.</p>
Objective	The Project was to facilitate further this success by providing a facility and hardware necessary for business growth.
Activities	<ol style="list-style-type: none"> (1) Construction of milk processing facility (2) Provision of processing equipment and refrigerator mini truck (3) Provision of capacity building training to LIBCO
Evaluation	<p>The milk processing facility was ready to operate practically. The milk processing capacity of LIBCO was expected to increase after starting the operation of the facility, and more farmers were expected to start to supply milk to LIBCO. Institutional capacity of LIBCO was improved through various trainings. Followings are the major achievement;</p> <ol style="list-style-type: none"> (1) Amount of milk processed by the milk processing facility As of 12 September: Nil Expected at the end of the year 2011: 500 litres / day; ultimate target is 1,000 litres per day. (2) Technical improvement of the operators of the milk processing facility The equipment dealer had instructed to the operators of LIBCO on how to use and maintain milk processing equipment. The operators would acquire practical technology through on the job training provided by the equipment dealer and DAPH officials. (3) Institutional development of LIBCO in terms of progress of meetings, other activities, and recording condition LIBCO had improved its administrative skill through capacity building training and had enough capacity to continue its activities
Annex	<ol style="list-style-type: none"> (1) Completion report of training on clean milk production (2) Check list of capacity building training program (3) Handing-over Certificate (4) Final Inspection Sheet after Defect Liability Period

Annex 1**Completion Report of Training on Clean Milk Production****1. Program Description****1.1 Program Objectives:**

The objective of this training programme is to provide quality training about clean milk production and importance of clean milk. Some of the specific objectives are mentioned below,

- a) to understand about cattle diseases (Udder disease)
- b) to understand about proper feeding of cattle
- c) to know how to test milk (quality)

1.2 Program Activities:

The clean milk production training was a one-day training Program. It was conducted by LIBCO with the support of PDP Jaffna. Beneficiaries were selected by LIBCO from their region of milk collecting centers.

Lectures were conducted in VS office and practical sessions were under taken at farmer's home. Lectures were conducted by the help of white board with markers. Stationeries including pen, note book and file cover to farmers. Lunch and refreshment's were also issued to whole participants in this training programme.

1.3 Training Schedule:

Time	Programme
9.00am – 9.15am	Registration of participants
9.15am – 9.30am	Introduction session (Briefing)
9.30am – 9.45am	Pre - test
9.45am – 11.00am	Lecture I
11.00am – 11.15am	Tea Break
11.15am – 1.00pm	Milk testing
1.00pm – 2.00pm	Field visit
2.00pm – 2.15pm	Discussion and Brainstorming session
2.15pm – 2.30pm	Post - test
2.30pm – 2.45pm	Feed back
2.45pm	Lunch

1.4 Participants' summary:

There were 75 persons participated in the four days training programme. Women participation for this training programme was 32%. Following table illustrates the summary of training program.

Date	Female	Male	Total
19.08.2011	9	16	25
22.08.2011	5	9	14
26.08.2011	5	15	20
29.08.2011	5	11	16
Grand Total	24	51	75

2. Evaluation and methods:

The evaluation was done by two different assessments in order to assess the usefulness of the training programme. The assessments were conducted through two different questionnaires, Feed back and Pre – Post test. (See formats of pre - post test and feed back forms as appendices).

Pre – Post test were done at start and end of the training respectively and the feed back forms were issued to famers at the end of training. These two formats (in local Language ‘Tamil’) were distributed to farmers and allowed to answer individually.

3. Findings and Results

The table (Table 1) below shows the summary of pre-post test scores of all the four days training.

Day	Training Date	Village	Average of correct answers & progress		
			Pre test	Post test	Progress %
1	19.08.2011	Manthigai	56.15	65.56	9.40
2	22.08.2011	Thumbalai	60.56	90.67	30.11
3	26.08.2011	Valvattithurai	56.11	59.44	3.33
4	29.08.2011	Thikkam	49.23	60.00	10.77
Average			55.51	68.92	13.40

The percentage of the total correct answers was calculated based on the number of participants for both pre and post tests. The results show that there was higher progress (30.11%) achieved in the training programme of Thumbalai range.

For the pre-test evaluation, participants took part, which is around 47 of the total participants. The percentage of correct answers of the pre-test was 55.51%. Totally, 37 training participants took the post test. The percentage of correct answers of the post test was 68.92%. Therefore, the progress from the pre-test to post-test was 13.4%. Hence result revealed that this training program has improved the knowledge and understanding of participants on clean milk production.

The figure below illustrates, that the percentage of correct answers increased for all the questions except No 9, No 14, No 17 and No18. There was around 80% progress for the question No 15 and 20, 35%.

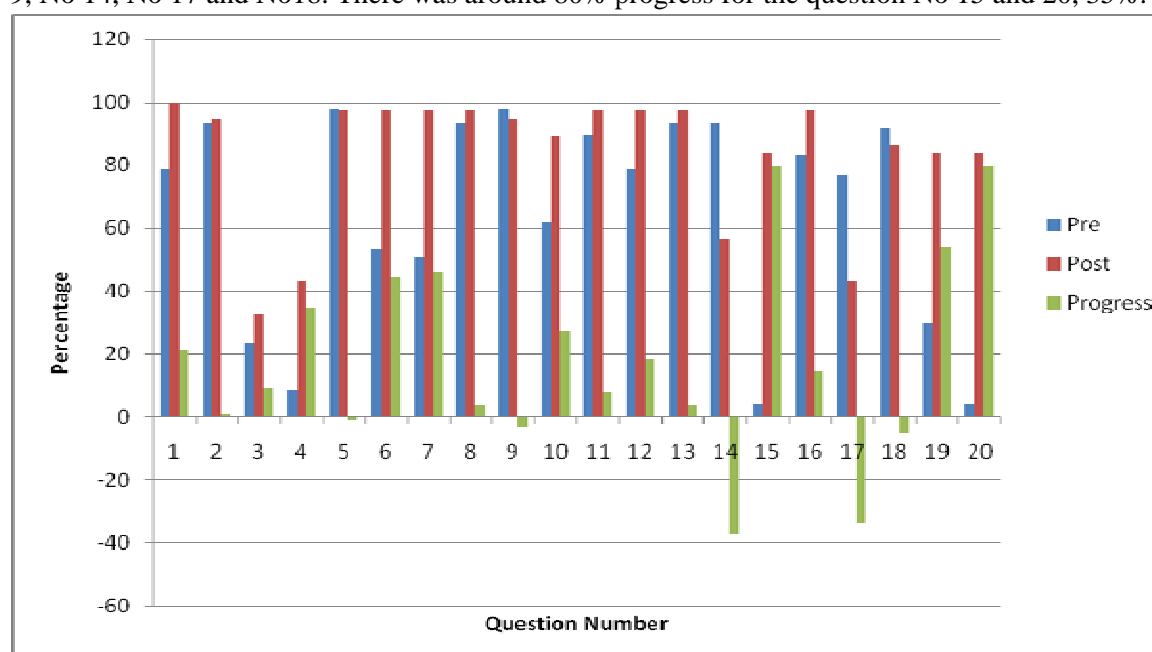


Figure 1: Pre- & Post- test evaluation: Progress of each questions

According to the overall assessment of the farmers' feedback, most of the farmers (95%) have marked very useful for the question on the usefulness of the key themes discussed on the training programme. They were able to get better explanation via this training. Some of them already participated like these training programmes at Veterinary office. None of the participants left complain about the quality of the training programme and they felt satisfied. Farmers agreed that this kind of regular trainings in future would help them to solve the problems that they face at their fields.

4. Comments on the training programme:

4.1. Venue:

The trainings were held in near to milk collecting center. The training center has enough facilities and suitable environment for farmers training programme. The training halls accommodates 15-25 participants and well comfort to farmers.

4.2. Training Contents:

The contents of training were very useful to do clean milk production in home level. Farmers got the knowledge about how to produce clean milk, identification of mastitis disease, feeding of cows to produce good quality milk, prevention methods of diseases and how to test milk quality.

4.3. Training method:

First day training programme was initiated by Dr.Vasekaran (Deputy Provincial Director). The lecture was conducted by VS and demonstration was done by VIO in cattle shed of one of the participants. Every participant's milk quality was also tested by such VIO in front of participants. This is very useful for dairy farmer to realize their milk quality. At end of the training session, one-liter teat dip solution was given to every dairy farmer that is used to disinfect the teats before and after milking.

5. Recommendations:

According to the overall evaluation, the following recommendations are suggested for further improvement of the training in future.

- VS should arrange this kind of training continuously.
- Encourage the youths to do dairy farm
- Do awareness programme about importance of clean milk production
- Do training about cattle rearing, calf rearing, disease prevention, upgrading of local breeds and artificial insemination.

6. Expenditure Summary

Items		Qty	Unit Price (Rs.)	Amount (Rs.)
Lunch and Refreshments	Meals, tea and short eats	75	200.00	15,000.00
Stationeries	Handout, Note book	60	75.00	4500.00
Demonstration	Towel	4	200.00	800.00
	Teat dip with 1l container	60	70.00	4200.00
	Resource person	8	800.00	6400.00
Total (Rs.)				30,900.00

Appendices:**Appendix A: Summary of Feed Back Form**

Date:

1) What do you think about the key themes of this training programme?

I) Very useful

II) Useful

III) Less useful

IV) Not useful

Discription	No of beneficiaries accept			
	19.08.2011	22.08.2011	26.08.2011	29.08.2011
Very useful	8	9	6	8
Useful	2	2	4	1
Less useful	0	0	0	0
Not useful	0	0	0	0

2) Will you be able to apply the key themes of this training to your routine farming practice? Yes

No

Decision	No of beneficiaries accept			
	19.08.2011	22.08.2011	26.08.2011	29.08.2011
Yes	10	11	10	9
No	3	0	0	0

3) Do you know the key themes of technical training before this training programme?

Yes

No.

If Yes, How? Where?

Decision	No of beneficiaries accept			
	19.08.2011	22.08.2011	26.08.2011	29.08.2011
Yes	8	4	1	3
No	2	7	9	6

- Through training in veterinary office
- from Veterinary doctor
- From experience

4)) Do you have clear picture about this training programme?

Yes

No.

If No , On which part of training?

Decision	No of beneficiaries accept			
	19.08.2011	22.08.2011	26.08.2011	29.08.2011
Yes	10	11	10	9
No	0	0	0	0

5) Do you feel any inconveniences/discomforts of this training Programme?

Description	No of beneficiaries accept			
	19.08.2011	22.08.2011	26.08.2011	29.08.2011
inconveniences/di scomforts	0	0	0	0
No comments	10	11	10	9

6) Do you think any specific training programmes need to be provided further?

Yes No

If yes, what kind of training and it is importance?

Decision	No of beneficiaries accept			
	19.08.2011	22.08.2011	26.08.2011	29.08.2011
Yes	5	5	2	2
No	5	6	8	7

- calf rearing system
- training about insemination
- how to rear the inseminated cows
- exposure visit to big farms
- how to produce more milk with low cost

7) Do you think this type of training programme will be useful to solve the problems in farming?

Yes No

If Yes / No what's the reason:

Decision	No of beneficiaries accept			
	19.08.2011	22.08.2011	26.08.2011	29.08.2011
Yes	10	11	9	9
No	0	0	1	0

- to know about reason for milk acidity
- to know about cattle rearing
- to know about cattle feeding

8) How can we improve /efficiently contact this kind of training programmes in future?

- video clips
- training about other chapter of cattle rearing
- continues training would help further improvement

9) State two important things that you gained from this training

- to know about how to produce clean milk
- Understand about prevention methods of cattle diseases
- Understand about proper feeding methods for milk cow
- Understand about construction of cattle shed
- Understand about how to increase milk quality by feeding

10) Will you eagerly participate for this kind of training in future: Yes No

Decision	No of beneficiaries accept			
	19.08.2011	22.08.2011	26.08.2011	29.08.2011
Yes	10	11	10	9
No	0	0	0	0

Appendix B: Pre - & Post-Test forms

PRE - / POST - EVALUATION ON TECHNICAL TRAINING ON CLEAN MILK PRODUCTION

SANITATION OF COW

- 1) Do you have cattle shed for your cows? Yes/No
- 2) Do you clean the cattle shed before milking? Yes/No
- 3) Do you bath your cow before milking? Yes/No
- 4) If yes, how many hours before you do? Just before milking/Before some hours
- 5) Do you clean the udder before milking? Yes/No
- 6) Do you rub cleaned udder? Yes/No
- 7) How about cloth for rubbing? Clean cloth/Dirt cloth
- 8) Do you feed the cow with grass after milking? Yes/No

SANITATION OF MILKER

- 9) Do you wash the hands before milking? Yes/No
- 10) What type of thing to be used for hand wash? Soap/Water
- 11) Do you rub the hands after hand wash? Yes/No
- 12) What type of cloth to be used? Clean cloth/Dirt cloth
- 13) Do you wear clean cloth during milking? Yes/No

SANITATION OF MILKING VESSELS

- 14) What type of vessels you used to milking?
a) Plastic b)Aluminium vessels c) vessel which used to feed d) Round aluminum vessel
- 15) Do you wash the vessels after milk away? Yes/No
- 16) What type of thing to be used to clean the vessels?
a) Normal water b)dish wash with clean water c)Ash with water
- 17) How to dry the cleaned vessel?
a)Downward b)Upward
- 18) Do you wash the vessels just before milking? Yes/No
- 19) What type of water to be used to wash? Normal water/Hot water
- 20) How to disinfect the teats after milking?
a) water b) Teat dip

Annex 2

Check list of Capacity building training program

Target CBO :- LIBCO, Point Pedro

Items	Plan	Actual
Objectives	To improve the knowledge and right attitude of Livestock Breeders Cooperative Society members to develop themselves as an efficient organization for a economical viable productions of Milk in the district by effectively utilizing the facilities provided by PDP Jaffna and DAPH	The Livestock Breeders Cooperative Society have been given the necessary training facilities jointly by DAPH and PDP and thereby their standard have been enhanced as economically viable organizations. The planned objective has been completely achieved.
Activities	1. Training for 20 members from mushroom growers society on leadership. 2. Training for 20 members from mushroom growers society on Book keeping	Attendance recorded 25 Attendance recorded 25 objective has been achieved completely
Target	Committee members and selected active young members	Out of the participants 40% committee members and 60% young members
Target numbers	20	Participants 25 – and target achieved
Training contents:-	<ul style="list-style-type: none"> • Leadership <ul style="list-style-type: none"> ○ Introduction and Objective of the training ○ Definition of Leadership ○ Types of leadership ○ How to develop leadership knowledge • Book keeping <ul style="list-style-type: none"> ○ Why book keeping? ○ What is book keeping? ○ Books of account of a small organization ○ Preparing primary entry books 	Leadership training covered the important topics as planned and well explained by the resource personnel Provided the basic accounting training and explained with relevant examples . The concept of ‘cost of production’ also taken as additional input above the planned topics.
Lectures	Cooperative Council Resource Personnels	The explanation was simple as suitable for the grass root organization and the participants were able to understand the topics clearly. Necessary examples were given wherever possible to make the participants to understand the contents of the lecture.
Output		The leadership skill and the accounting knowledge of the participants have been improved and they will be in a position to manage their organizations effectively.
Feedback from participants		Content. 25 highly satisfied,0 satisfied, 0 dissatisfied. Resource Persons’ Training Delivery: 22 highly satisfied, 03 satisfied, 0 dissatisfied. Logistics: 25 highly satisfied,0 satisfied, 0 dissatisfied.etc.
Feedback from lectures		The participants have been selected to suit their needs and the interaction between them shows their interest to improve their knowledge.
Feedback from related officers		Veterinary Surgeon:- The training provided is very useful to the society for their practical approach. CDO:- The method of book-keeping of the Co-operative societies is different from the normal accounting book-keeping. The training would be very useful for the Society members.

Annex 3



PROJECT FOR THE DEVELOPMENT PLANNING FOR
THE RAPID PROMOTION OF RECONSTRUCTION
AND DEVELOPMENT IN JAFFNA DISTRICT

HANDING OVER CERTIFICATE

TITLE OF THE PROJECT	: IMPROVEMENT OF MILK PROCESSING FACILITY IN POINT PEDRO
IMPLEMENTING AGENCY	: JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
HANDING OVER TO	: VADAMARADCHI LIVESTOCK BREEDERS COOPERATIVE SOCIETY (LTD)
CONTRACT VALUE	: RUPEES 1,680,000.00
CONTRACT PERIOD	: 6 MONTHS
COMMENCEMENT DATE	: 9 TH DECEMBER 2010
COMPLETION DATE	: 1 ST JUNE 2011
CONTRACTOR	: KAMSHIKAAS CIVIL ENGINEERING WORKS & SUPPLY
LOCATED AT	: > DISTRICT : JAFFNA > D.S. DIVISION : POINT PEDRO > G.N. DIVISION : MANTHIGAI

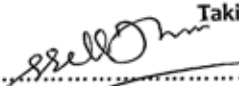
Above mentioned construction of milk processing facility building has been completed under the Project for the Development Planning for the Rapid Promotion of Reconstruction and Development in Jaffna District (PDP-Jaffna) with the assistance of Japan International Cooperation Agency and handed over on 8th of September 2011 to Vadamaradchi Livestock Breeders' Cooperative Society (Ltd) by JICA Study Team. The Vadamaradchi Livestock Breeders' Cooperative Society (Ltd) is fully responsible for Operation and Maintenance under the supervision of Department of Animal Production and Health.

Handing Over

for 
.....

Mr. Hiroaki YONESAKA
Team Leader
JICA Study Team, PDP Jaffna
Acting for and on behalf of
Japan International Cooperation Agency
Japan

Taking Over

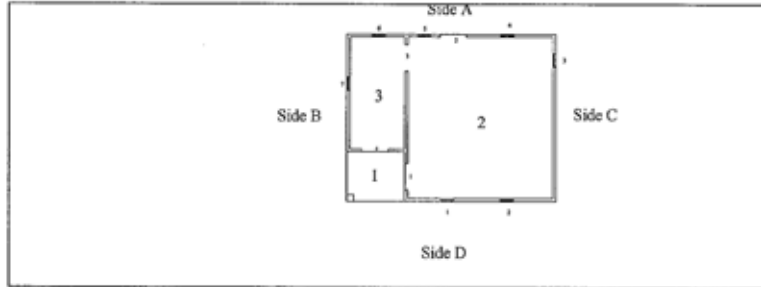

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Mr. S. SELLATHURAI
President
Vadamaradchy Livestock Breeders
Cooperative Society (Ltd), Point Pedro
Democratic Socialist Republic of Sri Lanka
Sri Lanka

Annex 4

FINAL INSPECTION-AFTER DEFECT LIABILITY PERIOD

MILK PROCESSING CENTER - POINT PEDRO



No.	Item	Inspection date	Re-Inspection date	Comments
		30.09.2011	04.10.2011	
1	4" Concrete Block wall			
	Side A	✓		
	Side B	✓		
	Side C	✓		
	Side D	✓		
2	Out side Plaster			
	Side A	x	✓	Crack near the W 4 / Corrected
	Side B	✓		
	Side C	✓		
	Side D	x	✓	Crack near the W 1 / Corrected
3	Out side Paint			
	Side A	✓		
	Side B	✓		
	Side C	✓		
	Side D	✓		
4	Outside Lamps			
	Side A	✓		
	Side B	✓		
	Side C	✓		
	Side D	✓		
5	Room No 1			
	wall plaster	✓		
	wall paint	✓		
	Floor Tiling	✓		
	Ceiling	✓		
	Lamps and switches	✓		

Legend
 Accept ✓
 Not Accept X

JICA Study Team (PDP Jaffna)

Dy. Provincial Director (PDAPH)

General Manager (LBCO)

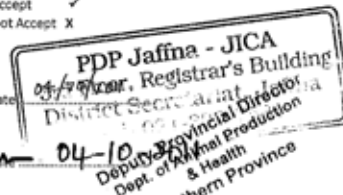
Contractor (Kamshikaas)

ce

A. Piratheeban

S. Sankar

B. Piratheeban



B. PIRATHEEBAN
 Director
 Kamshikaas Civil Engineering
 Works & Supply
 Karaveddy.

No.	Item	Inspection date	Re-inspection date	Comments
6	Room No. 2	30.09.2011	04.10.2011	
	wall plaster	✓		
	wall paint	✓		
	Tile work			
	Floor	✓		
	wall	✓		
	Ceiling	✓		
	Wooden doors			
	No. 1	x	✓	Lock to be rectify / Corrected
	No. 2	x	✓	Lock to be rectify / Corrected
	No. 3	x	✓	Lock to be rectify / Corrected
	Wooden windows			
	No. 1	✓		
	No. 2	✓		
	No. 3	✓		
	No. 4	✓		
	No. 5	✓		
	Lamps and switches	x	✓	Lock to be rectify / Corrected
Plugs	✓			
Fans & Regulators	✓			
Main switch board	✓			
Kitchen sink with tap	x	✓	waste to be rectify / Corrected	
Wash Basin with tap	✓			
7	Room No. 3			
	wall plaster	✓		
	wall paint	✓		
	Tile work			
	Floor	✓		
	wall	✓		
	Ceiling	✓		
	Wash Basin with tap	x	✓	Plaster work to be done near the waste line / Corrected
	Lamps and switches	✓		
	Plugs	✓		
Wooden door	✓			
Sales counter	x	✓	To be rectify / Corrected	
8	Sewer line & Soakage pit	✓		

Legend
 Accept ✓
 Not Accept x

PDP Jaffna - JICA
 3rd Floor, Registrar's Building
 District Secretariat, Jaffna
 Date: 04/10/2011
 Tel: 0211-320-7581

JICA Study Team (PDP Jaffna)

Dy. Provincial Director (PDAPH)

General Manager (LIBCO)

Contractor (Kamshikaas)

nc

A. R. Ramani Deputy Provincial Director
 Date: 04/10/2011

S. Subramanian General Manager
 Date: 04/10/2011

P. S. S. S. S. Contractor
 Date: 04/10/2011

B. PIRATHEEBAN
 Director
 Kamshikaas Civil Engineering
 Works & Supply
 Karaveddy.