

# Proceedings of

Training Workshop  
on

## Technology Extension through Field Demonstration of Forest-based Livelihood Options

12<sup>th</sup> March, 2016

Venue - Guchamura, Bamutia  
West Tripura District



**Organized by**



### **CENTRE FOR FOREST-BASED LIVELIHOODS & EXTENSION**

SHAL BAGAN FOREST CAMPUS, P O – GANDHIGRAM, AGARTALA - 799012, TRIPURA

**A Unit of Rain Forest Research Institute, Jorhat (Assam)**

*In Collaboration with*

**PANCHAI FARMERS' CLUB**

Guchamura, P.O- Bamutia, Sub-Div- Sidhai Mohanpur, Tripura (West), 799211.



## INTRODUCTION

Centre for Forest-based Livelihood & Extension (CFLE), Agartala is an organization under RFRI (ICFRE) that imparts training to utilize the natural resources found in an area/region in a sustainable manner, to help the people residing in those remote areas to generate their livelihood

The training cum workshop was organized by CFLE in collaboration with Panchai Farmers' Club, Guchamura in order to motivate rural farmers to earn their livelihood from natural resources without compromising on the conservation of the resources. The program was designed in such a way that it provides a ready to take package and encourage the farmers to take up these activities development of their sustainable livelihood.

### ABOUT THE TRAINING WORKSHOP:

The overall motive of the program was to help the farmers realize their potentialities which can be tapped and nurtured through exposure and guidance by technical expertise basically, to provide a completely replicable technology package and training to the farmers in the remote in-situ areas through hands on training and field demonstration.

Demonstration makes the participants learn faster and when it comes to agriculture, the farmers are more likely to adopt the technology, which increase their livelihood even by small margin. Agriculture is the essence of farmers in their profession. It is in this way that the farmers explore and relates to the actual market demand. The workshop aimed at providing a stress free training environment, where the farmers learn through two-way learning process expressing themselves in more casual and liberal state of communication with the trainers.



VENUE OF THE TRAINING WORKSHOP	: <b>Guchamura, Bamutia, Tripura West.</b>
TRAINING WORKSHOP CONDUCTED BY	: <b>Centre for Forest-based Livelihood &amp; Extension in collaboration with Panchai Farmers' Club.</b>
RESOURCE PERSONS	: <b>Pawan K Kaushik, Regional Director, and Atanu Saha, DCF, CFLE, Agartala.</b>
DATE OF WORKSHOP	: <b>12<sup>th</sup> March 2016.</b>
NUMBER OF PARTICIPANTS	: <b>58 nos.</b>
NUMBER OF MALE PARTICIPANTS	: <b>52</b>

NUMBER OF FEMALE PARTICIPANTS : 06

### **PROGRAM OBJECTIVES**

- Enhance understanding of poverty and available livelihood options
- Income generation through readily available natural resources
- Conservative and scientific usage of natural resources for sustainable livelihood
- Creating revenue generating opportunities through use of NTFPs
- Encouraging self determination through entrepreneurship development
- Usage and promotion of locally available medicinal herbs and plants

### **SCHEDULE OF TRAINING WORKSHOP PROGRAMME**

(10.00 am to 5.30 pm)

- ❖ **Congress for the Training Workshop:**
- ❖ **Welcome Speech by the DCF, CFLE, Agartala**
- ❖ **Oration by Regional Director, CFLE, Agartala**
- ❖ **Visual Presentation on vermicompost techniques**
- ❖ **Practical demonstration on Low Cost Vermicomposting**

*Tiffin break: 12.00-12.30 pm*

- ❖ **Presentation on Bamboo Treatment Techniques**
- ❖ **Practical demonstration on bamboo treatment**
- ❖ **Lecture on Bamboo Propagation & Bamboo Nursery**
- ❖ **Field demonstration on bamboo propagation**

*Lunch break: 14.30-15.00 hrs.*

- ❖ **Lecture on medicinal plants and their benefits**
- ❖ **Practical demonstration of planting of medicinal plants on beds**
- ❖ **Lecture on Broom Grass cultivation**
- ❖ **Encouragement and motivation for entrepreneurship development**
- ❖ **Interactive session**

## PROFILE OF PARTICIPATING COMMUNITIES

### **About Bamutia, Tripura West District:**

Bamutia is a large village located in Mohanpur of West Tripura district of Tripura with total 2376 families residing. The Bamutia has population of 9804 of which 4939 are males while 4865 are females as per Population Census 2011. Average Sex Ratio of Bamutia is 985 which is higher than Tripura state average of 960. Child Sex Ratio for the Bamutia as per census is 1037, higher than Tripura average of 957. Bamutia has higher literacy rate compared to Tripura. In 2011, literacy rate of Bamutia was 91.79 % compared to 87.22 % of Tripura. In Bamutia Male literacy stands at 94.67 % while female literacy rate was 88.84 %. Among a total of 8 districts in Tripura, the newly formed West Tripura district is situated about 19 km away from the capital city Agartala. The geographical area of the district is 983.63 sq. km with a highly dense population of 988192. The population density is about 1004.63 per sq. km. The total population includes 988192 under ST (23%), under SC (23%) under OBC (25%) General (26%) and Religious Minority (4%).



The technical aspects of training have wide scope to be extended in the both rural and urban areas of the district. The communities are also observed to be receptive to the new ideas and techniques for their livelihood development.

Total number of participants was 56 under different categories as detailed below:

Sl. No.	Caste	Number of Participants
1.	OBC Manipuri/ Bengali	28
2.	Minorities Muslim	05
3.	SC Bengali	23

### GENDER PROFILE OF PARTICIPANTS

Sl. No.	Particular	Number of trainee
1.	Male	49
2.	Female	07

## ASPECTS OF THE TRAINING

The training workshop was organised on **Technology Extension through Field Demonstration of Forest-based Livelihood Options in West Tripura District**. The aim of the training workshop was to deliver a replicable technology package for livelihood which promotes the use of readily available natural resources as a means of income generation for the people in the remote areas. The training was organized in collaboration with PFC (Panchai Farmers' Club) at Bamutia, Tripura West District. It was envisaged to invite farmers, bamboo growers, craftsmen, from different villages of the district to participate in the workshop and encourage them to share their experiences on producing vermicompost, bamboo treatment process, propagation of bamboo, etc. on their farm lands. In the first session, Shri Atanu Saha DCF, CFLE outlined the objectives of the training workshop and later technical aspects were covered by Sri P K Kaushik, Regional Director, CFLE Agartala. Both audio and video presentations were made for the demonstration of the training issues.



The various aspects covered in the program are -

- Low-Cost Vermicomposting
- Processing & Treatment of Bamboo
- Bamboo Propagation Techniques
- Broom Grass Cultivation
- Conservation of Medicinal Plants
- Encouraging Entrepreneurship Development

All the aspects of training workshop were designed to help the trainees to earn a sustainable livelihood from natural resources. The training workshop also provided a platform to exchange ideas and sharing of experiences among the experts and farmers in a two-way communication process. The training workshop showcased technologies on the above aspects.

This training workshop also initiated a thought-process amongst scientists and farmers to provide solutions through research and improvised capacity building programme. It also provided an opportunity for bringing the farmers, bamboo and medicinal plants growers in a common platform and facilitate them to promote organic agriculture and agroforestry models, commercial cultivation of NTFPs (Non-Timber Forest Products), and other tree farming models in the State. Receiving of indigenous and traditional knowledge from the farmers were of importance as it helped the scientists and technologists to rethink about the problems exist in the area and to initiate on-farm innovations.

### **LOW-COST VERMICOMPOSTING:**

Vermicomposting is an eco-biotechnological process that transforms energy-rich and complex organic substances into a stabilized humus-like product called vermicompost. It is an aerobically degraded and humified organic matter which has undergone chemical degradation by enzymes in the gut of earthworms and by the associated microbial population. It can be made from various kinds of organic waste available in day to day life such as cow dung, tree leaves, banana stem etc. The waste is shredded and collected in a container and then releasing earthworms into the mixture. The earthworm feeds on the various ingredients and converts it into a stable and valuable final product that is called as 'vermicomposting'.



The whole process of obtaining manure in this form was demonstrated by the experts through visual aids. A practical demonstration was also given so that the beneficiaries can have a first-hand experience on how to make vermicomposting a cost effective.

### **BAMBOO TREATMENT TECHNIQUE:**

In this process a desired length of bamboo measuring 2 ft to 10 ft is taken and then with the help of a pressure based Boucherie machine, CCB chemical is pumped in order to insert into the bamboo culm wall to replace the sap inside. This process helps in increasing the longevity of the bamboo as it protects from termites and other insects that might eat through and spoil the bamboo. The whole process of bamboo treatment was practically demonstrated and explained by the DCF, CFLE, Mr. Atanu Saha and his technical assistants. The livelihood need based training would the farmers in earning additional income besides conservation of bamboo resource in the locality.



### **BAMBOO PROPAGATION TECHNIQUES:**

In this part of the training workshop, the resource persons explained the bamboo propagation techniques through practical demonstrations for setting up a bamboo nursery. The important steps and necessary precautionary measures that need to be taken to manage a successful bamboo nursery were also explained through visuals. The farmers were explained and demonstrated in detail regarding the three methods of bamboo propagation viz. through branch cuttings, culm cuttings and macroproliferation techniques. The



Producer Group as proposed by the club will provide a platform for the Bamboo Growers to establish Community Livelihood Nurseries (CLNs). These CLNs will also be helpful to supply other plant materials for agroforestry models, commercial cultivation of NTFPs in the locality in future.

### **BROOM GRASS CULTIVATION:**

This part of the training was particularly women oriented mainly targeting housewives so that they can generate source of an additional income for their families. Women were motivated to use small patches of lands inside/near their households were encouraged to be used for cultivation of bamboo grass which enables them to manufacture brooms for their own use or for marketing to earn an additional profit. While conducting this part of the training, we noticed an avid interest among the female participants present in the training workshop.



### **CONSERVATION OF MEDICINAL PLANTS:**

Technical information was also shared on the cultivation and conservation of medicinal plants. Traditionally used and locally available healthcare remedies were discussed and encouraged. This knowledge of medicinal uses of herbs has been passed on through generations and thus needs to be preserved. Plants of medical importance such as *Aloe vera*, *Embllica officinalis*, *Bryophyllum spp.* etc. were encouraged for cultivation. Since the local herbs have a lot of potential in national and international markets, the technology package regarding the cultivation and harvesting of medicinally important plants needs to be extended. Thus, apart from the usage of medicinal plants to cure various ailments, it was also stressed that cultivation of medicinal plants can also be a source of income generation in the near future. Finally, the training was ended by planting a few herbal plants in a home garden.

### **ENCOURAGING ENTREPRENEURSHIP DEVELOPMENT:**

All the aspects that were discussed and pondered upon in the training workshop, ample stress was given to the idea of entrepreneurship development. Considering the present situation in the state which unfortunately lacks sufficient employment opportunities, entrepreneurship can prove to be a boon to the local populace. For a person to become an entrepreneur he/she needs certain specific skill sets, opportunities to receive financial support, a clear goal in mind and finally the support of family and friends. It is believed, this training programme would provide skills to the participants that might encourage entrepreneurship. Details and guidelines were also provided to the participants regarding various state and central government schemes that might help them realize their goals. The success stories on efforts taken for developing market linkages for vermicompost, bamboo craft, etc were also presented through audio visuals. The farmers expected prior notice on events such as trade fairs and handloom fairs where in they could showcase their locally produced products.

## FEEDBACK

Beneficiaries were classified on the basis of feedback which was received after the Q & A session. The farmers were asked to choose the particular livelihood activity of their interest. CLFE assured to provide technical support to the farmer to start that particular livelihood activity. The encouraging, ecstatic expression among the participants was significantly observed. Hence the willing participants who were interested to take up various technological options were listed and made into different groups based on their preferences. The CFLE team negotiated with the participating groups for the role and responsibilities to execute the livelihood development plan.

- ✓ For low cost vermicompost technology, beneficiaries were assured of getting plastic sheets and earthworms from CFLE, Agartala. Farmers have to manage rest of the materials and labor for fabrication and raw materials for operationalization
- ✓ Those who opted for bamboo treatment were assured of the setting up of a Bamboo Treatment Centre in the area by CFLE by installing Boucherie machines. The low cost treatment tanks will be installed by the group.
- ✓ The group interested in bamboo propagation techniques would be helped by providing starting material in form of bamboo mother plants etc.
- ✓ Technical support regarding setting up of Herbal Gardens by providing plant materials and other knowhow to the group interested in the same.
- ✓ The female participants who showed great enthusiasm regarding the broom grass cultivation were assured to provide with plant materials.

**DETAILS OF THE REGISTERED PARTICIPANTS**

<b>Sl.no.</b>	<b>Name of the participants</b>	<b>Address</b>	<b>Contact number</b>
3.	Mrinal Datta	Guchamura	
4.	Sunil Datta	Guchamura	8974882187
5.	Ramani Sarkar	Taltala	
6.	Aghurbasi Sarkar	Talatala	
7.	Prantosh Sharma	Rangotia	9874677476
8.	Amalendu Datta	Rangotia	
9.	Supen Datta	Taltala	8974271202
10.	Niresh Debbarma	Abhicharan	9856357886
11.	Binoy Data	Guchamura	
12.	Ashish Data	Guchamura	
13.	Khokan Sarkar	Guchamura	8794842794
14.	Anil Biswas	Taltala	9612890405
15.	Kishanjit Gupta	Guchamura	70851491135
16.	Bikash Sarkar	Laltila	8974528105
17.	Dilip Das	Taltala	
18.	Nishikanta Bishay	Guchamura	
19.	Khokan Tanti	Guchamura	9774251853
20.	Bishwajit Chatiya	Guchamura	8974300617
21.	Gourhari Sharama	Guchamura	
22.	Rana Datta	Taltala	8730045129
23.	Manuranjan Datta	Guchamura	9862294645
24.	Suman Datta	Taltala	9856984161

25.	Suranjan Datta	Guchamura	7085387601
26.	Rajen Sen	Guchamura	9774010454
27.	Jyotimoy Gupta	Guchamura	
28.	Nirmal Datta	Rangotia	
29.	Surjamohan Datta	Rangotia	
30.	Sumesh Datta	Taltala	9612829618
31.	Manihar Roy	Guchamura	
32.	Radhamohan Datta	Guchamura	
33.	Dulal Datta	Lamabari	9612574211
34.	Baburam Datta	Guchamura	
35.	Bimal Datta	Guchamura	
36.	Nishikanta Singh	Guchamura	
37.	Amrit Sharma	Guchamura	9612352051
38.	Kunal Datta	Guchamura	9612455920
39.	Bishwanath Datta	Guchamura	
40.	Kuleshwar Datta	Guchamura	9612340095
41.	Tapash Datta	Guchamura	9615257352
42.	Ugra Tanti	Guchamura	
43.	Manglu Tanti	Guchamura	
44.	Banabir Datta	Rangotia	9774772747
45.	Palash Datta	Rangotia	9089719674
46.	Dipankar Datta	Guchamura	9774010452
47.	Madhusudhan Datta	Guchamura	9862293424
48.	Pramila Datta	Guchamura	
49.	Shibuprasad Datta	Berimura	9862300201

50.	Sukumar Datta	Berimura	9774707102
51.	Mani Singh	Guchamura	7085439802
52.	Sujoy Rupini	TU	
53.	Rumpa Das	TU	8729970100
54.	Paplu Paul	CFLE	8754860280
55.	Manas Datta	Guchamura	
56.	Milli Datta	Guchamura	9612188660
57.	Rita Datta	Guchamura	8974720263
58.	Sabita Datta	Guchamura	

<b>Sl. No.</b>	<b>Vermicompost Producer Group</b>	<b>Treated Bamboo Producer Group</b>	<b>Broom Grass Producer Group</b>	<b>Medicinal Plants cultivation Group</b>
01.	Binoy Datta	Rajen Sen	Khokan Tanti	Rita Datta
02.	Sunil Datta	Suman Datta	Ramani Sarkar	Milli Datta
03.	Ramani Sarkar	Suranjan Datta	Aghurbasi Sarkar	Mrimal Datta
04.	Amrit Sharma	Manas Datta	Asish Datta	Rajen Sen
05.	Amalendu Datta	Mrinal Datta	Rita Datta	Pramila Datta
07.	Nirmal Datta	Dulal Datta	Binoy Datta	Banabir Datta
08.	Banabir Datta	Jyotimoy Datta	Dilip Das	Suman Datta
09.	Nirmal Datta	Amrit Sharma		Sabita Datta
10.	Prantosh Sharma	Sunil Datta		