Proceedings of

Training Workshop
on

Technology Extension through Field Demonstration of Forest-based Livelihood Options

14th March, 2016

Venue -Baidyadi, Bishalgarh, Sepahijala
Sepahijala 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 workshop was organized by CFLE in collaboration with Panchai Farmers' Club, Guchamura. The design and format of the report have been carefully geared towards motivating the rural farmers to earn their livelihood from natural resources without compromising on the conservation of the resources.

About the Training Workshop:

The endeavor was to help the farmers realize their potentialities which can be tapped and nurtured through exposure and guidance by technical expertise basically, to guide and provide training to the farmers in the remote in-situ areas through hands on training and field demonstration.

Farmers learn best when they find interest in what they are being demonstrated with. 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 farmers learn through two-way learning process expressing themselves in more casual and liberal state of communication with the trainers.

VENUE OF THE TRAING WORKSHOP	**: Baidyadi, Bishalghar, Sepahijala, Tripura.**
TRAINING WORKSHOP CONDUCTED BY	**: Centre for Forest-based Livelihood & Extension in collaboration with Panchai Farmers' Club.**
RESOURCE PERSONS	**: Pawan K Kaushik, Regional Director, and Atanu Saha, DCF, CFLE, Agartala.**
DATE OF WORKSHOP	**: 14th March 2016.**
NUMBER OF PARTICIPANTS	**: 45 Participants.**
NUMBER OF MALE PARTICIPANTS	**: 41**
NUMBER OF FEMALE PARTICIPANTS	**: 04**

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

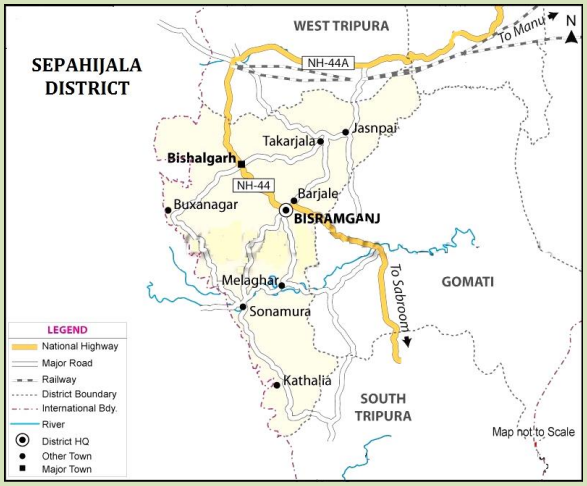
- **Presentation on Bamboo Treatment Techniques**
- **Practical demonstration on bamboo treatment**
- **Lecture on Bamboo Propagation & Bamboo Nursery**
- **Field demonstration on bamboo propagation**

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 Sepahijala District:



Among a total of 8 districts in Tripura, the newly formed Sepahijala district is situated about 30 km away from the capital city Agartala. The geographical area of the district is 1043.58 sq km with a dense population of 517529. The population density is about 496 per sq km. The total population includes 128259 under ST (24.7%), 73143 under SC (14.1%) and 113045 under OBC (21.8%). Within this district, there are 3 Sub Divisions, 7 blocks, 2 Nagar Panchayats, 9 Assembly seats & 3 ADC seats, fallen within 1 – West Tripura Parliamentary Constituency.

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 57 under different categories as detailed below:

Sl. No.	Caste	Number of Participants
1.	OBC Manipuri/ Bengali	39
2.	Minorities Muslim	01
3.	SC Bengali	05

Gender Profile of Participants

Sl. No.	Particular	Number of trainee
1.	Male	41
2.	Female	04

Aspects of the Training

The training workshop was on **Technology Extension through Field Demonstration of Forest-based Livelihood Options in Sepahijala District of Tripura**. The aim of the training workshop was to promote the use of readily available natural resources as a means of income generation for the livelihood of the people in the remote areas. In collaboration with PFC (Panchai Farmers' Club) the training was organized at Baidyadi, Bishalgarh, and Sepahijala Tripura. 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 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.

Low-Cost Vermicomposting:

Vermicompost is an organic fertilizer made from piling various ingredients like cow dung, tree leaves, banana stem etc in a container and then releasing earthworms into the mixture.

Vermicomposting is well known for stabilizing different natural and anthropogenic wastes. It is an aerobic, bio-oxidative, stabilizing, non-thermophilic process of organic waste decomposition that employs earthworms to fragment, mix and promote microbial activity. The earthworm gut, which serves as a bioreactor, provides a suitable environment for the multiplication of microbes. Earthworms transform energy-rich and complex organic substances into a stabilized humus-like product called vermicompost which contains most nutrients in plant-available forms as well as plant growth-promoting substances like cytokinins and auxins and consistently promote biological activity for germination, plant growth, flowering and better yield.

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 Techniques:

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 visuals during training programs explained about the important steps and necessary precautionary measures that need to be taken to manage a successful bamboo nursery. 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:

A video was shown on broom grass based agroforestry practices and its knowhow. The techniques of cultivation were also explained through interactions. This part of the training was primarily targeted towards the female populace mainly housewives so that they can generate an additional source of income for their families. Small patches of lands near households were encouraged to be used for cultivation of broom grass so that at least they can manufacture brooms for their own use. If any surplus materials are available then they could also make brooms and sell for 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:

Training was also imparted on developing herbal home gardens for cultivation and conservation of medicinal plants. Local healthcare remedies were encouraged. This knowledge of medicinal uses of herbs has been passed on through generations and thus needs to be preserved. Plants such as *Aloe vera* have already proven their potential in national and international markets. 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 huge source of income generation in the near future. A few plants like *Aloe vera*, *Emblica officinalis, Bryophyllum spp.* were also planted in a home garden on the day.

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

After the Q & A session, many of the participants were willing to adopt some of the technologies that were demonstrated to them during the training workshop. 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 them for role and responsibilities of all the participating groups.

✓ Those who opted for low cost vermicompost technique were assured of getting plastic sheets and earthworms from CFLE, Agartala. Rest of the materials and labor for fabrication and raw materials for operationalization have to be managed by the beneficiaries of their own as decided.

✓ 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.

✓ The group interested in medicinal plants was assured of necessary technical support regarding setting up of Herbal Gardens by providing plant materials and other knowhow.

✓ The female participants who showed great enthusiasm regarding the broom grass cultivation were assured to provide with plant materials.

Annexure

Details of the Registered Participants

Sl.no.	Name of the participants	Address	Contact number
01.	Binoy Sharma	Golaghati	9862548315
02.	Praneshwar Sharma	Golaghati	9612663342
03.	Gaurav Das	Golaghati	9612219943
04.	Subal Das Baishnab	Golaghati	9862251154
05.	Haradhan Debnath	Baidyadi	9612053799
06.	Utpal Sinha	Baidyadi	9856091206
07.	Birchandra Singh	Baidyadi	8014025572
08.	Anup Kumar Singh	Baidyadi	8731846021
09.	Bikash Singh	Baidyadi	9862473239
10.	Bikram Singha	Baidyadi	9089441265
11.	Pradip Sarkar	Kasba	9862473442
12.	Gourkishore Sharma	Baidyadi	9615814744
13.	Bappi Singha	Kasba	8974222022
14.	Nilkanta Singha	Kasba	8974438451
15.	Swadesh Singha	Kasba	8014031034
16.	Prabir Singha	Baidyadi	9862632984
17.	Abhishek Singh	Baidyadi	
18.	Surja Sinhg	Baidyadi	8014025188
19.	Subrata Das	Dhajonagar	9612263282
20.	Jiban Chandra Shil	Dhajanagar	8974353755
21.	Avninash Singh	Baidyadi	8014092275
22.	Ankur Singh	Baidyadi	
23.	Rajesh Singh	Baidyadi	
24.	Saurav Singh	Baidyadi	8794586072
25.	Subir Singh	Baidyadi	8974159201
26.	Jitendra Singh	Baidyadi	7085776850
27.	Litan Singha	Baidyadi	8729845245
28.	Kula Chandra Singh	Baidyadi	9862435467
29.	Monoj Singh	Baidyadi	9812839829
30.	Pulin Sharma	Baidyadi	9862426357
31.	Rahul Singh	Baidyadi	9862187329
32.	Naresh Singh	Baidyadi	9612732764
33.	Manash Singha	Baidyadi	9856117118
34.	Abul Hakim	Baidyadi	9612053790
35.	Khagendra Ch. Debnath	Dhajanagar	8974294392
36.	Bandana Sharma	Baidyadi	
37.	Bindrarani Singha	Baidyadi	

38.	Mihir Singha	Kasba	9774899256
39.	Ganesh Singh	Kasba	8974726719
40.	Palsh Sharma	Baidyadi	
41.	Suman Datta	Bamutia	9856984161
42.	Amrit Sharma	Bamutia	9612352051
43.	Suranjan Datta	Bamutia	7085387601
44.	Manas Datta	Bamutia	
45.	Mihir Datta	Bamutia	

WILLINGNESS OF THE PARTICIPANTS TO FORM VARIOUS GROUPS OF DIFFERENT LIVELIHOOD OPTIONS

Sl. No	Vermicompost Producer Group	Bamboo Plant Material Producer Group	Treated Bamboo Producer Group
01.	Binoy Sharma	Abul Hakim	Anup Kr. Singh
02.	Praneshwar Sharma	Haradhan Debnath	Bikash Singh
03.	Gourav Das	Subrata Das	Nilkanta Singh
04.	Subal Das Baishnab	Jiban Ch. Shil	Gaurav Das
05.	Haradhan Debnath	Pradip Sarkar	Prabir Singh
07.	Prabir Singh	Pulin Sharma	Haradhan Debnath
08.		Bappi Singh	Binnoy Sharma
09.		Bikram Singh	
10.		Swadesh Singh	