



Green Skill Development Programme (GSDP) on Quality Planting Material Producer Course Completion Report



**Organized from 22.02.2021 to 26.03.2021
by**

**ENVIS Resource Partner
on
Forest Genetic Resources and Tree Improvement
Institute of Forest Genetics and Tree Breeding
(Indian Council of Forestry Research and Education)
Coimbatore**

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Course Completion Report

Inaugural Session

A Green Skill Development Programme (GSDP) on “**Quality Planting Material Producer**” (level-4) was conducted by the ENVIS Resource Partner on Forest Genetic Resources and Tree Improvement at the Institute of Forest Genetics and Tree Breeding (IFGTB), Coimbatore from 22.02.2021 to 26.03.2021. The training module included theory, field visits, field exercises and assignments. Dr C. Kunhikannan, Director, IFGTB inaugurated the training programme.



Introductory Session

An introductory session about the Institute was taken by Dr Kannan C.S. Warriar, Scientist F, Coordinator ENVIS, Nodal officer GSDP and Training in-charge. During his presentation Dr Kannan deliberated about IFGTB and various institutes with the Indian Council of Forestry Research & Education (ICFRE). He also briefed about the mandate and activities carried out by ENVIS RP at IFGTB.



Introduction to Forestry

After the introductory session, a lecture on “Introduction to Forestry” was delivered by Dr Kannan C.S. Warriar. In his lecture, Dr Warriar explained the need for quality planting stock and covered the basic details on forestry. He also gave an idea about various techniques used in selecting Candidate Plus Trees (CPTs), Plus Trees and Elite Trees. He also detailed on techniques to induce juvenility and briefed the process of selection of tree cuttings and the procedures followed in the nursery for selection of cuttings. He also covered the basics of the clonal forestry, vegetative propagation and benefits & risks of using clones in forestry.



Fischer Herbarium (FRC) Visit

The Trainees were taken to Fischer Herbarium, which is recognized as a National Repository by Government of India. Dr S.P Subramani, Chief Technical Officer welcomed the trainees and explained that the herbarium was established in 1911 and houses very valuable collections of officials like C.E.C. Fischer, T.F.Bourdillon and M. Rama Rao from Andhra Pradesh, Karnataka and Tamil Nadu and Kerala. Presently, the herbarium has a collection of 15881 specimens of 3259 species with 1329 genera belonging to 172 families including thousands of recent collections with isotypes. Several stakeholders, students and research workers from different universities and R&D organizations in the country are utilizing these facilities, Dr Subramani added. Basics of Taxonomy, the use of Herbarium for Researchers and the steps in creating the herbarium sheets were also explained to the trainees by showing the sample herbaria sheets.



Gass Museum Visit

The trainees visited the Gass museum, which was established by Horace Archibald Gass, a British Forest Officer. Ms D. Sunita, Chief Technical Officer explained the history of the museum. The entomology section which has over 1,000 insects, with a significant part of the collection being butterflies attracts the trainees. The trainees also experienced the exhibits viz Timber, Non-Timber Forest Products, Wood Crafts, Wildlife, Entomology Mycology, Geology, Ethnology, Arms,

Forest Engineering, Environment etc. This visit has enriched the candidate's knowledge and learning experience.



23.02.2021 (Day 2):- Nursery Concepts

Shri. M. Maria Dominic Savio, Scientist E delivered a lecture on the basics of nursery technology.

Following topics were covered in his lecture:

- Introduction to nursery
- Basic nursery concepts
- Requirements for nursery
- Objectives of nursery
- Types of nursery



Visit to Nurseries

An overview about the management practices in the nursery was taught to the trainees. The process of taking measurements and designing layouts were also taught to the trainees. Later, the trainees were split into 03 groups and taken to Model nursery, Plant Biotechnology (PBT) nursery and Vegetative Propagation Complex respectively. Exercise to take measurement of mother bed was given to the trainees.



24.02.2021 (Day 3)

Lecture on Nursery Layout and Design

A group discussion was arranged for the trainees to foster their intellectual agility. Trainees shared their experience they had in the nurseries. A lecture on nursery management was delivered by Shri.M. Maria Dominic Savio. The following topics were discussed:

- Nursery layout and design
- How to choose nursery site
- Standard procedures followed for the selection of nursery site
- Materials and techniques



Visit to Nursery

The trainees were taken to Silviculture nursery and Mr M. Ganesan, Technical Officer explained the following topics in order to familiarize them to design and layout a nursery:

- Clearing of site for nursery
- Preparation of beds
- Leveling of beds
- Distance between beds



The trainees were split into 03 groups and the process of designing the layout was done by them. The team leaders in each group discussed how they have designed the layout of the nursery considering various parameters.

Lecture on Nursery Requirements

Shri. M. Maria Dominic Savio explained following:

- Shading requirements
- Shelter and protection
- Watering requirements
- Bare root seedling production
- Containerized seedling production

He also explained how to prepare a plot of land for raising seedlings which acts as a temporary home for young plants until they are eventually planted. An assignment to prepare the layout for a nursery was given to each group. The trainees were asked to consider various design parameters while designing the layout.





Trainees actively prepared their own layouts under the supervision of Shri. M. Maria Dominic Savio and ENVIS Staff. Assignment with specifications was given to each group.

26.02.2021 (Day 5):- Assignment Evaluation

Shri. M. Maria Dominic Savio explained that the standard layout of nurseries should have the following components:

- Protection fence
- Office and store
- Storage area
- Plant tent
- Nursery Yard
- Working space



The assignment given to the trainees was evaluated by Shri. M. Maria Dominic Savio. The team leaders presented what are the parameters which have been considered while designing their respective nursery layout. A rapid fire quiz was organized for the 03 groups in which the trainees actively participated.



Hands on Training

Shri. M. Maria Dominic Savio explained and demonstrated the following topics:

- Preparation of nursery site
- Types of nursery bed
- Media for propagating nursery plants
 - Selection of soil for soil mixture
 - Sand
 - Peat
 - Vermiculite
- Container for propagation and growing young plants
- Potting and repotting procedure

Hands on training were given to the trainees on to preparation of media. The trainees were split into 03 groups and an exercise to prepare soil mixture was given. Trainees prepared the potting media (soil mixture) and filled the media in poly bags actively. The entire session was monitored by Mr Sakthivel, nursery supervisor and Dr T. Vamadevan, Information Officer, ENVIS.



Shri P. Sakthivel, CEO M/s Santhi Clonal Nursery, Cuddalore and an entrepreneur trained by IFGTB ENVIS explained the concept of establishing nursery. He also gave an overview of the following:

- Mixing fertilizers in soil
- Filling the soil mixture in the container bags
- Making potting medium/containerized bags
- Watering the media
- Planting seeds/seedlings in the media





Hands on Training

Trainees were taken to model nursery and split into 03 groups. Hands on trainings on the following were provided by the ENVIS team:

- Mixing fertilizers in soil
- Filling the soil mixture in the container bags
- Making potting medium/containerized bags
- Watering the media
- Planting seeds/seedlings in the media
- Transplanting seedlings from germination bed to poly bag

Trainees prepared the potting media (soil mixture) and filled the media in poly bags actively.



01.03.2021 (Day 7):- Lecture on Seed Technology

Dr R. Anandalakshmi, Scientist F & Head, Forest Genetics Resource Management Division delivered a lecture on Basics of seed technology. Following topics were covered in her lecture:

1. Concept and goals of seed technology
2. Differences between scientifically produced seeds and mongrel seeds
3. Role of seed technology
4. History of seed industry in India
5. Importance of seed production



Nursery visit:

The candidates were taken to nursery Dr R. Anandalakshmi explained the stages of seed processing (Drying, cleaning, grading, treating, testing, packing etc) with examples. Mr K. Suresh Kumar, Technical Assistant, Seed Technology Division explained about various techniques used for seed preservation. He also explained how seed testing, seed filling, seed anatomical studies and seed biochemical parameters were conducted.

The trainees were taken to Casuarina field trial to know about the species. Handling of the seed plucker was taught to them and hands on training to handle the equipment in the field were given to them. The candidates visited various field trials of different species along with the Scientists and IFGTB ENVIS staff.



02.03.2021 (Day 8):- Evaluation

A written test was conducted to evaluate the trainees.



Lecture on Mother Trees:

Dr V. Sivakumar, Scientist G, Genetics and Tree Improvement Division discussed on the genetic & environmental factors determining the characteristics of the mother tree. He explained about the types of mother trees and the importance of selecting the mother tree. He also explained that prior to seed collection, good mother trees need to be selected and ear marked. The following characteristics of a good mother were also discussed by him:

1. Healthy and free of diseases and insects
2. Nearly mature
3. Good producers of the desired product
4. Growing in the midst of a healthy stand of the same species.

He elaborated that the selection of mother trees should be related to the intended use of the trees to be grown and if seeds are collected on a large scale, it is important to collect them from several trees in order to provide genetic variation in the new generation of trees. He gave an insight on how to select mother trees for fodder, timber and fruit production. He detailed on scoring of trees, methods of scoring and how scoring needs to be done for various types of trees.



Visit to Sadivayal, Coimbatore

Trainees were taken to the trial field in Sadivayal, Coimbatore to provide an exposure on Clonal Seed Orchard (CSO) & Seedling Seed Orchard (SSO) & Hybrid Orchard of *Eucalyptus*. The process of selecting superior trees based on the parameters like height & girth were demonstrated by Dr V. Sivakumar. He also demonstrated the selection of plus trees by showing the examples.



Visit to Teak Plantation at Sadivayal, Coimbatore

Trainees were taken to the Teak plantation at Sadivayal, Coimbatore and Dr V. Sivakumar and Dr A. Vijayaraghavan taught them how to select plus trees. The candidates were divided into four groups and selected plus teak trees based on the tree scoring. Trainees actively participated in tree selection and selected superior trees.



Day 9 (03.03.2021): Lecture on Innovations in Seed Technology:

The session began with a discussion of the key points covered in previous lectures. The trainees recalled the content in their own words. After the wrap up summary, a lecture on innovations in seed technology was delivered by Dr R. Anandalakshmi. She highlighted various innovative methodologies in the field of seed technology. Pictures of the seed processing unit in USA highlighting the importance assuring seed quality and seed packing were shown to the trainees.



Seed Processing for Production of Tree QPM:

Dr R. Anandalakshmi taught about seed processing techniques for production of tree quality planting material. In her lecture following topics were covered:

- Standardizing the collection methods of seeds of various tree species.
- Studies on the factors affecting the longevity of seeds.
- Techniques for testing the viability of seeds.
- Studies on the germination capacity of different species and provenances.
- Standardization of storage techniques for different types of forestry seeds.
- Bio-chemical aspects of ageing in seeds.
- Improvement of tree borne oilseeds for biofuels
- Germplasm conservation through seed stands and seed bank
- Cryopreservation
- Seed science and technology research on forestry species
- Seed collection, processing, testing, storage and supply

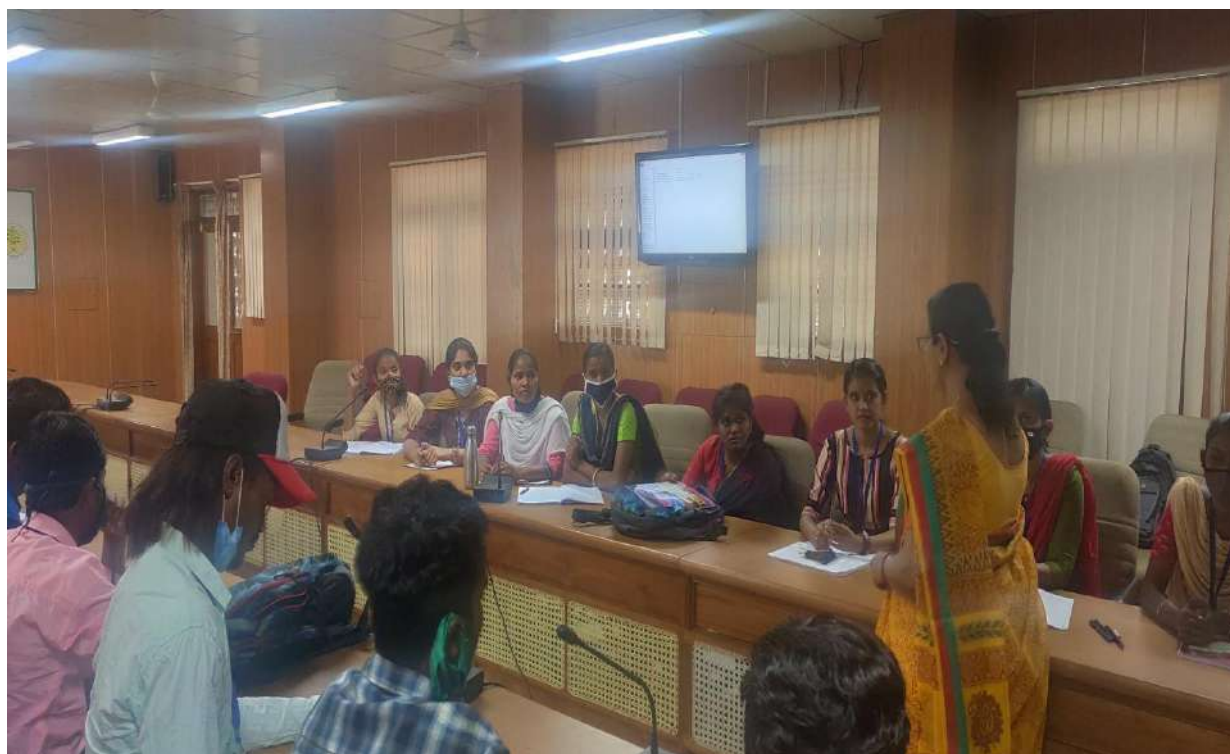


Day 10 (04.03.2021): Lecture on Seed Quality and Collection:

Dr R. Anandalakshmi explained about the following:

- The process of seed development
- Structure of the seed
- Seed production and handling techniques
- Seed testing and seed labelling
- Seed packing and storage
- Seed sources
- Seed Production Area (SPA)
- Seed Clonal Orchard (SCO)
- Clonal Seed Orchard (CSO)
- Seed classification
- Safety measures in seed collection
- Sampling of seeds
- Seed certification
- Seed germination
- Methods of seed germination tests

- Seed health and methods to measure health
- Types of Seeds and pre treatments



Seed Technology Lab:

Trainees were taken to the seed technology lab and Mr. C. Rajesh, Technical Officer explained about seed processing, testing standards, storage methods developed for plantation species and commercially important medicinal plants like *Tectona grandis*, *Casuarinas*, *Azadirachta indica*, *Aegle marmelos*, *Feronia elephantum*, *Emblica officinalis*, *Syzigium cuminii*, *Strychnos nux-vomica*, *Oroxylum indicum*, *Pterocarpus marsupium* and *Terminalia bellerica*. He also demonstrated various seed storage methods developed for RET (Rare, Endangered and Threatened) species like *Canarium strictum*, *Persea macrantha*, *Aristolochia tagala*, *Symplocos racemosa*, *Garcinia gummi-gatta*, *Myristica dactyloides* and *Emblica* spp. Trainees also had hands on training on handling of various seed processing equipment. Seeds of various tree species available in the lab were shown to them.



A Group photo of the GSDP team was captured.



Visit to Seed Certification Centre:

The participants were taken to the Seed Certification Centre, Coimbatore to understand the overall process of certifying the seeds. Ms O. Vijayalakshimi, Seed Inspector gave an introduction about the need of seed certification. She highlighted the need to maintain genetic identity and genetic purity. As a seed inspector she should ensure the timely supply of quality seeds in the region, she added.

Ms T. Valarmathi, Agriculture Officer explained the importance of seed inspection at field level. She also explained about Legislations for Seed Quality Regulation in India. The basic objective of the Seed legislation is to regulate the quality of seeds sold to farmers. Seed Inspection wing is issuing the licenses for Seed dealers under Seed (Control) Order 1983.

Ms Nargheese, Assistant Director of Agriculture and Seed Analysis explained about the importance of quality seeds with respect to agriculture. She detailed that the quality seeds have higher germination, optimum moisture content, enough physical purity, least other distinct

varieties, lack of pest and disease attack. She highlighted that there are certified seed testing laboratories which are functioning throughout the state to check and confirm the seed standards.



Ms Nargheese also explained about Tamil Nadu Organic Certification Department (TNOCD). The major theme is to create an ecosystem, which can achieve sustainable productivity without the use of artificial external inputs such as chemicals, fertilizers and pesticides. TNOCD was established by the Government of Tamil Nadu in the year 2007 to carryout inspection and certification of organic production system in accordance with NPOP (National Programme for Organic Production); it was launched by Government of India in the year 2000 and notified in October 2001 under the Foreign Trade and Development Act, she added.

After the lecture sessions, the trainees interacted with the experts and cleared their doubts with respect to seed certification and organic certification.



05.03.2021 (Day 11):- Visit to Seed Technology Lab

Mr K. Suresh Kumar, Technical Officer conducted a practical session about seed dormancy and pre-treatment methodologies. The following topics were discussed:

- Need of seed pre-treatment
- Various methods of seed pre-treatment
 - Physical methods
 - Biological methods
- Types of seed dormancy

The trainees were given sample seeds and were demonstrated about the seed treatment techniques.



Visit to Seed Processing Centre

The trainees were taken to Seed processing centre and had the following hands on training:

- Process of raising seedlings from the germination bed
- Transplanting seedlings from germination bed

The participants were given sample seeds and they carried out the exercises given by the expert.



Lecture on Forest Entomology

A lecture on basics of forest entomology was delivered by Dr John Prasanth Jacob, Scientist G. In his lecture he explained the role of insects in the forest ecosystem and highlighted that many insects play important roles in the forest ecosystem including pollination, nutrient cycling, eliminating sick or weakened trees from the forest, and are even an important food source for many animals, especially for birds. He briefed that it has long been recognized and documented that insects are the most diverse group of organisms, meaning that the numbers of species of insects are more than any other group. He also gave an insight to the insect pests associated with forestry, types of pests, injury they cause and the resulting damage. He also elaborated the pest assessment methods in various situations.



Lecture on Seedling Protection

A lecture on seedling protection was delivered by Dr John Prasanth Jacob. The following topics were covered in his lecture:

- Various seedling protection techniques
- How to protect seedlings from
 - Heat
 - Heavy sunlight, rain and wind
 - Falling/blowing

- Pests/diseases
- Damage and disasters in the nursery

He explained that seedlings are delicate and susceptible to attack by various pests and diseases as well as weather conditions. Such damages can seriously weaken or kill the seedlings, it is important that the damages be dealt immediately.



Day 12 (06.03.2021):- Lecture on Cleaner Production and Waste Minimization

Dr S.Vigneswaran, Senior Programme Officer, ENVIS RP, IFGTB delivered a lecture on Cleaner Production and Waste Minimization. Following topics were covered in his lecture:

- Cleaner Production (CP) / Waste Minimization (WM) concept & principles
- Types of waste
- Benefits of cleaner production
- Cleaner production tools
- Application of cleaner production

He also gave an insight on various tips for preventing the generation of wastes.

Lecture on Laboratory Waste Management

Dr .S.Vigneswaran delivered a lecture on the management of laboratory wastes. The following concepts were covered in his lecture:

- Collection of waste chemicals
- Container labelling and marking
- Container management
- Handling chemical inventory

In addition, two short films on waste management were screened to the trainees to give an exposure that how wastes can be converted to useful products.



Lecture on Vegetative Propagation

A lecture on vegetative propagation was delivered by Ms K. Shanthi, Chief Technical Officer, Plant Biotechnology and Cytogenetics Division. The following topics were covered in her lecture:

- Need for vegetative propagation
- Methods of propagation
- Importance of plant propagation
- Merits and demerits of different modes of propagation
- Propagation distinctions
- Propagation by cuttings



Visit to Vegetative Propagation Complex

The trainees were taken to vegetative propagation complex and Ms C.V. Vijayam, Technical Officer, Plant Biotechnology and Cytogenetics Division explained how propagation was carried out in the nursery.



Day 13 (08.03.2021): Practical Session

Ms K. Shanthi explained the following:

- The general structure of the nursery
- How to establish mist chambers
- Preparation of beds in the mist chamber
- Fertigation in mother bed



Trainees went through the vegetative propagation complex and experienced shade house, mist chambers, walk-in-poly tent, poly tunnels and water treatment plant. They also learned about the facility which is utilized for hardening of tissue culture raised plants and clonal propagation of tree species like Casuarinas, Eucalypts, Teak, Bamboos and some medicinal plants. Ms C.V. Vijayam, Technical Officer also gave an overall idea about the maintenance of humidity & temperature and steps of coppicing. Trainees visited the shade house and the overall process of collection of shoots was also explained.



Filling Hycopots

As a preparatory work, the trainees were split into 3 groups and were trained to wash hycopots and fill them with vermiculite. The filled hycopots were stored in the nursery by covering them in a poly tunnel to maintain moisture and temperature. The entire session was monitored by Ms C.V. Vijayam, Technical Officer and her team.



Day 14 (09.03.2021)

Weekly Test

A weekly test was conducted to evaluate the trainees.



Lecture on Vegetative Propagation

The trainees were taken to Vegetative Propagation Complex. Shri S.M. Paulraj, Technician, Plant Biotechnology and Cytogenetics Division taught about the following

- Vegetative multiplication techniques
- How to select cuttings from mother plants
- Collection of cuttings
 - Shoot or stem cuttings
 - Root cuttings
 - Hardwood and soft wood cuttings
- Criteria for selecting cuttings
- How to prepare media for rooting
- Types of media used for rooting
- Cutting preparation

- Transporting cuttings
- Storing of cuttings
- How to root the cuttings

He also demonstrated how casuarinas are propagated. The process of selecting cuttings from mother plant was also taught. Later, the trainees actively made cuttings of casuarina and learned how to collect the cuttings from mother plants. Hands on training on clonal propagation of casuarinas were also given to them.



Hands on Training on Clonal Propagation of Casuarina

The trainees washed the collected cuttings with fresh water 3–4 times and treated with Bavistin solution. Subsequently, the lower portion of the cuttings was dipped in IBA (indole butyric acid 4000 mg/L) in talcum powder (4g of Indole Butyric Acid in 1 kg of ordinary Talcum powder) by dip smear treatment to stimulate the root formation.





The processed cuttings were planted into hycopots filled with vermiculite. The cuttings were kept in polytunnels until a good root system is developed and shoot growth starts. Fresh water and bavistin were sprayed and the polytunnel was tightly covered by filling the ends with sand. The entire session was guided by Ms C.V. Vijayam and her team.



Day 15 (10.03.2021):- Lecture on Coir Pith Compost Preparation

A lecture on coir pith preparation was delivered by Mr S.M. Paulraj, Technician and the following topics were covered in his lecture:

- Preparation of coir compost
- Steps involved in coir decomposition
- Nutritive value of raw and composted coir pith compost
- Benefits of composted coir pith
- Application of coir pith compost
- Limitations in the usage of composted coir pith





Preparation of Coir Pith Compost

Trainees were split into 2 groups, collected the coir pith and created a coir heap in the site earmarked for composting. Coir pith was spread to the length of 4 feet and breadth of 3 feet. Initially coir pith was put up for 3 inch height and thoroughly moistened. After moistening, nitrogenous source material (in the form of urea) was added. Later, the heap was turned and water was sprinkled on the heap to maintain optimum moisture.





Day 16 (11.03.2021):- Preparation of Sunken Beds

The trainees actively participated in the preparation of sunken bed. After selection of the site, the trainees were engaged in clearing the site and earmarked the layout and prepared the sunken bed. The overall process of collection of raw material and methodology of the preparation of bed was monitored by Ms C.V. Vijayam, Technical Officer.



Hands on training on budding were given to the trainees.



Day 17 (12.03.2021):- Mock Practical

A mock practical for the trainees was conducted in the Vegetative Propagation Complex. Trainees performed exercises like cutting preparation, transplanting, preparation of hycopots, preparation of media and hardening under the supervision of Dr T. Vamadevan, Information Officer and Ms G.V. Subha Shree, Data Entry Operator.



Lecture on *Frankia*

A lecture on *Frankia* was delivered by Dr A. Karthikeyan, Scientist F, Forest Protection Division and the following topics were discussed in his lecture:

- Taxonomy of *Frankia*
- Genetics of *Frankia*
- Morphological characteristics of *Frankia*
- Physiology of *Frankia*
- Biochemical properties of *Frankia*
- Serology of *Frankia*
- Ecology of *Frankia*
- Isolation and cultivation of *Frankia*
- Growth characteristics of *Frankia*
- Interaction of *Frankia* with other microorganisms

The process of *Casuarina*- *Frankia* Symbiosis was explained to the trainees. He explained how inoculation of *Casuarina* with *Frankia* strain improves the growth of *Casuarina* seedlings in height, basal girth and biomass.



Visit to Forest Pathology Lab

The trainees were taken to forest pathology lab and Ms. R. Kalaiselvi, Senior Technical Assistant, Forest Protection Division demonstrated the following procedures about Isolation and Cultivation of *Frankia*:

- Isolation of *Frankia*
- Surface sterilization
- Preparation of media
- Maintenance of prepared media



Day 18 (13.03.2021):- Lecture on Composting

A lecture on compost preparation was delivered by Ms R. Sumathi, Chief Technical Officer and the following topics were covered in her lecture:

- What is composting?
- How compost can be made?
- Benefits of composting
- Types of composting
- How to make compost from organic waste?
- How compost improves the plant growth?
- How compost restores vitality in soils?
- Materials used for composting
- Materials to be avoided to make compost
- The concept of 3R (Reduce, Recycle and Reuse)

Ms R. Sumathi explained about the composting process. She also explained that the amount of time needed to produce compost depends on several factors, including the size of the compost pile, the types of materials, the surface area of the materials and the number of times the pile is

turned. Compost preparation exercise was given to the trainees. Trainees actively involved in the process of making the compost and made their own compost pile.



Day 19 (15.03.2021) Lecture on Bio-fertilizers

A lecture on importance of Bio-fertilizers was delivered by Dr A. Karthikeyan and the following topics were covered in his lecture:

- Preparation and uses of biofertilizers
- FYM (Farm Yard Manure)
- Beneficial microorganisms
- How microorganisms are inoculated in potting media
- Benefits of microorganisms
 - Soil Fertility
 - Plant growth improvement
 - Plant nutrient improvement
 - Plant health improvement

- Control against pests and diseases
- Salt & stress tolerance



Visit to Pathology Lab

The trainees were taken to forest pathology lab and the following were explained by Ms. R. Kalaiselvi, Senior Technical Assistant, Forest Protection Division.

- Media preparation
- Sterilization
- Slide preparation
- Serial dilution
- Culture inoculation
- Plating

She also gave an overall idea about the handling of sophisticated instruments used for forest pathology research.



Day 20 (16.03.2021):- Lecture on Utilization of Microbes

A lecture on utilization of microbes was delivered by Dr A. Karthikeyan. The following topics were covered in his lecture:

- Introduction to microbes
- Contribution of plant growth promoting microorganisms
- Assimilative versus dissimilative processes
- Impacts of microbes on ecosystems

He stressed that the microbes can do anything they want, wherever they want and without microbes, humans wouldn't be alive.

The following techniques were taught to the trainees:

- Isolation and characterization of *Rhizobium*
- Isolation and characterization of *Azospirillum*
- Isolation and characterization of *Azotobacter* spp.
- Isolation and characterization of phosphate solubilising bacteria



Day 21 (17.03.2021):- Lecture on *Trichoderma viride*

A lecture on *Trichoderma viride* was delivered by Dr A.Karthikeyan and the following topics were discussed in his lecture:

- General characteristics *Trichoderma*
- Biodiversity and phylogeny of *Trichoderma*
- Tools for genetic manipulation of *Trichoderma*
- Benefits
 - Disease control
 - Growth promoter
 - Transgenic plants
 - Bioremediation

He also explained that *Trichoderma viride* is a fungal antagonist present in almost all farming soils. For multiplying its own spores, *Trichoderma* rise in the direction of the mycelium of disease producing fungi and then discharge enzymes. He also gave an overall idea about the methodologies used to prepare *Trichoderma viride*. Various procedures of mass production of *Trichoderma viride* in agricultural point of view were also discussed. He also insisted that the trainees should establish their own production unit to meet the demand.



Visit to Forest Pathology Lab

Ms. R. Kalaiselvi Forest Protection Division explained the following methodologies to the trainees:

- Molecular plant-fungal interactions
- Expanded treatment of molecular tools
- Advanced bio-control concepts
- How to use and care for microscopes

Affected root, soil, stem and branch samples were given to the trainees in order to identify the diseases. Accordingly, trainees identified the diseases and viewed the result using microscopes.

Day 22 (18.03.2021):- Field Visit to M/s.Shanthi Nursery, Vadalur, Cudallore District

A field visit to M/s Shanthi Nursery, Vadalur, Cudallore District was organized for the trainees to give a real time exposure on the production of Quality Planting Material. Dr S. Vigneswaran, Sr. Programme Officer gave an introduction about the establishment of the nursery.



Mr P. Sakthivel, an entrepreneur trained by IFGTB ENVIS welcomed the trainees and explained the following:

- Quality Planting Material production
- How to grow clones in mother bed
- How to maintain mother beds
- Procedure to maintain mother plants
- Collection of species specific cuttings

- Preparation of media
- Irrigation method followed in the nursery
- Time period for irrigation
- How to create artificial well for irrigation



The trainees were taken to the causuarina field and Mr. P. Sakthivel explained how to make cuttings from the mother tree. He also explained various parameters to be considered while making cuttings from the mother tree.

He also took the trainees to the trail fields and explained how the clones were made from the cuttings and how to improve the growth of the clonal plantlets.

The trainees visited various plantations and they were explained the purpose, sampling methodology of genetic material, nursery techniques, plantation establishment techniques and the statistical design adopted in the nursery.

The trainees also visited nursery areas and obtained hands on experience on rooting media, misting system of propagation, mist-less system of propagation, green house, lath house and vermicomposting.



Finally, Mr P. Sakthivel shared his own experience to the trainees and highlighted the following:

- How he became an entrepreneur
- About the innovations followed in his nursery
- Selection of species
- How to make tie-up with industries
- The marketing tactics and strategies
- How to avail subsidies from government
- Shipment techniques
- Equipment used

Trainees actively interacted with him and cleared their doubts regarding the nursery management.

Day 23 (19.03.2021):- Field Visit to Tamil Nadu Newsprint and Papers Limited (TNPL), Karur District

A field trip to Tamil Nadu Newsprint and Papers Limited (TNPL), Karur District was organized to the trainees to give an exposure on the production of quality planting stock in large scale. Dr P. Chezhan, Senior Manager plantations welcomed the trainees and delivered an introductory lecture and the following topics were covered:

- About TNPL
- The origin of TNPL plantation department
- Various schemes of TNPL
- How farmers are being benefitted by TNPL
- Vision/mission and goal of TNPL plantations



Mr P. Selva Krishnan explained the following:

- How to develop renewable and sustainable pulpwood plantations through effective, innovative and best practices.
- How to disseminate efficient resource management practices among the farming communities and foster the growth in rural economy, employment and regional development.

- How to work towards continuous improvement/enhancement of productivity by adopting up-to date technologies.
- How to commercialize forest plantations as alternate land use in arid and semi arid regions by adopting technological research inputs.
- How to create resource base for industry in line with National Forest Policy (1988).



Short films highlighting the vision and mission of TNPL were screened. The trainees went through various fields and learnt about various activities like contract farming, tree plantation, schemes and subsidies given by the government. They also learned about the crops of pulp wood species like Casuarinas, Eucalyptus, Bamboos, Malaivembu (*Melia dubia*). Trainees also had an interaction with the field staff and cleared their doubts.

Day 24 (20.03.2021):- Visit to Green Life Bio-tech Lab, Somanur

The trainees were taken to Green Life Bio-tech Lab, Somanur. Dr P. Eswaramoorthy, Founder, Green life bio-tech lab and former professor, Sugarcane Breeding Institute, Coimbatore explained about the ill effects of excessive use of chemical fertilizers, pesticides and weedicides caused to the environment and how they cause adverse effects to all living beings on the earth and explained the following:

- The constituents of eco-friendly farming
- Integrated plant nutrient supply management
- Integrated pest and disease management
- Integrated soil and water management.
- Biological and parabiological methods of pest suppression and avoiding chemical pesticides
- Eco-friendly bio-fertilizers, bio-pesticides, bio-boosters/enhancers



Day 25 (21.03.2021):- Mass Tree Saplings Planting Drive

A mass tree sapling planting programme was organized at Panampully Field Research Station of IFGTB near Palakkad in connection with International Day of Forests 2021. Participants of the three Green Skill Development Programmes planted over 300 saplings in Panampully Field Research Station.



Day 26 (22.03.2021):- Visit to Forest College and Research Institute (FCRI), Mettupalayam

A visit to Forest College and Research Institute, Mettupalayam was organized for the trainees and Dr P. Rajendren, Associate Professor, Agroforestry Department explained the following:

- Agriculture vs tree plantations
- Well-developed technologies in forestry plantations
- Sustainable forest management
- Current trends in forestry plantations
- The role of quality planting stock in afforestation
-



Day 27(23.03.2021):- Visit to Horticulture Directorate, Ooty

The trainees were taken to the tissue culture laboratory of the Horticulture Department in the Botanical Garden, the Nilgiris. Mr. Prabhu, Horticulture Officer explained that after being dormant for over five years, the tissue culture laboratory was back to functioning at its full capacity, with hybrid banana plants, strawberries and orchids being developed at the facility over the last few

months. He also gave an insight to the tissue culture practices followed in the Directorate. Trainees interacted and cleared their doubts.



Visit to Central Potato Research Station

The trainees were taken to Central Potato Research Station, Ooty. Dr E.P. Venkatasalam, Head and Senior Scientist explained that the station is being doing research for the development of agro-techniques for potato cultivation, development of varieties possessing combined resistance to late blight and cyst nematode and to develop control measures for late blight, cyst nematode, bacterial wilt and other soil and tuber borne diseases. He also explained the hardening procedures to the trainees and enlightened them on the importance of aeroponic techniques (a soilless technique for growing plants) used in potato cultivation. Later, the trainees were taken to potato field.



Visit to Rose Garden

The trainees were taken to Rose garden, one of the most famous botanical gardens maintained by the Horticulture Department of Tamil Nadu. Ms Menaka, Horticulture Officer explained about appropriate basal medium and growth regulators used for culturing rose plants. She highlighted how the stock cultures are maintained and explained about various budding methods. Hands-on Training on T-budding (also known as shield budding, a technique of grafting to change varieties of plants) were also given to the trainees.



Day 28(24.03.2021):-NABARD Initiatives

Dr S. Vigneswaran, Programme Officer delivered a lecture on NABARD and its functions. Initially he explained why NABARD has been established as an apex institution and deliberated about on farm schemes and off farm schemes. :

The annual report of the NABARD for the FY 2019-20 was shared to the trainees and various subsidies provided by NABARD were also discussed.



Banking Linkages –SBI, Coimbatore

Ms S. Ramya, Farm Sector Technical Officer, State Bank of India, Coimbatore delivered a lecture on “Role of SBI in building an Entrepreneur”. She explained that State Bank of India grants financial assistance to technically qualified, trained and experienced entrepreneurs for setting up new viable industrial projects. Loans are also extended to technocrats who are unable to meet the normal margin requirements under the liberalized schemes. She also briefed that State Bank of India offers business loan to meet the varied needs of large business houses as well as Small and Medium Enterprises (SME).



Day 29(25.03.2021):- Lecture on Economic Gains of Forest Genetic Resources

Dr A. Nicodemus, Scientist F and Head, Genetics and Tree Improvement Division delivered a lecture on Realising economic gain from forest genetics resources through tree breeding. Following benefits of tree breeding were discussed in his lecture:

- Economic impact of tree breeding programmes
- Tree breeding can increase volume growth up to 10–25%,
- Bare land value associated with genetically improved trees gives a better return on investment and a shorter rotation period
- Impact of tree breeding in society

He also highlighted the challenges in tree breeding.



Assessment of Trainees

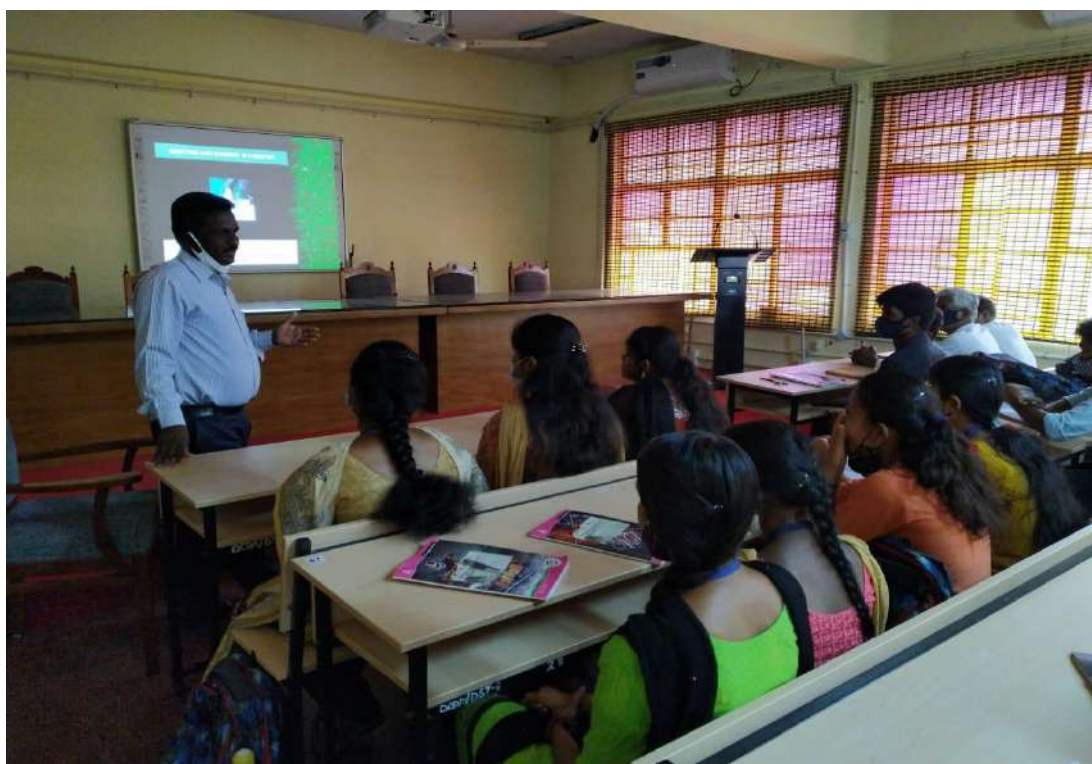
Trainees were assessed based on theory (35%) and practical (65%) with an in-house officer and an external examiner. Dr V.N. Muthraian, Assistant Professor of Botany, Gobi Arts and Science College, Gobi Chettipalayam acted as the external examiner and Dr Kannan C.S. Warriar, Scientist F, Coordinator ENVIS, Nodal Officer GSDP and Training in-charge acted as the internal examiner. Practical assessment was carried out in the vegetative propagation complex. Later written examination was conducted for theory assessment. All the trainees cleared the examinations both in theory and practical. Nineteen participants have successfully completed the training programme.



Day 30(26.03.2021):- Lecture on Grafting, Budding and Layering

A lecture on Grafting, Budding and Layering to produce quality planting material stock was delivered by Shri A. Mayavel, Scientist D, Genetics and Tree Improvement Division and the following topics were covered in his lecture:

- Significance of grafting, budding and layering
- Various reasons for using grafting, budding and layering
- Different methods
- Instruments used
- Pros and cons



Demonstration

The trainees were taken to Genetics and Tree Improvement nursery and Shri A. Mayavel, Scientist D demonstrated various grafting, budding and layering techniques. The procedure for collecting scion, preparation of root stock, joining stock and production of callus tissue were also discussed.

Valedictory function

The valedictory function of the Certificate Course was held on 26.03.2021. Dr C Kunhikannan, Director IFGTB awarded certificates from the Union Ministry of Environment, Forest and Climate Change (MoEFCC) to the successful trainees. 19 trainees from different parts of the country successfully completed the training. Dr Kannan C. S. Warriar, Scientist F, Coordinator ENVIS, Nodal Officer GSDP and QPMP Training in-charge proposed the vote of thanks and thanked MOEFCC & ENVIS Secretariat for sanctioning the certificate course to IFGTB ENVIS.







LIST OF PARTICIPANTS



Green Skill Development Programme (GSDP) Quality Planting Material Producer

Organized by

ENVIS Resource Partner on Forest Genetic Resources and Tree Improvement

Institute of Forest Genetics and Tree Breeding

(Indian Council of Forestry Research and Education)

Coimbatore

FINAL LIST OF CANDIDATES

S. No	Name	Application ID	Gender	Community	State	D.O.B	Qualification	Contact no	Mail Id
SELECTED CANDIDATES									
1.	Akash G	Akas04082000	Male	OBC	TN	04.08.2000	BSc Biochemistry	9994213852	akashakashggg@gmail.com
2.	Anthoni Manuel Raj	ANTH09051958	Male	BC	Tamil Nadu	25/01/2021	BA	9865988125	anthonimanuelraj@gmail.com
3.	Esakkimma ME	Esak20051998	Female	SC	TN	20/05/1998	BA	7868840562	Mgeetha01998@gmail.com
4.	Gopala Krishnan S	Gopa19081998	Male	BC	TN	19.08.1998	MSc Botany	9943494089	Ssaravanan1438@gmail.com
5.	Hemant Kumar	hema05081996	Male	OBC	Chattisgarh	05.08.1996	12 th	9754580330	Hemantnag958@gmail.com

6.	Kumee Kumar Yadav	KUME1507199 1	Male	OBC	Chattisgarh	15.07.1991	12 th level	9302503076	yadavkumar@gmail.com
7.	Manikandan G	MANI25041994	Male	BC	Tamil Nadu	25/04/1994	BE (EEE)	7904901045	stylishviswa77@gmail.com
8.	Neethu Krishna K	Neet10021998	Female	OBC	Kerala	10-02-1998	M.Sc Botany	9809460716	neethuchinnuz716@gmail.com
9.	Priya Darshini	Priy04122003	Female	BC	Tamil Nadu	04-12-2003	12 th level	9442780162	parvathisakthipriya@gmail.com
10.	Remya P	Remya2109199 6	Female	OBC	Kerala	21.09.1996	MSc Botany	8086398083	Remyaponnumani121@gmail.com
11.	Sangeeta Thakur	SANG23072002	Female	ST	Chattisgarh	23.07.2002	12 th level	8435480919	St475043@gmail.com
12.	Santhiya R	SANT05022001	Female	OBC	Tamil Nadu	05-02-2001	12 th level	9047555669	santhiyasusi2001@gmail.com
13.	Shambu Nath	SHAM0307199 9	Male	ST	Chattisgarh	03.07.1999	10 th level	9301318022	shambhunathvek@gmail.com
14.	Shankar Singh Nag	Shan09062000	Male	SC	Chattisgarh	09.06.2000	12 th level	7089409479	Shankarsinghmanjhi77@gmail.com
15.	Suklal Mandavi	sukl08071998	Male	ST	Chattisgarh	08.07.1998	12 th level	9406448042	suklalandav@gmail.com
16.	Sumathi S	suma05012001	Female	BC	Tamil Nadu	05.01.2001	BSc Botany	7339216865	Sumathi5122001@gmail.com
17.	Varshini S	Var18012000	Female	BC	Tamil Nadu	18-01-2000	B.Sc Botany	8825663969	varshinisathish18@gmail.com
18.	Vennila S	S_VE13061997	Female	ST	Tamil Nadu	13.06.1997	B.Sc Botany	9442252107	kselvarasusvennila@gmail.com
19.	Vijay Kumar	Vijai10031997	Male	BC	Chattisgarh	10.03.1997	12 th level	7879781657	Vijayakumarkash1887@gmail.com

OVERALL FEEDBACK BY THE TRAINEES



Green Skill Development Programme (GSDP)

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Coimbatore

EVALUATION REPORT BY THE PARTICIPANTS

[Note: Please fill-in all the items in the reports, your objectivity will help us to make improvements in the future course(s)]

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Points : 10 for very well structured to 00 for very unstructured [10 (highest) to 00 (lowest)]

5. Is the curriculum discussed is relevant to the course?

10

6. How useful were the lab sessions during this course?

9

7. Did you get enough opportunities to interact with the fellow participants?

8

8. How far have you been benefited from the lab session?

8

9. Relevant hands on training provided during this course?

10

10. To what extent are you satisfied with the following?

a. Transport facilities availed:

10

b. Accommodation Facilities availed:

10

d. Food quality and service:

10

e. Lecture hall facilities:

10

f. Interaction with the faculty:

8

g. Lab facilities:

8

11. Which part of the course did you find most useful?

Nursery Practices, Lab

12. Which parts of the course did you find least helpful?

- Nil -

13. Your overall impression about the course?

very Good

14. What were the weaknesses of the course?

- Nil -

15. Any suggestions for how to improve the course?

- Nil -

16. Any other comments/observations/suggestions:

- Nil -

17. Your overall rating about ENVIS Resource Partner?

10

18. Your overall rating about IFGTB?

10

Harsh / Harsh

(Name & signature of the participant)



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5. Is the curriculum discussed is relevant to the course? 10
6. How useful were the lab sessions during this course? 9
7. Did you get enough opportunities to interact with the fellow participants? 8
8. How far have you been benefited from the lab session? 8
9. Relevant hands on training provided during this course? 10
10. To what extent are you satisfied with the following?
 - a. Transport facilities availed: 10
 - b. Accommodation Facilities availed: 10
 - d. Food quality and service: 10

e. Lecture hall facilities:

10

f. Interaction with the faculty:

9

g. Lab facilities:

9

11. Which part of the course did you find most useful?

Nursery practicals, Lab.

12. Which parts of the course did you find least helpful?

NIL

13. Your overall impression about the course?

Good

14. What were the weaknesses of the course?

NIL

15. Any suggestions for how to improve the course?

NIL

16. Any other comments/observations/suggestions:

NIL

17. Your overall rating about ENVIS Resource Partner?

10

18. Your overall rating about IFGTB?

10

V. Anthony Manuec Raj
(Name & signature of the participant)

V. ANTHONI MANUEC RAJ



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- | | |
|---|----|
| 5. Is the curriculum discussed is relevant to the course? | 10 |
| 6. How useful were the lab sessions during this course? | 10 |
| 7. Did you get enough opportunities to interact with the fellow participants? | 10 |
| 8. How far have you been benefited from the lab session? | 10 |
| 9. Relevant hands on training provided during this course? | 10 |
| 10. To what extent are you satisfied with the following? | |
| a. Transport facilities availed: | 10 |
| b. Accommodation Facilities availed: | 10 |
| d. Food quality and service: | 10 |

e. Lecture hall facilities:

10

f. Interaction with the faculty:

10

g. Lab facilities:

10

11. Which part of the course did you find most useful?

practical

12. Which parts of the course did you find least helpful?

13. Your overall impression about the course?

Good

14. What were the weaknesses of the course?

15. Any suggestions for how to improve the course?

16. Any other comments/observations/suggestions:

17. Your overall rating about ENVIS Resource Partner?

10

18. Your overall rating about IFGTB?

10

M. Abdelkamel

(Name & signature of the participant)



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6. How useful were the lab sessions during this course? 10
7. Did you get enough opportunities to interact with the fellow participants? 10
8. How far have you been benefited from the lab session? 10
9. Relevant hands on training provided during this course? 10
10. To what extent are you satisfied with the following?
 - a. Transport facilities availed: 10
 - b. Accommodation Facilities availed: 10
 - d. Food quality and service: 10

e. Lecture hall facilities:

10

f. Interaction with the faculty:

10

g. Lab facilities:

10

11. Which part of the course did you find most useful?

practicals, field visits

12. Which parts of the course did you find least helpful?

—

13. Your overall impression about the course?

good

14. What were the weaknesses of the course?

—

15. Any suggestions for how to improve the course?

—

16. Any other comments/observations/suggestions:

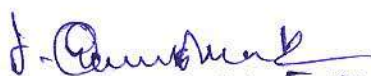
—

17. Your overall rating about ENVIS Resource Partner?

10

18. Your overall rating about IFGTB?

10


(Name & signature of the participant)
Gopala Krishnan.



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6. How useful were the lab sessions during this course? 10
7. Did you get enough opportunities to interact with the fellow participants? 10
8. How far have you been benefited from the lab session? 10
9. Relevant hands on training provided during this course? 10
10. To what extent are you satisfied with the following?
 - a. Transport facilities availed: 10
 - b. Accommodation Facilities availed: 10
 - d. Food quality and service: 10

e. Lecture hall facilities:

10

f. Interaction with the faculty:

10

g. Lab facilities:

10

11. Which part of the course did you find most useful?

seedling.

12. Which parts of the course did you find least helpful?

—

13. Your overall impression about the course?

all good

14. What were the weaknesses of the course?

—

15. Any suggestions for how to improve the course?

—

16. Any other comments/observations/suggestions:

excellent course.

17. Your overall rating about ENVIS Resource Partner?

10

18. Your overall rating about IFGTB?

10

Hemanth

Hemanth Kumar

(Name & signature of the participant)



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- | | |
|---|----|
| 5. Is the curriculum discussed is relevant to the course? | 10 |
| 6. How useful were the lab sessions during this course? | 10 |
| 7. Did you get enough opportunities to interact with the fellow participants? | 10 |
| 8. How far have you been benefited from the lab session? | 10 |
| 9. Relevant hands on training provided during this course? | 10 |
| 10. To what extent are you satisfied with the following? | |
| a. Transport facilities availed: | 10 |
| b. Accommodation Facilities availed: | 10 |
| d. Food quality and service: | 10 |

e. Lecture hall facilities:

10

f. Interaction with the faculty:

10

g. Lab facilities:

10

11. Which part of the course did you find most useful?

practical nursery

12. Which parts of the course did you find least helpful?

—

13. Your overall impression about the course?

very good

14. What were the weaknesses of the course?

—

15. Any suggestions for how to improve the course?

very good

16. Any other comments/observations/suggestions:

very good

17. Your overall rating about ENVIS Resource Partner?

10

18. Your overall rating about IFGTB?

10

(Name & signature of the participant)

Kumee Kumar Yadav



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7. Did you get enough opportunities to interact with the fellow participants? 10
8. How far have you been benefited from the lab session? 10
9. Relevant hands on training provided during this course? 10
10. To what extent are you satisfied with the following?
 - a. Transport facilities availed: 10
 - b. Accommodation Facilities availed: 10
 - d. Food quality and service: 10

e. Lecture hall facilities:

10

f. Interaction with the faculty:

10

g. Lab facilities:

10

11. Which part of the course did you find most useful?

very useful

12. Which parts of the course did you find least helpful?

- Nil -

13. Your overall impression about the course?

All practical

14. What were the weaknesses of the course?

- Nil -

15. Any suggestions for how to improve the course?

- Nil -

16. Any other comments/observations/suggestions:

- Nil -

17. Your overall rating about ENVIS Resource Partner?

10

18. Your overall rating about IFGTB?

10

(Name & signature of the participant)

Manikandan



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(Indian Council of Forestry Research and Education)

Coimbatore

EVALUATION REPORT BY THE PARTICIPANTS

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6. How useful were the lab sessions during this course? 10
7. Did you get enough opportunities to interact with the fellow participants? 10
8. How far have you been benefited from the lab session? 10
9. Relevant hands on training provided during this course? 10
10. To what extent are you satisfied with the following?
 - a. Transport facilities availed: 10
 - b. Accommodation Facilities availed: 10
 - d. Food quality and service: 10

e. Lecture hall facilities:

10

f. Interaction with the faculty:

10

g. Lab facilities:

10

11. Which part of the course did you find most useful?

Field visits, practicals and Lectures

12. Which parts of the course did you find least helpful?

—

13. Your overall impression about the course?

very good

14. What were the weaknesses of the course?

—

15. Any suggestions for how to improve the course?

—

16. Any other comments/observations/suggestions:

17. Your overall rating about ENVIS Resource Partner?

10

18. Your overall rating about IFGTB?

10

Neethu Krishna K

(Name & signature of the participant)

Neethu



Green Skill Development Programme (GSDP)

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 (Indian Council of Forestry Research and Education)
Coimbatore

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6. How useful were the lab sessions during this course? 10
7. Did you get enough opportunities to interact with the fellow participants? 10
8. How far have you been benefited from the lab session? 10
9. Relevant hands on training provided during this course? 10
10. To what extent are you satisfied with the following?
 - a. Transport facilities availed: 10
 - b. Accommodation Facilities availed: 10
 - d. Food quality and service: 10

e. Lecture hall facilities:

10

f. Interaction with the faculty:

10

g. Lab facilities:

10

11. Which part of the course did you find most useful?

Nursery and Institutional visit

12. Which parts of the course did you find least helpful?

—

13. Your overall impression about the course?

Got experience from field visit

14. What were the weaknesses of the course?

Nil

15. Any suggestions for how to improve the course?

—

16. Any other comments/observations/suggestions:

—

17. Your overall rating about ENVIS Resource Partner?

10

18. Your overall rating about IFGTB?

10

Remya

(Name & signature of the participant)



Green Skill Development Programme (GSDP)

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(Indian Council of Forestry Research and Education)

Coimbatore

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6. How useful were the lab sessions during this course? 10
7. Did you get enough opportunities to interact with the fellow participants? 10
8. How far have you been benefited from the lab session? 10
9. Relevant hands on training provided during this course? 10
10. To what extent are you satisfied with the following?
 - a. Transport facilities availed: 10
 - b. Accommodation Facilities availed: 10
 - d. Food quality and service: 10

e. Lecture hall facilities:

10

f. Interaction with the faculty:

10

g. Lab facilities:

10

11. Which part of the course did you find most useful?

Hands-on training in nurseries.

12. Which parts of the course did you find least helpful?

—

13. Your overall impression about the course?

Excellent and very useful.

14. What were the weaknesses of the course?

—

15. Any suggestions for how to improve the course?

NIL

16. Any other comments/observations/suggestions:

—

17. Your overall rating about ENVIS Resource Partner?

10

18. Your overall rating about IFGTB?

10

R. Sathya

(Name & signature of the participant)



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EVALUATION REPORT BY THE PARTICIPANTS

[Note: Please fill-in all the items in the reports, your objectivity will help us to make improvements in the future course(s)]

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Points : 10 for very well structured to 00 for very unstructured [10 (highest) to 00 (lowest)]

5. Is the curriculum discussed is relevant to the course? 10
6. How useful were the lab sessions during this course? 10
7. Did you get enough opportunities to interact with the fellow participants? 10
8. How far have you been benefited from the lab session? 10
9. Relevant hands on training provided during this course? 10
10. To what extent are you satisfied with the following?
 - a. Transport facilities availed: 10
 - b. Accommodation Facilities availed: 10
 - d. Food quality and service: 10

e. Lecture hall facilities:

10

f. Interaction with the faculty:

10

g. Lab facilities:

10

11. Which part of the course did you find most useful?

नर्सरी

12. Which parts of the course did you find least helpful?

नहीं

13. Your overall impression about the course?

बहुत अच्छा

14. What were the weaknesses of the course?

—

15. Any suggestions for how to improve the course?

—

16. Any other comments/observations/suggestions:

Excellent course

17. Your overall rating about ENVIS Resource Partner?

10

18. Your overall rating about IFGTB?

10

संभुनाथ

(Name & signature of the participant)

Sambuth Nath



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5. Is the curriculum discussed is relevant to the course?

10

6. How useful were the lab sessions during this course?

10

7. Did you get enough opportunities to interact with the fellow participants?

10

8. How far have you been benefited from the lab session?

10

9. Relevant hands on training provided during this course?

10

10. To what extent are you satisfied with the following?

a. Transport facilities availed:

10

b. Accommodation Facilities availed:

0

d. Food quality and service:

10

e. Lecture hall facilities:

10

f. Interaction with the faculty:

10

g. Lab facilities:

10

11. Which part of the course did you find most useful?

practical

12. Which parts of the course did you find least helpful?

-

13. Your overall impression about the course?

good

14. What were the weaknesses of the course?

-

15. Any suggestions for how to improve the course?

-

16. Any other comments/observations/suggestions:

no

17. Your overall rating about ENVIS Resource Partner?

18. Your overall rating about IFGTB?

SUBZAL
(Name & signature of the participant)



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5. Is the curriculum discussed is relevant to the course? 10
6. How useful were the lab sessions during this course? 9
7. Did you get enough opportunities to interact with the fellow participants? 6
8. How far have you been benefited from the lab session? 8
9. Relevant hands on training provided during this course? 10
10. To what extent are you satisfied with the following?
 - a. Transport facilities availed: 10
 - b. Accommodation Facilities availed: 10
 - d. Food quality and service: 10

e. Lecture hall facilities:

10

f. Interaction with the faculty:

6

g. Lab facilities:

8

11. Which part of the course did you find most useful?

Nursing practice

12. Which parts of the course did you find least helpful?

-

13. Your overall impression about the course?

Good

14. What were the weaknesses of the course?

-

15. Any suggestions for how to improve the course?

-

16. Any other comments/observations/suggestions:

no

17. Your overall rating about ENVIS Resource Partner?

10

18. Your overall rating about IFGTB?

10

Shah

(Name & signature of the participant)



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5. Is the curriculum discussed is relevant to the course? 10
6. How useful were the lab sessions during this course? 10
7. Did you get enough opportunities to interact with the fellow participants? 10
8. How far have you been benefited from the lab session? 10
9. Relevant hands on training provided during this course? 10
10. To what extent are you satisfied with the following?
 - a. Transport facilities availed: 10
 - b. Accommodation Facilities availed: 10
 - d. Food quality and service: 10

e. Lecture hall facilities:

10

f. Interaction with the faculty:

10

g. Lab facilities:

10

11. Which part of the course did you find most useful?

नथरी मोर-नखरी तकनीक डेले बनार्य

12. Which parts of the course did you find least helpful?

13. Your overall impression about the course?

बहुत अच्छा

14. What were the weaknesses of the course?

नह

15. Any suggestions for how to improve the course?

नही

16. Any other comments/observations/suggestions:

नही

17. Your overall rating about ENVIS Resource Partner?

10

18. Your overall rating about IFGTB?

10


(Name & signature of the participant)



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5. Is the curriculum discussed is relevant to the course? 10
6. How useful were the lab sessions during this course? 10
7. Did you get enough opportunities to interact with the fellow participants? 10
8. How far have you been benefited from the lab session? 10
9. Relevant hands on training provided during this course? 10
10. To what extent are you satisfied with the following?
 - a. Transport facilities availed: 10
 - b. Accommodation Facilities availed: 10
 - d. Food quality and service: 10

e. Lecture hall facilities:

10

f. Interaction with the faculty:

10

g. Lab facilities:

10

11. Which part of the course did you find most useful?

About how to create a nursery & Nursery techniques.

12. Which parts of the course did you find least helpful?

Nil.

13. Your overall impression about the course?

Great.

14. What were the weaknesses of the course?

—

15. Any suggestions for how to improve the course?

—

16. Any other comments/observations/suggestions:

—

17. Your overall rating about ENVIS Resource Partner?

10

18. Your overall rating about IFGTB?

10

Santhya S.

(Name & signature of the participant)



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5. Is the curriculum discussed is relevant to the course? 10
6. How useful were the lab sessions during this course? 10
7. Did you get enough opportunities to interact with the fellow participants? 10
8. How far have you been benefited from the lab session? 10
9. Relevant hands on training provided during this course? 10
10. To what extent are you satisfied with the following?
 - a. Transport facilities availed: 10
 - b. Accommodation Facilities availed: 10
 - d. Food quality and service: 10

e. Lecture hall facilities:

10

f. Interaction with the faculty:

10

g. Lab facilities:

10

11. Which part of the course did you find most useful?

Field visit

12. Which parts of the course did you find least helpful?

-

13. Your overall impression about the course?

Excellent

14. What were the weaknesses of the course?

-

15. Any suggestions for how to improve the course?

-

16. Any other comments/observations/suggestions:

-

17. Your overall rating about ENVIS Resource Partner?

10

18. Your overall rating about IFGTB?

10

S. Varshini

(Name & signature of the participant)



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Points : 10 for very well structured to 00 for very unstructured [10 (highest) to 00 (lowest)]

- | | |
|---|----|
| 5. Is the curriculum discussed is relevant to the course? | 10 |
| 6. How useful were the lab sessions during this course? | 10 |
| 7. Did you get enough opportunities to interact with the fellow participants? | 10 |
| 8. How far have you been benefited from the lab session? | 10 |
| 9. Relevant hands on training provided during this course? | 10 |
| 10. To what extent are you satisfied with the following? | |
| a. Transport facilities availed: | 10 |
| b. Accommodation Facilities availed: | 10 |
| d. Food quality and service: | 10 |

e. Lecture hall facilities:

10

f. Interaction with the faculty:

10

g. Lab facilities:

10

11. Which part of the course did you find most useful?

Practical classes.

12. Which parts of the course did you find least helpful?

—

13. Your overall impression about the course?

Good

14. What were the weaknesses of the course?

—

15. Any suggestions for how to improve the course?

—

16. Any other comments/observations/suggestions:

No.

17. Your overall rating about ENVIS Resource Partner?

10

18. Your overall rating about IFGTB?

10



(Name & signature of the participant)



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5. Is the curriculum discussed is relevant to the course? 10
6. How useful were the lab sessions during this course? 10
7. Did you get enough opportunities to interact with the fellow participants? 10
8. How far have you been benefited from the lab session? 10
9. Relevant hands on training provided during this course? 10
10. To what extent are you satisfied with the following?
 - a. Transport facilities availed: 10
 - b. Accommodation Facilities availed: 10
 - d. Food quality and service: 10

e. Lecture hall facilities:

9

f. Interaction with the faculty:

10

g. Lab facilities:

10

11. Which part of the course did you find most useful?

12. Which parts of the course did you find least helpful?

13. Your overall impression about the course?

Good

14. What were the weaknesses of the course?

15. Any suggestions for how to improve the course?

16. Any other comments/observations/suggestions:

17. Your overall rating about ENVIS Resource Partner?

10

18. Your overall rating about IFGTB?

10



(Name & signature of the participant)



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5. Is the curriculum discussed is relevant to the course? 10
6. How useful were the lab sessions during this course? 9
7. Did you get enough opportunities to interact with the fellow participants? 8
8. How far have you been benefited from the lab session? 8
9. Relevant hands on training provided during this course? 10
10. To what extent are you satisfied with the following?
 - a. Transport facilities availed: 10
 - b. Accommodation Facilities availed: 10
 - d. Food quality and service: 10

e. Lecture hall facilities:

10

f. Interaction with the faculty:

8

g. Lab facilities:

8

11. Which part of the course did you find most useful?

Nursery Practices, Lab

12. Which parts of the course did you find least helpful?

- Nil -

13. Your overall impression about the course?

very Good

14. What were the weaknesses of the course?

- Nil -

15. Any suggestions for how to improve the course?

- Nil -

16. Any other comments/observations/suggestions:

- Nil -

17. Your overall rating about ENVIS Resource Partner?

10

18. Your overall rating about IFGTB?

10

(Name & signature of the participant)