

Calendar

Short Term Training Courses

2013



FOREST RESEARCH INSTITUTE
(Indian Council of Forestry Research and Education)
DEHRA DUN

Short Term Training Courses at FRI, Dehradun

Set in the sylvan surroundings of Doon Valley and having a history of about a century of forestry research is an ideal seat for learning in forestry. FRI contributes the research perspectives focusing on different aspects of forestry research to different stake holders. The manifold research programmes related to enhancement of forest productivity through quality seed and planting material, Agroforestry, medicinal & aromatics plants, eco-rehabilitation, afforestation techniques for stress sites, bamboo & bio fertilizers, evaluation & utilization of plantation timber to name a few.

Training as part of extension is an important function of the institute towards capacity building. The institute organizes Short Term Training Courses (STTC) in nineteen disciplines to keep managerial level officers, supervisory staff and field officers abreast with recent research developments in forestry and to transfer the latest technologies. In addition to this Short Term Low-Cost Training courses will also be organized as provided separately in this brochure.

The faculty to impart these trainings consist highly qualified, experienced and skilled professionals and researchers. The Institute has a well-developed infrastructure of laboratories, computer center, library, herbarium, arboreta, nurseries and experimental field areas for conducting research and training programmes. Excellent boarding & lodging facilities are available at the Scientists Hostel and Officers Rest House of the Institute, with adequate means of recreation.

Course Contents

1. **Nursery & Plantation Management:** Seed technology, nursery design and operation, propagation through seed, clonal propagation, planting and aftercare, cultivation technology of important forest trees, protection measures for nurseries and plantations, avenue plantations.
2. **Improved Seed and Nursery Technology:** Seed Technology & Seed Certification, Nursery technology & management, Modern Nursery Potting media and containers, Role of Medicinal Plants in Plantation Forestry, Fungal disease of Nursery and Plantation and their Management, Bamboo Propagation techniques, Insect Pests diseases of Seed, Nursery, Plantations and their management, Soil fertility management in plantations, Landscape cum bio-aesthetic planning, Plant propagation techniques and infrastructure for clonal propagation.
3. **Tree Seed Technology:** Demonstration & familiarization of Seed Testing Lab, Practical demonstration of Seed Sampling, Purity, Seed Moisture & Seed Weight determination, Seed Collection, extraction & processing, Selection of Plus Trees, Hybridization, Seed Dormancy & germination, Seed storage, Seed treatment & testing of germination, Viability tests, Seed physiology, Development of modern nursery, Seed pathology & Seed entomology.
4. **Plywood Manufacture:** Plywood raw materials both wood and adhesives; Manufacture of veneers, plywood, block board and flush doors, their properties and testing; Preparation and testing of adhesives, plywood, laminated veneer lumber (LVL); Impreg and compreg and other development in panel products.
5. **Classification and Grading of Timber:** Testing of wood and classification of timbers for different end uses; Defects in wood, their measurement and evaluation; Visual grading of timber; Machine grading of timber.
6. **Wood Seasoning:** Importance of Seasoning; Equilibrium moisture content; Moisture content values and tolerances for end products; Influence of climatic zones on moisture content; Seasoning schedules, seasoning kilns (solar, steam, vacuum press drying, dehumidification drying etc.); Other seasoning methods like chemical seasoning and seasoning of plantation species like Eucalyptus and Poplar.

7. **Finger jointing for Efficient Wood Utilization:** The Finger jointing technique uses, design aspects, adhesive aspect, machinery, structural and non-structural usages, glulams, strength aspects, role of moisture and seasoning, finishing aspects, hands-on practices.
8. **Wood and Bamboo Preservative & Utilization:** Importance of preservation, seasoning, products, composites, finishing; Working properties and appropriate utilization of wood and Bamboo.
9. **Development of Green Belts:** Green belts in environmental amelioration; Selection of species; Pollution abatement through green belts; Use of MPTs; Green belts as buffer zone to Pas' Ethno botanical importance etc.
10. **Bamboo propagation and clonal nursery management:** Introduction to Bamboos and their utilization in rural and urban society, Germplasm collection, Establishment and maintenance of genetic resources of bamboos, Infrastructure development for bamboo propagation, Mass multiplication of important bamboos through low cost clonal technologies, Farmers friendly technologies for bamboo multiplication, Management of bamboo clonal nursery etc.
11. **Tissue culture of important forest trees, bamboos and medicinal plants:** Plant Tissue Culture principles, fields of application, progress and prospects with special reference to tree crops; Advantage of tissue culture, tissue culture a non-conventional means of mass multiplication, necessity of plant tissue culture etc.
12. **Genetic Improvement for Enhanced Productivity:** Tree Improvement, Genetic Gain and other tools of genetic improvement in tree species.
13. **Clonal forestry for higher economic returns:** Clones, Clonal propagation methodology, Economic benefits, Case studies of Shisham and Melia.
14. **Molecular markers in forest trees:** Application of molecular markers and other tools for analysis of variability and genetic improvement in tree species.
15. **Production of hybrids in Eucalyptus:** Hybrid breeding, Hybridization process, Eucalyptus species
16. **Molecular tools for identification and variability of pathogenic and medicinally important fungal species:** Importance and scope of studying fungal variability, Disease resistance and molecular variability, Yield of bioactive principles by medicinally important fungi and their molecular variability, Breeding disease resistant germplasm, Molecular tools in identifying resistant host germplasm. Demonstration of RAPD-PCR, amplification of ITS region of rDNA, Beta tubulin amplification and development of fungal species specific primers.
17. **Value addition of Non Wood Forest Products (NWFPs):** Natural Dyes: Extraction, dyeing and evaluation; Technology demonstration. Medicinal plants: Phytoextraction and preparation of standardized extracts. Tree borne oil seeds: Isolation, physic-chemical properties, value addition and applications. Essential oils: Principles and practices for value addition. Field visits
18. **Cultivation, Value addition and Marketing of Medicinal Plants:** Nursery and multiplication techniques; Cultivation techniques of important medicinal and aromatic plants and Hands on Training; Post Harvest and Value addition, Utilization and marketing; Field visits.
19. **Handmade Paper making:** Introduction and history of Handmade paper, Raw materials for handmade paper, their fibre composition, anatomy, chemistry. Raw material preparation, pulping, washing, screening, beating/refining, preparation of handmade paper sheets, handmade paper conversion, machining, equipment and project cost.

Calendar of Short Term Training Courses - 2013

NAME OF THE COURSE		NAME OF COURSE DIRECTOR & DIVISION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1.	Nursery and plantation management	Dr. Dinesh Kumar, Silviculture Ph. No. 0135-2224610						10-14						
2.	Improved Seed & Nursery Technology	Ms. Manisha Thapliyal Silviculture Ph. No. 0135-2224467									09-13			
3.	Tree Seed Technology	Dr. Ombir Singh Silviculture Ph. No. 0135-2224469							08-12					
4.	Plywood Manufacture	D.P. Khali Forest Products Ph. No. 0135-2224451								19-23				
5.	Classification & Grading of Timber	Dr. Y.M. Dubey Forest Products Ph. No. 0135-2224395											25-29	
6.	Wood Seasoning	N.K. Upreti Forest Products Ph. No. 0135-2224432									16-20			
7.	Finger Jointing for Economic and Efficient Wood Utilization	Dr. Kisharn Kumar V.S. Forest Products Ph. No. 0135-2224441											18-22	
8.	Wood and Bamboo Preservative & Utilization	Dr. Sadhna Tripathi Forest Products Ph. No. 0135-2224445										07-11		
9.	Development of Green Belts	Dr. Veena Chandra Botany Ph. No. 0135-2224491						10-14						
10.	Bamboo propagation and clonal nursery management	Dr. Subhash Nautiyal Botany Ph. No. 0135-2752673					06-10							

Forest Research Institute, Dehradun

NAME OF THE COURSE	NAME OF COURSE DIRECTOR & DIVISION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
11. Tissue culture of important forest trees, bamboos and medicinal plants.	Dr. Ajay Thakur Botany Ph. No. 0135-2224493												16-20
12. Genetic Improvement for Enhanced Productivity	Dr. H.S. Ginwal G&TP Ph. No. 0135-2224403						24-28						
13. Clonal Forestry for Higher Economic Returns	Dr. Ashok Kumar G&TP Ph. No. 0135-2224379								19-23				
14. Molecular markers in forest trees	Dr. Santan Banrhwai G&TP Ph. No. 0135-2224381										21-25		
15. Production of hybrids in Eucalyptus	Ms. Praveen G&TP Ph. No. 0135-2224378				08-12								
16. Molecular tools for identification and variability of pathogenic and medicinally important fungal species	Dr. Amit Pandey Pathology Ph. No. 0135-2224314									09-13			
17. Value addition of Non Wood Forest Products (NWFPs)	Dr. Y.C. Tripathi Chemistry Ph. No. 0135-2752671								15-19				
18. Cultivation, Value addition and Marketing of Medicinal Plants	Dr. A.K. Sharma NWFP Ph. No. 0135-2224496												09-13
19. Handmade Paper making	Dr. S.P. Singh Cellulose and Paper Ph. No. 0135-2224391										21-25		

Low-Cost Training Courses For Field Staff, Farmers & Artisans

The following Low-cost short term training courses for State Government and NGOs sponsored field staff, farmers, artisans, JFM/VFP committees, SHG members, etc. shall be conducted at Shatabdi Van Vigyan Kendra, City Campus of FRI during 2013. These courses are designed as per the requirements of the sponsoring agencies.

1. Low-cost clonal/ propagation

Course Director : Dr. Subhash Nautiyal, Botany Division
Ph. No : 0135- 2752673
Dates : 13-14 May, 2013 (02 days)
Course contents : Low-cost clonal propagation techniques of Bamboos and other tree species of fuel wood and fodder values at Field Research Station, Khirsu.

2. Low-cost clonal/ propagation

Course Director : Dr. Meena Bakshi, Botany Division
Ph. No : 0135-2224410
Dates : 16-20 September, 2013.
Course contents : Infrastructure, development for clonal propagation of important forest tree species; Mass multiplication for production of superior planting stock of Shisham, Eucalyptus, Casuarina, Grewia, Teak, Terminalia and Medicinal plants; Maintenance of clonal material in nursery; Transportation of reproductive and planting material; Infrastructure development and maintenance of propagation complex, Technology transfer in the field.

3. Management of important NWFPs

Course Director : Dr. B.P.Tamta, Non-Wood Forest Products Division
Ph. No. : 0135-2224498
Dates :
Course contents : Overview of NWFPs; Resource development and Management of important NWFP bearing forest plants like Fibre yielding species; Bamboo & Canes, Oilseed , gum & Resin, Tans & Dyes, Edible plants, Medicinal plants etc.; Germplasm/NWFP Garden Development and Management; Nursery Techniques of Important NWFP bearing plants; Tools and Implements required for NWFP resource Management; Post Harvest Value Addition of NWFPs; Hands on Training on Important Technologies of NWFPs; Field visits.

4. Nursery and Plantation Techniques

Course Director : Dr. Dinesh Kumar, Silviculture Division
Ph. No. : 0135-2224610
Dates : 25-27 September, 2013
Course contents : Seed Technology, nursery design and operation, propagation through seed, clonal propagation, panting and aftercare, protection measures for nurseries and plantations

5. Agroforestry & Extension

- Course Director : Dr. Charan Singh, Extension Division
Ph. No. : 0135-2224355
Dates : 07-11 October, 2013
Course contents : Concept and status, Selection of tree-crop combinations, Handling of seed and plant material, Geometry of plantations, Tree-crop interaction, Agroforestry models, Marketing and extension.

Course fees: The course fees for STTC (including boarding & lodging charges) per participant is as follows:

- ❑ Rs. 10,000 for Indian nationals, Rs. 20,000 for SAARC countries, and Rs. 35,000 for other foreign nationals.
- ❑ Course fee for "Low-cost short term training courses for farmers, artisans, etc. is Rs. 5,000 with a minimum of 10 participants for a training course.

6. Forest Fire Disaster Mitigation

- Course Director : A.S. Rawat, IFS, Silviculture Division
Ph. No. : 0135-2224322
Dates : 25th-29th November 2013
Course contents : Disaster Management-Concept & Framework/ Forest Fire Disaster Management-Integration with Holistic framework, Damage Assessment of Forest Fire using GIS and Remote Sensing, Forest Fire Management-Experiences of State, Theory and Demonstration of using GPS, Near Real Time Monitoring of Forest Fire using Modis based Web Fire Mapper: Demonstration by FSI, Assessment of Forest Fire through Remote Sensing, Impact of Forest Fire on Forest Ecosystem, Tabletop simulation exercise on Forest Fire Disaster, Field visit and Group exercise.

Course fees: Course Fees Rs. 20,000/- per participant with participation of at least 10 participants

7. Role of Forestry Sector in Disaster Management

- Course Director : A.S. Rawat, IFS, Silviculture Division
Ph. No. : 0135-2224322
Dates : 27th to 31st Jan 2014
Course contents : Disaster Management: Concepts and Framework, Climate change and disasters-An overview for forestry Sector, Indian Forestry-Issues for Disaster Risk Management, Forest epidemics/insect-pest control for disaster Management, Preparation of Districts Disaster Management Plan, Landslide Risk Mitigation Practices, Cloudburst in Himalayas and Coastal Disaster, Meteorological aspects of Disaster Management with respect to forests, Disaster Management for National Parks/ Tiger Reserves in India, Near real time monitoring of forest fire using MODIS based web fire mapping, Forest Invasive species-Disaster in Forestry Sector, Geological aspects of Disaster management in Himalayas, Field visit, Group Exercise.

Course fees: Course Fees Rs. 20,000/- per participant with participation of at least 10 participants

NOMINATIONS

Nomination letters for the above courses may be addressed to:

Head, Extension Division, Forest Research Institute

P.O. New Forest, Dehradun 248 006 (Uttarakhand)

Phone: 0135 2758606, Fax: 0135 - 2756865, E-mail: headext@icfre.org

- ❑ The requisite course fees (through demand draft drawn in favour of the **Accounts Officer, Forest Research Institute, Dehradun, and payable at Dehradun**) should reach on the above address at least 30 days before the commencement of the respective courses.
- ❑ **Participants are advised to commence their journey for the training only after getting confirmation about the course programme from the concerned Course Director at the telephone numbers .**

Website : <http://fri.icfre.gov.in/> www.icfre.org



Training under National Bamboo Mission



Training of Frontline Staff of Punjab Forest Department



Training to the Farmers at Chandigarh



Demonstration of root trainer technology at Model nursery, Chandigarh