



Indian Council of  
Forestry Research  
and Education

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## Dr. Harsh Vardhan, Hon'ble Cabinet Minister, MoEF&CC Visited FRI, Dehradun

- Dr. Harsh Vardhan, Hon'ble Cabinet Minister, Ministry of Environment, Forest and Climate change, Government of India, New Delhi visited Forest Research Institute and reviewed research activities of the institute on 23 December 2017. He also visited FRI museums & paid tribute to the foresters who laid their lives in the service and protection of valuable forests at Foresters Memorial in FRI on 23 December 2017. Hon'ble Minister was accompanied by Shri Siddhanta Das, IFS, Director General (Forest), Ministry of Environment, Forest and Climate change, Government of India, New Delhi.



Dr. Harsh Vardhan, Hon'ble Cabinet Minister, MoEF&CC, Visited FRI, Dehradun

## Significant Research Findings

### Forest Research Institute (FRI), Dehradun

- Samples of insect fauna were collected from 40 different localities of districts Mahendargarh, Rewari, Gurugram and Jhajjar and preserved in alcohol for screening of *Apanteles* spp. Five samples of lepidopterous larvae have also been collected, infesting different forest tree spp., for their laboratory rearing for emergence of *Apanteles* spp. Sorting of *Apanteles* spp. and identification is in progress.
- Biology and rearing of *Chlorophorus annularis* continued. Infested bamboo species collected, cut into billets, examined and were caged for biological observations. Survey and collection of damaged bamboo species is continuing.
- Sample surveys were carried out in 10 transects in 3 forest types ( 12/C1a Ban Oak Forest, 3C/C2a Moist Shiwalik Sal Forests & 5B/C2 Northern Dry Mixed -Deciduous Forests) in Dehradun & Haridwar districts (Mussoorie, Dehradun & Rajaji National Park

of Uttarakhand). Vegetation survey & herbarium of trees & shrubs of two forest sub-types were carried out along the transects. GIS maps of 7 different forest types of the study area (Benog WLS-Kimoi Forest, Mussoorie & Shivalik ranges in Dehradun & Rajaji National Park & Haridwar) have been prepared. Studies on the life history of two species of butterfly were carried out in the laboratory by rearing them in cages. 32 herbarium sheets of plants (trees, shrubs & herbs) sampled in 9 forest sub-types and sampled in the field were prepared and identified.

- Biochemical study of leaf samples of 10 Poplar clones have been conducted to screen poplar clones for tolerance against poplar leaf defoliator, *Clostera cupreata* But.
- 57 soil samples collected for laboratory analysis were processed, for post fire impact in Tons Forest Division and Upper Yamuna Forest Division of Yamuna Circle. 12 Soil samples were analysed for Phosphorus and water holding capacity. Field survey were also conducted for evaluation of impact of fire in Haldwani, Nainital, Almora and Bageshwar Forest Divisions of Kumaun region.
- 10 soil samples were analysed for organic Carbon and Potassium under chirpine, sal and ban oak forests of Uttarakhand.
- Two populations of *Betula utilis* grown in the forests of Niti, Chamoli and Mana (Badrinath) were characterized for the first time for total triterpenoid contents (TTCs) in their bark.
- Previously unknown volatiles of the fruit bodies of wild edible mushroom, *Astraeus hygrometricus*, were determined by GC-MS analysis.
- Previously isolated extracts from the bark and saw dust of *Populus deltoides* (Poplar) which displayed *in vitro*

antioxidant and  $\alpha$ -glucosidase inhibitory activity were fractionated using Diaion HP20 and the phenolics rich fractions were isolated for their LC-MS analysis.

**Institute of Forest Genetics and Tree Breeding (IFGTB), Coimbatore**

- Tamarind is a multipurpose tree species wildy grown in farm forestry, social forestry and avenue plantations. It supports the livelihood of rural populations through providing income and creating employment opportunity during lean period. Identification and selection of elite genetic resources of tamarind will directly increase the fruit productivity. Ninety clones of tamarind were evaluated for vegetative and reproductive traits. Seven outstanding clones of tamarind were screened based on biometric, flowering and fruiting traits at clonal orchard, Virinjipuram, Vellore district, Tamilnadu. The promising clones were multiplied through approach grafting and about 1000 grafts were attempted.

**Arid Forest Research Institute (AFRI), Jodhpur**

- Accumulation of NH<sub>4</sub>-N, NO<sub>3</sub>-N, PO<sub>4</sub>-P and K in soils varied significantly due to different levels of treated effluent application, species under test and soil layers. Most of the nutrients were high when effluent was applied at one potential evapotranspiration (PET) as compared to tubewell water or effluent applied at 1/2 PET or 3/4th PET.
- Sustainable non-destructive oleo-gum resin harvesting method for *Commiphora wightii* (guggal) has been developed. Almost 10 g per plant guggul gum can be harvested if 8 cm horizontal cut inflicted twice in winters (in November and in February) in three branches of average girth size 19.90 ± 0.35 without any mortality even after three years.

**Workshops/ Seminars/ Meetings**

S. No.	Topic	Duration	Beneficiaries
<b>Institute of Forest Productivity, Ranchi</b>			
1.	Agroforestry Systems for Water Stressed Areas	19-20 December 2017	200 Delegates from ICFRE Institutes and other govt. Organizations/ Universities/ NGOs/ Students/ Poplar Tree Growers/ Farmers



**National Conference on Agroforestry systems for water stressed areas**



**Forest Research Institute, Dehradun**

2.	Future Research Needs in the Field of Paper Sciences & Bio-energy from Cellulosic Waste	5 December 2017	Scientists, Stakeholders & Academicians
3.	Development of Biopesticides and Biofertilizer for use in Forestry	27 December 2017	-

**Institute of Forest Genetics and Tree Breeding, Coimbatore**

4.	Bioprospecting, Scope and Challenges and Prospecting	Periodical seminar	65 Nos IFGTB Staff & Research Fellows
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**Arid Forest Research Institute, Jodhpur**

5.	Dissemination Workshop under the Project 'Studies on the Effect of MPOWER Programme on Mitigation and Adaptation Towards Climate Change in Western Rajasthan	4 December 2017	35 different NGOs and working groups of MPOWER
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**Rain Forest Research Institute, Jorhat**

6.	Regional Stakeholder Consultation and Capacity Building Workshop on National REDD+ Strategy	20 December 2017	30 officials from State Forest Departments of North East India, SHGs, NGOs, Academic Institutions, Civil Society Members
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**Training Programmes**

S. No.	Topic	Duration	Beneficiaries
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**Indian Council of Forestry Research and Education, Dehradun**

1.	Statistical Methods in Forestry Research	11- 15 December 2017	Scientist of ICFRE and its Institutes
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**Forest Research Institute, Dehradun**

2.	Seed Technology	11- 15 December 2017	Personnel of Uttar Pradesh State Forest Department
3.	Poplar growers of Uttarakhand and Uttar Pradesh	14 December 2017	125 farmers and poplar growers of Uttarakhand and Uttar Pradesh



**Training Programme on Seed Technology**



**Institute of Forest Genetics and Tree Breeding, Coimbatore**

4.	Seed Handling and Nursery Technology for Biodiversity Conservation and Sustainable Production	14-15 December 2017	18 members comprising foresters, rangers, farmers, agricultural officers, researchers, NGOs and nursery entrepreneurs
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**Institute of Wood Science and Technology, Bengaluru**

5.	Sandalwood-Seed Handling, Nursery and Plantation Technology	11 – 15 December 2017	43 trainees Farmers, Entrepreneurs, Land developers etc
6.	Sandalwood Cultivation and Other Forestry Related Aspects as a Part of Extension Activity	22 December 2017	75 farmers

**Arid Forest Research Institute, Jodhpur**

7.	Integrated Approach for Sustainable Development of Fragile Desert Ecosystem	18-22 December 2017	24 IFS Officers of different states of India.
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**Himalayan Forest Research Institute, Shimla**

8.	IPR Issues and Patent Filing	19 December 2017	50 participants comprising of scientists, officers and research support staff
9.	Causes and Management of Kharsu Oak Mortality in Nohra Range of Shimla	12 December 2017	8 beneficiaries of the affected area
10.	General Idea About Forest and Wildlife act, Forest Conservation act, Wildlife Protection act and Indian Forest act under Umbrella Scheme of Forestry Training and Capacity Building for Training for Personnel of Other Services	6 - 8 December 2017	Officers and professionals from different departments of Himachal Pradesh



Training Programme on IPR issues and Patent Filing at HFRI, Shimla



Training Programme on Causes and Management of Kharsu Oak Mortality in Nohra Range of Shimla at HFRI, Shimla

**Institute of Forest Biodiversity, Hyderabad**

11.	Assessment of Forest Resources for Preparation of Working Plan	4, 5, 8, 11, 12 and 14 December 2017	Kothagudam, Medak, Nalgonda, Narsinghpur and Ganjarani forest staff
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**Tree Growers Mela/ Kisan Mela**

Institute	Participated/organized	Duration	Place
IFGTB, Coimbatore	Kerala Bamboo Fest 2017 organized by Kerala State Bamboo Mission (KSBM) & Kerala Bureau of Industrial Promotion	1 - 5 December 2017	Marine Drive, Cochin
IWST, Bengaluru			
TFRI, Jabalpur	International Herbal Mela	14-20 December 2017	Bhopal

**Director General Visit**

- Dr. Suresh Gairola, IFS, Director General, ICFRE visited Meghalaya from 19 to 23 December 2017 and discussed with the PCCF, Meghalaya various joint activities of RFRI, Jorhat and Meghalaya State Forest Department. He also met the Mowphlang Community in Meghalaya.



Mowphlang Community Welcomed DG, ICFRE at Meghalaya

**Activities under Van Vigyan Kendras and Demo Villages**

- RFRI, Jorhat organized a training for frontline staff of Forest department, farmers and NGOs of Manipur under VVK, Manipur at Forest Training School, Mantripukhuri, Imphal on 14 and 15 December, 2017. 30 officials from Forest Field Functionaries, Farmers, NGOs etc. benefited from the training.
- CFLE, Agartala organised a training workshop on “Value Addition in Broom Grass for Enhanced Income and Promotion under Cultivation” (Product Development for Livelihood Promotion under Van Vigyan Kendra) at Guchamura, Bamutia, West Tripura on 27 and 28 December 2017.



Training on Value Addition in Broom Grass at CFLE, Agartala

**Publications**

- Tropical Forest Research Institute (TFRI) has published following technical bulletins:
  - Model Guidelines for Management of White Grubs in Forest Nurseries.
  - Maida Chhal (*Litsea glutinosa* Lour) Status and Conservation.

**Consultancy**

**Indian Council of Forestry Research and Education (ICFRE), Dehradun**

- Work on 11 consultancy projects, which are awarded by Tehri Hydro Development Corporation India Ltd; Himachal Pradesh Power Corporation Limited; Karnataka State Official Authority; Uttarakhand Jal Vidyut Nigam Limited (UJVNL); MoEF&CC GoI, New Delhi; Coal India Limited, Kolkotta; NTPC Ltd NOIDA; CMPDI, Ranchi and NMDC Ltd., Hyderabad is in progress.

**Popularizing Forestry Through All India Radio/ Doordarshan**

Programme Topic	Channel	Date
<b>Rain Forest Research Institute, Jorhat</b>		
Bamboo as an Important Development Sector of NER	local TV Channel 'Headlines Tripura'	22 December 2017

**Information Technology Initiatives**

- ICFRE Dehradun developed and hosted the application "Online Office Records (Order/MoM/ Agenda etc) System on live server. The URL of application is <http://records.icfre.org>.

**Miscellaneous**

Institute	Special Day/ Theme	Duration
HFRI, Shimla	International Mountain Day	11 December 2017
ARCBR, Aizwal		8 and 18 December 2017
IFGTB, Coimbatore	Swatchh Bharat Mission	19 December 2017
HFRI, Shimla		27 December 2017
RFRI, Jorhat		28 December 2017



Swatchh Bharat Mission at HFRI, Shimla



Swatchh Bharat Mission at RFRI, Jorhat



Swatchh Bharat Mission at ARCBR, Aizwal

**A News item on High Yielding Varieties**

- IFGTB, Coimbatore has released 30 clones of *Casuarina* and *Eucalyptus* so far and is actively promoting large scale cultivation of these high-yielding varieties by farmers. In this regard, following news article appeared in *The New Indian Express* dated 21 December 2017 detailing the high-yielding qualities of IFGTB's clones.



06 CHENNAI

TAMIL NADU

INSTITUTION FOR TAMIL

THURSDAY 21.12.2017

# ‘Reap rewards in 2 yrs with Casuarina farming’

Sathivel who holds a masters in engineering has undertaken project to distribute 1 crore saplings to the farmers

**HARISH MURALI** @Cuddalore

A 26-year old farmer, with a Masters degree in Engineering, has successfully taken up casuarina cloning in Cuddalore and is now encouraging other farmers to take up the practice, which can rake in profits in just two years.

P Sathivel, who runs the Sathi Clonal nursery at Kurinchipadi, after obtaining training from the Institute of Forest Genetics and Tree Breeding at Coimbatore, has undertaken a project to generate 1 crore saplings for distribution among farmers.

The farmer has now begun supplying saplings to corporate giants such as ITC, TNPL and Seshasavee paper mills for at least



Sathivel at his casuarina nursery at Kurinchipadi | HARISH MURALI

₹5,000 for a tonne.

After seeing his father grow several ornamental flowering plants in their farm, Sathivel urged him to take up casuarina cultivation. Though they ventured in for casuarina three years ago, it was only in January this year the new variety CH1 and CH5 reaped them much profit. CH1 and CH5 varieties were launched after several years of research by the IFGTB. He claims that he is the only person in State who has taken up the rights for the varieties, paying a sum of ₹6 lakh, as no one else was willing to take up Casuarina cultivation.

“Normally these trees take at least 4-5 years for proper maturation, however the new varieties

can mature in two years. This tree cultivation should be encouraged,” says Sathivel, who has raised a nursery after entering into an Memorandum of Understanding with the Coimbatore based institute, where the varieties were found by scientist Nicodamus. Though the land is very fertile for casuarina farming, most farmers are not interested due to the long period it takes to mature. However, he claims the CH1 and CH5 varieties take less time are also high in quality.

As most paper companies tend to import raw materials from abroad, the demand is always present. Thus farmers can easily make profit with minimum production cost, he added.

**HR NEWS**

Name & Designation	Date	Name & Designation	Date
<b>Repatriation/ Relieving from ICFRE</b>		<b>Retirement</b>	
Shri Shivakumar C.M. IFS, ADG (Edu. & RB)	12.12.2017	Shri M. Baskaran, Section Officer, IFGTB, Coimbatore	30.11.2017



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Dr. Suresh Gairola, Director General

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