



Indian Council of  
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and Education

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# ICFRE NEWSLETTER

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## CONTENT

Pg. No.	Title
01	Significant Research Findings
02	Tree Growers Mela/ Kisan Mela
02	Visits Abroad
03	Workshops/ Seminars/ Meetings
05	Training Programmes
07	Popularizing Forestry through All India Radio/Doordarshan
08	Miscellaneous
08	Varieties Released
09	Award
08	Publications
09	Consultancies
09	HR News

### Significant Research Findings:

#### Forest Research Institute (FRI), Dehradun

- Insect pests of ban oak trees collected from the field were reared in the laboratory. Experiments on life cycle of 8 insect pests of ban and moru oak (5 species of Lepidoptera), two species of cerambycid borers, one species of seed pest, along with three species of parasitoids emerged in the laboratory from these pests, was carried out. Insect specimens were preserved, labelled, identified up to species /family level besides their photography. Database on insect pests of western Himalayan oaks was updated.
- Digitization of small insects: 130 species of Hymenoptera and Diptera were digitized with Auto montage 3-D imaging system mounted on SMZ-16 Stereo zoom Microscope. Photographs of each species were placed in a folder named after the accession number of the species

registered in NFIC. Record of the photographed insect was noted and insect marked with a white paper disc for future reference. Digitization of slides in trays: 100 trays in three boxes were photographed. NFIC Database format was updated. Identified two species of encyrtids rarely: *Anicetus* sp. and *Microterys indicus*.

- Population of *Betula utilis* grown in the forests of Munsyari was characterized for the first time for total triterpenoid contents (TTCs) determined in their bark.
- Previously isolated extracts from the spent leaves and bark of *Eucalyptus* hybrid, and knots and saw dust of *Dalbergia sissoo* (Shisham) 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.

- Leaves of *Terminalia alata* was collected from Dehradun and after processing, dye was extracted from the sample using water as solvent. The extracted dye was applied on silk, wool and cotton fabrics which produced various shades on applied substrates.

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

- Physico-chemical properties of soils collected from plantations of *Acacia nilotica*, *Eucalyptus camaldulensis*, *Acacia tortilis* and *Dalbergia sissoo* in Indira Gandhi Nahar Pariyojana (IGNP) indicates slightly basic in nature with pH ranging from 7.65 to 8.55. Organic carbon varies between 0.23% and 0.41% being high in *Acacia tortilis* plantation. Compared to the soils outside the plantation area, SOC and P were higher in all the plantations. Significant increase in electrical conductivity was observed in *E. camaldulensis* and *D. sissoo* plantations.

- The rooting potential of juvenile shoots was investigated by dividing the shoots on the basis of different orders on leaflet number. In Neem, maximum rooting (41.25%) was observed in cuttings of 13 leaflet stage followed by 11 leaflet stage (24.7%). Whereas, mature cuttings showed only 1% rooting.
- Axillary bud break was achieved in bamboo-*Schizostachyum dullooa*. Three to four shoots proliferated from single axillary bud on MS medium supplemented with 5.0 mg/l BAP.
- In *Leptadenia reticulata*, in vitro shoot multiplication was standardized. Callus was obtained from various explants viz. immature seed, leaves, internode. which was multiplied and organogenesis and somatic embryogenesis was obtained.

**Himalayan Forest Research Institute (HFRI), Shimla**

- 50 macro-fungal samples were collected from the Chilgoza pine forest for carrying out studies on their mycorrhizal associations. The studies revealed that the samples thus collected, belonged to 13 genera, representing 22 species. *Scleroderma polyrhizum* was recorded to be the dominant ecto-mycorrhizal associate of chilgoza pine, which was then mass multiplied under laboratory conditions. The impact of artificial inoculation of *Scleroderma polyrhizum* was also assessed in the nursery conditions. Inoculated seedlings when compared were found to perform for growth parameters. It was further observed that phosphorus content in rhizosphere soil of inoculated seedling showed an increase up to 400 percent.

**Tree Growers Mela/ Kisan Mela:**

Institute	Participated/organized	Duration	Place
IFGTB, Coimbatore	Tree farming for increasing Farm income	16 February 2018	KVK, Papparapatty, Dharmapuri
IFP, Ranchi	Kissan Mela – cum - Agriculture Machinery Exhibition – 2018	16 February 2018	Namkum, Ranchi



IFP, Ranchi participated Kissan Mela – cum - Agriculture Machinery Exhibition – 2018

**Visits Abroad:**

Name of personnel	Institute	Purpose of visit	Duration	Place
Dr. K.K. Pandey, Scientist-G	IWST, Bengaluru	UNEP-Environmental effects Assessment Panel (EEAP)	14 – 20 February 2018	University of Malaga, Spain
Dr. R.S.C. Jayaraj, Director RFRI	RFRI, Jorhat	Role of REDD+ in supporting Sustainable Development Goals (SDGs) and Nationally Determined Contribution (NDC)	21 - 22 February 2018	Yezin, Myanmar

**Workshops/ Seminars/ Meetings:**

Sl. No.	Topic	Duration	Beneficiaries
<b>Indian Council of Forestry Research and Education, Dehradun</b>			
1.	IX Director's Conference	26 February 2018	All DDGs, Director (IC), ADGs of ICFRE and Directors of all ICFRE institutes
2.	XVIII Research Policy Committee	27 - 28 February 2018	Universities, NGOs, Farmers and Industries



IX Director's Conference at ICFRE, Dehradun



XVIII Research Policy Committee (RPC) Meeting at ICFRE, Dehradun

**Forest Research Institute, Dehradun**

3.	Potential of forestry technologies in employment generation for youth	1 February 2018	87 students of Nehru Yuva Kendra of Uttarakhand & Karnataka states and Scientists
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Workshop on Potential of forestry technologies in employment generation for youth at FRI, Dehradun

**Institute of Wood Science and Technology, Bengaluru**

4.	Wood: A Way Forward for Sustainable Development	9 February 2018	80 delegates from different industries, universities and Government Organizations
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**Tropical Forest Research Institute, Jabalpur**

5.	Environmental and economical function of Agroforestry	15 February 2018	-
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**Arid Forest Research Institute, Jodhpur**

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|----|--|---------------------|---|
| 6. | National Symposium on Plant Biotechnology- Recent Trends in Plant Propagation, Genetic Improvement & Industrial Applications (PTCA-2018) | 16-18 February 2018 | Researchers ,Senior professors Ph.D. scholars and staff |
|----|--|---------------------|---|



National Symposium on Plant Biotechnology- Recent Trends in Plant Propagation, Genetic Improvement & Industrial Applications (PTCA-2018) at AFRI Jodhpur

**Himalayan Forest Research Institute, Shimla**

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|----|----------------------------|------------------|--|
| 7. | Forest Fire and Management | 8 February 2018  | Resource persons from FSI, Dehradun; HP University, Shimla; HPSFD; FRI, Dehradun |
| 8. | NTFP Resource Development  | 23 February 2018 | -  |

**Institute of Forest Productivity, Ranchi**

- |     |  |                    |   |
|-----|--|--------------------|---|
| 9.  | Role of Molecular Biology in Conservation of RET species | 6 February 2018    | All Officers/ Scientists/ Technical Staffs/ Ministerial Staffs/ Research Scholars, etc. |
| 10. | Research Advisory Committee (RAC)                        | 8- 9 February 2018 | SFDs under jurisdiction of CTR&TI, Piska- Nagri, Ranchi Jharkhand                       |



Seminar on Role of Molecular Biology in Conservation of RET species at IFP, Ranchi

**Training Programmes:**

Sl. No.	Topic	Duration	Beneficiaries
<b>Indian Council of Forestry Research and Education, Dehradun</b>			
1.	Climate Change and Carbon Mitigation	19 - 23 February 2018	23 Scientists and Technologists
2.	Advanced Statistical Methods (using 'R' etc.)	19 - 23 February 2018	15 Scientists of ICFRE Institutes



**Forest Research Institute, Dehradun**

3.	Advance Techniques in Soil, Plant and Water Analysis	5 - 9 February 2018	Research Support Staff
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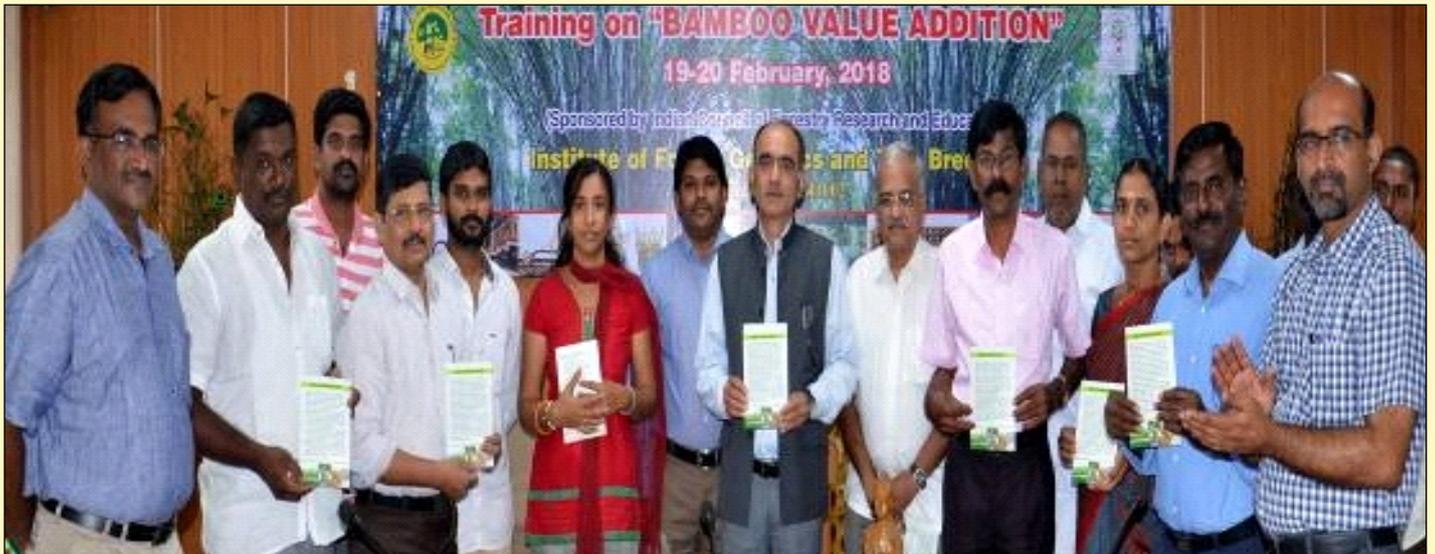
Training on Advance Techniques in Soil, Plant and Water Analysis at FRI, Dehradun

**Institute of Wood Science and Technology, Bengaluru**

4.	Sandalwood-seed handling, Nursery and Plantation Technology	19 – 23 February 2018	44 participants like farmers, entrepreneurs, land developers
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**Institute of Forest Genetics and Tree Breeding, Coimbatore**

5.	Bamboo Value Addition	19 - 20 February 2018	Bamboo growers and entrepreneurs
6.	Biotechnology techniques	29 Jan - 2 February 2018 5 - 9 February 2018 12 -16 February 2018	B. Sc Biotechnology students of Govt Science College, Jabalpur



Training on Bamboo Value Addition at IFGTB, Coimbatore

**Rain Forest Research Institute, Jorhat**

7.	Skill Development Training on Agar, Parkia, Bamboo and Lac	7 - 8 February 2018	-
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**Advanced Research Centre for Bamboo and Rattan, Aizwal**

8.	Value Addition of Bamboo	3 -7 February 2018	-
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Skill Development Training on Agar, Parkia, Bamboo and Lac at RFRI, Jorhat



Training on Value Addition of Bamboo at ARCBR, Aizwal

**Centre for Forestry Livelihood and Extension, Agartala**

9.	Bamboo Shoot Processing Techniques and Value Addition of Non-timber forest products (NTFPs) for Entrepreneurship Development	19 - 21 February 2018	-
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10.	Designing and Establishment of Herbal Home Gardens for Traditional Health Care	21 - 22 February 2018	-
11.	Community Approach in Development of Forest-based Livelihood options	19 - 26 February 2018	Field staff and JFMC members of Assam Forest Department

### Himalayan Forest Research Institute, Shimla

12.	Cultivation of important temperate medicinal plants	21 February 2018	40 participants comprising of Panchayat Members, Elected Representatives, Social Activists, Media Persons, NGOs, Cooperatives, Mahila Mandals, Teachers, member of Nature Clubs and progressive farmers of Kullu valley
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Training on Cultivation of important temperate medicinal plants

### Popularizing Forestry through All India Radio/ Doordarshan:

Programme Topic	Channel	Date
<b>Institute of Forest Genetics and Tree Breeding, Coimbatore</b>		
Theekuchi Marathin Sagupatdi Muraigalum Payangalum	All India Radio, Coimbatore	28 February 2018
<b>Forest Research Institute, Dehradun</b>		
उत्तराखण्ड की पादप विविधता एवं उसका संरक्षण		7 February 2018
समृद्धि रेशम उत्पादकों के लिए लाभकारी उत्पाद		
शीसल रेशे के पर्यावरण अनुकूल विधि	All India Radio, Akashvani, Dehradun.	14 February 2018
Scope & Utilization of Bamboo based Agroforestry		16 February 2018
आज के संदर्भ में प्राकृतिक रंगों की प्रासंगिकता		
Utilization of weeds and other cellulose waste in handmade papermaking		21 February 2018

**Miscellaneous:**

Institute	Special day/ theme	Duration
IFGTB, Coimbatore	World Wetland Day	2 February 2018
TFRI, Jabalpur	Prakriti, Paryavaran and Hum	16 February 2018
FRI, Dehradun	National Science Day	28 February 2018
RFRI, Jorhat	National Science Day	28 February 2018
	Swachh Bharat Abhiyaan and Swachh Pakhwada	1, 8, and 22 February 2018
ARCBR, Aizwal	Swachh Bharat Abhiyan	15 and 28 February 2018



World Wetland Day at IFGTB, Coimbatore



National Science Day at RFRI Jorhat



Swachh Bharat Abhiyan at RFRI Jorhat



Swachh Bharat Abhiyan at ARCBR, Aizwal

**Varieties Released:**

IFGTB, Coimbatore

Non-exclusive licensing of Casuarina clones for commercial use:

Institute of Forest Genetics and Tree Breeding (IFGTB) has so far released 30 clones of Casuarina and Eucalyptus with superior characters like fast growth, wind-hardiness, drought tolerance, insect attack tolerance and ability to grow in sodic soils. The new clones are capable of producing 25 to 40% more pulpwood compared to the currently planted benchmark clone depending on the planting site and cultivation practices adopted. The wide adaptability, fast growth, pest tolerance and uniform growth of the clones help the farmers to realize the maximum potential of land and the crop and in turn increase raw material availability for paper industries.

In order to make these clones available to farmers and other tree growers in different locations, IFGTB has so far given six non-exclusive licenses to paper industries and private nursery operators for commercial production and supply of the new clones. The seventh license for commercial propagation of two Casuarina clones viz., IFGTB-CH-1 and IFGTB-CH-2 has been issued to Seshasayee Paper and Boards Limited (SPB), Erode, Tamil Nadu for deployment in its farm forestry programme. The Licence agreement was signed by Dr Mohit Gera, IFS, Director, IFGTB and Shri S. Velmurugan, Manager (Forests), SPB, in the presence of Dr. S. Murugesan, Group Coordinator (Research) and Dr. A. Nicodemus, Head, Division of Genetics and Tree Breeding on 21 February 2018. IFGTB has realized a total license fee of Rs.20,00,000/- through the seven licenses issued so far to different organizations.



**IFGTB released 30 clones of Casuarina and Eucalyptus with superior characters like fast growth wind-hardiness, drought tolerance**



**Awards:**

Distinguished Women Scientist Award for the year 2017 was awarded to Dr. Janhvi Mishra Rawat, Young Scientist, FRI, Dehradun on 23 February 2018 for her outstanding contribution in the field of Plant Biotechnology by Department of Science and Technology, Govt. of Uttarakhand.



**Women Scientist Award for the year 2017 was awarded to Dr. Janhvi Mishra Rawat, Young Scientist, FRI, Dehradun**



**Publications:**

Institute of Forest Genetics and Tree Breedings (IFGTB). Coimbatore released book on “Mara Sagupadi”- (Tamil) - Tree Cultivation practices during Tree Growers Mela 2018.

**HR News:**

**Appointment**

	<b>Date of Joining</b>
Dr. Nitin Kulkarni, Director, IFP, Ranchi	5.2.2018
Dr. Mohit Gera, IFS, Director, IFGTB, Coimbatore	12.2.2018
Dr. G. Rajeshwar Rao, Director, TFRI, Jabalpur	22.2.2018

**Retirement**

<b>Name of Officer</b>	<b>Date of Retirement</b>
Shri Krishna Kumar, Section Officer, FRI, Dehraun	28.2.2018
Shri K.K. Gaur, Section Officer, TFRI, Jabalpur	28.2.2018

**Consultancies:**

**ICFRE, Dehradun**

Presently works 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 and CMPDI Ranchi, NMDC Ltd. Hyderabad is in progress.

**Repatriation/ Relieving from ICFRE**

<b>Name of Officer</b>	<b>Date of Relieving</b>
Shri Akhilesh Kumar Sharma, DCF, TFRI, Jabalpur	February 2018
Shri Pradeep Bhardwaj, DCF, HFRI, Shimla	19.2.2018

**Transfer**

<b>Name of Officer</b>	<b>From</b>	<b>To</b>
Shri P. Arulrajan, IFS, DCF	IFGTB, Coimbatore	IFB, Hyderabad
Shri Anil V. John, DCF	IFB, Hyderabad	IFGTB, Coimbatore

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Dr. Suresh Gairola, Director General

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