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### 58<sup>th</sup> Meeting of ICFRE Board of Governors

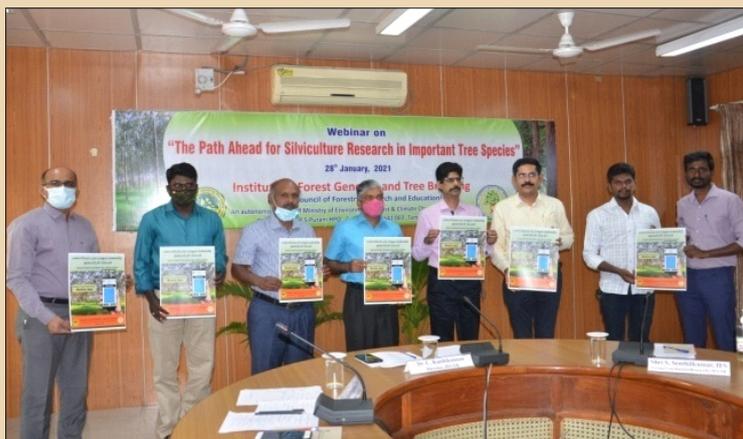
The 58<sup>th</sup> meeting of the Board of Governors (BoG) of ICFRE, Dehradun was held under the Chairmanship of Secretary, (EF&CC), Government of India and Chairman, BoG of the ICFRE on 22 January 2021. The Secretary (EF&CC) and Chariman, BoG in his opening remarks appreciated the innovative research initiatives of ICFRE. DGF&SS and Vice-Chairman, BoG appreciated the research activities of ICFRE. With the permission of the Chair, 13 agenda items were discussed ad seriatim. The Secretary, (EF&CC) and Chairman, BoG of ICFRE declared “ICFRE Awards for Excellence in Forestry - 2019” and the Board extended congratulations to the award winners. Seven publications were released by the Chairman, BoG of ICFRE.



58<sup>th</sup> Meeting of ICFRE Board of Governors

### ICFRE Green Products

IFGTB released three products developed by IFGTB viz. i) A farmer's friendly Mobile App “Wood Yield Calculator” for estimating yield in the plantations of *Melia dubia*, ii) “DYECOP face mask” – a plain weaved cotton, dyed with the extract of *Eucalyptus* leaves along with natural mordants like Myrobalan, *Aloe vera*, Turmeric & Pomegranate peel and iii) “IFGTB – Seed Cake Mix” for making seed balls which can be used for direct dibbling, broadcasting, aerial seeding, protection of seeds pathogens and pests on 28 January 2021.



Release of Mobile App “Wood Yield Calculator”



Release of “DYECOP Face Mask”

# SIGNIFICANT RESEARCH FINDINGS

## Forest Research Institute, Dehradun

- Assessed crop yield for Til & Sugarcane with Kadam, Kachnar and Bhimal at site 1<sup>st</sup>, Dhaluwala Kalan and site 2<sup>nd</sup>, Dhaluwala, Majbata at Haridwar respectively & data was compiled. Maintenance and monitoring of plantation of Kachnar, Bhimal and Kadam at above sites is in progress.
- Total eight samples of insect eggs for rearing were collected from New Forest area and Botanical garden, Dehradun from different forestry trees viz; *Dalbergia sissoo*, *Cassia fistula*, *Populus deltoides*, *Mesua ferrea* and *Morus alba*. Five egg parasitoids were identified up to species level which were sorted out from the previously collected sweeping samples: *Lymanenon* sp., *Mirufens afrangiata*, *Mymar taprobanicum*, *Ooencyrtus segestes* and *Trichogramma semblidis*.
- GIS based maps were generated for 8 species of the family Riodinidae sampled from field surveys in Uttarakhand. Larval host plants database was prepared for 110 species of butterflies belonging to 3 families sampled in Uttarakhand. 16 species of Papilionidae having 130 food plants, 20 species of Pieridae having 145 food plants and 74 species of Nymphalidae having 501 food plants.
- Experiments on life cycle in larval stages of Kharsu oak borer, *Xylotrechus basifuliginosus* Heller, were carried out and pupal stage was described. Experiments were also carried out on life cycle of one species of lymantrid defoliator feeding on Ban oak, *Quercus leucotrichophora* foliage collected from the field. GIS based maps were generated for depicting the spread of Kharsu oak forest and borer infestation in Chakrata Forest Division in relation to (i) disturbed and undisturbed oak stands (ii) 3 elevation gradients (iii) Forest sub-types. Database on Defoliators of Western Himalayan oaks was prepared for 15 more species and updated to a total 113 species of Lepidoptera.
- In the process of digitization of NFIC 600 photos were edited and compressed. Corrections in the database records of 3071 accessions/species based on the verification report prepared earlier by physically verifying each and every species in the collection, were done.
- Collected data on bio-efficacy test of JHTTA -1; JHTTA -D-2; JHTTA -Aug. 3; JHTTA -Aug. 4; JHTTA -Aug. 5; JHTTAD6; JHTTAD7; TTJ -2; TT-J-3; TT-J-4; TT-J-5, TT-J-D-6; TT-J-7; FRI - HS; and FRI-493 on *Hoplocerambyx spinicornis* analyzed with the support of Olfactometer in laboratory at different doses ranged from 50 to 200 micro litre and found JHTTA - D-1 @ 150 micro Litre has maximum attractancy potential in laboratory.

- During the month 2500 specimens have been digitized and entered in to Digital Herbarium Specimen Database. *Ficus laminosa*, *Mallotus albus*, *Ficus auriculata* collected from Bihar were incorporated in DD Herbarium.
- Lyophilized and milled needles of two populations of *Taxus baccata* occurring in Uttarakhand were extracted with methanol. The extracts were purified using column chromatography for their 10-Deacetylbaaccatin-III assisted screening.
- Needles of two populations of *Cupressus torulosa* grown in Uttarkashi and leaves of one population of *Neolitsea umbrosa* found in Suwakholi, Mussoorie of Uttarakhand were hydrodistilled and their essential oil contents were determined.
- Total phenolic contents and total flavonoid contents in the leaves of *Cupressus torulosa* and total flavonoid contents in the peels of *Punica granatum* to assess their antioxidant potential were determined.
- Zinc oxide nano particles using extracts isolated from knotwoods of *Eucalyptus citriodora*, *E. tereticornis*, *E. hybrid* and *Toona ciliata* to assess their biocidal potential against brown rot and white rot fungi were synthesized.
- Bacterial sequences were submitted to NCBI GeneBank and assertion number obtained as *Klebsiella aerogenes* (MW475284) (454(a), serawala agriculture,0-30), *Lysinibacillus acetophenoni* (MW362768) (424, ashabutter, khair forest,0-30), *Pseudomonas stutzeri* (MW444894) (466, serawala, khair forest, 30-60), *Pseudomonas mosselii* (MW479151) (HB01, 310 (a) Rtiya, mixed forest,0-30).

## Institute of Forest Genetic and Tree Breeding, Coimbatore

- Isolated 112 endophytic fungi from four different tree species viz., *Tectona grandis*, *Ailanthus excelsa*, *Gmelina arborea* and *Pterocarpus santalinus* from different locations in Tamil Nadu of which 15 were identified as endophytic fungi of entomopathogenic significance on *Eligma narcissus*. Molecular characterization of endophytic fungi *Aspergillus* sp., *Aspergillus terreus*, *Trichoderma harizanum*, *Acremonium borodinense*, *Lecanicillium lecanii* and *Phialemonium* sp. was carried out.
- Chitosan based nano particle was prepared and characterized. The entomopathogenic fungi were encapsulated with chitosan nano particle for further evaluation on targeted insect pests.

## Arid Forest Research Institute, Jodhpur

- Selected plants of *L. reticulata* were established in the shade house and field. Tissue culture protocol developed for multiplication of *reticulata* (Jivanti/Dodi). Nodal segments used as an explant for micropropagation showed 80-90% bud break response and 2-3 shoots proliferation

from nodal segments on modified MS medium supplemented with 5.0 mg/l BAP. Best *in vitro* shoots multiplication was obtained on modified MS medium supplemented with 2.0 mg/l BAP + 0.5 mg/l Kinetin + 0.1 mg/l IAA. Best *in vitro* rooting was obtained on 1/4th MS medium supplemented with 2.0 mg/l IBA and 100 mg/l activated charcoal. Best *ex vitro* rooting was obtained by pulse treating *in vitro* raised shoots with 200 mg/l IBA for 3 min. Different explants viz. leaves, flowers, internode and immature seeds were used for callus induction. Callus

initiation was obtained on modified MS medium supplemented with different concentrations of 2, 4-D. Callus obtained from leaves and internodal segments resulted in organogenesis where as callus obtained from flowers and immature seeds resulted in somatic embryogenesis. The tissue culture raised plants were hardened and acclimatized before field transfer.

### Consultancy

Presently works under 09 consultancy projects are underway. The works carried out during the month of January 2021 are as follows :

- i. Final report on 'Standardizing approach and methodology for Environmental Performance Indexing (EPI) for open cast coal mines' was submitted to CIL, Kolkata.
- ii. Preparation of Roadmap for EA-EPIR of 35 coal mines of CIL.
- iii. Eighth report of 3rd Party Monitoring of Activities Implements under CAT Plan of Vishughat Pipalkoti

Hydro electric project in Chamoli district, Uttarkhand submitted to THDC India Ltd, Rishikesh.

- iv. Field works for collection of study data were carried out under:
  - a) R & R Plan, BCT, Karnataka,
  - b) NMDC, BIOM, Kirandul South Buster, Chhattisgarh.
  - c) Biodiversity Assessment of Hasdeo Arand Coal field, Surguja, Chhattisgarh.

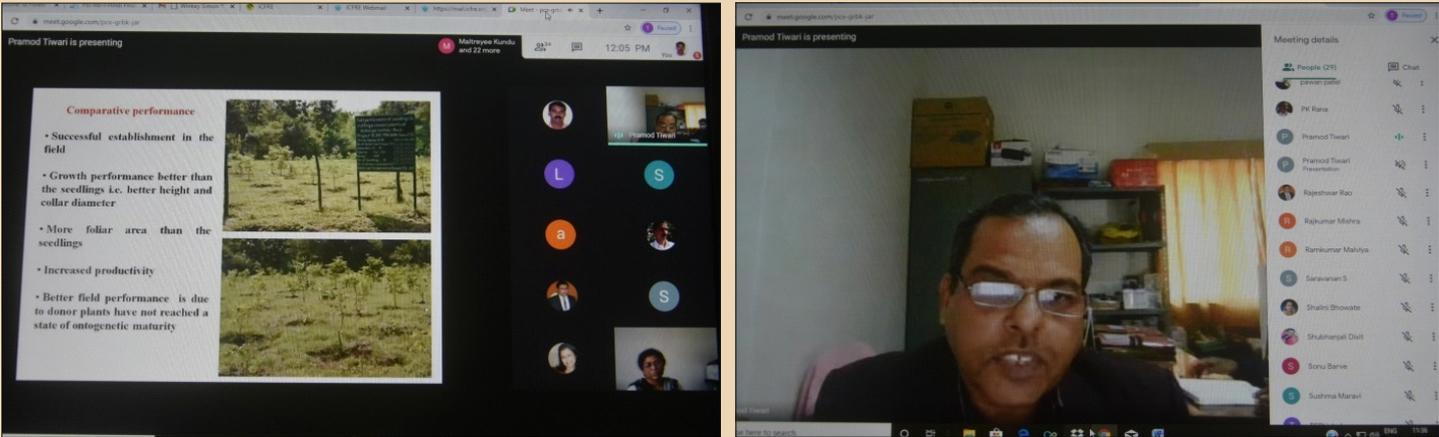
### Exhibition

Institute	Participated	Duration	Place
AFRI, Jodhpur	Atamnirbhar Bharat, 2021	11 and 12 January 2021	Udaipur, Rajasthan



AFRI, Jodhpur participated in Atamnirbhar Bharat 2021

## Workshops/ Seminars/ Meetings

S.No.	Topic	Duration	Beneficiaries
<b>Institute of Forest Genetic and Tree Breeding, Coimbatore</b>			
1.	Webinar on The Path Ahead for Silviculture Research in Important Tree Species	28 January 2021	Researchers
<b>Tropical Forest Research Institute, Jabalpur</b>			
2.	Webinar on Quality Planting Material Through Stock Plant Manipulation	6 January 2021	Research Scholars and Students of Forestry
			
Webinar on Quality Planting Material Through Stock Plant Manipulation			
<b>Arid Forest Research Institute, Jodhpur</b>			
3.	Webinar on Forest hydrology: Emerging Issues and Futuristic Directions	12 January 2021	Scientists & Technical staff of AFRI
<b>Himalayan Forest Research Institute, Shimla</b>			
4.	Seminar on Agroforestry in Trans Himalayan Cold Deserts: Diversity, Forestry interventions and Livelihood security	29 January 2021	Scientists, Technical Officers, Research staff and Students
<b>Institute of Forest Productivity, Ranchi</b>			
5.	Webinar on Wild Edible fruiting Species	14 January 2021	-
<b>Institute of Forest Biodiversity, Hyderabad</b>			
6.	Meeting on draft safeguards information system	4 January 2021	REDD+ to TSFD & OSFD officers
7.	Seminar on Conservation and Productivity Improvement of Red Sanders, <i>Pterocarpus santalinus</i> L.f	27 January 2021	Officials from IFB

**Trainings**

S.No.	Topic	Duration	Beneficiaries
<b>Institute of Wood Science and Technology, Bengaluru</b>			
1.	Advances in Wood Production and Utilization	4 to 8 January 2021	Indian Forest Service (IFS) Officers
2.	Sandalwood Nursery/Seed Handling, Nursery and Plantation Technology	20 and 21 January 2021	Farmers from various states
<b>Tropical Forest Research Institute, Jabalpur</b>			
3.	Organic Fertilizer & its Application	18 to 27 January 2021	Chhattisgarh Forest Department
<b>Arid Forest Research Institute, Jodhpur</b>			
4.	Rural Women Farmers on Application of Biofertilizers	6 and 29 January 2021	Rural women farmers of Mathania and Phalodi, Jodhpur
<b>Rain Forest Research Institute, Jorhat</b>			
5.	Bamboo	4 and 5 January 2021	Trainees from Arunachal University of Studies, Namsai, Arunachal Pradesh



Training and demonstration on various aspects of bamboo

**Institute of Forest Productivity, Ranchi**

6.	Training under HRD Plan on “E-Procurement & Purchase Management in Government, Storekeeping and Record Maintenance	12 and 13 January 2021	Administrative staff of different ICFRE institutes
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## Memorandum of Understanding

Director, IFP, Ranchi signed two MoUs on 18 January 2021 between one with Chief General Manager, Meghahataburu Iron Ore Mines, SAIL and another with Chief General Manager, Kiriburu Iron Ore Mines, SAIL for rehabilitation of stressed sites of approximately 8.50 hectare and 10 hectare area respectively in the next five years.

## Popularizing Forestry through All India Radio

Programme Topic	Channel	Date
<b>Forest Research Institute, Dehradun</b>		
Natural dyes from forest biomass	AIR, Akashvani Kendra, Dehradun	22 January 2021
<i>Bans ki kheti se krishikon ki samridhi</i>	AIR, Akashvani Kendra, Dehradun	27 January 2021
Bamboo cultivation Govt. Schemes profitability for farmers	Aakashvani, Dehradun and in NDUAT Masti Channel	29 January 2021
<b>Institute of Forest Genetic and Tree Breeding, Coimbatore</b>		
Gass Forest Museum	Suryan FM	27 January 2021

## HR News

### Appointment

Name of Officer	Date
Sh. Deepak Mishra, IFS, CF, ICFRE, Dehradun	25.01.2021
Sh. E. Venkatreddy, IFS, CF, IFB, Hyderabad	15.01.2021
Sh. Ajin Sekhar, Sci -B, TFRI, Jabalpur	01.01.2021
Sh. Rathod Digvijaysinh Umedsinh, Sci-B, TFRI, Jabalpur	04.01.2021
Sh. Kasushal Tripathi, Sci-B, TFRI, Jabalpur	04.01.2021
Ms. Aditi Tailor, Sci-B, AFRI, Jodhpur	05.01.2021
Ms. Anjali Joshi, Sci-B, AFRI, Jodhpur	08.01.2021
Sh. Kingshuk Modak, Sci-B, AFRI, Jodhpur	11.01.2021
Sh. Tanmay Kumar Bhoi, Sci-B, AFRI, Jodhpur	11.01.2021
Sh. Mohan C, Sci-B, TFRI, Jabalpur	11.01.2021
Sh. Neeraj Prajapati, Sci-B, TFRI, Jabalpur	11.01.2021
Sh. Nikhil Verma, Sci-B, TFRI, Jabalpur	11.01.2021
Sh. Mohit Hussain, Sci-B, FRI, Dehradun	12.01.2021
Sh. L.R. Lakshmikanta Panda, Sci-B, FRI, Dehradun	12.01.2021
Sh. Muhammad Ali Noushad, Sci-B, IFGTB, Coimbatore	12.01.2021
Ms. Jangam Deepika, Sci-B, TFRI, Jabalpur	13.01.2021
Sh. Vinod Kumar, Sci-B, IFB, Hyderabad	13.01.2021
Ms. Mudang Yampi, Sci-B, RFRI, Jorhat	13.01.2021
Sh. Kavi Sidharthan V, Sci-B, IFB, Hyderabad	15.01.2021
Sh. Vinod Kumar Kairon, Sci-B, FRI, Dehradun	15.01.2021
Sh. Sarath S, Sci-B, IWST, Bengaluru	15.01.2021

Sh. Dheeraj Kumar, Sci-B, FRI, Dehradun	15.01.2021
Sh. Ashrith K.N., Sci-B, IFGTB, Coimbatore	18.01.2021
Sh. Surthani Giri Babu, Sci-B, IWST, Bengaluru	18.01.2021
Sh. Nada Tadi, Sci-B, RFRI, Jorhat	18.01.2021
Sh. Ashutosh Pathak, Sci-B, FRI, Dehradun	18.01.2021
Sh. Kondeboina Murali, Sci-B, FRI, Dehradun	21.01.2021
Sh. Lokinder Sharma, Sci-B, FRI, Dehradun	22.01.2021
Sh. Abhishek Kumar Verma, Sci-B, FRI, Dehradun	25.01.2021

### Repartition

Name of Officer	Date
Sh. P. Kathirvel, IFS, DCF, IFGTB, Coimbatore	21.01.2021

### Retirement

Name of Officer	Date
Dr. P.V. Somsekar, CTO, IWST, Bengaluru	31.01.2021

### Patron:

Shri. A.S. Rawat, Director General, ICFRE, Dehradun

### Editorial Board:

Dr. Sudhir Kumar, DDG(Extn.), Chairman  
 Dr. Geeta Joshi, ADG (Media & Extn.), Honorary Editor  
 Shri Ramakant Mishra, CTO, (M&Extn.), Member

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