



ICFRE NEWSLETTER

November 2020

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Release of IFGTB's Herbal Hand Sanitizer

IFGTB formulated Herbal Hand Sanitizer using the leaf extracts of *Eucalyptus globulus* (eucalyptus), *Plectranthus Amboinicus* (Karpuravalli), *Lantana camara* and *Cymbopogon citratus* (lemon grass) plants enriched with phytochemical having significant antimicrobial activities in equal proportions along with isopropyl alcohol, water and glycerol which kills maximum (90-99%) of germs. The hand sanitizer is natural, harmless and safe to skin and keeps the hands soft and refreshed. Trade mark application for IFGTB's Herbal Hand Sanitizer has been submitted. The product was released on 25 November 2020 in the seminar "Role of Scientists and Science endeavours in finding solutions to combat COVID-19 pandemic".



Release of IFGTB's Herbal Hand Sanitizer

Patent

A patent entitled-'Natural fibre from *Pinus roxburghii* (Chir Pine) needles and a process of preparation' thereof having application No. 202011051242 has been filed on 25 November 2020 by FRI, Dehradun.

Constitution Day 2020

ICFRE and its institutes celebrated Constitution Day on 26 November 2020 for extending the ideology of Dr. Bhimrao Ambedkar to the people of India.



Significant Research Findings



Forest Research Institute, Dehradun

- Regional Variety Testing Committee (RVTC) has recommended six varieties of Neem developed by FRI, Dehradun for commercial release. Recommendations sent to MoEF&CC, New Delhi.
- Preparation of experimental sites and sowing of wheat agriculture crop at Dhaluwala (Haridwar) and Fatehpur Pelio (Saharanpur) were done. Recorded Til-kharif crop yield from Dhaluwala majbata (Haridwar) and Fatehpur Pelio (Saharanpur) sites. Compilation and tabulation of kharif crop yield and growth data of *G. arborea* & *E. officinalis* at Dhaluwala (Haridwar) and Fatehpur Pelio (Saharanpur) experimental sites were done. Maintenance and monitoring of plantation of *G. arborea* and *E. officinalis* at above sites is in progress.
- Preparation of experimental sites and sowing of wheat agriculture crop at Dhaluwala (Haridwar) was done. Recorded of Til-kharif crop yield at site of Dhaluwala Majbata (Haridwar) was done. Maintenance and monitoring of plantation of Kachnar, Bhimal and Kadam at above sites is in progress.
- The slant of nutrient agar for bacteria has been prepared for identification and isolation from surface of bhimal twig for extraction of fibre. The growth of bacteria is under observation for further experiment. In order to determination of chemical properties of bhimal fibre, process has been initiated in lab. Samples for determination of chemical properties of bhimal fibre are under process.
- Alternate host was sown in the pots and petri dishes for rearing of winter asexual phase of *Biazongia pistaciae* which forms leaf horn gall on *Pistacia integerrima*.
- A field survey for butterflies was carried out in three forest sub-types: 3C/C2a Moist Shiwalik sal forests; 5B/C1a Dry Shiwalik Sal Forest and 5B/C2 Northern Dry Mixed Deciduous forests in Dehradun (Thano ; Barkot, Lachiiwala, Asarori, Karvapani, Timli RF's) and Haridwar (Jhilmil Jheel RF) districts during the Post Monsoon season. 83 species were sampled on 9 transects including 3 specimens.
- A field survey was carried out in Kharsu oak forest in Deoban, Chakrata Forest Division, Dehradun district. Kharsu

oak trees were monitored for borer infestation. Two borer infested Kharsu oak logs were also brought to the laboratory for experiments on life cycle in larval stages. Experiments were also carried out on life cycle of 1 species of Lymantrid defoliator feeding on Ban oak, *Quercus leucotrichophora* foliage, collected from the field.

- Edited and compressed 104 photos of 51 species in cabinets No. 60, 66, 99 and 136. Corrections in the database records of 2105 accessions/species in the cabinets 72 (part) to 84 (part), based on the verification report prepared earlier by physically verifying each and every species in the collection were done. Updated photos records of insects in excel sheet. Changed or allotted new accession numbers to photograph files of eight species.
- Experiment for clonal resistance screening against leaf defoliator *Clostera cupreata* has been conducted for 10 poplar clones in the laboratory. Choice experiment of feeding have been conducted Leaf consumption area measurement/calculation have been done.
- Survey for collection of pteromalid parasitoids have been made in the fields, plantation and forest areas in Pauri, Garhwal, Bageshwar and some parts of Almora districts. Samples of leaf galls, stem galls, leaf miners were also collected from the New forest FRI and reared in the Lab.
- A field survey for sampling of moths was carried out in the Shiwalik range of Dehradun (Asarori, Mohand, Karvapani & Timli) and Haridwar (Jilmil Jheel) districts of Uttarakhand during post monsoon season. Moths were sampled using lights and moth screens from 7-10 pm daily. A total of 31 species of 5 families were sampled and identified from both tropical moist deciduous forest and northern tropical dry deciduous forest.
- Spectrophotometric analysis of wool and silk fabrics dyed with natural dyes derived from leaves of *Cassia angustifolia* and mordented with various metallic and herbal mordents.

Arid Forest Research Institute, Jodhpur

- A total 250 arid zone trees saplings were planted in the Judicial Academy area of Jodhpur.
- Treated wastewater collected from Salawas (Jodhpur) treatment plant was used to irrigate planted seedlings of seven species during 2013-14 to 2016-17 in Lysimeters of 4 m² area. After harvesting of the plants in September 2017, the tanks were left abandoned for natural processes.

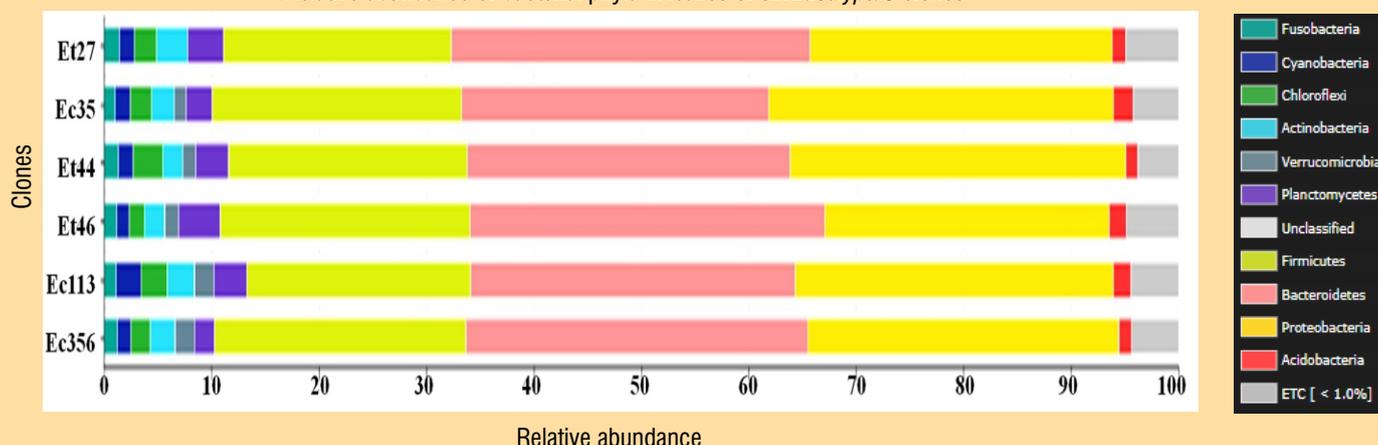
The herbaceous species regenerated in treated wastewater applied tanks (84) as well as in 6 additional tanks without any treatments were assessed in October 2020. There were 37 herbaceous species and tree seedlings recorded in these tanks. The species tolerant to wastewater disposed tanks were *Colophospermum mopane*, *Cenchrus biflorus*, *Vernonia cinerea*, *Pergularia daemia*, *Tephrosia purpurea*, *Eragrostis ciliaris*, *Dactyloctenium indicum*, *Prosopis juliflora*, etc.

Institute of Forest Genetic and Tree Breeding, Coimbatore

- The diversity of bacterial endophytes in *Eucalyptus tereticornis* and *E. camaldulensis* clones with contrasting response to drought stress was documented by sequencing the V3–V4 region of the bacterial 16S rRNA gene. Analysis revealed that bacterial richness and diversity was high in

E. camaldulensis and clones susceptible to stress. Additionally, taxonomic and functional biomarkers were recorded and the drought tolerant clones were enriched with *Oscillibacter* sp. The findings provide an insight into the endophyte diversity in *Eucalyptus* leaves and is the first report on documenting the endophyte abundance in drought stress responsive *Eucalyptus* clones.

Relative abundance of bacterial phyla in leaves of six *Eucalyptus* clones



Exhibition

Institute	Participated	Duration	Place
RFRI, Jorhat	North East Green Summit, fifth edition	16 to 18 November 2020	IIT, Guwahati



RFRI, Jorhat participated North East Green Summit fifth edition

Workshops/ Webinars/ Meetings

S.No.	Topic	Duration	Beneficiaries
Forest Research Institute, Dehradun			
1.	Exploration of Forestry based Technologies and Products	25 November 2020	Entrepreneurs, SFDs, NGOs, SHGs and other stakeholders

Institute of Wood Science and Technology, Bengaluru

2.	Wood Modification Technologies	19 November 2020	Wood Based Industries, Forest Corporations, Researchers, Foresters, Architects, and Students
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Arid Forest Research Institute, Jodhpur

3.	Safeguards Information System for REDD+	3 November 2020	Forest officials of Rajasthan and Gujarat, progressive farmers, NGOs, university personals and officers, scientists and CTOs of AFRI, Jodhpur
4.	Senior Forest Officers conference Telangana State Forest Department	17 November 2020	Senior Forest Officers



Workshop on Safeguards Information System for REDD+

Himalayan Forest Research Institute, Shimla

5.	Application of Modern Nursery Techniques in Forestry for Production of Quality Planting Stock and Enhancement of Field Survival in North Western Himalaya	3 November 2020	Scientists, DCFs, Technical Officers and other research staff of the Institute
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Seminar on Application of Modern Nursery Techniques in Forestry for Production of Quality Planting Stock and Enhancement of Field Survival in North Western Himalaya

Forest Research Center for Coastal Ecosystem, Visakhapatnam

6.	Conservation of Threatened Species of Eastern Ghats	10 November 2020	Officers and Scientist
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Trainings

S.No.	Topic	Duration	Beneficiaries
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Institute of Wood Science and Technology, Bengaluru

1.	Master Trainers on Indian Sandalwood	23 to 27 November 2020	Research and Technical Staff of ICFRE
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Rain Forest Research Institute, Jorhat

2.	Inoculation of Agar Wood (<i>Aquilaria malaccensis</i>)	4 to 8 November 2020	West Bengal Forest Department
3.	Bamboo Charcoal Production and Briquetting	13 November 2020	Villagers of Karbi Anglong district, Assam



Training on Bamboo Charcoal Production and Briquetting

Himalayan Forest Research Institute, Shimla

4.	Cultivation of Important Temperate Medicinal Plants	8 November 2020	Progressive Farmers of different villages of Lahaul Valley
5.	Nursery and Plantation Techniques of <i>Juniperus polycarpus</i> and Cultivation of Important Temperate Medicinal Plants	10 November 2020	Progressive Farmers from different villages of Lahaul valley and Front line staff of the Lahaul Forest Division

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| 6. | चिलगोजा के संरक्षण और इस के स्थायी प्रबंधन की आवश्यकता | 29 and 30 November 2020 | Farmers of Dubling Panchyat, of Pooh Forest Range, Kinnaur and farmers of Spillow Panchyat, of Pooh Forest Range, Kinnaur |
|----|--|-------------------------|---|



Training on चिलगोजा के संरक्षण और इस के स्थायी प्रबंधन की आवश्यकता

Institute of Forest Productivity, Ranchi

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| 7 | Networking and Hardware Maintenance | 25 to 27 November 2020 | Technical Staffs of ICFRE Institutes |
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Institute of Forest Biodiversity, Hyderabad

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| 8. | Research Methodology and Statistical Tools in Forestry for Technical Staff | 19 and 20 November 2020 | Technical Staff |
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Prakriti Programmes

- IFGTB, Coimbatore organized the online knowledge series on "Forest and Climate Change" under Prakriti programme on 10 November 2020. 100 students from Jawahar Navodaya Vidyalaya attended the programme.
- FRI, Dehradun organized a online lecture under Prakriti programme on "Cultural Heritage and Forestry of Meghalaya" to Students of KV AFS Bareilly, UP on 28 November 2020.



IFGTB, Coimbatore organized online knowledge series on Forest and Climate Change

Memorandum of Understanding

- MoU between IWST and Furniture and Fittings Skill Council (FFSC) has been signed by Director, IWST on 10 November 2020 to create skill development centers for training and capacity building for job roles under various occupations in industries and training of assessors and accreditation of training centers.
- MoU between ICFRE (represented by IFGTB) and Forest Departments of Tamil Nadu and Andaman & Nicobar Islands have been initiated and followed up with for the approval of respective SFDs.

Consultancy

ICFRE is presently working under ten consultancy projects, which are awarded by Tehri Hydro Development Corporation India Ltd; Himachal Pradesh Power Corporation Limited; Karnataka State Official Authority; MoEF&CC, GoI, New Delhi; Coal India Limited, Kolkata; NTPC Ltd Noida; NMDC Ltd, Hyderabad; Singreni Collieries Company Ltd., Kothagudem; Chhattisgarh Forest Department, Raipur; Deptt. of Forest and Environment, Bhubaneswar. These projects are related to one or other aspects of the environment. Following activities were done during the months under the ongoing consultancy projects:

- Working group meeting w.r.t Biodiversity Assessment Study of Surguja, Chhattisgarh was held.
- Field data on monitoring of CAT plan activities undertaken by Uttarakhand Forest Department under Vishnu Piaplkoti Hydroelectric project in Chamoli district of Uttarakhand for 7th Third Party Monitoring Report was collected and report compilation was done for submission to the THDCIL.
- Revision in the Report on Standardizing Approach and Methodology for Development of Environmental Performance Indexing (EPI) for open cast coal mine of Coal India Limited (CIL) was made and accordingly final report was submitted to CIL, Kolkata.

Awareness and Demonstration Programmes

- TFRI, Jabalpur organized demonstration cum awareness generation programme for B.Sc (Hon's) Agriculture students of School of Agricultural Sciences, Sausar, Chhindwara to demonstrate Nursery techniques, Organic manure preparation methods and their application, Plant Biopesticide preparation and their application methods, Extraction techniques for fatty oil and essential oil from plant material, Sustainable harvesting techniques of various NTFPs, Analytical method for organic carbon content in soil samples, Field identification of economically important plant species from 24 November to 1 December 2020.
- The ENVIS Resource Partner on Forest Genetic Resources and Tree Improvement at the IFGTB, Coimbatore organized an awareness campaign on 13 November 2020 to disperse the message on celebration of Green Deepavali following mandatory protocol to contain the spread of COVID-19.

HR News

Appointment

Name of Officer	Date
Sh. Shushant Kumar, IFS, DCF, FRI, Dehradun	26.11.2020

Repartition

Name of Officer	Date
Sh. N.C. Saravanan, IFS, Secretary, ICFRE	10.11.2020

Retirements/VRS

Name of Officer	Date
Dr. A.K. Pandey, Sci-G, FRI, Dehradun & ADG (M&Extn.), ICFRE, Dehradun	30.11.2020
Dr. G.R.S. Reddy, Sci-G, IFB, Hyderabad	30.11.2020
Sh. Rajeshwar Singh, ACTO, FRI, Dehradun	17.11.2020

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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