



**Indian Council of  
Forestry Research  
and Education**

# ICFRE NEWSLETTER

**Vol 21 No. 10 October 2021**



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## Azadi ka Amrit Mahotsav

- ICFRE, Dehradun celebrated ICONIC Week by organizing a lecture on "Avoiding usage of Single use Plastics for Environmental Safety" on 7 October 2021.
- A public awareness programme "To avoid Single Use Plastic" organized by FRCER, Prayagraj on 7 October 2021.
- IFGTB celebrated Iconic week 2021 by organizing an awareness event on the theme "Avoid the usage of single use plastics" from 4 to 10 October 2021.
- IWST, Bengaluru organized webinar on "Sandalwood farming and management of its health" on 11 October 2021. Stakeholders and farmers from across the country participated in the programme.
- IWST, Bengaluru celebrated Iconic Week on 6 October 2021 by organizing a lecture on Impact of single use plastic. A documentary on Midway: A plastic island by CNN was also screened.
- RFRI, Jorhat organized awareness programme to avoid the use of "Single Use Plastic" on 4 October 2021.
- FRC-LE, Agartala organized "Awareness Programme to Avoid the Use of Single-use Plastic" on 9 October 2021. Representatives from Samaj Shakti Society (Women's NGO), Youth for Integration and Development Initiative for Sustainable Advancement (DISA) attended the programme.
- AFRI, Jodhpur organized meeting on "Single use plastic – Iconic week celebration" on 6 October 2021.
- AFRI, Jodhpur organized lecture on "Carbon Sequestration and Rajasthan Forest" from 16 to 21 October, 2021). AFRI, Officers and staff attended program.
- HFRI, Shimla celebrated Iconic Week campaign for the prevention of single use plastic from 4 to 10 October 2021 and organized an awareness programme on 8 October 2021.



Awareness programme on Avoid the usage of single use plastics at IFGTB, Coimbatore



Environmental Conservation Awareness programme for the villagers by HFRI, Shimla

- HFRI, Shimla, organized programme on 'Environmental Conservation Awareness programme for the villagers' on 13 October 2021 at Khatnol, Khatnol Panchayat, Basantpur block, district Shimla on topic. 30 participants including villagers, teachers, students, youth club and Mahila Mandal attended the programme.
- IFP, Ranchi celebrated Iconic Week and on this occasion organized a seminar on "Removal of single-use Plastic" on 6 October 2021. 89 Scientists, officers, Staff and students attended the programme.



Awareness programme on To Avoid Single Use Plastics at HFRI, Shimla

- IFP, Ranchi organized a Cleanliness campaign in the Government School, Lalgutwa, Ranchi on the occasion of ICONIC week on 8 October 2021.
- ENVIS Resource Partner on Forest Genetic Resources and Tree Improvement at the IFGTB, Coimbatore organized Wildlife Week 2021 on 7 October 2021. An online elocution competition was also conducted for students and public on the topic "Importance of Wildlife".



Awareness programme on To Avoid the use of Single Use Plastics at FRCER, Prayagraj



Webinar on Removal of single-use Plastics at IFP, Ranchi



Cleanliness campaign organized by IFP, Ranchi

## Significant Research Findings

### Forest Research Institute, Dehradun

- Maintenance of established Bambusetum of 18 Bamboo species at farm, ICAR-IISWC, Punchkula and 11 Bamboo species of Bambusetum at Seed farm, PAU Ladowal, Ludhiana was done.
- A 6 days field sampling survey of moths was carried out in the Shiwaliks in Mohand, Sharanpur Forest Division, (Uttar Pradesh) in 5B/C1a Dry Shiwalik Sal Forest; Karvapani & Asarori,

Dehradun Forest Division, (Uttarakhand) in 3C/C2a Moist Shiwalik Sal Forest, from 13-24 October 2021. A moth screen with CFL lamp was used for sampling and collection of moths. Moths were sampled for three hrs (7:30 pm to 10:30 pm) each day. 29 species of moths belonging to 5 families were recorded and 18 specimens preserved. Moths were identified with the help of keys, books and photographs. The moth database was updated with 210 species belonging 10 families.

- Pine peat blocks were prepared using refiner at different disc spaces /passes. The properties of pinepeat blocks were evaluated with respect to various parameters viz. drainage rate, pH, CSF value and drainage time. The proximate chemical analysis of raw material (Depithed sugarcane bagasse) for the preparation of dissolving grade pulp and nanocellulose have undertaken in this period according to TAPPI standard protocols where chemical compositions of raw material with different aspects have determined such as moisture content (7.0%), cold water solubility (1.78%), hot water solubility (4.25%), 1%NaOH solubility (26.67%), klason lignin content (21.26%), extractive (4.60%), ash (1.8%) holocellulose (72.02%) and alpha cellulose(40.18%). On the basis of this analyses depithed sugarcane bagasse was found having low value of lignin and ash content but high alpha cellulose content as compared to whole sugarcane bagasse. Therefore raw material is suitable for the preparation of dissolving grade pulp and nanocellulose which is under processing.
- Population survey of *Machilus odoratissima* was conducted and seeds of *Acer pictum* were collected under AICRP seed project. Quality evaluation of the seeds is being done. Seeds of *Mitragyna parviflora*, *Zizyphus mauritian* and *Ficus bengalensis* were collected, and marked GPS location of *Terminalia belerica*, *Cordia dichotoma*, *Albizia procera* and *Aegle marmelos* in different forest divisions of Uttar Pradesh under National-FGR-Conservation project.
- Acute toxicity of the essential oil of *Cupressus torulosa* needles and *Neolitsea pallens* leaves was examined on Swiss albino mice using OECD 423 guidelines and the oils were found to be non toxic below 300 mg /Kg of body weight of the animal and suitable for conducting *in vivo* biological studies. Aqueous methanolic (25%) extract isolated from the needles of *C. torulosa* was examined for its *in vitro* anti-inflammatory activity using egg albumin method and was found to be comparable with the positive control diclofenac.
- Bark samples from 49 accessions of two populations of *Terminalia arjuna* from Jhansi and Lalitpur, U.P. were collected, and processed for marker assisted chemical screening of these populations. Bark of *T. arjuna* was defatted and extracted with methanol using ultrasonication. The extract was isolated after evaporating the solvent under vacuum for isolation of the marker compound, Arjunic acid.
- Fatty oil of *Princepia utilis* seeds collected from GHNP, Kullu of Himachal Pradesh was isolated and its contents were determined to be 30%. Acid catalyzed transesterification of the fatty oils isolated from *Princepia utilis* seeds of four locations

namely Sukki, Uttarkashi, Bagi Forest, Shimla, Rieya Forest, Manali Kullu, and GHNP, Kullu was carried out and their fatty acid methyl esters (FAMES) were prepared. These FAMES were analyzed by GC-MS and chemical composition of the fatty oils was determined.

- Method for isolation of natural dye from the peels of *Punica granatum* (PG) was optimized using Box Behnken design. Lyophilized and milled peels of PG were defatted with hexane and sequentially extracted with chloroform and 25% aqueous methanol using ultrasonication and the extracts were isolated after evaporating the solvent under vacuum.

## Institute of Forest Genetics and Tree Breeding, Coimbatore

- Standardized the optimum conditions viz., MLR, time, temperature and pH for extraction of maximum quantity of natural dye from the bark of *Careya arborea*.
- Seeds of *Bambusa bambos* were collected from the Western and Eastern Ghats during mast flowering. The seeds were tested for viability, germination, moisture content and electrical conductivity. They were then stored under different temperatures (-80°C, -20°C, 20°C, 15°C, 10°C, 3°C and ambient as control) and containers (Paper, cloth and plastic bags) to assess the rate of deterioration. The process underlying loss of viability was studied through changes in metabolic activities. Interim results reveal that at the end of two months, the rate of deterioration was low in seeds stored at low temperatures. Plastic containers retained viability better than cloth and paper bags. Reducing sugar levels were higher in seeds with a high loss in viability, while seeds that retained viability showed higher levels of carbohydrates and proteins with less ROS activity.

## Himalayan Forest Research Institute, Shimla

Identified 27 sources of *Trillium govanianum* from different geographical locations of Himachal Pradesh and studied the Diosgenin content (mg/g) variation among the population and of ranged from 0.033 to 2.03 mg/g. Developed nursery techniques and vegetative propagation method for *T. govanianum*.

## Consultancy

ICFRE works under 04 consultancy projects were carried out during the month of October 2021 were as follows:

1. Finalization of Annual Report (Year 2020-21) of Monitoring of NTPC Accelerated Afforestation programme of Plantation of 10 Million Trees – in the states of Madhya Pradesh, Maharashtra, Assam, Karnataka, Andhra Pradesh, Telangana and Bihar (NTPC Ltd., Noida).

2. Finalization of deposit 11A ML of BIOM in respect of Environmental Management Plan and Reclamation and Rehabilitation of three iron ore mining leases of BIOM, Kirandul complex, south Bastar Dantewada District, Chhattisgarh (NMDC Ltd. Hyderabad).
3. Field tour for EA-EPIR works of Ananta and Bharatpur OCP of MCL, Odisha under Environmental Audit and Environmental performance Index Ranking of 35 mines of CIL (Coal India Ltd. Kolkata).
4. Field studies for collection of one season data for R&R Plan Activities at John Mine (ML No. 2294) (M/s R. Praveen Chandra, ERM Group of Companies Chitradurga District, Karnataka).

## Workshops/Seminars/Meetings

S.No.	Topic	Duration	Beneficiaries
<b>Forest Research Institute, Dehradun</b>			
1.	Workshop on Climate Driven Effects on Indian Forests through long term Monitoring and Hydrological Services	8 October 2021	-
2.	Webinar on Forest Entomology	8 October 2021	Students of FRI deemed University
3.	Webinar on Biotechnological approaches in forest insect pest and diseases management	11 October 2021	-
<b>Institute of Forest Genetics and Tree Breeding, Coimbatore</b>			
4.	Research Advisory Committee Group Meeting	8 October 2021	-
<b>Institute of Forest Productivity, Ranchi</b>			
5.	Webinar on Plant phenology	4 October 2021	Scientists, Technical officers and Students
6.	Meeting on Releasing clones of Poplars	25 October 2021	-



IFGTB, Coimbatore conducted Research Advisory Committee Group Meeting



IFP, Ranchi organized Webinar on Plant phenology

**Training Programmes**

<b>S.No.</b>	<b>Topic</b>	<b>Duration</b>	<b>Beneficiaries</b>
<b>Indian Council of Forestry Research and Education, Dehradun</b>			
1.	Upscaling SLEM best practices	2 to 5 Oct 2021 4 to 14 Oct 2021 9 to 20 Oct 2021 15 to 19 Oct 2021 27 to 31 Oct 2021 28 to 31 Oct 2021	-
<b>Forest Research Institute, Dehradun</b>			
2.	Development of Agroforestry Practices for Livelihood Generation	11 and 12 October 2021	Farmers, NGOs, SHGs and other stakeholders
3.	Forest Fire Monitoring & Damage Assessment	21 and 22 October 2021	IFS officers
4.	Mushroom Cultivation	23 October 2021	-
<b>Institute of Forest Genetics and Tree Breeding, Coimbatore</b>			
5.	Capacity Building on the Development of Tree Rich Biobooster	1 October 2021	Irular tribes
<b>Rain Forest Research Institute, Jorhat</b>			
6.	Edible and Medicinal Mushroom Cultivation	4 to 6 October 2021	Technical staff of ICFRE Institutes
7.	Mushroom Cultivation and Spawn Production	4 to 6 October 2021	State Council of Science, Technology and Environment, Meghalaya
8.	Forestry in Addressing Livelihood Issues of People of NE States	28 to 29 October 2021	Personnel of other services



## Memorandum of Understanding

- RFRI signed a License Agreement on 21 October 2021 with Jabalpur based company, Pro Agro Tech for supplying of seven strains of PGPR.
- RFRI, Jorhat signed a MoU on 25 October 2021 with Jorhat Institute of Science & Technology to have collaboration on skill development, outcome based training and other R&D areas.
- RFRI signed a MoU with Environment & Forest Department, Government of Assam for further extension of VVK, Assam on 28 October 2021.
- AFRI, Jodhpur signed a MoU with Deputy Conservator of Forests, Udaipur on 4 October 2021, to establish and maintain Van Vigyan Kendra in Kalkamata Nursery, Udaipur.



RFRI, Jorhat signed MoU with JIST, Jorhat



AFRI, Jodhpur signed a MoU with Deputy Conservator of Forests, Udaipur

## Prakriti Programme

To generate awareness about nature and its conservation among students, a webinar was hosted as a part of “Online Knowledge Series - PRAKRITI – Nature Connect programme” in collaboration with CUBE organization, Singanallur, Coimbatore on 23 October 2021 on the topic “Cancer curing medicinal plants” and on 30 October 2021 on the theme “Quality Planting Stock production and cultivation of *Neolamarckia cadamba*”. A total of 45 students participated in the programme.

## Awareness and Demonstration Programmes

- IWST, Bengaluru conducted technology demonstration programme on “Wood Preservation Techniques” and “Medicinal Plants” at Valpoi through VanaVigyan, Satpal Goa.
- FRGER, Prayagraj organized a Demonstration-cum-training workshop on “वानिकी से उद्यमिता” in Padilla Research Nursery, Prayagraj on 8 October 2021.

## Popularizing Forestry through All India Radio/Doordarshan

Programme Topic	Channel	Date
<b>Forest Research Institute, Dehradun</b>		
उच्च कोटि के मिलिया का प्लाईवुड के लिए उत्पादन- डॉ. अशोक कुमार, वैज्ञानिक-‘जी’	Akashwani	12 October 2021
अकाष्ठ वन उत्पादन आधारित विभिन्न इकाइयों उपक्रम: निवेश की सम्भावनाएँ- डॉ. नीलू सिंह, वैज्ञानिक-‘जी’		

शहरी क्षेत्रों में वृक्षों की स्वास्थ्य समस्याएं एवं निदान-  
डॉ. अमित पाण्डेय, वैज्ञानिक-‘जी’

Akashwani

14 October 2021

पौधशाला के मुख्य रोग एवं उनका नियंत्रण-  
डॉ. शैलेश पाण्डेय, वैज्ञानिक-‘डी’

टिम्बर के लिए कोरिम्बिया हाइब्रिड का एग्रोफोरेस्ट्री में उत्पादन-  
डॉ. अजय ठाकुर, प्रमुख

Akashwani

20 October 2021

कृषि वानिकी कीट एवं उनका जैविक नियंत्रण-  
डॉ. अरविंद कुमार, वैज्ञानिक-‘ई’

Akashwani

25 October 2021

वन कीटों का व्यावहारिक नियंत्रण- सुश्री जी.एस. उमा, वैज्ञानिक-‘बी’

वृक्षों के हानिकारक कीट और उनकी रोकथाम-  
डॉ. रंजीत सिंह, वैज्ञानिक-‘जी’

Akashwani

26 October 2021

वन्य पौधों से स्वास्थ्य एवं पर्यावरण अनुकूल रंग-  
डॉ. वाई.सी. त्रिपाठी, वैज्ञानिक-‘एफ’

## Miscellaneous

### Institute

### Special Day/theme

### Duration

ICFRE and its institutes

Gandhi Jayanti

2 October 2021

ICFRE and its institutes

Vigilance Awareness week

26 October 2021

HFRI, Shimla

Rashtriya Ekta Diwas

31 October 2021



FR, Dehradun celebrated Gandhi Jayanti



IFGTB, Coimbatore conducted Vigilance Awareness Week



IFP, Ranchi conducted Vigilance Awareness Week



HFRI, Shimla celebrated Rashtriya Ekta Diwas

## HR News

### Retirements

Name of Officer	Date
Shri Netra Pal Singh, Section Officer, FRI, Dehradun	31.10.2021
Shri Ajay Gulati, Chief Technical Officer, FRI, Dehradun	31.10.2021
Smt. Shalini Bhowte, Scientist - 'C', TFRI, Jabalpur	31.10.2021

### Transfer

Name of Officer	From	To
Dr. S. Saravanan, Scientist - 'F'	TFRI, Jabalpur	IFGTB, Coimbatore
Ms. Neelu Singh, Scientist - 'F'	FRI, Dehradun	TFRI, Jabalpur
Dr. Surender Singh Bisht, Scientist - 'F'	IWST, Bengaluru	FRI, Dehradun
Ms. Shruti Godhara, Scientist - 'B'	RFRI, Jorhat	FRI, Dehradun
Ms. Nibedita Guru, Scientist - 'B'	FRI, Dehradun	RFRI, Jorhat

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