



Indian Council of Forestry Research
and Education

ICFRE NEWSLETTER

July to September 2017

Vol. 17 Nos. 2,3 & 4

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SIGNIFICANT RESEARCH FINDINGS



FRI, Dehradun

- The processing conditions and chemical extraction procedures are optimized for maximum extraction of reducing sugars from banana stem juice after experimenting under various sets of physico-chemical conditions. Optimum sugar generation has been confirmed spectrophotometrically (DNS method). Confirmatory experiments are on board with the interpretation of acid hydrolysis.
- Chemical analysis of sugarcane bagasse was performed to check its suitability for bioethanol and papermaking. Extraction of reducing sugar from bagasse dust was done under fermentable conditions. Approx. 14-16mg/ml of reducing sugar have been extracted under mild acidic condition with specific temperature and time. Further, the experiments are under process to enhance the recovery of reducing sugar from bagasse.
- Populations of *Rhododendron arboreum* grown in the forests of Pauri Garhwal and Uttarkashi were characterized for the total flavonoid contents (TFCs).
- Taxonomic study of Tettigoniidae (Orthoptera) of India (AICOPTAX). Following Tettigoniidae adults and nymphs were collected from New Forest area, *Conocephalus melaenus*, *Mecopoda elongata elongata*, *Sathrophyllia rugosa*, and *Letana megastridula*. Studies were also undertaken at Chidiyapur & Jhilmil, Haridwar.
- A major borer of cut and dry bamboo: Infested bamboo attacked by *Chlorophorus annularis* Fab. (Coleoptera: Cerambycidae) were collected from FRI Campus and in and around New Forest and caged in Zinc, Wooden, Chimney and outdoor cages for further observations. Mating behavior and longevity of male and female beetles were recorded.
- Verification of small insects in National Forest Insect Collection (NFIC): Digitization of small insects: 88 species (39 species of the genus *Onthophagus*, 1 each of *Cossolus*, *Oniticellus*, *Delopentus*, *Bolboceras* and *Othphnus*, 5 of *Drepanocerus* and 39 of Aphodius) of small beetles belonging to Scarabaediae (Coleoptera) were digitized with Automontage 3-D imaging system mounted on SMZ-16 Stereozoom Microscope.

- Sampling surveys were carried on collection of data and samples of butterflies in three different forest types: Kharsu oak forest (*Quercus semecarpifolia*); Moru oak forest (*Q. dilatata*) and Ban Oak Forest (*Q. leucotrichophora*) in Chakarata Forest Division and Dhanualty in Tehri Garhwal. Map of 21 different forest types generated on ArcMAP10.5. More insect specimens and data collected on butterflies. “Butterflies associated with different forest types/sub-types in Uttarakhand”.

IFGTB, Coimbatore

- 32 CPTs of *Acacia* were selected from Dharmapuri district Tamil Nadu.
- Clonal trials of *A. auriculiformis* established at Neyveli, Chennai and Peringamala (Kerala) during 2014 were evaluated for growth and form after 3rd years. Data were analysed using DATA PLUS and Genstat softwares. One clone (clone No. 27) performed better in terms of tree height, girth at breast height, stem straightness, clear bole height and apical dominance than control seedlings and Mysore Paper Mills hybrids.

AFRI, Jodhpur

- Soil organic carbon density analysed for four blocks namely Baitu, Sankada, Bap and Aburoad under

MPOWER project. Soil carbon density in top 0-30 cm soil layer ranged between 4.50 tons per ha in Baap block to 14.84 tons per ha in Baitu block.

- Soil samples collected from rhizosphere of *Dendrocalamus strictus* and *Bambusa bambos* from different sites of Rajasthan indicated presence of *Glomus*, *Acaulospora*, *Gigaspora* and *Sclerocystis*. Among these, *Glomus* occurred most frequently.
- Vegetative multiplication Garden of 15 *Casuarina* clones was established at AFRI Nursery.
- Somatic embryogenesis has been successfully initiated from callus derived from immature embryos of *Azadirachta indica*.
- A salt tolerance gene - SOS-1 upon *in silico* co-expression analysis revealed a very strong expression association with gene coding for Beta-glucosidase2 type protein (GBA 2) under the conditions of salinity stress.
- Observations on the effect of treated effluent application on tree seedlings performance indicated significant ($P < 0.01$) variations in height, collar diameter and crown diameter and their mean annual increments among the species. Best performing species were *A. indica*, *E. camaldulensis*, *P. juliflora* and *Salvadora persica*, whereas least performing species was *T. aphylla*.

TREE GROWERS MELA/ KISAN MELA



Institute	Mela/organized	Duration	Place
AFRI, Jodhpur	Kisan Mela/ Sangosthi	21 August 2017	KVK, CAZRI, Jodhpur
	Kisan Mela	15 September 2017	Agriculture Research Station, Mandore, Jodhpur
	Kisan Mela	15 September 2017	CAZRI
RFRI, Jorhat	Vanya Resham Krishi Mela	29 August 2017	Central Muga Eri Research & Training Institute (CMERTI), Lahdoigarh, Jorhat



RFRI, Jorhat participated in a Vanya Resham Krishi Mela

CONSULTANCIES



ICFRE, Dehradun

- MoU was signed between IWST, Bengaluru and Indian Plywood Industries Research and Training Institute (IPIRTI), Bengaluru on 29 August 2017 for initial period of five years that may be extended by mutual agreement for additional period. The main objective of the MoU is to conduct research on wood science and technology at national level and focuses its research activities on important forest research needs of the States of Karnataka and Goa at regional level and to undertake research & development, training & education, testing & standardization and extension activities on all technical aspects related to plywood and other panel products from wood, bamboo & all other lignocellulosic materials.
- Presently work on 09 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 are in progress.

- A consultancy for Preparation of Environment Management Plans and Reclamation And Rehabilitation Plans for BIOM, Kirandul Complex, Dantewada District, Chhatisgarh was awarded by NMDC Ltd, Hyderabad.

HFRI, Shimla

- A Memorandum of Understanding (MoU) was signed between HFRI, Shimla and M/s Ambuja Cement Pvt. Ltd., Darlaghat, distt. Solan (HP) for providing consultancy on the "Assessment and technical inputs on the works carried out by M/s Ambuja Cements Ltd. for Green Belt Development (GBD) and providing technical know-how for establishment of additional GBD areas. This consultancy has been approved for its implementation over a period of two years.

VISITS ABROAD



Name of Personnel	Institute	Purpose of Visit	Duration	Place
Dr. R.S. Rawat, Scientist-D	ICFRE, HQ			
Sh. Hans Raj, Scientist-C	ARCBR, Aizwal	Hand on training on REDD+ compass	24-26 July 2017	Kathmandu, Nepal
Dr. Tara Chand, Scientist-D				
Sh. Vishwajeet Sharma, RA-I				
Dr. V.P. Tiwari, Director	HFRI, Shimla	IUFRO 125 th Anniversary Congress	18-22 September 2017	Freiburg, Germany
Dr. Rashmi, Scientist-E	FRI, Dehradun			
Dr. K.K. Pandey, Scientist -G	IWST, Bengaluru	UNEP- Environmental Effects Assessment Panel (EEAP)	11-19 September 2017	Stratford-upon Avon, UK

POPULARIZING FORESTRY THROUGH ALL INDIA RADIO/DOORDARSHAN



Programme Topic	Channel	Date
Rain Forest Research Institute (RFRI), Jorhat		
Biodiversity Hotspots and its significance under the program of environment and ecosystem	All India Radio, Guwahati, Assam	17 August 2017



S.No.	Topic	Duration	Beneficiaries
Institute of Forest Genetics and Tree Breeding (IFGTB), Coimbatore			
1.	Expert Committee Meeting	21 August 2017	KVK, CAZRI, Jodhpur
2.	Third Periodical Seminar	28 August 2017	Scientists, officers and research staff including SRF's, JRF's, RA's and FA's
3.	Second Institute Level Periodical Seminar	21 July 2017	Scientists, officers and research staff including SRF's, JRF's, RA's and FA's
4.	Management of Invasive Plants in Forests	12 September 2017	60 Scientists, Research Officers, Research scholars
5.	Insect-Plant Interactions and its Potential Role in Forest Insect Pests Management	27 September 2017	60 Scientists, Research Officers, Research scholars
Institute of Wood Science and Technology (IWST), Bengaluru			
6.	<p>A Regional Research Conference was held at Institute of Wood Science and Technology, Bengaluru on 17 July 2017. Director General of Forests and Special Secretary to Ministry of Environment, Forest and Climate Change, Government of India, Director General ICFRE, all the Deputy Director Generals of ICFRE, Directors of ICFRE Institutes, PCCFs and Senior Officers of Karnataka, Tamilnadu, Andhra Pradesh, Telangana and Kerala Forest department, representatives from Universities, Research institutes, Industries, NGOs, Farmers and other Stake holders participated in the conference. About 100 participants attended the conference.</p>		
	 <p>Dr. Suresh Gairola, DG, ICFRE addressing Regional Research Conference at IWST, Bengaluru</p>		
7.	ICFRE Directors Meet	18 July 2017	Directors of all the ICFRE Institutes, DDGs and ADGs of ICFRE
Arid Forest Research Institute (AFRI), Jodhpur			
8.	Conservation of the Community Conserved areas (ICCAS), Orans/ Charnots	15-16 July 2017	Local Communities
9.	Weeds and invasive species <i>P. juliflora</i> problems and solution	One day	25 Participants

Himalayan Forest Research Institute (HFRI), Shimla

10.	Identification and Prioritization of Research Needs in Forestry	11 August 2017	Himachal Pradesh Forest Department, Universities and other Research Organizations, Industries, NGOs, Farmers, Local Bodies & Mahila Mandals etc.
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Identification and Prioritization of Research Needs in Forestry, HFRI, Shimla

TRAINING PROGRAMMES



S.No.	Topic	Duration	Beneficiaries
Forest Research Institute (FRI), Dehradun			
1.	Agroforestry and Land Management	18-20 September 2017	35 farmers & frontline staff of Punjab Forest Department
2.	Cultivation and utilization of Bamboo	22-24 August 2017	40 participants from various SHGs including women, and NGOs of Uttarakhand State
3.	Nursery diseases and their management	1-5 August 2017	Officials from State Forest Department of Uttarakhand and Maharashtra
Rain Forest Research Institute (RFRI), Jorhat			
4.	Skill Development Training for Eri Entrepreneurs	27 June - 9 July 2017	-
5.	Skill Development and Capacity Building of rural Youth for Livelihood Generation through Bamboo Handicrafts	28 August-9 September 2017	21 participants from Institution for Culture and Rural Development (ICARD)
6.	Nursery Techniques and Vermicomposting	14 -15 September 2017	JFMC, farmers and frontline staff
7.	Nursery Management, Bamboo Propagation and Cultivation, Value Addition, Seed Technology and Vermicomposting Techniques	1-4 September 2017	39 participants of Assam Forest School, Jalukbari, Assam
8.	Forestry in Addressing Livelihood Issues of People of North Eastern States	6-8 September 2017	32 participants including JFMC, SHG, NGO, Entrepreneur, etc.

9.	Role of Forestry in Sustainable Livelihood and Rural Development	20-22 September 2017	NGO personnel, JFMC Members, Students, Panchayat members, Personnel from Banking Institutions, Academia and Media persons etc.
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Organizers and participants of training programme "Agroforestry and Commercial Forestry"



RFRI, Jorhat organized a Training for Foresters



RFRI Imparted training to the other stake holders

Institute of Wood Science and Technology (IWST), Bengaluru

10.	Wood Utilization	25,28,29 of August 2017	RFOs of Tamil Nadu Forest Academy, Coimbatore
11.	Wood Polymer Composites	9- 11 August 2017	-
12.	Bamboo: Propagation, Value Addition and Marketing	18-22 September 2017	11 participants
13.	Forest, Wildlife and Environment Conservation	19-21 September 2017	26 beneficiaries from Business community related to forest, Excise Department, Forest Department, FRLHT etc.
14.	Nursery Practices of Sandalwood and Other Species	22 September 2017	25 Forest Department Officials
15.	Wood Seasoning and Preservation	25-28 September 2017	6 persons from AP timber Federation
16.	Statistical Methods in Forestry	13-15 September 2017	12 Research Staff
17.	Nursery Practice of Sandalwood and other Tree Species	22 September 2017	-

Centre for Forest-based Livelihoods and Extension (CFLE), Agartala

18.	Herbal Medicines	7 - 9 September 2017	-
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Himalayan Forest Research Institute (HFRI), Shimla

19.	Planting Stock Improvement for Productivity Enhancement	18- 20 July 2017	30 participants from Agriculture, Horticulture, Animal Husbandry, Rural Development, Land Records, Block Development Offices, Revenue etc.
20.	Conservation of <i>Pinus gerardiana</i> (Chilgoza) through Scientific Intervention in Moorang Forest, Himachal Pradesh	9- 10 August 2017	Farmers and Villagers
21.	High altitude Medicinal Plants Cultivation in Chenab valley (J&K)	21 August 2017	Local communities
22.	Cultivation of Atish, Ban Kakri, Chora and other important Temperate Medicinal plants	22 August 2017	45 progressive farmers
23.	Cultivation of Important Temperate Medicinal Plants: an Option for Diversification and Augmentation of Rural Income	Three days	35 participants including Representatives from banks, teachers, students, members of Panchayats, Mahila Mandals and Yuva Mandals, JFMC, NGO, villagers living near the forest areas.



A training programme on High altitude Medicinal Plants Cultivation in Chenab valley (J&K)

Centre for Forest-based Livelihoods and Extension (CFLE), Agartala

24.	Bamboo Harvesting and Preservation Techniques for Housing	19 August, 2017	30 beneficiaries from Barkathal, West Tripura district and Machmara, North Tripura district
25.	Product Development for Bamboo-based Livelihood Promotion	29 August to 30 August, 2017	25 Bamboo Artisans of Barjala Cluster

Arid Forest Research Institute (AFRI), Jodhpur

26.	Innovations in Forestry and Dry land Forestry from 29 to 31 August, 2017 under umbrella scheme of MoEF & CC	3 days	Panchayati Raj Institutions, Member of VFPMCs, NGOs, and School Teachers, Research Scholars from University and Scout Rovers
27.	Dry Land Forestry: Propagation, Development & Conservation	12 to 14 September 2017	38 (officers from PWD, PHED, JDA, Vidyut Vitaran Nigam, Watershed Development and Soil Conservation, Agriculture, Horticulture, Tourism, etc).
28.	Role of Forestry in Sustainable Livelihood	19 to 21 September 2017	37 participants (member from VFPMC, NGO, watershed development committees, scouts, school teacher and students from Ayurved University and Botany Dept. J.N.V. University, Jodhpur
29.	जैव उर्वरक एवं जैवकीय खाद तकनीक की कुटीर उद्योग में भूमिका	5 days	19 Farmers



A training programme on "Dry Land Forestry: Propagation, Development & Conservation"

Tropical Forest Research Institute (TFRI), Jabalpur

30.	वनों की उत्पादकता वृद्धि हेतु जैव कीटनाशकों एवं जैव उर्वरकों का प्रयोग	8-10 September 2017	48 Unemployed youth, members of SHGs and students
31.	Insect Pests in Forest Nurseries and Plantations and Their Control Measures	8 September 2017	16 SFDs
32.	लाख की खेती द्वारा अतिरिक्त आय	12-14 September 2017	45 Unemployed youth, members of SHGs and students
33.	Biodiversity Conservation and Environmental Awareness	16 September 2017	88 Students Navin Govt. Middle School, Poama, Chhindwara
34.	NWFP Harvesting, Processing & Value Addition/ Food from Forest	18 September 2017	16 Students and teachers, Bharat Bharti Vidyalaya, Chhindwara

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

35.	Internal Audit	20-21 July 2017	15 Scientists and staff
36.	Cultivation of Sandalwood and other Forestry Species	26 July 2017	50 farmers
37.	Field Identification of Important Timbers Species	24 to 28 July 2017	RFOs of KFD and students of College of Forestry
38.	Coir Pith Disc Making/ Developing Biobooster Disc/ Pellets	-	Women Self Help Groups (WSHGs) of Irular tribes
39.	Culture and multiplication of <i>Trichoderma viride</i>	29 & 30 August 2017	unemployed school drop outs, unemployed graduates, young farmers and young agriculture
40.	Bioprospecting and Biopiracy from organic wastes	13- 15 September 2017	Various Government departments, Tribal Welfare organisation etc.



Training for Women Self Help Groups (WSHGs) of Irular tribes at IFGTB, Coimbatore

Rajbhasha News



- ICFRE Celebrated Hindi Week from 7 to 14 September 2017. The closing ceremony was held on 14 September 2017. Dr. Suresh Gairola, DG, ICFRE was the Chief Guest on this occasion.
- Hindi Week was celebrated at RFRI, Jorhat from 14 to 21 September 2017. Various programmes including extempore speech, essay competition, quiz were organized in the occasion.
- Centre for Forest-based Livelihoods and Extension, Agartala observe
- Hindi Week was celebrated from 14-20 September 2017 at IFB, Hyderabad.
- A workshop on implementation of Rajbhasha held in official works was organized on 20 July 2017 at CFRHRD, Chhindwara.



Dr. Suresh Gairola, DG, ICFRE addressing at the closing ceremony of Hindi Week at ICFRE, Dehradun



Hindi week celebration at RFRI, Jorhat



Hindi week celebration at CFLE, Agartala

Visit of Dignitaries



FRI, Dehradun

- Shri Andrew Ayre, British Deputy High Commissioner, Chandigarh visited Forest Research Institute, Dehradun on 17 August 2017.
- Shri K.V. Choudhary, Chief Vigilance Commissioner (CVC), New Delhi visited Forest Research Institute, Dehradun on 13 August 2017.
- A delegation of Indonesia visited Forest Research Institute, Dehradun on 5 September 2017.



Shri Andrew Ayre, British Deputy High Commissioner, Chandigarh visited Forest Research Institute



Deputy Chief Minister of Arunachal Pradesh at RFRI, Jorhat

RFRI, Jorhat

- Dr. K. Dhileepan, Senior Principal Scientist, Biosecurity, Ecosciences precinct, Queensland, Australia visited IFGTB, Coimbatore and delivered a special talk on Management of Invasive plants in Forests on 12 September 2017.
- Mr. Chowna Mein, Deputy Chief Minister of Arunachal Pradesh along with three Scientists from the state namely Shri Egam Basar, Dr D. Yonggam and Dr. O. Apang visited RFRI, Jorhat on 11 September 2017. Mr. Chowna Mein emphasised on many issues and sought the cooperation of RFRI in the development process of Arunachal Pradesh.

Director General Visits

Dr. Suresh Gairola, Director General, ICFRE visited IWST, Bengaluru and a meeting was held on 22 August 2017.

Patents

A patent application No. TEMP/E-1/27105/2017-DEL 201711026681 for the title "A Plant Based Microscopic Immersion Oil Formulation" was filed on 27 July 2017 by FRI, Dehradun

Awareness and Demonstration Programmes

- AFRI, Jodhpur organized a demonstration programme on Skill Development (Skill India) from 21-30 August 2017 on value addition of *Momordica dioica*. 204 participants from VFPC/SHG in tribal dominated area of Abu Road block in Sirohi district of Rajasthan attended the programme.
- IWST, Bengaluru conducted demonstration programme for the forest officials on Wood Preservation on 23 Aug 2017.
- IWST, Bengaluru demonstrated Simple treatment techniques of bamboo treatment by sap displacement method to 50 students of Forestry College, Ponnampet, Karnataka on 28 July 2017.

HFRI, Shimla

- A demonstration on Nursery techniques and maintenance of Himalayan medicinal plants was given on 22 August 2017 to 30 gardeners of Bhaderwah Development Authority at Bhaderwah (J&K).

RFRI, Jorhat

- A demonstration programme on Bamboo Nursery, Bambusetum, Tissue Culture Laboratory, Bamboo Handicrafts and Bamboo Preservation Techniques were given to 15 college students and 6 visitors at RFRI, Jorhat on 21 July 2017.

SKILL INDIA

Skill Development Programme at AFRI, Jodhpur from 21- 30 August 2017



Washing of fruits of *M. dioica*



Cutting and weighing of fruits



Passing through boiled water



Drying of fruits



Preparation of pickle



Distribution of pickle among SHG members



Institute	Special day/ Theme	Duration
FRI, Dehradun		14 July 2017
AFRI, Jodhpur		6 July 2017
IFB, Hyderabad	Van Mahotsav	6 July 2017
RFRI, Jorhat		1 to 7 July 2017
HFRI, Shimla		6 July 2017
FRI, Dehradun	Swachata Pakhwara	30 June - 14 July 2017
IFGTB, Coimbatore	Dr. S. Kedharnath Memorial Lecture	28 July 2017
IFGTB, Coimbatore		
RFRI, Jorhat	World Ozone Day	16 September 2017
CFLE, Agartala		
AFRI, Jodhpur		
CFLE, Agartala	World Bamboo Day	18 September 2017



Celebration of Van Mahotsav at HFRI, Shimla



Celebration of Van Mahotsav at FRI, Dehradun

OTHER IMPORTANT ACTIVITIES



CFLE, Agartala organised a project launching ceremony for execution of project on the theme “Promotion of Bamboo Preservation for Construction of Earthquake Resilient Structure” funded by National Mission on Himalayan Studies (NMHS) under MoEF & CC, Govt. of India on 6 July 2017. Mr. Jagdish Singh, IFS, Addl. PCCF (P&D), Govt. of Tripura graced the occasion as the Chief Guest.

XXIII SOCIETY MEETING



XXIII Annual General Meeting (AGM) of ICFRE Society was held on 28 September 2017 at Paryavaran Bhawan, New Delhi. The ICFRE Annual Report 2015-16 was adopted in the meeting.



XXIII Society Meeting

AWARDS

Dr. Girish Chandra, ICFRE received the prestigious International “Cochran-Hansen Prize” 2017

Dr. Girish Chandra, Scientist-C, Division of Forestry Statistics, ICFRE received the prestigious International “Cochran-Hansen Prize” 2017 given by International Association of Survey Statisticians (IASS), in the field of Survey Research during World Statistics Congress 16-21 July 2017 at Marrakech, Morocco. This biennial award is given to the best research paper in survey given to the best research methods of the young statisticians from the developing countries. Dr. Chandra received this prize for the application of ranked set sampling methods in response estimation of developmental programs implemented by government and non government organization in successive phases. He was also honored by the Indian ambassador of Morocco Dr. Kheya Bhattacharya.



Dr. Girish Chandra, Scientist-C, ICFRE (middle) received the prestigious International Cochran-Hansen Prize 2017

HR NEWS



Name & Designation

Date

Repatriation/ Relieving from ICFRE

Appointments

Deputation:

Shri S.D. Sharma, IFS, Director (IC), ICFRE
Shri Anil Kumar, Hindi Officer, FRI, Dehradun

11.07.2017
22.09.2017

Promotion

Shri V.B. Jakhmola, Section Officer, ICFRE

01.07.2017

Dr. U. Prakasham, IFS, Director, TFRI, Jabalpur
Dr. N.K. Vasu, IFS, Director, AFRI, Jodhpur

08.08.2017
31.08.2017

Retirement

Dr. H.B. Vaishtha, Scientist-F, FRI, Dehradun
Dr. Rajiv Rai, Scientist-F, TFRI, Jabalpur
Shri M. Venkateswara Rao, Scientist-F, IFB, Hyderabad
Shri V.K. Dhawan, Scientist-B, FRI, Dehradun

31.07.2017
31.07.2017
31.07.2017
31.08.2017

Patron:

Dr. Suresh Gairola, Director General

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