

## From the Director's Desk

### GREETING FROM TFRI FAMILY,



I take pride in sharing the tenth issue (April-June, 2023) of ICFRE-TFRI Newsletter, showcasing, significant research activities, events organized, participated and publications made during the period.



I hope this newsletter will be helpful for researchers, different stakeholders, and policy makers concerned with forestry research.

**Dr. Nitin Kulkarni**  
Director, ICFRE-TFRI Jabalpur

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## Celebration of World Environment Day

ICFRE-TFRI, Jabalpur conducted series of events to commemorate the World Environment Day. In the key event, various influential public figures including Shri Rinkuj Vij, Chairman, Nagar Nigam, Jabalpur; Smt. Chandrakiran Goswami, Janpad President, Janpad; Smt. Manju Neeraj Garg and Smt. Taruna Sonkar, both Janpad Members; Shri Manoj Yadav, Mandal President; Shri Saurabh Rai, Sarpanch Saliwada and Shri Swarnajeet Singh Babbu graced the occasion.

Shri Rinkuj Vij presented his gratitude towards ICFRE-TFRI for conducting this public event. He also led the pledge to become environment responsible citizen and reduce plastic usage.

Dr. Nitin Kulkarni, Director, TFRI in this address sensitized the masses about the increasing land degradation in the country and emphasized the need to curb single use plastic usage.



## MAJOR EVENTS

### National Conference

A two days National Conference on “Value addition and marketing of Non-Timber Forest Produce (NTFPs)/ Medicinal and Aromatic Plants (MAPs) for Livelihood Security - virtual mode” was conducted during 2<sup>nd</sup> & 3<sup>rd</sup> May 2023 at ICFRE- Tropical Forest Research Institute, Jabalpur. Dr. Nitin Kulkarni, Director, ICFRE-TFRI welcomed the honored guests and delegates. The Chief guest, Shri A.S. Rawat, IFS, Director General, ICFRE, Dehradun inaugurated and released the souvenirs.

Prof. Dr. Tanuja Nesari, CEO, National Medicinal Plant Board and Dr. H.S. Gupta, Ex PCCF, Jharkhand state and current Chair of Excellence (Forest Productivity & Livelihood) graced as the guest of honour for the event.

The conference covered various aspects of NTFPs *i.e.*, conservation, domestication, resource assessment, collection, harvesting, processing, value addition, bio-prospecting, indigenous traditional knowledge, adulteration, quality control and biotechnological approaches for NTFP/MAPs species.



### Development and use of Herbal Products for healthy Lifestyle

A program on “Development and use of Herbal Products for healthy Lifestyle” was organized on 23<sup>rd</sup> May 2023 at ICFRE- TFRI campus. Programme was attended by dignitaries including Smt. Hansha Thakur, Manager, Patanjali Aarogya Jabalpur; Dr. Renu Pandey, Principal, SAIT Jabalpur; Smt. Apoorva Killedar, Dy. S.P. Barela; Dr. Jaya Singh, Director, BCRBC, Jabalpur; Shri Ambica Patel, Founder of Agadyati Herbs & Food Pvt. Ltd, Kundam, Jabalpur; Sarpanch of Barela, Jamtara and Saliwada gram Panchayat of Jabalpur.

Programme Coordinator, Smt. Neelu Singh, briefed about the program under Mission LiFE and herbal products developed by TFRI. More than 150 people including teachers and students of SAIT, Jabalpur, progressive farmers of Saliwada, Neemkheda and Barela villages, Jabalpur, Scientists and employees of TFRI, Jabalpur attended the program.



*Scientist's Corner*

## Research activities/Initiatives

### Preparation of forest soil health cards for all forest divisions of Madhya Pradesh

Tropical Forest Research Institute, Jabalpur prepared forest soil health cards for Madhya Pradesh by collecting a total number of 2545 soil samples (0-30cm, 30-60cm, 60-90 cm soil depths) from 63 territorial forest divisions. One of the major achievements of the project is the development of standard values for different parameters for the forest soils of Madhya Pradesh. On 22<sup>nd</sup> May 2023, Shri Bhupender Yadav, Hon'ble Minister of Environment, Forest and Climate Change, New Delhi, released the Forest Soil Health Cards of Madhya Pradesh at ICFRE, Dehradun in the presence of Shri C. P. Goyal, Director General of Forests and Special Secretary; Shri A.S. Rawat, Director General, ICFRE; and Dr. N. Kulkarni, Director, ICFRE-Tropical Forest Research Institute (TFRI), Jabalpur. Soil health cards which consist of whole some information on macro and micronutrients status of 63 forest divisions of Madhya Pradesh are ready for implementation in the field. Forest soil health cards will be useful for identifying the soil related constraints of the areas. This is a pioneering work facilitating management of plantations raised by State Forest Departments, forest development corporations and other tree growers in a scientific manner.



Release of Forest soil health cards for Madhya Pradesh by Shri Bhupender Yadav, Hon'ble Minister of Environment, Forest and Climate Change, New Delhi

**Dr. Jangam Deepika, Scientist-B**  
**Dr. Avinash Jain, Scientist-F**

### Combating desertification by enhancing vegetation cover and people livelihoods in degraded dry lands and deserts of India

Visited the plantation site in Chambal ravines during April, 2023 and inspected the instrumentation for run off and sediment measurement such as coshocton wheel, H-flume etc. laid by Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya (RVSKVV), Gwalior. Growth parameters of the saplings, status of check dams and operation of Automatic Weather Station were also evaluated.



**Shri M. Rajkumar, Scientist-D**

## Research activities/Initiatives

### Performance of fodder under fodder bank established in Chhattisgarh for sustainable production

To ensure sustainable supply of fodder to domestic animals/ livestock during summer season, an experiment was initiated with fodder yielding grass species. Fodder bank was established with grass and fodder tree species in Chhattisgarh viz Napier Grass (*Pennisetum purpureum*), Marval grass (*Dichanthium annulatum*) and Buffel grass (*Cenchrus ciliaris* L.).



Dr. Nanita Berry, Scientist-F

### Optimization of protocol for natural dye extraction from *Careya arborea* (Kumbhi) stem bark and *Woodfordia fruticosa* flowers

Optimized the protocol (material to liquor ratio, time, pH, absorbance etc) for extraction of dye from the stem bark of *Careya arborea* and flowers of *Woodfordia fruticosa*. Further possibilities for functional evaluation and value addition are being explored.



Chopped bark of *C. arborea*



Dye from stem bark of *C. arborea*



Flowers of *W. fruticosa*



Dye from *W. fruticosa* flowers

Dr. Hariom Saxena, Scientist-E

## Research activities/Initiatives

### Standardization of cultivation techniques for *Desmodium gangeticum* and *Uraria picta*



**Cultivation of  
*U. picta* in field**

**Cultivation of  
*D. gangeticum* in  
field**



*Desmodium gangeticum* and *Uraria picta* are commonly known as Salparni and Prishnaparni, respectively. These species are among ten species of Dashmoolarishta which is an established ayurvedic formulation used to treat ailments like fatigue, oral ulcers and a myriad of gynaecological problems.

**Dr. Hariom Saxena, Scientist-E**

### Standardization of vegetative propagation technique of *Dillenia pentagyna*

*Dillenia Pentagyna* Roxb. is commonly known as Dog Teak, Kallai, Karkotta and Karmal, As one of the native plants in India, its fruits, leaves and bark have been documented to have good therapeutic values and used as traditional medicines. For instance, the root and fruit of the plant are consumed for body pain relief and dropsy therapy. The dried fruit of *D. pentagyna* is a source of 'Malabar Nagakesara' drug widely utilized in therapeutics especially in disorders of GIT, skin, and bleeding disorders. *D. pentagyna* is a critically endangered species in Madhya Pradesh state. Vegetative propagation technique of *Dillenia pentagyna* has been standardized for its conservation.



**Vegetatively prepared plants of *Dillenia pentagyna***

**Dr. Hariom Saxena, Scientist-E**

### Assessment of native tree species in removal of lantana

Allelopathic effects of *Lantana camara* (leaf and root extractives) have been assessed on growth and germination of tree species- *Albizia procera*, *Albizia lebbek*, *Cassia fistula*, *Tamarindus indica* and *Dalbergia sissoo* to evaluate the potential of native species to replace notorious weed lantana. Phytotoxic effect of lantana allelochemicals was also assessed.



**Shri Neeraj Prajapati, Scientist-B**

## Research activities/Initiatives

### Conservation of Forest Genetics Resources

New seed sources identified for *Pterospermum acerifolium* and *Cochlospermum gossypium*. To access field performance, a nursery trial initiated for 8 species: *Semecarpus anacardium*, *Putranjiva roxburghii*, *Mallotus philippensis*, *Buchnanian lanzan*, *Stereospermum chelonoides*, *Kydia calycina*, *Feronia limonia* and *Hymenodictyon excelsum*. Seed handling and testing protocol development work is going on in these species.



In order to protect wild fruit yielding species, nursery protocol (Seed and Vegetative) development work initiated on *Semecarpus anacardium* and *Flacourtia indica*.

Seed handling, testing and storage protocol work of orthodox seeds of selected 45 RET species of central India are being experimented.



**Shri Manish Kumar Vijay, Scientist-B**

### ICFRE -Coordinated Consultancy Project

Studies are being carried in Jayant Opencast Coal mine of NCL, Singrauli, Madhya Pradesh out with the team of experts from ICFRE, Dehradun to assess the changes in composition of the flora and fauna and the impact on forest fringe communities due to the construction of a coal-transportation road.

The study aims to assess the impact on the overall human health and well-being needs of the forest fringe communities of the affected area due to resultant changes in forest and forest-based food, nutrition, and water availability, consumption patterns and the institutions of local governance that ensure conservation of forest resources.



**Shri M. Rajkumar, Scientist-D**

## Third Party Environmental Auditing and Environment Performance Index Ranking of Cluster VII Coal Mines, BCCL Dhanbad, Jharkhand.

Indian Council of Forestry Research and Education (ICFRE) has been awarded a consultancy project for Third Party Environmental Auditing and Environment Performance Index Ranking of 35 coal mines of Coal India Ltd. As a consultant member of ICFRE team, the conditions laid down in the Environmental Clearance (EC) issued by MoEF&CC for OB Dump Management and Surface Water Management were reviewed, the compliance of the project proponent together with the project approval plans and other warranted approvals of the mine were vetted, and specific findings pertaining to the domain of 'Biological Environment' was prepared and submitted to Nodal Officer, EM Division, ICFRE for Cluster VII Coal Mines, BCCL Dhanbad, Jharkhand.



Cluster VII Mines of BCCL Dhanbad, Jharkhand



ICFRE Team of Experts with Mine Officials (left) and on-site field inspection (right)

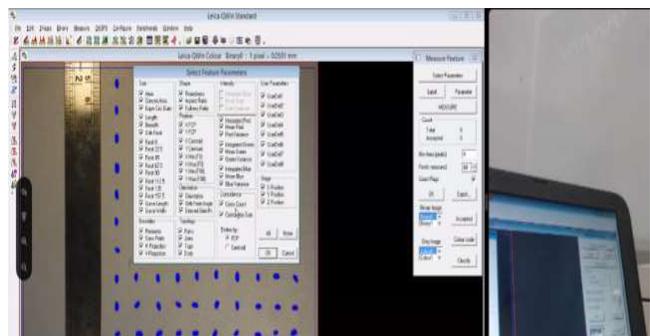
**Shri Ajin Sekhar, Scientist-B**

## New infrastructure created

### Image Analysis: A Modern Approach for Seed Quality Testing

In order to address the difficulties of traditional seed morphometry investigation, ICFRE-Tropical Forest Research Institute has established the capability of seed image analysis under the ongoing National Programme for Conservation of Forest Genetic Resources funded by CAMPA.

Machine vision system, including image analysis techniques, hold the potential to enable researchers to conduct more detailed studies on seed morphology, anatomical activity during germination and the growth of germinated seedlings. It is based on the extraction of numerical data from a captured image for characteristics like size, shape of seed and seedlings and their subsequent processing with the help of suitable computer software.



**Shri Manish Kumar Vijay, Scientist-B**

## VISIT OF DIGNITARIES

Shri Vivek Khandekar, APCCF (Social Forestry), Pune and Shri Ramesh Kumar, CCF (Social Forestry), Nagpur, Maharashtra visited ICFRE - Tropical Forest Research Institute, Jabalpur on 18<sup>th</sup> April 2023 to discuss availability of the quality planting material of different species of bamboo and future collaborations.



Shri AK Patil, IFS, General Manager, Madhya Pradesh State Forest Development Corporation, Bhopal, Madhya Pradesh visited ICFRE - Tropical Forest Research Institute, Jabalpur on 7<sup>th</sup> June 2023 and had discussion with Dr. Nitin Kulkarni, Director and other senior scientists. On this occasion, Mr. Patil discussed the experiences of the institute in plantation of *Melia dubia* tree species in Betul and Balaghat districts of Madhya Pradesh and other related aspects.



ICFRE - Tropical Forest Research Institute Jabalpur organized a talk by Prof. S. S. Sandhu, Director, BioDesign and Innovation Centre, Rani Durgawati Vishwavidyalaya, Jabalpur on "Intellectual Property Rights: protection of intellectual property, need of the hour" on 12<sup>th</sup> May, 2023.

The program aimed at sensitizing young scientists and students to understand the importance of the protection of intellectual property rights arising out of ongoing research and identify such opportunities relating to the valuable forest wealth.



## EXPOSURE VISITS OF STAKEHOLDERS

On 19<sup>th</sup> April, 2023, 44 Forest Range Officer Trainees 2022 to 2024 Session, Kundalpur Academy, Sangli, Maharashtra visited Tropical Forest Research Institute. During the visit, Dr. Nitin Kulkarni, Director, discussed various forestry research subjects with the trainee team and informed about the activities of the institute. On this occasion, a tour of the main demonstration area was also conducted by the scientific and technical officer of the institute.



Students of Army Public School No. 2, Jabalpur visited Tropical Forest Research Institute, Jabalpur on 22<sup>nd</sup> April, 2023.

Dr. Nanita Berry, Head, FE division demonstrated the TFRRI activities to the group of Students of Gyan Ganga Institute of Technology & Science, Jabalpur (MP) on 12<sup>th</sup> May, 2023.



Shri Rawatpura Government Ayurvedic Medical College and Hospital's 2<sup>nd</sup> year pharmacy students (70 no.) visited (ICFRE) - Tropical Forest Research Institute, Jabalpur (M.P.) on 6<sup>th</sup> June, 2023.

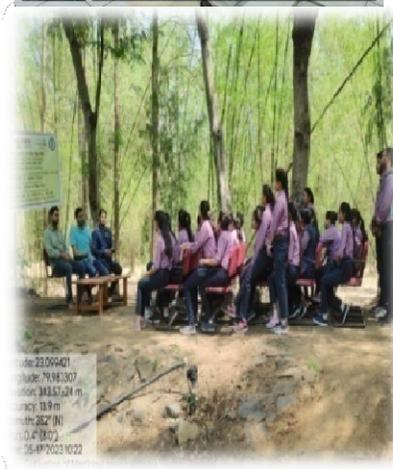
## TRAINING AND CAPACITY BUILDING

### Short term (75 hours) training course on various topics

**ICFRE-TFRI conducted short term training course ( 75 hours) for St. Aloysius College students (90 no.) on various topics.**

**Duration: 08 May 2023 to 08 June 2023 was conceptualized and coordinated by Smt. Neelu Singh, Scientist-G, GC (Res.)**

- Plant tissue culture
- Charcoal and its briquette preparation
- Paper recycling
- Phyto-sociological study
- Wet preservation of plants
- Ethnomedicinal knowledge
- Fatty oil and soap utilization
- Extraction and estimation of fatty oil
- Agarbatti/dhoopbatti preparation
- Herbal pesticide preparation
- Herbarium preparation
- Plant dye extraction
- Essential oils extraction
- Plantation/ Nursery technique
- Estimation of total phenolic compounds in plants
- Soil analysis
- Water analysis
- Vermicomposting
- Jivamrit preparation
- Mushroom cultivation
- Extraction and testing of antifungal activities of plant extract



## VOL-10 April-June, 2023

### Events organized under Mission LiFE

Meeting cum sensitization of ICFRE - Tropical Forest Research Institute Jabalpur and FRSDC, Chhindwara employees was organized on 9<sup>th</sup> May, 2023 to prepare action plan and adopt activities of the Mission LiFE under the chairmanship of Dr. Nitin Kulkarni, Director, TFRI.

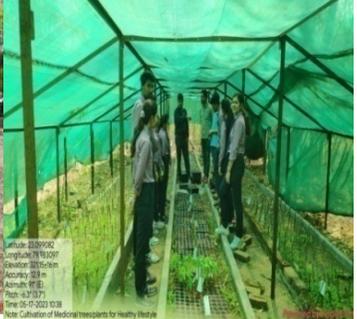


Team ICFRE-TFRI consisting of Shri Ajin Sekhar, Scientist-B, Shri Arunendra Chaturvedi and Shri Khilendra Kumar distributed and assisted plantation of medicinal plants in Dhamtari, Chhattisgarh, under Mission LiFE.

Executed a series of events (600) under the seven themes of Mission LiFE since 10<sup>th</sup> May 2023 to 31<sup>st</sup> May 2020 with involvement of employees in groups and as individuals.



Smt. Neelu Singh, Scientist-G organized three programmes under **Mission LiFE** on "Recycling of Bio-waste", "Development and use of herbal products" and "Cultivation of medicinal trees/ plants for healthy lifestyle".



## Events organized



**Celebrated National Civil Service Day, 20/04/2023**



## World Earth Day

Celebrated World Earth Day on April 22, 2023. Dr. Nitin Kulkarni, Director gave the message of environmental protection to the students of Army Public School No. 2, Jabalpur. Dr. Nanita Berry, Scientist- F & Head, Forest Extension Division, displayed the research and activities of the institute that aid in the protection of the planet.



## World Environment Day



ICFRE - Tropical Forest Research Institute (TFRI) Jabalpur conducted series of events to commemorate the United Nations acclaimed World Environment Day. An environment awareness rally to clean plastic around the institute was carried out involving around 200 people including scientists, officers, research scholars, under training students of St. Aloysius College, local vendors and residents of Neemkheda, Jabalpur.

### Quiz and Painting competition



Dr. Nitin Kulkarni, Director, TFRI felicitated winners of painting, quiz and slogan writing competition that was conducted to generate environment awareness among the students and employees of institute. Shri Shashank Gupta and Late Shri Ramu Naik (Posthumously) were felicitated with special award for conserving biodiversity.



## International Biodiversity Day

ICFRE-TFRI celebrated “**International Day of Biological diversity, 2023**” with the theme “Agreement to Action- Build back biodiversity” by conducting a series of events from **20<sup>th</sup> to 22<sup>nd</sup> May, 2023**

Conducted **Treasure Hunt** with the message of Mission LiFE and exploring the rich biodiversity of the TFRI campus for research fellows, PhD scholars and children of TFRI staff on 20<sup>th</sup> May, 2023.



Organized a **talk by Dr. Kailash Chandra**, former Director, Zoological Survey of India and Professor at National Forensic Sciences University on “Faunal Diversity of India and its conservation” on 22 May, 2023 followed by **Screening of Oscar winning best documentary – “The Elephant Whisperes”**. Over 120 scientists, technical officers, staff and research fellows of the Institute and around 50 students from St. Aloysius College participated in this event.



Shri P. Subramanyam, IFS and Deputy Director General of forests and Dr. Murlu Krishna, Scientist, Integrated Regional Office MoEFCC delivered a talk on “Current threats to biodiversity and role of LiFE mission in conservation” on 22 May, 2023 at 4:00 PM.



## Awards



Dr. Nitin Kulkarni, Scientist-G & Director, ICFRE-Tropical Forest Research Institute, Jabalpur has been awarded with **Paryavaran Shri Samman** during 1<sup>st</sup> International Conference on "Nature and Natural Sciences (ICNS-2023)" organized by RDVV, Jabalpur jointly with TFRI and ABRF, Prayagraj among other Co-organisers on 5<sup>th</sup> & 6<sup>th</sup> May, 2023

Smt. Neelu Singh, Scientist-G & GC(R) has been conferred with **Lal Bahadur Shastri Glocal Award for Biodiversity** by Glocal Environment & Social Association, New Delhi for commendable contribution in the field of "**Conservation of Nature & Natural Resources**" during 1<sup>st</sup> International Conference on Nature and Natural Science (ICNS, 2023) on 5<sup>th</sup> & 6<sup>th</sup> May, 2023 organized and hosted by Rani Durgavati Vishwavidyalaya Jabalpur.



- ❖ Shri. Manish Kumar Vijay, Scientist-B bagged **Best Oral Presentation Award** in the 1<sup>st</sup> International Conference on Nature and Natural Sciences (ICNS 2023) (5<sup>th</sup> - 6<sup>th</sup> May, 2023) held at Rani Durgavati Vishwavidyalaya (RDVV), Jabalpur (M.P.)
- ❖ Shri. Manish Kumar Vijay, Scientist-B bagged **Best Oral Presentation Award** in the 2<sup>nd</sup> National Conference on "Value addition and Marketing of NTFPs/ MAPs for Livelihood Security (NCVAM - 2023) (02<sup>nd</sup> - 03<sup>rd</sup> May, 2023 Virtual mode TFRI, Jabalpur)

- ❖ Dr. Mohan C (Sci-B) has been awarded with "**Dr. A.P.J. Abdul Kalam Young Scientist Award in the field of Entomology**" on the occasion of 12<sup>th</sup> National Conference on Natural Sciences (Virtual mode), jointly organized by Pushkaram college of Agricultural Science and Tamil Nadu Scientific Research Organization, Pudukottai, Tamil Nadu.
- ❖ Dr. Darshan K., Sci.-B bagged **Best Oral Presentation Award** in the 2<sup>nd</sup> National Conference on "Value addition and Marketing of NTFPs/ MAPs for Livelihood Security (NCVAM - 2023) (02-03 May, 2023 Virtual mode TFRI, Jabalpur)
- ❖ Dr. Darshan K., Sci.-B bagged **third prize in Oral Presentation** during the 1<sup>st</sup> International Conference on Nature and Natural Sciences (ICNS 2023) (5<sup>th</sup> - 6<sup>th</sup> May, 2023) held at Rani Durgavati Vishwavidyalaya (RDVV), Jabalpur (M.P.).

## Radio Talk



- ❖ Shri N.D. Khobragade, Scientist-E delivered Radio talk on Agroforestry on 02<sup>nd</sup> May 2023 at 7:20 pm on Kisanwani, Akashwani Kendra, Chhindwara (M.P.)

## New Publications

### Popular Article

- ❖ सिंह एन. (2022). प्लास्टिक का विकल्प: समय की मांग, तरुचिन्तन, पेज क्रमांक 85-86.
- ❖ झारिया, डी . पी . एवं बेरी , एन. (2022). मेंदा लकड़ी (लिटसिया) अगरबत्ती उद्योग हेतु महत्वपूर्ण प्रजाति , तरुचिन्तन. पेज क्रमांक. 49-50.
- ❖ विजय, एम . के . एवं बेरी, एन. (2022). स्थानीय वृक्ष प्रजाति: वन उत्पादकता वर्द्धि में अहम् योगदान , तरुचिन्तन. पेज क्रमांक 46-48.
- ❖ दुबे, एस. एवं राय, एन. (2022). चिरौंजी : मध्य भारत के आदिवासियों की आजीविका का महत्वपूर्ण स्रोत, तरुचिन्तन. पेज क्रमांक 66-67.

### Research papers

- ❖ Saxena, H.O., Parihar, S., Mohammad, N. and Pawar, G. (2023). Variability studies in *Stereospermum suaveolens* (Roxb.) DC. – a threatened Dashmool species from Central India. *Vegetos*, pp. 1-9.
- ❖ Saxena, H.O., Parihar, S., Pawar, G. and Rao, G.R. (2023). Simultaneous densitometric determination of  $\beta$ -sitosterol and lupeol through validated HPTLC method in different plant parts of *Uraria picta* (Jacq.) Desv. ex DC. – A dashmool species. *Acta Chromatographica*, 35(1): 99-105.
- ❖ Saxena, H.O., Parihar, S. and Das, A. (2023). Assessment of Variations in Phytochemical Components in Stem and Root Bark of *Dillenia pentagyna* from different Locations of Madhya Pradesh. *Biological Forum – An International Journal*, 15(2): 185-190.

### Book Chapter

- ❖ Berry, N. (2023). Chapters contributed in the Book titled FAQs on Agroforestry. Eds. Dr. Geeta Joshi *et al* 2023, ADG,(Media and Extension), ICFRE, Dehradun publication. pp: 1-164.
- ❖ Mohan, C. (2023). Ecofriendly insect pests management in medicinal and aromatic plants. In. S.V.S. Raju (Ed.) Recent Trends in Insect Pests Management, Akinik publications. pp.47-64. ISBN: 978-93-5570-614-0.
- ❖ Mohan C, Sowmya, P., Dubey, S. and Kumar, A. (2023). Biological testing of insecticides with emphasis on environment. In. S.K. Mahapatra (Ed.) Advances in Agricultural Research Methodology. Pp.84-94. SP publications. ISBN. 978-93-57807-11-1

## Upcoming events

Regional Research Conference will be held in third week of August, 2023 at TFRI, Jabalpur on “Nursery technology for Propagation of difficult tree species”.

## Joining and Superannuation

Sl. No.	Particulars	Name of officers/staff	Post	Date
1.	Joining	Shri Darshan Gattani, IFS	Dy.C.F. (Admin)	29/05/2023
2.	Superannuation	Shri H. D. B. Anthony	STO	31/05/2023

## Infrastructure and facilities available at ICFRE-TFRI, Jabalpur



**National Insect Repository**

- 750 species of insects.
- recognized by **National Biodiversity Authority (NBA)** as National Repository

- **4000 Fungal specimens** systematically arranged and documented and 451 species of Fungi identified.
- Forest fungi identification service available



**Mycology Herbarium**



**Herbarium**

- **800 plant specimens** preserved in Herbarium .
- Forest Ecology & Climate Change Division provides services of plant identification on submission of specimens.



**Non Timber Forest Produce (NTFP) Demonstration Centre  
Interpretation Centre - Museum**



**Interpretation Centre -  
Museum**

## Testing facilities available at ICFRE – TFRI, Jabalpur

S. No.	Parameter	Price in ₹
1	pH	100/-
2	EC	100/-
3	Organic Carbon (OC) /Organic Matter	100/-
4	Major nutrients (N, P, K, Ca, Mg, Na)	300/- each and 1500/- package
5	Micronutrient (Mg, Ni, Zn, Fe, Co, Cr, Cu, Mn, B)	300/- each and 2000/- package
6	Texture analysis	500/-
7	Bulk Density	150/-
8	Total soil Analysis (1 to 7)	4000/-
9	Dry matter / Moisture percentage	100/-
10	Plant testing – N, P, K, Ca, Mg, Na	250/- element and 1300 /-for all
11	Plant identification charges	250/- specimen
12	Bio- control agent-egg parasitoid card (25000 eggs /card)	300/- card
13	Laboratory testing of pesticide ( biopesticide / insecticide) against insect defoliator/ white grub	20,000/- per defoliator 40,000/- per white grub
14	Field testing of insecticides against termites and insect defoliators	1,00,000/-
15	Identification services for decay fungi/mould	1000/ species
16	Identification of fungal specimen and its matching with herbarium	250/-
17	Micro photography of fungi	100/-
18	Seed germination and viability test	500/- sample
19	Seed purity tests	400/- sample
20	Moisture content of seeds	200/- sample
21	Determination of phenols ( if standards available)	600/- samples
22	Determination of tannins ( if standards available)	600/- samples
23	Determination of carbohydrates ( if standards available)	600/- samples
24	Determination of starch ( if standards available)	600/- samples
25	Determination of chlorogenic acid ( if standards available)	600/- samples
26	Determination of Protein ( if standards available)	600/- samples
27	Chemo profiling of medicinal plants with the help of HPTLC	2000/- for the first sample & 500/- per subsequent sample of the same sp.
28	Leaf area Measurement	200/-
29	Estimation of a single marker constituent in plant extract	5500/- sample for Academia / R &D, 10000/- sample for Industry
30	Ash Content	610/-sample for Academia , 1100 / sample for Industry
31	Microscopic analysis	500/- samples

## Services available for the Society

*Plant Species and plant Available for Sale at Genetics and Tree Improvement Division, TFRI, Jabalpur*

### Improved Varieties- Cost per plant- Rs. 50/- plant

S. No.	Species	Number of Plants Available
1.	<i>Rauvolfia serpentina</i> TFRI RS-1 (Sarpagandha)	200
2.	<i>Rauvolfia serpentina</i> TFRI RS-2 (Sarpagandha)	150

### Bamboos Species- Rs. 25/-plant

S. No.	Species	Number of Plants Available
1.	<i>Bambusa bambos</i> (Katang bans)	1350
2.	<i>Bambusa vulgaris</i> (var. green)	110
3.	<i>Bambusa nutans</i>	75
4.	<i>Dendrocalamus strictus</i> (Lathi bans)	940
5.	<i>Dendrocalamus longispatus</i>	100

### Tree Species and Medicinal Plants- Rs. 25/- plant

S. No.	Species	Number of Plants Available
1.	<i>Tectona grandis</i> ( Teak, Sagoan)	200
2.	<i>Dalbergia latifolia</i> ( Kala shisham, Rosewood)	200
3.	<i>Celastrus paniculatus</i> (Malkagini, Jyotishmati)	100
4.	<i>Plumbago zeylanica</i> (Chitrak)	100
5.	<i>Oroxylum indicum</i> (Shivnag)	50
6.	<i>Tamarindus indica</i> (Imli)	150
7.	<i>Azadirachta indica</i> (Neem)	50



*Plant Species and plant Available for Sale at Silviculture, Forest Management Division, TFRI, Jabalpur*

### Medicinal Plants- Rs. 30/- plant

S. No.	Species	Number of Plants Available
1.	<i>Tinospora cordifolia</i> (Giloy)	100
2.	<i>Aegle marmelos</i> (Bel)	50
3.	<i>Cymbopogon citratus</i> (Lemon grass)	100
4.	<i>Oroxylum indium</i> (Shyonak)	50
5.	<i>Mimusops elengi</i> (Moulshri)	100
6.	<i>Asparagus racemosus</i> (Satawar)	100
7.	<i>Artemisia annua</i> (Davana)	30
8.	Other Species	As per availability



Delivered 150 Bamboo based pot with plants as memento for during 1<sup>st</sup> International Conference on Nature and Natural Science (ICNS, 2023)

Plant with Bamboo pot - 60 Rs/per pot  
Without Bamboo pot - 30 Rs/per pot

## Guest House facilities and Charges

S.No	Category of Person	Rent per day while on Govt. Duty (Rs.)		Rent per day while not on Govt. Duty (Rs.)	
		Room	Suit	Room	Suit
1	A) Officials of ICFRE and institutes B) Consultants and research Fellow at ICFRE and its institutes and FRI Deemed Universities C) Officials and experts of MoEF&CC, New Delhi D) Officials of SFDs E) Ex- employees of ICFRE and Ex-Deputationist	150	200	200	300
2	Family members of present /ex-employees a) ICFRE Employees b) ICFRE Deputationist			200	300
3	a) Officials of Autonomous bodies, Universities under the FRI Deemed University b) Officials of Central/State Government other than SFDs	200	300	400	500
4	Others (Non Governmental)			600	750
5.	Community garden/hall with Permanent Stage (Facilities of changing room/ sitting room )	50,000/per day			



Maintenance charges in addition to above rent will be applicable as follows :

Accommodation type	Maintenance charge including A/C ,Heater Charges
Room	200
Suit	250



*Patron*

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## ABOUT THE INSTITUTE

Tropical Forest Research Institute, Jabalpur (Madhya Pradesh) came into existence in April 1988, to provide strong research support to sustainable development of forest and forestry sectors in central India comprising the states of Madhya Pradesh, Chhattisgarh and Maharashtra.

It is one of the nine Regional institutes under the Indian Council of Forestry Research & Education, Dehradun (Uttarakhand).

Forest Research Centre for Skill Development, Chhindwara, came into existence on 30th March 1995. It was declared on 3rd January 1996, a satellite Centre of Tropical Forest Research Institute, Jabalpur.



## CORE RESEARCH AREAS

- ❖ Eco-restoration of Vindhyan, Satpura and Maikal hills and Western Ghats, Rehabilitation of mined areas.
- ❖ Development and Demonstration of Agroforestry Models
- ❖ Forest Protection
- ❖ Biofertilizers and Biopesticides
- ❖ Non-Wood Forest Products
- ❖ Biodiversity Assessment, Conservation and Development
- ❖ Sustainable Forest Management
- ❖ Planting Stock Improvement
- ❖ Climate Change & Environment Amelioration
- ❖ Forest Products Development

