





#### From the Director's Desk ::

I am pleased to mention that ICFRE-TFRI, Jabalpur, one of the nine regional institutes under the ICFRE provide strong research support for sustainable development of forests and forestry sectors in central India.

I take pride in sharing the 17<sup>th</sup> Volume (January-March, 2025) 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. H. S. Ginwal Director, ICFRE-TFRI Jabalpur

#### **Contents** Content Page No. Major Events Scientist's Corner Training & Capacity Building **Outreach Programmes** 10 **Important Visits** 12 Celebration of Important Days 13 Staff News 14 **Publications** 14 Media Coverage 16 Knowledge Bequest of ICFRE-TFRI 17 Testing Facilities Offered 18 Services for to make your society 19 green and healthy

## **Major Events**

ICFRE-Tropical Forest Research Institute (TFRI), Jabalpur, organized a five-days IFS refresher training program titled "Agroforestry and Farmer Livelihood: Problems and Solutions for Various States" from 3rd to 7th February 2025. Indian Forest Service officers from Uttarakhand, Haryana, Maharashtra, Odisha, Andaman and Karnataka attended the program. Dr. H.S. Ginwal, Director of ICFRE-TFRI, welcomed the partivipants and highlighted about the institute's history, objectives and appraised them contributions forestry research. Mr. Jagdish Chandra, former PCCF (Haryana) & HoFF, served as the chief guest He emphasized the historical relevance and importance of traditional agroforestry models. Dr. Nanita Berry, Training Coordinator, briefed the training objectives and course structure focused on enhancing farmer livelihoods through agroforestry. Dr. Shyam Vishwanath (former director of KFRI), heads of divisions, scientists, and other TFRI officials graced the event.



• A MoU was signed between ICFRE-TFRI, Jabalpur, and State Forest Research and Training Institute (SFRTI), Raipur (CG) on 30<sup>th</sup> January 2025 to extend TFRI technologies among the Chhattisgarh forest officials focusing on training, capacity building and sustainable forest management.







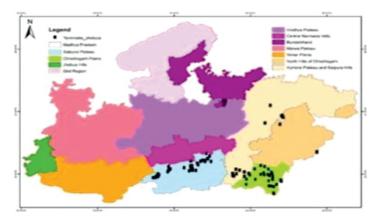


### January-March, 2025 VOL:17

#### **SCIENTIST'S CORNER**

Identification of Prominent Populations of Terminalia chebula (Harra) and Anogeissus latifolia (Dhawda) in Madhya Pradesh Based on Active Chemical Constituents

• Prominent locations of *Terminalia chebula* (Harra) were identified and a distribution map of the species in Madhya Pradesh was prepared. The fruit samples were collected from 84 beats of 14 forest divisions. The content of gallic acid in collected fruit samples varied from 0.43±0.02 to 6.22±0.25%. Average fruit size (length x width) varied from 493.31 to 1151.13 mm² for the samples collected from Dodramau beat of West Chhindwara and Bhimpur beat of North Betul forest divisions.



Dr. Hari Om Saxena Scientist-E

Current status of nursery diseases and insect pests of important species in forest nurseries of Madhya Pradesh and their eco-friendly management.

• A periodic survey was conducted in selected Social Forestry (SF) nurseries across Madhya Pradesh, including: Rewa (Jayant Kunj Social Forestry Nursery), Panna (Vishramganj Forest Nursery), Shivpuri (Tuki Social Forestry Nursery), Guna (Cantt. Forest Nursery), Bhopal (Ahmadpur Social Forestry Nursery) and Sagar (Sijhora Social Forestry Nursery). Observations were recorded on pest damage affecting seedlings of important tree species such as Teak, Khamer, Arjun, Mahua, Chirol, Karanj, Aonla, Jamun, Neem, Bael, Sissoo, Siris, Sonpatha, Kusum, Bamboo and other species. Insect pests were identified based on their life stages, damage patterns and field symptoms.

#### **Key Insect Pests Identified**

- **Teak:** Teak leaf skeletonizer (*Eutectona machaeralis*), whitefly (Bemisia spp.), leafhopper (Amrasca spp.).
- **Bamboo:** *Hieroglyphus banian* (grasshopper), Crypsiptya coclesalis (bamboo defoliator).
- **Khamer:** Leaf miner (*Phyllocnistis amydropa*), leaf webber (*Paratalanta* spp.), Tingis beesoni.
- **Karanj:** Skipper (*Hasora chromus*), eriophyid mite (*Aceria pongamiae*) causing finger galls.
- **Neem:** Tea mosquito bug (*Helopeltis antonii*), red spider mite (*Tetranychus urticae*).
- **Arjun:** Defoliator (*Selepa celtis*), gall-making psyllid (*Trioza fletcheri*).
- Mahua: Defoliators (Achaea janata, Bombotelia spp., Metanastria hyrtaca), leaf miner (Acrocercops euthycolona).
- **Sissoo:** Ash weevil (*Myllocerus* spp.), defoliator (*Plecoptera reflexa*), leaf twisting weevil (*Apoderus* spp.).
- **Aonla:** Gall-making insect (*Betousa stylophora*), mealybug (*Nipaecoccus* spp.).
- Jamun: Defoliator (Carea subtilis).
- **Bael:** Defoliator (*Papilio* sp.).
- **Haldu:** Defoliator (*Dirades theclata*).
- Chirol: Green leafhoppers (Nephotettix spp., Amrasca spp.).
- Siris, Sonpatha, Kusum: Unidentified defoliator pests.
- A periodic survey in various nursery of Madhya Pradesh (Bhopal), followed the molecular identification and confirmed the pathogens like *Colletotrichum gloeosporioides* and *Alternaria tenuissima*. The sequences were submitted to NCBI Gen Bank (NCBI sequence ID PP887685, PP887686) for *Colletotrichum gloeosporioides* and *Alternaria tenuissima*, respectively



Fig. (i-vi) Isolation and purification of fungal pathogens derived from different nurseries





# NEWSLETTER



# January-March, 2025 VOL:17

NCBI Sequence ID	SI.NO.	NCBI Sequence ID
Mahua Pathogen: SUB14509555 Kshipra vihar ACCESSION PP887685 AUTHORS: Darshan, K., Mishra, S.N., Fatima Shirin and Charishma,K.	1	Colletotrichum gloeosporioides (LOCUS PP887685 575 bp DNA linear PLN 12-JUN-2024)
Mahua Pathogen: SUB14509555 Ahmadpur_Mahua_B08 ACCESSION PP887686 AUTHORS: Darshan, K., Mishra,S.N., Fatima Shirin and Charishma,K.		Alternaria tenuissima (LOCUS PP887686 569 bp DNA linear PLN 12-JUN-2024)

Dr. S.N. Mishra Scientist-D Dr. C. Mohan Scientist-C Dr. Darshan K. Scientist-C

# **NEW PROJECT SANCTIONED**

S.NO.	Name Of Project	Name Of PI	Amount Sanction (Rs. IN Lakh)
1	Studies on the Conservation Strategies of <i>Adansonia</i> digitata	Ms. Komal Rani	9.00
2	Establishment and evaluation of seed source trial of <i>Santalum album</i> in Central India.	Dr. Divya Prakash	8.00
3	Exploration of Kairomone Signals for the Ecofriendly Management of Defoliator Pests in Teak Nurseries and Plantations.	Dr. Nidheesh T.D.	13.0
4	Development of passport data for comparative morpho chemometrics to assess purity/ adulteration of forest origin gums and resins.	Mr. Ajit Kumar Maurya	8.0





# NEWSLETTER

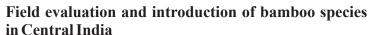


## January-March, 2025 VOL:17

Development of value chain for bamboos for mass multiplication, popularization in farmers' field and industrial linkage in central India.

# Mass propagation and Quality Planting Material (QPM) production

Propagation of elite bamboo clumps from the TFRI Germplasm Bank was achieved through refined macropropagation and micropropagation techniques. For Bambusa tulda, protocols were standardized for in vitro bud initiation (MS medium with 3 mg/L BA), shoot multiplication (2.5 mg/L BA), and rooting (10 mg/L coumarin). For Pseudoxytenanthera stocksii, shoot cultures were maintained on MS medium enriched with 4 mg/L BA and 0.25 mg/L IAA, and rooting was induced with 0.5 mg/L NAA.Rooting success was also achieved using culm and culm branch cuttings with species-specific hormone treatments, including IBA and NAA. For instance, B. vulgaris var. green and B. nutans responded to 200 ppm IBA, while D. strictus and P. stocksii required higher concentrations of 1500 ppm IBA and 2000 ppm NAA, respectively. B. balcooa and B. bambos responded well to cavity methods with 50 ppm IBA and 50 ppm boric acid, respectively.



• To popularize bamboo cultivation, field trials were established across 10 hectares at Kundam and Jabalpur, Madhya Pradesh, involving six bamboo species: *Bambusa tulda*, *B. bambos*, *B. nutans*, *B. vulgaris* var. *green*, *B. balcooa*, and *Dendrocalamus strictus*. After three years, *B. nutans* (DM-CL-9) showed the highest culm heights (5.68 m at Jabalpur and 3.35 m at Kundam). The highest culm numbers were recorded in *B. tulda* (NW-CL-2, 5.67 culms) and *D. strictus* (BAL-CL-4, 4.49 culms), and significant culm diameters were achieved by *B. bambos* (MAN-CL-2, 3.79 cm) and *B. nutans* (DM-CL-9, 6.79 cm).

#### Industrial linkage and clonal fidelity testing

• A multipartite collaboration was formalized between TFRI, Jabalpur; Orient Paper Mill, Amlai; and local farmers to establish a bamboo value chain in Central India. Farmers were selected in consultation with the industry partner, and plantations were established in the villages of Naugaja, Chingrola, Bharhut, and Kacharwar in Umaria district, Madhya Pradesh. Clonal fidelity of tissue-culturederived plants was assessed using ISSR markers (UBC 836 and UBC 840). DNA banding patterns from progenies of B<sup>4</sup> tulda, B. nutans, B. balcooa, and P. stocksii matched



Fig.1 Species trial of bamboos at Jabalpur







Fig. 2 (i-iii). Micropropagation of *Bambusa tulda*: Bud initiation; *In vitro* shoot multiplication; rooted plantlet







Fig.3 (i-iii). Micropropagation of Pseudoxytenanthera stocksii: Bud initiation; In vitro shoot multiplication; rooted plantlet









Fig. 4 (i- iv) Treatment of cuttings, sprouting, rooted cuttings and plants of *Bambusa tulda* 

Dr. Fatima Shirin Scientist-G





- Promotion of bamboo based agroforestry system for economic upliftment and livelihood security of farmers in Madhya Pradesh.
  - Bamboo based agroforestry model was successfully established in the farmer's field at Konikala, Vasan, Doni, Patan, Deoribasiania, Sohad village, Jabalpur. Imparted two on site trainings to the farmers at Ranga Farms, Devri-Basaniya village, Jabalpur on management of bamboo culms. The girth and height of culms ranged between 30.2 to 35.5 cm and 12 to 15 meters, respectively under four-year old bamboo based agroforestry system. Bamboo growers get additional revenue by selling bamboo branches for stacking of tender vegetables like tomato and support climber beans.





Maintenance and recording of growth data of four-year old culms of bamboo

Dr. Nanita Berry Scientist-F

#### Introduction and evaluation of Melia dubia Cav. in Central India.

• Filed evaluation trail of *Melia dubia* genotypes were established at Chhindwara, Morena (MP), Durg (CG) & Nagpur, Amravati (Mahrashtra). At the age of three years, the genotypes 261, 235, 268, 2035, 2068, 2067, 2076 and 267 demonstrated superior performance under field conditions, exhibiting plant height 9.60m, 9.20m, 8.20m, 7.25m, 7.60m, 7.20m, 6.40m and 6.40 m and collar diameter (41.20 cm, 36.00 cm, 37.20 cm, 54.25 cm, 51.20cm, 48.20 cm, 47.80cm and 46.20 cm) respectively.





A view of *Melia dubia* trialsa

Shri N.D. Khobragade Scientist-E







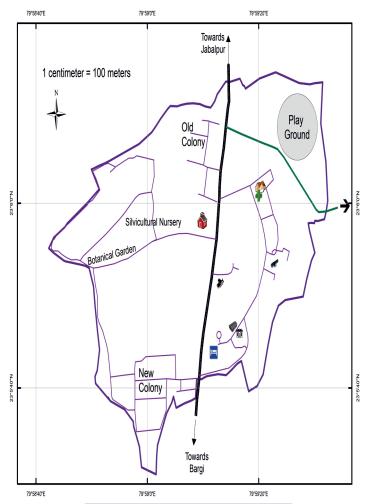


## January-March, 2025 VOL:17

#### Geo-tagging of valuable trees diversity of TFRI

#### Adansonia digitala

#### **Distribution Map in ICFRE-TFRI Jabalpur Campus**



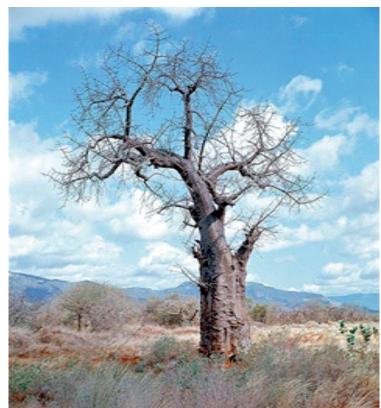
Legend Girth (cm) Landmark TFRI boundary 
 + > 200

 ✓ Administrative Building

 Play Ground Director Bungalow Roads — Internal Roads Kendriya Vidyalay Neemkheda Road Neemkheda Samadhi Road Plant Protection Division Rest House **Scholar Hostel** Scientist Hostel

Botanical Name: Adansonia digitata

Family name: Malvaceae Common name: Baobab Habit: Deciduous tree



#### **Botanical description:**

Native to Africa, the baobab is a remarkable tree with a massive, water-storing trunk. It sheds leaves in the dry season and blooms at its end with large, night-blooming white flowers pollinated by bats. Its gray, gourdlike fruits hang down, resembling dead rats by their tails.

**Use:** Suitable for use as a bonsai. The leaves, roots, flowers, fruit pulp, and seeds are all edible and have various traditional medicinal uses. The dried pulp is sold around the world in powdered form. The bark fibers can be harvested and used to make ropes, mats, nets, and fabric.

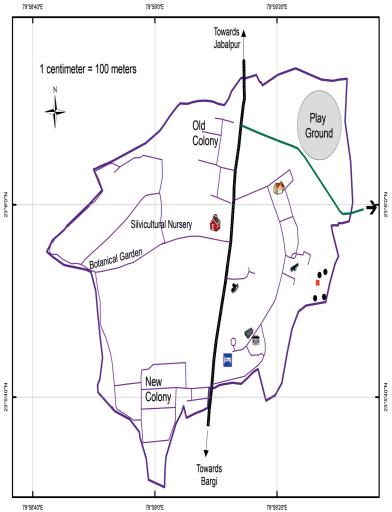
#### There are 5 trees in the ICFRE-TFRI campus.

Shri Dheeraj Gupta Scientist-D FE&CC DIVISION





# Adina cordifolia Distribution Map in ICFRE-TFRI Jabalpur Campus



Legend Girth (cm) Landmark TFRI boundary Administrative Building Play Ground 50 - 100 Director Bungalow Roads Internal Roads Kendriya Vidyalay Neemkheda Road → Neemkheda Samadhi Road Plant Protection Division Rest House Scholar Hostel Scientist Hostel

Botanical Name: Adina cordifolia
Family: Rubiaceae (Coffee family)
Common name: Haldu, Yellow Teak
Habit: Moist deciduous forests



**Botanical description**: Yellow Teak is a tall deciduous tree with broad, heart-shaped leaves. Its small yellow flowers, often tinged with pink, bloom in spherical clusters 2–3 cm wide. Flowering occurs from June to August, creating a striking display during the monsoon season. The tree can grow over 20 metres high.

Use: Leaves and bark are used for cholera, cold cough, fever, headache, scars and urinary complaints Paste of stem bark and leaves are used for curing deep wounds, jaundice, stomachache

Wood is valued for making small items.

There are 16 trees in the ICFRE-TFRI campus.

Shri Dheeraj Gupta Scientist-D FE&CC DIVISION









#### Training and Capacity Building

#### **Training For Gujarat Forest Department**

• The third and fourth one-week trainings on "High Quality Plant Production and Livelihood Security through Agroforestry" were held from 8<sup>th</sup>-13<sup>th</sup> January and 20<sup>th</sup>-24<sup>th</sup> January 2025 at ICFRE-TFRI, Jabalpur, for 20 officials of the Gujarat Forest Department. Dr. H. S. Ginwal, Director, ICFRE-TFRI emphasized promoting afforestation outside forest areas using quality planting material and industry-oriented agroforestry models, Dr. Nanita Berry, Scientist-F and Head, Extension Division, coordinated the training and briefed the participants about the training program.



One week training on "Plant Biotechnology" was organized by ICFRE-TFRI, Jabalpur from 13<sup>th</sup>-17<sup>th</sup> January, 2025 for B.Sc. students of Government Model Science College Jabalpur.



• A five day training program on "Instrumentation was held from 20th-24th, January 2025; Dr. Hariom Saxena, training coordinator, briefed about the use of instruments in research during the inaugural session. Dr. H.S. Ginwal, Director emphasized the importance of new technologies and instruments in the field of research, explaining how these new techniques and instruments can make research more efficient and accurate.

• A five-day training program on "Quality Planting Material Production & Agroforestry for Livelihood Security" was held from 10<sup>th</sup>-14<sup>th</sup> February 2025 at ICFRE-TFRI, Jabalpur, for Gujarat Forest Department staff. Dr. H.S. Ginwal, Director, ICFRE - TFRI, Jabalpur inaugurated the program focused on high-quality planting material, species selection, timely seed collection, and agroforestry models to boost income and land productivity. Dr. Nanita Berry coordinator briefed the outline of program and highlited the importance of the forest conservation, sustainable management, and enhancing rural livelihoods through agroforestry practices.







# January-March, 2025 VOL:17

#### Training For Stockholder of Madhya Pradesh

• Training programs were organized from 19th-22nd March, 2025 for various stakeholders on "Sustainable harvesting and conservation of medicinal plants/forest produce for livelihood security" in 9 different locations of Madhya Pradesh i.e. Balaghat. Bichiya, Haidargarh, Seoni, Mandla, Vidisha, Niwas, Sagar and Pauanala Forest. These programs were organized by Dr. Hari Om Saxena, Scientist-E.





#### **Training For Maharashtra Forest Deplopment**

• A three-days training program on "Plant Tissue Culture for the Production of Quality Planting Material of Bamboos" was organized by ICFRE-TFRI, Jabalpur, from 19<sup>th</sup>–21<sup>st</sup> February 2025 for forest officers, assistant conservators and range officers from Maharashtra. Dr. H.S. Ginwal, Director, ICFRE-TFRI, Inaugurated the program and emphasized bamboo's role in afforestation, ecological conservation, livelihood enhancement and highlighted tissue culture as a key method to improve the supply of quality bamboo planting material for large-scale plantations. Training coordinator, Dr. Fatima Shirin outlined the program's focus on modern propagation techniques, including micropropagation, media preparation, infection control, hardening, and field establishment.





• The ICFRE-Tropical Forest Research Institute, Jabalpur, conducted a one-day hybrid training workshop on 24<sup>th</sup>,March 2025, at Nagpur for Maharashtra State Forest Department officials on "Use of Soil Health Cards for Promoting Soil Test-Based Nutrient Management Practices". Smt. Shomita Biswas (PCCF & HOFF, MHSFD) addressed the event. Dr. H.S. Ginwal highlighted the institute's research initiatives.

• Experts, including Dr. Avinash Jain, Dr. V.P. Panwar, and Dr. Jangam Deepika, delivered lectures. Over 100 forest officers participated in the training.



A three-day training program on "Agroforestry, Management and Bamboo Seed Technology" was organized at ICFRE-TFRI, Jabalpur, from 10<sup>th</sup>-12<sup>th</sup> March, 2025 for Maharashtra forest officials, sponsored by the Maharashtra Forest Department. During the inaugural session Dr. H.S. Ginwal, Director, ICFRE-TFRI, addressed the participants and emphasized the use of bamboo for afforestation, ecological conservation, and livelihood enhancement, along with the importance of expanding forest cover in agricultural landscapes. Dr. Nanita Berry, training coordinator, highlighted the objective of the training.



Propagation and Plantation Management" was organized from 4<sup>th</sup> – 6<sup>th</sup> March, 2025 at ICFRE-TFRI, Jabalpur, for Maharashtra's DFOs, ACFs, and RFOs.The training was Inaugurated by Dr. H. S. Ginwal. Director, ICFRE-TFRI, Jabalpur. He emphasized bamboo's importance and encouraged for creating bamboo rhizome banks. Dr. Fatima Shirin, the program coordinator, highlighted the goal of training to train officials with modern bamboo propagation techniques to support sustainable production and enhance the quality of bamboo resources. Training was funded by the Maharashtra Forest Department.











#### **Training For IFS Officers**

• A three-day training workshop on "Preparation of Ecosystem and Health Card" for Indian Forest Service officers was held at ICFRE-TFRI, Jabalpur, from 28<sup>th</sup>-30<sup>th</sup> January 2025, with participation from officials across various states. Dr. H.S.Ginwal, Director, ICFRE-TFRI, inaugurated the workshop. Dr. Avinash Jain Workshop coordinator, addressed ecosystem issues, land degradation, and the need for awareness and joint conservation efforts. Dr. K. Ravichandran, Director, IIFM Bhopal, spoke on ecosystem problems, their diagnosis, management, and the importance of policy adherence and public participation.





#### **OUTREACH PROGRAMMES**

• Thirty-five students and six faculty members from Rani Durgavati Government College of Paraswara, Balaghat, visited ICFRE-TFRI, Jabalpur on 16<sup>th</sup> January, 2025. Students visited Forest Ecology Division, the Insectary of the Forest Protection Division, Hydroponics Lab of the Silviculture Division, and Library of the institute.





- ICFRE-Tropical Forest Research Institute, Jabalpur, Madhya Pradesh, participated in a one-day exhibition during the Mega Health Checkup and Elite Solution Camp, organized by the Vindhya Sanskritik Manch, Jabalpur. The program was inaugurated on 19th January, 2025 by the Hon'ble Shri Rajendra Prasad Shukla, Deputy Chief Minister, and Shri Kailash Vijay Varghiya, Minister for Urban Development and Housing Affairs.
- The ministers visited the TFRI stall, interacted with the
  officials and appreciated the institute's tribal livelihood
  programs including lac cultivation, hydroponics for
  MAPS, and agroforestry models.



ICFRE-Tropical Forest Research Institute (TFRI), Jabalpur, participated in the "Nature Mahakumbh (प्रकृति ਸहਾਰੂਂਮ)" held in Prayagraj on 24th January, 2025. The event was organized by the ICFRE. Ecological Restoration Center, Prayagraj, in collaboration with CSIR-Central Institute of Medicinal and Aromatic Plants (CIMAP), Lucknow, and featured a one-day training and plant distribution program. Dr. H.S. Ginwal, Director, ICFRE-TFRI, Jabalpur was invited as the Chief Guest and addressed the farmer highlighting the importance of integrating tree species and medicinal plants in sustainable farming. The program showcased technologies -developed by different institutes under the ICFRE and posters on the improved variety of Vacha, non destructive harvesting techniques, and aquatic cultivation of medicinal plants were displayed and well appreciated by the farming community.









## January-March, 2025 VOL:17





• ICFRE-Tropical Forest Research Institute, Jabalpur organized a two-day training program on "Research Methodology" from 17<sup>th</sup>–18<sup>th</sup> February 2025 for officers of the Research Branch, Maharashtra Forest Department at Chandrapur Forest Academy. The program was coordinated by Dr. Nanita Berry.



 ICFRE-TFRI, Jabalpur participated in Kisan Mela -2025 at ICAR-Directorate of Weed Research, Jabalpur on 18<sup>th</sup> Feburary, 2025 and displayed technologies developed by TFRI.



- Display of the hydroponics technique
- ICFRE-Tropical Forest Research Institute, Jabalpur organized an exhibition on Forest based products developed by Van-Dhan Samiti, lakhnadon and NABARD,Kundam on 21<sup>st</sup> March, 2025 at TFRI, Jabalpur.





• ICFRE-Tropical Forest Research Institute, Jabalpur, Madhya Pradesh participated in the Divisional Millets Food Festival and Agricultural Fair held from 29<sup>th</sup> to 30<sup>th</sup> March 2025, along with 50 institutions. The fair aimed to promote millets, enhance farmer income through processing, and facilitate linkages among farmers, traders, and consumers. The institute showcased agriculture and forestry models based on millets and different technologies of ICFRE-TFRI were displayed. On the first day, over 1000 farmers and scientists visited the stalls.







## January-March, 2025 VOL:17

#### **NSS Camp at ICFRE-TFRI**

- The seven-day special camp of the National Service Scheme was organized by St. Aloysius College, Sadar, Jabalpur. Madhya Pradesh, on the premises of the ICFRE-Tropical Forest Research Institute, Jabalpur.
- On this occasion, coordinator of the program Dr. Akhilesh Pathak, outlined the structure of the camp and the Director ICFRE-TFRI encouraged the participants and urged them to raise awareness among the residents around the campus through cleanliness drives, drug de-addiction rallies, and street plays.



### **Important Visits**

- Sixteen probationary Indian Forest Service officers visited the ICFRE-Tropical Forest Research Institute, Jabalpur, for a one-day program. Smt. Neelu Singh. Scientist-G and Group Coordinator (Research), presented detailed information about the institute's history, objectives, and its work in the field of forestry research.
- On this occasion, Dr. H.S Ginwal, Director, ICFRE-TFRI Jabalpur, shared insights about the institute and interacted with the Official





- Dr. Kaushal Tripathi, Mr. Anil Vishwakarma, Mr. Manish Sapkal, and Mr. Durgesh Kumar Thakur participated in Joint Regional Language Conference for the Central, Western, and Northern regions at Jaipur, Rajasthan, on 17th February 2025. The conference was chaired by the Hon'ble Minister of State for Home Affairs, Mr. Nityanand Rai, with Mr. Bhajanlal Sharma, the Chief Minister of Rajasthan, serving as the Chief Guest
- The main objective of the conference was to emphasize linguistic diversity, promote social harmony and encourage the use of Hindi in government work across India. During the brain storming session, invited academicians highlighted the need to accelerate the adoption of Hindi in government work, presenting the mantras "Triple K" (Pen, Tongue, Computer) and "Triple P" (Training. Practice, Encouragement).



• Shri Shankar Sharma, Assistant Director (Official Language), Forest Research Institute, Dehradun, conducted a workshop on the Official Language policy of the Union Government and provided guidance on filling and submitting the Rajbhasha Orientation Observation Questionnaire. He also delivered a lecture on the use of the 'Kanthasth' software to officials at ICFRE-Tropical Forest Research Institute, Jabalpur, on 21st February 2025.







#### Establishment of Van Vigyan Kendra at Indore

• Dr. Nanita Berry, Head, Forest Extension division along with her team visited Van Vigyan Kendra, Indore and interacted with CCF and DFO, Indore circle and presented a brief about the activities to be done at VVK, Indore,



Dr. Nanita Berry, Head, FE division interacted with CCF and DFO, Indore



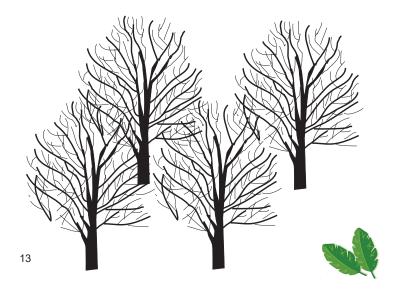
Visit of the site under VVK, Indore

#### **Celebration Important Days**

#### **International Forest Day**

• International Forest Day was celebrated on 21<sup>st</sup> March, 2025 at the ICFRE-Tropical Forest Research Institute Jabalpur, On this occasion, two documentary films were presented, covering the topics "Wildlife and Tribals" and "Extra Income through Mushroom Cultivation." Additionally, an exhibition of "Forest Products" created by the Forest Committee, Lakhnadon, and NABARD was also set up, aimed at raising awareness among children about the importance of forests. Dr. H. S. Ginwal, Director, ICFRE-TFRI, Jabalpur, briefed about the significance of forests and the means of livelihood they provide. Students from PM Shri Central School TFRI and PM Shri Government School, Salivada, Jabalpur, along with Mr. Gopal Singh. Assistant Conservator of Forests, Lakhnadon was also present on this occasion. Later, all the students visited the botanical garden, sandalwood agroforestry, and museum at the institute.







### **STAFF NEWS**

#### **New Joining**

S.No.	Name of Employee	Date of joining	POST	Division/Section
1	Shri Laxmi Narayan Meena	24.02.2025 (F.N.)	LDC	Account Section
2	Shri Sunil Kumar	27.02.2025 LDC	LDC	Account Section
3	Shri Shubham Pandey	27.02.2025 (F.N.)	LDC	Vehicle Section and Store and Purchase Section
4	Ms. Sonali	27.02.2025 (F.N.)	LDC	Genetics and Tree Improvement Division
5	Shri Abhijeet Pratap Singh	27.02.2025 (F.N.)	LDC	Establishment Section
6	Shri Rakesh	27.02.2025 (F.N.)	LDC	ICFRE-Skill Development Centre (SDC), Chhindwara

#### **PUBLICATION**

#### **Research Papers**

Pusam, R., Asaiya, A.J.K. and Raj, D. (2025). Cultivation of Oyster mushroom (*Pleurotus ostreatus*) using Agriculture substrate. *Journal of Emerging Technologies and innovative Research* (JETIR), 12 (3):674-685.

Tripathi, K. Mishra, M., Yadav, J., Kumar, G., Shankar, R., Tiwari, P., Shirin, F. and Shukla, B. (2024), Cytological and Phenological Variability in *Dalbergia latifolia* Roxh: A Vulnerable Tree Species. *Silvae Genetica*, 73: 190-200.

Shirin, F., Saudagar, I. A., Mohammad, N., Soni, R., Tripathi, K. and Prakash, D. (2025) Assessment of the Impact of Pre-Sowing Treatments on Variations in Seed Germination Dynamics and the initial Growth of Seedlings in Sterculia urens. Indian Forester, 151(3):244-254.



Vishwakarma, J., Asaiya, A.J.K. and Raj, D. (2025). Isolation of Endophytic Fungi From *Azadiracta Indica* and Their Antagonistic Activity. *International Journal of Research and Analytical Reviews* (URAR), 12 (1): 736-744

Nidheesh, T.D., Jayanthi, P.D.K., Jagadish, K.S. and Shivanna, B. (2025) Enhancing biological control: Unraveling the impact of salicylic acid on maize volatile emissions and *Spodoptera frugiperda* - parasitoid interactions Hexapoda, *Insecta Indica*, 32(1): 1–10. https://doi.org/10.55446/hexa.2025.49.

Dahayat, A., Mohammad, N., Yadav, R. S., Agrahari, H., Pardhi, Y., Shirin, F. and Miskini, B. (2025). Enhancing conservation and genetic resource management through cross-transferability exploration and optimization of DNA extraction protocol for Buchanania cochinchinensis (Lour.) M. R. Almeida. Vegetos. https://doi.org/10.1007/s42535-025-01176-3.

Rohilla, S., Rana, V., Ginwal, H.S., Chaudhary, U., Prajapati, N., Malik, S. and Barthwal, S., 2025 Age and height as determinants of the chemical properties of two morphometrically superior genotypes of Dendrocalamusstrictus (Roxb.) Nees: Prospects for advances in industrial applications. *Advances in Bamboo Science* 11, p.100156. doi: 10.1016/j.bamboo.2025.100156.

Parihar, S., Saxena, H. O., Pawar, G., and Ginwal, H. S (2025) Validated high performance thin layer chromatographic method for simultaneous quantification of betulinic acid, β-sitosterol and lupeol in fruits, leaves, root bark and stem bark of *Dillenia indica* Linn. *Acta Chromatographica* 37(2), 183-193

#### **Book Chapters**

Darshan, K., Tailor, A., Rani.K., Chittaragi, A., Loona, D., Santhoshinii. E..Nigam,S. and Shreedevasena. S. (2025). Biotechnological Approaches for Combating Tree Diseases to Enhance the Forest Ecosystem Sustainability. In: Kalia, R.K., Pathak, R. (eds) Tree Biology and Biotechnology. Springer, Singapore. Page no-261-285.https://doi.org/10.1007/978-981-96-0002-1 16.

Tripathi,K et al., (2025). Chemical constituents and TLC profiling of flowers of Psydraxdicoccos Gaertn. Plant and secondary metabolites, Vol-6, ICBN no ISBN: 978-81-984754-0-4.

M. Rajkumar (2025). Forest management - A brief review of the traditional methods and current trends Published book chapter in the book titled 'Advanced Geospatial and Ground Based Techniques in Forest Monitoring' Elsevier. eds. Kumar, P., Srivastava, P.K., Khan, M. L., Arunachalam, A., Roy, P. S. and Kumar K. 1st Edition, July 2025, Paperback, JSBN: 978044318949

Mishra, R.K., Mishra, D. and Agarwal, R. (2025). Robotics and Autonomous Systems. Innovations, Challenges, and Future Prospects, ISBN (eBook) 9783389117217 ISBN (Book) 9783389117224, GRIN Publishing GmbH', Trappentreustr. 1, 80339 Munich, Germany. Catalog Number V1563344, 37 pp.

#### **Popular Articles**

Komal Rani and Naseer Mohammad (2025). RNAi: A revolutionary approach to combat insect infestation in forest trees. Van Sangyan, 12(1):39-45.

एस.सी. बिस्वास , निकिताराय, नरेंद्र मिश्रा एवं नीलू सिंह (2025) अगरबत्ती उद्योग के लिए जिगत का वैकल्पिक स्त्रोत, वनसंज्ञान, 12 (1):15-19.

Mohan, C. (2025). Lac farming: An alternative income source for farmers. Van Sangyan, 12 (2):26-30.

Saikat Banerjee, Avinash Jain, M. Rajkumar and K. S. Sengar (2024). Ecosystem and ecosystem services, Van Sangyan 11(12):59-67.





### Media Coverage

# वन विभाग के अधिकारियों को मिला पौधा रोपण का प्रशिक्षण



जबलप्र । उष्णकटिबंधीय वन अनुसंधान संस्थान में गुजरत वन विभाग द्वारा प्रायोजित, गुजरात वन विभाग के अधिकारियों एवं कर्मचारियों के लिए उच्च गुणवत्ता पौध उत्पादन एवं कृषिवानिकी द्वारा आजीविका सुरक्षा विषय पर पांचवां साप्ताहिक प्रशिक्षण कार्यक्रम का उदाटन डॉ. एच.एस. गिनवाल, निदेशक की अध्यक्षता में हुआ। इस अवसर पर निदेशक ने प्रशिक्षणार्थियों को संस्थान

एवं प्रशिक्षण के विषय पर विस्तृत चर्चा की एवं उच्च गुणवता के पाँध के उत्पादन एवं उस पर आधारित वृक्षारोपण एवं कृषिवानिकों के लिए प्रोत्साहित किया और आह्वन किया कि वनों से बाहर वन के लिए सुदृढ़ वनीकरण के लिए उपयोगी कारक जैसे उच्च गुणवत्ता प्रजाति का चयन, प्रजाति के अनुसार बीज का उचित समय पर संग्रहण आदर्श रोपनी की स्थापना और उच्च गुणवत्ता के पौध का उत्पादन एवं प्रबंधन, औद्योगिक एवं कृषक की आवश्यकताओं का विशेष ध्यान रखकर कृषि वानिकी प्रारूप को बढ़ावा देने पर जोर दिया जिसके द्वारा न केवल कषकों को अतिरिक्त आय प्राप्त हो सकती है बल्कि भीम की उत्पादकता एवं उपजाऊ क्षमता भी बनाए



टीएफआरआई में 5 वां साप्ताहिक टेनिंग प्रोग्राम का आयोजन

# कृषि वानिकी प्रारूप को बढ़ावा देने की आवश्यकता : डॉ. एच गिनवाल

रिसर्च के रिजल्ट का लाभ उठाने में मिलेजी मदद

# वन विभाग के अधिकारियों को मिली पौधों की जानकारी

जाकरिसंधीय वन अनारंपान संस्थान में गुजरात वन विभाग द्वारा प्राचीनित, गुजरात वन विभाग के अधिकारियों एवं कर्मचरियों के लिए उच्च गुणवत्ता पीध उत्पादन एवं कृषिवानिकी द्वारा आजीवका सुरक्षा विषय पर पांचवां साप्तरिक प्रशिवण कार्यक्रम का उद्घाटन डॉ. एच.एस. गिनवाल, निदेशक की अध्यक्षता में हुआ। इस अवसर पर निदेशक ने प्रशिवणार्थियें को संस्थान एवं प्रशिक्षण के विषय पर विस्तृत चर्चा की एवं उच्च गुजवता के पौध के ऊपादन एवं उस पर आधारित बुबारोपण एवं कपिवानिकी के लिए प्रोत्साहित किया और आद्धान किया कि वनों से बाहर वन के लिए सुटुड़ वनीकरण के का चयन, प्रजाति के अनुसार बीज का उचित की रूपनेखा के बारे में विस्तार से जनकारी प्रदान किया जाएगा।

आदर्श रोपनी की म्बापना और उस्त गुगवता के पीध का उत्पादन एवं प्रबंधन, औद्योगिक एवं कृषक की अवस्पकताओं का विशेष ध्यान सक्रकर कृषि वानिकी प्रारुप को बड़वा देने पर जोर दिया वसके द्वार न केवल

۸ ۱



# पत्रिका

#### कृषि वानिकी से किसानों की आय में अवश्य की जा सकती है बढोतरी



जबलपुर @ पत्रिका. कृषि वानिकों से किसानों की आय में बढ़ोतरी हो सकती हैं। इसके लिए उच्छी प्रजातियों का चयन करना होगा। यह बात उष्णकिटबंधीय वन अनुसंधान संस्थान में आयोजित वक्तांप में विशेषज्ञीं ने कही। कृषि वकसाप मावसपत्ता न कहा। कृत्य व्यानिकी व कृत्यक आजीविका पर प्रशिक्षण कार्यक्रम में उत्तराखंड, हरियाणा, महाराष्ट्र, ओडिशा, अंडमान, कर्नाटक से भारतीय वन सेखा के अधिकारी शामिल हुए। संस्थान नियेशक डॉ. एवएस गिनवाल ने संस्थान के इतिहास, उदेश्यों और वानिकी अनुसंधान के क्षेत्र में किए गए कार्यों के बारे में जानकारी दी। मुख्य अतिथि पूर्व प्रधान मुख्य बन संस्का हरियाणा ब बन बल प्रमुद्ध जगहीश खंद ने बताया कि मानक सभ्यता के इतिहास के साख ही कृष्टि सन्यता क इत्तरास क साथ हा कुछ व्यानिको का इतिहास जुड़ा है प्रशिक्षण की संयोजक डॉ. निन्त केरी ने प्रशिक्षण के कोर्स मॉइयूल के बारे में बताया। कार्यक्रम में अनुसंधान समन्वयक नील् सिंह, डे स्थाम विश्वनाथ सहित अन्य वैज्ञानिक मौजूद थे।



## पीपुल्स॰समाचार

TFRI के वैज्ञानिक एमपी, छग व महाराष्ट्र में 18 खदानों पर करेंगे काम देश के 3 राज्यों में माइनिंग एरिया की

सेहत सुधारेंगे जबलपुर के एक्सपर्ट्स

सामाना स्थाप के स्याप के स्थाप के स्थाप के स्थाप के स्थाप के स्थाप के स्थाप के स्था



तीन राज्यों में होगा काम कार प्रकार एक प्रोते दिया गया है। तीन सामी से स्थान क्षेत्रों के विदेशिक्टर सा









#### Knowledge Bequest of ICFRE-TFRI, Jabalpur

#### **National Insect Repository**

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





### **Mycology Herbarium**

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



#### Herbarium

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











## **Museum cum Interpretation Centre**





## **Technical services offered**

Institute conduct Internship programmes for student's/stakeholders

## **Internship Charges**

Sl.No.	Training	Biotechnology /Molecular Biology		Other Disci	plines
	Period	B.Sc./Undergraduate	M.Sc.	M.Sc. B.Sc./Undergraduate	
			Postgraduate	_	Postgraduate
1.	One Week	Rs. 1,000=00	Rs. 2,000=00	Rs. 1,000=00	Rs. 2,000=00
2.	Fifteen days	Rs. 2,000=00	Rs. 4,000=00	Rs. 1,500=00	Rs. 3,000=00
3.	One Month	Rs. 3,000=00	Rs. 8,000=00	Rs. 3,000=00	Rs. 5,000=00
4.	Two Months	Rs. 5,000=00	Rs. 11,000=00	Rs. 5,000=00	Rs. 7,000=00
5.	Three Months	Rs. 28,000=00	Rs. 16,000=00	Rs. 7,000=00	Rs. 11,000=00
6.	Above three	Rs. 12,000=00	Rs. 22,000=00	Rs. 9,000=00	Rs. 16,000=00
	months to six				
	months				





## Testing facilities available at ICFRE - TFRI, Jabalpur

S1. No	Parameter	Price in Rs.		
1.	рН	100/- per sample		
2.	EC	100/-per sample		
3.	Organic Carbon (OC) /Organic Matter	100/-per sample		
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/-per sample		
7.	Bulk Density	150/-per sample		
8.	Total soil Analysis (1 to 7)	4000/-per sample		
9.	Dry matter / Moisture percentage	100/-per sample		
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. 14.	Laboratory testing of pesticide ( biopesticide / insecticide) against insect defoliator/ white grub	20,000/- per defoliator 40,000/- per white grub		
15.	Field testing of insecticides against termites and insect defoliators	1,00,000/-		
16.	Identification services for decay fungi/mould	1000/ species		
17.	Identification of fungal specimen and its matching with herbarium	250/-per sample		
18.	Micro photography of fungi	100/-per sample		
19.	Seed germination and viability test	500/ - per sample		
20.	Seed purity tests	400/ - per sample		
21.	Moisture content of seeds	200/ - per sample		
22	Determination of phenols ( if standards available)	600/ - per sample		
23	Determination of tannins ( if standards available)	600/ - per sample		
24	Determination of carbohydrates ( if standards available)	600/ - per sample		
25	Determination of starch (if standards available)	600/ - per sample		
26	Determination of chlorogenic acid ( if standards available)	600/ - per sample		
27	Determination of Protein ( if standards available)	600/ - per sample		
28	Chemo profiling of medicinal plants with the help of HPTLC	2000/- for the first sample & 500/ - per subsequent sample of the same sp.		
29	Leaf area Measurement	200/- per sample		
30	Estimation of a single marker constituent in plant extract	5500/ - per sample for Academia / R &D, 10000/ - per sample for Industry		
31	Ash Content	610/-per sample for Academia, 1100 /		
32	Microscopic analysis	per samplee for Industry 500/- per sample		
33	Genetic Fidelity testing	10,000/- per sample (Minimum 10 samples)		





#### Plants Available for Sale at Silviculture, Forest Management Division, TFRI, Jabalpur

S. No.	No. Species Number of Plant		
1.	Tinospora cordifolia (Giloy)	100	
2.	Aegle marmelos (Bel)	540	
3.	Cymbopogon citratus (Lemon grass)	100 //	
4.	Oroxylum indium (Shyonak)	50	
5.	Mimusop selengi (Moulshri)	260	
6.	Asparagus racemosus (Satawar)	100	
7.	Artemisia annua (Davana)	30	
8.	Phyllanthus emblica	25	
9.	Terminalia arjuna	30	
10.	Moringa oleifera L	1850	
11.	Bamboo	600	
12.	Delonix regia	3000	
13.	Cassia fistula	1000	
14.	Pongamia pinnata	550	
15.	Tamarindus indica	820	
16.	Albizia lebbeck	5000	
17.	Syzygium cumini	540	
18.	Terminalia bellirica	720	
19.	Other Species	As per availability	









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

- Prices and number may be varied as per the availability and season TFRI TRICHO-Card
  - TFRI-TRICHOCARD developed using the parasitoid, *Trichogramma raoi*.
  - It's an Ecofriendly bio-control method for managing teak defoliator & skeltonizer.
  - 4 cards required for a hectare area cards available @ Rs. 500/- per card







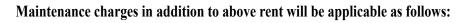




# January-March, 2025 VOL:17

# **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.)	
		Rooms	Suits	Room	Suit
1.	<ul> <li>a) Officials of ICFRE and institutes</li> <li>b) Consultants and research Fellow at ICFRE and its institutes and FRI Deemed Universities</li> <li>c) Officials and experts of MoEF&amp;CC, New Delhi</li> <li>d) Officials of SFDs</li> <li>e) Ex- employees of ICFRE and Ex-Deputationist</li> </ul>	150	200	200	300
2.	Family members of present /ex -employees a) ICFRE Employees b) ICFRE Deputationist			200	500
3.	<ul> <li>a) Officials of Autonomous bodies,</li> <li>Universities under the FRI Deemed</li> <li>University</li> <li>b) Officials of Central/State Government other than SFDs</li> </ul>	200	300	400	300
4.	Others (Non Governmental)			600	750



Accommodation type	Maintenance charge including A/C, Heater Charges
Room	Rs. 200/-per day
Suit	Rs. 250/- per day















Patron
Dr. H. S. Ginwal
Director
ICFRE-TFRI, Jabalpur

Editor-in-Chief Smt. Neelu Singh

Scientist –G, Group Co-ordinator (Research) ICFRE-TFRI, Jabalpur

#### **Editors**

Dr. Jangam Deepika

Scientist –C, FE&CC Division, ICFRE-TFRI, Jabalpur

Dr. Kaushal Tripathi

Scientist –C, GTI Division, ICFRE-TFRI, Jabalpur

Shri Ajit Kumar Maurya

Scientist –B, SFM&AF Division, ICFRE-TFRI, Jabalpur

Technical support
Shri. H. L. Asati
Senior Technical Officer, ICFRE-TFRI, Jabalpur
Smt. Nikita Rai
Sr. Technician, ICFRE-TFRI, Jabalpur
Shri. Ravi kant
LDC, ICFRE-TFRI, Jabalpur



For further information contact GROUP COORDINATOR RESEARCH ICFRE - TROPICAL FOREST RESEARCH INSTITUTE

(Indian Council of Forestry Research & Education)

P.O.:R.F.R.C., Mandla Road, Jabalpur - 482021, Madhya Pradesh

Phone No: - + 91-761-2840010(O) Fax :- + 91-761-2840484

Group Coordinator (Research) Phone: 0761 -2840003

Website: - http://tfri.icfre.gov.in; Email: - dir tfri@icfre.org, groupco tfri@icfre.org











# **ABOUT THE INSTITUTE**

- ICFRE-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).
- ICFRE-Skill Development Center, Chhindwara, came into existence on 30<sup>th</sup> March 1995. It was declared on 3<sup>rd</sup> January 1996,a satellite Centre of ICFRE-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

