



From the Director's Desk



Greetings from TFRI family, I am delighted to publish the second issue of TFRI Newsletter, showcases, different significant research activities, events organized, participated, publications and other research achievements during March-April, 2022. I hope this newsletter will be helpful for researchers, different stakeholders, policy makers concerned with forestry research.



Dr. G. Rajeshwar Rao
Dr. G. Rajeshwar Rao, ARS
Director, TFRI Jabalpur

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Chief Guest, Shri Faggan Singh Kulaste, addressed the gathering on importance of forestry and agricultural organisation for dependent communities. He emphasized on cultivation of bamboo and informed about handicraft packaging and marketing of its products facility available at the district. He spoke in detail about various possibilities to be explored by the district including that of various fruits and lac species.



Various progressive farmers also shared their journey and experiences on lac, bamboo cultivation with the participants. Over 400 farmers actively participated in the event. Organisations - IFFDC, MPSFD, herbal industries, TFRI, JNKVV, DWR etc. put up stalls for the benefit of farmers and dignitaries.

During the programme, First volume of TFRI Newsletter and a documentary on TFRI, Jabalpur in Hindi were released by dignitaries.

SIGNIFICANT EVENTS

Release of Detailed Project Report on Rejuvenation of Rivers through Forestry Interventions



Detailed Project Report on Rejuvenation of Rivers through Forestry Intervention for 13 major rivers of India was officially released jointly by Hon'ble Sh. Bhupender Yadav, Cabinet Minister for Environment, Forest and Climate Change, Hon'ble Sh. Gajendra Singh Shekhawat Cabinet Minister for Ministry of Jal Shakti and Hon'ble Sh. Ashwini Kumar Choubey, Hon'ble Minister of State MOEF&CC in a ceremony held in Indira Paryavaran Bhawan, New Delhi on 14/03/2022 on the eve of "International Day of Action for Rivers".



Tropical Forest Research Institute, Jabalpur prepared the DPR on Rejuvenation of River Narmada through Forestry Interventions. The goal of the project was to manage the river ecosystem particularly in the river scape area with the aim of achieving Aviral Dhara and Nirmal Dhara through forestry interventions. Total financial outlay of 5-year implementation project has been estimated at Rs 2127.28 crore.



Dr. G. Rajeshwar Rao, ARS Director, TFRI along with the scientists of the institute attended the release ceremony through virtual mode.

Kisan Mela

Tropical Forest Research Institute, Jabalpur successfully organised KISAN MELA at Krishi Vigyan Kendra, Mandla, Madhya Pradesh on 11/03/2022. Chief Guest, Hon'ble Shri Faggan Singh Kulaste, Minister of State for Steel & Rural Development, Government of India and Guests of Honour of the Event Smt. Sampatiya Uikey, Member of Rajya Sabha, Smt. Saraswati Maravi, Adhyaksh, Jila Panchayat, Dr. Pradeep Kumar Bisen, Vice Chancellor, Jawaharlal Nehru Krishi Vishwa Vidyalaya Jabalpur, Shri Amitabh Agnihotri, Director, State Forest Research Institute, Jabalpur, Dr. S.R.K. Singh, Director, ATARI, Jabalpur, Dr. J.S. Mishra Director ICAR-DWR, Smt. Harshika Singh (IAS) Collector Mandla District and other dignitaries were present.





SIGNIFICANT RESEARCH ACTIVITIES

Assessment of variability and natural regeneration of a near threatened *Pterocarpus marsupium* Roxb. (Bijasal) in Madhya Pradesh

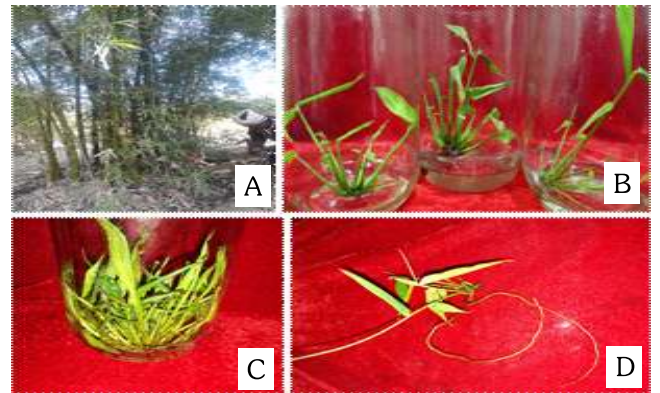


The study was carried out at seven forest sites namely Sara, Birsa, Lamta, Barha, Chada, Bahoriband, and Semariya in tropical deciduous forests of Madhya Pradesh.

As infestation/invasion of weeds affects the natural regeneration significantly, assisted natural regeneration (ANR) activities should be undertaken for this species in its natural ranges. ANR can be cost-effective and advantageous in stands smaller in size and ideally surrounded by native vegetation.

Investigation revealed that despite small population sizes, all the sampled populations showed high level of morpho-molecular diversity. Absence of sapling stage at all the study sites indicates its Near-Threatened status in Madhya Pradesh. From the association analysis, it is clear that weed infestation and biotic disturbances have profound negative impact on the seedling density per sample plot across the study sites.

Pseudoxytenanthera stocksii (common name- Marihal) is a graceful mid-sized non-thorny bamboo species with loosely spaced, solid erect culms which provides flexibility in harvesting, easy management and sustainable income to farmers. It is a valuable multi-purpose bamboo species used as substitute for cane and rattan in bamboo based furniture industry. In vitro shoot cultures of *Pseudoxytenanthera stocksii* were established and shoot multiplication was carried out on MS medium supplemented with 4 mg l⁻¹ BA and 0.25 mg l⁻¹ NAA. Shoots were also transferred to rooting medium for production of plants. Rooting was achieved on MS liquid medium supplemented with 1mg l⁻¹ NAA.



Micropropagation of *Pseudoxytenanthera stocksii* :
a) Mother clump, b and c) in vitro shoot multiplication, d) rooting in shoots.



CPT of *Haldina cordifolia* (haldu)

Study on *Haldina cordifolia* (haldu) for higher wood productivity is undertaken. During the survey, occurrence of the tree species was reported in the plains as well as in the hills upto the 1100 MSL in the states of Madhya Pradesh and Chhattisgarh. In both the states, CPTs of the species have been identified based on morphological characteristics of the individual tree.

A 10-ha permanent plot has been established in Kanha Tiger Reserve, Mandla M.P. through survey for long term ecological monitoring, biodiversity assessment, natural regeneration status, soil carbon stock, monitoring disease, pest and pollinators and phenological studies.



Monitoring of biodiversity and natural regeneration in permanent plot at Kanha Tiger reserve



Selection of phenotypically superior trees of *Madhuca longifolia* was carried out in Khandawa, Madhya Pradesh and Gondia, Maharashtra and 50 trees were selected on the basis of criteria of flower yield. Flowers were collected from all selected individual trees and morphological and biochemical characterization of flowers was carried out. Sugar content was found to be maximum in flowers of Balaghat (64.53 %) and minimum in flowers of Shahpura (10.94 %).



Collection of Mahua flowers, drying and processing for biochemical estimation

- *Trichoderma sp.* isolated from local soil samples. Multiplied in broth culture. Dual culture tests of *Trichoderma* isolates against *Fusarium solani* & *Ganoderma lucidum* are being done. Multiplication of *Trichoderma sp.* on mixed fruit wastes, cow dung, orange peel, pineapple waste has been carried out.
- Biochemical characterization of bio-fertilizers (commercial and developed by IFGTBs, Coimbatore), where the organisms viz., *Azospirillum sp.*, *Azotobacter p.*, *Pseudomonas sp.* (Phosphobacteria) and *Bacillus sp.* (Potash mobilizer) were confirmed.



Culture of Potash mobilizer



Multiplication of *Trichoderma sp.* on orange peel

- Artificial inoculation of pathogens and bio-fertilizers to healthy seedlings. The bio-fertilizer products (Commercial and IFGTB biofertilizer) such as *Azospirillum lipoferum* (10 ml), *Azotobacter* (10 ml), *Phosphobacteria* (10 ml), AM fungi (20 gm) and Potash Mobilizer (10 ml) used for bio-inoculation experiments (as per quantity mentioned in parenthesis) with the seedlings of, *Gmelina arborea* and *Dalbergia sissoo* in Bamandehi and Aamgaon Nursery seoni (M.P.) by following the standard experimental design specified in the methodology.

Established Sandalwood based Agroforestry system at TFRI, Jabalpur (MP) under AICRP on Sandalwood



Vigna sinensis intercropped with *Santalum album* at experimental plot of Agroforestry, TFRI



TFRI NEWSLETTER



VOL - 2

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FOREST RESEARCH CENTRE FOR SKILL DEVELOPMENT, CHHINDWARA

- Mosquito repellent Agarbatti sticks were developed (under the ICFRE funded project) total 10 different formulations were tested for their mosquito repellency and found more than 90% repellency.
- Energy Bars were developed from dried *Madhuca longifolia* (Mahua) flowers under All India Coordinated Research Project.

New Projects approved by ICFRE, Dehradun and MPSFD, Bhopal

New Research projects approved during RPC held on 23-25 February 2022

- Development of Nanoformulation of *Cleistanthus collinus* leaf extract for Management of Major Defoliators Pests of Teak and Gmelina.
- Evaluation of nano-fertilizers on growth and performance of forest tree species in nursery and plantations.
- Biotization with plant growth promoting rhizosphere and endophytic bacteria for management of nursery diseases of micro-propagated bamboo and teak.
- Sustainable management of grasslands inside Tiger Reserves of Madhya Pradesh with special emphasis to "Ingression of Trees".

New projects approved by Madhya Pradesh State Forest Department (MPSFD)

- Development of multitier agroforestry systems in selected agroclimatic zones of Madhya Pradesh
- Evaluation of accessions of *Withania somnifera* (L.) Dunal collected across India for varietal development
- Current status of nursery diseases and insect pests of important species in forest nurseries of Madhya Pradesh and their eco- friendly management.

CONSULTANCIES

- Concluded five years monitoring of NTPC accelerated plantations in 107 land parcels of Madhya Pradesh and Maharashtra through 372 permanent and 212 temporary quadrats. In M.P., the average survival percentage of saplings was found to be 83.52%, while in Maharashtra it was 78.42% after five years of plantation.
- Conducted floral and faunal survey for the pre-monsoon season in opencast coal mines of WCL at Umrer and Niljay, Nagpur.



Monitoring of Plantations
Established at M.P. under NTPC work

GLORIOUS MOMENTS

Project "Tree Outside of Forest In India" in Collaboration with



- ICRAF, (USAID) The International Centre for Research in Agroforestry Nairobi, Kenya
- First and second grant received under USAID \$16621 (Rs. 1252376)
- Director Dr. G. Rajeshwar Rao, TFRI, Jabalpur was invited for inauguration of USAID TOFI Project Office in New Delhi on 26/4/22



Study will be initiated in
Orissa and Assam



Inauguration of USAID TOFI Project office in New Dehli on 26/4/2022



AWARDS AND RECOGNITION



Dr. G. Rajeshwar Rao, ARS, Director, TFRI Jabalpur has been selected for 8th Venus International Science and Technology Awards –VISTA, 2022 in Discipline –Agricultural Sciences, Category "Award for excellence in Agro forestry" (vide letter no. AAP-III/ST22EN08SN-034 dated 26.04.2022)

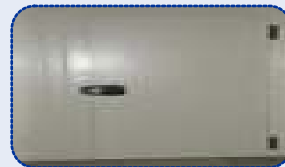
SCIENTIST'S CORNER

COLD STORAGE FACILITIES FOR CONSERVATION OF FOREST GENETIC RESOURCES



Dr. M. Kundu
Scientist-G

Preservation of forest genetic resources in viable and active forms for a long time is a key challenge for foresters. The storage environment is obviously very important in extending the longevity. Cold storage facilities have been developed by TFRI Jabalpur to store forest seeds available in central India. The cold rooms (20feet*22feet *10feet*2) has the capacity to store the seeds for mid terms storage at 2-8 °C and long terms storage at -20 °C for conservation of orthodox seeds. This facility is developed under the "National Program for Conservation and Development of Forest Genetic Resources funded by CAMPA (MoEF & CC) at TFRI, Jabalpur.



USER FRIENDLY PROPAGATION TECHNIQUE FOR *Dalbergia latifolia*



Dr. Promod Kumar
Scientist-D

Developed user friendly propagation technique of high- priced difficult-to-root *Dalbergia latifolia*, a vulnerable species. Use of juvenile shoot cuttings obtained from 5-10 yrs ages hedged progenies with 18 hrs basal dip treatment of 5.0mM IAA in combination with 1.0mM Boric Acid for propagation in a partially shaded open environment can be used for the production of quality planting material of *Dalbergia latifolia*.



Propagation in Poly bags

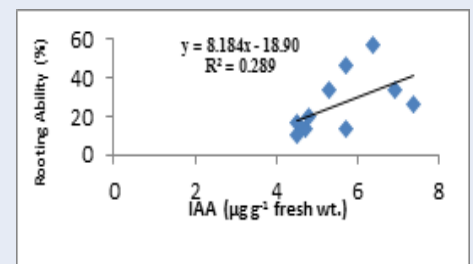
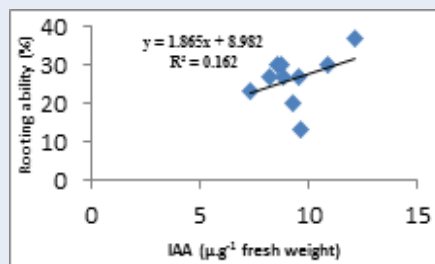


Adventitious rooting



Rooted plantlets of *D. latifolia*

Worked out a weak non-significant relationship between endogenous auxin (IAA) and adventitious rooting in difficult-to-root *Dalbergia latifolia*. It suggests that IAA does not directly regulate rooting in hard wood species and the role of endogenous IAA is supportive in various physiological processes which are responsible for adventitious rhizogenesis.



Relationship between endogenous IAA and rooting ability in *Dalbergia latifolia*



Conservation of *Litsea glutinosa* Lour. (Maida Chaal / Maida Lakri) in Madhya Pradesh



Dr. Naseer Mohammad
Scientist-D

- *L. glutinosa* is critically endangered in Madhya Pradesh and it is unlikely that new populations will get established through natural processes. Therefore, to reduce extinction risk and increase the long-term security of a species, we are establishing its plantations in different forest divisions of the state with the financial assistance of NBM, New Delhi.
- For this, planting stock has been raised during 2021 and 2022. One block plantation was established in Bargi Range, Jabalpur Forest Division in 2021.
- Three sites were finalized in Chhindwara Forest Division [one each at Compt. No. P-104, Dellakhari range; Compt. No. P-45, Jhirpa range and Compt. No. P-97, Dellakhari range] and plantations will be established in June, 2022.
- For awareness activities, leaflets in vernacular languages (Hindi, Marathi) were prepared and distributed.



Decreasing forest cover in Narmada basin increasing surface runoff and thereby reducing lean seasonal flow



Shri Dheeraj Kumar Gupta
Scientist -D

- Study on impact of forest cover change on regulating stream flows of the Narmada river basin using Macroscale Hydrological Model indicates that decrease in forest cover increases surface runoff in the basin leading to reduced lean seasonal flow.
- The forests in Narmada basin mainly deciduous broadleaf and mixed forest have been on a decreasing trend in consecutive decades 1980-90 (31680 sq km), 1990-2000 (30372.2 sq km), 2000-2010 (27718.7 sq km).
- This has led to decrease in contribution in the annual water yield by forests i.e., 39, 38.2 and 37.9 % respectively. Furthermore, for the decades 1980-90, 1990-2000, 2000-2010, the surface runoff increased from other non-forest land use classes as 62.8, 63.4 and 63.9 % during monsoon. It was also found that the contribution of forests in the lean season flow decreased as 39.5, 39, and 38.5 % respectively in the three consecutive decades.

Impact of Iron Ore Mining



Shri M Rajkumar
Scientist-D

To assess the impact of iron ore mining on ecology and biodiversity conducted rapid study for vegetation, birds and other terrestrial fauna in the forests adjacent to iron ore mines of NMDC located in Bailadila hills of Bachel range in Dantewada Forest Division, Chhattisgarh. Iron ore mining in this region are being carried out characteristically in the hill tops where Central Indian subtropical hill forests are found. This study was part of a ICFRE coordinated consultancy titled 'Preparation of Environmental Management Plan & Reclamation and Rehabilitation of two iron ore mining leases of BIOM (Deposit-5 and Deposit-10), Bachel Complex, South Baster Dantewada District, Chhattisgarh.



Scientist from TFRI and other domain experts of ICFRE conducting the vegetation studies



A view of iron ore mines in the hill top of Bailadila hills



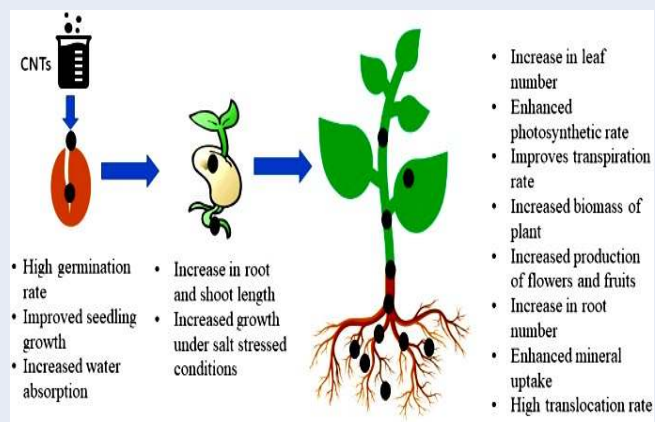
Nanotechnology based Carbon Nano Tubes (CNTs): An innovative tool for seed quality enhancement



Shri Manish Kumar Vijay
Scientist-B

Nano seed technology is a new platform with endless possibilities and impacts on applied agriculture and forestry research. The implementation of nanotechnology in seed research is in its infancy and needs more pace to meet the needs of current global demand. CNTs (allotropes of carbon and engineered nanomaterial's) exhibits beneficial effects on plant species by altering the morphological and physiological properties such as enhancing water uptake, seed germination, photosystem, and antioxidant activities; activating water channels protein, and promoting nutrient absorption of plant cells. The ability of CNP to traverse both the cell wall and seed coat has been proposed as a possible mechanism through which the increased germination rates have been achieved in some agriculture species.

Recently CNTs found superior in breaking both embryo and seed coat dormancy in upland boreal forest species Bog birch (*Betula pumila* L.) and Labrador tea (*Rhododendron groenlandicum* L.) by Ali et al., 2020. There is plenty of room to use these cutting-edge technologies to alleviate seed dormancy, boost vigour, and solve the problem of slow growth in native forest tree seed propagated species.



Source: <https://doi.org/10.1007/s42823-020-00195-1>

Nano formulation of Biopesticides



Dr. Mohan C
Scientist-B

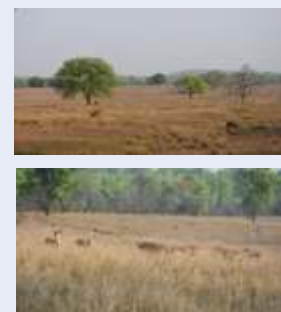
Nanotechnology has emerged as a promising area for the development of products in wide range of applications, including pesticide agents. Nanoemulsions are one of the most important formulations to enhance stability and dissolution properties of poorly water soluble substances, developing ecofriendly nano formulation of certain botanicals against major defoliator insect pests of forestry species which can be used for different forest pests management across the country.

Grassland Ecology



Sh Ajin Sekhar
Scientist-B

India witnessed a loss of 31 per cent (5.65 million hectares) of its area under grassland ecosystem in the previous decade. Grasslands in protected landscapes are critical habitats of innate flora and fauna and maintenance of feeding stock for the increasing population of ungulates in Tiger Reserves is a decisive determinant for the survival of top predators. ICFRE funded project on “Sustainable Management of Grasslands in the Tiger Reserves of Madhya Pradesh with special emphasis to ‘ingression of trees’ has been initiated to take into cognizance, the monumental ecological role performed by the grasslands and to determine the causes of shrinking grasslands in Protected Areas.



Grasslands of Kanha Tiger Reserve and National Park, Madhya Pradesh



Enhancing urban greening using Miyawaki Plantation techniques



Sh. Rathod Digvijaysinh Umedsinh
Scientist- B

The spread of new construction activities such as building, roads, industries, etc. in green areas in metropolitan areas is causing them to shrink. Citizens should strive for a life that is both mentally and physically healthy, as this is the cornerstone of all lives. Urban Forests in cities is important for minimising air pollution, noise pollution, and dust pollution, as well as mitigating climate change and offer a variety of ecosystem services including air and water filtering, which are necessary for healthy human societies in cities. Dr. Akira Miyawaki proposed a reliable forest restoration method, i.e., "Native forests by native trees" for increase forest/green area in cities and first applied it in Japan. Using native tree species, this strategy aids in the creation of multi-strata forests. It has the potential to increase forests and green space in urban areas. Many states in our country have also used this strategy to increase green cover. TFRI will also initiate scientific research work on it and has submitted a project proposal on "Evaluation of various city forest established using Akira Miyawaki techniques in Maharashtra" to MoEF& CC for funding through our ICFRE council.



Posha Nakhwa BMC Garden, Versova, Andheri, Mumbai establish by Keshav Srushti

Biotization with Plant Growth Promoting Rhizosphere and Endophytic Bacteria for Management of Nursery Diseases of Micro Propagated Bamboo and Teak



Dr. Darshan K,
Scientist-B

Healthy and disease-free planting material is an important factor for sustainable forest protection. Micropropagation is a subfield of forest biotechnology which is attracting the attention of scientists for disease free superior clonal seedlings in a short time throughout the year to meet market demand. Tissue culture raised plants that survive less field condition following laboratory transfer due to the extreme differences between the *in vitro* and *ex vitro* environment. In the process of *in vitro* propagation most of the beneficial endophytic bacteria are also eliminated. Hence, the tissue cultured plantlets are highly and easily susceptible to biotic and abiotic stress in early stages. Serious efforts are urgently required for successful field establishment of micropropagated plants. Scientifically, 'Biotization / Bio-hardening defined as a metabolic response of in vitro grown plant material to microbial inoculant(s), leading to developmental and physiological changes enhancing biotic and abiotic stress resistance of the derived propagules. Biohardening is an emerging trend envisioned at reducing harmful chemical usage in plant production while enhancing plant fitness, productivity, and resistance to pests and diseases.

A project has been taken to explore potential rhizosphere and endophytic bioagents substantially enhance the establishment rate of the micropropagated bamboo and teak plants to empower with extra molecular weapons tackle the situation once exposed to the ambient environment.



Biotization leads to induction of innate immune response and growth promotion in banana by *B. velezensis* against *Foc*.

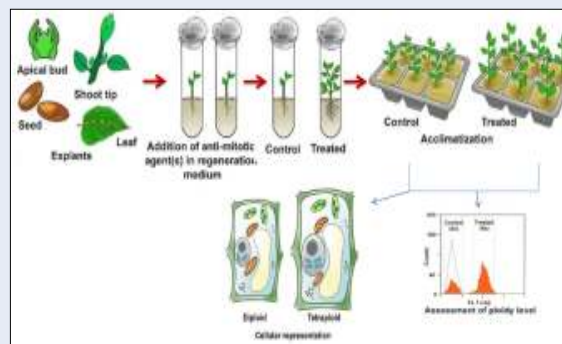


Induction of Polyploidy in the Improvement of Medicinal Plants



Shri Kaushal Tripathi
Scientist-B

Polyploidy is a widespread phenomenon in flowering plants that contributes to diversity, adaptability, and evolution. The several advantages of polyploidy observed in natural species indicate that polyploids have a selective advantage over diploids. Polyploidy is associated with extensive structural, developmental, physiological and biochemical alterations in plants that result in wide variation in these features. As a result, polyploidization presents new opportunities for plant breeders to produce *ex vitro* and *in vitro* synthetic polyploids and select desirable plants for purposes such as medicinal and resistant applications, among others. The phenomena of genome buffering, heterozygosity and heterosis deserve attention in plant breeding programs, because they may contribute to the increased vigor found in polyploid organisms compared to their diploid genotype. Along with these polyploids, play a crucial role in germplasm transfer across species when direct crossing is not feasible, as well as in restoring the fertility of sterile hybrids. Increasing biomass production coupled with the change in the production of secondary pharmaceutical compounds has made researchers an efficient option for selecting high-yielding plants. Therefore, seeing the commercial interest in Medicinal plant, a Project on "Induction of polyploidy and production of quality planting material of Medicinal plant" to improve genotype, has been submitted to Chhattisgarh State Medicinal Plant Board (CGMPB), Raipur.



Diagrammatic representation of *in vitro* induction of polyploidy

Soil Less Cultivation



Smt. Neelu Singh
Scientist - G

Changing climate, lack of resources for irrigation, pest management, herbicides/weedicides, presence of hostile environmental factors and various types of soil/water borne diseases are the major challenges for developing countries. The effects of all these factors can be over ruled by the new technique of cultivation i.e. Hydroponics or soil less cultivation. First project in ICFRE on Hydroponics has been initiated with four medicinal plants-*Bacopa monnieri*, *Centella asiatica*, *Acorus calamus* and *Stevia rebaudiana*. Mini hydroponic systems have been established to initiate research activities.



Mini Hydroponics system



Hydroponics systems established at TFRI, Jabalpur





TRAINING AND CAPACITY BUILDING

1. Five days online training programme on "**Advance Training in Molecular Biology Techniques and its Application**" for the scientists of ICFRE, held on 21/03/2022 to 25/03/2022 through virtual mode.
2. Two days training programme on "**Bamboo: processing & management**" for the farmers of MSME, Maharashtra was held on 24/03/2022 and 25/03/2022.
3. Two days training programme on "**Bamboo: conservation and management**" was organized on 05/04/2022 for the group of 20 officials of Soil and water conservation department, Foundation of MSME Cluster (FMC), Meghalaya State at Tropical Forest Research Institute, Jabalpur involved in Bamboo farming and processing under NBM and Asian Development Bank project.
4. Training on "**Standard Operating Procedures for The Forestry Plantation for the officials of Odisha State Forest Department**" was organized by Genetic and Tree Improvement Division of the institute in collaboration with IFP, Ranchi dated 21/04/2022 in virtual mode. A total of 150 officials of Odisha SFD participated in the training.
5. Two days regional training cum workshop on "**Preparation and Application of Organic Fertilizers & Biofertilizers**" was organised by Madhya Pradesh Van Vikas Nigam Bhopal at Belkund Nursery (Kundam Project) and Kanchangao nursery (Mohgaon project) on 25/4/22 and 27/4/22 respectively, on request of Regional General Manager, FDCM, Jabalpur. Hands on practical demonstration on preparation of Jivamrut was also demonstrated to participants. A total of 50 participants attended in each training.



Training programme on "Advance Training in Molecular Biology Techniques and Its Application"



Training programme on "Bamboo: Processing & Management"



Training-cum-workshop on 'Standard Operating Procedure (SOP) for Forestry Plantations'



Training programme on "Bamboo: Conservation and Management"



Training cum workshop on preparation and application of organic fertilizers & Biofertilizers was organized by Madhya Pradesh Van Vikas Nigam Bhopal at Belkund Nursery(Kundam Project) and Kanchangaon nursery (Mohgaon project)





Visits of dignitaries

Head, Bio research Development, **Dabur Research Development Centre**, Ghaziabad visited TFRI and interacted with the Director and scientists of the Institute regarding various research programs which are carried in the field of Medicinal Plants at TFRI.



Exposure Visits

Training Programme on "**Bamboo Promotion & Management**" was conducted on Ranga Plantation Barha on 24-03-2022 for farmers.



Extension Activities (SFD/Industrialists/Others)



Demonstration of TFRI technologies to Range Forest Officer trainees from Coimbatore on 21/03/2022



Demonstration of TFRI technologies to Range Forest Officer trainees from Haldwani on 29/03/2022



Demonstrated Agroforestry model, Bambusetum, insectary, plant propagation, seed handling techniques to the group of B.Sc. forestry students of JNKVV, Jabalpur on 13/04/2022.



Demonstration on Vermicompost Preparation, Jeeva amrut, Beeja amrut and Plant based bio pesticides for B.Sc (First year) students of Danielson College, Chhindwara



WORKSHOP / SEMINAR



One day Hindi Workshop organized for technical staff at TFRI, Jabalpur on 15/03/2022



Quarterly execution meeting of Rajbhasha chaired by Director, TFRI held on 21/03/2022

CHIEF GUEST / GUEST SPEAKER

1. **Dr. G. Rajeshwar Rao**, ARS, Director, TFRI Jabalpur was invited as Chief guest and attended Inaugural session of the 21 days Training course on "**Forest Management for sustainable use of Natural resources**" through virtual mode held on 03/03/2022 to 24/03/2022.
2. Smt Neelu Singh, Scientist-G, Group Coordinator Research TFRI, Jabalpur delivered lecture "**Potential of NTFPs and scope of integrating NTFPs in Tribal Development Programme of NABARD**" as guest speaker on 30/04/2022 through virtual mode in three days workshop at Banker Institute of Rural Development (BIRD), Mangaluru (NABARD) for 28th to 30/04/2022 for Capacity building of NABARD Officers and representative of project Implementing Agencies (PISs).

EVENTS ORGANIZED

"International Women's Day"

Tropical Forest Research Institute, Jabalpur organized series of events to celebrate "**International Women's Day 2022**" on 8th March

on the theme "**Break The Bias**".

Dr. G Rajeshwar Rao, ARS, Director, TFRI, Jabalpur welcomed Dr. Pragya Dhirawani, MBBS, DGO, Jabalpur Hospital & Research Center, Chief Guest of the function. He emphasized on the role of women in the national perspective and shared his views on motivational women and freedom fighters like Rani Laxmibai and Rani Durgawati heroism. Smt. Neelu Singh, GCR and Scientist 'G', TFRI shared her personal experience of Doctor's role in women's life. Dr. Pragya Dhirawani, spoke on her experience as a doctor and the critical issue of female foeticide despite the increasing educational status and laws by government on the same. She emphasized on cooperation and support among women for empowering themselves.





"World Forestry Day"

TFRI celebrated "World Forestry Day" on 21.03.2022

Series of programmes were organized by Tropical Forest Research Institute, Jabalpur to celebrate **"International Forest Day"** on 21st March, 2022. Two competitions i.e. Quiz and Rangoli were also organized for the research scholars of the Institute on the theme of Forests and Sustainable production and consumption' on International Day of Forests, 2022. Director, TFRI distributed certificates to the participants during the event.



"Earth Day"

"Earth Day" organized for students of Kendriya Vidyalaya, Jabalpur on 22nd April 2022

On the occasion of Earth Day 2022, Quiz and Painting Competitions for the students of Kendriya Vidyalaya, Jabalpur was organized by the Forest Extension Division of the institute on 22nd April 2022 to create awareness among the students on the theme **"Invest in our planet"** of earth day. Quiz and Painting competitions for the students were organised. The programme was coordinated by Dr. Nanita Berry, Head, Forest Extension Division and Manish Kumar Vijay, Scientist B. Students enthusiastically participated in the competitions. Winners were also honoured with Prize and certificate distributed by the dignitaries during the occasion.



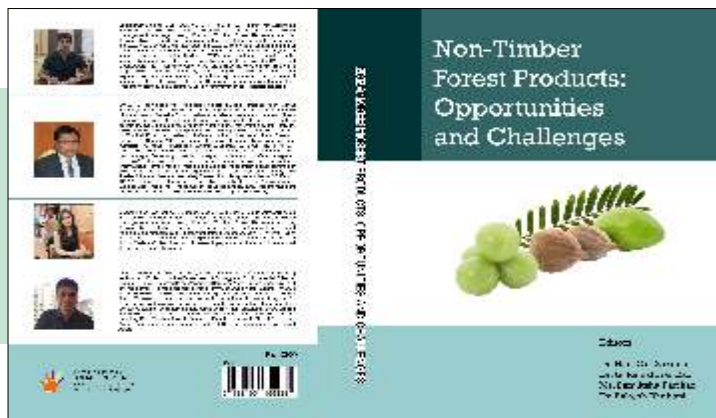
FRCS, Chhindwara celebrated "Earth Day" on 22.4.2022 and conducted quiz competition for the B.Sc students of Danielson College, Chhindwara.





PUBLICATIONS

Book



Hari Om Saxena, G. Rajeshwar Rao, Samiksha Parihar and R. Bhutiani (Eds.) (2022). Non-Timber Forest Products: Opportunities and Challenges. Jabalpur (M.P.), ISBN :9788195159888 . Published by : Anjali Copiers, JBP

Research Papers

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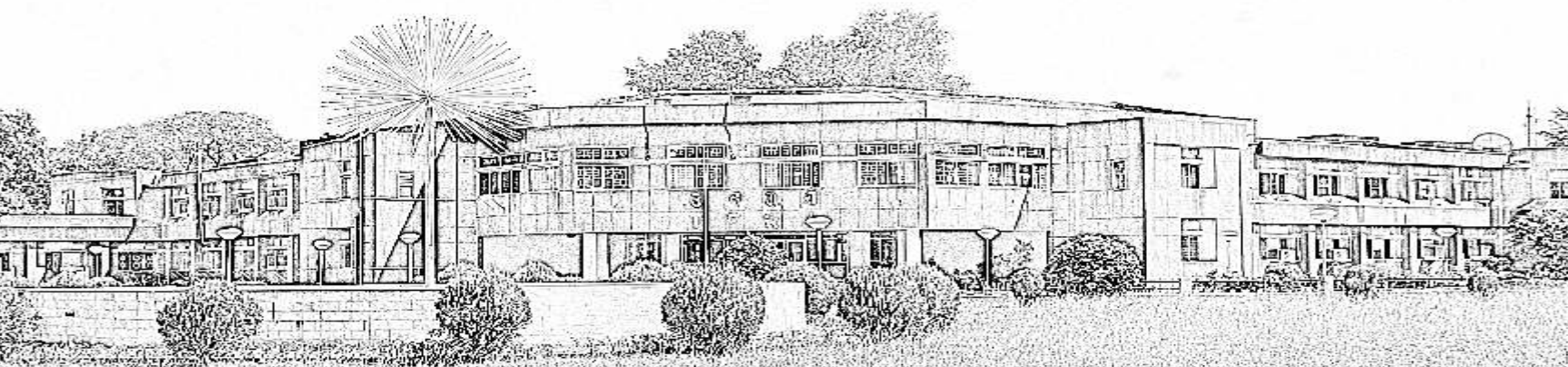
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ABOUT THE INSTITUTE

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

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

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



CORE RESEARCH AREAS

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- Biodiversity assesment, conservation and development
- Sustainable forest management
- Planting stock improvement
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