



ICFRE NEWSLETTER

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Shri. A.S. Rawat, IFS is the new Director General of ICFRE

Shri. A.S. Rawat, IFS (JHK:1986) assumed the additional charge of the post of the Director General, Indian Council of Forestry Research and Education (ICFRE), Dehradun in the afternoon of 16 March 2020.



More than 1000 tree growers, staff of state forest department of Tamil Nadu, KVKs, Wood Based Industries, NGOs and Tree Growers Associations participated in the Mela. The event was for the first time live streamed in YouTube. Proceedings are available at the links <https://youtu.be/3PdKjQfJNns> & <https://youtu.be/QXv-POoVq00> for I & II day respectively.



TREE GROWERS MELA

Institute of Forest Genetics & Tree Breeding (IFGTB), Coimbatore organized two days Tree Growers Mela 2020 at the institute on 10 and 11 March 2020. The Mela was organized in collaboration with Tamil Nadu Forest Department, Tamil Nadu Newsprint & Papers Limited (TNPL), KVKs & NGOs.

An exclusive exhibition on the tree cultivation technologies, clonal technologies, agroforestry models, nursery management, bio products, timber procurement and marketing options was also arranged in the Mela. New publications and bio products of IFGTB were released in the Mela.



Significant Research Findings



Forest Research Institute, Dehradun

- Aphid rearing experiments on wheat set up, I & II instars nymphs successfully reared on wheat roots. Winter generation of the aphid *Biazongia pistaciae* was reared. Virginopare completed three generations on the roots of alternate host, wheat. Biology related experiments are being conducted under the project “Cecidology and nursery establishment of *Pistacia integerrima* for exploring possibility of *in situ* leaf gall production (Dabur India Pvt Ltd)”.
- Tours were conducted to Ambala, Panchkula, Dehradun during February 2020 and collected eighteen samples of lepidopterous larvae: *Eutectona machaeralis* and some unidentified larvae from different forestry trees: *Tectona grandis*, *Dalbergia sissoo* and *Cassia fistula* and five samples of *Apanteles* cocoons were also collected for their laboratory rearing which has been continued for the emergence of *Apanteles* spp. Three species of *Apanteles*: *A. ruidus*, *A. hyblaeae* and *A. calycinae*, were identified upto species level.

During March 2020 collection of *Apanteles* spp. has been carried out from Dehradun in Uttarakhand. Ten sweeping samples of insect fauna were collected. Five specimens of *Apanteles* spp. were sorted out. Twenty samples of lepidopterous larvae/ cocoons have been collected from Dehradun and Yamunanagar, feeding on forest tree species: *Cassia fistula*, *Dalbergia sissoo* and *Tectona grandis* for the laboratory rearing and emergence of *Apanteles* spp. Collected samples of larvae: *Catopsila pomona*, *Eutectona machaeralis*, *Hyblaea puera*, *Hyposidra* sp. and *Hyposidra succesaria*. Emergence of *Apanteles phytometrae* from

parasitized larvae of *Eutectona machaeralis* during rearing has been photographed. Data compilation and table of host range were also prepared under the project “Studies on taxonomy and host range of larval parasitoids, *Apanteles* spp. (Hymenoptera: Braconidae) from Uttarakhand and Haryana”.

- Thirty sweeping samples were sorted out from which thirteen egg parasitoids were identified up to species level: *Anagrus* sp., *Anaphes* sp., *Gonatocerus aegyptiacus*, *Lymaenon littoralis*, *Lymaenon aureus*, *Lymaenon narayani*, *Mymar taprobanicum*, *Oligosita debaensis*, *Trichogramma chilonis*, *Trichogramma kankerensis*, *Trichogrammatoidea fumata*, *Pseudoligosita latipennis* and *Ufens latipennis*. During March 2020 field collection of insect fauna for egg parasitoids carried out from Haryana. As a whole 60 sweeping samples were collected, from different agro-climatic zones : (Haryana; Zone I: Ambala; Zone II: Jind, Nuh, Palwal, Faridabad and Zone III: Gurgaon). Fifteen samples of eggs of insect pests infesting different forestry trees (*Albizia lebbbeck*, *Acacia nilotica*, *Cassia fistula*, *Delonix regia*, *Eucalyptus* sp., *Ficus* sp., *Syzygium cumini* & *Tectona grandis*) were also collected for laboratory rearing for emergence of hymenopteran egg parasitoids. Photographs of *Trichogramma* sp. were taken for its taxonomic identification under the project “Studies on diversity and host range of hymenopteran egg parasitoids from northern India (Haryana, Uttar Pradesh and Uttarakhand)”.
- Database of butterflies associated with different forest sub-types was updated and completed for past records. Segregation of past data on butterflies was done for generating GIS based mapping for each 3 species of the family Papilionidae in Uttarakhand under the project “Butterflies associated with different forest types/sub-types in Uttarakhand”.
- Experiments on biology of the 4th instar larvae of cerambycid borer, *Xylotrechus basifuliginosus* was carried out on Kharsu oak, *Quercus semecarpifolia* logs brought from the Deoban RF, Chakrata earlier & cerambycid borer, *Aphrodisium hardwickianum* on ban oak, *Q. leucotrichophora* logs brought from Devli village in Thanu range, Dehradun district were continued in the laboratory for life history studies during winter. In March 2020 database of insect pest of Western Himalayan Oaks was updated by adding 12 species of the order Hemiptera, thus increasing the total number of species to 187 species. Experiments on biology of the cerambycid

borer, *Xylotrechus basifuliginosus* was carried out on Kharsu oak, *Quercus semecarpifolia* logs brought from the Deoban RF, Chakrata earlier & Cerambycid borer, *Aphrodisium hardwickianum* on ban oak, *Q. leucotrichophora* logs brought from Devli village in Thanu range, Dehradun District, were continued in the laboratory, with larval feeding now resuming. Besides life cycle of 1 species of Lepidoptera (Lymantridae) larvae brought from the field were continued in the laboratory for life history studies during winter with formation of pupal stage under the project “Insect pests of Western Himalayan Oaks and their Control”.

- Under the project “Digitization and enrichment of National Forest Insect Collection (NFIC) of Forest Research Institute, Phase-II (minute insects)” digitized 100 types with about 700 photos in February and 129 types with about 598 photos in March. Edited about 550 photographs of 100 species in February and 200 photographs in March and saved them in Tiff, Jpeg and compressed forms. Verification of names in the cabinets was completed. Corrections in the records based database on the verification report has been done in cabinet 1-4 in February and of 925 accessions were done in cabinets 6, 9 12 to 14 in March.
- Estimation of total phenolic content of 20 different clones of poplar has been done. Estimation of total tannin content of 10 different clones of poplar has been done. A field visit to Udham Singh Nagar, Pilibhit and Bareilly region was done for the collection and observation of different insect pests of poplar and observation of poplar field under the project “Screening of poplar clones for tolerance against poplar leaf defoliator, *Clostera cupreata* But.”
- A ten day survey was carried out to assess the status of butterflies, birds and mammals during winter season in the impacted forest area in Surguja and Korba districts of Chattisgarh under the project “Biodiversity assessment study with respect to the whole Hasdeo-Arand Coalfields comprising of Tara, Parsa, Parsa East, Kente extension, in Surguja district, Chattisgarh”.
- Attack of gall forming insect was recorded in *Emblia officinalis*. Treatment of Furadan was given to infested plants. Attack of defoliator was found in *Gmelina arborea* and treatment of insecticides was also given to infested plants. Monitoring & soil working in plantation area of both sites at Dhaluwala Majbata (Haridwar) and Fatehpur Pelio (Saharanpur) was done. Counting of tillers of wheat was done randomly in experiment sites. Maintenance and monitoring of plantation of *G. arborea* and *E.officinalis* at above sites is in progress under the project “Development of *Gmelina arborea* and *Emblia officinalis* based agroforestry models on degraded lands in Uttarakhand and Uttar Pradesh”.
- Monitoring & soil working in plantation area of both sites at Dhaluwala Majbata (Haridwar) was done. Counting of tillers of wheat was done randomly in experiment sites. Attack of defoliator was found in kadam and treatment of insecticides was also given to infested plants. Maintenance & monitoring of plantation of kachnar, bhimal and kadam at both above sites was also done under the project “Development of kachnar (*Bauhinia variegata*), bhimal (*Grewia optiva*) and kadam (*Anthocephalus cadamba*) based agroforestry models on farmers land under rainfed conditions in Uttarakhand”.
- Samples of *Grewia optiva* collected from field are under process of determination of saponin. Multiplication of the fungus i.e. *Aspergillus niger* are under progress for development of eco-friendly method to extract the fibre from *Grewia optiva*. Data collected on fodder quantity in various treatments are under computation under the project “Livelihood improvement through sustainable utilization of *Grewia optiva* (bhimal) in Uttarakhand”.
- Carboxymethylation of *Cassia tora* gum was carried out using monochloroacetic acid in alkaline conditions using Taguchi's statistical design. Crude extracts and hydrolysed samples of *Cassia tora* endosperm obtained at different temperatures were analysed by HPLC to quantify rehin, emodin and chrysophanic acid using standard anthraquinones.
- HPLC estimation of Limonoids (Azadirachtin A&B, Salannin, Nimbin, 3-deacetylsalannin and 6-deacetylnimbin in neem seed samples of altogether 20 progenies was done. Analysis of neem seed samples from various provenances for quantitative estimation of Azadirachtin A, Azadirachtin B, salannin, and nimbin by HPLC was done.
- CIE L*a*b* analysis of further samples of dyed silk, wool and cotton fabrics with natural dyes derived from aerial biomass of *Cassia occidentalis* was done.
- Field observation and collection of some unidentified pteromalid wasps were done in FRI Campus through sweeping net. Several samples of pteromalid, eulophid and encyrtid insects were collected from FRI Campus. A field visit

to Udham Singh Nagar(Uttarkhand), Pilibhit and Bareilly (UP) region was done for the collection of different parasite and observation of Vegetable Research Centre, Horticulture Research Centre and agroforestry area. Several samples of pteromalids, eulophids and aphids were collected from fields. Emergence of pteromalid female wasp (unidentified) was observed from the seeds of *Melia* sp. collected from the Sitarganj. Samples of oak leaf and ficus leaf infested with galls insects has been collected from Shimla and Solan districts of Himanchal Pradesh. Total samples of ten species were collected in this month under the project ”

- Extracts from knot-woods of *Acacia nioltica* and *Toona ciliata* obtained from the timber depot of Haryana Forest Department, Panchkula were isolated using hexane, 5% water- acetone and water under ultra-sonication for their chemical and bioassay studies.
- Two populations of *Btula utilis* (BU 06 and BU 10) grown in the forests of Uttarakhand were characterized for their total triterpenoid contents determined in their bark.
- Essential oils from the peels of *Citrus reticulata* (kinnu) fruits with and without cortex were isolated using hydro-distillation for their GC-MS assisted chemical examination.

Institute of Wood Science and Technology, Bengaluru

- Organo-metallic complexes of *Eucalyptus* and *Lantana camara* species were evaluated as a potential wood preservative. Extractives from bark, wood and leaves were prepared using different solvents (viz, Hexane, acetone, alcohol and water) of varying polarity.

Rubberwood samples were treated with extractives of the above species by pressure method and dipping method and were exposed to field test to study the toxicity of different extractives. Results of the initial experiment showed that alcohol and water extract after sequential extraction was performing better compared to other two solvents. This step was very important for selection of solvent extract for the preparation of organo metallic complexes with inorganic salts i.e., sodium dichromate and copper sulphate.

Of the two extractives i.e. alcohol and water; water extractive performed better and solubility of this extractive and mixing with the inorganic salt was very good compared to alcohol extract. Fixation property of both the extractives was almost same. Both the extractives (*Lantana* and *Eucalyptus*) in combination are performing good. Eucalyptus bark and wood extractives are performing better compared to leaf extract.

Arid Forest Research Institute, Jodhpur

- Tour was undertaken to Gujarat to assess the growth performance of clonal trials of casuarina and agroforestry trial of sandalwood. Recorded one year growth data. Inter specific hybrids between *Casuarina equisetifolia* and *Casuarina junghuniana* are performing better on all three selected sites (Rajkot and Bhavnagar). 98% survival was recorded in Rajkot (inland area).

In agro forestry trial of sandalwood, better growth was found in Anand Agricultural University campus. Mean value of sandalwood tree height was 250cm and basal diameter was 50mm.

Consultancy

- ICFRE presently works on eleven consultancy projects, which are awarded by Tehri Hydro Development Corporation India Ltd; Himachal Pradesh Power Corporation Limited; Karnataka State Official Authority; MoEF&CC GoI, New Delhi; Coal India Limited, Kolkata; NTPC Ltd Noida; NMDC Ltd, Hyderabad; Singreni Collieries Company Ltd., Kothagudem; Chhattisgarh Forest Department, Raipur; Deptt. of Forest and Environment, Bhubaneswar and Khairaha UG Coal Mine of SECL M.P

Publications

- The following extension material was developed by HFRI, Shimla during the month of March 2020:
 - हिमाचल प्रदेश के महत्वपूर्ण मशरूम (a small Booklet in Hindi)
 - गुच्छी (a pamphlet in Hindi)
 - हिमाचल प्रदेश के पर्वतीय क्षेत्र में पायी जाने वाली सामान्य तितलियाँ.
 - A pamphlet on ‘Chilgoza (*Pinus gerardiana* Wall.)’

Popularizing Forestry through All India Radio/Doordarshan

| Programme Topic | Channel | Date |
|---|-----------------|------------------|
| Forest Research Institute, Dehradun | | |
| Different Forestry Aspects | All India Radio | February 2020 |
| उत्तराखण्ड के रिंगाल बांस की विविधता एवं उसके उपयोग | Akashvani | 23 February 2020 |
| कैसिया तोरा के बीज का उपयोग | Akashvani | 4 March 2020 |
| Preparation of binder for agarbatti making-role of FRI | Akashvani | 4 March 2020 |
| कृषि और वानिकी में आग की भयावहता | – | 11 March 2020 |
| वनीकरण द्वारा सिंचाई जल की गुणवत्ता एवं उपलब्धता में वृद्धि | – | 11 March 2020 |

Tree Growers Mela/ Kisan Mela

| Institute | Participated/organized | Duration | Place |
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| IFP, Ranchi | <i>Kisan Gosthi</i> in the Kisan Mela-cum-Technology and Machinery Exhibition | 13 and 14 February 2020 | ICAR-Indian Institute of Natural Resins & Gums (IINRG), Namkum |
| IWST, Bengaluru | Indian Wood Exhibition 2020 | 27 February to 2 March 2020 | IWST, Bengaluru |
| IFGTB, Coimbatore | Tree Growers' Mela | 10 and 11 March 2020 | IFGTB, Coimbatore |

Workshops/Seminars/Meetings

| S. No. | Topic | Duration | Beneficiaries |
|--|---------------------------------|------------------|-------------------|
| Forest Research Institute, Dehradun | | | |
| 1. | Modern Trends in Plant Taxonomy | 12 February 2020 | SFDs and Students |

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| 2. | 2nd consultation on UP-DPR Yamuna Project | 24, 25 & 26 February 2020 | SFD Haryana & UP-DPR-Yamuna project |
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| 3. | Role of Forstry in Disaster Management | 3 to 5 March 2020 | Forest Department, NYK & NGOs |
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Institute of Forest Genetics and Tree Breeding, Coimbatore

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| 4. | CRISPR for Prosperous Forestry: Scope and Challenges” & “Opportunities for New Thrust area in Bioprospecting of Forest Resources | 7 February 2020 | ICFRE Scientist's |
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| 5. | Impact of Plantation Forestry: Medium & Small Scale Industries | 11 February 2020 | Officers, Scientist's, Staff and Research Fellows |
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| 6. | Forest Genetic Resource Management | 5 March 2020 | Scientist's, Technical Staff and Research scholars |
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| 7. | National Programme for Conservation and Development of Forest Genetic Resources | 6 March 2020 | Scientists, Technical staff, Research scholars |
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Seminar on Impact of Plantation Forestry: Medium & Small Scale Industries



Meeting on National Programme for Conservation and Development of Forest Genetic Resources

Institute of Wood Science and Technology, Bengaluru

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| 8. | National Accreditation Board for Testing and Calibration Laboratories (NABL) | 18 February 2020 | NABL Consultants |
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Tropical Forest Research Institute, Jabalpur

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| 9. | Preparation of DPR for river Narmada under river rejuvenation programme | 17 February 2020 | State Government, Scientists and Stakeholders |
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Rain Forest Research Institute, Jorhat

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| 10. | Preparation of Detailed Project Report (DPR) for Rejuvenation of river Brahmaputra through Forestry Interventions | 10 February 2020 | People of Brahmaputra basin, Forest Departments & Researchers |
| 11. | 2nd consultation meeting on “Preparation of Detailed Project Report (DPR) for Rejuvenation of river Brahmaputra through Forestry Interventions | 28 February 2020 | People of Brahmaputra basin, Forest Departments & Researchers |
| 12. | Enterprise Based Web GIS and Plantation Monitoring | 6 March 2020 | – |



Meeting on Preparation of Detailed Project Report (DPR) for Rejuvenation of river Brahmaputra through Forestry Interventions



Second Consultation Meeting on Preparation of Detailed Project Report (DPR) for Rejuvenation of river Brahmaputra through Forestry Interventions

Arid Forest Research Institute, Jodhpur

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| 13. | Role of Botanicals in Management of Plant Disease | 27 February 2020 | Forest officers, Scientists, Technical Staff and Research Scholar |
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Himalayan Forest Research Institute, Shimla

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| 14. | Second Consultative Meeting for the Finalization of Detailed Project Reports for Rejuvenation of Beas, Ravi and Sutlej River Basins through Forestry Interventions | 12 March 2020 | Central and State Govt., R&D Organizations, Punjab Forest Department and various other departments |
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Institute of Forest Biodiversity, Hyderabad

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| 15. | Detailed Project Report for Rejuvenation of Godavari River Through Forestry Interventions | 6 March 2020 | – |
| 16. | Detailed Project Report for Rejuvenation of Godavari and Krishna Rivers Through Forestry Interventions | 12 March 2020 | – |
| 17. | Sustainable management of NTFP's | 16 March 2020 | – |

Training Programmes

| S. No. | Topic | Duration | Beneficiaries |
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Institute of Forest Genetics and Tree Breeding, Coimbatore

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|----|---|-----------------------------|---|
| 1. | Quality Plant Material Producer (QPMP) | 3 February to 13 March 2020 | Entrepreneurs and Students |
| 2. | Urban Forestry | 13 and 14 February 2020 | Teachers, Staffs of PWD and NGOs |
| 3. | Recent Advances in Forestry Research & Tree Improvement | 17 to 21 February 2020 | Forest Officials of Uttar Pradesh Forest Department |
| 4. | Tissue Culture of Important Tree Species and Bamboos | 24 to 28 February 2020 | ICFRE's Technical Staff |



Training on Tissue Culture of Important Tree Species and Bamboos



Training on Recent Advances in Forestry Research & Tree Improvement



Training on Urban Forestry

Forest Research Institute, Dehradun

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| 5. | Forest Economics | 10 to 14 February 2020 | 10 IES Officers |
| 6. | Bamboo Propagation and Management | 24 and 25 February 2020 | 25 NBM officials & farmers from Bihar, HP, J&K, UP and Uttarakhand |
| 7. | Forest Acts & Policy | 24 February to 6 March 2020 | 10 IES Officers, Students, NGOs and SHGs |
| 8. | Parataxonomy Under the UNDP-SECURE Himalaya Project 'Skilled Development in Parataxonomy | 29 February to 2nd March 2020 and 4 to 6 March 2020 | Trainees from both landscapes (Gangotri-14, Govind-6) |
| 9. | Forest Entomology & Pest Control under Green Skill Development Programme (GSDP) | 24 February to 28 March 2020 | 50 participants |



Training on Skilled Development in Parataxonomy



GSDP training on Forest Entomology & Pest Control

Institute of Wood Science and Technology, Bengaluru

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| 10. | Wood Protection | 3 to 7 February 2020 | Entrepreneurs from Private wood industries, Academia, Trainees from Private Bamboo Industry |
| 11. | Sandalwood – seed handling, nursery & plantation technology | 10 to 14 February 2020 | Farmer's |
| 12. | Propagation and Management of Bamboo | 25 February to 26 March 2020 | Student's |

Tropical Forest Research Institute, Jabalpur

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| 13. | Value Addition and Marketing of NTFPs (Plant Origin): Bamboo Craft | 7 February to 23 March 2020 | Unemployed youths/ Villagers and Womens |
| 14. | Value Addition and Marketing of NTFPs (Plant Origin): Medicinal Plant | 26 February to 17 March 2020 | Unemployed youths/ Villagers and Womens |
| 15. | Bio Control Efficacy of Spiders Against Insect Pests of Rice Raising in Irrigated Conditions | 4 and 5 March 2020 | Farmers |
| 16. | E-procurement and Purchase Management in Government Storekeeping and Record maintenance | 4 to 6 March 2020 | ICFRE's Ministerial Staff |
| 17. | Research and Developments of commercially important tree species | 12 and 13 March 2020 | Staff of MP Forest Department, farmers, NGOs |

Rain Forest Research Institute, Jorhat

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| 18. | Bamboo Craft | 3 February to 20 March 2020 | Craftsmen/farmers from different districts of Assam |
| 19. | Best Practices of Forestry | 18 and 19 February 2020 | Sr. Forest Officers |
| 20. | Best Practices of Forestry | 21 and 22 February 2020 | 77 Nos. Front line staff |



Training on Bamboo Forestry under Green Skill Development Programme

Arid Forest Research Institute, Jodhpur

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| 21. | Value Addition & Marketing of NTFPs (Plant Origin): NTFP Products/Medicinal Plants | 6 to 25 February 2020 | GSDP Trainees |
| 22. | Waste Management, Solid Waste, Bio-Chemical Waste, Plastic waste, E-Waste, Construction and Demolition | 20 February to 21 March 2020 | GSDP Trainees |

Himalayan Forest Research Institute, Shimla

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| 23. | Cultivation of Non –Timber Forest Produces (NTFPs) in Jammu Region: A Step Towards Enhancing Farmer's Income and Livelihood | 26 February 2020 | Farmers of the Jammu region, PCCF (Wildlife), CF, DFOs, Director, SFRI, Jammu and Director, CF, and Scientists |
| 24. | Uses and Conservation of Chilgoza Pine and Wild Mushrooms | 12 and 13 March 2020 | Frontline staff of SFD, local villagers, members of Panchayat and Mahila Mandals |
| 25. | Nutritive Value and Leaf Biomass Production as Influenced by Lopping, Aspect, Altitude and Crown Architecture | 14 to 19 March 2020 | – |



Training on Cultivation of Non –Timber Forest Produces (NTFPs) in Jammu Region: A Step Towards Enhancing Farmer's Income and Livelihood



Training on Uses and Conservation of Chilgoza Pine and Wild Mushrooms

Institute of Forest Productivity, Ranchi

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| 26. | Field survey of village level | 24 January to 1 February 2020 | NGO, Stakeholders, Local people and SFD Maharastra |
| 27. | Field data collection | 31 January to 7 February 2020 | – |
| 28. | Demonstating field data collection | 8 to 13 February 2020 | – |
| 29. | Bamboo Propagation and Management | 10 February to 14 March 2020 | Students, Youths & Farmers |
| 30. | Forest Management | 18 to 20 February 2020 | SFD Jharkhand, Panchayat Members, NGOs, students & progressive farmers |

Prakriti Programmes

- Under “*Prakriti*” programme, 989 students from various schools and 176 college students from Uttarakhand, Uttar Pradesh and Karnataka visited FRI, Dehradun in the month of February, 2020.
- Under “*Prakriti*” programme, 1070 students from various schools and 458 college students in and around Coimbatore district, participated in the awareness programme conducted by IFGTB, Coimbatore in the month of February, 2020
- Under “*Prakriti*” program 44 students of Grade V on 4 February 2020, 38 students of Grade VI on 5 February 2020 and 47 students of Grade VII on 6 February 2020 from Sharadha Vidyalaya, Bengaluru visited the IWST, Bengaluru.
- TFRI, Jabalpur organized demonstration cum awareness programmes for students from K.V. TFRI, Jabalpur on 27 February 2020.
- Representatives of AFRI, Jodhpur visited Kendriya Vidhyalay, Rajkot (Gujarat) under “*Prakriti*” programme and discussed

with Sh. Tej Singh (teacher) about “*Prakriti*” Programme on 10 February 2020. 30 students of class 11th Biology Science participated in the programme.

- Under “*Prakriti*” programme, 350 students from KV, ONGC Cinnamara visited RFRI, on 11 and 12 February 2020.



Students of KV, AFS, Bareilly visited FRI, Dehradun



Students of KV, JRC, Bareilly visited FRI, Dehradun



Students of KV, ONGC Cinnamara visited RFRI, Jorhat

Awarness and Demonstration Programmes

- FRI, Dehradun organized training programmes on “Identification of Butterflies & Birds” and “Health assessment of trees” for frontline staff of State Forest Department, eco club teachers, students and other stakeholders at Botanical Garden, UT Chandigarh on 27 and 28 February 2020 under VVK..
- IWST, Bengaluru organized under VVK, Technology demonstration programme on “Package of Practice of Sandalwood Cultivation” at Ramanagar on 5 February 2020; Kolar & Mysore; on 6 and 7 February 2020, Kalburgi on 12 February 2020 and Viyayapura. 550 farmers and foresters attended the programme.
- IFP, Ranchi orgnized demonstration cum training programme on value addition of *T. indica* pods (Jam & Chutney) and *E. officinalis* (Aonla) Candy Value addition of *T. indica* pods and *E. officinalis* fruits.
- Following demonstration- cum-awareness programmes were organized by TFRI, Jabalpur:
 - For students of Anand Niketan Collage of Agriculture, Maharashtra on 4 February 2020.
 - For students of P.G. Collage Ghazipur, U.P. on 6 February 2020.
 - Trainees of Forestry Training Academy, Haldwani (Uttarakhand) on 20 February 2020.
- TFRI, Jabalpur organized demonstration cum awareness programme for trainees from Kundal Academy of

Development, Administration and Management (Forests), Maharashtra on 4 March 2020. 45 RFO trainees and Staff participated in the programme.

- An Awarneres & demonstration programme was organized on the research and development activities of RFRI, Jorhat, i.e. Bamboo Cultivation, Propagation, Nursery Management, Value addition & bamboo preservation techniques, biotechnology and tissue culture, identification of wild edible mushroom, lac cultivation, agar cultivation, vermicomposting, medicinal plants and orchids etc. during the month of March 2020. 250 Students of various schools of different districts of Assam under Gyan Yatra Programme, Govt. of Assam attended the programme.



RFO trainees and Staff participated in Demonstration cum awareness programme, TFRI, Jabalpur

Awards

- Ms. Rakhi Tyagi, FRI, Dehradun was bestowed with the 'Young Scientists Award' for the oral presentation entitled 'Hydroxyproyl Guar Gum: A Promising Viscosifier for Oil Drilling Industry' authored by Rakhi Tyagi, Ajeet Kumar Lakhera, Pradeep Sharma and Vineet Kumar during the 14th Uttarakhand State Science and Technology Congress (USSTC) held on 26 to 28 February 2020 at Vigyan Dham, Dehradun, Uttarakhand.
- Ms. Sapna Bhardwaj, FRI, Dehradun was awarded with 'Young Scientists Award' for the poster presentation entitled 'Seasonal Influence on *Artimisia roxburghiana* Wall. Ex. Besser Volatile: Physicochemical Profile and its Antimicrobial Activity against Human Pathogens' authored by Sapna Bhardwaj and Rashmi during the 14th Uttarakhand State Science and Technology Congress (USSTC) held on 26 to 28 February 2020 at Vigyan Dham, Dehradun, Uttarakhand.

Miscellaneous

| Institute | Special day/theme | Duration |
|---------------|----------------------|------------------|
| FRI, Dehradun | National Science Day | 28 February 2020 |

HR News

Repatriation

| Name of Officer | Date |
|--|------------|
| Dr. S.C. Gairola, IFS, Director General, ICFRE | 16.03.2020 |

Appointment

| Name of Officer | Date |
|--|------------|
| Shri Shyam Singh, Security Officer, FRI, Dehradun | 27.02.2020 |
| Shri K.Murali Sankaar, IFS Dy. Conservator of Forests, IFGTB, Coimbatore | 30.03.2020 |

Retirement

| Name of Officer | Date |
|---|------------|
| Dr. Shamila Kalia Asst. Director General (Media & Extension) & Scientist-G, ICFRE | 29.02.2020 |
| Dr. S. Murugesan, Scientist-G, IFGTB, Coimbatore | 31.03.2020 |
| Dr. Nizora D. Borthakur, Scientist-C, R.F.R.I., Jorhat | 31.03.2020 |

Patron:

Shri. A.S. Rawat, Director General, ICFRE, Dehradun

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