



INSTITUTE OF FOREST GENETICS AND TREE BREEDING
(Indian Council of Forestry Research and Education)

VAN VIGYAN

Newsletter

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From the Director's Desk

The start of the year for us in the Institute was encouraging with the visit of Smt. Jayanthi Natarajan, Hon'ble Minister of State (Independent charge), Ministry of Environment and Forests, Government of India. The announcements made by the Minister on ENVIS centre at IFGTB, support to Thane farmers and inauguration of FGRMN complex were again heartening. This is the fourth year we have been interacting with Farmers through the farmers' mela. The response of farmers for tree cultivation in Tamil Nadu and Kerala is encouraging. We in IFGTB are proud that we have contributed to tree cultivation outside forests and continued to render services to the tree growers. The farmers appreciated IFGTB's efforts in providing an excellent platform for discussing issues related to tree cultivation.

We have had, as usual, many training programmes for various endusers and stakeholders cutting across various sections of the society. The National Seminar on Forest Health Management inaugurated by Dr. P.J. Dilip Kumar was another feather in the cap, as it provided solutions to pest and disease problems encountered by the tree growers. A two day training programme to IFS officers on Public Private Partnership in Forestry was attended by DG, ICFRE, wherein he delivered the valedictory address.

The period has also been very edifying with the visit of Dr. Albert Nikiema, Forestry Officer (Forest Genetic Resources) from FAO who reviewed the country report prepared by IFGTB through extensive consultative process involving all stakeholders in the country. Appreciating the report, he stated that the report besides contributing to the preparation of SOW FGR would also support FGR conservation and management in the country.

Well begun is half done. I am sure IFGTB, in this year, would take up many more challenges and provide needy solutions for the cause of forestry in the country.

Dr. N. Krishnakumar
Director, IFGTB

The Institute of Forest Genetics and Tree Breeding, Coimbatore organised the Tree Growers Mela 2012 on 23rd and 24th February, 2012 at Coimbatore. It was inaugurated by Smt. Jayanthi Natarajan, Hon'ble Minister of State (Independent charge), Ministry of Environment and Forests, Government of India.



She distributed awards to the staff of IFGTB who had done meritorious service.



She announced a grant of Rs. 1 crore to produce 15 lakhs of quality planting stock of Casuarina for supply to the 'Thane' cyclone affected farmers of Cuddalore, Villupuram and Puducherry areas and distributed seedlings to the farmers of these areas as a symbolic gesture of the launch of the programme.

During the function she released publications brought out by IFGTB. Hon'ble Minister also released two products, a biofertilizer developed by IFGTB and a pesticide HyACT based on plant formulations.



She declared IFGTB as an ENVIS Centre on the subject of Forest Genetic Resources and Tree Improvement.

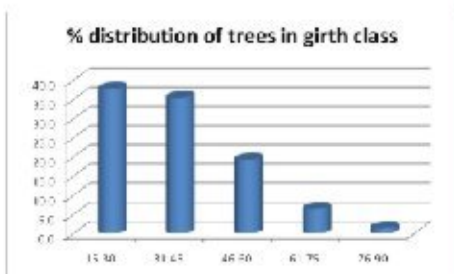
CASUARINA - AS A LONG ROTATION CROP

A study was taken up by the Institute of Forest Genetics and Tree Breeding, Coimbatore to estimate the yield of pulpwood from 20-year-old plantations of *Casuarina equisetifolia* in the land belonging to Arulmigu Nithyakalyana Perumal Temple at Tiruvidanthai, Kanchipuram district. The Tamil Nadu Newsprint and Papers Ltd., Pugalur, Karur commissioned this study.

The plantation was raised at a spacing of 4' x 4' (1.2m x 1.2 m) amounting to a density of 2778 trees per acre. Some deviations in the planted spacing were observed; however, average spacing worked out to 1.2 x 1.2 m. The casualty amounted to an average of 67%. There existed huge variation in girth of trees varying from 15 to 90 cm with a very few exceptional trees measuring up to 108 cm. Hence, the trees were stratified into five girth classes and frequency distribution of trees in different girth classes was

Girth class (cm)	Girth of sample trees (cm)	Total height (m)	Pulpwood yield (kg per tree)	Tops and tops (kg per tree)
15-30	22.5	12.5	40.0	2.0
31-45	37.5	18.5	128.0	22.0
46-60	52.5	19.0	246.5	30.0
61-75	67.5	24.0	452.0	56.0
76-90	82.5	37.0	788.5	135.0

Mid-value for each girth class was arrived at and representative mean trees for each girth class were selected and felled to assess yield of pulpwood with bark upto a thin end diameter of 5 cm (2 inches).



Frequency distribution of trees in various girth classes in *Casuarina* plantation



Pulpwood logs from a single tree measuring girth of 82.5 cm

It is estimated that pulpwood production on fresh weight basis (without any moisture loss) was 357 MT ha⁻¹ amounting to productivity of 17.87 MT ha⁻¹ year⁻¹. Besides pulpwood, firewood production amounted to 47 MT ha⁻¹. In terms of volume of pulpwood, it was 414 m³ ha⁻¹ from these plantations.

Large extent of land to the tune of about 300 acres is available with the Arulmigu Nithyakalyana Perumal Temple at Thiruvidanthai, Kanchipuram district, Tamil Nadu, and the soil is sandy, fit only for cultivation of *Casuarina equisetifolia*. It is

recommended that after harvest of the existing plantations, it would be apt to utilize the land for further cultivation of *Casuarina*, as the soil would be rich with the nodules of *Frankia*, and would help in better growth of the new plantations. If not utilized, the land is likely to be invaded by species like *Prosopis juliflora* and *Calotropis gigantea*, as observed in the blocks harvested earlier. In this process, a community nursery can also be promoted involving temple land and local people, in collaboration from IFGTB for improved seeds and clones for enhancing productivity and shortening the rotation period.

Another suggestion is that it would be desirable to use the existing plantation for selection of superior phenotypes to develop productive clones of local land

resources for this region, before clear felling the stand for pulpwood. These clones can be used immediately for establishing a seed orchard, which can be a source of superior seeds, for future planting programmes.

**C. Buvaneshwaran,
S. Saravanan,
K. Ravichandran,
R.S.C. Jayaraj**

Inauguration of new buildings

Hon'ble Minister laid the foundation stone for the Forest Genetic Resource Management Complex and the Extension Auditorium worth Rs. 4.60 crores for outreach programmes for farmers and other stakeholders.

She congratulated the ICFRE for remaining a stakeholder responsive organization, and suggested that these initiatives need to be sustained in the future.

She announced that IFGTB will act as nodal agency for Forest Genetic Resource Management and eventually this would lead to the establishment of the National Bureau of Forest Genetics Resources. She also appreciated the efforts taken by IFGTB in preparing the country report for the State of World Forest Genetic Resources (SOW FGR) to be released by FAO in 2013.



Hon'ble Minister also declared open the Exhibition on Agroforestry and Farm Forestry Technologies, wherein more than 30 forestry research organizations, wood based industries, bio-manures and bio-fertilizers industries, farm equipments and implements, organic products, Irrigation agencies, Tree Growers, hitech nurseries involved in planting stock production, Self help groups, etc participated.

Workshops & Seminars

A Workshop on 'Assessment of Forest Types of India' was organized at IFGTB on 2nd February, 2012 in which representatives from research organizations, forest department and other stakeholders participated.



A **National Stakeholder workshop** to prepare the country Report on Forest Genetic Resources for SOW-FGR was held on 7th & 8th February 2012. Representatives from Forest Departments, Research and Academic institutions and Industries participated in the workshop. The team leaders for the subgroups constituted to prepare the report presented the respective chapters.



This was followed by a visit by Dr. Albert Nikiema, Forestry Officer (Forest Genetic Resources) from FAO on 28.2.12 to facilitate finalization of the Country report on FGRs.



A **workshop** on 'Tree Farming for Sustainable Livelihood' was organised on 23rd and 24th February 2012 as part of the Tree Growers Mela 2012. Scientists, academicians, wood based industries, forest department, farmers spoke on various topics on themes related to Improved Tree Farming for enhancing livelihood, Technologies for Dryland Tree farming, Wood based Industries and Institutions, Market demand and supply linkages, Energy plantations and Rural livelihood, and Best practices in Tree Cultivation: Farmers' Experiences. The workshop was attended by about 1000 farmers besides representatives from Forest department, wood based industries, academic and research institutions, voluntary organizations participated in the workshop.



A National **Seminar** on Forest Health Management FHM-2012 was organized on 21st and 22nd March, 2012



Trainings imparted

Three training programme under 'Field Functionaries Training on Bamboo under National Bamboo Mission' were conducted in January and March at IFGTB with funding support of Tamil Nadu Horticulture Development Agency (TANHODA), Chennai. Around 100 field level functionaries at the level of Assistant Director of Horticultures (ADHs), Horticulture Officers (HOs) and Assistant Horticulture Officers (AHOs) working in the Horticulture Department of 9 districts of Tamil Nadu, participated in the training programme. The participants were taken to Bambusetum at IFGTB, Coimbatore, Bamboo trials at Bharathiyar University, Bamboo Ply factory, Angamaly, KFR I Bambusetum, Natural Bamboo Stands at Athirapalli Falls and Kerala Forest Research Institute, Peechi, Tamil Nadu Forest Department Field Station at Anthiyur, Bamboo plantation raised by farmers at Vilamundi and Natural Bamboo Brakes in Indira Gandhi Wild Life Sanctuary and National Park and Parambikulam Tiger Reserve.



A **training workshop on 'Public Private Partnership: Scope in Forestry'** for the Indian Forest Service Officers sponsored by the Ministry of Environment and Forests, Govt. of India was organized on 21st and 22nd February 2012.



A total of 29 IFS officers from different states of India participated in the workshop. The training workshop had interactive sessions on Public Private Partnership and experiences of various sectors like APFDC, Tripura Forest Development Corporation, tourism, transport, environmental and urban (commercial) sectors. A field visit was organised to Anamalai Tiger Reserve

and Parambikulam Tiger Reserve. Dr. VK. Bahuguna, IFS, Director General, ICFRE, Dehra Dun delivered the valedictory address and distributed certificates to the participants.



A **training programme on "Role of Micro and macro propagation for large scale production of quality plantingstock with focus on economically important tree species"** was conducted at IFGTB on 26-27 March 2012 for the forest guards of Kerala Forest and Wildlife Department. Twenty-seven participants attended the hands on training. Participants were made aware of the importance of genetic improvement and management of common diseases in clonal nurseries. Demonstration on various micropropagation techniques in forest trees was a highlight of the training programme. A training manual was also provided to the participants.



A **training programme on "Seed Handling and Nursery Technology for Biodiversity conservation and sustainable production"** was imparted to the officials of Tamil Nadu Forest Department during 16th and 17th March 2012.



Extension Activities at Demo Village

A **Demonstration** was organised to farmers and self help group members on Biofertilizer and biomanure production, identification of disease and pests in plantations and their control to the Farmers and Women Self Help Group of Kandiyur village, Coimbatore district, Tamil Nadu on 6th January 2012.



Books published:

1. IFGTB Vision Document
2. Proceedings of TESFS Seminar
3. Proceedings of Casuarina Workshop
4. Biofertilizers & Biomanures
5. Principles and applications of Frankia
6. Gmelina arborea (Tamil)
7. Vana Arivial Newsletter

Brochures

1. Institute's brochure in Hindi
2. Volume table for Casuarina

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