



“TREE CULTIVATION TECHNIQUES OF IMPORTANT TREE SPECIES”

04 - 06 January, 2023

INSTITUTE OF FOREST GENETICS & TREE BREEDING, COIMBATORE

Green India mission is one of the missions that come under the umbrella of the National Action Plan on Climate Change (NAPCC) which prioritized “greening” in the context of climate adaptation and mitigation, aiming to enhance ecosystem services like carbon sequestration and storage (in forests and other ecosystems), hydrological services and biodiversity; along with provisioning services like fuel, fodder, timber and NTFPs. The Mission had envisaged supporting a massive program of forestry on non-forest lands with participation of the community, farmers, NGOs, private sector, institutions, government agencies and the Forest Department. In this context, it was felt to dovetail the expertise and services of Krishi Vigyan Kendra in popularizing and scaling up the concept of Trees Outside Forests. Tamil Nadu has 31 Krishi Vigyan Kendras spread across all agro-climatic zones in the state.

Indian Council of Forestry Research & Education (ICFRE) and the Indian Council of Agricultural Research (ICAR) had signed a Memorandum of Understanding to promote and accelerate the progress of research and training in various disciplines of agricultural and forestry research and education through execution of a mutually agreed Work Plan. As follow up to the work plan; and as per the framework in the Biennial action plan, Van Vigyan Kendra (VVK), Coimbatore of IFGTB in collaboration with TNAU ICAR - KVKs of Tamil Nadu District had organized training program on “***Tree Cultivation Techniques of important tree species***” during 04-06th January, 2023 for KVK Personnels.

The main objective of this training is to popularize and scale up the concept of Trees Outside Forests and for wider dissemination of forestry research and technologies to the farmers. The convergence of IFGTB’s forestry research expertise coupled with larger field network of KVK officials would pave way for wider dissemination of technologies to farmers. The training was **sponsored by CAMPA, Extension, Ministry of Environment, Forest & Climate Change (MoEF&CC), Government of India under AzadikaAmritMahotsav.**

The three day module was attended by 13 KVK officials comprising Subject Matter Specialists and Farm Manager nominated by the office of Directorate of Extension Education, TNAU, Coimbatore. The module included technical sessions on Clonal Technology of important tree species, Agro forestry models, industrially important indigenous species and Advances in clonal propagation of trees. The participants also visited Vegetative Multiplication Garden in IFGTB to learn new methodologies in clonal propagation of tree species.

The training programme started on 04th January, 2023 and Shri. G.R.Madhavaraj, IFS, DCF welcomed the participants. Dr.S.Saravanan, Training Coordinator and Head, Extension Division, IFGTB welcomed the guests and participants and gave an over view of the training module and schedule. Dr. R. Yasodha, Group Coordinator Research, IFGTB, during her inaugural address highlighted the role of KVK officials in scientific research. She also added that On-farm tree planting played a significant role in providing both economical and

environmental benefits. She highlighted the technologies developed by IFGTB and also emphasized the need of VVKs and KVKs working together, blending forestry and agriculture, to strengthen and magnifying the dissemination of technologies to various stakeholders.

Dr. N. Anandaraja, Ph.D., Professor & Head, Training division, Directorate of Extension Education, TNAU, Coimbatore, graced as the chief guest of the inaugural function, welcomed the idea of networking IFGTB and ICAR-KVK for jointly organizing the training. He narrated that since time in memorial forests served as foster mother for agriculture and how trees have provided humankind with numerous services and benefits. He also assured to step up the collaborative activities in the days ahead. Dr. C.Kunhikannan, Director, IFGTB, presided over the inaugural session, emphasized on the need for institutional linkages to enable transfer of technologies to the farmers. He also stressed that convergence of IFGTB's forestry research expertise coupled with larger field network of KVK officials would pave way for wider dissemination of technologies to farmers. He highlighted that the Memorandum of Understanding of ICAR and ICFRE to promote and accelerate progress in research and training in various disciplines of forestry and agro forestry research, education and extension is forward step to bring in institutional mechanism for convergence. A training manual on the training theme "**Tree Cultivation technologies for higher yield**" was released by Director, IFGTB during the inaugural. The inaugural session ended with vote of thanks by Shri. P.Chandrasekaran, ACTO, IFGTB.

Technical session - Day 1: 04.01.2023

There were 6 technical session was on the first day. **Commercial cultivation of Eucalyptus by Dr.V.Sivakumar, Scientist.** His presentation outlined the best clones of Eucalyptus released by IFGTB, its package of practices, environmental Impacts and water use efficiency, intercropping effects, requirement and yield assessment. He also added that large scale plantations have been raised in government owned and private farm lands and there is a vast potential to grow the species economically on farm and waste lands in suitable zones.

"Commercial cultivation of Casuarina", by Shri. A. Mayavel, Scientist wherein he highlighted that Casuarina is a multipurpose tree cultivated in a range of agroclimatic conditions for more than a century. Nitrogen- fixing ability, good pulping traits for manufacture of paper, high calorific value of wood and short gestation period has made it a preferred crop for farmers in South India. He also presented the best clones of Casuarina released by IFGTB, its package of practices, environmental Impacts.

"Commercial cultivation of Cadamba" by Dr.A.Vijayaraghavan, Scientist, wherein he show cased the technology of Cadamba clones and clones released by IFGTB to the tree growers. He explained the design, package of practices, intercropping and economics of the Cadamba plantation model. He also added that demo plantations have been raised in Chennai and Neyveli and there is a vast potential to grow the species economically on farm.

“Casuarina WindBreak Clones” by Dr. C.Buvaneswaran, Scientist, he showcased the technology of windbreak clones and clones released by IFGTB to the banana growers. He explained the design, package of practices and economics of the plantation model, establishment, post planting care and advantages of the windbreak clones.

“Cultivation techniques of Melia” by Smt.K.Shanthi, CTO wherein she explained that Melia fast growing short rotational indigenous tree species, is in high demand by the plywood industries. She explained in detail the Nursery techniques, vegetative propagation of the species.

“Prospects & Possibilities of Red Sanders cultivation “by Shri. Maria Dominic Savio, Scientist. He explained the purpose of Red Sanders cultivation, its economics, distributions, production and market price trends, plantation techniques etc., IFGTB’s role in development of the species was elaborated in detail.

On 05.01.2023

An exclusive one day field trip to Tamil Nadu Newsprint & Papers Limited (TNPL), Karur and farmer field was organized as part of training to learn significant impact of industrial agro forestry for increasing farm income. TNPL is one of the licensees of IFGTB who has obtained exclusive licenses for mass multiplication of clones of IFGTB. KVK officials were given inputs on mass production of clones & nursery management. They also had hands on experience in clonal propagation and propagation techniques. They also visited the field named of Shri. Swaminathan, in Kuttapalayam village of Kankeyam taluk of Tiruppur District wherein the comparative growth of clones of IFGTB viz., CH5 and EC-4 plantation was identified. Harvesting process also was demonstrated at the field of Shri. Ramasamy, Icipalayam, Kodumudi taluk, Erode district.

On 06.01.2023 there were 5 sessions as detailed below.,

“TREEGENIE – Interactive Digital platform” by Shri.P.Chandrasekaran, ACTO, he explained the key functionalities of the TreeGenie Mobile Application, its uses and installation procedures.

“Cultivation techniques of Tissue Culture Teak” by Dr.RekhaWarrier, Scientist wherein she explained the properties of the species, its distribution, silvicultural practices, agroforestry promotion, nursery techniques, micro propagation methods, and planting procedures.

“Cultivation techniques of Calophyllum” was taken by **Dr. R. Anandalakshmi, Scientist.** She explained elaborately the distribution, oil usage and its market price trends, package of practices for propagation, the processing methods for oil extraction collection, and details of benefitted farmer’s database with Calophyllum species.

“Role of Bioproducts in Forestry” by Dr. N. Senthil Kumar, Scientist wherein he explained the pest and disease attack of various species and its management process by using biopesticides, the products developed by IFGTB and its value in controlling pests, the process of preparation of tree rich bio-boosters.

IFGTB’s Bio fertilizers by Dr.A.Karthikeyan, Scientist wherein he explained the role of biofertilisers, its role in forestry, their types, the products developed by IFGTB and its usages.

Participants visited Clonal Multiplication Garden in IFGTB where Smt. K.Shanti, CTO explained on the various advanced methodologies practiced by IFGTB in clonal propagation of

Eucalyptus, Casuarina and other important species. Later on they visited to Gass Forest Museum and Smt.Sunitha, CTO explained the importance of century old museum and its role in society for nature conservation and education.

The training concluded with the feedback and the valedictory session on 06.01.2023. A brief outline of the sessions of the training program was presented by the course Co-ordinator Dr.S.Saravanan, Head, Extension who also delivered his impressions on the training program. Dr. C.Kunhikannan, Director, IFGTB graced the Valedictory session of the training. On the occasion he requested all the KVK officials to take efforts for transfer of technologies in form of On Farm Trials (OFTs) and Field Level Demonstrations (FLDs) for greater outreach of technologies to the farmers.

All the participants were given certificates during the valedictory session. Participants were also given IFGTB Publications and the training manual as reading material. Shri. P. Chandrasekaran, presented the vote of thanks to the sponsors of the training programme, participants and resource persons of the training



Dr. C. Kunhikannan, Director, IFGTB addressing the KVK Officials



Release of Training Manual “Tree Cultivation Technologies for higher yield” by Director, IFGTB



Lead session by Dr.V.Sivakumar, Scientist on Eucalyptus cultivation



Tissue Culture Teak Cultivation by Dr.RekhaWarrier, Scientist



Nursery visit to Vegetative Multiplication Garden



Visit to Gass Forest Museum, IFGTB



Visit to Clonal Propagation & Resource Center, TNPL, Karur



Visit to the field of Swaminathan, in Kuttapalayam village of Tiruppur District



Harvesting demonstrated at the field of Shri. Ramasamy, Icipalayam, Kodumudi taluk, Erode district



Distribution of Certificate to participants

