

Institute of Forest Genetics and Tree Breeding, Coimbatore-641 002

***Proceedings of the Monthly seminar on
“Population Genetics and its implications in FGR Conservation”***

As a part of Monthly Periodical Seminar under the 75th AzadiKaAmritMahotsav celebration a programme on the theme “**Population Genetics and its implications in FGR Conservation**” was organized on 17th June, 2022 in the institute. Dr. **Archana, R**, the seminar Co-ordinator briefed about the seminar viz., importance of FGR, FGR collections, conservation, use of molecular markers and its utilization in future breeding programme. About 130 participants including Scientists, officers, technical staff and research scholars of IFGTB and other institutes of ICFRE participated in the seminar conducted in hybrid mode.

In the welcome speech, **Dr. R. Yasodha**, Group coordinator (Research), IFGTB, welcomed the key speakers, offline participants and online members to the seminar. In the welcome address, GCR, IFGTB emphasized on the FGR, its conservation, management, its importance in tree breeding programme especially in institute like IFGTB to accelerate genetic gain per unit time and unit area. The seminar was inaugurated by **Dr. C. Kunhikannan**, Director, IFGTB and delivered the opening remarks. In his opening remarks, he emphasized on importance of Population ecology and conservation actions need to be taken to conserve FGR in natural populations

Technical sessions

1. Dr. Anandalakshmi, Scientist-F, FGRM, IFGTB has delivered a lecture on **Exploration and assemblage of FGR**. The highlighted points in the lecture were the importance of biodiversity, forest genetic resources, systematic way of collection of forest genetic resource, methods used in FGR collection from different forest types, its conservation and management, sampling methods, different strategies to conserve, importance of field gene bank, seed bank and Cryo-genebank, importance of short term, medium term and long term storage of seeds, and different tools and techniques used for conserving orthodox, intermediate and recalcitrant seeds of forest species.

The invited speaker **Dr. R. Vasudeva**, Professor (Forest Biology), College of Forestry, Sirsi, UAS, Dharwad delivered lecture on ‘**Population Genetics and FGR Conservation: Concepts**

and issues'. The speaker has emphasized on the importance of study of population Genetics, Mendelian inheritance, different concepts involved, Hardy Weinberg principle, mating systems, gene flow, measures of gene flow, practical considerations while sampling tree populations for *Ex situ* conservation (Kimura and Crow model).

3. **Dr. Modhumitha Dasgupta, Head and Scientist G, PBT, IFGTB** shared a presentation on **"Inferring Population Dynamics in Sandalwood (*Santalum album*)"**. The highlights of the sessions were about the importance of sandalwood, its habitat and distribution, market scenario for sandalwood oil, Population genetics in Indian sandalwood, development of species distribution map of Sandal, discussed about the leaf functional traits analysis, correlation analysis of recorded traits with climate and edaphic factors, seed and seedling trait assessment, variability in seed parameters and seedling traits, discussed about understanding of gene expressional plasticity and assessment of population structure using genome-wide SNP markers in Sandal and research needs in Sandalwood.



Key speaker: Discussions on technical sessions



Invited speaker: Dr. R. Vasudeva, Professor (Forest biology),
College of Forestry, Sirsi, UAS, Dharwad.



Key speaker:Dr. R. Anandalakshmi, Scientist-G, IFGTB

