



INSTITUTE OF FOREST BIODIVERSITY (IFB), HYDERABAD

21.09.2021

A Report on Bharat Ka Amrut Mahotsav Celebrations from 20.09.2021 to 24.09.2021 at Institute of Forest Biodiversity (IFB), Hyderabad.

As part of the ongoing programme to celebrate “**Bharat Ka Amrut Mahotsav**”, a webinar was organized on the second day of the programme (21.09.2021) by the Division of Genetics and Tree Improvement, IFB, Hyderabad.

The theme of the webinar was “**Scientific Achievements and Technological Advancements in India**”. Dr. S. Pattanaik (Scientist-F), Head, Division of Genetics and Tree Improvement, IFB, Hyderabad introduced the topics to the audience and welcomed the speakers, scientists, officers, staff, and others who have joined the webinar. A total of 36 Officers/ Scientists, Students, Research scholars and Technical staff participated.

The first speaker of the webinar was Dr. Ashok Kumar, Scientist-G, FRI, Dehradun who delivered a talk on “**Advancements in breeding and clonal propagation techniques in productivity enhancement of forest trees**”. The speaker enlightened the audience about various methods and components of tree improvement and tree breeding strategies. Different types of selection, their effect on the genetic base and the need for progeny testing after selection was highlighted. The need for adopting proper genotypic selection and environmental corrections in breeding programmes was emphasized. Phenotypic variability

in flowering, fruiting, bark and wood parameters in various crops like *Gmelina arborea*, *Melia dubia*, *Eucalyptus* sp., etc. were shown. Increasing the size of breeding populations and use of superior parents in hybridization programmes was suggested. The speaker also explained the importance of understanding reproductive biology of tree species for performing controlled hybridization. Clonal propagation techniques followed for mass multiplication of various tree species in FRI, Dehradun were shown. The speaker also highlighted the correlation of phenotypic variability with genotypic variability using molecular markers. Finally, the process for release of identified clones was also explained.

The second speaker Dr. C. Buvaneswaran, Scientist-F, IFGTB, Coimbatore delivered a lecture on **“Good silvicultural practices for tree plantation management”**. The speaker introduced the topic to the audience by quoting the environmental influence on the phenotype. Impact of major silvicultural interventions like spacing, mixed planting, nutrient management, mechanical soil working and other cultural operations on the productivity of various tree crops was elaborated. The speaker concluded the seminar by emphasizing the need for clone specific silvicultural interventions for enhancing the productivity.

The third speaker Dr. S. Pattanaik, Scientist-F, IFB, Hyderabad delivered a talk on **“Advanced genetic tools in the management of forest species”**. The speaker gave the audience a glimpse about the basic terminologies of molecular biology. Later, the audience was exposed to the widely used Polymerase chain reaction and DNA sequencing technologies. The speaker also explained about the molecular markers, their types and selection based on the purpose of the study. Applications of DNA markers in Forest Genetic Resource conservation, seed orchard management and timber tracking were elaborated with case studies.

Each presentation was followed by a discussion session. The vote of thanks was extended by Dr. S. Pattanaik (Scientist-F), Head, Division of Genetics and Tree Improvement, IFB, Hyderabad for the successful conduct of the webinar. The webinar was concluded with active participation by all the officers, scientists, and staff of IFB, Hyderabad and FRCCE, Visakhapatnam. The overall program was coordinated by Shri E. Manikanta Reddy, Technician, Extension Division.



Glimpses of the Webinar

