

Report on
Bamboo : Propagation Value addition and Marketing

(September 18th 2017 to September 22nd 2017)

Tree Improvement and Genetics Division

Institute of Wood Science and Technology

Course Co-ordinator: Dr Syam Viswanath, Scientist G, TIG Division, IWST



Short term training on 'Bamboo : Propagation Value addition and Marketing' was conducted from September 18th 2017 to September 22nd 2017 by Tree Improvement and Genetics Division, Institute of Wood Science and Technology, Bangalore. The training aimed at encompassing the different aspects of growing bamboos including its propagation by different methods, growth and pest management and finally value addition to bamboos and its marketing.

The training programme was attended by 12 participants from various parts of the country right from Uttarkhand in the northern most part of India to Kerala in the southern tip of the country. The inaugural session of the training was initiated with a welcome address by Dr. Syam Viswanath, Scientist G and Course Director at Tree Improvement and Genetics (TIG) Division. This was followed by participants introducing themselves simultaneously giving their expectations from the training. Dr. Geeta Joshi, Scientist F and Head, TIG Division, addressed the gathering conveying to the participants that all their expectations would be addressed through during the five day training duration. Dr. Pankaj Aggarwal, Scientist G and Extension Officer at IWST addressed the participants. This was followed by an inaugural address from Mr. P. Sadashiva, Secretary and Treasurer, Bamboo Society of India who was the chief guest invited for the event. The inaugural session concluded with a vote of thanks by Mrs. Tresa Hamalton, Scientist C, TIG Division.

After the conclusion of the inaugural session, the participants were given a brief overview of how the five day training program would be conducted along with a brief introduction to bamboos and its prospects for domestication by Dr. Syam Viswanath. This was followed by a talk on macro and micro propagation techniques of bamboo by Dr. Geeta Joshi. This was also demonstrated practically by Dr. Somashekhar and Mr. Sandeep Chakraborty, Research Assistant at TIG Division of IWST. The last session for the day was on the technological properties of bamboos by Dr. S.R. Shukla, Scientist F at WPEW Division of IWST.



Mr. P. Sadashiva, Secretary and Treasurer, BSI giving the inaugural address

The second day (19/9/17) of the five day training started with understanding silviculture and plantation management in bamboo cultivation by Dr. Syam Viswanath. He also discussed Mr. Sanjeev Karpe's presentation on making high end furniture using bamboos. This session was to be conducted by Mr. Sanjeev Karpe himself but since he could not participate to address the bamboo trainees, the same was discussed by Dr. Syam Viswanath. Dr. Barathi, Director of Growmore Biotech Ltd. then addressed the participants on new opportunities in bamboo with specific reference to 'Beema' bamboo, a Tissue

Culture *Bambusa balcooa* seedling developed by Growmore Biotech Ltd. Dr. A. Muthukumar, Scientist D and Head, FWP Division, IWST enlightened the participants on pest problems in bamboo and its protection. The policies and schemes associated with sandalwood cultivations were discussed by Mr. M Srinivasa Rao, IFS, Conservator of Forests and Head PRM Division of IWST.

The third day of the training (20/9/17) progressed to use of bamboo as a green building material by Architect Ms. Neelam Manjunath of Centre for Green Building Material and Technology (CGBMT), Bangalore. This was followed by a session on bamboo preservation techniques by Ms. D. Venmalar, Scientist D, WP Division, IWST. She also gave a practical demonstration of Boucherie method of preservation technique to the participants. Post lunch session included forward integration of bamboos by Mr. Parameswaran Krishna Iyer of Bamboo Pecker Lifestyle Crafts Pvt. Ltd. He highlighted the challenges faced along with the potential of bamboo as a raw

material in furniture and crafts industry. Dr. Uday D Nagamannavar, Scientist E and HOD, PDES, highlighted the research activities undertaken by IPIRTI to promote bamboo sector in India. The final session of the third day was by Mr. C.S. Sushant of National Institute of Design highlighting design principles and alternatives that can be adopted using bamboo as a raw material.



Coordinator addressing the participants

The fourth day (21/9/17) of the training was entirely dedicated to field visit wherein farmers were first taken to IWST field stations located at Nallal and Gottipura. At Nallal, they saw field trial of intercropping of annual crops amidst bamboo plantations at different spacings. At Gottipura, the participants saw the different bamboo species present in the Bamboosetum. They also saw the CPC varieties of different bamboo species. This was followed by a visit to (Center for Green building Technology and Training center) CGBMT, Jakkur wherein bamboo has been used extensively in construction. Post lunch, participants visited IPIRTI, wherein the participants were exposed to use of bamboo as an alternative to plywood and as a medium of construction. The last visit for the day was to National Institute of design (NID) which also houses the Centre for Bamboo Initiatives. Here, participants got to see many innovative and simple designs using bamboo as a base material.

On the last day of the training, Mr. Raja Rishi, Scientist C, FWP Division, IWST exposed the participants to different kinds of pest attacks bamboo can be subject to and how it can be rectified. Dr. S.S. Chauhan, Scientist F, WP Division, IWST gave an overview of Bamboo thermal plastics composite. He also highlighted research activities at IWST on bamboo polymer composites. The next session was on bamboo based energy by Mr. Ritesh Kumar D. Ram, Scientist D, WP Division, IWST. Post lunch session was a practical demonstration of bamboo gasification process by Mr. R. Ezhumalai, Scientist D, CFP Division, IWST. Participants were also taken to the wood science workshop wherein formation of Bamboo polymer composite was demonstrated to them. Subsequently, all the participants were taken for a short tour of IWST including the laboratories, nursery and the museum by Mr. Sandeep Chakraborty, RA-II, TIG Division. The final session of the five day training on bamboo was dedicated to interaction of participants with all the experts

and gathering the feedback of participants with respect to the usefulness of the training program. The five day training on bamboos concluded with a valedictory function and distribution of certificates to the trainees. Chief Guest for the event was Mr. K.S. Anand, Executive Director, Bamboo Society of India.



Valedictory Function and Distribution of Certificate to the trainees on conclusion of the five day training program on Bamboo : Propagation Value addition and Marketing

LIST OF RESOURCE PERSONS AND TOPIC FOR FIVE DAYS BAMBOO TRAINING

18-09-2017 TO 22-09-2017

Topic	Resource person
Overview of bamboo in India & prospects for domestication	Dr. Syam Viswanath, Scientist-G TIG Division
Bamboo propagation techniques	Dr. Geeta Joshi, Scientist-F, Head, TIG Division
Bamboo propagation techniques (practical)	Dr. P.V. Somashekar, RO Sh. Sandeep Chakrborty, TIG Division
New opportunities in bamboo	Dr. N. Barathi, Director Growmore Biotech Ltd. Hosur, Tamil Nadu
Pest and diseases problem in bamboo and its protection	Dr. A. Muthukumar, Scientist-D FWP Division
Policy related issues in bamboo sector	Shri. M. Srinivasa Rao, IFS Head, PRM Division
Bamboo as a green building material resource	Ms. Neelam Manjunath CGBMT Bangalore
bamboo preservation techniques (theory and practical)	Ms. D. Venmalar, Scientist-D WP Division
Forward integration of bamboos	Mr. Parameswaran Krishna Iyer Bamboopecker Lifestyle Crafts Pvt. Ltd Bangalore
Role of IPRTI in promoting bamboo sector in India	Dr Uday N IPRTI Bangalore-
Design principal in bamboo production	Mr. C. S. Susanth NID, Bangalore
Technological properties of bamboos	Dr. S.R. Shukla, Scientist-F Head, WPEW Division
Bamboo thermo plastic composite	Dr. S. S. Chauhan, Scientist-F WP Division
Bamboo based energy	Shri. Ritesh Kumar D. Ram, Scientist-D, WP Division
Demonstration of bamboo gasification	Sh. R. Ezhumalai, Scientist-B, CFP Division
Visit to IWST labs, Museum & Xylarium	Mr. Sandeep Chakrborty, RA II TIG Division