

## **Proceedings of In House Seminar on "Physio-biochemical screening for productivity enhancement" held on 26-10-2018**

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In House Seminar on "Physio-biochemical screening for productivity enhancement" was held on 26-10-2018 in the conference hall of Institute of Forest Productivity Ranchi. All Scientists, officials, technical staff and researchers attended the Seminar.

The seminar was chaired by Dr. Nitin Kulkarni, Director IFP while Dr. K. Jayaram Kumar, Professor, Department of Pharmacy, Birla Institute of Technology, Mesara, Ranchi was the invited expert.

In the beginning Dr. Yogeshwar Mishra, Group Coordinator (Res.), IFP informed about the relevance of the subject and invited Dr. Sanjay Singh, Scientist F for his presentation.

Dr. Singh made a detailed presentation on various physiological and biochemical parameters which could be effectively utilized for selection and improvement of forestry species for enhancement of productivity. He cited examples from some of the research conducted by the Institute in the arena. This was followed by interactive deliberations by the gathering to finalize following points:

### **1. Identification of research needs**

The main research needs identified are-

- Key physiological and biochemical parameters of utmost importance should be identified keeping in view of ease of working and efficacy for incorporation along with morpho-genetical procedures in screening, selection and improvement of tree species for productivity enhancement.
- Physiological parameters like net photosynthesis rate, stomatal conductance; enzyme systems like carbonic anhydrases and endogenous biochemicals such as proline, phenols can be useful and thus be incorporated in studies so as to standardize the parameter for early salutation.

- Physio-biochemical parameters should be used in early selection of genotypes at nursery and vegetative growth phase after their standardization, as above.

## 2. Formulation of future strategies/ road map

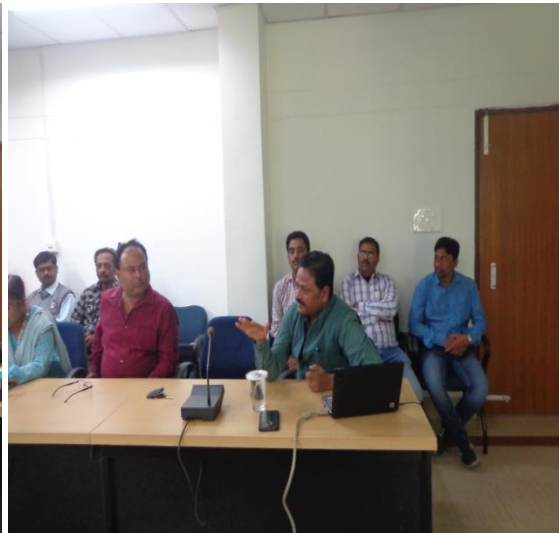
- Comprehensive multidisciplinary research projects having components of all possible screening, selection and improvement techniques should be attempted on any important forestry species to come up with most efficient provenances/genotypes/clones in place of current isolated efforts based on traditional genetics, molecular biology etc.
- More project proposals must be proposed for intra mural and external funding agencies on the field by picking up lead from the previous work.

## 3. Networking research option and opportunities

- Institutions in the regions should be involved taking advantage of their technical expertise and infrastructural strengths for addressing research problems in the area.
- A formal proposal shall be asked from Botanical Survey of India, whose scientists have expressed willingness to collaborate in physiological studies in Bamboos and great Banyan tree.
- Dr. Jayaram Kumar ensured support of BIT Mesra for estimation of certain biochemical parameters as requested by Sh. Sanjiv Kumar, Scientist-D.



Talk delivered by Dr. Sanjay Singh



Discussion Session with experts & Scientist of the Institute