

Current Development and Research in Bamboo in Gujarat State

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1. Introduction

Taxonomically bamboo is a grass belonging to poaceae family and since it has been exempted from forest with the effect of IFA – 1927 amended in 2017, it becomes popular and farmers are enquiring for bamboo farming. Entrepreneurs are also willing to set up the bamboo based industries such as agarbatti stick industries, Charcoal industries, ethanol industries, composite furniture industries etc. Despite of their willingness major challenges in recent time is huge shortage of raw material for running of industries, skilled labour, right choice of species, plant availability, agronomical practices, low shelf life and analysis of different bamboo species for its strength and quality.

2. Materials and methods

Naturally forest of Gujarat state harbor of two bamboo species viz. (1.) *Dendrocalamus strictus* (Manvel/Bharat Bamboo) and (2.) *Bambusa bambos* (Kantas Bamboo). Gujarat state has two bamboo germplasm conservation areas viz. 1.) Singalkhanch, Tapi Forest Division, Vyara comprises of 26 species and 2.) Bamboo Resource Centre, College of Forestry, NAU, Navsari comprises of 33 species. As per demand and popularity of bamboo it is mandatory to increase bamboo plantation of different species in forest and non forest area for that concern require bamboo planting material which will be fulfilled by bamboo nursery. We are providing right bamboo species planting material to farmers as per their end use of culm, lacunae of skill labour overcome by training programme which we are providing at our Bamboo workshop, low shelf life of bamboo culm mitigate by using preservation and seasoning technique and analysis of different bamboo species for different parameters are using anatomy lab, biotechnology lab and tissue culture lab.

3. Results and discussion

Due to high public demand, popularity and inquiry pertaining to bamboo for plantation and bamboo based industries we have established Bamboo Resource Centre under the beneath College of Forestry, NAU, Navsari. We are working on the different aspects such as bamboo germplasm conservation unit having 33 species, bamboo nursery & propagation, clump management & harvesting, preservation & seasoning, bamboo workshop & products, bamboo based agroforestry model, bamboo tissue culture, biotechnology & anatomy aspects and research pertaining to hurdles' facing by farmer's & need based research. Recently we are working on the bamboo shoot analysis for nutritional value, leaf leachate analysis for allelopathy effect, molecular & anatomy analysis for identification, macro & micro propagation for multiplication bamboo plants. Tissue culture & macro propagation of different bamboo species, growth evaluation of different bamboo species, DNA barcoding of different bamboo species and bamboo leaves nutritional value of different bamboo species research were completed under beneath of BRC.