1. Title of the Project:- Identification of best performing bamboo species for enhancement of income of farmers in Madhya Pradesh

Why this Project:-

Degradation and depletion of bamboo forests has manifested in diminishing bamboo production and greater proportion of industrial bamboos as against commercial bamboos in bamboo production, resulting in declining financial returns.

In order to mitigate this serious problem, not only bamboo forests are to be managed strictly in accordance with scientific principles of management, but also, greater emphasis needs to be given to promote planting of bamboos on farm lands in a larger way. That is why; extension of bamboo covers over non-forest lands (farm lands and community lands) is one of the focus areas of National Bamboo Mission and MP State Bamboo Mission. However, capacity building of farmers by organizing training programmes is essential for the success of this programme.

Bamboo is an important source of income. According to an estimate, 20,000 NT (Notional tonnes; 1 N.T. is equivalent to 2400 m length of bamboo culms) of bamboo is being obtained from farmers. For many farmers, bamboo is the main source of income. In some states like Tamilnadu, many farmers have switched over from traditional agriculture to bamboo farming. There are 22 districts in the state of M.P. which have abundance of bamboo. To enhance income of farmers and bamboo dependant population from bamboo cultivation and to identify species which are more profitable to farmers, the present study is proposed to be carried in the state. Bamboo setums, demo plots have been established in different agro-climatic zones of the state

Research methodology: -

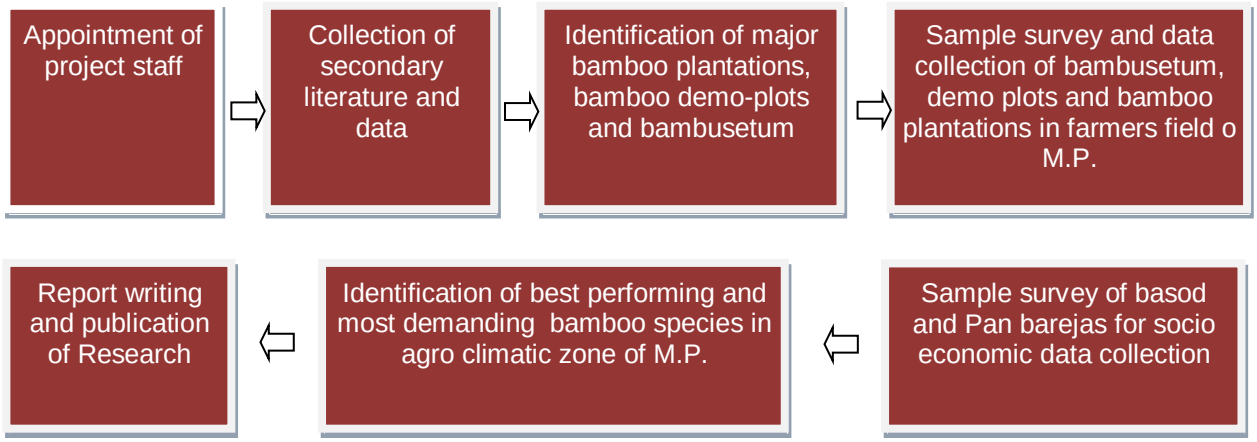
To Identify best performing bamboo species

- Bamboo plantations, bamboo setums and demo-plots of various species in different agro-climatic zones were surveyed and sample plantations of each bamboo species were assessed to compare their performancein terms of survival, yield and profitability for plantations.
- Three growth study measurements were taken from all clumps and the average measurement was used for calculations. The number of culms in these clumps was counted and all observations were made for the GBH, height and number of culm per clump for all the species.

Socio –economic survey of basod and pan barejas

- Random sampling technique was followed to select basod and pan barejas households. All the relevant information was collected from the basods through a structural questionnaire by personal interview
- Tabular analysis was done to calculate different parameters of socio-economic condition, *viz*, family size, education status, land holing capacity, animal husbandry status, major occupations, bamboo species utilized and resource availability, high demand bamboo species, bamboo requirement, bamboo purchasing sites, income from various sources and and interest of rural people/farmers in planting high yielding bamboo species, other than the traditional *D. strictus* species etc

Study Design :-



Objectives of Research:-

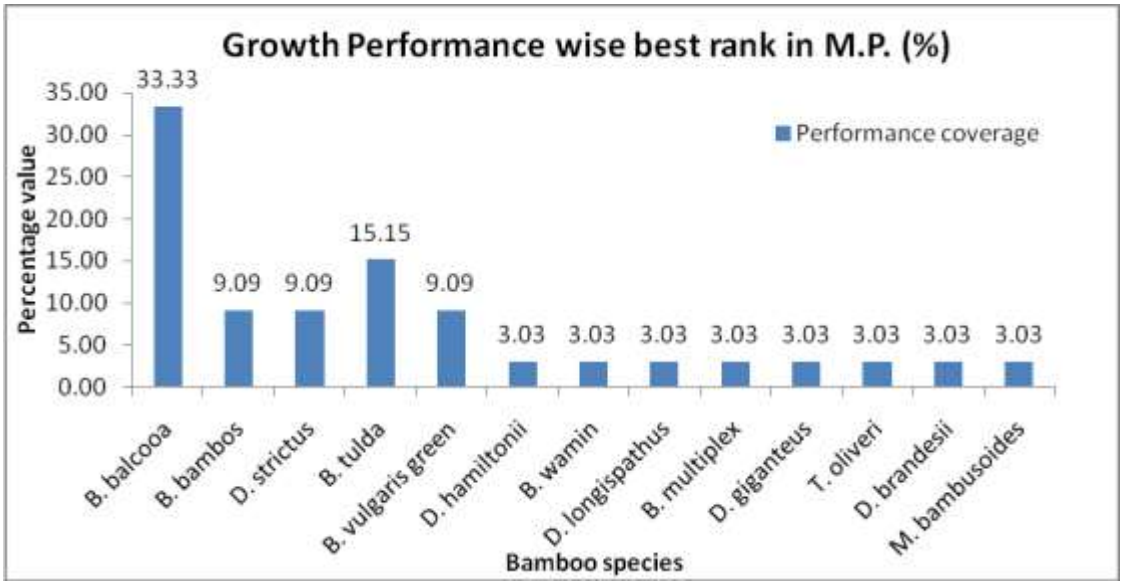
1. To identify best performing bamboo species in all the agro-climatic zones of the state based on the study of bamboo setums demo-plots and other bamboo plantations.
2. To identify species suitable for strengthening the socio-economic conditions of farmers and other dependent communities – basods and pan barejas.

Activities Undertaken:–

Cost of the Project:- 10.17 lakhs

Outcome of Research:-

- Under the project, 11 bambusetums, 40 bamboo demo plots, 264 bamboo plantations of farmers of 12 Forest Divisions of 11 agro climatic zones were surveyed to evaluate the growth performance of different bamboo species.
- Under the project, observed in total 39 different bamboo species in different bamboo setum, demo plots and farmer plantation of 11 agroclimatic zones of Madhya Pradesh.
- Overall growth performance wise rank, *Bambusa balcooa* found to be the best performing followed by *Bambusa tulda* whereas *Dendrocalamus strictus* was found to be most popular (high demanding) species amongst the bamboo dependent communities.



- Socio –economic study has been conducted in all 13 Forest Divisions of 11 agro-climatic zones of Madhya Pradesh in which 1374 basod household and 59 pan barejas of 04 Forest Divisions of 02 agro climatic zones of Madhya Pradesh were surveyed.

Income share from traditional business of basod household in Forest Divisions of Madhya Pradesh

S.No	Name of Forest Division	Surveyed Household	Annual income from traditional business (Rs.)	% of income from traditional business
1	South Seoni	248	45819.28	46.48
2	Anuppur	103	39809.71	45.49
3	Satna	249	38795.31	41.25
4	Jabalpur	100	37470.12	47.25
5	Raisen	113	37663.72	47.14
6	Bhopal	11	81818.18	79.03
7	Tikamgarh	81	48071.10	31.79
8	N. Betul	154	39551.53	58.80
9	Indore	15	60400.00	100
10	Ujjain	10	57840	42.21
11	Khandwa	177	35945.65	44.15
12	Badwani	64	37936.50	35.90
13	Alirajpur	49	42340.90	41.59

- Under the project demand and consumption of bamboo in bamboo dependent communities were also studied in which maximum gap found in Satpura plateau followed by Nimad plains.
- During our field survey, it was observed that most of the areas, basod has facing problems of bamboo at their desired cost. The bamboo they used purchase from the market sometimes move beyond their purchasing capacity. The similar situations have been observed for Pan bareja communities. This high cost of procurement of bamboo for market is affecting their production cost.
- So they have demanded to provide their required bamboo through forest depot with a minimum supporting price.
- Final report and utilization certificate has been submitted to funding agency.