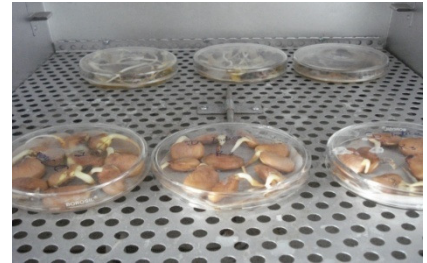


PROJECTS ONGOING DURING THE YEAR 2008-09

PLAN PROJECTS

Project 1: Creation of seed database on economically important forestry species of Jharkhand aiming at functioning of a forestry seed certification agency. [IFP-030/FMS -5/2006 – 2011]

Status: Seeds of 15 species were collected and processed. Physical and physiological parameters of seeds (seed weight, length and width, volume, colour, germination %, time) were recorded. Data on seed storage and viability in types of containers and different storage temperatures were recorded.



Seed germination test

Project 2: Studies on Reproductive biology and propagation techniques of *Schleichera oleosa* Lour (Oken), an oil bearing tree and important lac host plants. [IFP-046/BGT -12/2006 – 10]

Status: As many as 30 trees were selected from different parts of prominent lac growing region in Eastern India. Trials on cutting, grafting & budding as well as experimentation on micropropagation of Kusum were conducted. A Vegetative Multiplication Garden of Kusum was established at FRC, Mandar. Study on clonal fidelity was initiated with the extraction of DNA from clones. Variation in seed sources on the basis of seed germination was recorded. Data on blooming, time of fruit initiation, fruit maturation period & a number of fruits per inflorescence were obtained from Orissa & Jharkhand.



Blooming of Kusum

Project 3: Species suitability and reclamation strategy for degraded forest soils of Chhotanagpur Plateau, Jharkhand. [IFP-031/SLR -7/2006– 2011]

Status: Nursery and Field trials were conducted in order to evaluate the suitability of tree species for degraded soils under Chhotanagpur condition at Lalgutwa, IFP, Ranchi and the most suitable species were identified after compilation of growth data of the sixty species tried in nursery and field plantation. Field trials were under progress to study the effect of liming materials, bulky organic and mulching materials, macro and micro nutrients as a strategy to

reclaim degraded soils using *Gmelina arborea*, *Madhuca indica* and *Pongamia pinnata* as test species.

Project 4: Genetic Evaluation & Molecular Characterization Of *Jatropha Curcas* L. of Eastern India. [IFP-038/BGT -10/2007– 2010]

Status: 28 plus trees were selected from the states of Jharkhand, Bihar & West Bengal. Cuttings from the selected clones were collected & propagated in polybags in the mist chamber. Appropriate number of cuttings were raised for field trials & plantation in the farmers field. Plantation was carried out in selected site at FRC campus, Mandar during rainy season by using RBD design at spacing of 2 meters (of both clonal & seedling origin). After interval of one month, data on growth parameters were taken from the field trial. DNA extraction method and electrophoresis was standardized. One community land & nine farmers land were selected.

Project 5: Improvement of clonal propagation techniques of bamboos and enhancement in field survival. [IFP-035/SLR -8/2007– 2011]

Status: Rooting, Shooting & Rhizome genesis were performed for *B. bambos*, *B. nutans*, *B. striata*, *B. vulgaris* (Black), *D. strictus*, *D. asper* & *Gigantochloa atroviolaceae*. Survival and performance of Bamboo Planting Stock (BPS) of *B. nutans*, *B. striata*, *C. capitatum*, *D. strictus* under pot and field condition as influenced by organic soil treatment (Soil+ Sand; Soil + Sand + FYM Soil + Sand + FYM + Rice Husk & Soil + Sand + FYM + RH + Saw Dust] have been undertaken. Quarterly data on propagation behavior Rhizome initiation, Rhizome, culm and clump growth were recorded. Planting stock of *D. asper* was generated through *in-vitro* propagation and placed for hardening for different duration (50 to 250 days). Hardened BPS of *D. asper* was planted in field under rainfed condition (without fertilization & irrigation) and their survival rate and growth & rhizome development were recorded. Germination behaviour and performance of *Melocanna baccifera* under Chhotanagpur plateau climatic and soil condition were conducted.



Bamboo macropogon

Project 6: Assessment of the genetic diversity and development of species specific molecular markers in bamboos in Eastern India. [IFP-039/BGT-11/2007– 2010]

Status: Reviewed literature on genetic diversity / population structure of bamboos and developed marker systems. Germplasm of target species & 15 other species were collected and maintained. Identification of potential primers on the basis of prior studies and commercially available RAPD primers was done.