

## Rain Forest Research Institute Jorhat

The Rain Forest Research Institute (RFRI), Jorhat, Assam, is a constituent Research Institute of Indian Council of Forestry Research and Education (ICFRE), Dehradun. It is mandated to cater to the forestry research related needs of Northeastern states of India and has been pursuing research in the areas of shifting cultivation, ecology and biodiversity, propagation, cultivation and performance trial of important forest species, integrated management of pests and diseases, bioprospecting of bioresources, genetic improvement of tree species and biotechnology.

An Advanced Research Centre for Bamboo and Rattans (ARCBR), has also been established at Aizawl, the capital city of Mizoram state, and its infrastructural development is in full swing.

### PROJECTS COMPLETED DURING THE YEAR 2006-2007

#### Project 1: Reclamation of highly eroded site of Cherrapunjee, Meghalaya [RFRI-SM/4/2003-2006]

**Findings:** *Alnus nepalensis* and *Exbucklandia populnea* were planted in the experimental plot at Cherrapunjee, Meghalaya. Survival percentage of *Alnus nepalensis* was found to be 90.8% and that of *Exbucklandia populnea*, it was 75.18%. Of the sixteen treatment combinations, P2W0M0F1 showed maximum height growth (221 cm) in case of *A. nepalensis* and 63 cm for *E. populnea*. The experimental plot was damaged entirely by fire during February 2006. The burnt area was fenced properly to preserve the plot for the rest of the project period to see the impact of fire hazard on the targeted species. It has been observed that *A. nepalensis* can come up after the fire hazard in more numbers and better height as compared to *E. populnea*.



*Exbucklandia populnea*



*Alnus nepalensis*



*A. nepalensis* after burning



## **Project 2: Development of an eco-friendly strategy for the Management of *Calopepla leayana* Latr., a serious pest of *Gmelina arborea* Roxb. [RFRI/FE/11/2004-2007]**

**Findings:** Population fluctuation of *Calopepla leayana* on *Gmelina arborea* was studied in and around Jorhat, Assam. The population trend was correlated with abiotic factors of the study site which indicated significant dependence on temperature, relative humidity, and rain fall. Regression equation was also developed to predict population of *C. leayana* based on abiotic factors.

Damage potential of different stages of *C. leayana* on *G. arborea* was also assessed to develop suitable protocol for their management.

Entomopathogenic fungus, *Beauveria bassiana* was isolated and identified as an effective natural pathogen against the larval and adult stages of *C. leayana*. Mass production of *B. bassiana* using different substrates was attempted to produce ample amount of spores.

## **PROJECTS CONTINUED DURING THE YEAR 2006-2007**

### **Project 1: Development of Patchouli based viable agroforestry models for NE region of India [RFRI/CFE-04/2004-2007]**

**Status:** Nursery trials were laid out to standardize vegetative propagation of patchouli under four different environments (i.e. under partial shade below tree, agronet shade house, mist chamber and under the open environment).

An extensive survey was conducted for selection of 10 tree garden sites. The farmers were motivated the farmers to take part in On-farm participatory research for development of cultivation and management techniques for patchouli.

On farm trials have been laid out in the tree gardens of Areca nut, Agar, Gamhari (*Gmelina arborea*) and bamboo (*Bambus tulda*) with different age and plantations geometry. Periodic observations on crop have been recorded.

Initial results show that patchouli performs best under Areca nut. In terms of increased herbage production presently the suitability sequence is Areca nut > Bamboo > Gmelina > Agar.

### **Project 2: Evaluation of different existing land use systems for development of viable economic models in Northeast India [RFRI/SC/06/2003-2008]**

**Status:** Survey, selection and collection of productivity data of different land use systems in Nagaland and Meghalaya have been completed.



Kissan Nursery raised by Self Help Groups (SHGs)



Farmers maintaining patchouli under Tamul (Areca nut) garden



The benefit cost ratio of plantation/ cash crops has been calculated and physico-chemical analysis of soil samples collected from Meghalaya is in progress. The benefit cost ratio (b: c) of settled



Plantation of *Ananas comosus*



Settled cultivation

cultivation (3.85) and *Ananas comosus* (3.66) was found to be more than that of jhum cultivation (1.61). Evaluation of productivity and benefit cost ratio of important cash crops in Nagaland state revealed that productivity and cost benefit ratio of settled cultivation (2.61), *Ananas comosus*, *Musa paradisiaca* are quite encouraging than jhum cultivation (0.23) in the state.

### **Project 3: Stability test of various clones and progenies for different characters in *Gmelina arborea* [RFRI/TI-10/2003-2006]**

**Status:** Data from progeny trials of the selected families reflect that overall performance of progenies at Teliamura (Tripura) was better with 69 % survival, 2.9 m height and 7.0 cm collar diameter as compared to Imphal (Manipur) where survival was 62 %, height was 1.4 m and collar diameter was 4.4 cm. Genetic and environment interaction was found significant at 0.001 level of significance for both height and collar diameter. Hence, there is a likelihood that the same progenies would not perform similar at two different sites.

The results of a germination trial of half-sib progenies of selected families show that the percentage was maximum in case of RRI/GA31. Overall germination was only 26 %. Considering this, a tetrazolium test for seed viability was conducted which showed that 12% and 1% of the total seeds was partially and completely non-viable respectively. Progeny number 43 was most viable (93%).

### **Project 4: Genetic improvement and clonal propagation of *Dipterocarpus retusus* [RFRI/TI/11/2004-2007]**

**Status:** For progenies' performance, seventeen progenies along with check planted at Deovan, were evaluated for different traits viz. plant height (Ht), diameter at breast height (DBH), height at first branching and crown diameter. The progenies DMP-9, DMP-2, and JKG-2 were found to be superior. Development of clonal propagation protocol rooting of shoot cuttings of *D. retusus* is going on.

### **Project 5: Development of Nursery practices for production of quality planting stock of Bamboo in N.E. [RFRI/SM/06/2005-2008]**

**Status:** Offshoots were separated from the two noded culm and branch cuttings of *Dendrocalamus hamiltonii* and planted in the polypots having different potting media. Seven treatments were given



which included vermicompost, vermicasting (culture) and vermicasting (wild) apart from FYM, sand and soil.

## **Project 6: Management of *Bambusa nutans* for enhancing the productivity of marketable culm through silvicultural practices [RFRI/TI/13/2005-2008]**

**Status:** Thinning and soil mounding of the bamboo clumps were carried out. Regular observation and data recording on various growth parameters is in progress. A market survey at various bamboo depots at different places in Assam was undertaken. Fertilizer application in the plot has also been carried out. Other required silvicultural operations are being carried out at a regular interval.

## **Project 7: Comparative studies on natural resistance of bamboos to biodegradation in Assam [RFRI/FP-8/2005-2008]**

**Status:** Eleven species of bamboos of NE region viz. *Bambusa balcooa*; *Bambusa longispiculata*; *Bambusa pallida*; *Bambusa polymorpha* *Bambusa tulda*; *Bambusa nutans*; *Dendrocalamus hamiltonii*; *Dendrocalamus sikkimensis*; *Melocanna baccifera*; *Dendrocalamus giganteus* and *Bambusa bambos* were collected from different parts of the region; cut and sized to about 1 meter length and their fresh weight was recorded. They were shade dried to record the dry weight. Their volumes were also recorded. The samples were then planted, in test yards at selected sites viz. Burnihat, Jorhat and Nagaon for their natural durability against bio-degradation. During the initial observations presence of *Syzophyllum commune* was seen at Burnihat and Jorhat. Periodic meteorological data is being recorded.

## **Project 8: The Potential role of bamboo species with reference to carbon sequestration in Assam and Mizoram [RFRI/EE/07/2005-2008]**

**Status:** Data collected for potential role of bamboo species with reference to carbon sequestration in Assam and Mizoram. Biomass of different age groups of *Bambusa tulda* and *Dendrocalamus hamiltonii* from Assam and Mizoram has been estimated to evaluate carbon sequestration.



Biomass estimation in progress at Mizoram

## **Project 9: Bioecological studies of seed insect pests of *Dipterocarpus retusus* [RFRI/FE/12/2005-2008]**

**Status:** Bioecological studies of seed insect pests of *Dipterocarpus retusus* were made in Gibbon Wildlife Sanctuary (GWS), Assam. *Alcidodes crassus* Poscoe. (weevil-Coleoptera), *Enarmonia pulverulla* Meyrick and *Dioryctria abicutella* Denis (Lepidoptera) were found infesting seeds. Germination percentage of *D. retusus* in natural stands (in-situ) was found to be 3-5%. However, in nursery (ex-situ) it was 19.9%. The loss due to *Thamnurgides spp* on seeds of *D. retusus* collected from forest floor as well as using nylon net before falling to the floor was estimated.

## **Project 10: Diversity and dynamics of Arbuscular Mycorrhizal fungi and their influence on biomass production of some medicinal and aromatic plants of Assam [RFRI/FP/10/2005-2008]**

**Status:** Diversity studies of Arbuscular Mycorrhizal (AM) fungi associated with medicinal and aromatic plants in eight districts and Majuli Sub-division of Assam were completed. Mycorrhizal spores were isolated from the collected samples and their quantification was done. Root infection percentage was also calculated and it was found that AM fungi infect the plants with varying degree.



Ban-holodhi (*Curcuma aromatica*)



Jom lakhuti (*Costus speciosus*)

### **Project 11: Studies on structural formation of vegetation for the conservation of Biodiversity in Gibbon Wildlife Sanctuary Assam [RFRI/SC/08/ 2005-2008]**

**Status:** Ecological enumeration was carried out and plant communities were identified. A total of 152 plant species were identified and documented. Feeding height of gibbons during this study was found to be between 25 to 30 m. Gibbons generally utilize the top canopy trees for meeting their needs for food, cover, and movement by adopting to brachiatry. The most preferred food plants of gibbons in the study area were recorded. Seasonal requirement of plant species targeted by Gibbons for food in the area was also recorded.



Semi-evergreen forest at GWS

## **NEW PROJECTS INITIATED DURING The YEAR 2006-2007**

### **Project 1: Investigations on the formation of agar wood in *Aquilaria malaccensis* [RFRI/FP/11/ 2006-2009]**

**Status:** Surveys were made in different Reserve Forests viz., Hollongapar and Salnah Reserve Forests and homestead plantations at Amguri, Namti, Nahoroni, Alengi, Melamati, Jalukoni, Rowroiah in upper Assam for infected agar trees. Maximum infection of agar trees was recorded at Amguri of Sibsagar district followed by Alengi in Jorhat district. Various symptoms of infected agar trees were recorded to identify the infected tree. Infestation of borer, *Zeuzera conferta* was observed on agar tree in different study sites. Fungal species viz., *Fusarium* sp., *Rhizopus* sp., *Aspergillus* sp., *Mucor* sp. and *Penicillium* sp., were isolated from the infected host tissues as well as faecal matters of the borer. Studies on phyllosphere mycoflora also revealed the presence of nine species of fungi. Artificial inoculation of agar trees is being conducted at Nahoroni of field station of RFRI.



## Project 2: Investigation on propagation and cultivation of selected Rattan species [RFRI/FE/10/ 2006-2009]

**Status:** Status survey of canes carried out in Jorhat, Golaghat, Karbi-Anglong, Dibrugarh and Tinsukia Districts of Assam and demarcated seed stands for *Calamus tenuis* and *C. flagellum*. Mature fruits of *Calamus flagellum* were collected from selected stands at Gibbon Wildlife Sanctuary, Jorhat. Species viz. *C. leptospadix*, *C. namborensis*, *C. latifolius* and *C. flafellum* were collected during survey and planted in canetum.



Establishment of Canetum



Fruits of *Calamus tenuis*



Flowering of *Calamus tenuis*

## Project 3: Improvement of degraded shifting cultivation lands through introduction of *Thysanolaena maxima* (Broom grass) along with *Cajanas cajan* as $N_2$ fixing plant [RFRI/SC/09/ 2006-2009]

**Status:** *Thysanolaena maxima* (Broom Grass) growing areas of Assam were surveyed and best planting materials collected based on selective criteria for evaluation of performance trials. Collected rhizomes were successfully multiplied in the nursery for plantation in the degraded shifting cultivation areas.

## Project 4: Standardization of nursery technique for *Bambusa pallida* [RFRI/SM/07/ 2006-2008]

**Status:** Different concentrations of IBA are being used for development of propagation protocol. More seedlings sprout was observed in 300-ppm concentration. Growth data recording is continued.



Insertion of solution to the culm cuttings



Sprouting of culm cuttings

## PROJECTS CONTINUED DURING THE YEAR 2006-2007 (Externally Aided)

### Project 1: Conservation of productive land and promising flora of Majuli Island in Brahmaputra River [RFRI/EP/05/2003-2006]

**Status:** The approved project duration was over in March 2006. However, due to non release of fund as per approved grant in aid, some of the activities could not be completed. The funding agency has been requested to extend the project duration. Response in this regard is awaited.



Bunds and Mating with treated Bamboo and Ipomoea plantation for soil stabilization

### Project 2: Control of soil and riverbank erosion in Majuli through bamboo based vegetative embankment (Sponsored by TIFAC/DST, Govt. of India) [RFRI/EP/07/ 2004-2007]

**Status:** Construction of bunds and *Ipomoea* plantation in zero zone on the bank of Brahmaputra river for control of shore and surface run off of soil accomplished. Plantations of Bamboos, *Dalbergia sissoo*, *Thespesia populnea*, *Bombax ceiba* and *Bambusa nana*, and grasses in first, second and third zones at the bank of river have been found to check surface run off of top soil.

### Project 3: Validation, testing and locational trial of micro/macro propagated planting stock of selected bamboo species in Northeast India (Sponsored by: DBT, Govt. of India) [RFRI/EP/08/2005-2008]

**Status:** Liaison maintained with all the 8 nodal officers of Field Implementing Agencies (FIAs) in the NE states. Procurement of 46000 tissue culture saplings of bamboo from Growmore Biotech, Hosur and their hardening at HPCL site completed. Hardened TC plants were supplied to various FIAs. Establishment of Demonstration and Experimental Trial plantations of target bamboo species (*Bambusa balcooa*, *B. nutans* and *Dendrocalamus hamiltonii*) covering 90 ha area out of the total target 160 ha in different NE states. Standardization of monitoring and evaluation parameters and development of formats for recording of growth and performance data of trial plantations. Monitoring of the trial plantations established in different NE states and data recording is in progress.

### Project 4: Improvement of infrastructural facilities in botanical garden/Centers of *ex-situ* conservation at Deovan, RFRI, Jorhat, Assam [RFRI/EP/09/2003-2007]

**Status:** The civil works sanctioned by MoEF relating to the construction of the orchidarium and shade cum polyhouse, has been completed and irrigation system installed. This infrastructure is being utilized for the developmental activities of botanical garden. Introduced 29 species of medicinal plants, 39

species of orchids, 19 species of commercially important trees of NE India and 12 species of rare and endangered plants in the botanical garden.



Commercially important tree species of NE region



Orchids in shade cumpoly house



Construction of footpath in progress

## **Project 5: Augmentation of Entomopathogenic fungi for the management of *Calopepla leayana* on *Gmelina arborea*: An ecofriendly approach [RFRI/EP/10/2005-2007]**

**Status:** Augmentation of entomopathogenic fungi, viz., *Metarhizium anisopliae* (2 isolates from *Calopepla leayana* (RFRI/EP/04) and bamboo plant hopper (RFRI/EP/05), *Aspergillus niger* (RFRI/EP/06), *A. flavus* (RFRI/EP/07) and *A. fumigatus* (RFRI/EP/08) (isolated from soil) and *Beauveria bassiana* (2 isolates from rice hispa (RFRI/EP/02) and lepidopteran larva (RFRI/EP/03)) along with a positive control of *B. bassiana* isolated from *C. leayana* (RFRI/EP/01) was made against *C. leayana*. Among the eight fungi tested against adults of *C. leayana*, RFRI/EP/02 was found to be more pathogenic followed by RFRI/EP/04, RFRI/EP/05, RFRI/EP/06, RFRI/EP/03, RFRI/EP/08 and RFRI/EP/07. However, RFRI/EP/01, which, was isolated from *C. leayana* was found to be the more pathogenic than any other fungi. The average per cent mortality was found to be ranging between 60 to 92.

## **Project 6: Sustained capacity enhancement of economically backward Scheduled Tribes of North Eastern region through composite R & D technologies [RFRI/EP/11/2006-2009]**

**Status:** Socio economic survey of the adopted village namely Kakotibari, and Golaghat in Assam was done. Formed a registered Co-operative Society involving the villagers. Imparted training on nursery and planting technologies of Bamboo / Rattan. Developed kitchen garden and distributed various vegetable seeds, seedlings and horticulture species to all the 65 families of the targeted village.



Installation of two Gobar gas plants is in progress. Distributed fifteen numbers of bee keeping boxes and bee colonies. Imparted training on bee keeping and management.



Training on bamboo and rattan



Establishment of fish pond



Training on bee keeping



Installations of gobar gas plant

## Project 7: Biological control of *Mimosa invisa*, a destructive alien weed threatening Kaziranga National Park (Grassland) [RFRI/EP/12/2006-2009]

**Status:** Survey and screening of *Mimosa invisa* was done at the Kaziranga National Park and other areas for natural presence of any biological control agents. Few fungal species were isolated from infected *M. invisa* plants and purified. Preliminary laboratory studies are being conducted for their use as possible use as biocontrol agents. One insect was found to infest on *M. invisa*. Laboratory studies are being conducted to ascertain the efficacy of this insect species as bio-agent. Efforts have been made to use fungal culture obtained from the Indian Type Culture Collection, Division of Plant Pathology, IARI, New Delhi.



Fungi isolated from *M. invisa*



Insect species feeding on *M. Invisa*



## **Project 8: Genetic improvement and conservation of genetic resources of some economically more important bamboo species of Northeastern India [RFRI/EP/13/2006-2009]**

**Status:** Liaison established and MoUs signed with SFDs of Tripura, Mizoram, Assam and Nagaland for conducting clonal trials. Sites for clonal trials at 2 places each in Assam and Mizoram, and 1 place each in Nagaland and Tripura have been selected. Areas (2 ha each) have also been selected in RFRI, Jorhat (Assam) and ARCBR, Aizawl (Mizoram) for establishment of Gene Bank. Field layouts and statistically feasible plantation designs have been prepared for clonal trials and Gene Bank. Species-wise criterion for survey and selection of Candidate Plus Clumps (CPCs) has been finalized and their passport formats have been developed. **Bamboo growing areas in Upper Assam and Manipur** have been surveyed and superior clumps of target bamboo species have been selected. Multiplication works have been started for production of planting stock. Plans developed for *Melocana baccifera* staggering trial.

## **Project 9: Biodiversity studies of Orthoptera in Kaziranga National Park, Assam [RFRI/EP/14/2006-2009]**

**Status:** Preliminary survey of Orthoptera was made in Kaziranga National Park (KNP) and a total of 11 species were encountered of which, 9 were acridids, tettigoniids and gryllids represented one species each. *Oxya nitidula* (Walk.), *Acrida exaltata* (Walk.), *Diabolocantops pinguis* (Walk.), *Catantops ferruginous* (Walk.), *Atractomorpha crenulata* (Fab.), *Ailopus thalassinus* (Fab.), *Oxya hyla hyla* (Serv.) and *Anacridium flaviscens* (Fab.) were common in KNP. Seven species were observed in forestlands and 6 species in grasslands. Two species were found both in forestlands and grasslands.

## **Project 10: Mapping and quantitative assessment of geographic distribution and population status of plant resources of eastern Himalayan Region [RFRI/EP/15/2006-2009]**

**Status:** Workshop and First Interaction Meeting of the Project Investigators (PIs) for methodology development and finalization was held on 17<sup>th</sup> and 18<sup>th</sup> April 2007 at North-Eastern Hill University, Shillong. Literature survey is going on.

## **Project 11: Establishment of a Network to Facilitate Collection, Processing and Dissemination of Statistics Pertaining to Tropical Timber and other Forestry Parameters in India (Supported by ITTO and Co-ordinated by ICFRE Dehradun)**

**Status:** Information was collected from Agartala (Tripura), Aizawl (Mizoram) and Imphal (Manipur) regarding (1) Joint Forest Sector Questionnaires JQ1 & JQ2, (2) Timber/Bamboo Trade Bulletin and (3) Format of Forestry Statistics India Data for the year 2004-05 and 2005-06.

### **Abstract: No. of Projects**

	No. of projects Completed in 2006-2007	No. of ongoing projects in 2006-2007	No. of projects initiated in 2006-2007
Plan Projects	2	11	4
External Project	-	11	-
<b>Total</b>	<b>2</b>	<b>22</b>	<b>4</b>

## EDUCATION AND TRAINING

### Education

Dr. Ajay Thakur, Scientist C and Head Biotechnology and Genetic Division, RFRI was awarded Ph.D. degree from University of Wales, Bangor, U.K. In August 2006.

## LINKAGES AND COLLABORATION

The linkage and collaboration were established with State Forest Departments of NE States, Universities, other research organizations viz. GBPIHED, NMBA, MoEF, DBT, NEC and NGOs working in the field of forestry and forestry research.

## PUBLICATIONS

### Reports

1. Project Completion Report on Assessment of biological diversity of various ecosystems and to establish methods for conservation in Kaziranga National Park (RFRI/EP/06) P. K. Khatri (2007) being submitted to GBPIHED.
2. Project Completion Report on Financial assistance for improvement of Infrastructural facilities in Botanical Garden /Centres of *ex-situ* conservation at RFRI (RFRI/EP/09,) P. K. Khatri (2007) submitted to MoEF.
3. The project progress report in Group Monitoring cum sensitization workshop on Technology Intervention for Mountain Ecosystem (TIME) under Science and Society Division of Department of Science and Technology, GoI, New Delhi, Organised by HESCO, Dehradun in Bethany Society campus, Shillong from 25<sup>th</sup> to 27<sup>th</sup> September 2006.
4. Meeting report of seminar on “Biological control of insect pests and diseases of forestry importance” was organized on 18<sup>th</sup> September 2006 at Rain Forest Research Institute, Jorhat, Assam, sponsored by Science and Society Division, Department of Science and Technology (DST), Govt. of India, New Delhi, *Current Science*, 92(2): 166-167.

### Extension literature

Training manual on Propagation and cultivation of Bamboo was prepared.

Pamphlets in Assamese language on the following topics were prepared.

1. Compositing for organic farming : Techniques and Application.
2. Modern Bamboo nursery for self employment.
3. Vermicomposting: An ecofriendly technology for rural employment.
4. Chemical preservation of bamboo: Tools and techniques.

## CONSULTANCIES

1. Evaluation of Afforestation and Tree Planting Activities sponsored by National Afforestation and Ecodevelopment Board (NAEB), Ministry of Environment & Forests (Govt. of India) under Integrated Afforestation and Ecodevelopment Projects (IAEP) at Dibrugarh District, Assam; Mon District of Nagaland; Golaghat FDA District of Assam; West Garo Hills, FDA, Meghalaya; East Garo Hills, FDA, Meghalaya; and Deomali District, FDA, Arunachal Pradesh.



- Monitoring and Evaluation of the promotional projects assisted by National Medicinal Plant Board, Ministry of Health and Family Welfare, Department of AYUSH, Govt. of India in Assam, Arunachal Pradesh, Meghalaya, Mizoram and Nagaland.

## CONFERENCES/MEETINGS/WORKSHOPS/SEMINARS/ SYMPOSIA/ EXHIBITIONS

### Organised

- One day Regional workshop on "Forestry Extension" on 18<sup>th</sup> July 2006 at RFRI, Jorhat.



Regional workshop on "Forestry Extension"

- Trainers training on Bamboo Propagation and Cultivation from 21<sup>st</sup> to 24<sup>th</sup> August 2006 at RFRI, Jorhat.



Training on bamboo propagation and cultivation

- Industrial training to pre-final B.Sc., students of NERIST, Arunachal Pradesh from 2<sup>nd</sup> June to 21<sup>st</sup> July, 2006.
- One day seminar on "Recent trends in biological control of insect pests and diseases of forestry importance" on 18<sup>th</sup> September, 2006 at Rain Forest Research Institute, Jorhat, Assam, sponsored by Science & Society Division, Department of Science and Technology (DST), GOI, New Delhi.
- 8<sup>th</sup> RAG meeting on 22<sup>nd</sup> November, 2006 at RFRI, Jorhat.
- Training on Apiculture and Management on 18<sup>th</sup> March, 2007.
- Training on bamboo propagation technique and cultivation strategies for forest officials in Arunachal Pradesh on 19<sup>th</sup> march, 2007.
- Awareness generation programme at RFRI on World Forestry Day (21 March 2007).

## Attended

1. Shri E. Meru, IFS, GCR, attended a workshop on National capacity, self assessment NCSA for biodiversity conservation in the North East region held at Shillong on 26<sup>th</sup> August 2006.
2. Dr. Y.C. Tripathi, Scientist E, attended Rajbhasha Technical Workshop on Biodiversity organized by Ministry of Environment & Forests -Regional Office, Shillong on 18<sup>th</sup> and 19<sup>th</sup> September 2006. He chaired the 1<sup>st</sup> Technical session and presented paper.
3. Dr. Y.C. Tripathi, Scientist E, attended 3<sup>rd</sup> Meeting of Scientific Advisory Committee on Micropropagation Research and Technology Development (SAC-CMRTD) held at Department of Biotechnology, New Delhi on 27<sup>th</sup> October 2006.
4. Shri B.K. Pandey, Scientist C attended Zonal Workshop on “Production of quality planting material for Afforestation” as a resource person held at Dibrugarh Circuit House on 06<sup>th</sup> September 2006.
5. Shri B.K. Pandey, Scientist C, attended the Regional Workshop on “ Bamboo Species of North East India: Adoption of suitable Cultivation Techniques for Socio-Economic Development of Rural People” as a resource person, 15<sup>th</sup>-16<sup>th</sup> December, 2006 organized by Department of Forestry, NERIST, Nirjuli, Arunachal Pradesh.
6. Shri B.K. Pandey, Scientist C, attended meeting with Dr. Jayanta Madhab, Advisor to Chief Minister - Assam (Economic & Finance) at DRDA Conference Hall, Jorhat on 2<sup>nd</sup> March 2007.
7. Shri B.K. Pandey, Scientist C, attended meeting with Dr. Tapan Dutta, Agriculture Advisor to Chief Minister of Assam at Conference Hall of Zilla Parishod, Jorhat on 27<sup>th</sup> March 2007.
8. Shri B.K. Pandey, Scientist C, attended the Seminar on “ Commercial Cultivation of Bamboo” on 27<sup>th</sup> March 2007, Organized by District Agriculture Office, Jorhat.
9. Shri D. Gurung, R.O., attended writers meeting on Bamboo and rattan at School of Agriculture, IGNOU, New Delhi during July 2006.
10. Dr. N. Senthilkumar, Scientist B, attended and presented progress report of DST project in Group Monitoring cum sensitization workshop on Technology Intervention for Mountain Ecosystem (TIME) under Science & Society Division of Department of Science and Technology, GOI, New Delhi, Organised by HESCO, Dehradun in Bethany Society campus, Shillong, 25-27, September, 2006.
11. Dr. N. Senthilkumar, Scientist B, attended 16<sup>th</sup> RAC meeting of Central Silk Board, CMER and T I , Lahdoigarh, Assam as a representative of Director, RFRI on 13<sup>th</sup> and 14<sup>th</sup> March 2007.
12. Dr. P. K. Khatri, Scientist C, participated in Rajbhasha Technical Workshop on Biodiversity at Shillong organized by MoEF, Northeastern Regional Office, Shillong on 18<sup>th</sup> and 19<sup>th</sup> September 2007.
13. Dr. D. Dutta, Research Officer participated in Dissemination Workshop (International) on Unlocking opportunities for forest dependent people in India, on 5<sup>th</sup> and 6<sup>th</sup> June 2006, at Administrative Staff College, Khanapara, Guwahati, organized by MoEF, Govt. of India, and Deptt. of Environment and Forest, Govt. of Assam in association with TERI and World Bank.
14. Dr. D. Dutta, Research Officer participated in Workshop on “Documentation /involvement of formal and informal organization related to implementation of JFM in the field with a focus on institutional/ organizational process in relation to participation of different groups of stakeholders in Assam” 17<sup>th</sup> June 2006 organized by Department of Environment and Forest, Govt. of Assam, Regional Centre NAEB, Shillong, Meghalaya at Administrative Staff College, Khanapara, Gauhati, Assam.



15. On day training on Biotechnological application by Bangalore Genie was attended by Dr. Ajay Thakur, Shri A. K. Sarkar, Shri S. Bordoloi and Dr. Papori Sharma at AAU, Jorhat on 11<sup>th</sup> September 2007.
16. Dr. Papori Sharma attended six days training on Mass multiplication of oil yielding plants at IIT, Guwahati.

## AWARDS

Shri Mridul Saikia (Khalasi, Motor Mechanic) of this institute who represented ICFRE in the XV All India Forests Sports Meet held at Jaipur, Rajasthan on 6<sup>th</sup> to 10<sup>th</sup> February 2007 bagged the BRONZE MEDAL in Weight Lifting.

## DISTINGUISHED VISITORS

1. Dr. T.C. Dutta, Adviser (Agriculture) to the Hon'ble Chief Minister of Assam, visited RFRI on 24<sup>th</sup> August 2006 to attend concluding session of Trainers Training on Bamboo Propagation and Cultivation Programme as Chief Guest.
2. Shri D.S. Tomar, IFS, Managing Director and Shri R.B. Kala, Manager (Planning), Uttaranchal Forest Development Corporation, Dehradun visited RFRI on 21<sup>st</sup> December 2006.
3. Shri K.B. Thampi, IGF (NAEB) and Shri Sanjay Kumar, DIGF (NAEB), MoEF, New Delhi visited ARCBR, Mizoram on 7<sup>th</sup> February 2007.
4. Shri R.P. Agarwalla, IFS, CCF, Assam visited RFRI on 27<sup>th</sup> March 2007.