CHAPTER 3.5

Rain Forest Research Institute Jorhat

The Rain Forest Research Institute (RFRI) is a national Institute established at Jorhat, Assam in the year 1988, a constituent unit of the Indian Council of Forestry Research and Education (ICFRE), an autonomous body under the Ministry of Environment and Forests, Govt. of India. The mandate of the Institute is conservation of forest ecosystem with emphasis on natural regeneration, control of shifting cultivation, management of community forests, planting practices for eco-restoration and research on bamboo and rattan.

PROJECTS COMPLETED DURING THE YEAR 2005- 2006

Project 1: Genetic Improvement of Khasi pine (*Pinus kesiya*) [RFRI/TI/08/2002-2005]

Findings: Established 5 ha and 10 ha Seed Production Areas (SPA) of *Pinus kesiya* at Khonghampat in the central forest division, Imphal and Riet Khwan in Shillong forest division in the state of Manipur and Meghalaya, respectively.

A total 33 plus trees have been selected in east and west khasi hills of Meghalaya. Seedling Seed Orchard cum Progeny Trial was established at Umiam, Barapani over 2 ha area in Randomized Block Design with 16 progenies along with control in the state of Meghalaya.

The seed maturity indices for *Pinus kesiya* are determined using specific gravity of mature cones as parameter. The occurrence of cones in four, five and even six clusters in some of the plus trees was observed in the pine forests of Meghalaya. This is an unusual feature and can be exploited for the production of seeds in the orchards in future improvement programmes.

The presence of red pine besides the Khasi pine *(Pinus kesiya)* in the pine zone of Khasi hills in the state of Meghalaya was resolved scientifically by analyzing samples of wood, needle and cones collected from red pine and white pine (Khasi pine) trees. It was revealed that there is no red pine in Khasi pine areas in the state of Meghalaya.

Project 2: Studies on distribution dynamics of bamboo and canes and their *ex-situ* conservation [RFRI/EE/03/2004-2007]

Findings: Distribution map of bamboos of north-eastern region of India and *ex-situ* conservation of 32 species and 4 varieties of bamboo has been completed and identification of some bamboo species based on morphology is under progress.

Project 3: Germplasm collection, conservation and mass multiplication of selected Medicinal plants of north-east India [RFRI/EE/05/2003-2006]

Findings: Collection and *ex-situ* conservation of 5 selected medicinal plant species (*Bacopa monnieri*, *Andrographis panniculata*, *Plumbago zeylanica*, *Plumbago indica* and *Asparagus racemosa)* have been made at RFRI campus. Developed protocol for propagation of *Andrographis panniculata*, *Plumbago zeylanica* and *Plumbago indica.*

Project 4: Ecological studies on Dipterocarp forest of Gibbon Wildlife Sanctuary of Assam [RFRI/EE/04/2003-2006]

Findings: An ecological studies have been carried out in the Gibbon Wildlife Sanctuary, Assam to highlighted the present ecological status of the ecosystem with a view to suggest suitable measures for sustainability.

Natural Forest site

Dipterocarpus plantation site

Enumeration of vegetation in three different sites has indicated the presence of 298, 458 and 348 trees/ha (>10cm dbh) in the plantation, natural and disturbed sites respectively. Tree height stratification has indicated value, which is indicative of the fact that the bigger trees might have been felled.

Considering the regeneration status, Mesua seedling were the most dominant followed by Vatica and *Dipterocarpus retusus*. In the natural area similar trend was observed with Mesua, Vatica and *Dipterocarpus retusus*. In the disturbed site too, this trend was reflected with Mesua accounting for followed by Vatica and *Dipterocarpus retusus*. The dominance of Mesua seedling in all the three sites indicate that the Gibbon Wild life Sanctuary is in a disturbed stage as canopy openings are favouring the establishment and growth of Mesua which is a light demander.

Project 5: Growth, biomass and energy production potential of selected energy plantation species [RFRI/SC/07/2003-2006]

Findings: Growth and biomass studies conducted showed maximum height growth was observed in *Mallotus albus* followed by *Anthocephalus chinensis*, *Alstonia scholaris* and *Melia azedarach* etc. Lowest progressive height growth was observed in *Artocarpus chaplasha* among non legumes. In legumes *Samanea saman* and *Dalbergia sissoo* showed lowest growth rate.

Maximum diameter growth was recorded in *Mallotus albus* followed by *Anthocephalus chinensis*, *Alstonia scholaris* and *Melia azedarach* etc and lowest collar diameter was recorded in *Dalbergia sissoo* and *Samanea saman*. Diameter at basal hight was recorded highest in *Alstonia scholaris*. It was followed by *Anthocephalus chinensis* and in *Mallotus albus*. Minimum basal diameter was recorded in *Dalbergia sissoo.*

Minimum biomass was observed in *Samanea saman*, *Dalbergia sissoo* and *Artocarpus chaplasha*. Energy content was determined component wise. *Anthocephalus chinensis* leaf recorded highest energy content followed by *Melia azaderach* and *Lagerstromia speciosa*. Lowest leaf calorific value was recorded in *Ficus hispida*. Among leguminous species branch of *Dalbergia sissoo* measured highest energy content and in non legumes, it was highest in *Anthocephalus chinensis* followed by *Melia azaderach* and *Alstonia scholaris*.

Project 6: Indigenous knowledge of Angami tribe in sustainable management of biodiversity in Dimapur and Kohima districts of Nagaland, India [RFRI/ EP/03 2003-2006]

Findings: The Angami people of Nagaland bring the necessary resources such as fuel, food, fodder, dye, medicine etc. from forest.

About 28 species of medicinal plants, 14 species of dye yielding and 20 species of wild edible plants are reported, which are good sources of income and survival for the rural folk. Some promising indigenous medicinal plants used by Angamis have been reported for multiple biological effects such as anti-inflammatory, anti-allergic and anti-cancer properties etc. Angamis integrate indigenous technique for protection of crops, conservation of forest, water harvesting system, filtration of drinking water etc.

Filtration unit

Rice bundle

Project 7: Contribution of N_2 fixing plants on improvement of abandoned fallow in shifting cultivation [RFRI/ EP/04/ 2003-2006]

Findings: Nutrient status of soil was significantly improved by the application of legume green manure. Enhancement of chemical properties of soil was recorded due to addition of *Crotalaria pallida* followed by *Sesbania bispinosa.* Maintenance of fertility status might be due to easy decomposition of organic matter that converts organically bound nutrient to inorganic form. Maximum increase of rice and maize yield was recorded in *C. pallida* applied plot. In case of rice the productivity was increased 36.2% over control. During the year of experimentation the total nutrient uptake value was found maximum in *C. pallida* applied plot.

Project 8: Assessment of biological diversity of various ecosystems and to establish methods for conservation in the Kaziranga National Park of Assam [RFRI/EP/06/2003-2006]

Findings: Quantitative structure, population dynamics of forest communities and grassland productivity has been analyzed in the Kaziranga National Park. Four communities were identified on the basis of dominance of species in different ecosystem.

Grassland enumeration and biomass study has indicated the distinct characters of tall and short grass community. Four grassland communities have been identified.

Lagerstroemia Streblus Community
Reparian Forest Kaziranga National Park

Data collected reveals the presence of endangered species, rare Orchids and also cane species reported in the Kaziranga National Park, Assam.

Project 9: Financial assistance for improvement of infrastructural facilities in Botanical Garden/Centres of *ex-situ* conservation at Rain Forest Research Institute Jorhat, Assam [RFRI/ EP/ 09/2003-2006]

Findings: Construction of shade cum poly house, orchidarium and installation of irrigation facilities has been

completed. 20 species of rare orchids of north-east region collected. Other development activities of botanical garden are in progress.

Flowering of *Calanthe masuqa* a terrestrial Orchid in Botanical garden

Orchidarium in Botanical garden

Project 10: Capacity building of village level committee for efficient forest resource management through JFM [RFRI/CFE/01/2002-2006]

Findings: Assessment of natural resources has been done through participatory approach. Microplan has been prepared. Various Training programmes at Institute level and at Field level has been imparted to the villagers, farmers, SHGs, NGOs and GOs for awareness generation and capacity building of farmers and various user communities. A number of exhibitions have been organized and demonstrations of useful technologies have been done at village level. Use of Biofertilizers was explained to various farming and forestry groups to enhance productivity. Audio visual aids, Extension based movies were shown to the user groups. Technical brochures and booklets were distributed. Indigenous techniques and knowledge were collected and documented.

Use of treated bamboo in housing

Project 11: Studies on yield and quality traits of fragrant products from selected humid-tropical aromatic plants [RFRI/CFE/02/2002-2005]

Findings: Correct harvesting time of patchouli leaves in terms of optimum oil yield has been determined and

organoleptic traits were ascertained in terms of optimum oil yield. Effect of drying different methods on the essential oil content of patchouli leaves, appropriate drying method has been determined. Different distillation methods were attempted with certain modification and procedural refinement has been done for enhanced production of essential oil from patchouli leaves. Thin layer chromatographic chemical profiles for patchouli oil have been standardized. Significant decline has been recorded in oil content of infested leaves. The products so obtained need further chromatographic and spectral analysis for characterization.

Project 12: Germplasm evaluation of selected bamboo species for various end uses [RFRI/SM/03 /2001-2005]

Findings: A base population of about 2067 ramets belong to the four different bamboo species namely *Bambusa nutans, Bambusa balcooa, Bambusa tulda* and *Dendrocalamus hamiltonii* have been produced in the RFRI, nursery.

The overall genotype/clone of four different bamboo species showed the best performance in the Naharoni (Assam) in comparisons to the Khasiamangal of Tripura. The genotype /clone No. S_4C_{10} of *D. hamiltonii* had best performance at Khasiamangal, Tripura in respect of height followed by S_3C_4 of *B. nutans*, S_3C_8 of *B. balcooa* and S_3C_8 of *B. nutans*. Where as collar diameter is concern the best progeny/clone is S_4C_9 of *D. hamiltonii* followed by S_3C_3 and S_3C_8 of *B. nutans*. The progeny / clones of S_3C_4 of *B. nutans* showed best performance in respect of height at Naharoni, Assam followed by S_3C_9 of *B. nutans* and S_2C_6 of *B. balcooa*. Where as collar diameter is concern the best progeny/clone is S_3C_{10} of *B. balcooa* followed by S_2C_5 and S_2C_6 of *B. balcooa*.

PROJECTS CONTINUED DURING THE YEAR 2005-2006

Project 1: Development of an ecofriendly strategy for the Management of *Calopepla leayana* Latr., a serious pest of *Gmelina arborea* (Roxb.) [RFRI/FE/ 11/2004-2007]

Status: Pathogenic evaluation of entomopathogenic fungi *Beauveria bassiana* and *Metarhyzium anisopliae* against *Calopepla leayana* were carried out. Both the fungi were found to be pathogenic to all stages of *C. leayana*. After that mass production of entomopathogenic fungi *B. bassiana* and *M. anisopliae* using different substrates was standardized. Bio safety test of *B. bassiana* and *M. anisopliae* with muga silkworm was carried out. Both the fungi were found to be harmless to muga silkworm and all silkworms attained pupal stage (Cocoon) without any deformities and malformations. Spores of *B. bassiana* were isolated and kept in refrigerator at 4ºC in different vials to test their self-life expectancy, which are viable for about 8 months of storage period.

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

Status: Survey, selection and collection of productivity data of different land use system in Silonijan, Karbi Anglog Assam, Nagaland and Meghalaya have been completed. During this period survey of different land use system of Meghalaya was carried out.

Benefit cost ratio and productivity of *Ananas comosus* and *Zingiber officinale* are higher than jhum cultivation in this region. Soil nutrient status of these cropping system shows that PH, organic carbon and nitrogen plays an active role to enhance productivity of crop.

Plantation of *Ananas comosus*

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

Status: Evaluation and monitoring of established progeny trials at different locations of north-east India is in progress. Data collected from the three sites of progeny trial located at Teliamura (Agartala), Imphal and Naharoni. Seeds are also collected and distributed as per requirement to other ICFRE institutes where Multilocational trial is under progress.

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

Status: Clonal propagation trials to develop an efficient clonal propagation protocol of *Dipterocarpus retusus* are in progress. Data on different growth related parameters have also been recorded for evaluation of progeny trials and significant variation was observed among all the progenies for different traits. Observation were also made on flowering and fruiting behaviour in 11 out of 18 progenies raised from half-sib seeds collected from plus trees, selected from upper Assam and Arunachal Pradesh and raised at Jorhat (Assam) in 1999.

Project 5: Reclamation of highly eroded site of Cherrapunjee, Meghalaya [RFRI/SM/04/2003-2006]

Status: Growth datas of *Alnus nepalensis* and *Exbucklendia populenia* were collected during the month of July and it was observed that the growth performance of *A. nepalensis* shows better than *E. populenia* in that climatic zone.

Survival percentage for *Alnus nepalensis* was 92.19% and for *Exbucklendia populenia* 83.69 % after a period of 15 months plantation. And the maximum height growth was observed 180cm and 60 cm for *Alnus nepalensis* and

Exbucklendia populenia respectively. Quarterly growth and survival data of *Alnus nepalensis* and *Exbucklendia populenia* were collected during the month of November. Survival percentage for *Alnus nepalensis* was 90.8% and for *Exbucklendia populenia* was 75.18 %.

Project 6: Development of Patchouli based viable agroforestry models for north-east region of India [RFRI/CFE/04/2004-2007]

Status: Patchouli plants were raised through vegetative multiplication in root trainers under mist chamber condition for laying out agroforestry trails. Laid out Agar-patchouli based agroforestry trail on farmer's field at Salbari, Betel Nut-Patchouli based agroforestry trail at Numaligarh, Bharali gaon and Bogori gaon and Bamboo-Patchouli agroforestry trail on at Teak Tea Estate, Teok. Patchouli experimental trial plot were managed by providing technical guidance to the farmer concerned. Tours were undertaken to the on farm trial sites for collection of data on various crop parameters

Patchouli under Areca nut

NEW PROJECTS INITIATED DURING THE YEAR 2005- 2006

Project 1: Development of Nursery practices for production of quality planting stock of Bamboo in N.E. [RFRI/SM/06/2005-2008]

Status: *Dendrocalamus hamiltonii* bamboo culms aged 2 years were collected from Germplasm bank of bamboo. Two nodded cuttings were prepared, treatment were given and planted in beds to standardize propagation technique. Data is being recorded.

Off shoots are being separated from those two nodded cutting and are being planted in different potting media.

Different potting media were prepared to carryout experiment.

Culm cuttings

Project 2: Bioecological studies of seed insect pests of *Dipterocarpus retusus* [RFRI/FE/12/2005-2008]

Status: *Alcidodes crassus* (Coleoptera) a weevil and *Dioryctria abicutella* and *Enarmonia pulverula* (Lepidopera) moths were found infesting seeds of *Dipterocarpus retusus* collected from forest floor. 8-10% fallen mature seeds

were infested with these insects. Insect infestation on mature seeds collected using nylon nets, before falling to forest floor, was recorded which was 12-14% only.

Project 3: The potential role of bamboo species with reference to carbon sequestration in Assam and Mizoram [RFRI/EE/07/2005-2008]

Status: Surveyed the areas of Assam and Mizorum and Sites have been selected for biomass estimation of bamboo. Fresh biomass of *Bambusa tulda* of three age groups of 1st year, 2nd year and 3rd year estimated from selected sites at Jorhat, Assam. Oven dry weight has also been taken. Further studies are in progress.

Project 4: Comparative studies on natural resistance of bamboos to biodegradation in Assam [RFRI/FP/08/2005-2008]

Status: Ten bamboo species were selected for graveyard test, out of which seven species have been locally collected from Bambusetum at RFRI and local market. One new species *Bambusa bambos* has also been collected and included in the comparative tests on natural resistance of bamboo to biodegradation.

Bamboo samples at one experimental site at Jorhat has been set up and samples for another experimental site at Burnihat has been completed.

Project 5: Management of *Bambusa nutans* for enhancing the productivity of marketable culm through silvicultural practices [RFRI/TI/13/2005-2008]

Status: Plantation of *Bambusa nutans* in the year 2002-2003 covering an area of 0.5184 ha in 36 blocks, planted in 4x4 m, spacing in RBD design, at Dakshinpat Satra. Literature was surveyed and collected. Recording of initial observations as well as field works is in under progress.

Project 6: Studies on structural formation of vegetation for the conservation of Biodiversity in Gibbon Wildlife Sanctuary Assam [RFRI/SC/08/ 2005-2008]

Status: Study site was surveyed for reconnaissance pertaining to site, terrain, physical features and vegetation composition. Under floristic component investigations were initiated on location, identification and inventorization of specific species of flowering plants, area, which are the indicators of the Hoolock Gibbon's natural habitat and are indispensable to life style of Hoolock Gibbon. Phenological behavior of such species was also observed. Appropriate spots were selected for conducting ecological studies, such as structural formation of vegetation, community studies, vegetation types, etc. with reference to the habit and habitat of Hoolock Gibbon.

Project 7: 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: Survey and collection of soil and rhizosphere root samples of 94 indigenous Medicinal and Aromatic Plants (MAPs) from five districts of Assam namely, Jorhat, Golaghat, Sonitpur, North Lakhimpur and Dhemaji have been completed. 52 indigenous Medicinal and Aromatic Plants (MAPs) are conserved in the shade house. Analysis of root and soil of collected samples are in progress. The root sample of various plants collected has shown varying degree of Mycorrhizal infection. The number of arbuscular mycorrhizal spores associated with rhizosphere also varies with the species.

Dracaena

Nephaphu

PROJECTS CONTINUED DURING THE YEAR 2005-2006 (Externally Aided)

Project 1: Augmentation of Entomopathogenic fungi for the management of *Calopepla leayana* on *Gmelina arborea*: An ecofriendly approach [RFRI/EP/ 10/2005-2007]

Status: Entomopathogenic fungi viz., *Beauveria bassiana*, *Metarhyzium anisopliae*, *Aspergillus* spp. and *Fusarium* spp. were isolated from dead and diseased larvae and adults of different insect groups. All fungi were effective against both larval and adult stages of *Calopepla leayana*.

Project 2: Conservation of productive land and promising flora of Majuli Island in Brahmaputra River [RFRI/EP/05/2003-2006]

Status : Assessment of natural resources has been carried out by selecting different user groups. Indigenous knowledge of local inhabitants about medicinal and other plant resources was collected and documented. A number of trainings have been organized for villagers, farmers, SHGs, on correct harvesting and storage practices of some

Plantation of *Sesbania sesban* (fibre and fuel spp.)
for soil fertility improvement

important Medicinal Plants for economic upliftment and biodiversity conservation. Soil fertility enhancement through green manuring were also informed. Technology related to bamboo preservation and agroforestry has been demonstrated to villagers, farmers, SHGs etc. Agroforestry models like Moringa on field bunds, Moringa with Areca nut, Sissoopaddy have been established. Management of water for paddy and Trapa cultivation in water logged area for higher production was demonstrated. Shelterbelt of *Ipomoea carnea* grasses and banana on the bank of Tuni river has been established to check sand deposit in the field. Cultivation of *Sesbania sesban* to improve soil fertility and use of dry stem for fibre and fuel is under progress.

Project 3: Control of soil and riverbank erosion in Majuli through bamboo based vegetative embankment [RFRI/EP/07/2004-2007]

Status: Participatory rural appraisal was under taken. Microplan was prepared. Kissan nurseries were established in 12 groups in near by areas of the project site to meet the requirement of seedlings. Technical guidance was provided time to time. Similarly compost units were established to meet the requirement of compost. A bamboo treatment unit

Fencing of site with treated bamboo

has been established in Potia village near the project site to meet the requirement of treated bamboo. Materials for embankment work have been purchased. Fencing of the plantation area is under progress. Plantation work in all the four different zones is under progress. On site training programmes were organized to empower the local inhabitants.

Project 4: Validation, testing and locational trial of micro/macropropagated planting stock of selected bamboo species in north-east India [RFRI/EP/08/2005-2008]

Status: Liaison with Nodal Officers and Supporting Agencies has been established. Matter related to supply of required TC planting stock was persued with NMBA and Growmore Biotech Ltd. Periodically monitored the hardening status of TC planting Stock at HPC. Funds were released to various Field Implementing Agencies. Supply of planting stocks of *B. balcooa* from HPCL to Nodal Officers of Mizoram and Nagaland were expedited for demo plantations. Out of 20 ha area selected for locational trail by all the 8 FIAs, demo plantation of *B. balcooa* has been raised in Mizoram and Nagaland covering 7 ha area in each of the two states.

Abstract: No. of Projects

	No. of projects completed in 2005-2006	No. of ongoing projects in2005-2006	No. of projects initiated in 2005-2006
Plan Projects	12	6	7
External Projects	-	4	-
Total	12	10	7

LINKAGES AND COLLABORATION

The linkage and collaboration were established with State Forest Departments of N.E. States, University, other research organizations, G.B. Pant, NMBA, MoEF, DBT, NEC and NGOs working in the field of forestry and forestry research.

CONSULTANCY

1. RFRI is currently undertaking the consultancy on evaluation of afforestation and tree planting activities in Kamrup District of Assam, Mara Autonomous District Council of Mizoram, Tennoupal district of Manipur and Mokakchung, Kohima and Phek District of Nagaland.
2. RFRI is also undertaking the consultancy on monitoring and evaluation of plantations raised under National Medicinal Plants Board (NMPB) of the Ministry of Health and Family Welfare in all the north-eastern states including Sikkim.

CONFERENCES/MEETINGS/WORKSHOPS/SEMINARS/SYMPOSIA/ EXHIBITIONS

Organized

1. A training programme was organized on "Development of Bamboo Germplasm bank and multiplication strategies for conservation and plantation activities" and held at RFRI on 6th September 2005. Forest officials of Eastern Assam Circle participated.
2. Training on "Mass Multiplication and plantation of Fuelwood and Fodder species" was held on 6th January 2006 at Sokhoramukh Village, Majuli (Assam) under TIFAC-DST Sponsored Project.
3. Training on "Selection and Plantation Practices for bamboo in Flood Affected Areas" was held on 23rd February 2006 at Nimonichumoimari Village, Majuli (Assam) under TIFAC-DST sponsored Project.
4. Training on "Exploitation of Endemic Bioresources for Employment and Income Generation" was held on 27th February 2006 at Potia Village, Majuli (Assam) under ICFRE Project.
5. Trainees of State Forest Service College, Burnihat (Assam) and Assam Forest Guard School, Makum (Assam) were imparted training on propagation and multiplication of Bamboo species and nursery management on 30th December 2005.
6. A two days training on "Advanced Nursery Technology" was organized at RFRI on 8th and 9th November 2005 which was attended by Forest officials of State Forest Department, Manipur.
7. Seventh Research Advisory Group Meeting was held in the premises of RFRI on 26th October 2005.
8. Training on "Correct Harvesting and Storage Practices of Some Important Medicinal Plant for Economic Upliftment and Biodiversity Conservation" on 3rd and 4th May 2005, Potia Village, Majuli (Assam) under GBPIHED sponsored project.
9. Training on "Selection of Suitable Plant Species for Afforestation in Flood Affected Areas" on 10th May 2005, Potia Village, Majuli (Assam) under GBPIHED sponsored project.
10. Training on "Composting and Its Application for Productivity Enhancement" on 14th May 2005, Chumoimari Village, Majuli (Assam) under ICFRE Plan Project.
11. Training on "Advanced Nursery Technology" (for Forest Officers of SFD, Manipur) on 8th and 9th November 2005, Rain Forest Research Institute, Jorhat.
12. Training on "Agroforestry Models for Riverine Sand Dunes (Char Areas)" on 17th November 2005, Kaniajan Village, Majuli (Assam) under ICFRE Plan Project.
13. Training on "Soil Fertility Enhancement through Green Manuring" on 19th November 2005, Sokhonamukh Village, Majuli (Assam) under GBPIHED sponsored project.

Attended

1. Dr. Ombir Singh, Scientist C attended an International Conference on "Faciliting Forestry Mitigation Projects in India: Promoting stake-holder Dialogue and capacity Building" from 15th to 17th June 2005 at ICFRE Headquarter, Dehradun.

2. Shri S.S. Jain, Scientist C participated in the workshop on "Early warming systems for Forest Invasive species" at Kerala Forest Research Institute, Peechi, Kerala, India from 21st to 24th February 2006.
3. Scientific Exhibition cum Technology Demonstration during the Platinum Jubilee Celebration of J.B. College, Jorhat (Assam) from 5th to 7th February 2006.
4. Shri Pawan K. Kaushik, Scientist B, Community Forestry and Extension Division attended the National Seminar on "Growing, Processing, Value addition and Marketing of Medicinal and aromatic Plants" held at SFRI, Jabalpur from 6th to 8th February 2006.
5. Dr. Y.C. Tripathi, Scientist E and Head of Community Forestry and Extension Division attended the Meeting on Production and Supply of Quality TC Planting Stock of Bamboo, on 21st May 2005 at Hindustan Paper Corporation Limited (HPCL), Jagi Road (Assam).
6. Dr. Y.C. Tripathi, Scientist-E and Head of Community Forestry and Extension Division attended the Training on Bamboo Tissue Culture, from 18th to 22nd July 2005 at Growmore Biotech Ltd., Hosur (Karnataka).
7. Dr. Y.C. Tripathi, Scientist E and Head of Community Forestry and Extension Division attended the Meeting on "Operational Guidelines for Large Scale Production and Demonstration of Quality Planting Material of Bamboo" on 9th September 2005 at DBT, New Delhi.

AWARDS

Dr. J. Singh, Scientist E and Head, Shifting Cultivation Division, and his team (Dr. I. P. Bora, R.O., Dr. A. Baruah, RA-I, and Sri M. Hussain, RA II) have been awarded the prestigious Schlich prize for the year 2003 for the best research paper entitled "Effect of shifting cultivation on nutrient status of soil in Silonijan (Karbi-Anglong) Assam" (Indian Forester November 2003) on 26th May 2005 in the field of Forestry other than Silviculture.

DISTINGUISHED VISITORS

1. Mr. D. S. Tomar, IFS, M.D., Uttaranchal Forest Development Corporation visited RFRI on 4th May 2005.
2. Shri Pradyut Bordoloi, Hon'ble Forest Minister of Assam visited RFRI on 13th July 2005.
3. Shri P.P. Srivastava, Hon'ble Member of north-east Council, Shillong visited RFRI on 21st November 2005 and held discussion with the Director and Scientists regarding Bamboo and Cane research.
4. Dr. Tapan Dutta, Advisor to Chief Minister of Assam, Shri S. Rao, Deputy Commissioner, Jorhat; Dr. P. Gogoi, Head of Botany, D.R. College, Golaghat visited RFRI on 12th January 2006 and held a meeting on commercial cultivation of bamboos in Jorhat District.

MISCELLANEOUS

1. Shri Mridul Saikia, Khalasi Motor Mechanics of this Institute who represented ICFRE in the XIVth All India Forests Sports Meet held at Jamshedpur, Jharkhand from 4th to 8th January 2006 bagged the SILVER Medal in Power lifting and BRONZE Medal in Weight lifting.
2. Dr. M. George, Director of this Institute who represented ICFRE in the XIVth All India Forests Sports Meet held at Jamshedpur, Jharkhand from 4th to 8th January 2006 bagged the BRONZE Medal in Tennis (Senior Veteran Doubles).