

Centre for Forestry Research and Human Resource Development Chhindwara

Centre for Forestry Research and Human Resource Development, Chhindwara, came into existence on 30th March 1995. It was declared on 3rd January 1996, a satellite Centre of Tropical Forest Research Institute, Jabalpur. The mandate of the Centre is to take up the forestry research in the specialized areas like biodiversity conservation, non-wood forest products, forest protection, socio-economics, silviculture and tree improvement. In addition, the centre has also been assigned the task to develop human resource in forestry sector by imparting vocational training leading to poverty alleviation through self employment.

NEW PROJECTS INITIATED DURING THE YEAR 2006-2007

Project 1: Standardization of nursery technology and evaluation of various planting stocks of *Pterocarpus marsupium* an endangered leguminous tree [109/CFRHRD/2006-2(9) 2006-2009]

Status: Seeds of *Pterocarpus marsupium* were collected from healthy trees from Chattisgarh region and experiments were carried out in the nursery to study the effect of different seed treatments on germination of seeds and growth of seedlings. Seeds treated with cold water for 24 hours, showed promising results as compared to those treated with hot water and concentrated sulphuric acid for different periods. Seed size always affected germination and further growth of seedling in the nursery. Bigger sized seeds gave higher germination percentage and germination value as compared to the small sized seeds. Studies on time of seed sowing in beds showed higher germination percentage in the month of July and minimum percentage in the month of January.

Project 2: Studies on the seasonal variation in active chemical constituents of Hadjor, *Cissus quadrangularis* linn. [108/CFRHRD/2006-1(8) 2006-2009]

Status: *Cissus quadrangularis* (Hadjor) plant samples were collected from Chhindwara, Bhopal and TFRI, Jabalpur (Madhya Pradesh); Nagarjuna Botanical Garden, Akola, Valgaon, Amravati District (Maharashtra); Dabra (Janjgeer District) and Raigarh District (Chhattisgarh). Cuttings were also collected from the campus of National Research Centre for Agroforestry (NRCAF), Jhansi and planted in medicinal and aromatic plants (MAPs) nursery of the centre. Fresh stem samples were also collected from medicinal and aromatic plants (MAPs) nursery of the centre for estimation of active chemical constituents viz. total phytosterols and ascorbic acid. Total phytosterols content in the stem samples collected in January to March was estimated, it was found highest in the month of January (56.21mg/100g). Ascorbic acid was estimated in the hadjor stem samples, from November 2006 to March 2007, to study the monthly variation. The content was found highest in January (307.38mg/100g sample). Fresh stem samples were extracted for macroelements viz. calcium, magnesium, potassium and phosphorus content and trace elements (Boron, zinc, manganese, selenium, molybdenum, copper, vanadium and silicon)



Rauvolfia serpentina (sarpagandha) plantation at CFRHRD, Chhindwara



content. Macroelements were estimated from the hadjor stem samples at monthly intervals (July to March 2007). Calcium (1.12%) and magnesium (1.44%) contents were found highest in the month of March, and potassium content (0.72%) was found highest in the month of November.

PROJECTS COMPLETED DURING THE YEAR 2006-2007 (Externally Aided)

Project 1: Standardization of production technology of some important medicinal plants under tropical climate of Madhya Pradesh (A component assigned to CFRHRD, Chhindwara 40% and TFRI, Jabalpur 60% work) (Funding Agency: NMPB, Govt. of India)[055/CFRHRD-2003/MHFW]

Findings: Five kg seeds of *Rauvolfia serpentina* (sarpagandha) were collected from the sarpagandha plantation of CFRHRD, Chhindwara.

Cutting of *Tinospora cordifolia* (Gudbel) collected from Delakhari and Morghat forest range were studied for rooting in mist chamber by applying IBA in different concentration. IBA-500ppm got 100% rooting.

Seeds of Gudbel were sown in nursery beds and 95% germination was recorded in the month of October 2006. Cutting collected from Delakhari forest range under West Chhindwara forest division were studied for rooting by applying different concentration of growth regulator but rooting was not observed.

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

Project 1: Field trial on agro forestry model in farmers field with medicinal trees and herbs in Satpura plateau of Madhya Pradesh (Funding Agency: National Medicinal Plant Board) [110/CFRHRD/NMPB/10/ 2006-2009]

Findings: About 30,000 seedlings of various species of medicinal importance like *Andrographis paniculata*, *Asparagus racemosus*, *Rauvolfia serpentina*, *R. tetraphylla*, *Aegle marmelos*, *Moringa oleifera*, *Withania somnifera* etc. were raised in the nursery and about 800 grafted Aonla seedlings, and 1000 *Aegle marmelos* seedlings were procured and were used for raising demonstration cum research plot, agroforestry plantation and distribution to farmers.

Raised planting materials of medicinal species for establishment of agroforestry plantations in the farmers fields. *Emblica officinalis* and *Moringa oleifera* based agroforestry plantations were established with the crop like tomato and potato.

Andrographis paniculata, *Asparagus racemosus*, *Rauvolfia serpentina*, *R. tetraphylla*, *Withania somnifera* were established and maintained under the shade of *Aegle marmelos*, *Moringa oleifera* as well as in the open to study the effect of shade on growth of medicinal plants.

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
External Projects	1	1	-
Total	1	1	2



EDUCATION AND TRAINING

The centre organized and conducted 10 training programmes during 2006-2007. 409 trainees participated in various training programmes.

LINKAGES AND COLLABORATION

Linkages were developed with State Forest Department, Forest Development Corporation and Agriculture Research Station, Chhindwara for conducting research/training, and Forest Survey of India, Nagpur for analysis of forest floor and soil samples.

PUBLICATIONS

Bulletins

MNH-CH-ESJKE, OA'KKFYUH HKKOR} 2006- nhed , oal Qn xHMkj dk fu; &.k 4101-ICFRE-BL/CFRHRD-BL-2006.

CONFERENCES/MEETINGS/WORKSHOPS/SEMINARS/SYPOSIA/EXHIBITIONS

1. Shri Suneesh Buxy, Deputy Conservator of Forests and Shri. H.S. Awasthi, Forester participated in the training programme entitled "Laghu Van Upaj / Vanaspati Adharit Paudhon ke Prasanskaran Eevam Vipanan" (Processing and Marketing of Minor Forest Produces) held at Barkheda, Pathani Bhopal on 13th April 2006.
2. Shri Suneesh Buxy, Dy. Conservator of Forests participated in "New Dimensions in Ecotourism in Madhya Pradesh" on 11th July 2006 at Bhopal (M.P.).
3. Shri Suneesh Buxy, Dy. Conservator of Forests attended the 14th Rashtriya Bal Vigyan Congress workshop on "Jaiv Vividhta Prakruti Bachaye, Bhavishya Sanvare" on 2nd September 2006 organized by National Public School Chhindwara.
4. Shri Suneesh Buxy, Dy. Conservator of Forests participated in the inaugural session of wildlife protection week at Conservator of Forest office and Samvad Bhavan, Chhindwara on 1st October 2006. Delivered lecture on endangered species of plants and animals.
5. Shri Suneesh Buxy, Dy. Conservator of Forests attended workshop on 'National strategies of conservation wildlife and medicinal plants' at Khirsadoh Parasia organized by DFO West on 10th October 2006. Delivered lecture on "Importance of medicinal plants and role of NMPB."
6. Dr. A. Vijayaraghavan, Scientist-'B' and Dr. Vishakha Kumbhare, Scientist- 'B' attended the National Conference on "Natural Products and Biodiversity: Chemistry and Utilization" held on 2nd and 3rd November 2006 at FRI, Dehradun and presented "Effect of plant density on the yield of keokand (*Costus speciosus*) in a sandy loam soil of Chhindwara district of Madhya Pradesh" and "Bone fracture healing plants used by the tribals in India" respectively in poster presentation session.
7. Shri Suneesh Buxy, Deputy Conservator of Forest, CFRHRD, Chhindwara attended two day training workshop for IFS officers on "Operationalising the role of forests in ecological and economic security of the country-Current status and futurstrategies" on 16th and 17th November 2006 at Academy of Administration, Bhopal.
8. Shri Suneesh Buxy, Deputy Conservator of Forest participated in the workshop on "Biodiversity Conservation and Forest Law and their implications" organized by SFD and WWF on 29th and 30th November 2006.
9. Shri Suneesh Buxy, Deputy Conservator of Forest attended the seminar on "Importance of chemistry on medicinal plants" at P.G. College Chhindwara on 3rd December 2006.
10. Shri Suneesh Buxy, Deputy Conservator of Forest delivered a lecture on "Uses of medicinal plants" at P.G. College, Chhindwara on 4th December 2006.



11. Shri Suneesh Buxy, Deputy Conservator of Forest attended the workshop on "Lok Vaniki and Samajik Vaniki" at Khutama, Sillewani on 11th December 2006.
12. Dr. A. Vijayraghwan, Scientist- 'B' attended National Symposium on "Agroforestry for Livelihood Security Environmental Protection and Bio-fuel Production" held at "National Research Centre for Agroforestry" (NRCAF), Jhansi, U.P. State from 16th to 18th December 2006 and spoke on "Cultivation of Ganwarpatha (*Aloe vera*) as an intercrop in plantations and in Sal Forest".
13. Dr. D.L. Nandeshwar, Scientist-'C', Dr. A. Vijayaraghavan, Scientist B and Shri N.D. Khobragade, Research Officer attended the national conference entitled "Increasing Forest Productivity: Genetic and Breeding Option" at TFRI, Jabalpur from 21st to 23rd February 2007.
14. Shri Suneesh Buxy, Deputy Conservator of Forest CFRHRD, Chhindwara attended the "Rashtriya Shodh Sammelan- Janjatiya Vikas ke naveen aayam" on 26th and 27th February 2007 at Shaskiya Swashasi Snatakottar Mahavidyalaya, Chhindwara.
15. Shri Suneesh Buxy, Deputy Conservator of Forests attended the "Vindhya Herbal Utpad Shrinkhala - Introductory Meet" on 27th February 2007 at Hotel Abhimanyu, Chhindwara.

AWARDS

Shri R.S. Sahoo, Scientist-'B' was awarded first prize in Sixth Foundation Training for Scientists and Technologists (sponsored by Department of Science and Technology, Govt. of India) conducted by Indian Institute of Public Administration, New Delhi from 20th November 2006 to 25th January 2007.

DISTINGUISHED VISITORS

1. Shri R.G. Soni, Conservator of Forests, Chhindwara and Dr. Khare visited the centre on 2nd May 2006.
2. Shri P.K. Chowdhry, Chief Conservator of Forests, Bhopal and Shri A. Argal, Conservator of Forests, M.P. Corporation Bhopal and Dr. S.S. Bisen, Retd. Scientist visited the centre on 16th June 2006.
3. Shri R.G. Soni, Conservator of Forest Chhindwara visited the centre on 5th September 2006.
4. Shri Dinesh Rai, IAS, Vice-President Delhi Vikas Pradhikaran, New Delhi visited the centre on 15th October 2006.
5. Shri R.G. Soni, Conservator of Forest and Shri S. Shilawat, Conservator of Forest (Working Plan) Chhindwara visited the centre on 28th November 2006.
6. Shri R.G. Soni, Conservator of Forests, Chhindwara visited the centre on 19th February 2007.