

# Centre for Forestry Research and Human Resource Development Chhindwara

Centre for Forestry Research and Human Resource Development (CFRHRD), Chhindwara came in to existence on 30<sup>th</sup> March 1995 and declared as Satellite Centre of Tropical Forest Research Institute, Jabalpur under the ICFRE, Dehradun on 3<sup>rd</sup> January 1996. 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 to this, the centre has also been assigned to develop the human resource in forestry sector by imparting vocational training leading to poverty alleviation through self-employment.

## PROJECTS COMPLETED DURING THE YEAR 2005-2006

**Project 1: Studies on the feasibility of cultivation of medicinal and aromatic plants as intercrop in natural forests and plantations and their phytochemical investigations [049/CFRHRD-(2001-2002)/1(2)]**

**Findings:** A herbal garden comprising of 90 medicinal and aromatic plants species and with several endangered/threatened species has been established in the centre. Ganwarpatha (*Aloe vera*) was planted as intercrop with Amla (*Emblica officinalis*) while Chironji (*Buchnanania lanzan*) was planted natural forests of sal. Satawar (*Asparagus racemosus*) was planted as intercrop with Amla (*Emblica officinalis*). The results revealed that root production from single plant of Satawar was maximum in the natural forest as compared to the yield from plantations. An income of about Rs.13,000 (thirteen thousand rupees) has been generated from the sale of medicinal planting material.

**Project 2: Studies on the insect pests of *Emblica officinalis* and *Gmelina arborea* in agroforestry and plantation ecosystems [050/CFRHRD-(2001-2002)/2(3)]**

**Findings:** Seasonal history of shoot gall forming insect *Betousa stylophora* was studied. The plants of *E. officinalis* and *G. arborea* were infested by 14 pests. Their period of prevalence, nature of damage, status and incidence of major insect pests in different localities were recorded. The mean weekly incidence / population of shoot gall forming insect *Betousa stylophora* on *E. officinalis* and *Tingis beelsoni* on *G. arborea* was correlated with weather parameters. Field trials were laid out against shoot gall forming insect *B. stylophora* in 3 years old plantation of *E. officinalis*. It was observed that soil application of phorate followed by carbofuran @ 10 gm per plant was found to be most effective against this pest. Five varieties of *E. officinalis* were screened against *B. stylophora*. Different age group plantations of *G. arborea* in west Maharashtra were evaluated for monitoring the status of pests. Top dying in Hi Tech plantations of *G. arborea* was observed due to the role of insect disease complex i.e. lace bug *Tingis beelsoni* and fungus *Hendersonula toruloidea*, effective control measures were suggested at the interval of 15 days.

**Project 3: Standardization of nursery techniques and propagation methods of *Buchnanania lanzan* spreng. (Achar or Chironji) [051/CFRHRD-(2001-2002)/3(4)]**

**Findings:** Studies on effect of different seed treatments on germination and seedling vigor of *Buchnanania lanzan* has been conducted and the seed of *Buchnanania lanzan* treated mechanically by hammer gave better germination results



other treatments. The treatment registered 33% increase in germination percentage than control. Studies on morphological characters and seed germination using seeds collected from Allapalli (MS), Gondia (MS) and Delakhari, Chhindwara (MP) was carried out. Seed collected from Delakhari (Chhindwara) resulted in higher germination percentage as compared to seeds collected from other sources. Studies on germination as influenced by different months of the year, have been conducted by storing the seeds of *Buchnanian lanzan* at room temperature. The results of the studies showed that seed sown in the month of August gave comparatively better performance than the seeds sown in the any other month of the year. The observation on performance of various planting stocks of *Buchnanian lanzan* was recorded and six year old plants of *Buchnanian lanzan* was found to flower. Generally *Buchnanian lanzan* flowered after eight years onward. Early flowering observed in the present plantation may be due to the high inputs provided and timely cultural operation carried out.

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

### Project 1: Field trial of agroforestry model in farmers field with medicinal trees and herbs in Satpura plateau of Madhya Pradesh [110/CFRHRD/2006-3(NMPB)(10)]

**Status:** Seeds of Satawar (*Asparagus racemosus*), Sarpagandha (*Rauvolfia serpentina*) were sown in germination bed for the production of seedlings for distribution to the farmers. Seeds of Bael (*Aegle marmelos*) were sown in polythene bags.

### Abstract: No. of Projects

	No. of projects completed in 2005-2006	No. of ongoing projects in 2005-2006	No. of projects initiated in 2005-2006
Plan Projects	3	-	-
External Projects	-	1	-
Total	3	1	-

## EDUCATION AND TRAINING

Centre organized and conducted 13 training programmes for 462 trainees/stakeholders during the financial year 2005-2006.

## LINKAGES AND COLLABORATION

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



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

1. A. Vijayaraghavan attended international conference on multipurpose tree species in tropics at Jodhpur, organized by ICFRE and UFRO, presented a paper on “*Ex-situ* conservation of Ganwarpatha (*Aloe vera*) in Madhya Pradesh”.
2. A. Vijayaraghavan attended and presented one paper in National Symposium on “Recent advances in Science a prospective” at Dolphin PG Institute of Biomedical and Natural Sciences, Dehradun from 3<sup>rd</sup> to 5<sup>th</sup> June 2005.
3. P.B. Meshram and R.S. Sahoo attended Regional Workshop on “Management of Extension Activities in Forestry Sector” held at TFRI, Jabalpur on 14<sup>th</sup> and 15<sup>th</sup> September 2005.
4. P.B. Meshram and D. L. Nandeshwar attended and presented paper in the National workshop on “Biodiversity and Wildlife Conservation” held at Sevalal Mahila Mahavidyalaya, Nagpur on 2<sup>nd</sup> October 2005.
5. Suneesh Buxy participated in the National workshop on “Soil Waste Management and Urban Governance” held at Bhopal on 28<sup>th</sup> and 29<sup>th</sup> September 2005.
6. A. Vijayaraghavan participated in the National seminar on Non-conventional energy resources of biological origin held at PSGR Krishnammal College for Women, Coimbatore on 7<sup>th</sup> December 2005 and presented two research papers, Silviculture of important tree borne oil seeds Pungam L. and Role of tree borne oil seeds in climate amelioration.
7. P.B. Meshram and D.L. Nandeshwar participated in the National Seminar on “Recent Advances in Forestry Science” held at Guru Ghasidas University, Bilaspur (Chhattisgarh) on 30<sup>th</sup> and 31<sup>st</sup> January 2006 and presented research papers entitled 'Recent advances in forest protection against major insect pests and effect of different growth promoters on germination and initial seedling growth of *Buchnanania lanzan*', respectively.
8. Suneesh Buxy participated in the forest fire fighting workshop held at Ecocentre Dept., Poama and delivered a lecture on “Forest Fire Fighting” on 30<sup>th</sup> and 31<sup>st</sup> January 2006.
9. P.B. Meshram participated in the National Conference on “Tree Biotechnology: Indian Scenario” held at Tropical Forest Research Institute, Jabalpur on 9<sup>th</sup> and 10<sup>th</sup> February 2006.
10. A. Vijayaraghavan participated and presented a research paper entitled 'Effect of halogenation in seed germination and seedling vigour of stored *Albizia lebbeck* seeds' in the XII National Seed Seminar held at Acharya N.G. Ranga Agricultural University, Rajendranagar, Hyderabad from 24<sup>th</sup> to 26<sup>th</sup> February 2006.

## AWARDS

The research paper entitled “Effect of halogenation in seed germination and seedling vigour of stored *Albizia lebbeck* seeds” of Shri A. Vijayaraghavan, Scientist-B has been judged as the best research paper among the papers published in Seed Research Journal by the Indian Society of Seed Technology (IARI), New Delhi. The award was



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given in the XII National Seed Seminar held at Acharya N.G. Ranga Agricultural University, Rajendranagar, Hyderabad from 24<sup>th</sup> to 26<sup>th</sup> February 2006.

## **DISTINGUISHED VISITORS**

1. Shri Arun Pandey, IAS, Collector, Chhindwara had visited the centre on 9<sup>th</sup> July 2005.
2. Dr. A.K. Mandal, Director, TFRI, Jabalpur visited the centre on 12<sup>th</sup> and 13<sup>th</sup> July 2005.
3. Shri R.P. Singh, IPS, Deputy Inspector General of Police, Chhindwara visited the centre on 26<sup>th</sup> October 2005.
4. Prof. M.K. Rai, Head, Dept. of Biotechnology, Sant Gadge Baba University, Amravati (M.S.) visited the centre on 9<sup>th</sup> March 2006.