

## CHAPTER X

### **CENTRE FOR FORESTRY RESEARCH & HUMAN RESOURCE DEVELOPMENT CHHINDWARA**

Centre for Forestry Research & Human Resource Development, Chhindwara, came in to existence on 30<sup>th</sup> March 1995. It has been declared as Satellite Centre of Tropical forest Research Institute, Jabalpur under the Indian Council of Forestry Research & Education, Dehra Dun. 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 2001-2002**

Nil

#### **PROJECTS CONTINUED DURING THE YEAR 2001-2002**

**Project 1: Structure and function of the dry deciduous forest as per degradation status with special emphasis on forest management and regeneration [ID No. 18].** *Principal Investigator - Dr. P.K. Pande.*

**Status :** Field and analysis work has been completed, the final report is being compiled.

**Project 2 : Standardization of cultivation techniques of medicinal and aromatic plants [049/CFRHRD-(2001-2002)/1(2)/2001-2006].**

*Principal Investigator - Dr. A.K. Pandey.*

**Status:** A herbal garden with 90 medicinal and aromatic plant species cum nursery has been established. Multiplication of planting material is being done. Experimental sites were selected at Chhindwara to plant various medicinal and plant species. Observations has recorded that *Andrographis paniculata* (Kalmegh), *Rauwolfia serpentina* (Sarpagandha) and *Curcuma angustifolia* (Tikhur) can be cultivated as an intercrop with *Bixa orellana*, *Gmelina arborea* and *Emblica officinalis*. Essential oils were extracted from palmarosa, lemon



Ashwagandha

grass and *Thuja orientalis* and analyzed for their chemical characterization. Cultivation packages for ashwagandha, muskdana, kalmegh, kalihari, satawar, sarpagandha and lemon grass were developed. Bulletin on the cultivation on the safed musli (*Chlorophytum borivillianum*) has been brought out.

**Project 3: Studies on the insect pests of *Emblia officinalis* and *Gmelina arborea* [050/CFRHRD-(2001-2002)/2(3)/2001-2006].** Principal Investigator- Dr. P.B. Meshram.

**Status:** The impact of pest outbreak was evaluated on the mortality of different age group plantations of *Gmelina arborea* and their relationship with soil nutrients height/girth classes. Additional scenerios included possible measurer to counter the present problem. Ten National provenances of *G. arborea* were screened against key pests. Top dying problem in irrigated plantation of *G. arborea* was noticed due to insect diseases. Incidence of sap sucker *Tingis beesoni* followed by fungus *Hendersonula* sp. was controlled by spraying Monocrotophos 36 E.C. @ 0.05%+0.02% carbendasion 50 W.P. Seasonal history of gall forming insect. *Betousa stylophora* was studied. Seven varieties of *E. stylophora*. Chakaiya followed by kanchan were found less susceptible to pest attack than other varieties (N6, N7, Francis, Banarsi & wild).

**Project 4: Standardization of nursery techniques and propagation methods of *Buchanania lanzan* Spreng (Achar or Chironji) [051/CFRHRD-(2001-2002)/ 3(4)/ 2001-2004].** Principal Investigator - Mr. Jagdish Singh.

**Status:** Successfully carried out the rooting in root cuttings of two years old stock of *Buchanania lanzan*, under non-mist propagation chamber by treating with IAA. To standardize the nursery techniques the experiments have been laid out in the field to investigate the effect of sowing, mulching, orientation, and depth of planting on the germination of seeds and performance of the seedlings. Established *Buchanania lanzan* plantation in an area of 0.25 ha. to standardize and investigate the performance of seedlings raised through different methods viz. Root cutting raised seedlings, seed raised seedlings, one year old stump and two years old stumps etc.

## NEW PROJECTS INITIATED DURING THE YEAR 2001-2002

NIL

### EXTERNALLY AIDED PROJECT

**Project 1: Integrated development of neem in various agro-ecological regions of India.** (A component assign to CFRHRD, Chhindwara from TFRI, Jabalpur)

**Status :** 320 plus trees have been selected from three agro-climatic zones viz. Satpura, Narmada and Vainganga agro-climatic zones. Seeds were procured and raised 50,000 seedlings. Phenological studies were completed for three agro-climatic zones. Raised 2000 nos. Neem plants through vegetative propagation, branch cutting after treating with hormones from selected plus trees of different agro-ecological zone. Provenance trial consisting of eight provenances has been established in an area of 2.0 ha. at Poama, CFRHRD (M.P.) and in the area of 1.5 ha. at Hetti (M.S.) respectively. Extracted fatty oil from the seeds of different sources. Seeds were sent to NBPGR New Delhi for allotting accession no. and for cryo-preservation.

#### Education and Training

Sl.	Subject	Target Group
1.	Cultivation of Medicinal & Aromatic Plants	104 trainees - VFC/EDC's members and FD officials of M under GEF.
2.	Cultivation of Medicinal Plants, Pest Management, Biofertilizers, Soil Conservation, Agro-forestry and Computer Application	300 trainees - Farmers of MP, Maharashtra VFC/EDC's members, and Orissa, SFD officials and Staff of CFHRD, Chhindwara

#### Publications

Pandey, A.K. and Patra, A.K. (2001). Proceedings of the National Workshop on Conservation and Commercial Cultivation of Medicinal and Aromatic Plants, December 26-27, 2001. CFRHRD, Chhindwara.

#### Bulletins Published

Pandey, A.K., Patra and Shukla, P.K. (2002). Cultivation of Medicinal Plants: Safed Musli (*Chlorophytum borivillianum*), CFRHRD Bull. NO.8.

#### Research Papers Published

1. Chowdhury A.R. and Pandey, A.K. (2001). Aromatic Plants in Health Care, Proceedings of the National Workshop on Conservation and Commercial Cultivation of Medicinal and Aromatic Plants, CFRHRD, Chhindwara.



Training programme on Cultivation of Medicinal and Aromatic Plants

2. Jagdish Singh *et.al* (2001). Effect of growth hormones on the rooting of root cuttings of *Buchanania lanzan* Spreng. Proceedings of the National Workshop on Conservation and Commercial Cultivation of Medicinal and Aromatic Plants, December 26-27, 2001. CFRHRD, Chhindwara.
3. Meshram *et.al* (2001). Impact of Pest problem in *Gmelina arborea* Lin. plantations in West Maharashtra, *Indian Forester*, 127(12): 1377-76.
4. Meshram P.B. (2001). Application of some systemic insecticides against the weevil *Mecobaris terminalae* (Coleoptera: Curculionidae), a seed borne of *Terminalia bellirica*. *J. Tropical Forest Science*, 13(3): 548-550.
5. Pandey, A.K. and Patra, A.K. (2001). Influence of propagation methods on root quality and productivity of Ashwagandha (*Withania somnifera* Dunal), Proceedings of National Research Seminar on Herbal Conservation, Cultivation, Marketing and Utilization with Special Emphasis on Chattisgarh. "The Herbal State", December 13-14, 2001.
6. Pandey, A.K. and Shukla, P.K. (2002). Effect of planting dates and spacing on yield of *Abelmoschus moschatus* Medic. Under tropical climatic conditions, *FAFAI Journal*, 4(1):39-41

### Conferences, Meetings, Workshops, Symposia and Exhibitions

- ◆ Organized liaison meeting under the Chairmanship of DG, ICFRE with PCCF and other officers of Maharashtra Forest Department in the month of September 2001 at CP Club Nagpur.
- ◆ A National Workshop on "Conservation and Commercial Cultivation of Medicinal and Aromatic Plants" was organized during 26<sup>th</sup> - 27<sup>th</sup> December' 2001, under FREEP. 93 participants from various research institutions/ universities / NGO's / SFD's / farmers, youth, plant growers etc. attended the workshop.