



# MANDATE FOR THE SILVICULTURE DIVISION

State Forest Research and Training Institute
Raipur Chhattisgarh

Presented by ALOK GUPTA

(Junior Research Fellow)

## **Silviculture Division**

### **Mandates:**-

- 1. Establish nurseries to produce Quality Planting Material(QPM)
- 2. Nursery and plantation techniques on RET and lesser known species.
- 3. Monitor the growth and health of plantations and assess the impact of silvicultural interventions.
- 4. To establish, manage, and enhance productivity in SPA,SSO,CSO,TSO for quality seed production.
- 5. Plan, implement, and monitor tree plantation activities to restore degraded lands and enhance forest cover.
- 6. To conduct research, develop techniques, and provide expertise in wood properties and its identification.
- 7. Create and improve gardens to plant preservation, support biodiversity.
- 8. Support natural and artificial regeneration of forest areas to ensure biodiversity and ecosystem health.

# I. Establish nurseries to produce Quality Planting Material(QPM) Review of Related Research done Pro-

| Review of Related Research done   | <b>Prominent Scientist</b>    |                            |
|---|-------------------------------|----------------------------|
|   |                               | for SFRTI                  |
| • Nursery techniques have been standardized for the large scale production of   |                               | Standardization of         |
|   | Savio, Scientist – C          | containerized nursery      |
| viz., Azadirachta indica, Acacia nilotica, Acacia leucophloea, Acacia auriculiformis, Eucalyptus tereticornis, Tectona grandis, Tamarindus indica | Contact no 2484222            |                            |
|   | dominic@icfre.org             | practices,                 |
| • Standardization of containerized nursery practices for selected forest tree   |                               | Nursery techniques         |
| species.(2004) (IFGTB)  |                               | Development of Elite       |
|   |                               | planting Material          |
|   |                               | (Priority Species :-       |
| Development of ente planting material and model plantation ONGOING  | Scientist - G                 | Teak, Khamar, <i>Melia</i> |
|   | buvanesc@icfre.org<br>2484198 | dubia(Maha                 |
|   |                               | ``                         |
| Nursery technologies of mass multiplication of superior seedlings – Maida ,   |                               | neem),Harra,Behra,Ba       |
| Balbaring, Sarpgandha, Chironjere Arjun, Aonla, Bael in Chhattisgarh. 2008  |                               | mboo Karra, Malkagni,      |
| (TFRI)  |                               | Baibiding and Lesser       |
| •   | Dr. Pratiksha Chaturvedi      | Known Species etc.)        |
| (TFRI)  | 9826145284                    |                            |

## I. Establish nurseries to produce Quality Planting Material(QPM)

| Review of Related Research done   | Prominent<br>Scientist   | Priority Research Topic for SFRTI   |
|---|--|---|
| established plantations and development of nursery techniques to increase green cover under Green India Mission (GIM) in western Madhya Pradesh. (2020) (SFRI jabalpur) | Chaturvedi<br>chaturvedi.pratiksha@y<br>ahoo.com<br>9826145284 | To develop suitable nursery techniques of selected species.  To prepare field manual of identified species.  To study the growth performance of established species.  To disseminate developed techniques to the field staff and beneficiaries. |
| 20 ( Cropinono or pueriuge pruedrees on omeniu urboreu rions) ( rinumer   | Dr. Nanita Berry Head & Scientist – E berryn@icfre.org         |   |
| Capacity building on seed and nursery technology and Plantation techniques for prioritized species of Chhattisgarh state. 2019 (TFRI)                                   |  | Training on Seed and Nursery Technology   |

## I. Establish nurseries to produce Quality Planting Material(QPM)

| Review of Related Research done  | Prominent Scientist   | Priority Research Topic for SFRTI                  |
|--|---|--|
| Quanty team production. Supraining on croming 2017 25(111)   | ~ · · -   | Study on Quality teak production                   |
| Hi-Tech Nursery for Important Species. 2019 (RFRI jorhat)  | Shri Satyam Bordoloi,<br>Scientist-D<br>bordolois@icfre.org | Hi-Tech Nursery Development                        |
| Production of Organic fertilizers/Organic pesticides and their application in forest nurseries. 2018-2022 (TFRI) | againagilz@iafra ara  | Standardization of Fertilizer and Potting Mixtures |

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chaturvedi.pratiksha@yahoo.c

application for imp Species

Organic manure from weed

to CG

compost application in respect

Production of Organic fertilizers/Organic pesticides and their application in forest nurseries. 2018-2022 (TFRI)

Use of doses of fertilizers and potting mixtures was experimented for different forestry species.

Study the best size of root trainers for raising seedlings of different

Development of nanocomposite organic manure from weed compost

forest species.(SFRI jabalpur)

2019(KFRI)

## 2. Nursery and plantation techniques on RET and lesser known species.

| <b>Prominent Scientist</b>                           | Priority Research Topic for SFRTI  |
|--|--|
| Dr. Nasir Md. Scienitst-D, DR. Pramod Kumar, Sci-C   | Conservation of RET and Lesser known Species in respect to C.G. Species.  Episanthes tetraphylla                                   |
| Dr. Pankaj Singh,<br>Scientist-C<br>040-66309503     | Cosmostigma racemosum Dracaena terniflora Alocasia decipiens   |
| Dr.(Ms.) Nibedita Dutta Barua, CTO baruahn@icfre.org | Gymnema inodorum  (Dr. M.L. Nayak et al. discovered these Rare plant Species in CG in 2023)  |
|  | Dr. Nasir Md. Scienitst-D, DR. Pramod Kumar, Sci-C  Dr. Pankaj Singh, Scientist-C 040-66309503  Dr.(Ms.) Nibedita Dutta Barua, CTO |

3. Monitor the growth and health of plantations and assess the impact of silvicultural interventions.

| •   |  |  |
|---|--|--|
| Review of Related Research done   | Prominent Scientist  | Priority Research Topic for SFRTI  |
| Sequestration In Plantations Of Important Tree Species (IFGTB) ONGOING  | huvanesc@icfre.org   | Assesment of Silviculture Interventions in Plantation area of CG   |
| Productivity studies and modeling growth & yield in Teak plantations in Gujarat State   | P.H. Chawahan  | Productivity studies and modeling growth & yield in Teak   |
| म.प्र. राज्य वन विकास अभिकरण द्वारा विभिन्न वन विकास अभिकरणों में वित्तीय वर्ष 2015-2016 (िद्वतीय मूल्यांकन) एवं 2016-17 (प्रथम मूल्यांकन) के वर्षा ऋतु में हुए वृक्षारोपण कार्यों का अनुश्रवण मूल्यांकन एवं प्रोजेक्ट इम्पेक्ट असिसमेंट (पी.आई.ए.) के संबंध। (2022)(SFRI jabalpur) | Dr. Pratiksha Chaturvedi<br>chaturvedi.pratiksha@ya<br>hoo.com<br>9826145284 | <ul> <li>Monitoring and Evaluation of<br/>FDA's Plantation</li> <li>Project Impact Assessment</li> </ul> |
| Impact of Silviculture systems on the natural forests of Chhattisgarh with special reference to Sal and Bamboo 2019-20(TFRI)  | Dr. Nanita Berry, Sci-<br>E, Dr. M. Rajkumar, Sci-<br>C                      |  |
|   |  |  |

4. To establish, manage, and enhance productivity in SPA,SSO,CSO,TSO for quality seed production.

| Review of Related Research done                                      | Prominent Scientist    | Priority Research Topic for SFRTI |
|--|------------------------|-----------------------------------|
| Documentation and assessment of the status of Permanent Preservation | Dr. Fatima Shirin,     | Documentation and assessment      |
| Plots, Seedling Seed Orchards (SSO) and Clonal Seed Orchards (CSO)   | Scientist F, Pramod    | of Preservation                   |
| in Chhattisgarh 2019 (TFRI)  | Kumar, Sci-C           | plots,SPA,TSO,SSO,CSO etc.        |
| Study based on growth of sample plots of Teak, Sal and other species | Smt. Richa Seth        |                                   |
| laid out in different forest areas of Madhya Pradesh. 2018-24 (SFRI) | richaseth1972@rediff.c |                                   |
|  | om                     |                                   |
|  | 9893338680             |                                   |
|  |                        |                                   |
| E Dian implement and monitor two blantation activities to            |                        | and and anhance forces            |

# 5. Plan, implement, and monitor tree plantation activities to restore degraded lands and enhance forest cover

| Review of Related Research done                                     | Prominent Scientist | Priority Research Topic for SFRTI                            |
|---|---------------------|--|
| Species trial of different forestry species in degraded soil.(TFRI) | S.D.Sonkar          | Species trial of different forestry species in degraded soil |

#### **TFRI Publication**

- ➤ Teak Mortality soil and site characteristics of Mundi Range, South Khandwa Forest division, I.D.F. Tech. Report No.1, 1990.
- ➤ Afforestation of Important Stress Sites, 1996.
- ➤ Planting Methods of Multipurpose Tree Species, 1997

| Improvised forest nursery | 84 rs |
|---------------------------|-------|
| equipments                |       |
| Handbook on nursery and   | 88 rs |
| plantation technology     |       |
| Macro-propagation of teak | 77 rs |
| Application of rhizobium  | 93 rs |
| in forest tree species    |       |
| Plus trees selection      | 76 rs |
| Seed orchards             | 46 rs |

### Quality timber products of teak from sustainable forest management



Dr. K. M. Bhat, Dr. K.K.N. Nair, Dr. K Vishnu Bhat, Dr. EM Muralidharan, Dr. J.K Sharma

Size: Hard bound; 18 x 24 cm

Pages: 668

Year: 2003

Price: Rs.1000/ \$100

ISBN: ISBN 81-8-85041-63-

**Publisher: KFRI** 

Status: Available

### Compost for Container Seedlings Production in Forest Nurseries



Dr. M. Balasundaran, Dr. J.K Sharma

Size: Softbound; 18 x 24 cm

Pages: 54

Year: 1999

Price: Rs.100/ \$10

ISBN: ISBN 81-85041-20-2

Publisher: KFRI

Status: Available

#### SEEDLING SEED ORCHARDS



