

Soil Science



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Mandate of the Soil Science division of SFRTI, Raipur

- Conduct studies on soil fertility, nutrient management and fertilization techniques to optimize nutrient use in forest.
- Study on soil profile and soil modeling display with basic features of soil at various regions of Chhattisgarh and India.
- Investigate soil health, nutrient cycling, soil biology, the impact of soil management practices and documentation of traditional knowledge for natural resource management.
- Studied on the impact of various soil, water conservation measures on the establishment and growth of natural & artificial regeneration.
- Soil vegetation interrelationship for health improvement stability and productivity of ecosystem, its Implement strategies for improving soil health use recycling of wastes management.

- Up gradation of soil science lab to addition of water analysis lab and establish microbiology lab associated with tissue culture lab with advance instruments with modern technology. Promote the activity of biofertilizer, mushroom and mycorrhizal production.
- Development of biofertilizer and standardization of their application in relation to productivity, mass production and application of suitable host specific biofertilizers in forestry species.
- Provide education and training programs for farmers, land managers, and the public about soil science, conservation practices, and sustainable land use.
- Collaborate with government agencies, NGOs, and international organizations to develop soil policies and regulations.

Review/ reference/ previous work done at different institute

| Institute Name | Work | Prominent Scientists | SFRTI, Raipur |
|----------------|---|--------------------------|--|
| ICFRE, Ranchi | Preparation of forest soil Health Cards under different forest vegetation in all the Forest division of India | | <ul style="list-style-type: none"> Develop the method of soil health status / soil profiling of different region of Chhattisgarh and India. |
| SFRI, Jabalpur | चलित मृदा परीक्षण प्रयोगशाला के माध्यम से मध्य प्रदेश के अनुसंधान एवं विस्तार केंद्र में मृदा परीक्षण कर मृदा में उपस्थित पोषक तत्वों की जानकारी प्रदान करना। | Dr. Pratiksha Chaturvedi | <ul style="list-style-type: none"> Prepare methodology for soil moisture conservation techniques. |
| | Training on concept of soil moisture conservation and its importance in forestry. | | |
| ICFRE, Ranchi | Development of low cost technique of enriched vermicompost for commercial production. | Dr. M.V. Durai | <ul style="list-style-type: none"> Adopt different technology of composting practices. |

Review/ reference/ previous work done at different institute

| Institute Name | Work | Prominent Scientists | SFRTI, Raipur |
|-----------------------------|--|----------------------|--|
| ICFRE, Ranchi | Development of biofertilizer and standardization of their application in relation to productivity of forest tree species under degraded lateritic soil condition | Dr. S. Nath | <ul style="list-style-type: none">• Isolation , multiplication, production and distribution of biofertilizer , mycorrhizal product .• Standardization of tree specific biofertilizer (Nitrogen fixation, phosphorus and potassium solubilizer and mobilizer microorganisms).• Documentation of mushroom , microfungi, lichens, fern and lycopeptide present in forest area in Chhattisgah. |
| | Development of biofertilizer in relation to productivity of important tree species. | | |
| IFGTB, Coimbatore | Identification, mass production and application of suitable host specific biofertilizers in forestry species. | | |
| | Isolation, identification and mass production of Mycorrhizal fungi (ecto and endo)’. | | |
| JNTBGRI, Thiruvananthapuram | Survey and document mushrooms, microfungi, lichens, ferns and lycophytes in Kerala’s Western Ghats. | | |

Review/ reference/ previous work done at different institute

| Institute Name | Work | Prominent Scientists | SFRTI, Raipur |
|----------------|--|----------------------|--|
| SFRI, Jabalpur | Use of excavated soil for enhancing natural regeneration and plantation activities of Greenko Energy pvt. Ltd. Rampura forest range neemuch district of M.P. | Dr. S.K. Tiwari | <ul style="list-style-type: none">• Collaboration of SFRTI to different relevant govt. institute, training center ,agencies, private farm etc. |

Some Training Programme

- Institute **prepare yearly training calendar** and published. (ICFRE, Ranchi)
- Training on **analysis of soil** sample. (SFRI, Jabalpur and ICFRE, Ranchi).
- Training and concept of **soil moisture conservation** and its importance in forestry. (SFRI, Jabalpur)
- Training for **Isolation, identification, multiplication and application of biofertilizers** (Institute of Forest Genetics and Tree Breeding **IFGTB**, Coimbatore).
- Training on **mushroom production** (Institute of Forest Genetics and Tree Breeding **IFGTB**, Coimbatore).
- **Vermi Compost** Production technology & its Application (ICFRE, Ranchi).
- Training be Require to aware **indigenous technology of soil health recovery practices**.