



Report
on
Monthly Seminar
conducted
by
ICFRE-RFRI
Jorhat (Assam)



INSTITUTE LEVEL

Venue	ICFRE - Rain Forest Research Institute
Theme	Biodiversity Conservation
Presentation Team	Dr. Prosanta Hazarika , Chief Technical Officer, Forest Ecology and Climate Change Division of the Institute
Broad structure	Seminar for discussion/ brain storming on current research/ future strategies.
Periodicity	Once in a month
Duration	Half day
Expected outcomes of the seminar	i) Identification of research needs ii) Formulation of future strategies/ road map iii) Networking research options & opportunities (Attached, Page number 4)
Coordinator	Director, ICFRE-RFRI, Jorhat
Proceedings	(Attached, Page number 2)

Proceedings of the Monthly Seminar

Date: 10th July 2025 & Time 3.30 pm onward

Venue: Brahmaputra Hall, ICFRE-RFRI, Jorhat

Theme: Biodiversity Conservation

ICFRE-Rain Forest Research Institute, Jorhat (Assam) conducted the monthly seminar on 10th July 2025 at Brahmaputra Hall of ICFRE-RFRI, Jorhat campus. The seminar was attended in physical and virtual mode by the scientists, officers, technical, subordinate staffs, researchers and students along with the members of its centers i.e. BRC, Mizoram and CFLE, Tripura. The Coordinator of the seminar Ms. Tara Kumari, Scientist, conducted the program. The program was chaired by Dr. Nitin Kulkarni, Director, ICFRE-RFRI.

Dr. Prosanta Hazarika, Chief Technical Officer, Forest Ecology and Climate Change Division, ICFRE-RFRI, Jorhat presented on the topic '**Importance of Plant Growth Promoting Rhizobacteria (PGPRs) in Restoration Technology**' in the monthly seminar of ICFRE-RFRI, Jorhat, on 10th July 2025 at Brahmaputra Hall, ICFRE-RFRI, Jorhat campus. Dr. Hazarika explained on different type of PGPRs and mode of action PGPRs in general and benefits of incorporation of PGPRs in restoration technology in particular along with important research gaps need to be worked out by the scientific community at present time. He also described the history of conceptual development of PGPRs technology. During the presentation, Dr. Prosanta Hazarika specifically highlighted the importance of applying PGPRs (Plant Growth-Promoting Rhizobacteria) for the successful restoration of degraded lands, citing scientific studies conducted by researchers both in India and abroad. He also explained the work carried out by ICFRE-RFRI over the last decade on the use of PGPRs in restoring coal mined lands in Assam and Meghalaya. As an outcome, the institute has developed the 'ICFRE-RFRI Package of Practices for restoring degraded coal mine land'- he mentioned. He also discussed the steps taken to develop PGPR-based biofertilizers, including nano-biofertilizers.

In the interactive session Scientist from BRC, Mizoram put three queries on feasibility of application of PGPRs in Jhum cultivated lands, need of selection & application of site specific PGPRs and wanted to know about crop specificity. In reply Dr. Hazarika the seminar presenter told that PGPRs can be used for enhancing crop yield in Jhum cultivated lands as an ecofriendly

biofertilizer. In general, PGPRs can be used in all crops except *Rhizobium spp.* However, site specific PGPRs are required to obtain optimum support to the planted species in degraded lands and can be achieved by inoculation of local efficient PGPRs because they may show varying rate of performance in different agro climatic zones as per the published works. However, further research is required to examine the same. More input can be obtained by application of PGPRs as per the nutrient availability to the soil. Therefore soil test may be helpful to reduce fertilization cost- he said.

Besides this, a number of scientists and researcher present in the seminar including Dr. Dhruba Jyoti Das, HoD, FE&CC Division, Dr Satyam Bordoloi, HoD GTI Division, Mr Rajashree Bhattacharyya, STO etc. took part in the interactive session. Dr. Nitin Kulkarni, Director in his remarks appreciated the works of Dr. Hazarika and also thanked for the nice and meaningful presentation and suggested to the scientific community of the institute to continue follow up action of Dr. Hazarika as he is going to be retired soon. Dr. Kulkarni also suggested to work on reduction of research gaps on PGPRs and also to take up follow up action on the project on development of nano biofertilizer for mined land reclamation. The session concluded with a formal vote of thanks delivered by Ms. Tara Kumari, the coordinator of the program, marking its successful completion.

Expected outcomes of the seminar

1. Identification of Research Needs: The seminar successfully highlighted key knowledge and application gaps in the field of PGPRs and their role in restoration ecology.

- ✓ Dr. Hazarika's presentation brought attention to the need for site-specific PGPRs to enhance the efficiency of land restoration, especially in different agro-climatic zones like Jhum-cultivated regions.
- ✓ The discussion revealed that although PGPRs are promising, there is a lack of comprehensive studies on their crop specificity and nutrient interaction under different soil conditions.
- ✓ There is a need for further investigation into nano-biofertilizer development and its cost-effectiveness was also emphasized.
- ✓ Participants from field center (BRC, Mizoram) raised queries on practical challenges and uncertainties in applying PGPRs broadly which further underscores gaps that need targeted research.

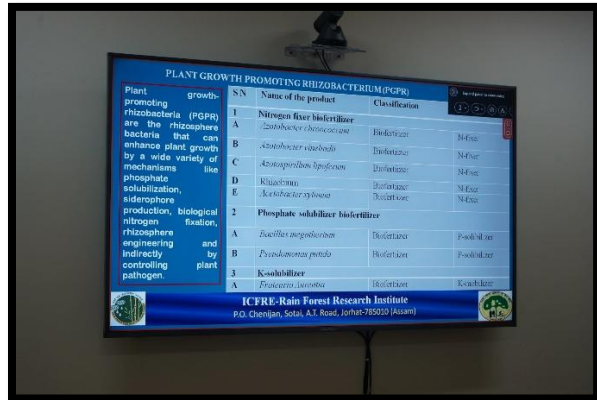
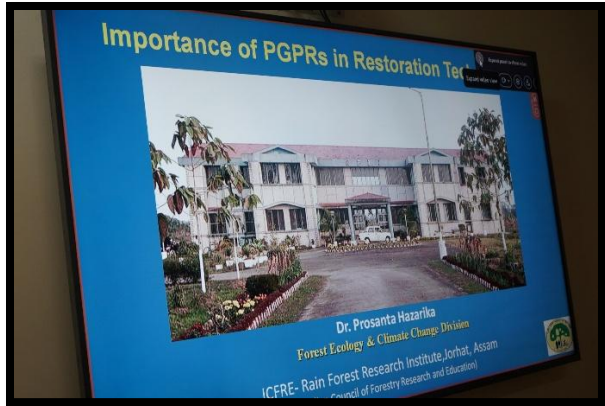
2. Formulation of Future Strategies / Road Map: The seminar helped in outlining potential strategies to bridge current research gaps:

- ✓ A research roadmap for PGPR application was indirectly formulated, with emphasis on isolating and validating local efficient strains and integrating them into restoration practices.
- ✓ The development and scaling up of nano-biofertilizers for degraded lands was proposed as a priority area which needs to be aligned with institute-driven innovation and technology transfer.
- ✓ Director, Dr. Nitin Kulkarni's recommendation to take up follow-up action on ongoing PGPR-based projects and continue the legacy work of Dr. Hazarika forms the basis of a strategic plan for continuity and institutional strengthening in this research domain.

3. Networking Research Options & Opportunities: The seminar facilitated interdisciplinary and inter-institutional discussions which are crucial for collaborative research:

- ✓ Interaction with scientists from different divisions (e.g., GTI, FE&CC, SFM etc) and centers (e.g., BRC, Mizoram) revealed scope for cross-locational trials and comparative studies of PGPR efficiency.
- ✓ The seminar served as a catalyst for knowledge exchange between researchers of different expertise - restoration ecology, soil microbiology, and biotechnology.







Tara

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