

TRAINING ON “TECHNIQUES IN BIO-FERTILIZER PRODUCTION, MAINTENANCE AND APPLICATION”

Date: 21-09-2016 to 23-09-2016

Course co-ordinator: Dr. V. Mohan, Scientist-F
Co–Course co–ordinator: Dr. A. Karthikeyan, Scientist E

India has achieved self sufficiency in food production through Green Revolution. Green revolution was accomplished with inputs like chemical fertilizers, insecticides and fungicides. Indiscriminate use of these chemicals spoiled fertility of the soil and caused lot of environmental issues. Considering the impact on environment, usage of inorganic fertilizers and pesticides are being replaced with eco-friendly organic manures and bio-fertilizers to ensure sustainable productivity. Bio-fertilizers are nothing but beneficial microbes which are ubiquitous in nature. They are found in air, water and soil and some of these beneficial microorganisms such as Mycorrhizal Fungi, *Frankia* and Plant Growth Promoting Rhizobacteria (PGPR) are involved in breakdown of organic matter, N₂ fixation, secretion of plant growth substances and increase of available mineral nutrients in soil; helpful to build up other beneficial micro-organisms and in turn improve soil health. They also control soil or root-borne diseases, parasitic nematodes and maintain soil structure. Bio-fertilizers help in production of high quality and healthy seedlings, which will help for better productivity in agro-forestry areas, greenery in wastelands, mined overburden areas, saline and salt affected areas and unproductive lands of the country.

IFGTB has been working on bio-fertilizers for about two decades, tested their efficacy in nursery, found out potential ones and mass produced for using in the field. The Institute developed different bio-fertilizer products viz., VAM fungal bio-fertilizer, *Frankia* Nitrogen fixer, Tricho-K etc. and made available to various end users. The effective usage of these bio-fertilizers not only improves crop productivity but also provides an alternative to costly chemical fertilizers. The objective of the present training was to create awareness among farmers, tree growers, Forest Department Officials, wood based industries and mining industries for effective use of these bio-fertilizers for quality and healthy planting stock production so as to ensure better establishment and survival of plants in different field conditions.

This training was scheduled for 3 days to provide information on the importance of different kinds of bio-fertilizers and their use through lectures and practicals in laboratory. A training manual has also been provided to all the participants, which contains details of different kinds of bio-fertilizers, their production and application methods. A total of 24 participants including officials from NMDC, Govt. of India, Hyderabad, Seshasayee Paper and Boards Limited, Erode, T-Stanes Co. Ltd., Coimbatore, College Teachers from Avinashilingam Home Science College for Women, Coimbatore, M.Tech. Biotechnology students from Kamarajar College of Engineering, Virudhunagar, B.Tech. Biotechnology students from PSR Engineering College, Madurai, M.Sc. Biochemistry students from PSG College of Arts and Science, Coimbatore, M.Sc. Biotechnology student from NGP Arts and Science College, Coimbatore, Research Scholars from Karunya University, Coimbatore and CAS in Botany, University of Madras, Chennai, Research Scholar and Research Assistant

from IWST, Bangalore and Farmers from Puducherry and Maduranthagam, Tamil Nadu attended the training programme.

The training was commenced on 21st September 2016. During the Inaugural Session, Dr. A. Balu, Scientist-G and Head, Forest Protection Division welcomed the gathering. A Special Address was delivered by Dr. B. Gurudev Singh, Group Co-ordinator (Research). An overview of the training Programme was given by Dr. V. Mohan, Scientist –F and Course Co-ordinator. Shri. R.S. Prashanth, I.F.S., Director, IFGTB and the Chief Guest inaugurated the training programme and released the training manual. He emphasized the need for utilization of bio-fertilizers in agriculture, horticulture and forestry practices. He also added that bio-fertilizers can improve the soil structure, enhance plant growth and yield. He opined that such training programmes would provide a good opportunity for the participants to know much about the current research on bio-fertilizers and their field application. He requested all the participants to utilize this training to learn various techniques on mass production and application of bio-fertilizers in the nursery and the field. Dr. A. Karthikeyan proposed vote of thanks.

Dr. V. Mohan and Dr. A. Karthikeyan delivered different lectures as well as practical sessions during the training programme. They were assisted by the Research / Technical Assistants and Research Scholars working in Forest Protection Division of IFGTB for imparting this training. The participants were given an overview of different kinds of bio-fertilizers, their importance, methods of production, maintenance and application methods in nursery and field. Hands on training on mass production and application of bio-fertilizers were also imparted to the participants during the training.

One day field visit was arranged to a commercial Bio-fertilizer Production Laboratory situated in the outskirts of Coimbatore. The participants showed enthusiasm, interacted well and got clarified many points during the training programme.

The training programme was concluded on 23rd September, 2016. During the Valedictory Session, Shri. R.S. Prashanth, I.F.S., Director, IFGTB distributed the Certificates and VAM Bio-fertilizer sample packets to all the participants and addressed the gathering. The participants appreciated the efforts taken by IFGTB for organizing the training programme and expressed that it was very much useful to them. Dr. V. Mohan, Scientist-F and Course Co-ordinator proposed vote of thanks.



Inauguration of the training programme



Participants of the training programme



Participants of the training programme



Release of training manual



Lecture on ectomycorrhizal fungi by Dr. V. Mohan



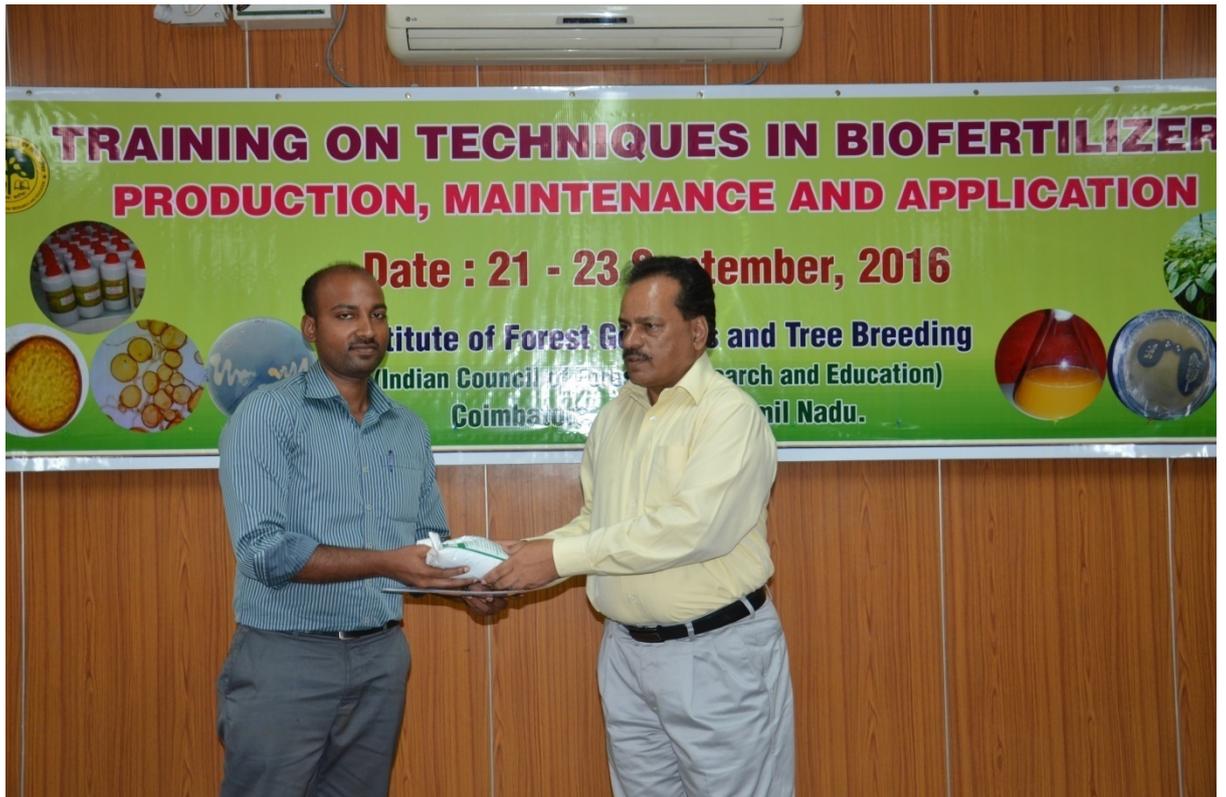
Lecture on Nitrogen fixing microbes by Dr. A. Karthikeyan



Practical classes in Forest pathology laboratory IFGTB



Practical classes in Forest Pathology laboratory, IFGTB



Distribution of certificates and VAM packets by Sh. R.S. Prashanth, IFS, Director, IFGTB.



Distribution of certificates and VAM packets by Dr. B. Gurudev Singh, Group Co-ordinator (Research) IFGTB.



Group photo of participants