

PROCEEDINGS OF THE INSTITUTE LEVEL SEMINAR

Consequent upon the approval of organisation of institute level periodical seminars to further identify and prioritise the research needs for improving the quality of research, the institute, organised the monthly seminar on the theme **“Forest Health and Vitality Protection”** on the issue **“Managing forests and forests products for livelihood support and economic growth”** on 1st December, 2017. Scientists, forest officers, researchers and technical staff were present during the seminar. Earlier, the seminar was to be scheduled to be held on 29th November, but due to some administrative reasons it was postponed to 1st December, 2017.

Dr. V.P. Tewari, Director, HFRI in his opening remarks appraised the house about the intend behind organising these periodical seminars at the institute level.

Dr. Ashwani Tapwal, Scientist - E made a presentation with specific focus on the application of mycorrhizae in raising healthy stock of conifers. He elaborated upon the importance of mycorrhizae in forestry and different aspects of research in the field of mycorrhizae being conducted at national and international level. He also discussed the role of mycorrhizal fungi in phosphorus and nitrogen acquisition from soil, tolerance to drought and soil borne pathogens. He described how the mycorrhizal fungi form symbiotic association with the roots of conifers in nature and also elaborated the techniques available for the artificial inoculation of seedlings with mycorrhizal fungi.

While making presentation, Dr. Ashwani Tapwal categorically emphasized upon research needs including selection of potent mycorrhizal fungi with wide host range. He was of the opinion that while producing tall conifer seedlings in the nursery, artificial inoculation with ectomycorrhizal fungi can always reduce the transplantation period and the inoculated seedlings will perform better in the field. The scientist also appraised the house about the future roadmap in this direction in the shape of the formulation of research collaborative project with state forest department and other research organisations.

Presentation was quite interactive and the queries and the issues raised were discussed and elaborated accordingly. Director, HFRI enquired about the role of mycorrhizae in xerophytic conditions, technique for mycorrhizal inoculation being followed by state forest department (SFD), possibility of product development etc. In response, Dr. Tapwal informed the house the in xerophytic conditions, the mycorrhizal seedlings will tolerate drought like conditions for longer duration due to extensive network of mycorrhizal fungi in soil. Regarding the inoculation technique it was informed that the SFD follow the tradition method of mycorrhizal inoculation by incorporating soil from the natural zone of host plant. He added that the trials of artificial inoculation of *Pinus gerardiana* seedlings with mycorrhizal fungi were established at Akpa, district Kinnaur by the institute in collaboration with SFD are performing well. Regarding the product development, Dr. Tapwal informed the house that inoculum of ectomycorrhizal fungi can be produced like mushroom spawn in laboratory and can be transported to the distant places.

