A report on one day webinar “Role of insects and fungi in forest ecosystem: Challenges & future perspective” organized by Forest Protection Division, TFRI (ICFRE) Jabalpur (M.P.) on August 26, 2020 by using the web based virtual platform

A one day webinar “Role of insects and fungi in forest ecosystem: Challenges & future perspective” was organized by Forest Protection Division, TFRI (ICFRE) Jabalpur (M.P.) on Wednesday, 26 August 2020 by using the web based virtual platform. It was attended by 67 participants from Scientists, Academicians and researchers and Forest field officials of ICFRE, ICAR, Universities and State forest Department from across the country.

Dr. Pawan Kumar scientist-E & Head Forest Protection Division, TFRI (ICFRE) Jabalpur welcomed the participants. Dr. G. Rajehwar Rao ARS, Director TFRI (ICFRE) Jabalpur delivered the inaugural address and stressed on conducting such events during the pandemic like crisis by optimum utilization of the technology to bring eminent experts on a same platform to share their research experiences. He further emphasized that due to recent uncertain insect pests and disease outbreaks, the research should be prioritized to develop safer ecofriendly biocontrol practices to minimize the dependence on harmful chemical insecticides.

Three leads talks were delivered by the invited speakers during the technical session which started with the lead talk of Prof. T.N. Lakhanpal, Prof. Emeritus & former Dean, Life Sciences HPU, Shimla on ‘Role of mycorrhizae in forest tree disease’. Another lead talk was delivered by Prof. S.P. Bhardwaj former Joint Director (Ext.)YSPUHF, Nauni, Solan (HP) on ‘Insects: connotation, threats and prospective in Forest ecology’. Dr. Amit Pandey Scientist-G & Head, FPD FRI (ICFRE), Dehradun U.K. delivered his lead talk on ‘Global issues and challenges in forest pathology’.

During the event Dr. Arvind Kumar Scientist FRI Dehradun (U.K.) and Dr. Avinash Chauhan, Central Agricultural University, Nagaland also expressed their views on need to update the taxonomy of all the insects and fungus species and to focus on developing ecofriendly biocontrol practices to manage the insect pests and diseases in forest ecosystems. During plenary session strong consensus came out to organize such virtual meetings to tackle the lockdown like situations involving all the stakeholders to develop future research and development plan on different aspects of insect pests and fungi especially in forest ecosystem. The webinar concluded with Vote of thanks by Sh. AJK Asaiya, Scientist, TFRI Jabalpur (M.P.).

Glimpses of the Webinar
Fumigation of nursery to control weeds and pathogens eliminates the residual inoculation of EM in lobolly pine (Marx et al., 1978).

Effect of soil fumigants Formaline and Methyle bromide on seedlings of Pinus gerardiana and Picea smithiana (Kumar and Lakanpal, 1990, 92).

In P. smithiana a dose of 210 ml/litre of water of formaline and 130 ml/litre of water of Methyle bromide controlled damping off of seedlings with normal mycorrhizal development.

In P. gerardiana 190 ml/litre of water of formaline and 110 ml/litre of water of methyle bromide eliminated damping off fungi with normal development of mycorrhiza.

Significantly higher germination percentage, survival percentage of seedlings, higher shoot/root ratio and maximum development of mycorrhizae.

Conclusion: Proper dosages of soil fumigants eliminate the pathogens and facilitates normal mycorrhizal seedling establishment.

Green skill
Lack of industries
New approach / raw material

- Extensive use of chemicals to control disease poses a serious threat to plant production system.
- Use of beneficial micro-organisms is one of the alternative management practices.
- This alternative approach is based on either manipulating or adding microorganisms to enhance plant protection.
- The beneficial microbes (antagonistic bacteria: Pseudomonas fluorescens, Bacillus subtilis) and fungi (AMF, Trichoderma etc.) compete with plant pathogens for nutrient and space, by producing antibiotics, by parasitizing pathogens or by inducing resistance.