

HIMALAYAN FOREST RESEARCH INSTITUTE, SHIMLA

PROCEEDINGS OF THE INSTITUTE LEVEL MONTHLY SEMINAR (28th September, 2018)

Institute organised the monthly seminar on the topic “**Managing Insect-pest incidences in forest nurseries for development of healthy planting stock**” under the thrust area “**Managing forests and forest products for livelihood support and economic growth**” on 28th September, 2018 at 2.30 PM. All the scientists, forest officers, researchers and technical staff were present during this seminar.

Dr. Ranjeet Singh, Group Co-ordinator Research (GCR) welcomed the Director and all the participants present in the Conference Hall and appraised them about importance of Insect-pests incidences and their management in the nursery. He informed the participants that nursery provided the ideal conditions for the insect pest and pathogens for development , multiplication and dispersal. It is one of the constraints in raising the healthy planting stock for plantation programmes. He informed the house that this presentation will be made by a team comprising of Mrs. Savita kumari Banyal and Shri Akhil Kumar Sharma, Assistant Chief Technical Officer of the institute and then asked the presenter to start the presentation.



A detailed presentation on the topic mentioned above was made by Mrs. Savita Banyal, Assistant Chief Technical Officer, forest Protection Division on behalf of the team, who gave a brief overview of the current scenario of India’s forest, forest nurseries and Insect-pest issues confronting forest nursery. She highlighted that though total forest cover in India is estimated to be 708273km² which constitutes of 21.54% of the geographical area of country, but, the health of the forest is adversely affected by insect-pest outbreaks and diseases incidences and these factors contribute more towards the mortality loss as compared to forest fires and other disturbances. She explained background of the issue including its scenario at the global and national level at length and told that in order to meet the increasing demands of quality planting stock, the nursery should be managed properly against the insect-pests.

She emphasized that almost all tree species seedlings are attacked by various categories of the insect-pests, out of which insects belonging to the order Coleoptera, Hymenoptera, Lepidoptera and Isoptera are the major pests causing high economic loss.

She pointed out that in order to control their incidences an accurate identification of the pests, its life cycle and appropriate time of action is very important.

During the presentation, Mrs. Savita categorically emphasized upon the relevant research needs on management of insect pest in the nursery and talked on the symptoms and management of major nursery insect-pests.

In his remarks, Director, HFRI mentioned that forest nurseries are the production centre meant for raising healthy planting stock of various tree species for planting under various afforestation programmes of the state forest department in Himachal Pradesh and Jammu & Kashmir. The nursery stock, being soft and delicate, is prone to infestation of infection by various biological control agents such as insect. Integrated nursery pest management is the most practical and ecologically sound approach for control of nursery pests. He further added that ready to use manual should be there for field staff indicating symptoms, type of insect pest and control measures so that the problem can be easily controlled well within time. He said that further projects can be taken of the problems being raised by the SFDs of mandated states and added that Biological control of major insect-pests should be used more as compared to the chemical pesticides for ecofriendly management.

Group Coordinator Research, HFRI stressed on accurate identification of the pest of nursery, its life cycle and appropriate time of action is very important for effective pest management programme. He informed that HFRI addresses different issues pertaining to queries raised by SFDs from time to time of insect-pest attacks, outbreaks and suggests control measures of these insect-pest attacks.

Sh. Sanjeev Thakur, DCF suggested that seeds must be given pre-treatment before sowing. Replying to this, the Presenter and Dr. Subhash Chandra said that pre-treatment is only possible by examining the symptoms of the seeds and there after suggesting the possible control measures. **Dr. Rajesh Sharma** emphasized on the solarisation and pre-treatment of the nursery beds before seed sowing and told that we should study the correlation between Climate and Insect-pest incidences.

After the presentations, GCR invited all the participants to raise queries and highlight the issues for comprehensive discussion. There was a lot of discussion on various aspects of insect-pest incidences in the forest nurseries and challenges in raising healthy planting stock for various programmes, mainly because:

- Raising insect/disease free healthy planting stock for large scale planting programme is often risky and failures of nurseries due to outbreak of insect-pest are not uncommon.
- There are multiple stakeholders.
- Striking an effective balance between insect-pest incidences and disease causing pathogens itself is a big challenge.

Dr. V.P. Tewari, Director, HFRI said that species specific IPM strategies is needed for raising quality planting stock on priority basis. He further said that in order to produce healthy planting stock clear understanding of forest pathology and insect-pests associated with the nursery plantation is necessary. He also stressed for ready to use manual by the field staff for onsite control measures of insect-pest.

Dr. Ranjeet Singh, GCR said that success of any plantation programme largely depends upon the insect pest and disease free healthy planting stock and symptoms nature of damage and its intensity are essential for adopting suitable management strategies

Outcome of the seminar:

A]. Identification of research needs:

1. More research is needed for exploring native plant species for development of Biopesticides and lures to control Insect-pests.
2. Mass culturing of the natural enemies (Predators and Parasitoids)
3. Screening of the Insect pest resistant plants.
4. Exploration of various Ecto-mycorrhizae fungus for quality seedling production.

B]. Formulation of future strategies/ road map:

It was discussed that institute, to begin with, can initiate working on the project keeping in view the followings objectives;

1. Queries received from the SFDs from time to time.
2. Prioritization of species specific IPM techniques.

C]. Networking research options identified:

It was opined that the institute can collaborate with Himachal Pradesh State Forest Department.

D]. Future research directions discussed for implementation and opportunities for funding:

The institute, in collaboration with the identified agencies, can pose a mega project for submission to the Ministry of Environment, Forest and Climate Change, Govt. of India, New Delhi for implementation in selected Forest Divisions of Himachal Pradesh to begin with.

In the end, the GCR thanked Dr. V.P. Tewari, Director of the institute and Chairman of the seminar, the presenters and all the researchers present for giving their inputs for making it successful.
