Training Report

"One Week Compulsory Training Course on **"Insect Pest Management in Forest Nurseries, Plantation and Natural_Forests" for IFS Officers was organized by Forest Protection Division at Forest Research Institute, Dehradun from 25-29 November 2019**.The financial support of the training was provided by Ministry of Environment, Forest and Climate Change (MoEFCC). A total of 12 participants from 8 states (Jharkhand, Orissa, Madhya Pradesh, Karnataka, Kerala, Telangana, UttarPradesh and Uttarakhand) attended this training programme. The main objective of the training programme was to discuss various aspects and issues on Forest insect pest problems and their management and to share the recent advances in pest management with stake holders.

The training programme was inaugurated by Dr. S.C. Gairola, Director General of ICFRE, Dehradun . In his inaugural address, he highlighted the importance of Insect-pest management in forestry science. He also expressed his concern on the effect of climate change on insect pests incidences in nurseries, plantations and natural forests, as the climate change may also trigger organisms to find new and more vulnerable hosts. There will be more rapid development and growth rates or high fecundity and more number of generations per seasons. Many insect species will extend their ranges towards higher altitude. He also emphasized that the knowledge on insect – pests are very important under changing climatic conditions as the Entomological problems are critical in disturbing the productivity of our forests because during every stage in the tree growth, from the seeds to the finished products, insect problems are persistently encountered.

Shri A. S. Rawat Director, Forest Research Institute also introduced the participants on the impact of Pests and diseases in plantations in quantitative term and highlighted their significance by economic loss caused by them. In recent years there have been several epidemics of insect and diseases causing economic damage to forest trees in India. The important examples are epidemic of Sal heartwood borer in sal, Teak defoliators in teak forest and Gall-inducing wasp (Letocybe invasa) in Eucalyptus plantation. He also expressed concern on indiscriminate application of pesticides which has resulted in resistance and resurgence of insect pests, environmental pollution and problems related to human health.

Dr. Arun Pratap Singh, Course coordinator, outlined the various aspects to be covered and field visits to be undertaken during training period.

At the end of inaugural session Dr. Mohd. Yousuf, Head Forest Protection Division, presented the vote of thanks.

The training programme schedule included 13 lectures which were imparted by 6 experts, senior forest entomologists, working in the Forest Protection Division, Forest Research Institute, Dehradun. The topics covered included basic as well as applied forest entomology. The general topics covered included- Introduction to Forest Entomology, Insect orders important in Forestry, Habits and role of insects in forest ecosystem with special reference to beneficial

insects, National Forest Insect Collection (NFIC) at Forest Research Institute, Dehradun on the first day. The following days covered lectures on- Insect Pests of Nurseries; Man Made Forests-Plantations & Natural Forests: Symptoms, extent and nature of damage, preventive & control measures of important pests; Insect-pests of Forest Seeds and their Management; Xylophagous Insects: Insect Pests of Felled and Converted Timber and Their Control; Bamboo Insect Pest and their Management Termites and their Management; Biological control of forest insect pests: parasitoids, predators, pathogens/ microbes and bio-pesticides; Biological Control of forest insect pests: parasitoids, predators, pathogens/ microbes and bio-pesticides; Use of Pheromones in Integrated Forest Pest Management. All the participants were provided with course material of all the lectures in both bounded hard copies (2 vols.) as well as e- literature in pen-drive along with relevant papers, literature, and e books and filed caps.

A field trip was also organized on 28 November2019 (4th day) to the nearby Rajaji National Park and sal forest area to expose the participants to insect pest infestation in natural forests by sal heart wood borer, *Hoplocerambyx spinicornis* and to mature teak plantations by teal skeletonizer , *Hyblea peura* along with felled logs and butterflies.

The training programme also included exposure visit to entomology laboratories, silviculture nurseries, genetics and tissue culture labs, museums, etc.

As part of the training programme 'Yoga' classes were also organized for the participants in the morning from 26-29 Novemebr2019, daily besides course dinner.

The training ended valedictory session which was chaired by Director, FRI who presented certificates, group photograph and a mementoes to each of the participants who gave an account/ feedback about the training programme.

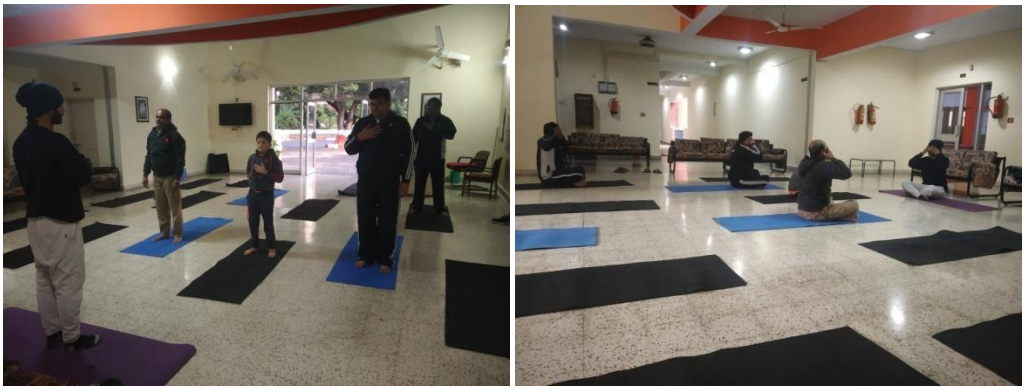
Group Photograph of the trainees with the faculty at FRI, Dehradun


Inauguration of the training programme by the chief guest, Dr. S.C.Gairola, D.G.ICFRE


Lecture sessions


Exposure visit to labs and nurseries

Field trip to Rajaji National Park & Sal forest



Yoga Sessions in the morning, daily






Valedictory Session and distribution of certificates by Shri A.S.Rawat, Director FRI to trainees.

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26 NOVEMBER, 2019

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One-Week Compulsory Training Course On Insect-Pest Management

Dehradun: Forest Research Institute, Dehradun is organizing training on "Insect pest Management in Forest Nurseries, Plantation and Natural Forests" to Forest officials from different states; financial support was provided by Ministry of Environment Forest & Climate Change , New Delhi. The main objective of training was to discuss various issues on Forest Insect pest management and to share the recent advances in pest management with stakeholders.

The training programme was inaugurated by Dr. S.C. Gairola, Director General of ICFRE. In his inaugural address, He highlighted the importance of Insect-pest management in forestry science. He also expressed his concern on the effect of climate change on insect pest's incidences in nurseries, plantations and natural forests, as the climate changes may also triggers organisms to find new and more vulnerable hosts. There will be more rapid development and growth rates or high fecundity and more number of generations per seasons. Many insect species will extend their ranges towards higher altitude. He also emphasized that the knowledge on insect - pests are very important under changing climatic conditions as the Entomological problems are critical in disturbing the productivity of our forests because during every stage in the tree growth, from the seeds to the finished products, insect problems are persistently encountered.

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Dr. A.P. Singh, Course coordinator, outlined the various aspects to be covered and field visits to be undertaken during training period.

At the end of inaugural session Dr. Mohd. Yousuf, Head Forest protection Division, presented the vote of thanks.