



A Report of Four Training Programmes on Management of Insect pests of Deodar and Shisham through techniques developed by HFRI, Shimla under AICRP-20

(Training at Chamba on March 10, 2025)

ICFRE - Himalayan Forest Research Institute (HFRI), Shimla, conducted a training program on “Management of Insect-Pests in Deodar and Shisham through techniques developed by the Institute” under the AICRP-20 project. The program was held on **March 10, 2025**, at **Chamba Forest Division**. The event was attended by 60 participants, including Shri Abhilash Damodaran, IFS, Conservator of Forests, Chamba Forest Circle, Shri Kritagya Kumar (IFS, Deputy Conservator of Forests), Shri Kuldeep Jamwal (Divisional Forest Officer, Wildlife, Chamba), Range Officers, Block Officers, and Forest Guards of Chamba Forest Division. The training program was financially supported by the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) under the Ministry of Environment, Forest & Climate Change, New Delhi.

The program commenced with a welcome address by **Dr. Pawan Kumar (Scientist-F & Training Coordinator)**, who introduced the objectives of the training. He emphasized the significance of pest management at the nursery stage, illustrating the damages caused by cutworms and white grubs.

Dr. Sandeep Sharma, Director, HFRI, Shimla welcomed the participants and the distinguished guests. He elaborated on the importance of high-quality seed procurement, cultural practices, and modern technologies in enhancing nursery productivity. He also highlighted the achievements of HFRI in developing bio-pesticides (Him Bio-Kill-I, Him Albivash), bio-fertilizers (Him Mrida Sanjeevani, Him Growth Booster), and bio-fungicide (HIM TRICHOKAWACH), underlining their role in sustainable pest management. Furthermore, he stressed the adoption of advanced techniques in model nursery development.

Addressing the participants, **Shri Abhilash Damodaran (IFS, Conservator of Forests, Chamba Forest Circle)** emphasized that such training programs offer exposure to the latest forestry research, enabling participants to enhance nursery management practices effectively.

Shri Kritagya Kumar (IFS, Deputy Conservator of Forests) discussed the impact of pests on plant quality in nurseries and the role of policy-driven pest management strategies.

Dr. Sandeep Sharma, Director, HFRI, Shimla elaborated on nursery management practices, stressing the necessity of maintaining records as an essential component of efficient nursery management. He further emphasized the importance of seed quality, genetic diversity in Deodar, winter protection for nursery plants, and the crucial role of forest soil in plant growth.

Technical Session

Dr. Pawan Kumar (Scientist-F & Training Coordinator) delivered a lecture on "Bio-Pesticide Products Developed by ICFRE-HFRI Shimla for Pest Management in Shisham and Deodar." He provided an in-depth overview of the economic significance of pests, the role of beneficial insects, and the global and national trends in pesticide usage. Highlighting the vulnerability of Deodar saplings, he discussed major nursery pests such as Greasy Cutworms (*Agrotis ipsilon* - Lepidoptera) and White Grubs (*Holotrichia consanguinea* & *H. serrata* - Coleoptera) and their impact on plant health. He further explained the application and efficacy of bio-pesticides such as Him Bio-Kill-I and Him Albiwash, developed by HFRI for sustainable pest control in forest nurseries.

In his vote of thanks, Dr. Pawan Kumar expressed his gratitude to the Ministry of Environment, Forest & Climate Change, New Delhi, for funding the project under the CAMPA scheme. He also appreciated the active participation of all attendees and encouraged them to implement the knowledge gained from the training in their respective nursery management practices.

Glimpses of Training Programme



(Training at Nurpur on March 11, 2025)

ICFRE - Himalayan Forest Research Institute (HFRI), Shimla, organized a one-day training program on “Management of Pests in Deodar and Shisham” under the AICRP-20 project on **March 11, 2025** at **Nurpur**.

This second training program was held at **Degree College, Nurpur**, and was attended by 50 participants, including officials and staff of the Nurpur Forest Department. Dignitaries present at the event included Shri Anil Kumar, Principal of Degree College, Nurpur; Shri Amit Sharma, Deputy Conservator of Forests (DCF), Nurpur Forest Division; Dr. Sandeep Sharma, Director, HFRI, Shimla; along with Range Officers, Block Officers, Forest Guards, and Panchayat representatives. The training program was financially supported by the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) under the Ministry of Environment, Forest & Climate Change, New Delhi.

The program commenced with a welcome address and an introduction to the training objectives by Dr. Pawan Kumar, Scientist-F and Training Coordinator. He emphasized the importance of pest management during the nursery stage and highlighted the damage caused by cutworms and white grubs.

Dr. Sandeep Sharma, Director, HFRI, Shimla discussed the significance of training programs and stressed the need for adopting various cultural practices, procurement of high-quality seeds, and the use of modern techniques in nursery management. He also emphasized the importance of maintaining records in nurseries, stating that it would be beneficial in the long run. Additionally, he highlighted the genetic diversity of Deodar, winter protection of nursery plants, and the role of forest soil in plant growth.

Shri Amit Sharma, Deputy Conservator of Forests (DCF), Nurpur Forest Division, highlighted the importance of such training programs for field staff, stating that they help participants gain valuable insights from experts on pest management in nurseries.

Shri Anil Kumar, Principal, Degree College, Nurpur discussed the economic impact of pests and the role of beneficial insects. He stated that this training program would help participants learn about the latest pest management strategies.

Technical Session

Dr. Pawan Kumar delivered a lecture on “Green Technology: Environmentally Sustainable Approaches for Pest Management in the Northwestern Himalayas.” He provided an overview of globally used pesticides, their impacts, and the necessity for eco-friendly biological control measures. He also elaborated on the susceptibility of Deodar and Shisham to pest attacks, with a focus on nursery pests such as Greasy Cutworms (*Agrotis ipsilon* – Lepidoptera) and White Grubs (*Holotrichia consanguinea*, *H. serrata* – Coleoptera).

Discussing the efficacy of bio-pesticides developed by the institute, Dr. Pawan Kumar highlighted that Him Bio-Kill-I has proven to be highly effective in controlling pests in stored seeds (such as Juniper and Chilgoza), whereas Him Albiwash has shown success in controlling nursery pests in Shisham, Salix, and Deodar.

Dr. Sandeep Sharma elaborated on plant classification, grading, and strategies for enhancing the resilience of nursery plants before transplanting them into the field. Additionally, he provided insights into the essential steps and protocols for establishing model nurseries.

The program concluded with a vote of thanks by Dr. Pawan Kumar, expressing gratitude to the Ministry of Environment, Forest & Climate Change, New Delhi, for funding the project under the CAMPA scheme. He also extended his appreciation to all participants for their active engagement and enthusiasm.

Glimpses of Training Programme



(Training at Dharampur, Mandi on March 19, 2025)

ICFRE-Himalayan Forest Research Institute, Shimla organized one day (**March 19, 2025**) training programme at Government Utkrisht Senior Secondary School, **Sajao Piplu, Dharampur (Mandi)** on “Management of Insect pests of Deodar and Shisham through techniques developed by HFRI, Shimla under AICRP-20 project” for officers and officials of Jogindernagar Forest Division, members of Local FPO Dharampur, progressive farmers and School staff which is funded by MoEF&CC, New Delhi under CAMPA Scheme. This was the third training programme in the series.

Dr. Pawan Kumar, Scientist-F was the training coordinator for this third training programme in the series. 60 participants including Sh. Bholu Dutt Sharma, Principal Govt. Utkrisht Sr. Sc. School, Sajao Piplu, Sh. Bhupender Singh, Secretary Dharampur Kisan Utpadak Sahkari Sabha, FPO Dharampur, Sh. Bhupender Singh, National Level Athletics Coach, Range Forest Officers, Block Officers and Forest Guards of Jogindernagar Forest Division, members of Local FPO and progressive farmers also participated in this training programme.

At the onset of the training programme Dr. Pawan Kumar, Scientist-F & Training Coordinator welcomed all the participants and also briefed about the objectives of the training programme.

Sh. Akhil Kumar, Chief Technical Officer, gave brief presentation about the research and development activities and recent achievements of the institute.

Sh. Bholu Dutt Sharma, Principal Govt Utkrisht Sr. Sc. School, Sajao Piplu in his opening remarks said that organic cultivation is the need of the hour for better living of the population. Citing the examples of harmful effects of synthetic chemical pesticides he highlighted the soil and water contamination. He further emphasizes that such trainings would of immense help to the local FPO members, progressive farmers and to school staff also. He also highlighted the importance of conservation of native variety of seeds of important millet crops which requires less amount of pesticides.

Sh. Bhupinder Singh, Secretary Dharampur Kisan Utpadak Sahkari Sabha (FPO) Dharampur (Mandi) explained about their FPO, its working and members/progressive farmers engaged. He also told the participants that this FPO has achieved several milestone in organic cultivation. He explained about the products developed which includes organic turmeric, sugar control aata, vermicompost etc. and said that natural ways like Jaivik Kheti has been used for the production of these products.

Dr. Sandeep Sharma, Director, HFRI, Shimla welcomed all the participants to the training programme. Later on highlighting the importance of the training he talked about different cultural practices, procurement of good quality seeds for better productivity and survival of the seedlings. He also discussed about the different practices to be adopted for making model nursery. He said that this training programme will be helpful to the

participants where in different management strategies will also be shared with them by different experts of entomology field.

Technical Session

Dr. Pawan Kumar, Scientist-F and Training Coordinator delivered a talk on Green technology: Ecofriendly approach for management of Insect-Pests threats in North Western Himalaya. He said that Nursery pests viz. Greasy Cut Worms, *A. ipsilon* (Lepidoptera); White Grubs, *Holotrichia consanguinea* and *H. serrata* (Coleoptera) cause considerable damage and require suitable ecofriendly biocontrol measures as an alternate to toxic insecticides. Citing the example of pissumar (*Boenninghausenia albiflora*), he said that plants of Himalayan Region are Potential Source of Bio-pesticides. He highlighted that Institute has developed 2 bio-pesticides products viz., HIM BOKIL-I and HIM ALBIWASH from the pissumar plant and said that HIM BOKIL-I had been found quite effective in controlling the stored seeds (Juniper and Chilgoza) insect pests and HIM ALBIWASH had been found effective in controlling defoliators of *Salix*, Shisham and nursery insect pests of deodar. He ended his talk by laying emphasis on development of other plant based bio-pesticides products as they are effective alternate against the chemical insecticides.

Dr. Sandeep Sharma, Director, Himalayan Forest Research Institute, Shimla talked about Nursery Management Practices. He said that field functionaries must have the habit of record keeping, as this will be beneficial to them in managing nursery. He said that for better survival and productivity one must ensure the procurement of good quality seeds. Further he lays emphasis on deodar genetic variability, overwintering of nursery plants and importance of forest soil in growth of the seedlings. He also threw some light on categorization and grading of plant stock. Further he talked about gradual hardening and acclimatization of nursery plants before their outplanting. He also briefed participants about the steps and protocols to be followed for making model nursery.

Dr. Pawan Kumar, Training coordinator proposed vote of thanks, wherein he thanked MoEFCC, New Delhi for funding of this project under CAMPA Scheme, he also thanked Director, HFRI Shimla, Officials of HPSFD, members of FPO and progressive farmers. Lastly he thanked all the participants of this training programme.

Glimpses of Training programme



Dr. Pawan Kumar during his talk



Dr. Sandeep Sharma Director, HFRI Shimla during his talk



Sh. Bhola Dutt Sharma, Principal during his talk



Participants of training programme



Sh. Bhupender Singh, Secretary FPO during his talk



Participants of the training programme

(Training at Rampur on March 22, 2025)

In the series, Fourth training programme at **Rampur Forest Division (Nogli)** was organized by ICFRE-Himalayan Forest Research Institute, Shimla on **March 22, 2025** on “Management of Insect pests of Deodar and Shisham through techniques developed by HFRI, Shimla under AICRP-20 project” for officers and officials of Rampur Forest Division, members of HIMOARD Rampur, progressive farmers which is funded by MoEF&CC, New Delhi under CAMPA Scheme.

Dr. Pawan Kumar, Scientist-F was the training coordinator for this fourth training programme in the series. 60 participants including Sh. Gurharsh Singh, IFS, Deputy Conservator of Forest, Rampur, Range Forest Officers, Block Officers and Forest Guards of Rampur Forest Division, Sh. Sachin Sharma, Deputy Director, Himalayan Organization for Organic Agri-Products Research & Development (HIMOARD), members of HIMOARD, Rampur and progressive farmers also participated in this training programme.

At the onset of the training programme **Dr. Pawan Kumar, Scientist-F & Training Coordinator** welcomed all the participants and also briefed about the objectives of the training programme, he said that for better survival of the deodar seedling, management of the insect pests in the nursery stage is very important, he also cited examples of cut worms and white grubs damage in the nursery plantations.

Sh. Gurharsh Singh, IFS, Divisional Conservator of Forest, Rampur Forest Division in his opening remarks said that such kind of platforms are necessary for learning process of the field staff. Further he said that the participants will also be benefited from the experience of experts in managing nursery insect pests. He also highlighted the importance of procuring good quality seeds, role of communities in forest and fire management, conservation of natural resources.

Dr. Sandeep Sharma, Director, HFRI, Shimla welcomed all the participants and Guest of Honor, DCF, Rampur to the training programme. Later on highlighting the importance of the training he talked about different cultural practices, procurement of good quality seeds for better productivity and survival of the seedlings. He also discussed about the different practices to be adopted for making model nursery. He said that this training programme will be helpful to the participants where in different management strategies will also be shared with them by different experts of entomology field.

Sh. Akhil Kumar, Chief Technical Officer delivered a lecture about research and developmental activities of the institute and recent achievements of the institute.

Technical Session

Dr. Pawan Kumar, Scientist-F and Training Coordinator delivered a talk on Ecofriendly approach for management of Insect-Pests threats in North Western Himalaya. He also talked about Economic Importance of insects, Beneficial Insects. Later on he highlighted the Pesticides used worldwide and in India. Besides, the Deodar seedlings are very prone to

insect-pest attacks. Nursery pests viz. Greasy Cut Worms, *A. ipsilon* (Lepidoptera); White Grubs, *Holotrichia consanguinea* and *H. serrata* (Coleoptera) cause considerable damage and require suitable ecofriendly biocontrol measures as an alternate to toxic insecticides. He also talked about the natural Predators, Parasites and Parasitoids. Citing the example of pissumar (*Boenninghausenia albiflora*), he said that plants of Himalayan Region are Potential Source of Bio-pesticides. He highlighted that Institute has developed 2 bio-pesticides products viz., HIM BOKIL-I and HIM ALBIWASH from the pissumar plant and said that HIM BOKIL-I had been found quite effective in controlling the stored seeds (Juniper and Chilgoza) insect pests and HIM ALBIWASH had been found effective in controlling defoliators of *Salix*, Shisham and nursery insect pests of deodar. He ended his talk by laying emphasis on development of other plant based bio-pesticides products as they are effective alternate against the chemical insecticides.

Dr. Sandeep Sharma, Director, Himalayan Forest Research Institute, Shimla talked about Nursery Management Practices. He said that field functionaries must have the habit of record keeping, as this will be beneficial to them in managing nursery. He said that for better survival and productivity one must ensure the procurement of good quality seeds. Further he lays emphasis on deodar genetic variability, overwintering of nursery plants and importance of forest soil in growth of the seedlings. Talking of ill effects of insecticides he said that chemical pesticides should be avoided rather their effective alternate like bio-pesticides should be practiced in managing insect pests of the nursery. He also threw some light on categorization and grading of plant stock. Further he talked about gradual hardening and acclimatization of nursery plants before their outplanting. He also briefed participants about the steps and protocols to be followed for making model nursery.

Sh. Sachin Sharma, Deputy Director, HIMOARD, Rampur delivered his talk on the functioning and role of HIMOARD organization in self-sustainability of community development. He also talked about different grant in aid schemes particularly of organic cultivation by State and Central Government and said that by adopting these schemes communities can become self-reliant and also fetch good amount of money by marketing and selling of their organic products after certification.

Valedictory & Discussion Session

The valedictory and discussion session was conducted during the afternoon session wherein Director, ICFRE-HFRI, Shimla and DCF, Rampur appreciated the participants for their keen interest in the Training Programme and assured to take care of their suggestions. Dr. Pawan Kumar, Training coordinator proposed vote of thanks, wherein he thanked MoEFCC, New Delhi for funding of this project under CAMPA Scheme, he also thanked Director, HFRI Shimla, DCF, Rampur, Members of HIMOARD, progressive farmers. Lastly he thanked all the participants of this training programme.

Glimpses of Training programme



Dr. Pawan Kumar, Scientist-F during his talk

Dr. Sandeep Sharma during his talk



Sh. Gurharsh Singh, IFS DCF Rampur during his address

Sh. Sachin, Deputy Director, HIMOARD Rampur during his talk



Group photo of participants
