



REPORT ON TRAINING AND DEMONSTRATION PROGRAMME
ON
DIVERSITY, CONSERVATION, UTILIZATION, AND MARKETING OF
MEDICINAL PLANTS OF NORTH WESTERN HIMALAYAN REGION
ORGANIZED AT ICFRE- HIMALAYAN FOREST RESEARCH INSTITUTE,
SHIMLA
(06th to 08th October, 2025)

A three days training and demonstration programme for the other stakeholders on **‘Diversity, conservation, utilization and marketing of medicinal plants of north western Himalayan region’** organized by ICFRE- Himalayan Forest Research Institute, Shimla at its campus from 6-8 October, 2025. This training and demonstration programme was sponsored by Ministry of Environment, Forest and Climate Change, GoI, New Delhi under the scheme environment knowledge and capacity building of other stakeholders. This training programme was aimed at creating awareness among other stakeholders towards medicinal plants diversity, identification, conservation, utilization and marketing. A diverse group of 30 participants from the horticulture, education (faculty members and students), Eco Task Force members, Vaids, representative of Cooperative Society, Ayurvedic Medical Officer, Pharmacy Officers, Progressive Farmers, Orchardists, members of youth club, etc took part in the three days training programme. Sh. Abhilash Damodaran, IFS and Chief Conservator of Forest, Himachal Pradesh State Forest Department graced the inaugural session of the training programme as Chief Guest. Day wise details of training and demonstration programme are described below:

Day One (06.10.2025)

Inaugural Session: Ms. Savita Banyal, Chief Technical Officer, ICFRE-HFRI Shimla initiated the proceedings of training programme. Dr. Joginder Singh Chauhan, Chief Technical Officer and Coordinator of the training programme presented a brief overview about the three days programme and said that the training has been envisaged with the aim to provide practical as well as theoretical information about the medicinal plants diversity, identification, cultivation, conservation, utilization and marketing. He further told that besides lecture of expert/resource persons, the field visit has also been scheduled so as to impart practical knowledge about the identification and cultivation of medicinal plants of north western Himalayan region. Thereafter, a formal welcome address was given by Dr Sandeep Sharma, Director (Link) & GCR, ICFRE-HFRI, Shimla. He extended a heartfelt welcome to the chief guest and participants from different departments, institutes and progressive farmers, orchardists, etc. He also briefed participants about research and extension activities of the institute and mandate of ICFRE.

In his in-augural address, Sh. Abhilash Damodaran, IFS & CCF appreciated the endeavours of ICFRE-Himalayan Forest Research Institute for organising training programmes on varied aspects of medicinal plants. He said that for the conservation of medicinal plants in the Himalayan region, there is a need to cultivate them through scientific techniques. He also discussed the marketing challenges of medicinal plants and told that *Fritillaria roylei* is in high demand and farmers are getting good prices for it. He also gave information about the problems being created by middlemen and talked about finding solutions to them. He also discussed about the Van-Dhan scheme launched in 2018 by the Ministry of Tribal Affairs and TRIFED to assist tribal communities in value addition and marketing of forest products. Under the scheme 'Van Dhan Vikas Kendras' are established, which help tribal communities in skill upgradation, capacity

building and better utilization of natural resources, so that their socio-economic condition can be improved and tribal communities are taught new skills and their capabilities are enhanced to enable them to become self-reliant. He stressed the need to awaken people's faith in Ayurveda and for this he discussed the need for availability of high quality planting material and the need for their scientific exploitation and storage techniques. Growing medicinal plants is good option for diversification of crops by farming communities and people can earn additional income. He advised participants to disseminate the knowledge acquired during training programme to other people.

Dr. Sandeep Sharma Director (link) and GCR, ICFRE-Himalayan Forest Research Institute, Shimla, informed participants that the institute has developed five new high quality varieties of medicinal plants viz. *Picrorhiza kurroa*, *Podophyllum hexandrum* and *Valeriana jatamansi* and quality planting stock of these varieties is maintained at Field Research Station Jagatsukh, Kullu. Further he added that there is great potential for commercial cultivation of high value medicinal plants in the area thus making it a sustainable income generating activity. The indiscriminate and unscientific harvesting is causing huge damage to medicinal plant diversity in its natural habitat. Moreover, harvesting before proper maturity provides inferior quality raw material to herbal industry. Moreover adulteration in herbal medicine is a big concern. He emphasized to conserve the medicinal plants species *in-situ* as well as *ex-situ* through cultivation of these species.

Technical session begins with the presentation of Dr. Vaneet Jishtu, Scientist (Retd.), HFRI, Shimla on Diversity, identification, conservation and utilization of medicinal plants of north western Himalayan region. He discussed about medicinal wealth of Himalayas and elucidated the importance of correct identification of plants. He also talked about distribution, habitat, status and utilization of some commercial important medicinal plants of north western Himalayan region like *Aconitum* spp, *Angelica glauca*, *Fritillaria roylei*, *Podophyllum hexadrum*, *Polygonatum* spp, *Picrorrhizza kurroa*, *Saussurea costus*, *Trillium govanianum*, *Valeriana jatamansi*, etc. He added that due to overexploitation, many of these species are threatened; hence there is dire need to conserve these species *in-situ* as well as *ex-situ*. Later on he also delivered a presentation on demand and supply of medicinal plants. He informed that total commercial demand of herbal Raw Drugs in India for the year 2014-15 was estimated at 512,000 MT (worth Rs. 7,000 crore) and demand of herbal raw drugs grew by about 5% per year over the last decade. He added that 1622 Herbal Raw Drug entities pertaining to 1178 medicinal plant species are recorded from trade and 310 of these species are traded in high volumes, of which 242 are wild collected, cultivated or imported primarily for use as herbal raw drug. 72% of the herbal raw drugs by species are sourced from the wild.

Dr. Sandeep Sharma, Scientist-G & GCR, ICFRE-HFRI Shimla discussed about modern nursery techniques and production of compost and vermi-compost for organic cultivation of medicinal plants. Through modern nursery techniques, best quality planting material can be produced and better yield can be obtained. He also told about the method for making compost and vermi-compost. He also shared his experiences and knowledge about the characterisation, Active Ingredient (AI) content, harvesting protocols of various medicinal plants of NW Himalayas and trans-Himalayan areas.

Dr. Jagdish Singh, Scientist –G (Retired) talked virtually about Medicinal plants as intercrop: An option for diversification and augmentation of income of rural communities. He informed participants that ICFRE-HFRI, Shimla has developed complete package of cultivation of some important medicinal plant species. viz., *Angelica glauca* (Chora), *Podophyllum hexandrum* (Ban Kakdi), *Trillium govanianum* (Nag Chhatri), *Picrorhiza kurroa* (kutak), *Valeriana jatamansi* (Nihani) and their potential for growing these species as intercrop and role in augmentation of rural income. He shared the success story of cultivation of intercropping of medicinal plants in

Apple orchards in Himachal Pradesh and informed the participants that it provides good alternative to earn income from the interspaces left in the orchards and the ultimately it turns into a win-win scenario. He further told that since climatic conditions of Himachal Pradesh are suitable for cultivation of these medicinal plants, hence farmers can grow these medicinal plants and get additional income. This will also reduce pressure on natural habitat thereby will help in conservation of these valuable medicinal plants. Besides, quality plants with better ingredients will also be available for pharmaceutical companies. Dr Rajesh Chauhan, Manager Marketing, Jadi Buti Cell, JICA-HPFSD deliberated on medicinal plants cultivation through common interest groups for additional source of income for rural communities and its marketing.

Last presentation of the day was delivered by Dr. Pitamber Singh Negi, Scientist-E, ICFRE-HFRI, Shimla on Nursery, Plantation Techniques and Uses of *Juniperus polycarpus* (Shur): An Important Medicinal Tree Species of Cold Desert. He said that the species has importance in the ecological and social context of cold regions and there are germination, regeneration and double dormancy related issues in the species. He informed participants that institute has successfully developed its nursery technique for first time and technique has been extended to Himachal Pradesh State Forest department and other stakeholders by organizing training programmes. He also elaborated in detail about nursery and plantation technique and importance of the species. Participants were also taken to different laboratories of the institute and were briefed about different research activities of the institute.

Finally, at the end of the first day proceedings, interactive session was held and all the participants showed their active involvement putting queries before the resource persons. Mostly questions were focussed on the proper identification of medicinal plants in wild, cultivation protocols and marketing potential. All the queries of participants were duly addressed by expert opinions of Resource Persons. Training Coordinator summarized the proceeding of the day.

Day Two (07.10.2025)

The second day of training programme was fully devoted to field trips for providing tangible experiences of identification and demonstration of agro-techniques of important medicinal plants, vermi-composting, etc. Training participants were taken for field visit to Field Research Station (FRS) of the institute at Shilaru and to Narkanda forests and Hatu alpine pasture. Dr. Joginder S. Chauhan, CTO and Sh. Kulwant Rai Gulshan coordinated the field visits of trainees. At FRS, Shilaru, participants were trained through demonstration on macro-proliferation techniques of Nihani and Kadu and vegetative propagation and application of bio-fertilizers in Chora, Van ajvain, Shingli mingali, etc. by Dr. Sandeep Sharma, Scientist-G, Dr. Ashwani Tapwal, Scientist-F and Dr. Joginder Singh, CTO. The participants got on spot useful information about more than 20 medicinal plants growing at FRS Shilaru. The practical demonstration on nursery bed preparation, compost & vermi-compost making was given to participants by Sh. Ramesh Kainthla, Forest Range Officer and Sh. Kulwant Rai Gulshan. Thereafter, training participants were taken to Narkanda Forests and Hatu alpine pasture, where they were apprised about diversity of medicinal plants and demonstrated keys of identification. The trainees found day rewarding and appreciated the field visits as they got closer interface with the medicinal plants of Himalaya.

Day Three (08.10.2025)

Dr. Joginder Singh Chauhan, CTO and Training Coordinator initiated the proceeding of third day. The session started with the talk of Dr. Ashwani Tapwal, Scientist-F, ICFRE-HFRI, Shimla, who shared his knowledge on bio-fertilizers and bio-fungicides for organic cultivation of medicinal plants. He discussed the adverse impacts of chemical fertilizers and benefits of using bio-fertilizer to promote organic cultivation. Apart from that, he also provided insights about organic farming

for cultivation of medicinal plants. The next talk of this session was given by Sh. Ram Gopal, flowers, vegetable and medicinal plant grower on growing of medicinal plants through cooperative societies and shared his experience.

Sh. Dinesh Paul, Divisional Forest Officer, HPSFD, Shimla gave a talk on transit rules, policy and legal issues for cultivation of medicinal plants in Himachal Pradesh. He explained about legal procedures to be followed for cultivation of medicinal plants and their transportation to market. He briefly informed important provisions of Indian Forest Act 1972, Wildlife Protection Act 1972 and its amendments of 2022, Forest Conservation Act 1980. He also briefly informed about Himachal Pradesh Forestry Sector Medicinal Plants Policy 2006.

Dr. Kuldeep Dogra, Scientist. Botanical Survey of India, Solan HP deliberated through virtual mode on Status of invasive plant species in HP, its impacts on indigenous plants including medicinal plants and their management through socio-economic use. Dr. Joginder S. Chauhan, Chief Technical Officer, ICFRE-HFRI, Shimla interacted with the participants and discussed about temperate medicinal plants used in rural areas for treatment of various minor ailments. He also discussed some formulations for treatments of minor ailments. He emphasized upon need of conserving traditional knowledge on medicinal plants as it is declining sharply especially among young generation. He said that like Ayurveda, ethnobotany is age old science and it signifies the traditional knowledge or use of plants by indigenous communities for medicinal and religious purposes. In his presentation, he also stressed that traditional knowledge is barely transferred and there are gaps. He emphasised on more and more documentation of the indigenous traditional knowledge (ITK) on medicinal plants. At the end of lectures, visit of training participant was organized to Technology Demonstration Centre for practical demonstration on identification of seed samples of medicinal plants and about displayed technologies. Sh. Kulwant Rai Gulshan, Sh. Rajender Pal and Sh. Swaraj Singh coordinated the visit to TDC.

Valedictory Session: In this session, Dr. Joginder Singh Chauhan, Training coordinator, requested training participants to share their experiences/feedback and give valuable suggestions. Training participants posed different questions and also expressed their reviews/feedback about the training programme. Discussions were held among participants and resource person and queries of training participants were satisfied with expert opinions. Dr. Chauhan, Training coordinator, assured that the suggestions of the participants will be incorporated in the future training programmes.

Dr. Sanjay Sood, IFS, Principal Chief Conservator of Forest and HoFF, Himachal Pradesh State Forest Department was the Chief Guest during the valedictory session of the Training Program. Dr Sandeep Sharma, Group Coordinator Research welcomed the chief guest and informed him about the three days training programme. He thanked all the participants for showing keen interest in lectures delivered on the topics related to the different aspects of medicinal plants of north western Himalayan region. Dr Manisha Thapliyal, Director ICFRE- Himalayan Forest Research Institute emphasized on sustainable and scientific exploitation of medicinal plants. She told that due to excessive unscientific exploitation, some medicinal plants like Nag Chhatri, wild Garlic are falling into endangered category. They have to be conserved in the forests also and it is necessary to promote their cultivation also. Dr. Sanjay Sood, IFS, PCCF&HoFF hoped that training participants would be benefited from this training programme. He advised all training participants to implement it in their area and share knowledge among other people. He expressed concern with respect to declining knowledge of medicinal plants and told that humans still have little knowledge about many medicinal plants. There is need to create awareness about the information already available in Vedas, scriptures and research papers. Besides, information on advance research will have to be shared among people. Through value addition, we can play a role in our own, state and country's development. He emphasized that people should select one or two medicinal plants which are in demand and grow them as crops. He said that it is very important to

strengthen the marketing of medicinal plants because the marketing of medicinal plants is unorganized and medicinal plant producers face difficulty in marketing and do not get fair prices. By and large, all training participants expressed happiness to take part in the training programme and told that they gained knowledge on medicinal plants cultivation and conservation and found this training programme very useful. They expressed their gratitude to the ICFRE-HFRI, Shimla for organizing this Training Program. Dr. Sharma also assured that the suggestions of the participants would be incorporated in future Training Programmes. He thanked all the Resource Persons and all the participants for their active participation. Three days training programme concluded with distribution of certificates to the participants and formal vote of thanks by Dr. Joginder Singh Chauhan, coordinator of training programme.

Glimpses of Three Days Training Programme



Dr Sanjay Sood, IFS & PCCF & HoFF, HP SFD feliciated by the institutue and his address



Sh Abhilash Damodaran, IFS & CCF, HP SFD, Chief Guest of Inaugural Session







Lecture by Different Resource Persons



Other Stakeholders Training Participants



Visits of Training Participants to Laboratories and Technology Demonstration Centre



Interaction of Training Participants with Resource Persons and Feedback





Distribution of Certificates to Training Participants

Field Visit





Group Photo



MEDIA COVERAGE

मिलावट तथा जड़ी-बूटियों की अपरिपक्व कटाई आयुर्वेदिक उपचार पर विश्वास कम होने के दो प्रमुख कारण : डा. संदीप



शिमला : हिमालयन वन अनुसंधान संस्थान में प्रशिक्षण कार्यक्रम के शुभारंभ अवसर पर मुख्यअतिथि के साथ संयुक्त चित्र में प्रतिभागी। (वेक)

जंगलों से जड़ी-बूटियों का दोहन करने के स्थान पर इसका उत्पादन करें लोग

शिमला, 6 अक्टूबर (भुविन्द्र) : वर्तमान समय में आयुर्वेदिक उपचार पर लोगों का विश्वास नहीं है। गंभीर बीमारों पर लोग एल्लेपैथी उपचार के लिए बड़े-बड़े अस्पतालों में जाते हैं। आयुर्वेदिक उपचार के प्रति लोगों में विश्वास नहीं होने के दो प्रमुख कारण हैं। पहला मिलावट तथा दूसरा जड़ी-बूटियों की अपरिपक्व कटाई (एमेच्योर हार्वेस्टिंग)। यह बात हिमालयन वन अनुसंधान संस्थान (एच.एच.आर.आई.) शिमला के प्रभारी निदेशक डा. संदीप राय ने संभवित रूप से

अवैध व अवैज्ञानिक दोहन सबसे बड़ी समस्या : दामोदरम

मुख्य अल्पमात्र अभिस्वा दामोदरम ने कहा कि जड़ी-बूटियों का अवैध व अवैज्ञानिक दोहन सबसे बड़ी समस्या है। उन्होंने कहा कि खराब, गरी, भस्मीर के जरूरी तबजे में अवैध व अवैज्ञानिक दोहन हो रहा है। इसे स्वामीय लोगों के सहयोग से ही रोकना व इसे खत्म किया जा सकता है। उन्होंने बताया कि इस अवैध व अवैज्ञानिक कार्य को रोकने के लिए सरकार को लगे रहने चाहिए। उन्होंने कहा कि जड़ी-बूटियों के दम व मार्केटिंग सबसे बड़ी समस्या है। उन्होंने कहा कि आजकल जंगलों से बहुत अधिक मात्रा में जड़ी-बूटियों को अचछे दम में लेते रहे हैं।

संस्थान में उत्तर पश्चिमी हिमालय क्षेत्र के औषधीय पौधों की विविधता, संरक्षण, उपयोग और विपणन को लेकर अन्य हिस्सों के लिए आयोजित 3 दिवसीय प्रशिक्षण एवं प्रदर्शन कार्यक्रम के शुभारंभ अवसर पर कही। उन्होंने कहा कि इस कार्यक्रम का मुख्य उद्देश्य जड़ी-बूटियों या औषधीय पौधों को लेकर लोगों को जागरूक करना है। उन्होंने जड़ी-बूटियों के जंगलों से अधिक दोहन के

स्थान पर इसके अधिक से अधिक उत्पादन पर बात दिया। इसके अलावा लोग जड़ी-बूटियों की एमेच्योर हार्वेस्टिंग कर रहे हैं। पूर्ण परिपक्व नहीं होने के कारण एक्टिव एन्टीड्रिग्ट कंटेंट बहुत ही कम होता है। ऐसे में लोगों को जड़ी-बूटियों की हार्वेस्टिंग इनके परिपक्व होने के बाद ही करनी चाहिए। लोग मुझे के लिए अपरिपक्व कटाई कर रहे हैं। साथ ही जड़ी-बूटियों के

अभाव में विकल्प का उपयोग कर रहे हैं। यानि मिलावट कर रहे हैं। 15 सितम्बर से नवम्बर तक होता है हार्वेस्टिंग का उत्तम समय : जड़ी-बूटियों के हार्वेस्टिंग का उत्तम समय 15 सितम्बर से नवम्बर तक होता है। यानि बरसात समाप्त होने के कारण जड़ी-बूटियों को हार्वेस्ट करना चाहिए। इससे इसमें एक्टिव एन्टीड्रिग्ट कंटेंट उत्तम स्तर का होता है।


