









Report

on

Training and Demonstration Programme for Other Stakeholders on Cultivation and Conservation of Important Temperate Medicinal Plants for

Livelihood Generation

A three days training and demonstration programme on **Cultivation and Conservation of Important Temperate Medicinal Plants for Livelihood Generation** was organized by ICFRE-Himalayan Forest Research Institute, Shimla at the institute w.e.f. 26th to 28th June, 2024. This training and demonstration programme was sponsored by Ministry of Environment, Forest and Climate Change, GoI, New Delhi. Day wise details of training and demonstration programme have been described in following paragraphs.

First Day (26.06.2024)

Inaugural Session: The proceeding of Training Programme started with lightening of lamp by the Chief Guest, Director, HFRI, Shimla, Training Coordinator and Head of Office. Dr. Jagdish Singh, Scientist-G & Course Coordinator, briefed about the schedule of activities of three days Training and Demonstration Programme. At the outset, Dr. Sandeep Sharma, Director welcomed Chief Guest of the inaugural session, Sh. Rajiv Kumar, Principal Chief Conservator of Forests & HoFF, Himachal Pradesh State Forest Department, Resource Persons and Other Stakeholder participants of the Training Programme. He also briefly talked about Research and Extension activities of the ICFRE-HFRI, Shimla, to make participants aware about the institute. He told that institute is working on different aspects of medicinal plants like, survey, documentation, agrotechnique, etc. Institute has standardized agro-technique for endangered species of medicinal plants viz., Aconitum heterophyllum, Angelica glauca, Picrorhiza kurroa, Podophyllum hexandrum, Trillium govanianum and Valeriana jatamansi. Besides, he also informed that institute has developed five new varieties of important high value temperate medicinal plants viz. Picrorhiza kurroa (Karu), Valeriana jatamansi (Muskbala) and Podophyllum hexandrum (Van-Kakri) for the benefit of different stakeholders. He stressed to conserve the Himalayan medicinal plants for Ayurveda. The availability of Himalayan medicinal plants can be ensured by cultivating them and this will also pave way for conservation of these medicinal plants.

Sh. Rajiv Kumar, in his inaugural address as a chief guest, told that such training programmes are important. ICFRE-HFRI, Shimla in working in the field of medicinal plants and extending research findings to various stakeholders by organizing such training programmes for various stakeholders. He appreciated the work being done by the institute on medicinal plants. He told that now people are returning and going towards Ayurvedic medicines instead of allopathic medicines. It is very important that the actual components of the herbs used in Ayurvedic medicines are available in

proper quality. It is also very important to grow the herbs in their habitat to get best quality raw material.

He also stressed the need for conservation and scientific harvesting of herbs so that it can be saved from extinction and also stressed on creating awareness about the importance of value addition and processing. Farmers should be able to increase their profits by doing value addition. He stressed upon on conservation of medicinal plants in natural habitats in the Himalayan region. Besides, there is a need to cultivate medicinal plants through scientific techniques. Cultivation of medicinal plants is a good option for diversification and additional income.

Technical Session: Technical session started with presentation of Dr. Vaneet Jishtu, Scientist-E, ICFRE-HFRI, Shimla on "**Identification and Uses of Important High Altitude Medicinal Plants**". He described identification keys of important medicinal plants of western Himalayan region and also explained through pictorial slides. He also briefed about the status, uses, habitat of important temperate medicinal plants and their suitability for cultivation in Himachal Pradesh.

Dr. Jagdish Singh, Scientist-G, talked about "Cultivation of important temperate medicinal plants for augmentation of rural income". He informed training participant that institute has developed complete package of cultivation of some important medicinal plant species. In this context, he explained cultivation techniques of important temperate medicinal plants viz., *Angelica glauca* (Chora), *Podophyllum hexandum* (Van Kakdi), *Trillium govanianum* (Nag Chhatri), *Picrorhiza kurroa* (kutki), *Valeriana jatamansi* (Muskbala) and their potential role in for augmentation of rural income. He further told that since climatic conditions of Himachal Pradesh are suitable for cultivation of these medicinal plants, hence farmers can grow theses 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. Lal Singh, Director, Himalayan Research Group (HRG), Shimla deliberated on "**Conservation, Cultivation and Sustainable Utilization of Important Medicinal Plants for Livelihood**". He elaborated cultivation technique, post harvesting and marketing of *Swertia chiryata* and nursery technique and uses of *Taxus wallichiana*. He further told that there are about 15 species of Chirayta in HP and there is about 500 metric ton demand of Chirayta in India. He also briefed about the uses of Nagchhtri and Karu. Due to heavy and indiscriminate extraction of high valued medicinal plants of Himachal Pradesh, their population in natural habitats has been declined drastically. Thereafter, Prof. (Dr.) Yash Pal Sharma, Head of department Forest Products, College of Forestry UHF, Nauni, Solan, HP delivered power point presentation through online mode on "Cultivation of Important Medicinal and Aromatic Plants of Himachal Pradesh with Special Emphasis on *Swertia chirayata*" He also talked about cultivation of marigold and its oil extraction.

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". He told that through modern nursery techniques, best quality planting material can be produced and better yield can be obtained. He further explianed about the method for making compost and vermi-compost.

Last presentation of the day was delivered by Dr. Pitamber Singh Negi, Scientist-D, ICFRE-HFRI, Shimla on "Nursery, Plantation Techniques and Uses of *Juniperus polycarpos* (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 is germination, regeneration and double dormancy related issues in the species. He informed the training participants that institute has successfully developed its nursery technique for the first time and technique has been extended to Himachal Pradesh State Forest department and other stakeholders by organizing training programmes. He also elaborated in details about nursery and plantation technique and importance of the species.

At the end of first day, interactive session with training participants was held. Training Coordinator summarized the proceeding of the day and discussed with participants regarding technical aspects of medicinal plants cultivation. All the queries of participants were duly addressed by expert opinions of Resource Persons.

Second Day (27.06.2024)

The day two of training programme was devoted for the field visit for practical demonstration on identification, nursery preparation and agro-techniques of important medicinal plants and vermicompost making. Training participants were taken to field visit to Field Research Station (FRS) of the institute at Shilluru, Shimla and to Narkanda forests and Hatu alpine pasture. At FRS, Shilaru, participants were trained through demonstration on macro-proliferation techniques of Muskbala and Karu and vegetative propagation of Chora, Van ajvain, Shingli mingali, etc. by Dr. Sandeep Sharma, Scientist-G, Dr. Jagdish Singh, Scientist-G 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, Sh. Rajender Pal, Sr. Technician, Sh. Swaraj, Technician and Sh. Shubham Malviya Forest Guard. 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 by Dr Sandeep Sharma, GCR, Dr. Jagdish Singh, Scientist-G and Dr. Joginder Singh, Chief Technical Officer. The trainees told that in field visit, they got more idea about the important temperate medicinal plants.

Third Day (28.06.2024)

Dr. Jagdish Singh, Scientist-G and Training Co Coordinator initiated the proceedings of the third day and invited Dr. Dinesh Kumar, Principal Scientist, IHBT, Palampur, H.P. to delivered virtual lecture on "Value addition of medicinal and aromatic plants for sustainable income generation". He elaborated in details about medicinal and aromatic plants suitable for livelihood enhancement in the temperate region. He also discussed about dhoop making and told that self-help group and panchayat people can initiate this in their area for additional income generation. He assured to give all possible technical help to interested participants in this aspects.

Dr R.K Verma, Scientist-G, ICFRE-HFRI, Shimla discussed about "Medicinal plants biodiversity in Himalayan region: management strategies for protection and conservation". He informed that about 1748 species of medicinal plants are found in Himalayan region. Due to over exploitation from their natural habitat many temperate medicinal plan species like Karu, Van-kakdi, Jangli lahsoon, etc., are endangered. Therefore cultivation of these medicinal plants is necessary which will help in their conservation. He also briefed about uses of important medicinal plants and also suggested necessary steps for the conservation of medicinal plants.

Sh. Kuldeep Sharma IFS, Conservator of Forests, ICFRE-HFRI Shimla delivered a lecture on "Conservation of endangered medicinal plants – Transit rules, policy and legal issues in Himachal Pradesh". He explained about legal procures 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 and TD rights.

Dr. Joginder Singh, Chief Technical Officer, HFRI Shimla deliberated on "**Traditional Knowledge for Sustainable Utilization and Conservation of Medicinal Plants**". He discussed some recipes 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. Thereafter, Prof. (Dr) Bhupinder Dutt, College of Forestry UHF, Nauni, Solan gave a detailed online lecture on "**Package and Practice for Cultivation of Important Tropical and Subtropical Medicinal Plants** viz. *Gloriosa superba, Andrographis paniculata, Withania somnifera, Rauwolfia serpentine*, etc. The last lecture of training programme and day was delivered by Dr. Jagdish, Singh, Scientist-G, he talked about varieties of *Picrorhiza kurroa* (Karu), *Valeriana jalamansi* (Muskbala) and *Podophyllum hexandrum* (Ban-kakdi) developed by the institute and told that these varieties of medicinal plants will be beneficial for taking up commercial cultivation by farming communities.

Valedictory Session: Dr. Jagdish, Singh Scientist-G & Training coordinator, requested training participants to share their experiences about training programme and give feedback and suggestions. Training participants shared their experiences and feedback. Discussions were held among participants and experts and queries of training participants were satisfied with expert opinions. Dr. Singh, assured that the suggestions of the participants will be incorporated in the future training programmes. He thanked all the resource persons and all the training participants for participating in training programme enthusiastically. Dr. Sandeep Sharma, Director, ICFRE-HFRI, Shimla, was the Chief Guest during the Valedictory Session of the Training Program. He appreciated the participants for their keen interest during three days of training and hoped that training participants from diverse field would be benefited from this training programme. He advised all training participants to implement it in their area and share knowledge among other people. The relevant queries of the participants were duly addressed through expert opinions of all the Resource Persons. The training participants found this training programme beneficial and extended their gratefulness to the ICFRE-HFRI, Shimla for organizing this training programme. 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. The participation certificates were distributed to the trainees by chief guest, head of office and head extension of the institute. The Training Program ended with a formal vote of thanks by Dr. Joginder Singh, CTO of the Institute.

Glimpses of Training Programme



Speakers Delivering Lectures















Media Coverage



औषधीय पौधों से महकेगी गांवों की जमीन जड़ी बूटियों की पहचान करने का प्रशिक्षण दे रहा है विभाग, कमाई का जरिया भी बनेंगे

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शिमला। गांवों में खाली पड़ी जमीन अब औषधीय पौधों की खुशबू से महकेगी। यही नहीं यह औषधीय पौधे किसानों की कमाई का जरिया भी बनेंगे।

बाजार में औषधीय पौधों की भारी मांग है। किसानों को औषधीय पौधों की खेती करने और इनकी पहचान करने का प्रशिक्षण दिया जा रहा है। हिमालय वन अनुसंधान संस्थान पंथाघाटी में औषधीय पौधों की खेती और सरंक्षण पर आयोजित तीन दिवसीय प्रशिक्षण कार्यशाला में यह जानकारी दी गई।

कार्यशाला में शिमला और सोलन क्षेत्र के 30 प्रतिभागियों ने शिरकत की। इसमें जडी बूटियों की पहचान करना, उपयोग, कृषि और विपणन की जानकारी दी। कार्यशाला में विलुप्त हो रहे औषधीय पौधों पर

उच्च गुणवत्ता वाले पौधे किए हैं विकसित : डॉ. राजीव

वन विभाग के प्रधान मुख्य वन अरण्यपाल एवं होफ्फ राजीव कुमार ने कहा कि संस्थान ने बागवानी पौधों के साथ औषधीय पौधों को उगाने के मॉडल विकसित किए हैं। किसान, बागवानी फसल के बीच के समय का उपयोग कर औषधीय पौधों को उगा सकते हैं। संस्थान ने कडु, निहानी, वनककड़ी औषधीय पौधों की उच्च गुणवत्ता वाली पांच किस्में विकसित की हैं। इसका स्टॉक जगतसुख अनुसंधान पौधशाला में उपलब्ध है। कार्यशाला में भाग ले रहे किसानों को शिलारू अनुसंधान पौधशाला और नारकंडा वन के आसपास के क्षेत्रों का दौरा भी करवाया जाएँगा। इसमें इन्हें औषधीय पौधों की पहचान और खेती की तकनीकों की जानकारी दी जाएगी।

पंथाघाटी में आयोजित कार्यशाला में दी जानकारी

चिंतन भी किया। कार्यशाला को केंद्र सरकार के पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय के सहयोग से आयोजित किया जा रहा है। कार्यशाला में वन विभाग के प्रधान मुख्य वन अरण्यपाल एवं होफ्फ राजीव कुमार ने बतौर मुख्य अतिथि शिरकत की। उन्होंने बताया

कि किसानों को कडु, मुश्कवाला, वन ककड़ी, चिरायता, निहानी, छोरा सलाम और मिश्री औषधीय पौधों की खेती बारे प्रशिक्षित किया जाएगा। लोग इन्हें उगाकर अच्छी खासी कमाई कर सकते हैं।

हिमालयन वन अनुसंधान संस्थान शिमला के निदेशक डॉ. संदीप शर्मा ने कहा कि आयुर्वेद के लिए हिमालयन जड़ी-बूटियों का संरक्षण करना अति आवश्यक है।

जड़ी-बूटियों के दोहन के साथ इनका संरक्षण भी जरू के लिए महत्वपूर्ण समशोतोष्ण औषधीय प्रतिभागी, जिसमें प्राध्यापक व छात्र, पौधों की खेती एवं संरक्षण विषय पर आयोजित किए जा रहे तीन दिवसीय कुफरी के सैन्य अधिकारी भाग ले रहे हैं। प्रशिक्षण कार्यक्रम के सुभारंभ अवसर पर एव.एफ.आर.आई. के निदेशक डा. कही। इन तीन दिनों में सभी हितपारक संदीप थाने ने कहा कि विषय में बोग भी. औषधीय पौधों को उगाने एवं उनके व शूरार की बीमारी लगावार बुढ़ रही है। औषधीय पौधों के अवैध कारोबार व विलुप्त होने पर जताई चिंता शिमला, 26 जून (भूपिन्द्र): जड़ी-वूटियों के दोहन के साथ-साथ इनका संरक्षण करना भी जरूरी है। इसके लिए

औषधीय पीथों को उगाने एवं उनके संरक्षण के गुर संखिंगे। उन्होंने अधिधीय पीथों के अर्वथ कारोबार तथा इनके विलुत होने पर चिंता जताई तथा कहा कि इनका दोहन इस तरह से होना बाहिए कि ये जुरन न हों साथ हो जड़ी-बुटियों को उनके आवास में उपाना भी बहुत आवश्यक है तभी उनमें पूरे पोषक तल्द उपलब्ध हो पाएं। उन्होंने संस्थान द्वारा विकसित की गई कडू... युक्कवाल, वन्ककडी की आतीत्यों के लिए भी सराहना की। इस प्रशिक्षण कार्यक्रम में शिमला, सोलन क्षेत्र के 30

त्तर्पण करना मा जलरा है। इसका लिए वैज्ञानिक तरीके से इनका दोहन किया जाना चाहिए। जड़ी-बूटियों को उखाड़ने का काम तो चल रहा है, लेकिन बीज डालने का काम कोई नहीं कर रहा है। आलन का काम काइ महा कर रहा ह यह बात प्रधान मुख्य का अपपयाल एवं वन विभाग के मुखिया राजीव कुमार ने बुधवार को हिमालय वन अनुसंधान संस्थान शिमला में भारत सरकार के पर्यावरण, बन और जलवायु परिवर्तन मंत्रालय के सहयोग से आजीविका स्जन

कुफरो के सेन्य अधिकारी भग ले रहे हैं। एन, एफ, आर. झाई, के निदेशक डा. संदीप शर्मा ने कहा कि विश्व में बी.पी. व जुरार की बीमारी लगातार खड़ रही हैं। इसके स्थावी उपचार के लिएस में आयुर्वेदा की. मेर जाना होगा। उन्होंने कहा कि उत्तर पश्चिमी हिमालय की जड़ी-बुटो की अधिक मांग है। उनहीन कहा कि हमें जड़ी बुटियों के लिए जंगल पर ही निभर नहीं।

बूटिया का लिए जगल पर हा निभर नहा रहना होगा, इसकी खेती अपने खेतों में भी करने की आवश्यकत है। वैज्ञानिक वनित जिष्टू ने कहा कि लोग जड़ी-वूटियों को लेकर पारंपरिक ज्ञान भूल रहे हुँ जबकि विश्व में इनकी मांग बढ़ रही है। उन्होंने बताया कि विश्व में औषधीय पौधों की 242 प्रजातियों की

शिमला : हिमालयन वन अनुसंधान संस्थान में आयोजित कार्यशाला के दौरान सं मांग बहुत ही अधिक है। उन्होंने चिंता - इनका अवैध कारोबार भी हो रहा है जताते हुए कहा कि लोगों ने औषधीय वैज्ञानिक एवं प्रशिक्षण समन्ययक डा पीधों के क्षेत्र समाप्त कर दिए हैं तथा जगदीशसिंह, निदेशकहिमालयअनुसंधा

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