

Endangered medicinal plant species in Himachal Pradesh

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The Indian Himalayas are rich reservoir of plant diversity and medicinal plant diversity is an important component of that. As one amongst the top repositories of medicinal herbs the state of Himachal Pradesh in Himalaya is one of the major sources of raw material to the global market. Unsustainable extraction of medicinal herbs has led to the endangerment of its several high value taxa. Ex-situ cultivation through community involvement is looked as probable solution to meet raw material market demand and diluting in-situ extraction pressure. The urgency of a committed action by different interested groups for the conservation of valuable medicinal resource has been severely realised. For this immediacy of an action is intensely felt to put in place for the conservation of endangered medicinal plants to prioritised for Himachal Pradesh.

With this view, and particularly on the occasion of International Year of the Mountains 2002, a workshop on “Endangered Medicinal Plant Species in Himachal Pradesh” was held at G.B. Pant Institute of Himalayan Environment & Development, Mohal-Kullu, H.P., India on 18-19 March 2002. It has presented a forum to scientists and various stakeholders including industrialists, farmers, NGOs, managers, funders and policy makers to address the multiple related issues and that has set forth the platform to make action plan with the common agreement and to execute in collaboration with identified partners. From India and abroad 40 identified experts from diverse disciplines attended the workshop. The major funder of the workshop was “World Resource Foundation” through Rothamsted International (IACR, UK), along with sponsorships from G.B. Pant Institute of Himalayan Environment & Development, Kosi-Almora, India, and Centre for Advancement of Sustainable Agriculture, New Delhi.

Participants deliberated upon various issues under technical sessions:

- Endangered Species Diversity, Characterisation and Evaluation

- Production through Cultivation
- Trade, Linkages, and Ethics
- Conservation Approaches in addition to presentation in inaugural session, and plenary session.

In inaugural session the theme and objectives of the workshop was made explicit to the mixed audience. It was highlighted how these technical sessions are steps and inter-linked for carrying forward the workshop objectives in desired direction. Through ex-situ cultivation the prospects and potentials of biobusiness were advocated for the state. The first technical session begun with reviewing the available knowledge on Himalayan medicinal plants and followed by presentations on role of chemistry and molecular genetic techniques for endangered species characterisation and evaluation. It was importantly highlighted that for cultivation, how superior germplasm can be obtained by selecting elite populations in the case of high altitude endangered taxa.

The second technical session on cultivation prospects of endangered medicinal plant, begun with stressing upon the prospects for enhancement of soluble anti oxidants crucial to plant defense responses to combat the environmental trigger particularly those that cause increased oxidative triggers. The other presentations focused on optimising yield parameters for increased productivity, quality improvement of desired active contents, economic viability, adaptability to a change climate, and establishing appropriate agronomic models along different altitudes. In the context of in-vitro mass multiplication and improved production micro-propagation protocols were also discussed.

The presentations in the third session exposed and discussed many challenges that local to global industries are facing. First hand experiences and status of raw material supply to and from the state was highlighted. Stressed was made to traceability, sustainability and transparency of internationally accepted protocols that meet the accepted minimum standards, be in the form of raw or processed value added products. It addressed the supply trade chain and discussed mechanisms basis crucial to sustainable income to farmers but at the same time benefiting all stakeholders through seeking harmonious commitments in working. Indigenous people and their role in the conservation and evolving better strategies how to involve them in ex-situ cultivation programme were the focal theme of the fourth technical session. The session covered wide range of speakers on institutional linkages to the community, evolving mechanisms for participatory models and exploring the approaches for funding.

In Plenary session, an open house discussion by the all participants was followed in prioritising endangered medicinal plant taxa for immediate action

for conservation through ex-situ cultivation. It has taken into consideration the key factors, viz. technological feasibility, economic viability, ensured marketing and farmers' acceptance available for each of the prioritised taxa. Various steps were identified and agreed to be taken up by various identified partners. At the end of the workshop, a coordinating group finalised the actions to carry forward the conservation programme in Himachal Pradesh.

This workshop was highly productive in the sense that it could raise the issues of local and global interests by bringing together different stakeholders and the forum specially stressed upon the involvement and crucial role of indigenous community in the conservation of endangered medicinal plants. The proceedings will be available for global release very soon.

Notes to readers

This was a paper presented at the workshop held at G.B. Pant Institute of Himalayan Environment & Development, Mohal-Kullu, H.P., India on 18-19 March 2002.

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