



# National Seminar on Plant Biodiversity for Food, Nutrition and Health Security in North-West Himalayas (PBFSNWH)

Nov 27 & 28 2023

*Venue*

Auditorium, Shoolini University, Solan, Himachal Pradesh



# TECHNICAL PROGRAM

## Day 1: November 27, 2023 (Monday)

08:30-09:30

Registration

### INAUGURAL SESSION (9.30-11.15 a.m.)

Chief Guest

**Col. Dr Dhani Ram Shandil**

Hon'ble Health Minister, Government of Himachal Pradesh, Shimla

Chair

**Dr R.S. Paroda**

President, ISPGR & Chairman, TAAS, New Delhi

Co-Chair

**Prof. P.K. Khosla**

Chancellor, Shoolini University, Solan

Guests of Honour

**Dr P.L. Gautam**

Former Chairperson NBA & PPV&FRA, Palampur

**Dr Sanjay Kumar**

Chairman, ASRB, New Delhi

Convenor

**Prof. Atul Khosla**

Vice Chancellor, Shoolini University, Solan

09.30-09.40

**Arrival of Dignitaries and Lighting of Lamp**

09.40-09.50

**Welcome & Setting the Context**

**Prof. Atul. Khosla**, VC, Shoolini University, Solan

09.50-10.10

**Special Remarks**

**Dr Sanjay Kumar**, Chairman, ASRB, New Delhi

**Dr P.L. Gautam**, Former Chairperson NBA & PPV&FRA, Palampur

**Dr P.K. Khosla**, Chancellor, Shoolini University, Solan

10.10-10.20

**Address by President, ISPGR**

**Dr R.S. Paroda**, President, ISPGR & Chairman, TAAS, New Delhi

10.20-10.40

**Address by Chief Guest**

**Col. Dr Dhani Ram Shandil**, Hon'ble Health Minister, Government of Himachal Pradesh, Shimla

10.40-10.50

**Vote of Thanks**

**Dr Anuradha Agrawal**, General Secretary, ISPGR & Organizing Secretary, PBFSNWH, New Delhi

### TECHNICAL SESSION I

#### Status and Management of Plant Biodiversity of North-West Himalayas (NWH) (11.20 a.m. -2.45 p.m.)

(Concurrent Poster Session)

Co-Chair

**P.L. Gautam**, Former Chairperson NBA & PPV&FRA, Palampur

**P.K. Khosla**, Chancellor, Shoolini University, Solan

Convenor

**R.K. Gautam**, ICAR-NBPGR, New Delhi

**B.D. Sharma**, Eternal University Baru Sahib, Rajgarh, Sirmour

Rapporteurs

**Kuldeep Tripathi**, ICAR-NBPGR, New Delhi

**Vinay Kumar Rachappanavar**, Shoolini University, Solan

11.20-11.25

**Welcome**

**Convenor**

11.25-11.50

**Plenary Lecture**

*Generating bioeconomy using biore-sources of North-West Himalayas*

**Sanjay Kumar**, ASRB, New Delhi

11.50-12.05

**Invited Lectures**

*Plant diversity in Cold Desert Himalayas: Challenges and opportunities*

**O.P. Chaurasia**, DIHAR, Leh, Ladakh

12.05-12.20

*Genetic enhancement in local food sys-tems in NWH*

**Lakshmi Kant**, ICAR-VPKAS, Almora



|                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12.20-12.35                                                                                                                                                | <i>Current status and potential of temperate horticulture</i>                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>M.K. Verma</b> , ICAR-CITH, Srinagar                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 12.35-12.50                                                                                                                                                | <i>Status and role of Agroforestry in the Himalayan Agriculture Production system</i>                                                                                                                                                                                                                                                                                                                                                                                                 | <b>Jagdish Singh</b> , ICFRE-HRFI, Shimla                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 12.50-13.35                                                                                                                                                | <b>Rapid Oral Presentations</b> (4; 6 min. each)<br><br><i>TSI-OP1: Expedition of PGR diversity in North Western Himalaya of India</i><br><br><i>TSI-OP2: Ampelographic characterization of grape genotypes from Himachal Pradesh</i><br><br><i>TSI-OP3: Interventions for conservation, productivity enhancement and nutrient assessment of medicinal and edible forest species</i><br><br><i>TSI-OP4: Reaching the unreached farming community through recent extension methods</i> | <b>R.K. Pamarthi</b> , ICAR-NBPGR, New Delhi<br><b>Co-authors</b> - D.P. Semwal, Soyimchetan & P.K. Singh<br><br><b>Sharmistha Naik</b> , ICAR-National Research Centre for Grapes, Pune<br><b>Co-authors</b> - D.P. Sharma, Jagesh Tiwari, Rasna Zinta, Gopal Singh & Arun Kumar<br><br><b>Vipan Guleria</b> , Forestry Regional Horticultural RS Jachh (Kangra), Dr Y.S. Parmar University of Horticulture and Forestry<br><b>Co-authors</b> - Amol Vashisth, Renu Kapoor, Rajesh Kaler & Dharmender Kumar<br><br><b>D.D. Sharma</b> , Shoolini University, Solan<br><b>Co-author</b> - Shareya |
| 13.35-13.45                                                                                                                                                | <b>Discussion and Co-Chairs' Remarks</b>                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 13.45-14.45                                                                                                                                                | <b>Lunch Break</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>TECHNICAL SESSION II</b><br><b>Traits Discovery and Genomics in Plants of NWH</b><br><b>(2.45 p.m.–5.40 p.m.)</b><br><i>(Concurrent Poster Session)</i> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Co-Chair                                                                                                                                                   | <b>B.S. Dhillon</b> , Former VC, PAU, Ludhiana<br><br><b>Atul Khosla</b> , VC, Shoolini University, Solan                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Convenor                                                                                                                                                   | <b>M.C. Yadav</b> , ICAR-NBPGR, New Delhi<br><br><b>D.P. Walia</b> , ICAR-IARI, Regional Station, Shimla                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Rapporteurs                                                                                                                                                | <b>Monika Singh</b> , ICAR-NBPGR, New Delhi<br><br><b>Salej Sood</b> , ICAR-CPRI, Shimla                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 14.45-14.50                                                                                                                                                | <b>Welcome</b><br><br><b>Keynote Lecture</b>                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>Convenor</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 14.50-15.10                                                                                                                                                | <i>Genomics for germplasm improvement and utilization</i><br><br><b>Invited Lectures</b>                                                                                                                                                                                                                                                                                                                                                                                              | <b>S.K. Yadav</b> , CSIR-IHBT, Palampur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 15.10-15.25                                                                                                                                                | <i>Genomics for conserving Himalayan food crops</i>                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>R.K. Chahota</b> , CSKHPKV, Palampur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 15.25-15.40                                                                                                                                                | <i>Genomics of medicinal plants: status and prospects</i>                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>R.K. Sharma</b> , CSIR-IHBT, Palampur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 15.40-15.55                                                                                                                                                | <i>Harnessing synergies in PGR utilization through public-private partnership</i>                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Aashish Barwale</b> , Seven Star Fruits Pvt Ltd., Mumbai                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 15.55-16.15                                                                                                                                                | <b>Tea/Coffee Break</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 16.15-17.15                                                                                                                                                | <b>Rapid Oral Presentations</b> (7-6 min. each)<br><br><i>TSII-OP1: Characterization and core set development of Amaranth using high density 64K SNP Array</i>                                                                                                                                                                                                                                                                                                                        | <b>Akshay Singh</b> , ICAR-NBPGR, New Delhi                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |



*TS-II-OP2: Search of novel donor germplasm for powdery mildew resistance in wheat minicore*

*TSII-OP3: Identification and development of yellow rust resistant sources in wheat using conventional, molecular and doubled haploidy breeding*

*TSII-OP4: Morphological characterization of magic population reveals extensive genetic variation for morpho-physiological and yield-related traits in bread wheat (*Triticum aestivum* L.)*

*TSII-OP5: Genome-wide association mapping of grain quality traits in rice using single-locus and multi-locus models*

*TS-II-OP6: Mapping and mining of major genomic regions conferring resistance to Bruchid (*Callosobruchus maculatus*) in blackgram (*Vigna mungo* (L.) Hepper)*

*TS-II-OP7: Molecular and tepal morphology in delineating vegetable Amaranthus species complex conserved in Indian National Gene Bank*

**Co-authors** - Avantika Maurya, Rajat Gupta, Dimpri Das, Gautam Vats, Ajay Kumar Mahato, S. Rajkumar, A.K. Singh, Rakesh Bhardwaj, S.K. Kaushik, Sandeep Kumar, Veena Gupta, Kuldeep Singh & Rakesh Singh

**Jyoti Kumari**, ICAR-NBPGR, New Delhi  
**Co-authors**--Shivani Sharma, Sherry Rachel Jacob, Arun Gupta, Ashwani Baisandrai, Sivasamy M., Vikas V.K., Lakshmi Kant, K K Mishra, Preeti Jakhar, Gaurav Kumar, Vasudha Jadon, Sundeep Kumar, Ashok Kumar, R.K. Gautam & G.P. Singh

**Madhu Patial**, ICAR-IARI, RS Shimla

**Sharmila M**, ICAR-NBPGR, New Delhi  
**Co-authors**- Shailesh Tiwari & Mahesh C. Yadav

**Avantika Maurya**, ICAR-NBPGR, New Delhi  
**Co-authors** - Rakesh Singh, Supriya Sachdeva, Vikas K. Singh, Uma M. Singh, Arvind Kumar & G.P. Singh

**Ragul S.** TNAU, Coimbatore  
**Co-author** - Manivannan N

**Pooja Pathania**, ICAR-NBPGR, New Delhi  
**Co-authors** - Venugopal Gowda R. & S. Rajkumar

17.15-17.30

**Discussion & Co-Chairs Remarks**

17.30-17.40

**Comfort Break**

**Evening Lecture and Cultural Program**

Co-Chair

**R.C. Agrawal**, DDG (Agric. Education), ICAR, New Delhi

**R.K. Tyagi**, Vice President, ISPGR, New Delhi

Convenor

**Sanjeev Kumar Chauhan**, YSPUHF, Solan

**J.K. Sharma**, Baddi University, Baddi, Solan

Rapporteurs

**Lokender Kumar**, Shoolini University, Solan

**Anil Kumar**, ICAR-DMR, Solan

17.40-17.45

**Introduction of Speaker**

**Convenor**

17.45-18.30

Global Concerns for PGR Management

**R.S. Paroda**, TAAS, New Delhi

18.30-18.35

**Chairperson Remarks**

18.35-18.40

**Vote of Thanks**

**Yashwant Singh Negi**, Shoolini University, Solan

18.40-18.50

**Break**

18.50-19.45

**Cultural Program**

19.45 onwards

**Welcome Dinner (Hosted by Chancellor, Shoolini University, Shoolini)**



Day 2: November 28, 2023 (Tuesday)

TECHNICAL SESSION III

***In situ/on-farm, ex situ Conservation and Access & Benefit Sharing***

(9.30 a.m. – 11.55 a.m.)

(Concurrent Poster Session)

|             |                                                                                                      |
|-------------|------------------------------------------------------------------------------------------------------|
| Co-Chair    | <b>K.R. Dhiman</b> , Former VC,YSPUHF, Solan<br><b>J.C. Rana</b> , Vice President, ISPGR, New Delhi  |
| Convenor    | <b>Anju Mahendru Singh</b> , ICAR-NBPGR, New Delhi<br><b>S.K. Gupta</b> , Shoolini University, Solan |
| Rapporteurs | <b>Jyoti Kumari</b> , ICAR-NBPGR, New Delhi<br><b>Narender Negi</b> , ICAR-NBPGR, RS Shimla          |

|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9.30-9.35   | <b>Welcome</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Convenor</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 9.35-10.00  | <b>Plenary Lecture</b><br><i>Protection of plant varieties and farmer's rights in context of N-W Himalayas</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Dipal Roy Chaudhury</b> , PPV&FRA, New Delhi                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 10.00-10.15 | <b>Invited Lectures</b><br><i>Use of genetic resources in crop improvement</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Mohar Singh</b> , ICAR-NBPGR, RS, Shimla                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 10.15-10.30 | <i>Conservation of native arboreal flora of N-W Himalayas: status, challenges and prospects</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Vaneet Jishtu</b> , ICFRE-HFRI Shimla                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 10.30-10.45 | <i>Biological Diversity Act and its relevance in conservation of unique Himalayan flora</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Murari Lal Thakur</b> , HIMCOSTE, Shimla                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 10.45-11.15 | <b>Tea/Coffee Break</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 11.15-11.35 | <b>Rapid Oral Presentations</b> (4-6min. each)<br><br><i>TSIII-OP1: Ex situ conservation of wild Allium genetic resources at NBPGR Bhowali field genebank</i><br><br><i>TSIII-OP2: Conservation of wheat and barley genetic resources of North-Western Himalayas in the National Genebank</i><br><br><i>TSIII-OP3: Conservation and Characterisation of Protected Farmer's Varieties of Apricot of Cold Arid Region for future breeding programmes in Kargil (UT-Ladakh)</i><br><br><i>TSIII-OP4: Advanced methods of conservation of plant biodiversity</i><br><br><i>TSIII-OP4: Advanced methods of conservation of plant biodiversity</i> | <b>K.M. Rai</b> , ICAR-NBPGR, RS Bhowali<br><b>Co-authors</b> - Pavan Malav, Pankaj Kumar Kannaujia, Narendra Negi & Mamta Arya<br><br><b>Sherry Rachel Jacob</b> , ICAR-NBPGR, New Delhi<br><b>Co-authors</b> - Shashank H.G., Sampa Saha, Aradhana Mishra, Aravind J., Padmavati Gore & Anju Mahendru Singh<br><br><b>Faizan Ahmad</b> , Mountain Agriculture Research and Extension Station, Kargil SKUAST-Jammu and Kashmir<br><b>Neha Rani</b> , Dr Y.S. Parmar, College of Horticulture and Forestry<br><b>Co-authors</b> - B.S. Ditta & Bhavna Rajkumari |

11.35-11.55 Discussion & Co-Chairs Remarks

TECHNICAL SESSION IV

***Plant Biodiversity in Local Food System***

(11.55 a.m.–3.00p.m.)

(Concurrent Poster Session)

|           |                                                                                                    |
|-----------|----------------------------------------------------------------------------------------------------|
| Co-Chair  | <b>R.S. Chandel</b> , YSPUHF, Solan<br><b>Brajesh Singh</b> , Director, ICAR-CPRI, Shimla          |
| Convenors | <b>Manjusha Verma</b> , ICAR-NBPGR, New Delhi<br><b>Somesh Sharma</b> , Shoolini University, Solan |



|                                                                                                                                                                        |                                                                                                                                                               |                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rapporteurs                                                                                                                                                            | <b>Rakesh Sharma</b> , YSPUHF, Solan<br><b>Ravi K. Pamarthi</b> , ICAR-NBPGR, New Delhi                                                                       |                                                                                                                                                                                                                                                                                                     |
|                                                                                                                                                                        | <b>Keynote Lecture</b>                                                                                                                                        |                                                                                                                                                                                                                                                                                                     |
| 12.00-12.20                                                                                                                                                            | <i>Mainstreaming agrobiodiversity for enhancing climate resilience, nutrition, livelihoods and ecosystems service</i>                                         | <b>J.C. Rana</b> , Alliance for BI and CIAT, New Delhi                                                                                                                                                                                                                                              |
|                                                                                                                                                                        | <b>Invited Lecture</b>                                                                                                                                        |                                                                                                                                                                                                                                                                                                     |
| 12.20-12.35                                                                                                                                                            | <i>Status and nutritional value of mushroom</i>                                                                                                               | <b>V.P. Sharma</b> , ICAR-DMR, Solan                                                                                                                                                                                                                                                                |
| 12.35-12.50                                                                                                                                                            | <i>Underutilized temperate fruit species in the Western Himalayas - scope for enhancing rural livelihoods and improving food security</i>                     | <b>K.K. Jindal</b> , Former ADG (Horticulture), ICAR, New Delhi                                                                                                                                                                                                                                     |
| 12.50-13.05                                                                                                                                                            | <i>Medicinal value of local plant diversity of N-W Himalayas</i>                                                                                              | <b>Bhupinder Dutt</b> , Professor YSPUHF, Solan                                                                                                                                                                                                                                                     |
| 13.05-13.20                                                                                                                                                            | <i>Traditional food of Himachal Pradesh</i>                                                                                                                   | <b>Nand Lal Sharma</b> , Himachal Pradesh Tourism Development Corporation                                                                                                                                                                                                                           |
| <b>13.20-14.20</b>                                                                                                                                                     | <b>Lunch break</b>                                                                                                                                            |                                                                                                                                                                                                                                                                                                     |
| 14.20-14.45                                                                                                                                                            | <b>Rapid Oral Presentations</b> (4-6 min. each)                                                                                                               |                                                                                                                                                                                                                                                                                                     |
|                                                                                                                                                                        | <i>TSIV-OP1: Evaluation of potato germplasm in early crop season</i>                                                                                          | <b>Babita Chaudhary</b> , ICAR-CPRI, Modipuram, Meerut<br><b>Co-authors</b> – S.K. Luthra , Anuj Bhatnagar, V.K. Gupta, Dalamu & Vinod Kumar                                                                                                                                                        |
|                                                                                                                                                                        | <i>TSIV-02: Reviving grasspea (Lathyrus sativus L.) - a potential green leafy vegetable source for the Himalayan regions</i>                                  | <b>Ramya KR</b> , ICAR-NBPGR, New Delhi<br><b>Co-authors</b> - Kuldeep Tripathi, Ravi K. Pamarthi, Padmavati G. Gore, Rinky Reshma Panda, Rakesh Bharadwaj & K.C. Bhatt                                                                                                                             |
|                                                                                                                                                                        | <i>TSIV-OP3: Understanding genetic variability for morphological and nutritional traits in the linseed germplasm collection at National Genebank of India</i> | <b>Vikender Kaur</b> , ICAR-NBPGR, New Delhi<br><b>Co-authors</b> - Sunil S. Gomashe, Shashank K. Yadav, Devender Singh, Vinay Kumar, Sheela, Shubhendra Singh Chauhan, Balram Jat, Munisha Kheralia, Sapna Langyan, Nutan Kaushik, Mamta Singh, D.P. Wankhede, J Aravind, Ashok Kumar & G.P. Singh |
|                                                                                                                                                                        | <i>TSIV-OP4: Agricultural biodiversity: participatory knowledge and autonomous learning for rural food systems</i>                                            | <b>Bhavna Rajkumari</b> , Dr Y.S. Parmar, College of Horticulture and Forestry<br><b>Co-authors</b> - B.S. Dilta, Chinglembi Laishram & Neha Rana                                                                                                                                                   |
| <b>14.45-15.00</b>                                                                                                                                                     | <b>Discussion &amp; Co-Chairs Remarks</b>                                                                                                                     |                                                                                                                                                                                                                                                                                                     |
| <b>TECHNICAL SESSION V</b><br><b>Entrepreneurship and value chains – Role of youths and women</b><br><b>(3.00p.m. –5.15p.m.)</b><br><i>(Concurrent Poster Session)</i> |                                                                                                                                                               |                                                                                                                                                                                                                                                                                                     |
| Co-Chair                                                                                                                                                               | <b>Parvinder Kaushal</b> , VC, UUHF, Pauri Garhwal<br><b>Anuradha Agrawal</b> , National Coordinator, NAHEP, ICAR, New Delhi                                  |                                                                                                                                                                                                                                                                                                     |
| Convenors                                                                                                                                                              | <b>Pankaj Sood</b> , KVK, Mandi<br><b>Ramesh Bhardwaj</b> , YSPUHF, Solan                                                                                     |                                                                                                                                                                                                                                                                                                     |
| Rapporteurs                                                                                                                                                            | <b>Vikender Kaur</b> , ICAR-NBPGR, New Delhi<br><b>Anil Kumar</b> , ICAR-DMR, Solan                                                                           |                                                                                                                                                                                                                                                                                                     |



|                                                      |                                                                                                                   |                                                                               |
|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| 15.00-15.05                                          | <b>Welcome</b>                                                                                                    | <b>Convenor</b>                                                               |
|                                                      | <b>Keynote Lecture</b>                                                                                            |                                                                               |
| 15.05-15.25                                          | <i>Role of potato in entrepreneurship development</i>                                                             | <b>Brajesh Singh</b> , ICAR-CPRI, Shimla                                      |
|                                                      | <b>Invited Lectures</b>                                                                                           |                                                                               |
| 15.25-15.40                                          | <i>High density apple plantation (HDAP)</i>                                                                       | <b>D.P. Sharma</b> , YSPUHF, Solan                                            |
| 15.40-15.55                                          | <i>Unlocking native mountain crops for livelihood and enterprise development</i>                                  | <b>Lal Singh</b> , HRC, Shimla                                                |
| <b>15.55-16.20</b>                                   | <b>Tea/Coffee Break</b>                                                                                           |                                                                               |
| 16.20-16.30                                          | <i>Developing recipes/products of traditional crops of N-W Himalayas</i>                                          | <b>Rahul Saxena</b> , Back to Basics Naturally LLP, Palampur                  |
| 16.30-16.40                                          | <i>Developing recipes/products of Himalayan plant diversity</i>                                                   | <b>Joginder Walia</b> , Society for Technology and Development, Mandi         |
| 16.40-16.50                                          | <i>Value addition of millets</i>                                                                                  | <b>Sneha</b> , Women Self Help Group, Gohar, Mandi                            |
| 16.50-17.00                                          | <i>Promotion of local plant diversity of N-W Himalayas for developing products and value chain in Uttarakhand</i> | <b>Nav Bharat</b> , Mount Valley Development Association, Doni, Tehri Garhwal |
| <b>17.00-17.15</b>                                   | <b>Discussion &amp; Co-Chairs Remarks</b>                                                                         |                                                                               |
| <b>Concluding Session<br/>(5.15 p.m. –6.45 p.m.)</b> |                                                                                                                   |                                                                               |
| Co-Chair                                             | <b>R.S. Paroda</b> , President, ISPGR, New Delhi                                                                  |                                                                               |
|                                                      | <b>P.K. Khosla</b> , Chancellor, Shoolini University, Solan                                                       |                                                                               |
| Convenors                                            | <b>R.K. Tyagi</b> , ISPGR, New Delhi                                                                              |                                                                               |
|                                                      | <b>Yashwant Singh Negi</b> , Shoolini University, Solan                                                           |                                                                               |
| Rapporteurs                                          | <b>Sherry R. Jacob</b> , ICAR-NBPGR, New Delhi                                                                    |                                                                               |
|                                                      | <b>Pankaj Chauhan</b> , Shoolini University, Solan                                                                |                                                                               |
| 17.15-17.30                                          | <b>Summary of Major Recommendations</b>                                                                           | <b>R.K. Tyagi</b> , Vice-President, ISPGR                                     |
| 17.30-18.05                                          | <b>Felicitations and Award Distribution</b>                                                                       |                                                                               |
| 18.05-18.35                                          | <b>Remarks by Co-Chairs</b>                                                                                       |                                                                               |
| 18.35-18.45                                          | <b>Vote of Thanks</b>                                                                                             | <b>Saurabh Kulshreshta</b> , Organizing Secretary, Shoolini University, Solan |
| 18.45 onwards                                        | <b>Dinner</b> (Hosted by Mahyco Pvt. Ltd.)                                                                        |                                                                               |



