

Name: Ashok Singh

Designation: Scientist

Working Station / Divison: Centre for High Altitude Biology at Ribling, P.O.- Tandi, Tehsil-Keylong, Lahaul & Spiti (HP) – 175 132, India (a research centre of CSIR – Institute of Himalayan Bioresource Technology Palampur-176061, HP, India)

Research Area: Biodiversity Conservation and Management, Ecology

Research Experience: 14 years in the Cold Desert and high altitude areas in India

Awards and Job positions: ICAR-NET Forestry-2003,2007, Researcher (sponsored by World Pheasant Association, New Delhi), JRF/SRF (sponsored by MOEF&CC New Delhi), Research Associate (sponsored by ICAR-NAIP New Delhi, & CSIR 12th FYP New Delhi)

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Research focus:

In nature, rapid decrease in the populations of RET and economically important medicinal and aromatic plant species were recorded. Under continuous increasing demand and lesser supply to the pharmaceutical industries, it is our priority concern to initiate ex-situ conservation and cultivation practices not much attempted so far from the Cold Desert areas in India.

- Ecological studies of high altitude important targeted species, populations and ecosystems
- Introduction/Domestication of important plant bioresources (RET and economically important plant) in the farmers field/CeHAB farm of high altitude region in the Cold desert area of Himachal Pradesh
- Conservatory (Field Gene-bank, In-situ and Ex-situ conservation) of high altitude plants; mass multiplication with a mission target to convert RET plants into Non-RET, and their value addition

Research projects completed as PI/Co-PI/Team member: 5 numbers

On-going projects as PI/Co-PI/Team member: 5 numbers

Research publications:

1. Samant, S.S., Pant, S., Singh, M., Lal, M., **Singh, A.**, Sharma, A. and Bhandari, S. 2007. Medicinal plants in Himachal Pradesh, northwestern Himalaya, India. *International Journal of Biodiversity Science and Management* **3**: 234-251.
2. **Singh, A.**, Lal, M. and Samant, S.S. 2009. Diversity, indigenous uses and conservation prioritization of medicinal plants in Lahaul valley, proposed Cold Desert Biosphere Reserve, India. *International Journal of Biodiversity Science and Management*. **5(3)**: 132-154
3. **Singh, A.** and Samant, S.S. 2010. Conservation prioritization of habitats and forest communities in the Lahaul valley of proposed Cold Desert Biosphere Reserve, North Western Himalaya, India. *Applied Ecology and Environmental Research*. **18(2)**:101-117
4. Sharma, P.K., Thakur, S.K., Manuja, S., Kumar, Pradeep, Rana, R.K., Jagdish Chand, Sharma, Sanjay, **Singh, A.** and Singh, Neetu. 2011. Traditional usage of food products prepared by local tribal inhabitants of Lahaul valley in Northwestern Himalayan region of Himachal Pradesh. *Asian Agri History*. January-March-2011.
5. Sharma, P.K., Thakur, S.K., Manuja, S., Rana, R.K., Kumar, Pradeep, Sharma, Sanjay, Chand, Jagdish, **Singh, A.** and Katoch, K.K. 2011. Observation on traditional phototherapy among the inhabitants of Lahaul valley with reference to medicinal & aromatic plants and minerals through Amchi system of medicine. *Chinese medicine*.- **2&3 (3)**: 93-102; DOI: 10.4236/cm.2011.23016
6. **Singh, A.**, Butola, J.S., Samant, S.S., Sharma, P., Lal, M. and Marpa, S. 2012. Indigenous Techniques of Product Development and Economic Potential of Seabuckthorn: A Case Study of Cold Desert Region of Himachal Pradesh, India *Proceedings of the National Academy of Sciences, India Section B: Biological Sciences*: **82(3)**: 391-398
7. Kumar Parveen, Singh, Virendra, **Singh, A.** and Kumar, Suresh. 2014. Ethno-botanical studies of plant species associated with *Hippophae* sp. in Chandra Valley a part of Cold desert Biosphere Reserve Himachal Pradesh, India. *Annals of Plant Sciences*. pp. **3(7)**: 754-757
8. **Singh A.**, Vats S.K. And Kumar Sanjay. 2017. Present trend of research and developmental activities taking over by Global Mountain Organizations. *Octa Journal Of Environmental Research*, **5(4)**: 258-269
9. **Singh, A.** and Gupta, N.K. 2008. Growth and standing volume estimation of *Cedrus deodara* (Roxb.) Loud. stands under the present system of management in Himachal Himalayas - a case study. *Indian Forester* **134(4)**: 458-468

10. **Singh, A.** and Gupta, N.K. 2009. Assessment of floristic diversity and regeneration status of *Cedrus deodara* (Roxb.) Loud. stands under forest management systems in western Himachal Himalaya-a case study. *Indian Journal of Forestry*. **32(1)**: 45-54
11. Samant, S.S., **Singh, A.**, Lal, M. and Sharma, P. 2011. *Diversity, distribution and conservation prioritization of economically important species in Lahaul valley, North Western Himalaya, India*. In: *Global change, Biodiversity and Livelihoods in Cold desert Region of Asia*. (Eds.) K. G. Saxena, Luohui Liang and Xian Xue, Published by; Gajendra Singh Gahlot, Bishan Singh Mahendra Pal Singh, Dehradun, India. pp. 31-42.
12. Kumar, Parveen, Singh, Virendra and **Singh, A.** 2012. *Diversity, distribution of vascular plant species associated with Hippophae species under threat to be submerged within proposed Hydroelectric Project in Bhaga valley, Lahaul-Spiti district in Himachal Pradesh, India*. In: Rani Devi, Mohd. Kashif Kidwai, Pawan Kumar Rose, Alok Kumar Saran. eds.: *Energy-Water-Waste Nexus, For Environment Management*,. Published by Narosa Publishing House Pvt. Ltd. Delhi. pp. 95-102.
13. Rana, R.K., **Singh, A.**, Singh, Virendra, Sharma, L.K., Devi, Reena, Katoch, Pankaj and Lal, Manohar. 2014. *Seabuckthorn (Hippophae L.) propagation and plantation is a new avenue to farmers and future scope of cultivation in Cold Desert area of Himachal Pradesh, India*. In: Singh, Virendra; Yang Baoru; Choudhary Sonika; Morsel Jorg-Thomas; Zubarev Yury A.; Mohini K.; Singh, Sonika; Sharma, V.K.; Rana, R.K. and Lal Manohar. Eds.: *Seabuckthorn (Hippophae L.) A multipurpose wonder plant. Vol. IV. Emerging Trends in Research Technologies*. pp. 59-71. Daya Publishing House New Delhi.
14. Sharma, Alpy, Singh Virendra, Lal, Manohar, **Singh, A.** and Dixit, S.P. 2014. *Status of soil nutrients under Seabuckthorn (Hippophae rhamnoides) vegetation in Lahaul valley, Himachal Himalayas*. In: Singh, Virendra, Yang Baoru, Choudhary Sonika, Morsel Jorg-Thomas, Zubarev Yury A., Mohini K., Singh, Sonika, Sharma, V.K., Rana, R.K. and Lal Manohar. Eds.: *Seabuckthorn (Hippophae L.) A multipurpose wonder plant. Vol. IV. Emerging Trends in Research Technologies*. pp. 521-532.
15. Samant, S.S., Singh, M., Lal, M., Sharma, A., Bhandari, S., **Singh, A.**, Pant, S. and Butola, J.S. 2006. Diversity, Distribution pattern and Economic importance of the Agroforestry trees and shrubs in Kullu district, Himachal Pradesh. In: Proceeding “*Status and potential of Agroforestry in North Western Himalayas*”. Organized by: Himalayan Forest Research Institute. Sponsored by: State Land Use Board (SLUB). pp. 34-42
16. Singh, V., Sharma, V.K., Sharma, M., Tyagi, S.P., Dhaliwal, Y.S., Rana, R.K., Saini, J.P., Pathania, P., Lal, M., **Singh, A.**, Sharma, R.K., Sharma, V., Devi, R. and Kumar, R. 2010. *Fifteen years of research on seabuckthorn in CSK Himachal Pradesh Agriculture University, Palampur*. In: “National Conference on Seabuckthorn: *Emerging Trends in Production to Consumption*” Organized by CSK HPKV Himachal University, Palampur on February 16-18, 2010. pp. 1-12.
17. Kumar, Parveen, Singh, Virendra and **Singh, A.** 2011. *Vegetation associated with Seabuckthorn (Hippophae spp.) in Lahaul valley of Himachal Pradesh*. In: Proceedings of National conference on Seabuckthorn (*Hippophae L.*): *Emerging trends in R & D on health protection & Environment conservation*’ (eds.): Virendra Singh *et al.*, Organized by CSK HPKV Himachal University, Palampur on December 1-3, 2011. pp. 1-8.
18. Alpy, Singh, Virendra, Lal, M., **Singh, A.** and Dixit, S.P. 2011. *Impact assessment of Seabuckthorn (Hippophae rhamnoides) on soil fertility status*. In: Proceedings of National conference on Seabuckthorn (*Hippophae L.*): *Emerging trends in R & D on health protection & Environment conservation*’ (eds.): Virendra Singh *et al.*, Organized by CSK HPKV Himachal University, Palampur on December 1-3, 2011. pp. 9-16.
19. Singh, Virendra, Gupta, R.K., Arumughan, C., Sawhney, R.C., Rana, R.K., **Singh, A.**, Lal, M., Devi, R. and Sharma, N. 2011. *Biochemical evaluation of Hippophae salicifolia and H. mongolica as Horticultural crops in dry temperate Himalayas*. In: Proceedings of National conference on Seabuckthorn (*Hippophae L.*): *Emerging trends in R & D on health protection & Environment conservation*’ (eds.): Virendra Singh *et al.*, Organized by CSK HPKV Himachal University, Palampur on December 1-3, 2011. pp. 75-92.
20. **Singh, A.**, Samant, S.S., Lal, M., Sharma, P., Butola, J.S. and Marpa, S., 2011. *Assessment, mapping and harnessing economic potential of Hippophae species for the socio-economic development of Tribal communities in Himachal Pradesh, India*. In: Proceedings of National conference on Seabuckthorn (*Hippophae L.*): *Emerging trends in R & D on health protection & Environment conservation*’ (eds.): Virendra Singh *et al.*, Organized by CSK HPKV Himachal University, Palampur on December 1-3, 2011. pp. 260-69.
21. Sharma, L.K., Rana, R.K., **Singh Ashok** and Singh Virendra. 2016. *Experiences on Mass multiplication and Systematic plantation of Seabuckthorn in Cold Desert Condition of Himachal Pradesh*. (eds.) Virendra Singh, Poonam Thakur, V.K.Sharma, S.P. Tyagi, A.Kumar, R. Verma, Y.S. Dhaliwal, Ankit Kumar, Ashima, Sonika Singh, Monika Sharma, Ankita Singh, Kusum Devi, Jai Singh, T.Stobdan, S.K.Dwevedi, Madhu Bala, and R.C. Sawhney. In: Proceedings of 7th Conference of International Seabuckthorn Association on *Seabuckthorn: Emerging Technologies for health protection & Environmental Conservation*, from November 24 - 26, 2015, NASC Complex, New Delhi, India. pp.57-61

22. Rana, R.K., **Singh Ashok**, Dhaliwal, Y.S. and Singh Virendra. 2016. *Selection of High Yielding land races of Seabuckthorn from Wild seedling population of Lahaul and Spiti District of Himachal Pradesh, India.* (eds.): Virendra Singh, Poonam Thakur, V.K.Sharma, S.P. Tyagi, A.Kumar, R. Verma, Y.S. Dhaliwal, Ankit Kumar, Ashima, Sonika Singh, Monika Sharma, Ankita Singh, Kusum Devi, Jai Singh, T.Stobdan, S.K.Dwevedi, Madhu Bala, and R.C. Sawhney. In: Proceedings of 7th Conference of International Seabuckthorn Association on *Seabuckthorn: Emerging Technologies for health protection & Environmental Conservation*, from November 24 - 26, 2015, NASC Complex, New Delhi, India. pp.108-111
23. Singh, V., Rana, R.K., Khan, A.R., Sharma, S.K., Kumar, A., Saini, J.P., Sharma, V.K., Sharma, M., Dhaliwal, Y.S., Tyagi, S.P., Vatsa, D.K., Thakur, D.R., Pathania, P., Arya, D.S., Manuja, S., Verma, R., Kumar, P., Chahota, R., Sharma, P.C., Guleria, J.S., Kumar, A., Singh, Sukhbir, **Singh, A.**, Sharma, V., Lal, M., Devi, Reena, Sharma, Rakesh, Palial, A., Kumar, Raj, Anand, S., Kumar, A., Thakur, B., Jaryal, A.K. and Sharma, M. 2011. *Seabuckthorn: an Introduction.* CSKHPKV Palampur, India, 60p.
24. Singh, V., Thakur, S.K., Rana, R.K., Pathania, P., Kumar, A., Saini, J.P., Sharma, S., Dancholia, S., Sharma, V.K., Sharma L.K., Dhaliwal, Y.S., Sharma, M., Tyagi, S.P., Saini, A.S., Thakur, D.R., Vats, D.K., Lal, M., **Singh, A.**, Kumar, V., Devi, R., Anand, S. and Ambedkar, S.K., 2009. *Chharma (Seabuckthorn) ka bag lagane ki vidhiyan.* CSKHPKV Palampur. India. 42p.
25. Pant, S., Butola, J. S. and **Singh, A.** 2007. Traditional Foods and Beverages of Kullu Valley, Himachal Pradesh. *More Expressions: Mountain Researchers Expression Newsletter.* Vol.1 Inaugural Issue. 14-15 pp.
26. **Singh, A.** and Butola, J.S. 2008. Prospects of Apple cultivation in Cold Desert of Lahaul valley in Himachal Pradesh. *More Expressions: Mountain Researchers Expression Newsletter.* **5:** 4-6.
27. Butola, J. S., Sharma, S. Oinam, S.S. and **Singh, A.** 2008. Kullu Zila me Byapari mahatua vale oshdiyion avum sugandit padap avum unn par aadharit Udyog. *Vanoshidi Darpan* **4(2):** 11-17.
28. Butola, J.S., Samant, S.S., **Singh, A.** and Lal, M. 2008. Kullu Zila main Ashwagandha (*Withania somnifera*): ek sarwavyadhihar ausdhiya padap. *Vanoshdhi Darpan.* **4(3):**3-12.
29. Butola, J.S. Samant, S.S. and **Singh, A.** 2009. Aoshadi avum sagand padpon se rojgar ki badi sambhabnayen.- Kullu avum Mandi Zile par ek Najar. *Vanoshdhi outlook.* 1(January-March): 15-19.
30. Samant, S. S. and **Singh, A.** 2009. Seabuckthorn ki prajatiyon ka sheet marusthal ke kabaliyon key aarthik Vikas par prabhav- Ek sarvekshan. *Him Prabha (Rajbhasha Patrika).***2:**48-51.
31. **Singh, A.**, Rana, R.K. and Sharma, P.K. 2012. Lahual evum Spiti Jila me mojudh durlab aashidhiye Padpon dwara jebik krishikaran kar kwailyon ki aarthiki sudharne me Krishi Vigyan Kendra Kukumseri ka yogdaan-Ek Ablokan. *Parvatiyan Khetibaddi.* (January- March):24-27.

Other works:

- Important contributions to establish new *CSIR- IGBT Centre for High Altitude Biology* at Ribling, Lahaul – Spiti (HP) in India since beginning of establishment phase
- Faculty member as "Assistant Professor ACSIR"

Research Team:

- Mr. Mohit Kashyap (Project Assistant-II), Mr. Priyabrat (Project Assistant -I), Mr. Anuj Kaushik (Project Assistant-I), All field staffs at CeHAB
- All visiting faculties staff (Scientist, Technical, Non-technical) of CSIR-IGBT Palampur to CeHAB Ribling, Lahaul-Spiti (HP) India